

BEGINNERS GUIDE: **DIORAMAS**





Chuck and Greg used ingenuity and inexpensive materials to create an inviting space to fill with 1/35 scale models and figures.

DIORAMAS for the frugal modeler

Imagination and inexpensive materials
are all you need

*By Chuck Bevill and Greg Gregg
Photography by Alisha Gregg*



1 On the lower left are four frame pieces, each with a dado to hold a sheet of plywood; the beveled cuts at the end of each piece (seen in the assembled frames leaning against the wall) are still to come. The frame on the right shows a Pony band clamp in place with the ratchet tightener at the top of the frame.



2 Sketches help plan the scenery to come. On the floor, left to right: frame filled with drywall scraps; Pony band clamp at rest; and the plywood sheet that seats the drywall within the frame.



3 To remove drywall's paper covering, soak the paper with water. Use sandpaper on the last stubborn bits of paper.

Every modeler knows how effective a great diorama base can be. The sky's the limit, especially with more pre-fabricated materials available now than ever before.

However, the imaginative use of basic skills and found materials can save you time and money and help you build great-looking diorama bases. We built three display bases from three 8' lengths of 2" x 4" lumber, a sheet of 1/2" plywood, and a 4' x 3' sheet of 3/4"-thick drywall for less than \$15 – and we used only new stuff. In addition to improving your model displays



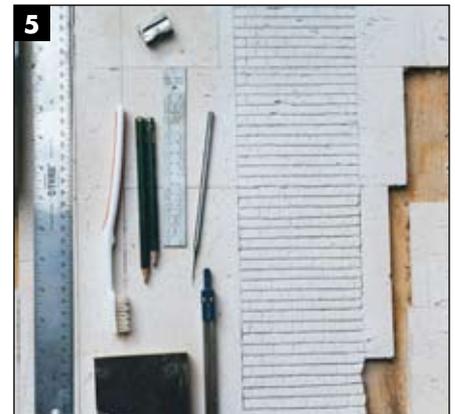
4 Notice how the frames' sides have been sloped at 45 degrees. A belt sander quickly levels the drywall surface but also makes one whale of a mess; wear an industrial-grade respirator and eye protection.

with inexpensive, easily available materials, you can use stuff that may be lying around your garage or workbench area. Once you've read this article, you'll agree: If you can't find a modeling use for it, it's time to throw it out!

Note: Before you begin on any part of this project, you should be equipped with industrial-use eye protection and an approved respirator.

Square it up

Square bases are easiest to build because all sides are cut the same way. After cutting each piece of 2" x 4" to length, we cut a dado, or lip, on its inner surface; later, a square of plywood would be seated on this edge, **1**. Next, the sides were bevel-cut and glued to form a frame; we used a Pony 1215 band clamp (available at hardware stores), which includes a 15' nylon strap, four 90-degree strap holders, and a ratchet device for tightening the strap with a 7/16"



5 Building a cobblestone road in drywall is easier than you might think. About the only specialized tool in this shot is the Bare-Metal scribe seen on the left side of the road.

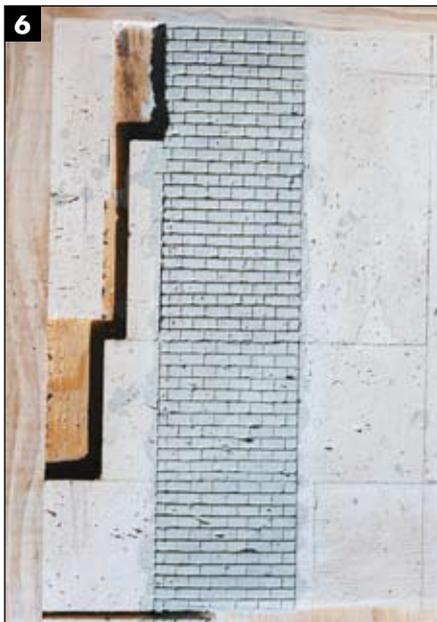
wrench. The result is a square frame with no nail holes to fill and sand.

We waited for the glue to dry before we sloped the sides at 45 degrees with a tilted saw blade and a "rip fence" to guide the wood through the saw cut. It's easier to get the corners right this way, rather than making these cuts before assembling the frame, and it saves filling and sanding time at the corners.

Ode to drywall

We took this opportunity to demonstrate an extremely versatile yet often overlooked diorama material – drywall. Inexpensive and available at any lumberyard or home improvement center, it comes in a variety of thicknesses and is usually sold in 4' x 8' sheets, although many places sell odd-size pieces for smaller home repairs.

