



< REPLICATE A DAILY DRIVER  
DO A MONSTER MASHUP >

p. 50

p. 42



FineScale.com

# FineScale

February 2021

# Modeler

**30<sup>TH</sup> ANNIVERSARY SPECIAL**

## DESERT STORM

> **BUILD A BRADLEY  
AND ITS ENEMY** p. 26

**PLUS:**

> **LOAD UP A  
TORNADO** p. 34

> **BEAT AN  
IRAQI APC** p. 20

> **FINISH A  
GUARD F-16** p. 12



\$7.99



0 71486 01260 3

02

Vol. 39 • Issue 2

**AGORA**  
MODELS

# THE TERMINATOR™

**Your unique opportunity  
to build and own a 1:2  
scale replica model of  
the T-800 Terminator  
Endoskeleton**

|    |          |                          |
|----|----------|--------------------------|
| 🏠  | Scale    | 1:2                      |
| ↑  | Height   | 3' 1"                    |
| ⚓  | Weight   | 13 lbs                   |
| 📏  | Base     | 16" x 16"                |
| ⚙️ | Material | Zinc alloy and ABS       |
| 🔩  | Parts    | 650                      |
| 🔊  | Remote   | Sounds, lights, movement |



Exact replica



Electronic base



Articulated joints



3 ft tall

ONLY AVAILABLE AT  
**agoramodels.com**

**50% OFF YOUR FIRST PACK**

**AGORA**  
PROMISE

- ✓ Premium quality guaranteed
- ✓ Full-model production guaranteed
- ✓ Build Diary for every model
- ✓ Dispatched within 48 hours
- ✓ Officially licensed products
- ✓ Accurate representation
- ✓ Customer Service with care
- ✓ Worldwide shipping

**STUDIOCANAL**  
A CANAL+ COMPANY

T1, THE TERMINATOR, ENDOSKELETON, and any depiction of Endoskeleton are trademarks of STUDIOCANAL S.A.S. All Rights Reserved.  
© 2020 STUDIOCANAL S.A.S. © All Rights Reserved. Original concept Hachette Partworks Ltd. Under licence from Hachette Partworks

Our customers say **Excellent**



4.9 out of 5

★ Trustpilot





12

## FEATURES

- 11 **Desert Storm at 30**  
The Gulf War provides plenty of modeling choices  
AARON SKINNER
- 12 **Building the *Spirit of Syracuse***  
Commemorating the F-16s that flew in Desert Storm  
DARREN ROBERTS
- 20 **Through the storm**  
Detail a 1/35 scale Iraqi APC in desert camo  
JOHN BONANNI
- 26 **The victor and the vanquished**  
Double-teaming a Desert Storm diorama  
CHUCK DAVIS & AARON SKINNER
- 34 **Improve Eduard's Tornado**  
Accurate ordnance and weathering for a Gulf War striker  
VLADO JOVIC
- 42 **Destroy all Martians**  
Build a 1/350 scale monster mashup of Godzilla battling alien tripods  
MICHAEL WALLACE
- 50 **George's Jeep**  
Scratchbuilt modifications make a stunning tribute  
MASSIMO SANTAROSSA
- 56 **Form & Figure**  
Phantom of the Opera or bust!  
MARK MCGOVERN
- 60 **Airbrushing & Finishing**  
Prevent color showing through a decal  
PABLO BAULEO



20



34



42

## KIT REVIEWS

- 62 **MiniArt Focke-Wulf Triebflügel**
- 64 **Italeri BMW M1 Procar**

## IN EVERY ISSUE

- 5 **Editor's Page**
- 6 **Scale Talk & Reader Tips**
- 9 **New Products**
- 40 **Reader Gallery**
- 65 **Modeler's Mart**
- 65 **Advertiser Index**
- 66 **Classified Marketplace**
- 66 **Hobby Shop Directory**
- 67 **Final Details**

## EVERGREEN CA ADHESIVES



- Thin, Medium and Thick in ½ and 1 ounce bottles
- 2 ounce Accelerator with pump top
- 2 ounce Remove Debonder with spout top

**evergreen** scale models

visit us at [www.evergreenscalemodels.com](http://www.evergreenscalemodels.com)  
Toll Free (877) 376-9099  
f/EvergreenScaleModels

*We Buy Collections!*

*Dean's*



Specializing in hard-to-find & OOP kits. **OVER 10,000 IN STOCK!**

Visit us on the web at:  
[www.deanshobbystop.com](http://www.deanshobbystop.com)

Contact us for a **FREE** catalog!  
(specify car or military list)

113 West Exchange St., Owosso, MI 48867  
989-720-2137 • Fax: 989-720-0937  
Email: [dean@deanshobbystop.com](mailto:dean@deanshobbystop.com)

## ARA Press

The Spaceship Enthusiasts'  
One-Stop Data Shop!

### *Dyna-Soar: Its History, Military Missions and Legacy to the X-37B*

Five years in the making by Air Force historian Dr. Roy Houchin, with full access to all official documents, this will be the definitive work on the program for some time to come.



- Foreword by Dyna-Soar Pilot Al Crews
  - PART I - THE DYNA-SOAR PROGRAM
  - PART II - THE DYNA-SOAR VEHICLE
  - Glossary of Acronyms and Program Names
  - Appendix - The Modeling World
  - Hundreds of photographs and illustrations, most in color
  - Dimensioned Drawings of the Dyna-Soar and Boosters.
  - 215 Pages, 80 lb. coated stock
  - Smyth-sewn Hardcover binding
- Only \$39.95! (plus shipping)**

Please visit our website to order on-line.  
Credit Cards and PayPal accepted.  
Call or write "info@arapress.com" for shipping options.  
Sales Tax added for CA orders



**ARA Press**  
785 Jefferson Ave.  
Livermore, CA 94550  
(925) 583-5126  
[www.arapress.com](http://www.arapress.com)



Don't miss what's new!

Watch the

**New Product Rundown**

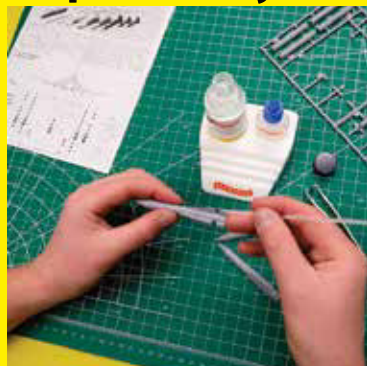
video today! ▶

[www.finescale.com/videos/  
new-product-rundown](http://www.finescale.com/videos/new-product-rundown)

Create with Flex I File



**Speciality Abrasives  
Unique Hobby Tools**



**Order**

**ONLINE**

[www.flex-i-file.com](http://www.flex-i-file.com)



Non-toxic • Non-flammable • Easy to Use • 0% Shrinkage • Waterproof • Superior Strength & Detail

**AVES®** Products will Blow you Away!  
Make sure Apoxie® Sculpt is in your Arsenal!

- Your aid in customization & fabrication.
- Perfect for figurine conversions, original sculptures, kit bashing, tanks, trains, boats & planes.
- Create your own tarps, coats, bedrolls, ground work, rocks, etc.
- Apoxie® Sculpt adheres to: vinyl, plastic, resin, kits, wood, metal, ceramic, glass, polymers, foam, fiberglass & more!
- Ask your hobby shop to carry Aves' products!
- Visit our web site for more information.



Elephant with Custom  
Apoxie® Sculpt Zimmerit  
by Joe Porter



By Aaron Skinner

# Has it really been 30 years?

In January 1991, I made a driving tour of Civil War battlefields that took me through Kentucky, Tennessee, and Mississippi (with an extended side trip at the end to visit the CAF museum which at that time was in Harlingen, Texas). On the evening of January 16, I found myself in a Jackson, Tennessee, mall shopping for music and killing time. If I know me, I probably hit the K-B Toys to look at models and die-cast metal airplanes.

Thinking about finding some dinner, I became aware of hushed voices and a crowd gathered outside a store with TVs in front. News organizations were reporting the early moments of Desert Storm, mostly talking heads and spotty audio from CNN correspondents in Baghdad. I was back in my motel room when President George H.W. Bush addressed the nation about the beginning of combat operations after months of buildup and diplomacy.

As a journalism and history student, I was interested in the progress of the war (which is why I collected the newsagent leader posters above). As a modeler, I was enthralled by the images of aircraft, tanks, ships, and other vehicles I was seeing daily. The war corresponded with the widespread availability of Dragon (or DML) kits, many of which featured

the Soviet equipment deployed by Iraqi forces.

Even today, 30 years on, there are still projects I want to build based in things I saw in 1991: a French AMX-30B2 in two-tone desert camouflage, a Marine Corps Harrier, a British Buccaneer with nose art, an Abrams grinding across the desert, and an Iraqi Mirage F.1.

This issue includes one of my other to-do projects, a British Tornado, built here by *FSM* newcomer Vlado Jovic.

That story, along with the others in this Desert Storm anniversary special give just a taste of the richness of modeling subjects as offered by the Gulf War.

.....

Speaking of richness, if you haven't checked out all of the

new things at FineScale.com, you need to head over there. We have new videos on the site nearly every other day. Workbench Reviews now live almost exclusively online, which allows us to show you what's inside the latest kits much sooner than in print. And we have many more exciting things planned in the coming months.

Happy modeling!



editor@finescale.com



## FineScale Modeler

**Editor** Aaron Skinner

**Editor, Scale Modeling Brand Group** Tim Kidwell

**Assistant Design Director** Scott M. Krall

**Digital Editor** Elizabeth Nash

**Editorial Associate** Monica Freitag

### ART & PRODUCTION

**Design Director** Tom Danneman

**Illustrator** Kellie Jaeger

**Photographer** William Zuback

**Production Coordinator** Sue Hollinger-Klahn

### REGULAR CONTRIBUTING MODELERS

John Bonanni, Paul Boyer, Andy Cooper, Raúl Corral, Chris Cortez, Frank Cuden, Chuck Davis, Jonas Dahlberg, Walt Fink, Tom Foti, Phillip Gore, James Green, Caleb Horn, Ted Horn, Joe Hudson, Mark Karolus, Andy Keyes, Rick Lawler, Ulf Lundberg, John Maher, Chris Oglesby, Jeff Pollizzotto, Bill Plunk, John Plzak, Darren Roberts, Chuck Sawyer, Mike Scharf, David Schemel, Cookie Sewell, Bob Steinbrunn, Karel Sutt, Matthew Walker, Jim Wechsler, Adam Wilder, Jim Zeske

### KALMBACH MEDIA

**Chief Executive Officer** Dan Hickey

**Senior Vice President, Finance** Christine Metcalf

**Senior Vice President, Consumer Marketing**

Nicole McGuire

**Vice President, Content** Stephen C. George

**Vice President, Operations** Brian J. Schmidt

**Vice President, Human Resources** Sarah A. Horner

**Senior Director, Advertising Sales and Events**

David T. Sherman

**Advertising Sales Director** Scott Redmond

**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

### EDITORIAL

262-796-8776

### ADVERTISING DEPARTMENT

888-558-1544

**Advertising Sales Representative**

Daryl Pagel, Ext. 618

**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

**E-mail** [tss@kalmbach.com](mailto:tss@kalmbach.com)

**Website** [retailers.kalmbach.com](http://retailers.kalmbach.com)

### CUSTOMER SALES AND SERVICE

**Phone** 877-246-4847

Outside U.S. and Canada 903-636-1125

**Customer Service**

[customerservice@FineScaleModeler.info](mailto:customerservice@FineScaleModeler.info)

### SPECIAL E-MAIL & WEB ADDRESSES

**Ad Sales** [adsales@FineScale.com](mailto:adsales@FineScale.com)

**Letters to the Editor** [editor@FineScale.com](mailto:editor@FineScale.com)

**New Products** [mf Freitag@FineScale.com](mailto:mf Freitag@FineScale.com)

**Reader Gallery** [Contribute.Kalmbach.com](mailto:Contribute.Kalmbach.com)

**Reader Questions** [questions@FineScale.com](mailto:questions@FineScale.com)

**Reader Tips** [tips@FineScale.com](mailto:tips@FineScale.com)

©2021, Kalmbach Media Co., all rights reserved. This publication may not be reproduced in any form without permission. Printed in the U.S.A. Allow 6 to 8 weeks for new subscriptions and address changes. Single copy: \$7.99 (U.S.). Print + digital subscription rate: U.S.: 1 year \$52.95. Canadian: Add \$8.00 postage. Canadian price includes GST, payable in U.S. funds. All other international: Add \$16.00 postage, payable in U.S. funds, drawn on a U.S. bank. BN 12271 3209 RT. Not responsible for unsolicited materials.





## Amazing realism puts reader on deck

As a retired 25-year U.S. Navy guy who has spent hundreds of hours on the flight deck and deployed on three aircraft carriers, I was amazed at the accuracy of Oliver Doering's MH-60S diorama. He captured every nuance and detail to the degree that it took me back to the flight deck as soon as I saw the photos. Not only is everything accurately portrayed but the level of detail of every single thing is to a level I've never seen before. Mr. Doering's diorama is much higher than "museum quality," attaining the "artiste" range of modeling (if there is such a thing).

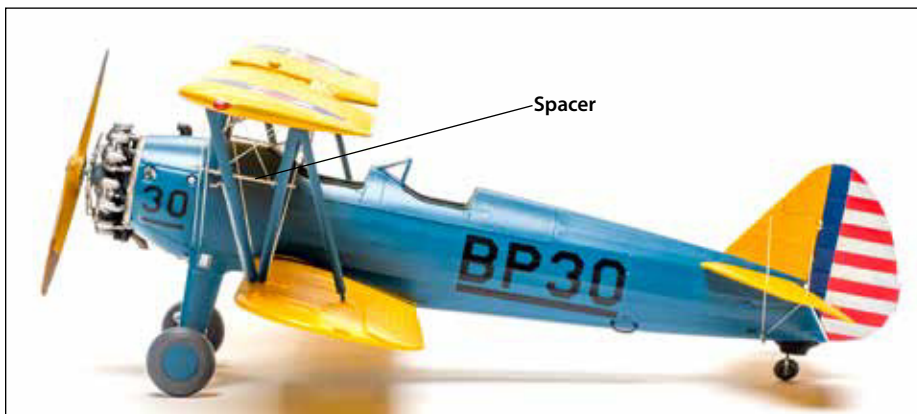
Thank you for an article on what is possible in modeling. Although I'm sure I will never reach Mr. Doering's level, his example is certainly a high bar to keep attempting so that one day I might get close.

— Lt. Cmdr. Stephen Davis, USN (Ret.)  
Virginia Beach, Va.

*Ed.: The amount of work in Oliver's Seahawk diorama impressed us, too. Here are some more images of it to inspire us all.*







## This Tiger is a beast



As a kid in the late '50s and early '60s, I built a variety of kits, including a large number of the Renwal Blueprint armor models that ended up "dying by firecracker." Then girls replaced models, and for quite a few years I got away from building.

One Christmas in the late '70s, a friend gave me a tank kit as a gift. It was a Tamiya 1/25 scale Tiger I with electric motors and corded remote; it was a neat kit and even had a (mostly) complete interior. I had to build it and off to the store I went to buy glue, paint, and brushes.

Once it was finished, it needed a place to live. Combine a piece of plywood, some strips of wood-grain trim, fish-tank gravel, tree branches, and plastic foliage from the flower department. *Bam!* Instant diorama.

Please don't look too closely though — remember, it is a 40-year-old build. If you see what looks like cobwebs and dust bunnies, that's just my advanced, secret weathering process.

I didn't build anything else until the early '90s when I built a Tamiya (I think) British M3 Grant with some Desert Rats and a 6-pounder gun.

I got serious about armor modeling in 2009, and I was amazed by how much modeling had changed since I was a kid. Soon I discovered *FineScale Modeler* magazine, and in the December 2011 Reader

Gallery, I had my World War I Mark V tank diorama featured. Because of that photo, I was contacted by a member of the local AMPS club who invited me to attend their meetings. I became a member and the support and knowledge I have received from the members has made me a much better modeler. And I sure as heck wouldn't have had the guts to enter any of my builds in the 2012 AMPS International contest without their urging.

Regardless of what type of models you prefer to build, if you can find a club within driving distance, join it! Learning from other club members will expand your modeling skills quicker and over a broader range than you ever will develop if you try to go it alone. Trust me.

— Dan Drake  
Roanoke, Ind.

## Stretcher? Spacer? Er?

Just got my November *FSM* with the great article on painting a prewar SB2U by my modeling friend Ed Baroth.

While reading the Workbench Reviews, I noticed an interesting error in Chuck Davis' build report on Roden's 1/32 scale PT-17. He said the wing-wire stretchers were not mentioned in the instructions, but were provided in the kit and he used them. The PT-17 did not use wire stretchers in its rigging, so I wonder why they were included.

— Mike Schein  
La Crescenta, Calif.

*Ed.: I talked this over with Chuck, and we agreed that what he referred to as wire stretchers are actually more properly referred to as spacers. This piece fits where the rigging wires cross and prevent them from rubbing or vibrating together.*

*If this is not the correct term and somebody with more practical experience of biplane rigging and associated terms than me knows them by another name, email editor@FineScale.com.*

## Correction

Due to an editor's mistake, the model mentioned in David Prevost's terrific letter about his oldest model was misidentified. It should have been Monogram's 1/72 scale Boeing F4B-4.



## PRECISION POWER TOOLS FOR YOUR INTRICATE PROJECTS

**MICRO Mill MF 70. With continuously variable spindle speeds from 5,000 – 20,000rpm. Small and beautiful!**

With special, balanced motor for vibration-free work at high speeds and thus perfect for even the smallest milling cutter. Size 340 (13 25/64") x 225 (8 55/64") x 130mm (5 7/64"). Weight 7kg (15.5lbs). Comes with six steel collets to cover 1.0 (1/32") – 3.2mm (1/8") and step clamp set.

The PROXXON MICROMOT system features more than 50 high-quality power tools and a huge selection of matching accessories.

**Please contact us for a free catalog.**

**PROXXON**

— [www.proxxon.com/us](http://www.proxxon.com/us) —

PROXXON Inc. – Hickory, NC/USA – Email: [sales.us@proxxon.com](mailto:sales.us@proxxon.com)



## Reader Tips



### Point those guns straight

When assembling plastic armor barrels, I glue the joint then use clothes pins in two directions as clamps. One direction to clamp the joint and the other direction to align the seam. There is very little sanding needed to make the joint disappear.

— Joseph Richardson  
Englewood, Colo.

### Tack it in place with Glue Dots

I needed to temporarily attach the hood of a Humvee to its body so I could paint the

whole vehicle before adding extras to the interior. I've had the same problems with cockpit covers and the like. When I opened some mail recently, it came with a card fixed to the letter with a sticky dot. I checked it out. They are called Glue Dots (often unceremoniously referred to as "snot dots"). Easily removable, they come in a tape dispenser. They are readily available, inexpensive, and work really great without hurting painted surfaces.

— Mike Ballantyne  
Central Saanich, British Columbia, Canada

## Oldest is a Model T



This is a Gowland & Gowland Ford Model T that my dad helped me build on the kitchen table in 1956. I was 8 years old, and I still have it.

— Virgil Stanbary  
Burlington, Iowa

## Reviving old models



I have to say, the magazine covers a lot of material and a lot of good subjects that help us building many types of models.

In October 2020, you asked about the oldest model we still have. In a corner of my basement, there is a shelf with an Aurora Famous Fighters Series 1/72 scale B-29 (Kit No. 372) covered in spider webs, lint, and dust. I was able to clean it up with a soft brush and compressed air used for cleaning electronics. Except for the missing propeller blades on the No. 3 engine, tail gun barrels, and the fact that some decals had flaked off since my dad and I built it in 1961, the model has held up pretty well. Typical of the time, the skin has raised rivets and the markings are molded on the surface. My father was a very good painter and could paint the insignias by hand when I lost decals.

I found two more models that were built around the same time: a Monogram 1/32 scale P-51 Mustang and a Lindberg F-91 Thunderceptor, both with faded decals and yellowed canopies.

— Mel Maczewski  
Royal Oak, Mich.

Now at [www.FineScale.com](http://www.FineScale.com)



## Free Video Reviews

You love cars, *FSM* loves cars, we all love cars! So if you want to see the latest car models, check out **Fast Track**, a video series which shows you inside kit boxes, such as Monogram's re-issue of the 1/24 scale 1969 Dodge Super Bee 2'n1 muscle car.

## More Workbench Reviews

If you're a subscriber, we're about to make your day. Did you know that there are many, *many* more **online-only** build reviews going up on our site all the time? Check them out! Not a subscriber? The time has come. Sign up today!



# NEW PRODUCTS

Compiled by Monica Freitag & Aaron Skinner

## AIRCRAFT

### 1/32 SCALE



**Tornado GR.4** from Italeri, No. 552513, \$229.99

### 1/48 SCALE



**Supermarine Spitfire Mk.XIV Civilian Schemes** from Airfix, No. A05139, \$30.

### 1/72 SCALE



**Avro Lancaster B.II** from Airfix, No. A08001, \$42.75



**EF-111A Raven** from Revell, No. 04974, \$24.35



**F-16 MLU Tiger Meet 2018 31 Sqn. Kleine Brogel** from Revell, No. 03860, \$24.35.

## ARMOR

### 1/35 SCALE



**German delivery car Type 170V** from MiniArt, No. 35297, \$TBA



**Austin Armored Car 1918 Pattern British Service Western Front** from MiniArt, No. 39009, \$TBA



**M3 Lee Mid Prod** from MiniArt, No. 35209 interior kit, \$TBA

### 1/72 SCALE



**15cm Field Howitzer/10.5cm field gun** from Italeri, No. 557082, \$27.99



**IJA Type 97 Chi-Ha medium tank** from Dragon, No. 7397, \$18.99



**IJA Type 2 Ka-Mi Amphibious tank combat version** from Dragon, No. 7435, \$22.99



**M2A3 Bradley** from Dragon, No. 7623, \$28.99



**Chinese Volunteer T-34/85** from Dragon, No. 7668, \$22.99

**AAVP-7A1 with enhanced applique armor kit (Desert Yellow)** No. 63019, \$37.99;  
**AAVP-7A1 with enhanced applique armor kit (camouflage)** No. 63073, \$37.99, both prefinished models from Dragon.

## FIGURES

### 1/35 SCALE

**U.S. Soldiers at Rest** from MiniArt, No. 35318, \$TBA



**German Drivers & Officers** from MiniArt, No. 35345, \$TBA.

### Find us on Facebook

Connect with modelers from across the globe, share ideas, have some fun!



## MISCELLANEOUS

### 1/35 SCALE

**Wooden barrels** from MiniArt, No. 35632, \$TBA.

**B-type London Omnibus 1919** from MiniArt, No. 38031, \$TBA.

## AIRCRAFT DECALS

### 1/144 SCALE

**North Central DC-9-51 Republic Scheme** from Draw Decal, No. 44-DC9-58A, \$12. Also available in 1/200 No. 20-DC9-58A, \$8.

**Lao Airlines A320** from Draw Decal, No. 44-A3N-96, \$12. Also available in 1/200 No. 20-A3N-96, \$8 and 1/125 No. 25-A3N-96, \$16.

**Delta Airlines DC-9-50** from Draw Decal, No. 44-DC9-60, \$10. Also available in 1/200 No. 20-DC9-60, \$8.

**Houstonian P-51C** from Draw Decal, No. 44-P51-147, \$5. Also available in 1/32 No. 32-P51-147, \$14; 1/48 No. 48-P51-147, \$10 and 1/72 No. 72-P51-147, \$8.

**CBS 1953 Coronation P-51B** from Draw Decal, No. 44-P51-146, \$5. Also available in 1/32 No. 32-P51-146, \$18; 1/48 No. 48-P51-146, \$12; 1/24 No. 24-P51-146, \$30.

## BOOKS



### FlightCraft: P-51

**Mustang** \$26.95 by Robert Jackson, softcover, 96 pages, 200 color & black-and-white illustrations, ISBN 978-1-5267-5990-0. From Casemate.



### Hitler's Panther Tank Battalions 1943-1945

\$22.95 by Ian Baxter, softcover, 128 pages, 250 B/W photos, ISBN 978-1-5267-6545-1. From Casemate.

# Car Modeling with the Experts!

**\$1 Off Plus Free Shipping!**

**Introduction by Tim Boyd!**

Get the newest special issue from *FineScale Modeler* featuring 10 new projects covering everything from correcting body shapes and wheel arches to kitbashing, scratchbuilding, and integrating resin parts into your models. And don't forget how to apply the perfect paint for outstanding additions to your scale-auto collection.

Building Muscle Cars, Restomods, and Pro Touring includes:

- The Corvette infused RX-7
- Finishing an incredible Super Bee
- Tim Boyd's Top 10 Building Tips
- And more!

Don't miss out - Reserve your copy today and get \$1 off and FREE SHIPPING!



**Order your copy today at**



**KalmbachHobbyStore.com/MuscleCars**

Free standard shipping to U.S. addresses only. Offer expires 4/15/21 at 11:59 p.m. CT. Sales tax where applicable. Building Muscle Cars, Restomods, and Pro Touring will be available April 2021.

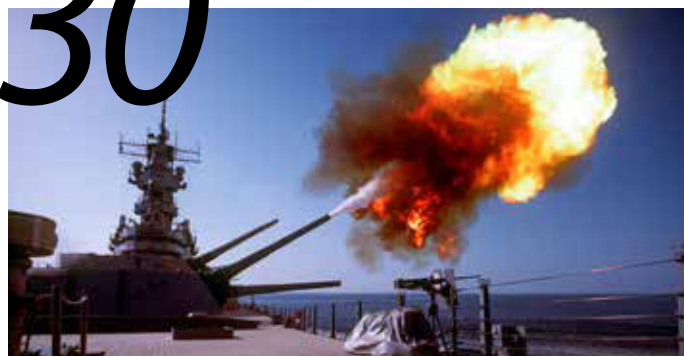


# DESERT STORM

## at 30



An F-14B Tomcat of VF-143 flies past a Kuwaiti oil well set ablaze by retreating Iraqi troops during Operation Desert Storm.



The battleship USS *Wisconsin* fires one of its 16-inch guns at an Iraqi shore target.



A Scorpion reconnaissance vehicle of the 7th Brigade Royal Scots, 1st Armoured Division, advances east into Kuwait from southern Iraq.



A Kuwaiti Mirage 2000C takes off for an air strike against Iraqi targets. (All photos from the National Archives.)

### Gulf War provides plenty of modeling choices

In August 1990, Iraq stunned the world when it invaded and annexed neighboring Kuwait. After months of preparations, the world responded on Jan. 17, 1991, when aircraft gathered from numerous countries attacked military targets in Iraq and occupied Kuwait. At the end of February and following a series of feints and raids by the coalition, and an abortive incursion into Saudi Arabia by Iraqi forces, coalition ground troops entered Iraq and Kuwait. Within 100 hours, a ceasefire was declared, Kuwait was liberated, and coalition troops pursued Iraqi forces deep into Iraq.

The multinational character of the coalition and the associated variety of equipment make

rich fodder for modelers. Tomcats, Hornets, Intruders, and Corsair IIs crowded U.S. carrier decks. Airfields across the region played host to American F-15s, F-16s, and F-111s, French Mirages and Jaguars, and British Tornados on their first combat deployment along with Cold War Buccaneers. No less interesting is the ground equipment with French AMX-30s and British Chieftains joining American M60s and Abrams, and even Kuwaiti BMPs. Not to mention the variety of Soviet- and Chinese-built equipment Iraq fielded.

To mark the anniversary, *FSM* put together the following four-story package that touches just briefly on that rich subject matter. **FSM**



# *Building* **SPIRIT OF**

Commemorating the F-16s that flew in Desert Storm

BY DARREN ROBERTS





# SYRACUSE

One of the units deployed to the Persian Gulf for Desert Storm was the 174th Tactical Fighter Wing based in Syracuse, N.Y., my childhood home. I had friends whose fathers went to war, and you could sense the worry, even as they tried to act as if it was no big deal. Thankfully, everyone made it back with no casualties.

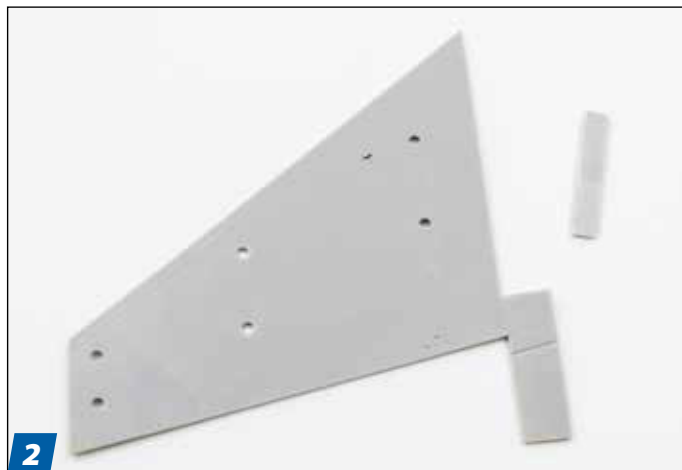
To commemorate the 30th anniversary of Desert Storm, I built a Hasegawa 1/48 scale F-16A in the markings of the 174th commander's fighter, *Spirit of Syracuse*, as it appeared during the war. While an older kit, the Hasegawa offering can make a beautiful replica. I did add a couple aftermarket items, but for the most part, what was in the box sufficed.





1

Up first, the kit comes with wings separate from the upper fuselage half. It helps to attach the wings before gluing the fuselage together.



2

To finish attaching the wings, I had to cut the support tab from the lower wing half, so it could be glued on after the fuselage was together.



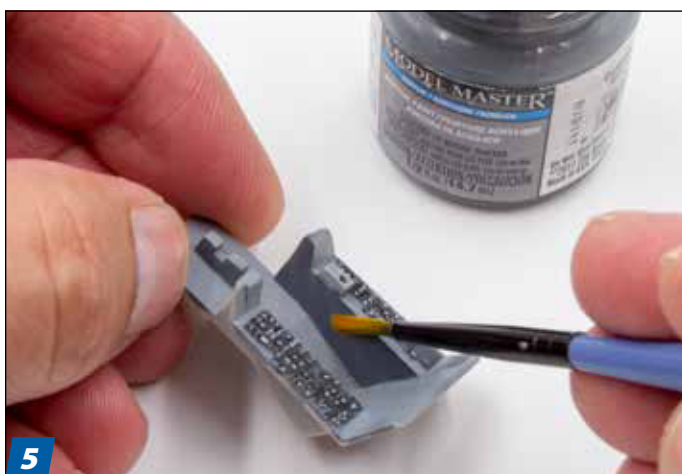
3

The cockpit received a base coat of Testors Model Master acrylic dark gull gray (No. 4755), and I painted the instrument panel and side consoles MRP tire rubber (No. MRP-A016) followed by dry-brushed Model Master light gray (No. 4765).



4

I picked out knobs and switches in white using a fine paintbrush. A .005-inch artist pen helped me clean up some of the untidy painting. I used the fine paintbrush dipped in water to spread the ink into all the crevices while the ink was still wet.



5

The last step for the cockpit was to paint the vertical surfaces next to the consoles and under the instrument panel Model Master gunship gray (No. 4755). This creates an appearance of shadows when the cockpit is buttoned up. Then I glued the cockpit in place and joined the fuselage halves.



6

With the fuselage together, I glued on the lower wings. The loadout that I was modeling didn't have the outer wing pylons. I plugged the holes with short lengths of round styrene rod, cemented them in place and sanded them smooth.





**7** I don't particularly like finishing intakes on models. So I took the path of least resistance and used a resin intake cover from my company, Steel Beach. Some may call it cheating; I call it smart modeling.



**8** The engine nozzle comes as a separate part and is easier to paint alone. I airbrushed the ring in front of the nozzle itself Alclad II aluminum (No. ALC126) and followed up with a misting of Alclad II transparent blue (No. ALC403) to simulate heat discoloration.



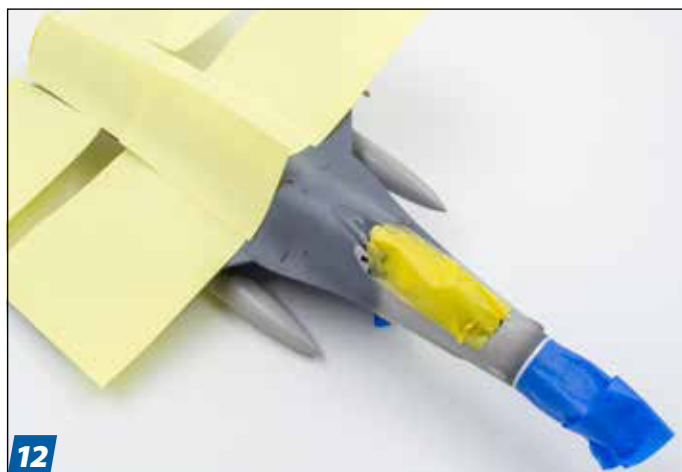
**9** I masked the ring and base-coated the nozzle with Alclad II pale burnt metal (No. ALC104). The areas where the petals overlap are a darker color, so I masked off the base coat leaving only the overlapping areas exposed and lightly airbrushed Alclad II burnt iron (No. ALC121).