Drywall is rigid, durable, and easy to



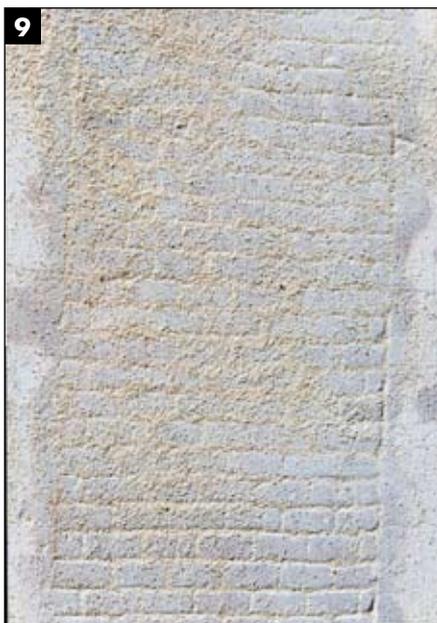
6 After a cobblestone pattern is scribed in the dry-wall, it's painted with a base coat of light gray, oil-based primer.



7 Chuck and Greg follow the base coat with a thin wash of burnt-umber artist oils.



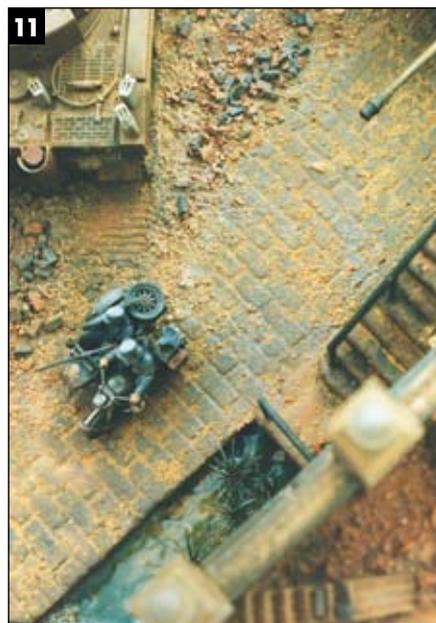
8 Adjusting the contrast, the modelers wipe the wash from the high spots to lend natural depth to details.



9 Fine, light-color sand used for grout also adds realism to the cobblestone, filling in deeper crevices and softening the contrast.



10 After the cobblestone is briskly swept with a wide paintbrush, grout is fixed in place with a thin, watery white-glue mix. This glue coat will be shiny until treated with a coat of flat clear.



11 Using contrasting colors of stone and grout produces various results. Experiment to find the look you want.

work. You can cut it to shape, scrub it with water, paint it, sand it, you name it. It can be scribed or sculpted to make intricately curved cobblestone sidewalks, brick roadways, finished brick, stone retaining walls, or concrete steps. Let your imagination be your guide.

Stay away from salvaged or old drywall. It's usually too dry and crumbles easily. The money you save will not be worth the extra time and trouble.

Surface preparations

A rough sketch on the drywall surface helps determine proportions and placement of details, **2**. You can cut a single piece of drywall or use several small pieces (as we did). A single piece works best if you will be scribing details that run the full width of the frame (such as a cobblestone street).

The best way to cut drywall is with a table saw, using a rip fence to keep it straight. It's also extremely dusty; always

wear a respirator and goggles.

Without a saw, you can use a razor or carpet knife to score and snap off drywall as you would sheet styrene. However, the edges will be much rougher and less precise.

Drywall has a heavy paper coating to resist moisture and add rigidity. Cut this paper from the sides, but leave the rest of it until after you have shaped and glued it to the diorama base. We used Elmer's white glue, but any wood glue will do.



12 A rail platform begins with two levels of drywall. The brick facing on the platform wall is made of small squares of drywall and assembled just like real masonry.



13 Along with cobblestone roads, other features, such as rail spurs, can be directly scribed into the drywall surface.



14 Some readers may recognize the Verlinden walls near the top of this scene. Other stonework, such as the cobblestones, steps, and wall that leads up from the street, are chunks of drywall. The rubble truly is real: smashed bricks look exactly like smashed bricks.



15 Breaking up the scribed pattern of scale cobblestones replicates the damage heavy, tracked vehicles do to real cobblestones.

Once the glue is dry, use a sponge to wet the drywall, then peel away the paper, **3**. Use plenty of water and remove all paper residue. Don't worry about marks or other surface imperfections. After removing the paper, allow the drywall to dry completely; you'll see its color lighten as it does.

On these bases, we built up the drywall slightly higher than the sides of the base. You could cut a deeper dado for the drywall to level it with the sides, but we used a belt sander to smooth it flush, **4**. (This takes longer and certainly is messier, but it's nice to start with a smooth, blank canvas.) Afterwards, a fine mist from a garden hose cleaned off all the dust and emptied it from pores in the drywall as well.

Don't fill any imperfections yet – there's still more work to come.

On the road

When the surface dries, you can scribe brick or cobblestone patterns in it, **5**. We recommend the Bare-Metal plastic scribe because it is so delicate and versatile. But you can use other scribing tools according to the desired effect. Thin lines are good for cobblestone brick; thicker lines are good for larger stonework, such as bridge supports or retaining walls.

After you have scribed everything, fill minor imperfections with a two-part epoxy putty; Milliput works well with water and can be easily shaped with a moist toothpick. Never use Durham's Water Putty as a filler before scribing; when those folks say it dries "rock hard," they are not kidding.