**10** The separation of the petals is a bit soft, so I traced each with a .005-inch artist pen to better define them. I finished the nozzle by painting the interior petal edges tire rubber.



**11** I glued the painted nozzle section onto the fuselage's rear end. The 174th flew early Block 10 F-16s which had smaller stabilizers. I replaced the kit's parts with Quickboost resin replacements and angled them to add interest to the finished model.



**12** Normally I start with the lightest color and progress to the darkest. But, because of the odd angles of where the wings join the fuselage, I began with gunship gray. Then I masked and spray Model Master light ghost gray (No. 4762). Model Master neutral gray (No. 4757) was painted last on the tail and intake sides.



13

After flat-coating the F-16, I attached a turned-metal nose probe from Master Models. Waiting until last to put in on and enhanced the overall look and reduced the chances of breaking it during handling.



14

Another improvement from Master Models that I added at the end of the build were turned-metal static wicks on the trailing edges of the wings, stabilizers, and tail. I've modeled them in the past from bristles pulled from a toothbrush, but these made life much easier.

### Applying the markings

After the paint had dried, I applied a coat of Pledge Floor Gloss (PFG) with a soft, wide brush. The 174th Tactical Fighter Wing markings came from Afterburner, which included the markings for *Spirit of Syracuse*. As per most Cartograf decals, they went down with no problems at all.



15

The pace of operations during Desert Storm didn't allow much time for keeping aircraft clean. However, my F-16 modeled the first few days of combat, so I didn't want to overdo it. Using a small brush, I ran a wash of burnt umber and Payne's gray artist oils over the panel lines.



16

When dry, I used a soft, medium-wide pointed brush, dampened with a bit of mineral spirits to remove the excess wash and leave behind just enough for a dirty look when dry. The point allowed me to get into corners.



17

I finished up by running a black .03-inch artist pen through the major panel lines, such as the leading and trailing edge wing flaps, rudder, and select fuselage panels.





18

The ink adds depth and realism to the panel lines. I wiped away the excess ink with a cotton swab dampened with water.



19

I replaced the kit seat with a much more detailed resin offering from CMK. A detailed seat elevates the finished look of a build, especially if the canopy is open.



20

These wheels came from a Revell 1/48 scale ADF F-16, which looked more accurate for an early F-16 than the wheels that came with the Hasegawa kit.





The ordnance loadout was based on what the 174th carried at the outset of Desert Storm. Their mission was close air support (CAS), which meant a GPU-5/A Paveway 30mm gun pod, a pair of AIM-9 Sidewinders, an ALQ-119 ECM pod, and an AGM-65 Maverick missile.

**A** Paveway (center); **B** External tanks (inboard port and starboard wings); **C** ECM pod (center starboard wing); **D** Sidewinder (starboard and port wingtips); **E** Maverick (center port wing)

### Look at all those weapons!

The gun pod, Sidewinders, and Maverick all came from a Hasegawa 1/48 scale Weapons Set C; the ALQ-119 was liberated from a Monogram 1/48 scale F-15 Eagle.







22

I built a single-rail launcher for the Maverick with the main body of the leftover outer-pylon Sidewinder rail from the kit along with bits of the triple Maverick rack found in Weapons Set C. While not perfect, it was close enough, especially since the missile would be covering most of the rail.

## FINAL THOUGHTS

### I'M HAPPY WITH HOW WELL THIS MODEL

re-creates the 174th Tactical Fighter Wing commanding officer's F-16 in the early days of Desert Storm and commemorates the servicemen who fought. Interestingly, the Paveclaw gun pod proved a dismal failure in combat. The vibration from firing the weapon wreaked havoc on the F-16's sensitive electronics, and the violence of the 30mm recoil bent the pylon it was attached to. Accuracy issues coupled with the F-16's speed made the Paveclaw little more than an area-suppression weapon. After only a few days, the 174th removed the gun pod and went back to cluster and general-purpose bombs for the remainder of the war. **FSM**

# Through the

Detail a 1/35 scale Iraqi APC in desert camo

BY JOHN BONANNI

**D**uring Desert Storm, the American-led coalition began its ground campaign against Russian- and Chinese-made armored vehicles in Iraqi service. One such vehicle was the YW-531C, an export version of the Type 63 armored personnel carrier (APC). Entering service in the late 1960s and put to many purposes, from ambulances to troop carriers, this lightweight steel vehicle was no match for coalition ground and air power. I was inspired for this build by a YW-531C destroyed by air attack on Route 801 north of Kuwait City.

## The kit

**BRONCO FIRST INTRODUCED** its 1/35 scale kit of the YW-531C (No. CB35082) in 2010, and it still stands as the only option in injection-molded plastic with a total of six variants. The kit contains beautifully detailed parts, many small and delicate, and extra care must be taken during the assembly process in order not to damage or lose any parts. But it's a perfect choice for a unique replica.





# STORM





**1** When building armor, I prefer to get the tedious task of building tracks out of the way first. Bronco provided simple click-together tracks that only needed to be removed from the sprue.



**2** After finishing the tracks, I proceeded to the road wheels, idlers, and sprockets. No surprises here with quick and easy assembly. Each road wheel contains a plastic washer enabling it to spin freely.



**3** I purchased 3D-printed tool clasps from Shapeways.com for additional hull detail. They're meant for World War II German armored vehicles but looked similar to the ones used by the Chinese.



**4** A fret of photo-etched metal (PE) contained mounting tabs for small hull details and two large screens for the top deck. The parts fit perfectly, and I attached them with superglue.



**5** Countless small parts make up the external features, including hollow clamp locks, tools, and handholds.



**6** With the hull finished, priming was only a spray can away. Note: Leave the road wheels off until last because once they're on, it is almost impossible to remove them without breaking the delicate suspension torsion-bar arms.



**7** I went with black hardware store primer — cheap and easy. Primer exposes errors that I may need to correct and helps paint adhere. In this case, I didn't see any gaps, so it was time to paint.

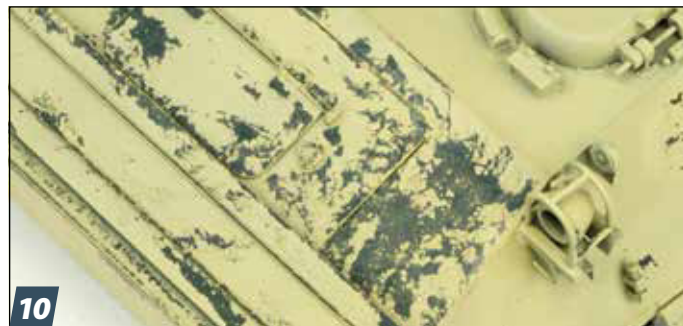


**8** I base-coated the hull with Tamiya deep green (XF-26), let it dry, and then layered two coats of hairspray on top. Don't worry about applying too much hairspray, because it levels well.





9 I airbrushed a coat of Tamiya dark yellow 2 (XF-88) over the hairspray. I built up the color slowly; a heavy coat of paint will cause a premature reaction with the hairspray and crack the top layer of paint.



10 To begin the chipping process, I used a soft-bristled brush to apply water to an individual panel. After letting the water sit for a minute, I gently removed patches of the top layer of paint with the same brush. I worked in small, manageable areas until I was happy with the effect.



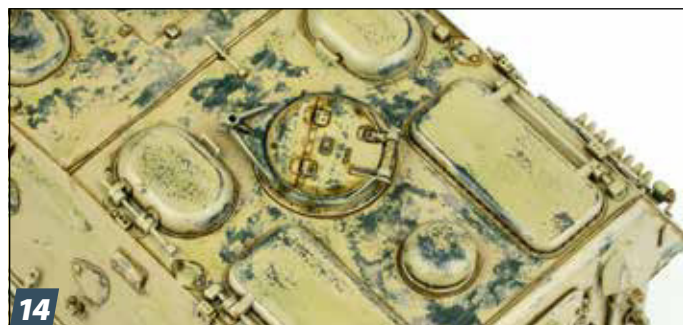
11 At this point, I thought the vehicle needed another tan color because the dark yellow 2 had too much green in it. I repeated the hairspray chipping process, this time with Tamiya buff (XF-57).



12 The extra layer of chipped paint added dimensionality to the finish. Varying the opacity of the topcoat can affect the chipping process: the lighter the coat, the easier the chipping.



13 Before weathering, I sealed the model with Testors Dullcote. The finish turned out more satin than flat, but that worked well for the effects that would follow.



14 I applied a pinwash of Ammo by Mig Jimenez brown wash for German dark yellow (No. AMIG1000) to all the recessed details. For me, this is when a model starts to look and feel like a replica of the real thing.



15 For rust stains on horizontal surfaces, I applied Ammo Oilbrusher rust (No. AMIG3510) to the panel edge. Next, I blended the paint on the surface with a dry flat brush. Additionally, I highlighted worn weld lines with silver paint.



16 Using the same technique as I did for the rust, I applied Oilbrusher dust (No. AMIG3516) around select details. The only difference was I lightly dampened the brush with mineral spirits to make blending easier and a bit more random.





17

Details such as the tools, spare tracks, and convoy lights were picked out in various acrylics. To paint the wooden handles, I applied a coat of dark brown oil paint over a tan base coat and then dragged a clean brush along the handle simulating wood grain.



18

I created subtle streaks of grime with Oilbrusher starship filth (No. AMIG3513) on vertical surfaces. First, I'd place a dot of filth at the top of the surface, then I'd drag it down with a brush damp with mineral spirits.



19

The tracks received a black base coat followed by a light wash of rust-colored acrylic paint. I finished them off with a heavy wash of earth-colored pigments. I knocked off the excess pigment after it dried and highlighted contact points with graphite powder.



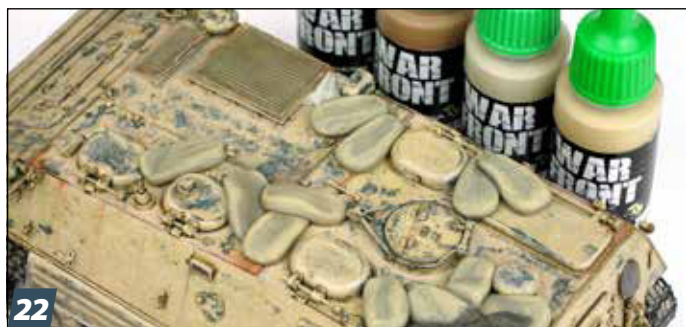
20

I base-coated the DShK heavy machine gun dark gray, added a heavy wash of dust oil paint, and, lastly, burnished the bare-metal parts with graphite powder.



21

The real vehicle was loaded with sandbags. I re-created them with Apoxie Sculpt. The tied openings came first and were left to dry. Then I made the bags, added the ends, and placed them on the model while still soft. A little water applied with a soft brush helped them conform.



22

Initially, I wanted to pop the bags off and paint them separately, but that didn't happen. Next time, I'll lay down a plastic-wrap barrier first. The bags received a range of acrylic colors from black to light tan to get an appropriately dirty, sandy appearance.



23

The vehicle had several jerrycans tied to it, which I accomplished with sewing thread. The jerrycan here was the type used by Americans during World War II, and I surmised that a similar can may have been used by the Iraqi army, too.



24

Ammo Fresh Engine Oil wash (No. AMIG1408) dries glossy brown. You can vary its opacity by thinning it with mineral spirits to create oil stains and spills. I use a fine brush and allow capillary action to make natural-looking pools.





25

A splash of color helps breakup monotone finishes. In this case, it took the form of a small plastic container sourced from another kit.



26

The finishing touches came in the form of clear lenses for the headlights and painting the periscopes and vision ports semigloss black.



27

Happy with the YW-531C, it just didn't look right without some sort of context, and a simple base would provide the perfect setting. The base started as a sheet of adhesive cork from a craft store.



28

I cut the cork to shape and applied a thin layer of Vallejo Earth Texture black lava-asphalt (No. 26.214). After letting it set for a few hours, I airbrushed it with Tamiya flat black (XF-1), flat white (XF-2), and flat yellow (XF-3) to create a little wear and traffic lines.



29

I slathered the roadway with a heavy wash of Ammo Europe earth pigment (No. AMIG3004) and mineral spirits. After it dried, a large brush helped remove pigment and expose the asphalt texture beneath.



30

Lastly, I peeled the protective sheet off the cork's adhesive backing and attached it to a simple wooden box I picked up from the craft store and painted black. **FSM**





# ***THE VICTOR*** *and the* ***VANQUISHED***

Double-teaming a  
Desert Storm diorama

BY CHUCK DAVIS AND AARON SKINNER

**W**hile much of the action of Desert Storm took place in the air, ultimately a 100-hour ground campaign liberated Kuwait.

Troops from the U.S.-led coalition crossed the Saudi border into Kuwait and southern Iraq and quickly overwhelmed Iraqi defenses and destroyed hundreds of tanks, armored personnel carriers, and other vehicles. Some of the largest tank battles in American military history occurred during this campaign.

We set out to build a typical scene from the ground campaign with an American Bradley rolling past a recently knocked out T-72. Chuck built Tamiya's 1/35 scale M2A2 with a few improvements and Aaron "destroyed" Hobbycraft's re-boxed Trumpeter 1/35 scale T-72 and built the base.









# THE BRADLEY

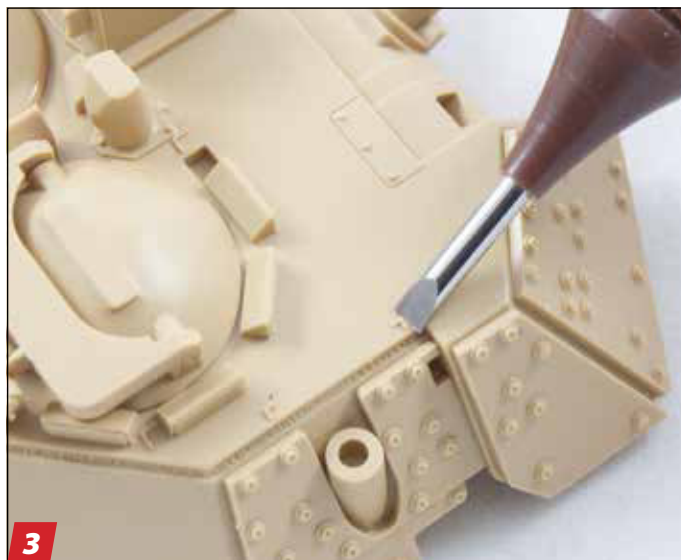
During Desert Storm, Bradleys proved their worth, even going toe to toe — or should that be TOW to toe? — with T-72 main battle tanks. I usually model airplanes, so the challenge of modeling a Bradley in overall CARC tan appealed to me. But I was also shy of references, spare parts, and general knowledge. Tamiya's M2A2 is a decent, albeit older, kit, and there aren't many accessories available for it, so I was on my own to a large degree.



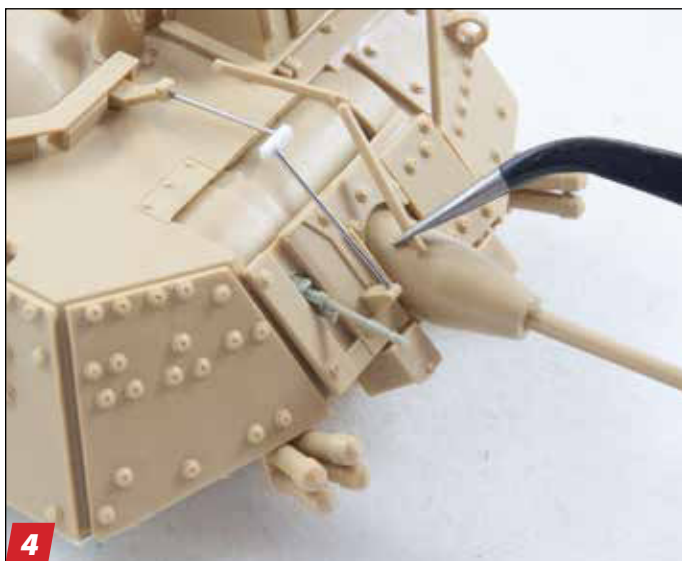
The slotted muzzle brake on the 30mm Bushmaster cannon is difficult to mimic with injection-molded plastic. To improve it, I carefully drilled a pilot hole as close to the center of the muzzle as I could get. Then I used a series of ever larger drill bits to open up the muzzle brake, eventually reaching a size that cuts through the deepest portion of the slots.