On the cobblestone, we rarely filled imperfections; the irregularities looked natural. If there is a large, unsightly air

bubble in the drywall, see if you can use it to your advantage. Sprinkle it with a little water and score the sides with the sharp end of a toothpick to rough up the edges to make it look as if some of the material is missing or damaged. Painting and weathering blends everything quite nicely.

If you are butting several pieces of drywall, scribe lines parallel to the drywall seams. Next, scribe crossing lines to draw the pattern of stones or bricks.

Paint your roadway with a light-colored enamel primer, **6**; it will blend better with the wash later. Don't worry about dust or smaller pieces and chips; they add relief and texture to the finished product.

Wash the surface with thinner and your favorite oil-based medium, **7**. We prefer burnt umber artist's oil, available in art-supply stores. The tone of the wash is your choice; we like it dark to give the



16 You don't need fancy equipment to make rubble: eye protection; a hammer; a towel to wrap around the bricks to keep chips from flying away; strainers and mesh to sift debris; a dish to retain fine powder; and, of course, bricks to smash. After the demo's done, add in a few whole 1/35 scale bricks to complete the pile.



17 When you're modeling messed-up masonry, smashing bricks is a productive activity. And there's a bonus: fine powder for realistic weathering.



18 Tree material: Woodland Scenics coarse turf, floral garnish from a crafts store, florist's wire, wire-cutting pliers, a hot glue gun, and a can of 3M Spray Mount.



19 The trunk and boughs of Chuck and Greg's tree are florist's wire coated with glue. It might not look like much ...

shadows more depth. Washes should not be neat and symmetrical on a well-used roadway, so go ahead and splash away. The wash will blend with the base coat and even itself out as it dries. Before the wash dries, gently wipe the high spots with a clean, dry rag. The more you rub, the more wash you remove and the lighter the high spots become, **8**.

We highlighted with a light dry-brushing of pure white and added a fine sand tint as grout to add texture, **9**. Smooth the sand into all the cracks and crevices, then brush away as much as you like, **10**.

To permanently set the sand, use a wide, flat brush to apply a liberal coat of diluted white glue to the grouted areas. The glue coat leaves a sheen on what should be a dry, flat, and dusty roadway; you can dull the shine with powdered pastels or spray it with a flat clear.

Get real

Add a realistic touch by leaving out pieces of drywall and filling the chinks later with Celluclay or some other groundwork medium. After that, you can add tread marks.

To give the bricks deeper contrast, you can scribe thicker and deeper lines and fill them in with a contrasting grout, **11**. Red stone with a light grout made from fine sand and white glue looks good once it's dry and finished with a flat clear.

Multilevel bases are more visually interesting than flat, featureless bases, **12**. You can scribe other features in a base to depict the features of a railroad yard or a factory near a rail line, **13**. Entire balconies and stairwells can be built from small scraps of drywall assembled like masonry, **14**.

We have a technique for the badly rut-

ted and damaged cobblestone often seen in World War II Europe. Remember, those roadways were originally designed for pedestrians, horses, and carts; tracked vehicles could quickly do a lot of damage. For this we use a 4" x 3" square of 1/4" wire mesh with the sides filed down smooth, **15**. After scribing and finishing the cobblestone (as described before), use a sponge to wet it until it's slightly soft. (If it gets too wet, simply wait until it dries and try again.) Pressing the mesh into the softened cobblestone leaves a rough-textured but symmetrical pattern – obviously man-made damage. It looks especially convincing with a bit of multicolored dirt and sand mixed into the crevices.

Stick it to a brick

Some of the bricks in battle-damaged ruins remain intact, but most of the mess

is broken into bits of bricks, mortar, dirt, and other debris. You can buy this material in scale: For example, Verlinden Productions sells very nice 1/35 scale bricks. However, modeling a ruined building could be costly. Instead, you can augment 1/35 scale building materials simply by beating the daylight out of a 1/1 scale brick. Photo **16** shows everything you need.

Wrap the brick in an old towel, put it on a concrete slab (your driveway or sidewalk will do), and pulverize it with a hammer. (Note: Wear safety goggles to guard against flying chips.) When you open the towel, you'll have some of the nicest diorama material you've ever seen, **17**. Sifting with an old tea strainer yields fine powder you can use like high-price powdered pastels. Likewise, you can sort the rest of the brick bits and mix them with store-bought bricks. You'll be in scale – and still in the money!

Thrifty trees

"Planting" 1/35 scale trees in a diorama can be costly, too – that is, unless you make them yourself. Photo **18** shows the materials you'll need: several feet of florist's wire; one can of 3M Spray Mount (which will last through many trees); a hot glue gun; pliers or wire cutters; model railroad coarse turf (we used Yellow Grass T-61 from Woodland Scenics); and the dried flowers and stems used to accent floral arrangements (we used Broom Bloom ACM361T from Michaels craft store).

Using an 18"-long scrap of rigid material for a spool, wrap the florist's wire around its length about 10 times (more if you want a thicker trunk and fuller branches). Remove the wire from the spool. Use pliers to grip the bundle about 1" from one end, then twist the other end until you have a tightly twisted mass of wires between the pliers and roughly the center of the bundle. This tightly wound section will be the trunk. Separate the wires at the bottom end into four or five groups and twist them tightly in the same manner; these will be the exposed roots of the tree.

Now, at the other end of the bundle, separate the wires to make branches. Clip the ends of the wires to single out boughs, **19**. Using the hot gun and plenty of glue, coat the entire structure; the stringier and messier, the better.

Painting and weathering the surface will make it look like real bark – neither tidy nor symmetrical. Keep a photo reference handy and paint the trunk and



... but with painting and the addition of foliage made of spray-painted coarse turf and floral garnish, this tree looks at home in a diorama.

Meet Chuck Bevill and Greg Gregg



Texas modeling buddies Chuck Bevill (from Ransom Canyon) and Greg Gregg (from Lubbock) collaborated on this modeling project and article. Chuck, a geologist who likes to build models when he isn't drilling for oil, has won first place awards on every level, including the IPMS U.S. Nationals. Here he is seen with his one-time close companion, the late, great Buttercup; she was an English mastiff who weighed nearly 300 pounds and pretty much sat wherever she pleased. Greg, a sergeant with the Lubbock Police Department and, until recently, a member of the Mounted Patrol, aspires to one day completely finish a Monogram 1/48 scale F-14 Tomcat.

branches. Use a darker shade of brown/black for the tree, then highlight with a lighter shade to make the texture stand out.

Next, put the coarse turf in a disposable container (such as an old shoebox) and spray-paint it the desired color. We used a shade of dark green to model a summer tree; however, you could use spring green or autumn colors. Clip the floral blooms and stems at the base to make branches. Treat them with Spray Mount, then roll them in the shoebox with the coarse turf to make limbs with

leaves.

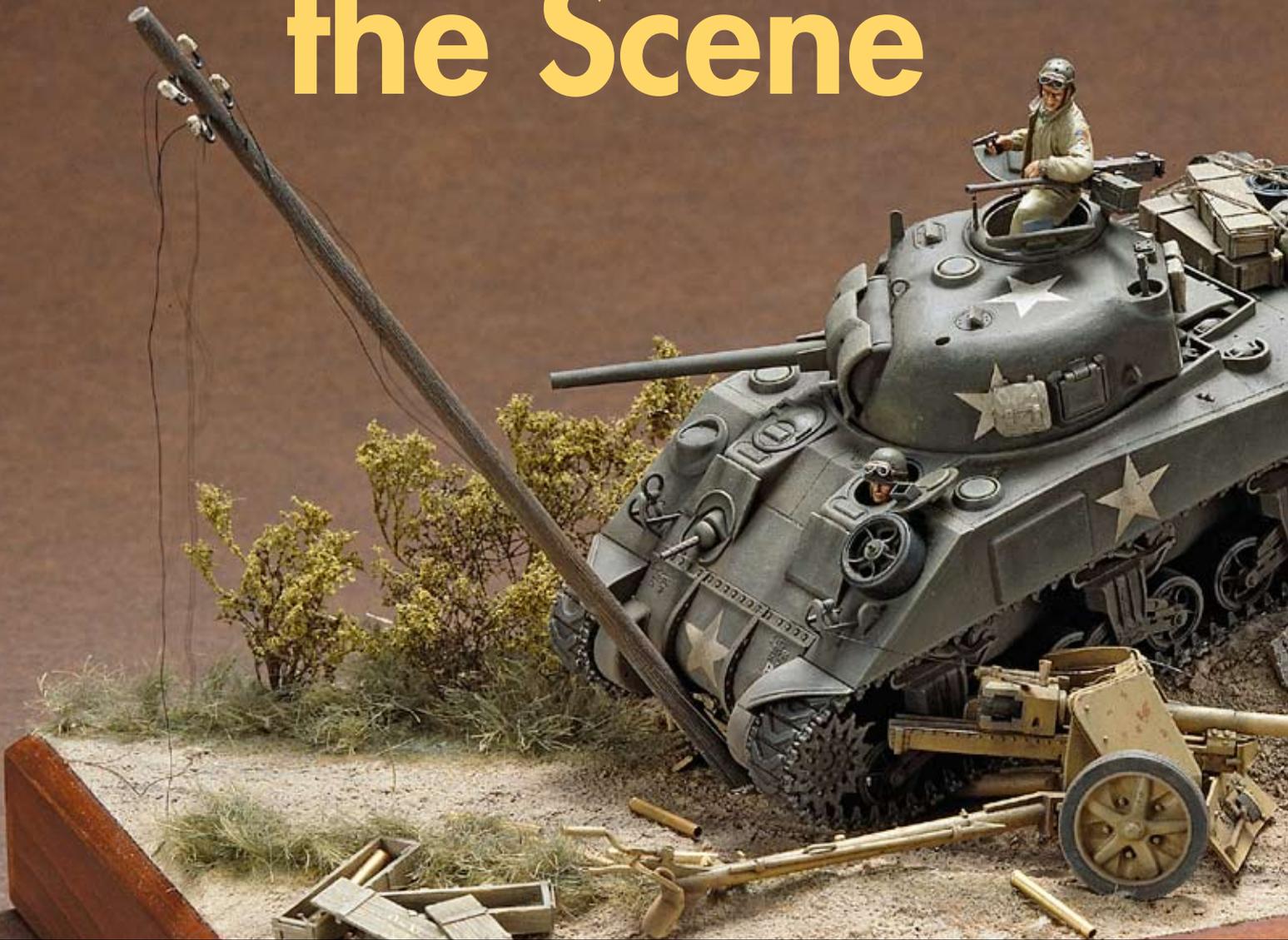
Attach the finished branches to the trunk and boughs with spots of hot glue, touch up the glue spots with a little trunk-colored paint, and you have a flexible, durable, easy-to-pose tree, **20**.