While on the subject of guns, my kit was missing the coaxial M240 7.62mm machine gun barrel. I found a nice resin version from LiveResin that I modified to fit.



I'm not positive, but I'm betting full-size Bradley don't have raised locators on the turret for the antenna brush guard. I removed them with a micro chisel.



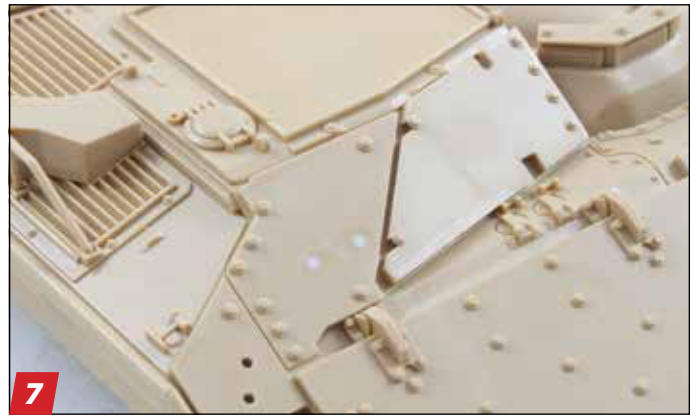
Comparing it to photos, the clunkiness of the kit's antiaircraft sighting mechanism bothered me. I replaced it with scrap plastic and wire attached to the kit part's upper and lower mounts.



After assembling the turret, I discovered missing plates on the lower right segment. The omission is visible from some angles, so I covered the void with scrap sheet styrene.



It appears Tamiya also missed extending the weld seam over the mount for the TOW launcher. Remembering an old-school technique, I glued strip styrene into the gap, then softened it with liquid cement and impressed weld-bead texture with the back of a hobby knife blade.



The kit includes two spare track links, one for the deck behind the turret and one up front. I didn't see many Bradleys equipped this way, so I filled the locators with styrene rod and festooned the kit with other stowage using spare parts and a few aftermarket items.



Something just isn't right here ... or I just don't know my tanks. It sure seems as though this part is supposed to fit flush with the underside. So, that's what I did with some severe cutting and trimming.



Small jewels look great as landing lights on aircraft models, so I brought that idea over to the Bradley's headlights, drilling out the solid housings to accommodate the jewels but left them off for painting.



While fitting the side armor and skirts, I noticed ejector-pin marks that would be visible on the finished model. I punched discs of .020-inch sheet styrene, glued them into the holes, and finished them with a smear of putty.



Circle templates make easy masks for painting wheels after airbrushing the tires. Armor people have it rough compared to plane modelers; there are 24 wheels on a Bradley! Most aircraft have between three and six.



Scrounging for stowage, I found beautiful resin water containers from Eureka. All I had to do was remove them from the pour stub and trim thin flash from the handles, and they were ready to use.





13

Many photos showed concertina wire on the glacis plate, so I twisted fine electrical wire into a coil and mounted it with a strip of lead-foil securing it. I also added lead straps for the water and fuel containers, detailing them with spare photo-etched metal seat-belt buckles.



14

Let the painting begin! First came a base coat of Tamiya desert yellow (XF-60), followed by a patchy layer of Hataka Orange Line desert tan (No. C238). I protected the previously finished tracks and road wheels with kitchen cling wrap.



15

I applied Flory Models gray wash around bolt heads and other details. Flory dark dirt wash around hinges and other select details added contrast as does the Flory black wash on the central engine screen.



16

To mute the effect of the washes and lighten the model's overall tone, I lightly sprayed Tamiya buff (XF-57) randomly over the surface. I also shot thin Tamiya deck tan (XF-55) on the lower surfaces of the skirts and running gear to add a film of dust.



17

To replicate the reflective orange sheen of the vision blocks, I carefully hand-painted them with Testors Metalizer burnt metal (No. 1415) then topped them with Tamiya clear orange (X-26).



18

Even though it's a dusty vehicle, I wanted a few shiny spots, like the headlights. The orange lights are Tamiya clear orange over Testors chrome silver. I hand-painted the concertina wire with Testors Metalizer dark anodonic gray (No. 1412), at the same time adding chips and scratches on the tools on the hull. Finally, I used Tamiya NATO black (XF-69) to show cracks in the paint on the rubber mud flaps.



# THE T-72 AND BASE

Looking for a T-72 I was willing to destroy, I came across Hobbycraft's kit in a box of kits I was planning to get rid of. I picked it up on clearance in 2005, took one look at the contents, and decided I got exactly what I'd paid for. The biggest issue I had turning it into a destroyed tank was resisting the urge to truly destroy it. I based the damage on photos of Iraqi tanks knocked out during Desert Storm, but it doesn't represent a specific vehicle. I imagined whatever took it out caused a quick, hot fire on one side, burning the road-wheel tires and scorching the hull and turret.



**1** I started by removing the tires from six of the 12 road wheels, starting with the inner halves which have axle holes all the way through. I attached them to a cutoff wheel holder in a rotary tool using a thin metal washer to lock the screw in place.



**2** With the rotary tool at its slowest setting, I held the spinning wheel against a coarse metal file and gradually wore the tire down. Checking my progress frequently ensured I didn't go too far.



**3** To finish, I held a coarse sanding stick against the spinning wheel to remove rough burrs of plastic.



**4** I drilled small holes through the hubs of the outer halves of each road wheel to mount them on the rotary tool. It was harder to keep them centered on the axle so some of them ended up uneven.



**5** Figuring the flames would have claimed the tank's rubber sand skirt on the damaged side, I removed it from the frame with a cutoff wheel in a rotary tool. Sanding sticks refined the edges.



**6** After a base-coat of Tamiya gray primer, I sprayed Tamiya lacquer rubber black (LP-65) lightened with a few drops of dark ghost gray (LP-36) on the damaged side under the fender and over the running gear ...

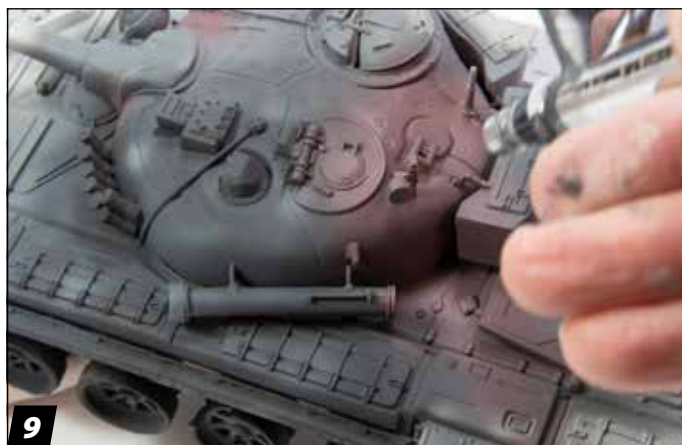


**7** ... as well as up over the edge of the hull and across one side of the turret and a section of the engine deck .



8

To break up the black, I added more dark ghost gray to the mix and randomly sprayed a few splotches around the turret and hull.



9

Then, I airbrushed a mix of dull red (LP-18) and German gray (LP-27) over a couple of sections, again mimicking images of knocked out Iraqi tanks.



10

After spraying the model with a couple of layers of hairspray and letting it dry overnight, I airbrushed Tamiya acrylic buff (XF-57) overlapping the scorched areas but not covering them.



11

Less than 30 minutes later, I wet the surface and then gently wore the buff around the edges of the scorching. I wanted the paint to look blistered at those margins.



12

To make a simple desert base for the Bradley and T-72, I spread two thin layers of wallboard joint compound (mud) over a 14- x 14-inch wooden base, allowing the first to dry overnight before adding the next.



13

While the second layer was still wet, I pressed the vehicles into the mud to ensure they sat in rather than on the sand; the Bradley was placed a couple of times to give an impression of tracks in its wake. A damp sponge textured the material.



14

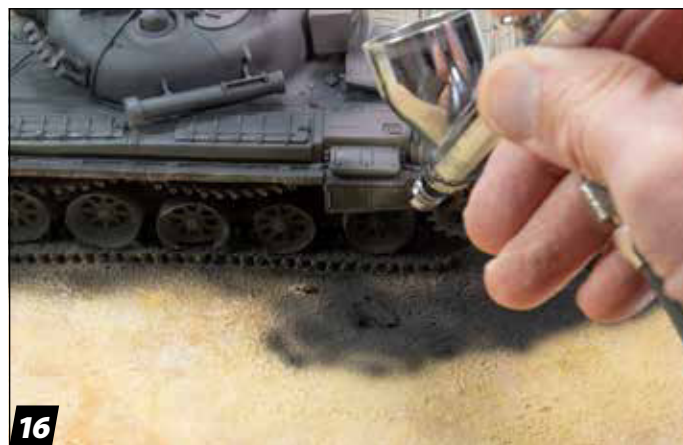
After gently removing the vehicles, I airbrushed the groundwork with a mix of Tamiya acrylic desert yellow (XF-59) and buff. Then I prodded and pushed yellow and sand-colored pigments over the surface with a soft brush.





15

Isopropyl alcohol dripped from a pipette fixed the pigments.



16

I attached the T-72 to the base with white glue. Once that was dry, I sprayed the ground around the scorched running gear with Tamiya acrylic flat black (XF-1) lightened with a little neutral gray (XF-53).



17

Figuring the torched tires would have turned to ash, I added off-white pigments around each of the road wheels. To get the right look to the tracks, I used Friulmodel individual metal links — that cost six times as much as I paid for the kit!



18

Finally, before gluing the Bradley to the base, I dusted the lower hull and running gear with the same pigments used on the base to tie it all together. With that, we called the operation over, but it may not be the last time our coalition unites to tackle a project. **FSM**



# Improve Eduard's TORNADO

*Accurate ordnance and weathering for a Gulf War striker*

BY VLADO JOVIC



**R**oyal Air Force Tornado GR1s specialized in taking out Iraqi airfields during the opening days of Desert Storm, known to the British as Operation Granby. Upon deployment to the Persian Gulf, the aircraft were painted with pinkish-tan desert camouflage and dressed with unique ... um ... charismatic nose art.

## Gathering parts

To build one of these hardworking combatants, I grabbed Eduard's 1/48 scale Desert Babe (remember the charismatic

comment) kit, a limited-edition rebox of Revell's Tornado GR1.

In addition to Revell's gray plastic, the kit features resin seats and wheels, along with photo-etched metal (PE) details, including pre-colored cockpit panels and seat belts.

The decal sheet offers eight options for Operation Granby Tornados, but the only ordnance in the box is a pair of inaccurately molded Sidewinder missiles, which makes for an anemic ground-attack aircraft. However, the kit does include the Sky Shadow radar-jamming pod and the flare

and chaff dispensing BOZ-EC pod. I ended up replacing them with more detailed Eduard Brassin offerings.

To increase my Tornado's hitting power, I picked up Eduard Brassin weapons and replaced the unimpressive kit cockpit and flat PE instrument panels with Aires resin; I did the same with the engine nozzles. Master Models turned-metal improved the pitot tube and AOA sensors.

I planned to build an RAF Tornado that deployed both CBU-123s and ALARMs in the Gulf War but discovered that none of the kit options met that requirement.





The Tornados' dangerous low-level missions against Iraqi airfields marked the combat debut of the swing-wing aircraft that entered RAF service in 1979.

I turned to a Print Scale decal sheet that offered markings for Granby Tornados that carried both weapons.

Aircraft ZD748 caught my fancy: Dubbed *Anola Kay*, it was a member of No. 9 Squadron, the first unit to fly the GR1. The squadron operated from Tabuk, Saudi Arabia, in early 1991.

### The build

I realized that this could become a complex build very quickly, especially adding an aftermarket cockpit, which involved removing a section of plastic. My plan was

to build different parts of the aircraft at the same time, including the wheel bays, intakes, and aftermarket cockpit. If I had all of the components done, my thinking went, I could assemble the airframe over a couple of days and be ready to paint.

Most of the build, including the wheel bays, landing gear, intakes, and even installing the Aires cockpit was straightforward and problem free.

The wings proved more difficult. The kit's design allows for the flaps, slats, and spoilers to be posed extended, but research indicated they were kept closed on parked

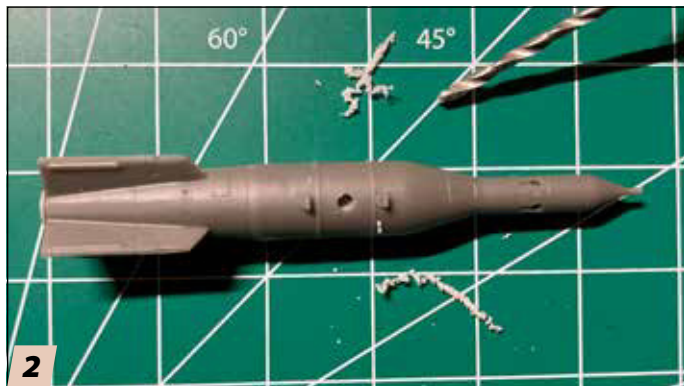
Tornados to prevent sand getting into the mechanism and messing up the works. Unfortunately, every part needed heavy sanding to fit flush. In the end, I made it fit without losing any surface detail.

The surface of the plastic was pebbly, but I fixed it quickly with 600-grit sandpaper.

The subassemblies went together pretty well with putty needed on top of the intakes, the sides of the rear fuselage, and around the air brakes. I used Deluxe Materials Perfect Plastic Putty, which applied easily and cleaned up with a cotton swab dipped in water, **1**.



**1** The airframe's ready for priming. The white is Deluxe Materials Perfect Plastic Putty I used to fill gaps especially around the top of the intakes.



**2** In preparation for fitting magnets to the resin bombs, I drilled holes with a 1.77mm bit chucked in a pin vise.



**3** I applied a little superglue in the drilled holes before inserting 1/16-inch rare-earth magnets.



**4** Make sure the corresponding holes in the weapon and the pylons are aligned and the polarity of magnets matches.



**5** I primed the models with black and then applied Tamiya dark sea gray to the leading edges of the wings and tail surfaces.



**6** Eduard provided resin ordnance unique to Tornados during Operation Granby. I airbrushed the weapons and counter-measures pods.

## Interchangeable ordnance

Tornados carried both the CPU-123s and ALARM missiles on hardpoints under the fuselage. Using a trick I learned several years ago, I added magnets so I can change out the weapons whenever I choose.

First, I drilled holes in the pylons and the CPU-123s with a 1.77mm bit, ensuring that they lined up with the molded locators, **2**. Then, I superglued 1/16-inch disc magnets into the holes, **3**. Make sure the polarity is correct or you'll be dropping the bombs every time you try to add them, **4**.

For the ALARM missiles, I glued the

magnets on top of the adapter rail that carries the missile, because the rail is too narrow to drill into. The protruding magnets fit into holes in the fuselage.

Each weapon was attached at a different location, so I placed the corresponding magnets differently: one at the front of the pylon for the CPUs and two in the middle of the pylon for the ALARMS.

## Painting

Before painting, I airbrushed MRP black primer (No. MRP-085) to give the surface a uniform base.

Then, I sprayed Tamiya dark sea gray (XF-54) on the leading edges of the wings, tail, and other areas that suffered wear; I would chip the camouflage and reveal the underlying paint later, **5**.

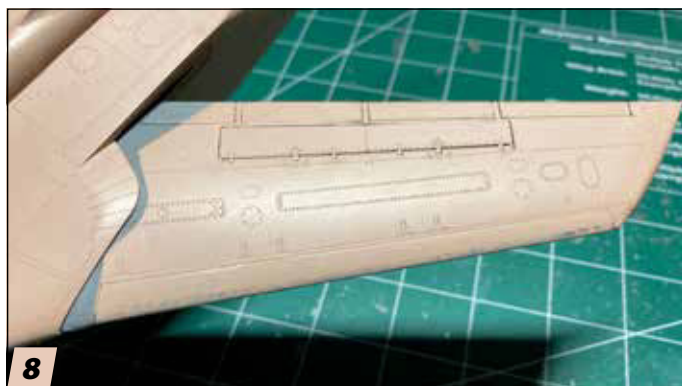
Gulf War Tornados wore a unique pinkish-brown camouflage applied over the existing dark green and gray before the aircraft departed the UK.

To reproduce that shade, I selected MRP desert pink (No. MRP-185). It looked a touch too brown to my eye, so I mixed in a few drops of MRP PRU pink (No. MRP-190).

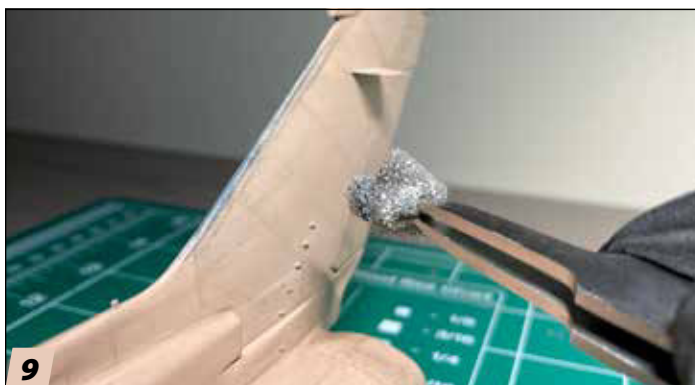




**7** Using 400-grit sandpaper, I lightly scratched the desert sand color on the wing leading edges to expose the black and grey underneath.



**8** Sand gently to avoid removing too much paint or exposing the plastic. However, there is a fix if you do!



**9** I dipped a small piece of foam in dark sea gray, then lightly touched the previously sanded surfaces to enhance the chipping and cover any plastic exposed by too aggressive sanding.



**10** In preparation for using AK Interactive weathering pencils, I wet the model's surface with a flat brush and water.



**11** Then, I lightly rubbed the weathering pencil — in this case smoke — over the wet surface to cover the entire area.

I airbrushed the ordnance with AK Interactive Real Colors acrylic lacquers.

The underwing fuel tanks carried on Tornados, known as Hindenburg tanks to RAF staff, were painted in-theater using locally procured paints that did not match the aircraft. Photos show the shades varied widely; I painted mine with pale sand (No. RC018).

For the CPU-123s, I applied bronze green (No. RC264) for the bomb body and Tamiya olive drab acrylic (XF-62) on the tail kit and fins. Thinking the olive drab too dark, I added a little Real Color pale sand

to lighten the shade. I had read AK acrylic lacquers could be mixed with Tamiya acrylics, and it worked great with zero problems producing the desired color, **6**.

### Weathering

Using 400-grit sandpaper, I eroded the desert paint camo on the leading edges of the wings and tail as well as small areas of the fuselage, **7**. This work replicated areas subjected to a sand-blasting effect while operating in the harsh desert environment. I worked slowly and carefully, moving the sandpaper lightly back and forth in the

direction of airflow to unevenly expose the underlying gray paint, **8**.

Then, I lightly dabbed Tamiya dark sea gray over the sanded areas with a chunk of foam to enhance the chipping and cover any plastic exposed during sanding, **9**. A light rubdown with 600-grit sandpaper, again moving in the direction of airflow, smoothed the surface.

To weather the Tornado, I used AK Interactive enamel panel-line washes and weathering pencils.

MRP lacquers are strong and resilient, so, as crazy as it sounds, I applied green/



12

Finally, I moved the color around the weathered area with a wet, flat brush to produce an uneven and dirty appearance.



13

Applying the dust/rain marks pencil with water and a serrated-tip brush on the bomb body gave it a realistic coat of dust.



14

Using MRP exhaust soot (No. MRP-180), I airbrushed the Tornado's characteristic reverse-thrust staining on the vertical tail.

brown Panel Liner for Desert Camouflage enamel directly to the paint without a clear coat. Once the wash dried, I used a paper towel to wipe away excess; cotton swabs moistened with AK Interactive white spirit cleaned up stubborn spots.

After seeing demonstrations of AK Interactive weathering pencils, I wanted to give them a shot. Testing them showed I could build up layers of color in small steps. Best of all, it is accomplished with water and mistakes can simply be removed by wiping the surface with a wet paper towel and, if needed, white spirit.

Working in sections, I brushed water onto the surface, **10**, then drew over the area with a smoke-colored pencil, **11**. I smeared the color with a flat brush for an appropriately dirty appearance, **12**.

Underneath the rear fuselage, a black weathering pencil and a brush with a serrated tip produced oil and fluid streaking. Photos from the kit instructions and dstorm.eu helped me get the weathering right.

I repeated the airframe weathering on the fuel tanks and bombs. For the latter, I used the dust/rain marks pencil to build up

a layer of dust, which usually occurred on the base where the bombs were prepped for loading, **13**.

Once everything was weathered, it was sealed with a coat of Alclad II gloss Klear Kote (No. ALC310).

### Decals and final steps

Tornados in the Gulf had few stencils because they were mostly painted over with the desert camouflage.

Other than the RAF roundels, nose art, mission marks, ejection-seat warning labels, and angle indicators on the horizontal







stabilizers, the aircraft had few other markings.

Print Scale's decals had problems, including markings that were too big, incorrect fonts, and, in the case of *Anola Kay*, the mission markings were backward. I corrected this by cutting each column and placing them in the right order on the model. I added decals from the kit for accuracy. A layer of gloss Klear Kote sealed the decals before flat Klear Kote (No. ALC314) gave everything a military sheen.

Lastly, I focused on the exhaust nozzles and the unique deposit of soot on the tail

that built up when the thrust reversers were deployed at landing, deflecting the blast forward. I airbrushed MRP exhaust soot for this, slowly building up the color. It's a light medium with a flat finish and can be layered for effect, **14**.

I painted the exhaust nozzles with Alclad II steel (No. ALC112), pale burnt metal (No. ALC104), and jet exhaust (No. ALC113).

With that done, I pieced together all of the bits and pieces to reveal a model of a tested and proven aircraft that played a big role in the Gulf War 30 years ago. **FSM**

## PROJECT AT A GLANCE

**Eduard Desert Babe**,

No. 11136, [eduard.com](http://eduard.com)

**Eduard CPU-123 Paveway II**,

No. 648550

**Eduard ALARM**, No. 648549

**Eduard AIM-9L/M Sidewinders**,

No. 648029

**Eduard Sky Shadow ECM Pod**,

No. 648528

**Eduard BOZ-EC pod**, No. 648527

**Aires cockpit**, No. 4800, [aires.cz](http://aires.cz)

**Aires exhaust nozzles**, No. 4736

**MRP acrylic lacquers**, [mrpaint.sk](http://mrpaint.sk)

**AK Interactive Real Colors acrylic lacquers**, [ak-interactive.com](http://ak-interactive.com)

**AK Interactive weathering pencils**

# READER GALLERY

**BRAD SHINN**

**HATFIELD, PENNSYLVANIA**

Model or real deal? That's the question Brad wanted you to ask when he built Hasegawa's 1/200 scale Airbus A300-600F and used Photoshop to place it on a runway. He subtly weathered the FedEx cargo plane with streaking on the wings, but kept the fuselage mostly pristine.



**▲ TOM RODGERS**

**COLLEYVILLE, TEXAS**

Tom built Airfix's 1/48 scale early P-40 and finished it as a Curtiss Hawk 81-A2 of the American Volunteer Group flown by R.T. Smith in 1942. Eduard photo-etched metal detailed the cockpit and exterior. He painted with Vallejo Model Air acrylics and applied the kit decals.



**▲ JOHN ZWEBER**

**GILBERT, ARIZONA**

Here is Fujimi's 1/24 scale kit of the 2010 Goodsmile Racing Hatsune Miku Porsche from the Japanese GT300 Race series. John says he likes unusual liveries and just had to build this. The kit did not include number placards, so he used Hobby Design's photo-etched metal set. For the base white, John used Splash lacquers and 2K clear; the blue, pink, and yellow are Vallejo acrylics. He says the decals were a bit of a challenge but worth it in the end.



# Put a "FIN" on Your Flightline



Italeri's Tornado GR.4 kit is as impressive in size as it is in detail: It's nearly 21" nose-to-tail, and almost 17" wingtip-to-wingtip. It was nicknamed the "Fin" because of its outsized, vertical stabilizer. The full-size, twin engine, variable-sweep wing GR.4 used its two afterburning turbofans to reach Mach 2.34. For decades the Tornado family has been a mainstay of Western European military aircraft. See your hobby dealer and put a remarkably detailed Tornado GR.4 on your flightline.



Detailed cockpit.  
Note finely reproduced  
photo-etched parts.

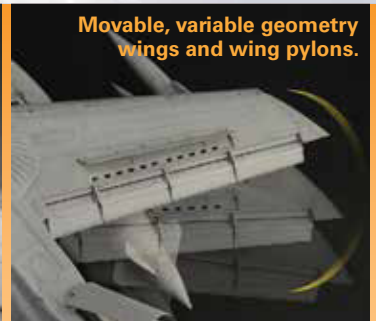
Removable RB.199 engine  
with special  
support  
trolley.



Build slats and flaps  
retracted or  
extended.  
Movable  
ailerons.



Movable, variable geometry  
wings and wing pylons.



Radome opens to  
reveal accurate radar.



Realistic  
landing  
gear and  
rubber  
tires.



## Other details include:

- Rubber wing root seal
- Full range of armament, including air-to-air and air-to-ground missiles
- Four R.A.F. super decal sheets
- Color instructions



**M O D E L R E C T I F I E R C O R P O R A T I O N**

360 Main Street, Suite 2, Matawan, NJ 07747 • 732-225-2100 • [www.modelrectifier.com](http://www.modelrectifier.com)



■ Train Controls

■ Model Railroad Accessories

■ Plastic Model Kits

■ Scenery

■ Educational Kits



# DESTROY

Build a 1/350 scale monster mashup of Godzilla battling alien tripods

BY MICHAEL WALLACE

When I began modeling it was for the sole purpose of making monster dioramas. I am a huge fan of giant monsters in film and in literature, although it's not necessarily re-creating a scene from a monster movie that gives me the most joy. Rather, I like to create scenes I want to see.

I think the 2014 U.S. version of Godzilla battling the alien tripods from the 2005 film *War of the Worlds* would be fantastic! And since the aliens would be making their second trip to Earth — an Earth with titans like Godzilla — they would bring a titan tripod. My diorama shows the climactic victory for Godzilla over the aliens in an urban setting.

The diorama is 1/350 scale and the model kits I used are T's Facto Godzilla 2014 First Appearance, Pegasus' 1/350 scale *War of the Worlds* Tripods Attack kit, Pegasus' 1/144 Scale *War of the Worlds* Alien Tripod, and nickdo3d 1/350 scale buildings that I found on eBay.





# *all Martians*



After assembling Godzilla and spraying the parts with Krylon gray primer, which would serve as the base coat for the skin, I airbrushed Tamiya buff on raised areas and the underside of the tail. The chest, belly, and tail were then highlighted with Tamiya deck tan.



I lightly mottled the chest, belly, and the underside of the gills with a mix of Createx Illustration Colors Bloodline surgery sienna and transparent medium. Dry-brushed light gray and tan highlighted the texture.



Using a piece of damp sea sponge, I applied a mix of Golden green gold heavy-body acrylic and Golden glazing liquid to the perimeter of the chest and belly.



4 For the mouth, I lightly sprayed a mix of ComArt riojas flesh, fertile soil, and riojas bone flesh, followed by washes of Vallejo burnt umber and red leather mixed with Badger Extender until the flesh looked right. The teeth were painted burnt umber, then golden brown, and topped off with Iraqi sand.



5 After painting the claws on the hands and feet with Tamiya buff, I brushed on a glaze of Vallejo burnt umber mixed with German gray that I wiped off so it left a hint of the darker shade. Then I mottled ComArt transparent smoke on all of the claws; a mist coat of Golden transparent raw umber hue followed.



6 I mixed a wash of Winsor & Newton burnt umber, Payne's gray, black, and white artist oils thinned with Turpenoid and applied it over the entire creature.



7 After airbrushing Testors Model Master clear flat lacquer, I dry-brushed the monstrous hide with a mix of Vallejo dark gray-blue, burnt umber, and deck tan to emphasize the texture.



8 Using a mix of Vallejo buff, khaki, and tan earth, I made a thick wash to highlight scale edges. I brushed this on carefully after dabbing most of the paint off on a paper towel. Turning back to Tamiya buff, I airbrushed the ends of the dorsal fins and tail ridges.



9 Finally, I mixed a tan oil wash of raw sienna, raw umber, and white, and applied it to deep crevasses between the scales using a fine brush.





10

To alter the poses of both tripods' accordion necks, I cut the inner folds, carefully bent them into the new position, and filled the voids with Magic Sculpt and red automotive putty.



11

I removed the middle section from the smaller tripod's blaster arms and replaced them with snakes of Magic Sculpt superglued in place after they cured.



12

After base-coating the tripod parts with gloss black enamel, I painted them with Alclad II laquers: gunmetal overall, then dull aluminum, stainless steel, and pale burnt metal to break-up the finish. Alclad II matte clear sealed everything.



13

A black oil paint pinwash emphasized surface details. I base-coated the neck and mandibles with Vallejo Model Air dark gray-blue, and then applied a light gray-blue wash to highlight edges and break up the color; a mist coat of Golden transparent raw umber finished the work.



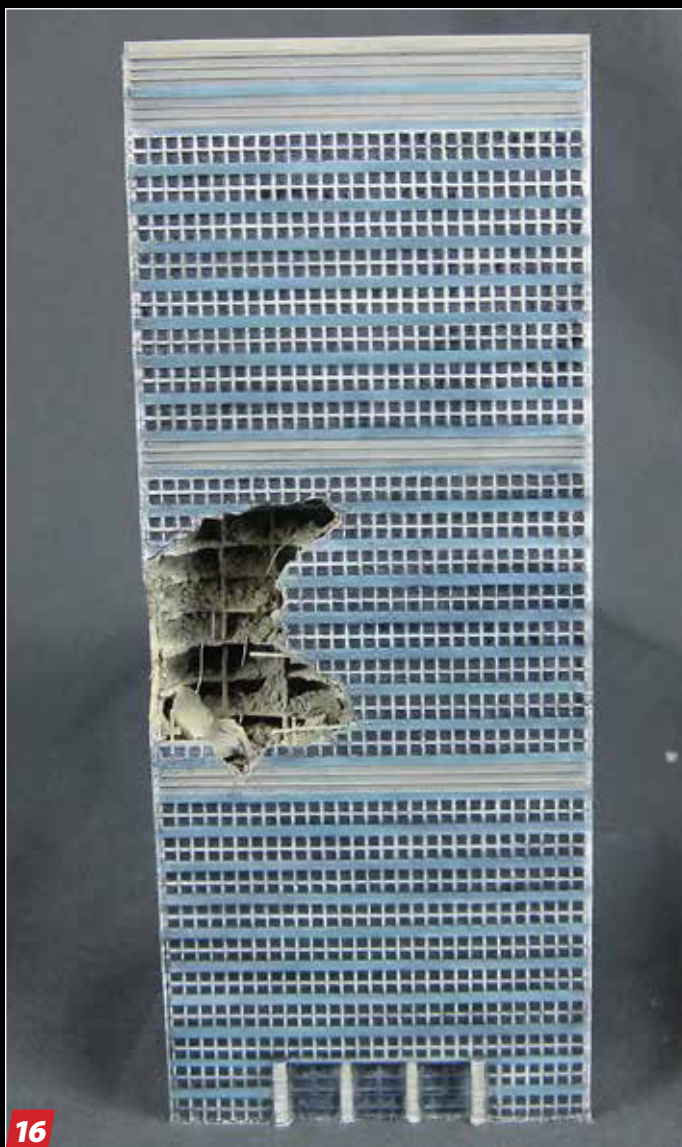
14

I cut a tripod impact hole in the 3D-printed skyscraper with a Cutra ultrasonic cutter. Then I packed the cavity with Apoxie Sculpt and pressed styrene floors and walls into it; model railroad ballast, gutter sweepings, styrene strips, and thin brass wire formed debris.



15

I sprayed the high-rise building with Krylon white primer, then brushed on a heavy glaze mixed from Vallejo Payne's gray and German gray. Wiping the building stained the building and colored the windows.



16

After masking the exterior floors, I airbrushed most of the building with Vallejo blue-gray and some with Vallejo concrete gray. The latter was used for the exposed interior before a wash of raw umber artist oils.



17

To detail the windowless sides, I sprayed dark gray dashes with an airbrush. Using a stencil, I airbrushed light gray-tan (almost white) between the dashes, creating a mosaic concrete effect.



18

Once the building was complete, I carefully heated and bent the small tripod's legs to match the hole.