The payoff

These techniques enable you to build any diorama you desire using low-cost, easily obtained materials. With practice, you'll be building good-looking, realistic dioramas – and you'll be saving money, too.

FSM

Making the Scene



Basics for building dioramas

Modeling by Scott T. Hards

Great modelers can make it look easy. Fortunately for the rest of us, sometimes it really *is* easy – not to mention fun.

Naturally, we all want to build the best, most accurate models we can. We strive to make each model a little better than the last.

But they don't all have to be masterpieces. And sometimes the best way to take your modeling to the next skill level is to experiment. Necessity may be a mother of invention, but so is goofing around.



1 Before building a diorama, think it through. Making a rough sketch helps clarify the concepts and fix them in physical space.



Modeler Scott T. Hards, with help from friends Naaki Nakamine and Masahiro Doi, built a 1/35 scale scene from the savage battle for Saint-Lô during the Allied breakout from Normandy. Featured in the display are a Tamiya M4 Sherman, Modelkasten PaK 40 gun, and Verlinden wall and foliage. The skewed telephone pole is a refugee from an Italeri set.

You could spend days, weeks, perhaps even months building the perfect display base for a model. Or it could be a just-for-fun weekend project. That's what modeler Scott T. Hards had in mind when he decided to throw together a 1/35 scale diorama using some extant models and materials you could pick up in one trip to your local hobby shop or hardware store. Sure, Scott's one of those advanced modelers who make it look easy. But here's a chance to look over his

shoulder and pick up the basic steps to building a display base for almost any sort of model.

A project like this can be a lively way to get kids involved (appropriately aged and protected according to the ingredients, of course). Or you can just while away some time with a low-pressure, relaxing project – which really is the big idea. If you find yourself too much caught up in the pursuit of perfection, take a break and have some fun! **FSM**



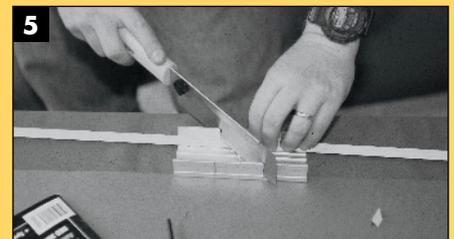
2 With plan in hand, Scott's off to the store for materials. A thin, easy-to-saw sheet of plywood will be the base; trim molding will frame it. Scott also picked up a couple sheets of styrene foam to serve as bedrock for the terrain.



3 Shopping in Tokyo, Scott chose Dufix for ground-work material. An American product with similar properties would be Durham's Water Putty, which can be mixed with water to form a batter that's easy to shape before it solidifies.



4 Common household items can come into play, such as this strainer (later used for sprinkling soil). Scott's expert advice is to stay on the good side of housemates: "Don't use your wife's or mother's kitchenware," he says.



5 Back from the store, Scott goes to work on the frame for the base. He uses a fine-toothed saw guided by a miter box to bevel the corners, ensuring they're square.



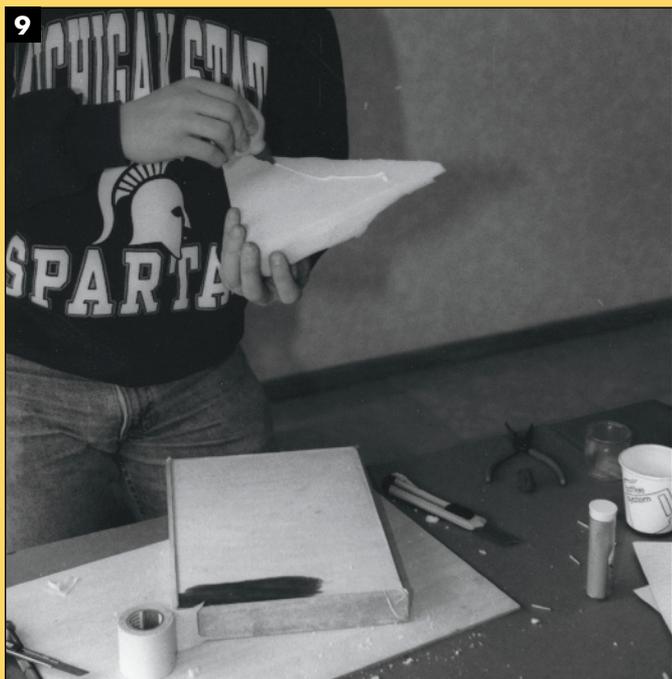
6 Scott glued the frame and base together, filling gaps with putty. Epoxy is fast and strong, but wood glue gives you more time to square the corners and clamp the frame. After gluing, Scott brushes on an oil-based stain. Let the frame dry on a level surface so it won't twist.



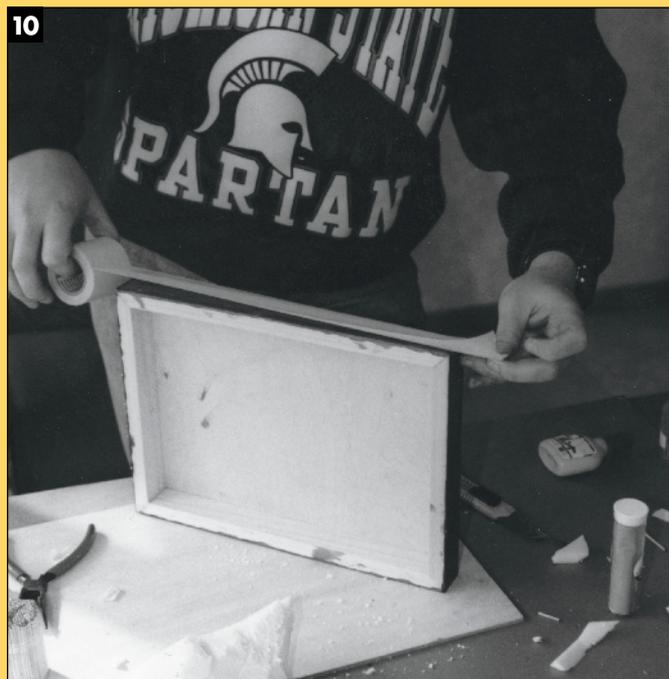
7 Gaps and nicks in the wood can be filled with putty, but putty (or stray glue) won't take stain. You can repair a spot like this by sanding off the glue, painting the spot to match the stain, or blending it in with a furniture-repair product such as Old English Scratch Cover.



8 After the frame dries, Scott builds a styrene-foam bedrock foundation for the groundwork. A keen knife is the best way to get quick, smooth cuts. However, these foam steps will be smoothed when the groundwork is poured.



9 After cutting the foam to the desired shapes and layers, Scott glues it in place. Use a toothpick to verify the glue is set before proceeding.



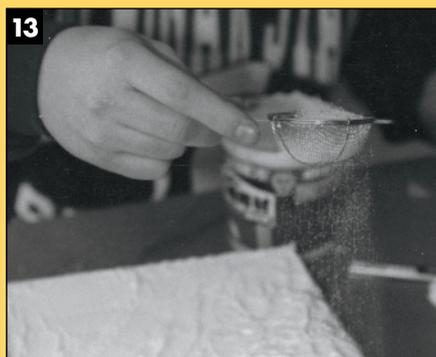
10 Things are about to get wet and sloppy: Scott protects the finish on the frame with masking tape.



11 Remember that advice about preserving domestic peace? Scott thoroughly mixes the groundwork material in a clean, disposable container. Use a good piece of Tupperware for this and you'll never get out of the kitchen alive.



12 Spread the plaster with a trowel or spatula. If you're using Durham's Water Putty, you have about 20 minutes before it sets up, and 45 minutes before it becomes rock-hard. Durham's instructions suggest adding a little milk or vinegar to slow the cure, giving you more time to work.



13 Before the groundwork dries, Scott sifts finely powdered soil on the still-moist surface. Tip: If you want a smoother surface (or your groundwork dries too fast), you can finish with a layer of premixed spackle; add a dash of white glue to the spackle to improve adhesion.



14 Still modeling against the clock, Scott and friends work together to embed pebbles, stones, bricks, etc.



15 Let your fingers do the landscaping to get realistic groundwork. A gentle, sweeping touch works best.



16 Making a good impression: Scott marked the location of the tank ...



17 ... then pressed tracks into the still-pliable surface. He used spare track links to avoid mucking up the finished model.