19

To make kaiju spikes for the titan tripod, I sprayed mold-release agent onto a split piece of oak, then pressed a thin layer of Aves Apoxie Sculpt into the texture. Once the putty cured, I removed it, put putty on the back side, and pressed it to the wood. Final shaping and trimming was done with a Cutra knife.



20

To pose the tripod's legs severed by Godzilla's breath, I sliced them with my Cutra cutter and sponged heavy acrylic matte gel on the ends. After brushing on black and dry-brushed medium gray paint, I packed the ends with Apoxie Sculpt and inserted leftover 3D-printing fibers. The new tentacles are Green Stuff putty.





21

For the base, I started with 1-inch pink insulation foam and .040-inch sheet styrene. I mapped out the sidewalks and buildings with a straightedge and pencil.



22

After removing the courtyard, I scribed sidewalk panels into the surface. I cut the low-rise wing and built a wrecked interior as I had on the high-rise. The rest of the building will be added on the other side of Godzilla's foot.



23

I built the collapsed building under the titan tripod with pieces from a cut up 3D-printed structure. I hot-glued chunks of foam coated with Vallejo ground texture for rubble, then superglued thin shards of cured Apoxie Sculpt to 1/8-inch Evergreen styrene I-beams for floor sections.



24

After priming the building complex base with white, I applied Golden asphaltum glaze, wiping most of it away. Then, I glued 1-inch balsa foam to the insulation, traced Godzilla's footprints, and began carving the balsa with sculpting tools, putty knives, and aluminum foil balls.



25

After sealing the balsa foam with clear resin and patching gaps with Apoxie Sculpt, I primed the groundwork white. Golden asphaltum glaze, brushed on and wiped off, colored the surface and emphasized the rough and broken detail.



26

I applied a layer of Golden glazing liquid tinted with Vallejo deck tan and German gray with a chunk of damp sea sponge after dabbing most of the color off on a paper towel. I applied the glaze a couple of times, lightening the shade each time. A wash of raw umber and black artist oils toned down the blacktop and tied the colors together.





27

For green space, I rolled out thin sheets of Apoxie Sculpt and added grass texture with a stiff flux brush after placing them in the diorama. The grass was painted with Vallejo green and dry-brushed with green lightened with yellow ochre and white.



28

I built rubble piles from foam and Apoxie Sculpt, then applied Vallejo ground texture and pressed in broken pieces of cured putty. Ballast, grit, thin wire, and styrene were placed with thin white glue mixed with a few drops of AK Interactive Ultra Matte to kill any gloss.



29

After painting the rubble various shades of gray, tan, and concrete, and flowing on a raw umber and black wash, I dry-brushed light tan and light gray for highlights. Dried plant roots sprayed Krylon red oxide primer from the can made the Martian redweed, and I tacked it down with thin white glue. Other details include: 1/350 scale autos purchased on eBay and cars from Pegasus' *War of the Worlds* diorama kit; trees made from plant roots and Woodland Scenics foliage; scratchbuilt streetlights; and a boulevard made from sheet styrene and Apoxie Sculpt.





## Final Thoughts

Well, this project took a couple of months longer to complete than I anticipated, and it was quite a learning experience. Along the way I changed the composition of the scene several times, and tried some new materials and techniques — some worked and others didn't. This was also the first time I had worked with 3D-printed models. All in all, I'm pleased with the results and hope it inspires you to attempt a monstrous project, too. **FSM**



## New Spaceships!

Model kits - Lighting - Decals - Photoetch - Much More!

Star Wars - Space: 1999 - 2001 - Irwin Allen

Shop our website at [www.CultTVmanShop.com](http://www.CultTVmanShop.com)

# George's **JEEP**

Scratchbuilt modifications make a stunning tribute

BY MASSIMO SANTAROSSA



A fellow modeler's Jeep inspired Massimo Santarossa to try his hand at scratchbuilding details to re-create the one-of-a-kind vehicle in 1/25 scale.



One day, while shopping at a local hobby shop, I saw the AMT/Ertl 1/25 scale reissue of Daisy Duke's Jeep CJ. The shop owner jokingly said, "You could do a conversion and build George's Jeep." So you know, George is a member of our local modeling club. A colorful man, he owns an equally colorful Jeep that can be picked out from miles away, by either sight or sound, even in a sea of other cars.

The shop owner's suggestion stuck with me, nagged at me: Why *not* build George's Jeep? I returned a few days later and picked up the kit.

From the beginning, I knew this build would require a ton of scratchbuilding and weathering — there isn't a "George's Jeep" conversion kit and paint set! I decided to build the kit curbside, keeping the hood closed and leaving off the top cover. More than one person tried to get me to detail the engine compartment, hot dog roasting on the header and all, but I thought there was more interesting stuff to model inside George's Jeep.

For reference, I snuck outside during a club meeting and took photos of my subject from a bunch of different angles, inside and out, to capture all the details I needed. With no one the wiser, I returned home, and the work began.

## PROJECT AT A GLANCE

**AMT/Ertl Daisy's Jeep CJ**  
(No. 31535)

**Scott's Custom Resin**  
**mufflers**

**Aluminum soda-pop can**

**CMK 1.5mm hexagonal bolt**  
**heads (No. 007)**

**CMK 1.5mm round bolt**  
**heads (No. 005)**

**Evergreen .015"** (0.4mm)  
styrene sheet

**Evergreen .005"** (0.13mm)  
styrene sheet

**Plastruct .06"** (1.5mm)

styrene sheet

**Plastruct .06"** (1.5mm) round  
rod

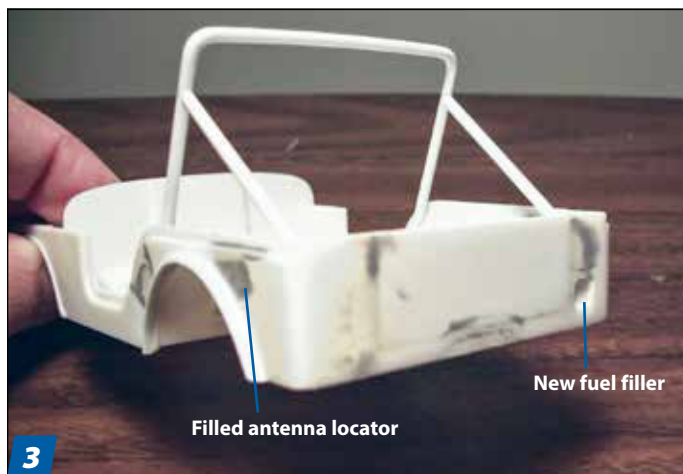
**Plastruct .06"** (1.5mm)  
quarter-round rod



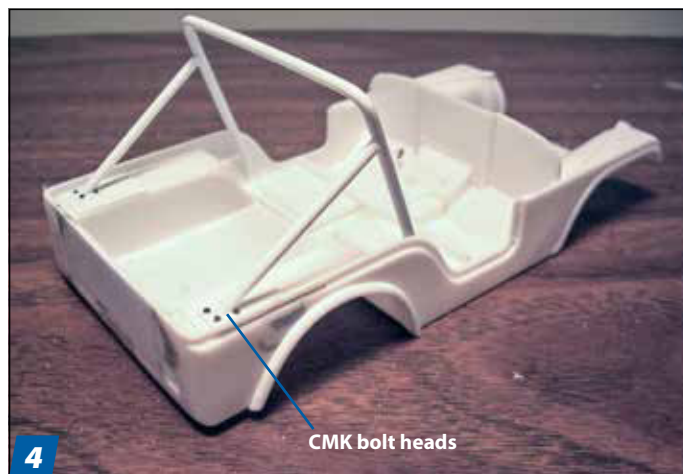
I got to it by making the required changes to the body. First up, eliminating the tailgate. I faired in a piece of .06-inch styrene sheet to complete the back of the box, then added a lip to its outside edge with a styrene strip.



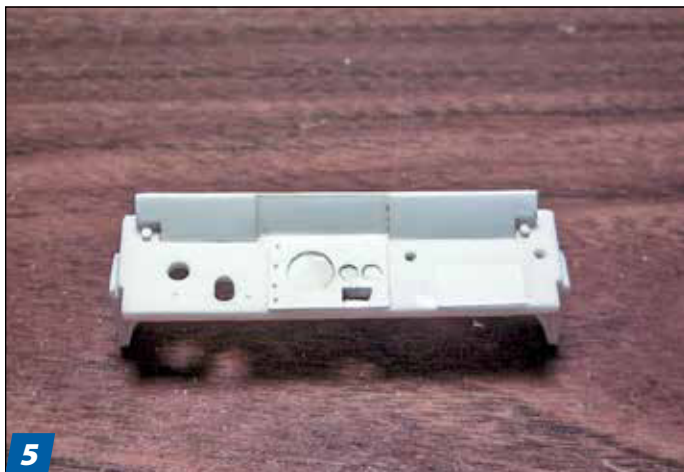
The fuel filler needed to be repositioned from the side to the rear. I sanded and filled the original location on the side of the body and carefully cut a new hole in the rear to the right of the recently filled-in tailgate.



Up next, 1.5mm quarter-round styrene rod worked perfectly for the rear fenders. The styrene was flexible enough for me to glue and shape the piece to the wheel-well opening as I went. I also filled the antenna mounting holes located on both sides of the box above the rear wheels.



The roll bar provided in the kit was too upright; the roll bar on George's jeep has a rake. After some rough measurements, I formed 2mm plastic rod into the main U-shape and glued it in place. Then I cut and mounted the rear braces and styrene-sheet brackets to the wheel wells.



5

I built the kit dash and filled and sanded the whole unit smooth. The new instrument panel and triangular sun shield are .015-inch styrene sheet; I cut the holes for the gauges with a hobby knife. I made the cover for the glove box from .005-inch styrene sheet.



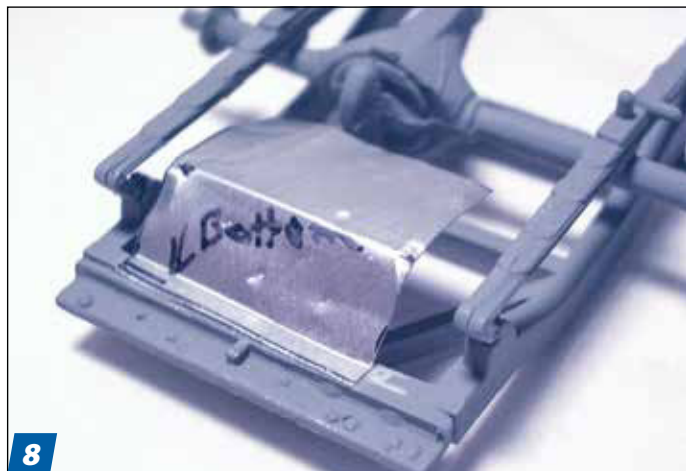
6

Heating and ventilation control levers were made from lengths of brass wire. The remaining details came from my spares box. Then I glued the new dash to the body and added a small grille fashioned from .005-inch styrene sheet to the cowl in front of the windshield.



7

George's Jeep has a mount for a spare tire in back. Using the "it looks about right" method, I crafted the three parts for the mount from an aluminum soda-pop can and superglued them together. There is one styrene part in the center, and CMK bolts for detail.



8

Most of the frame is out of the box. However, George's Jeep doesn't have bumpers. I fashioned front and rear bumper mounts from the rear bumper bracket (Part 113), added a crossmember made from styrene sheet, and snipped a fuel-tank skid plate from my trusty soda can.



9

Although I was building the model curbside, it still needed to have an engine up front — even if it wasn't superdetailed. I finished the kit engine, painted it, and gave it a wash to dirty it up a bit. Even though George's Jeep has a six-cylinder, this four-banger met my needs.



10

I base-coated the frame and body with Testors Model Master bright blue (No. 203223). The front fenders, dash, and windshield frame were coated with flat black.





11

The body received a gloss coat, and I went to work weathering with Testors rust (No. 1185TT) and multiple heavy washes of black watercolors. After spraying it with a satin varnish, I dry-brushed the interior with rust.



12

For rusty holes, I thinned the plastic from inside and then opened the area with a sharp No. 11 hobby blade, careful to make the hole irregular. Then I spackled on baking powder mixed with Testors rust. Add a little black or white paint for lighter and darker shades of rust.



13

I used much the same process to weather the frame as I did the body, with the addition of dry-brushing some areas with metallic colors before dry-brushing rust and applying small areas of rust-colored baking powder.



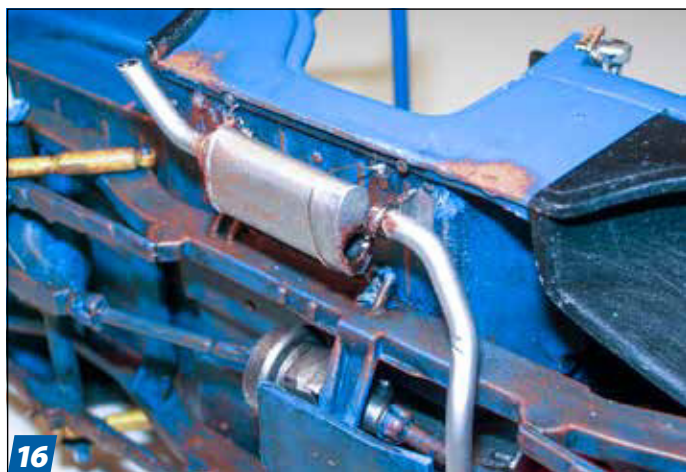
14

Now that the frame and body were finished, I glued them together. To make the weathering consistent, I airbrushed the underside and lower sides of the Jeep lightly with flat brown paint. Something was still missing ... the exhaust!



15

The kit came with only one tail pipe, but wouldn't you know it, George's Jeep has two side pipes. First, I formed .06-inch styrene rod to shape, which required a little heat from a candle.



16

A couple of Scott's Custom Resin mufflers looked perfect sitting off to the sides. I painted and weathered them to match the rest of the vehicle and made mounting clamps from lengths of scrap wire; L-brackets were made from my aluminum soda can.



17

A weathered Jeep would look wrong wearing shiny new tires, so the rubber had to be aged. **A** I picked out the sidewall lettering in white. **B** The whole tire was misted with heavily thinned gray paint, applying less to the sidewalls and more to the running surface so paint would seep between the treads. **C** When the paint was dry, I sanded the tread to add wear and expose the rubber beneath the paint. **D** I weathered the rims with heavy washes of both black and burnt umber watercolors.



The seats were finished flat black and given an uneven gloss coat, as were the steering wheel and center console. The driver's mirror was carved from plastic and mounted with paper-clip wire. I designed the gauges, printed them on clear decal film, and sealed with gloss clear.



## FINAL THOUGHTS

**GEORGE'S JEEP IS READY** to roll! Building a replica of a vehicle all our club members are familiar with was just plain fun. When the completed model finally made it to the display table, we all had good laugh, and none more than George.

One more thing you may have noticed: I removed the molded-in windshield wipers from the windshield and repositioned the passenger-side wiper to the bottom edge with one from my spares. There isn't supposed be one in front of the driver because the real thing was stolen! **FSM**







19

On the hood, I first airbrushed the left side with Tamiya royal blue, let it dry, then painted the whole part bright blue like the rest of the Jeep. When the second coat dried, I lightly sanded the left side of the hood to reveal the royal blue beneath, just like the real thing.



20

Producing the stowage items was a ton of fun. I downsized a photo of a Trumpeter Su-27 kit, printed it, and folded it into a box. The coffee cups were made in a similar manner. I placed parts from my spares in the paper box, including an antifreeze jug, old boot, and an ammo box.



By Mark McGovern

# The Phantom of the Opera or bust!

Painting tricks give a resin bust of a classic monster life

**M**ovies often create icons that remain part of popular culture long after the films themselves become lost or forgotten. The living skull makeup devised and worn by Lon Chaney for the title role in the 1925 version of *The Phantom of the Opera* is a great example. For my money, Chaney's is still the best realization of the villain yet to appear in the movies.

GeoMetric released a 1/4 scale bust of the Phantom in 1997. The sculpt is a painter's dream that comes to life with a few simple painting techniques.







Eyes can make or break a figure. They must be looking in the same direction so the subject doesn't look wall- or cross-eyed. Lining them up before painting makes finishing them easier. On this kit, the eyes are smooth domes. Testing eye directions showed how different positions change the Phantom's expression.



Once I'd chosen an expression, I marked the irises and pupils with a pencil. Then I positioned the bust with the eyes looking at me and drilled shallow depressions for the pupils.



For the base flesh color, I airbrushed the head with a mix of Testors insignia yellow and flat black enamels. After dry-brushing squiggly lines of the base color darkened with engine gray, I dabbed on spots of the base color lightened with Testors skin tone light tint. It looks unnatural, but later layers will blend the effects.