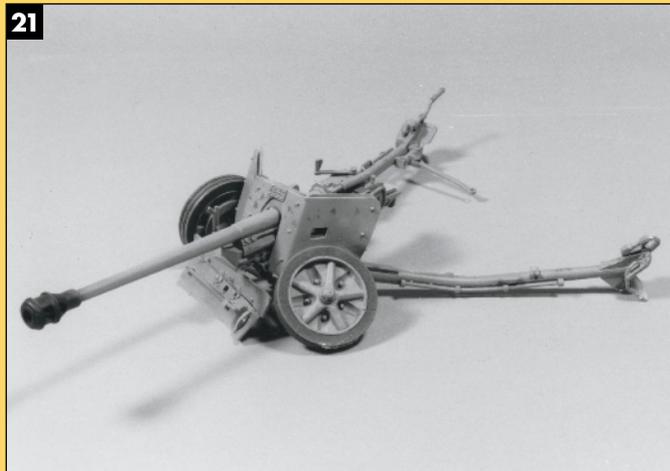
18 Applying a coat of Liquitex matte medium to the groundwork makes it a receptive surface for acrylic paints.



19 Moistening the medium with water provides a tacky surface for static grass.



20 While everything on the groundwork was drying, Scott turned his attention to painting a tank crew mustered from his spares.



21 This Modelkasten PaK 40 white-metal kit suffered cruel modification before being painted and weathered.



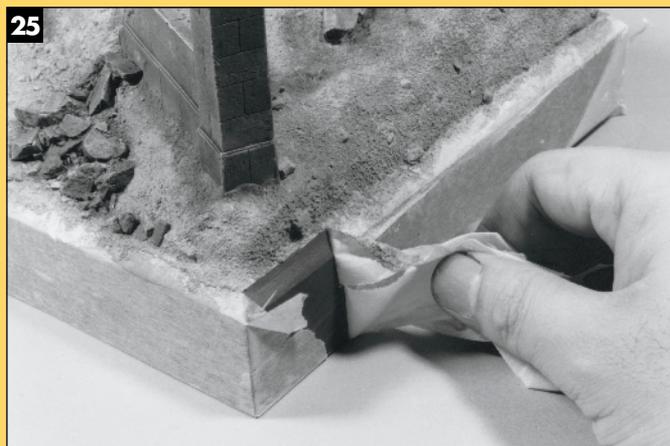
22 Local color: Scott painted the groundwork with Tamiya flat earth, desert yellow, red brown, and flat black.



23 Like the kits, the wall and other major elements of the diorama were painted before placement.



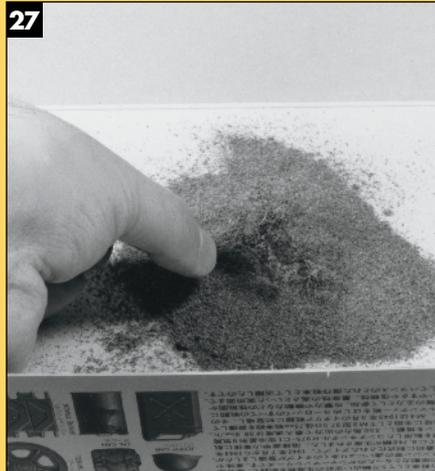
24 The grass was airbrushed with a mixture of olive green and desert yellow, then dry-brushed with lighter shades of the same to accentuate detail.



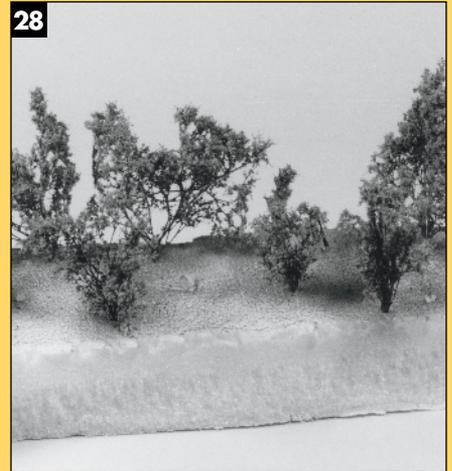
25 After painting, Scott carefully removed the masking tape from the base. Stay close and go slowly to avoid marring the frame.



26 Scott planted Verlinden shrubbery in a styrene-foam painting stand and sprayed it from above.



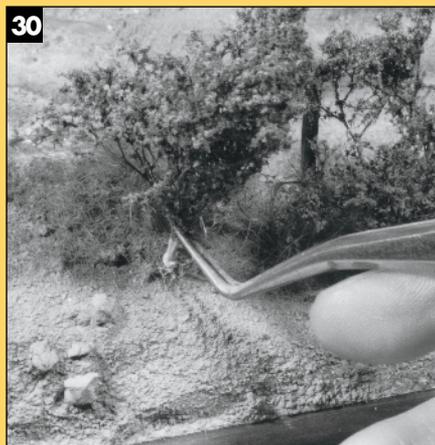
27 While the painted foliage was still wet, Scott rolled it in "scenery powder."