4

Using Vallejo acrylics, I painted the eyes with thin washes of a mix of white and pale blue-gray that allowed the base color to show through. I painted reddish flesh around the eyeball with a mix of light flesh, a little carmine red, and a touch of pale blue-gray. Then I outlined the eyeballs with the reddish flesh darkened with black. Over Pledge Floor Gloss (PFG), I painted the irises with artist oils by outlining them with black. I filled in the gray irises with streaks of black and white, cleaning the brush to keep the colors discrete.



5

On a large bust, too little contrast in the flesh colors can ruin the effect. So, I brushed pure black artist oil into the deep recesses of the ears, around the eyes, and the truncated nose. I lightened the black with a little yellow ochre to accentuate wrinkles under the eyes, deep crevices around the mouth, the border of the collar at the neck. I wanted the Phantom's complexion to be a sickly pale-yellow, so I started with a yellowish-brown shadow color mixed with yellow ochre, burnt sienna, alizarin crimson, and a touch of black.



6

After letting the shadows dry overnight, I lightened leftover shadow color with more yellow ochre, cadmium yellow, white, and, yes, black to maintain that nasty grayish tint. I dry-brushed this over the skin, starting on high features, then working my way down the face to mimic the play of light. I continued this process, applying progressively lighter tones over ever smaller areas. An advantage of using artist oils was that the darker colors, including the splotches applied to the base coat, remained visible beneath the lighter colors.



7

I repeatedly applied a color to get the right coverage before I moved to a lighter shade. I maintained reddish patches at the cheekbones, ears, nose, and chin, where blood vessels lie closest to the surface. The red made the flesh look more alive while breaking up the painted colors. To be honest, the process of painting flesh wasn't a series of steps. There was tweaking, adjusting, and so on until I was satisfied. So, don't feel discouraged if you find you have to wrestle with your model until you get just the effect you want.





**8** Hair generally gets thinner and lighter in color at the hairline, so I wanted to avoid a hard, painted-looking hairline. When I painted the first shadow flesh color, I brushed it past the hairline.



**9** Using artist oils, I lightened black with a little of the medium flesh tone and brushed it out from the molded hair until it softly blended with the shadow color at the hairline.



**10** Taking advantage of the extended drying time of artist oils, I brushed pure black into the lighter hairline color to create a subtle transition from the hairline color to the black hair.



**11** The locks of hair that rested on the skin were also blended into the shadows around them so they wouldn't appear too stark.



**12** I filled in the bulk of the hair with Testors flat black, which is less expensive and faster drying than the oil paints.



**13** After the black dried, I applied highlights with Testors burnt umber lightened with steel to provide a little sparkle; I used this lighter color sparingly. PFG was carefully brushed along the uppermost contours of the hair to give a realistic sheen. **FSM**

By Pablo Bauleo

# Prevent color showing through a decal

Simple technique enhances marking realism



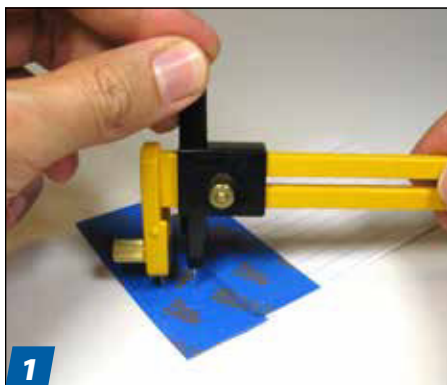
**M**any camouflage patterns are made up of contrasting colors. As often as not, national markings, squadron codes, and stencils span two or more of those colors. That situation always worries me. Will the decal be opaque enough? Thin decals may reveal the underlying color and leave camouflage demarcation lines visible. This simple technique will allow you to stop worrying about decal transparency issues.

## What you'll need

Olfa circular cutter  
Masking tape  
Index cards  
Ruler

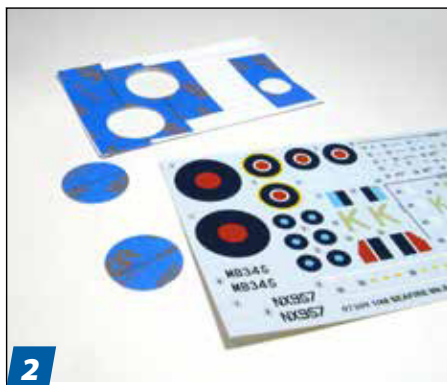






1

I measured the diameter of British roundel decals for a 1/48 scale Seafire. I set an Olfa cutter to half of that — the radius — and cut masks from tape on an index card.



2

Now, I had a set of national markings on the decal sheet and matching masks. Make sure to repeat this for any decal that will span two or more colors.



3

After applying the first color, in this case dark slate gray, I placed the circle masks where the roundels will go. This is an important step, so take your time to place the masks correctly.



4

Make sure the masks cover fully. The Olfa cutter pin made a small hole in the center that I covered with tape. And I burnished the edges to prevent paint bleeding under the tape.



5

Then I applied the second color (dark sea grey). When the paint was dry, I removed the masks to reveal uniformly colored backgrounds for the decals.



6

I applied the decals over a layer of clear gloss. As I said, mask placement determines where the decals will go, so I made sure I got them right in Step 4.



There you have it. A uniform marking that doesn't reveal the underlying colors. In this case it was 1/48 scale circular markings, but this technique can be easily adapted to many other shapes and sizes. **FSM**

# A Triebflügel worth taking for a spin

**M**uch like so-called “paper panzers,” the Focke-Wulf Triebflügel was an idea that never made it past wind tunnel testing — probably just as well for the pilots that it came too late. The rotary-winged vertical takeoff and landing fighter was a last-ditch effort by the Luftwaffe to reclaim air superiority under relentless assault by Allied bombers.

My experience with MiniArt 1/35 scale ground vehicles is that they are well-detailed kits but tedious to build. Going into this, one of MiniArt’s first aircraft, I thought it might be on par with Zoukei Mura and jammed full of insane detail. But no, I was relieved to discover the kit has just 135 parts.

Well-engineered, the parts feature crisp detail. The fuselage comprises three sections: The front including the cockpit, the center ring with rotors, and the aft section and landing gear.

Many of the kit’s parts go into the cockpit, including multipart photo-etched metal (PE) seat belts and control levers, as well as instrument decals.

The instructions are clear and easy to read, but I deviated from the assembly order and didn’t glue the rear bulkhead to the floor as indicated, because it interfered with the fit of the upper cockpit section.

Four cannons mount alongside the cockpit and the separate, thin weapon hatches can be posed open or closed.

The completed cockpit fits tightly into the nose halves; I used superglue to ensure the seam between the halves was tight.

Everything was simpler after the cockpit. The three rotor blades and their tip-mounted engines come next. The ramjets are detailed for what they are — simple engines without moving parts — and look good when finished. The rotors move and can be easily removed for transportation.

The landing gear is also well-detailed and simple. The kit offers the option of



closing the clamshell gear doors to pose the fighter in flight, but no stand is included. The clamshell doors have small attachment points, which is good for detail, but they require patience to mount cleanly. The four

outrigger landing gear are sturdy enough to hold the model up with help from the large center wheel.

The thin, crystal clear canopy can be posed open or closed.

Next I faced the biggest challenge: Deciding which markings to apply. The kit provides six options, all obviously fictitious. They include a red trainer, a yellow-trimmed Eastern Front fighter, and even a





### Exclusive reviews online!

Want more Workbench Reviews? Head to [FineScale.com](http://FineScale.com) and check out these models built by our experts:

- Kitty Hawk 1/48 scale Sukhoi Su-30
- Tamiya 1/24 scale Lotus Super 7
- Academy 1/35 scale Panzer III
- Monogram 1/24 scale Chevy S-10
- Takom 1/72 scale Chieftains
- Revell 1/25 scale '56 Chevy Del Ray
- Eduard 1/32 scale Bf 108
- Zvezda 1/35 scale M4A2 Sherman ▼



maritime camouflaged Triebflügel aboard the carrier *Hermann Göring* in the Mediterranean.

I chose a Berlin air-defense interceptor. The color instructions indicate the aircraft to be overall RLM 76 lichtblau, but I've never seen a German aircraft painted topcoat with epoxy sealed panel lines. I think it should be natural metal, so that's how I finished mine.

The paint chart references colors from Vallejo, Mr. Color, LifeColor, Tamiya, AK Interactive, and Mission Models.

The crisp decals went on OK with plenty of Microscale decal solutions to force them into the deep surface detail.

MiniArt's beautifully executed Triebflügel is a fun addition to any collection, and the basic kit is now available in several versions, including a night-fighter and one with a boarding ladder. The fact that it is 1/35 scale broadens the options if you want to use it in a diorama.

— Caleb Horn



**Kit:** No. 40002 **Scale:** 1/35

**Mfr.:** MiniArt, [miniart-models.com](http://miniart-models.com)

**Price:** \$62.99 **Comments:** Injection-molded, 135 parts (11 PE), decals

**Pros:** Well-executed kit; good fits; plenty of marking options

**Cons:** Discrepancies in assembly instructions and color callouts

# Italeri BMW M1 Procar

Similar to the IROC (International Race of Champions) series in the U.S., the short-lived Procar series took drivers from Formula One, the World Sportscar Championship, touring cars, and other series, and pitted them against each other in identically prepared BMW M1 race cars. Niki Lauda won the inaugural championship in 1979 winning three of the eight races.

Italeri's M1 was initially released by ESCI in 1979 and it has been re-released by ESCI and Revell Germany as recently as 2014 in a few different liveries. Given that it is more than 40 years old, the tooling has held up well. The details are still crisp, and there are minimal mold lines and very little flash; cleanup went relatively quickly. However, a fair number of sink marks needed to be dealt with, especially on and around the rear deck.

Parts related to the body are molded in white and everything else in black.

The all-new Cartograf decal sheet features the bright fluorescent markings of the title sponsor.

The instructions outline 12 steps and although the illustrations are a little crude by today's standards, they are clear and include decent color callouts. A nice, color, five-view plan provides decal placement.

The 11-part six-cylinder inline engine generally fits well. I drilled the intake trumpets for improved realism and attached them early rather than waiting until the engine was in the chassis. I also deviated

from the instructions by installing the engine after the lower subframe was attached to the main chassis. Sanding a little off the side of the alternator gave clearance with the chassis so the engine sat straight. The rest of the rear suspension went together without problems.

The straightforward front suspension has upper wishbones molded into the main chassis and lower wishbones molded with the subframe. The steering is designed to be movable with the tie-rod captured by mushrooming pins with a hot screwdriver. I found it stayed in place without modifying the pins.

The wheels are not chrome plated, so you'll need to paint them with metallic shades. I used Alclad II chrome for the rims and pale gold for the centers. Tire logos are molded into the sidewalls and decals are supplied if you prefer.

As with most race cars, the M1's interior is rather spare; only the essentials are there and that is true of the kit also. Decals provide seat belts, dash details, and the steering-wheel hub.

After cleaning up a few mold lines and filling a couple sink marks on the body, I attached the front and rear bumpers and sprayed Tamiya pure white

(TS-26) for the base color. On looking more closely at the scheme, I realized masking would be easier with the bumpers off the body. So I carefully cut the front bumper from the body. I left the rear in place because a black separation line would hide any goofs. Tamiya fluorescent red (TS-36) is supposed to match the decals. I confess that I don't have a lot of experience with this shade, but it seems sensitive to density — apply too much and it just looks red; too little, it looks pink!

Be sure the surface is wet when sliding the decals on. They are very thin, and I had

trouble finagling some of them into position.

While Italeri's BMW M1 may not on par with some of the latest offerings, it's still a decent kit and the only option for this unique racer. The aftermarket already has several marking options available that are definitely combining through if the set included isn't your first choice. I bet you'll find markings out there interesting enough to get you into the driver's seat on this M1, even if you built one years ago.

— Mike Klessig



**Kit:** No. 3643 **Scale:** 1/24

**Mfr.:** Italeri, Italeri.com (Sample courtesy of Model Rectifier Corp., modelrectifier.com) **Price:** \$52.99

**Comments:** Injection-molded plastic, 100 parts (4 vinyl), decals **Pros:** Beautiful Cartograf decals; crisp detail moldings

**Cons:** Sink marks



**KALMBACH  
HOBBYSTORE**

Find More of What  
You're Looking For

Scale Modeling  
Garden Railroading  
Model Trains  
Railroading  
Toy Trains

**BOOKS**

**DIGITAL  
DOWNLOADS**

**DVDS**

**VIDEOS**

**MAGAZINES**

**MODELING TOOLS**

**AND MORE!**

Shop for products  
related to your  
favorite hobby!

Visit  
**KalmbachHobbyStore.com**

**TOTALNAVY.COM**  
ALL SHIPS, ALL NAVIES, ALL KINDS  
(718) 471-5464  
**www.TotalNavy.com**

just **Flock It!**  
with Soft Flock Precision Cut Fibers.  
Over 20 colors available.  
Small packages just for the model maker.  
**Flock It!**  
info@flockit.com | www.flockit.com

**Custom Squads**  
**Models by Tony**  
New and bigger selections  
Your Police Headquarters for Parts & Accessories  
VISIT US AT **www.customsquads.com**  
FOR MORE INFO, SEND \$2.00 REFUNDABLE WITH ORDER. CUSTOM SQUADS -  
MODELS BY TONY, DEPT. SAE, 1226 CHERRY ST., SO. PLAINFIELD, NJ 07080

**FANTASTIC  
PLASTIC** Unique Resin Kits for  
Experienced Modelers  
Visit the Virtual Museum Store  
**www.fantastic-plastic.com**  
Concept Aircraft \* Spacecraft \* Sci-Fi \* Luft '46

**Replicas & Miniatures  
Company of Maryland**  
Resin & Photoetch Parts for Hot Rods, Rat Rods  
Engines, Detail Parts, Wheels, Tires  
48 Page Catalog - \$10.00 Check or M/O  
Visa / Mastercard Service - \$40.00 Minimum  
317 Roosevelt Ave., SW • Glen Burnie, MD 21061  
replmincmd@aol.com for a Price List

**MEGA  
HOBBY**  
The Largest Selection of Hobbies on the Web!  
Over 40,000 items from hundreds of manufacturers  
**FREE SHIPPING ON LOWER 48  
USA ORDERS OVER \$100**  
MegaHobby.com  
110 Hurlock Avenue  
Magnolia, NJ, 08049  
Order securely online or call toll free: 888-642-0093  
**WWW.MEGAHOBBY.COM**

**GLENN HOOVER**  
Model Build Instructions  
I do the prep work for you...  
Reorganize the model kit instructions  
Combine aftermarket part instructions  
...into a seamless, single checklist  
New Releases - Upgraded Website  
See my website for a list of books  
**glennhoovermodels.com**

## Ad Index

We believe that our readers are as important as our advertisers. If you do not receive your merchandise or a reply from an advertiser within a reasonable period, please contact us. Provide details about what you ordered and the amount you paid. If no action is obtained after we forward your complaint to the advertiser, we will not accept further advertising from them. *FineScale Modeler* magazine, 21027 Crossroads Circle, Waukesha, WI 53187. The Advertiser Index is provided as a service to *FineScale Modeler* magazine readers. The magazine is not responsible for omissions or for typographical errors in names or page numbers.

|                                |    |                                       |    |
|--------------------------------|----|---------------------------------------|----|
| Agora Models _____             | 2  | Glenn Hoover Models, LLC _____        | 65 |
| ARA Press _____                | 4  | Megahobby.com _____                   | 65 |
| Aves Studio _____              | 4  | Model Rectifier Corp _____            | 41 |
| Building Muscle Cars _____     | 10 | Models by Tony _____                  | 65 |
| Cult TV Man _____              | 49 | ParaGrafix _____                      | 4  |
| Dean's Hobby Stop _____        | 4  | Proxxon _____                         | 7  |
| Evergreen Scale Models _____   | 4  | Replicas & Miniatures Co. of MD _____ | 65 |
| Fantastic Plastic Models _____ | 65 | Tamiya America Inc. _____             | 68 |
| Flex I File _____              | 4  | TotalNavy.com _____                   | 65 |
| Flock It _____                 | 65 |                                       |    |

## Classified Marketplace

This section is open to anyone who wants to sell or buy scale modeling merchandise. FSM reserves the right to edit undesirable copy or refuse listing. For FSM's private records, please furnish: a telephone number and a street address.

**All Copy:** Set in standard format. First several words only set in bold face. If possible, ads should be sent typewritten and categorized to ensure accuracy.

**Coming Events Rate:** \$45 per issue (55 word maximum). Ads will contain the following information about the event: state, city, sponsoring organization and name of event, meet, auction or show, dates, location, times, admission fee, name and/or telephone number and/or email of person to contact for information. Name, daytime telephone number and street address of the person providing the information is also required but need not be included in the ad. Unless otherwise requested, ads will be published in the issue month that the event occurs in. Additional months are available at the \$45 per issue fee. Please specify issue date(s).

**Word Ad Rates:** 1 insertion - \$1.13 per word, 5 insertions - \$1.08 per word, 10 insertions - 99¢ per word. \$30 minimum per issue. Count all initials, single numbers, street number or name, city, state, zip, phone numbers each as one word. Payment must accompany the ad. To receive the discount you must order and prepay for all ads at one time. We accept Visa, Mastercard, American Express and Discover.

**Send Your Ads To:** *FineScale Modeler* - Classified Marketplace, 21027 Crossroads Circle, P.O. Box 1612, Waukesha, WI 53187-1612. Phone toll-free: 1-888-558-1544, Ext. 551, or fax: 262-796-0126. E-mail: [classifieds@kalmbach.com](mailto:classifieds@kalmbach.com)

## FOR SALE

**BUSINESS FOR SALE:** Combat Models/Roberts Models. 83 S. Pine St., Hazleton, PA. Well established business. Continuous operations since 1978. Serious inquiries only. Please call 570-450-5647.

## FOR SALE (CONT.)

**CANOPY MASKING AND MORE! WWW.EZMASKS.COM**  
List \$3.00. Chris Loney, 75 Golf Club Rd., Smiths Falls, ON, Canada K7A 4S5. 613-283-5206, [ezmasks@gmail.com](mailto:ezmasks@gmail.com)

**FRED'S MODEL WORLD** sells model kits too darn cheap! Check us out at [www.fredsmodelworldonline.com](http://www.fredsmodelworldonline.com), Facebook, or contact Fred at [fsterns@aol.com](mailto:fsterns@aol.com) or call 716-838-6797. Our address is Fred Sterns, 48 Standish Road, Buffalo, NY 14216

**THOUSANDS OF MODEL KITS** for sale. All types from Old Aurora to new releases. Send a \$70 SASE to: Dean Sills, 113 West Exchange St., Owosso, MI 48867. Specify Military or Auto List. Phone: 989-720-2137. Fax: 989-720-0937. E-mail: [dean@deanshobbystop.com](mailto:dean@deanshobbystop.com)

## WANTED

**AIRCRAFT, ARMOR, SCI-FI, FIGURES, AUTO, ETC.** Buying kit collections, large or small, worldwide. Top prices paid. Call Jim Banko 610-814-2784 or mail list to 122 Independence Ct., Bethlehem, PA 18020, fax 610-439-4141. E-mail: [cth1@prodigy.net](mailto:cth1@prodigy.net)

**BUILT PLASTIC MODEL COLLECTIONS:** Planes, cars, boats. Contact [mike@peterson-picture.com](mailto:mike@peterson-picture.com) or 773-387-1400.

**COLLECTOR LOOKING FOR** 1/43 scale Carrera Panamericana Mexico diecast and assembled model cars. Please send photo, price, and a brief description to: [richardtsinclair@gmail.com](mailto:richardtsinclair@gmail.com). I am also looking for 1/43 scale Briggs Cunningham cars (race or street), and service vehicles.

**I WANT TO BUY YOUR UNBUILT MODEL KITS:** Any size collection. Dean Sills, 113 West Exchange St., Owosso, MI 48867. 989-720-2137, Fax 989-720-0937. Email: [dean@deanshobbystop.com](mailto:dean@deanshobbystop.com)

## WANTED (CONT.)

**MODEL CAR AND TRUCK KITS.** Unbuilt, started or built. Any size collection. Good prices paid. Please contact: Fred Sterns, 48 Standish Road, Buffalo, NY 14216. Phone: 716-838-6797. Fax: 716-836-6057. E-mail: [fsterns@aol.com](mailto:fsterns@aol.com)

## MISCELLANEOUS

**1ST AND ABSOLUTELY THE BEST MUSEUM-QUALITY MODELS.** IPMS Nationals winner building aircraft and armor to your specification, including conversions and scratchbuilt. Call BC Models for quote and information at 913-385-9594 or visit [www.bcmmodels.com](http://www.bcmmodels.com)

**FINESCALE MODELER AUTHOR** and IPMS medalist will build your favorite aircraft, specializing in metal finishes. Contact John Adelmann at 563-556-7641 or [jjadelmann@yahoo.com](mailto:jjadelmann@yahoo.com)

## Closing Dates:

March 2021 closes Dec. 8, April closes  
Jan. 13, May closes Feb. 16, July  
closes April 12, Sept. closes June 14,  
Oct. closes July 19, Nov. closes Aug. 16,  
Dec. closes Sept. 14.

## Local Hobby Shop Directory

Local Hobby Shop Directory listings are available for the next ten issues for \$275 (payable in advance) or at \$37 per issue (billed to established accounts for a minimum of ten insertions). Ads will be set in standard listing typography. All insertions must be consecutive and may be invoiced if you have credit established with us. No mention of mail order business permitted. For information call 888-558-1544, ext. 551. Closing dates listed in Classifieds section.

### ARKANSAS • Jacksonville

Headquarters for scale hobbies. Models; N, HO, O trains, gaming, tools, paints, etc. Discounts & special orders. Open 10-6, closed Sundays and Wednesdays.

**RAIL & SPRUE HOBBIES**  
1200 John Harden Dr. 501-982-6836

### CALIFORNIA • Burbank

Large selection of plastic kits, paints, and supplies. Special orders no problem. Visit us in person or online [www.houseofhobbies.com](http://www.houseofhobbies.com). Secure online ordering.

**BURBANK'S HOUSE OF HOBBIES**  
911 S. Victory Blvd. 818-848-3674

### CALIFORNIA • Garden Grove

Rewards program for 10% back on purchases. Plastic aircraft, armor, ships, cars, decals, books, paints, tools, miniatures war-games. Mon-Thur 11-8, Fri 11-midnight, Sat 10-midnight, Sun 11-7 [www.brookhursthobbies.com](http://www.brookhursthobbies.com)

**BROOKHURST HOBBIES**  
12188 Brookhurst St. 714-636-3580

### CALIFORNIA • Hollister

Model planes, car, ships & figures. Model train scales: Z, N, HO, O & G. Paints, tools, R/C & parts, incl. service. Craft & educational kits, supplies, products. Clinics available. Tue-Sat 11-6; Sun 12-4. [debbiebartunek@mac.com](mailto:debbiebartunek@mac.com)

**B.C.T. HOBBY & CRAFTS**  
201-C McCray St. 831-635-0537

### COLORADO • Aurora

Large inventory of models from the world over! Detailing accessories, research publications, games, trains, R/C, tools, and supplies. Easy access from D.I.A. <http://www.colpar.com>

**COLPAR HOBBIES**  
1915 S. Havana St. 800-876-0414

### CONNECTICUT • Cos Cob

Planes, tanks, cars, ships, rockets, plastic and wood kits. Trains. Authorized Lionel dealer. Die-cast, RC, slot cars, structural and diorama supplier. Special orders welcome.

**ANN'S HOBBY CENTER**  
405 E. Putnam Avenue 203-869-0969

### CONNECTICUT • Milford

Extensive selection of armor kits & Verlinden accessories. Military, auto & aircraft plastic models. Photo-etched parts. O gauge train sets. Open Tues - Sat 11-6, Sun 12-5. [www.HOHOobbies.com](http://www.HOHOobbies.com)

**HQ HOBBIES**  
394 New Haven Ave., Unit 1 203-882-1799

### MARYLAND • Towson

Huge selection of Models, Figures, Paints, and Modeling Supplies. Iwata and Badger Airbrush Dealer. [www.CompetitionMinis.com](http://www.CompetitionMinis.com)

**COMPETITION MINIS**  
8803 Orchard Tree Lane 410-561-6324

### MASSACHUSETTS • Norton

6,000 model kits, old and new: Autos, armor, planes & sci-fi. Reference books & supplies. Th&Fr 12-7, Sat&Sun 12-5. Rt. 495 to Rt. 123E, behind Dunkin' Donuts. [www.mymummy.com](http://www.mymummy.com)

**HARRY'S HOBBIES & COLLECTIBLES**  
250 E. Main St., Rt. 123 508-285-8080

### MICHIGAN • Owosso

Thousands of model kits from old Aurora to new releases. Mon 4pm-7pm, Tues - Fri 1:30am-5pm, Sat 11:30am-4:00pm E-mail: [dean@deanshobbystop.com](mailto:dean@deanshobbystop.com)

**DEAN'S HOBBY STOP**  
113 West Exchange St. 989-720-2137

### MICHIGAN • Traverse City

Let your imagination run wild! Aircraft, ships, cars, armor, special orders, diecast cars, model railroad Z to G and more...

**TRAINS & THINGS HOBBIES**  
210 East Front St. 231-947-1353

### MICHIGAN • Ypsilanti-Metro Detroit

Your single stop model building shop. Michigan's largest selection of new and vintage kits in all genres plus everything needed to build them. Please call for hours.

**MODELCAVE**  
103 W. Michigan Avenue 734-316-2281

### NEW HAMPSHIRE • Dover

Best plastic, resin & balsa kits from around the world. Scratch building & diorama supplies. reference books, large paint selection including Humbrol, Citadel & Testors

**ELITE HOBBIES**  
#334 90 Washington St. 603-749-0800

### NEW JERSEY • Kenil

Full service hobbies, a full line of HO, N, 3-Rail, military, cars, boats, planes, dollhouses, scratchbuilding supplies, plus details-details-details!

**KENVIL HOBBIES**  
590 Rt. 46 973-584-1188

### NEW JERSEY • Magnolia (Camden)

Huge foreign & domestic model selection all scales. Automobiles, aircraft, ship, books, wargames, scenery, diorama, supplies, parts & tools. Open 7 days

**AAA HOBBIES & CRAFTS**  
706 N. White Horse Pike 856-435-1188

### NEW YORK • Astoria

Car, Plane, Military, Models, Trains, Paints, Tools, Diecast, Art Supplies, Wood & Wood Models. Open Wed., Thur., Fri., Sat. 11:00 to 6:30.

**RUDY'S HOBBY & ART**  
3516 30TH Ave 718-545-8280

### NEW YORK • Middle Island

Excellent selection of lead miniatures-historical and fantasy, Plastic models, wargames & modeling supplies. Books and magazines.

**MEN AT ARMS HOBBIES, INC.**  
134 Middle Country Rd. 631-924-0583

### NEW YORK • Upr Eastside GR Manhattan

Visit our in-house Aircraft Model Museum. Foreign and domestic plastic and wood kits. Open 7 days.

**JAN'S HOBBY SHOP, INC.**  
1435 Lexington Ave. 212-987-4765

### OKLAHOMA • Owasso

Oklahoma's largest plastic kit, paint & after-market inventory. Planes, cars, trucks, armor, ships, trains & sci-fi. Special orders welcome! Tue - Fri 10-5, Sat 11-5, Closed Sundays & Mondays. Web site: [www.topshelfmodelsllc.com](http://www.topshelfmodelsllc.com)

**TOP SHELF MODELS**  
119 S. Main St. 918-274-0433

### OREGON • Beaverton

Complete full line hobby shop. Z, N, HO, O, Lionel, and LGB. Open Mon-Fri 10-6, Sat 10-5, Sun 12-5.

**TAMMIES HOBBIES**  
12024 SW Canyon Rd. 503-644-4535

### TEXAS • Houston

HO & N, Lionel trains. Complete line of plastic kits, military, architectural supplies, paints and tools. Open Mon-Fri 11am-6pm, Sat 10am-5pm, Sun 12pm-5pm. [www.gandgmmodels.com](http://www.gandgmmodels.com)

**G & G MODEL SHOP**  
2029 Southwest FWY 713-529-7752

### TEXAS • San Antonio

Scale modeling from beginner to expert. Wide selection of aircraft, armor, autos, figures, ships, & sci-fi. Lots of reference material, detail parts, decals, tools, & eight lines of paint. Tue-Sat 10am-6pm [www.dibbleshobbies.com](http://www.dibbleshobbies.com)

**DIBBLE'S HOBBIES**  
1029 Donaldson Ave. 210-735-7721

### TEXAS • San Antonio

ONE STOP SHOPPING FOR PLASTIC MODELS! Stocking Aircrafts, Armor, Car, Ship and Sci-fi models and detailing accessories. Full lines of Tamiya, Vallejo, and Alclad Paints.

**HILL COUNTRY HOBBY**  
9355 Bandera Road, Ste. 109 210-681-2007

### WASHINGTON • Seattle

Plastic Model Specialists. Largest selection of plastic models in NW! We have Aircraft, Armor, Auto, SCI-FI, and Gundam, along with great paint selection. Email us at [skyway@nwlink.com](mailto:skyway@nwlink.com) or look us up at [www.skywaymodel.com](http://www.skywaymodel.com)

**SKYWAY MODEL SHOP**  
12615 Renton Ave. S. 206-772-1211

### CANADA-ON • Toronto

Large selection of new & out-of-production kits. Accessories & finishing products. Servicing the hobbies since 1986. We buy kit collections. [www.wheelswingshobbies.com](http://www.wheelswingshobbies.com)

**WHEELS AND WINGS**  
1880 Danforth Ave. 416-752-0071

Run your Retail Directory ad in the next issue of *FineScale Modeler*! Call 888-558-1544, ext. 551 for more information.

**FineScale  
Modeler**  
MAGAZINE

When contacting advertisers, mention you saw their ad in *FineScale Modeler* magazine!



By Elizabeth Nash

# Scratchbuild an entire scene

Cut up metal coffee cans, cardboard, and earrings make a 1/24 scale WWII diorama



**C**harlie Rivera of Newark, California, is all about scratchbuilding in a *big* way. Take for instance his 1/24 scale diorama depicting the capturing of a German Gestapo headquarters. It includes a castle, pond and marsh, land strip, aircraft, and three military vehicles with guns and ammunition. Not a single kit was used, and everything — except the figures — was scratchbuilt. Wow!

“Since age 11, I always liked to create and build things,” says Charlie. “I served in the Korean War for two years (1951–1953) starting when I was 21. During that time, I drove an ammunition truck that delivered cannon shells to the front lines. Many years after returning home from the war, I began to make scale models of my memories in Korea and added other elements that interested me from wartime history. This diorama is a collection of all those interests, grouped together.”

The only item in Charlie’s diorama that was not scratchbuilt was the military figures — those are his granddaughter’s Polly Pocket dolls outfitted in tissue paper uniforms. The GMC M211’s front grille is a section of a hair comb and headlights are small earring beads!

Charlie built with items he found around home. A common material was the metal from coffee cans. “I would cut the can into sheets and bend them into forms for the truck frames, fenders, bumpers, battery boxes, doors, and other parts.”

The castle was once a box that held Christmas lights, modified to look like stone. A cardboard soda carton soaked in water and folded into the shape formed the stairway. The water tower is a cylindrical piece of foam with a nail sticking out of the center to support a ring of toothpicks; that was covered with paper towels and painted to look like the tower’s roof. Super creative, Charlie! **FSM**

# Panzerkampfwagen IV Ausf. F Sd. Kfz. 161

**1/35 Scale Plastic Model Kit.** Item No.35374

This historical model assembly kit depicts the German Pz.Kpfw.IV. It was a stalwart of the WWII effort, serving from start to finish of the conflict. Manufacture began in 1936 with the Ausf.A, and went through a number of specifications before what was perhaps the definitive short barreled variant started production in 1941: the Ausf. F. It had reinforced armor and updated hull designs, as well as an L/24 75mm gun. Around 460 rolled off of the production lines, serving on the Eastern front as Nazi Germany grappled with the Soviet Union, and in North Africa.



Comes with three figures (commander, gunner and loader) for installation in the model's various hatches.



- **Brand new parts!** (Only the lower hull and wheels are existing designs).

- Assembly type tracks capture the main Ausf.F design with lightened center guide sections. Tracks are assembled on an included jig to help recreate realistic upper run 'sag.'

- Choose between two types of engine deck hatch, with or without louver.

- Markings are included to recreate a choice of two different Eastern Front vehicles.

- Includes a full color painting guide and four-language background story.



TAMIYAUSA



TAMIYAUSA



TAMIYAUSA  
OFFICIAL



TAMIYAUSA



TAMIYAUSA