28 The vegetation looked sparse for July in France, so Scott added more branches and leaves.



29 The trees are transplanted in holes Scott dug out with a pin vise.



30 A generous dab of glue at the base of the trunk ensures the tree is firmly rooted.



31 Scott drilled a hole in the base, pushed a bolt through, and secured the Sherman with a nut.



Project at a Glance

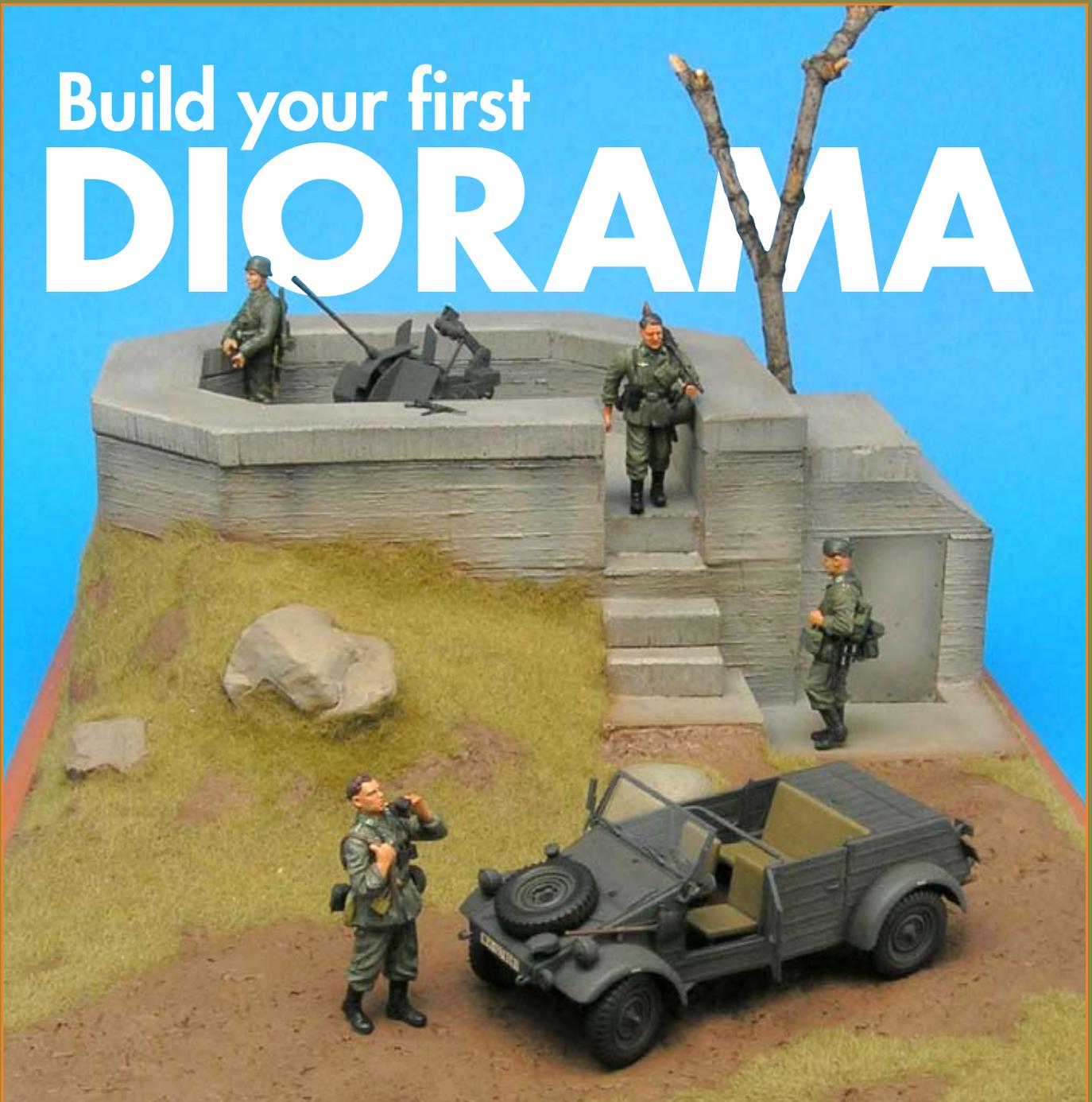
Kits and pieces: Tamiya M4 Sherman; Modelkasten PaK 40; Verlinden wall and foliage; Italeri telephone pole; tank crew figures.

Materials and tools: Plywood sheet; trim molding; miter box; fine-toothed saw; wood stain; filler putty; Dufix (try Durham's Water Putty); premixed spackle; styrene foam; trowel or spatula; hobby knife; white glue; wood glue (or epoxy); masking tape; disposable mixing containers; strainer; soil, pebbles, etc.; static grass; power drill; pin vise; brushes; Liquitex matte medium; Tamiya acrylic paints.

The results: Victorious Allied forces break out from Normandy, and Scott and his friends have a ball making a diorama base that lends life to a static model. Try some of the techniques for yourself and you'll have a ball, too!

Scott T. Hards is owner and president of HobbyLink Japan, Ltd.

Build your first **DIORAMA**



This eye-catching project helps showcase smaller armor models

By Matthew Usher

During my years here at *FineScale*, I've assumed the role of "utility modeler" – I build a little bit of everything, so I can usually jump in and tackle a tank or a car or an airplane without too much trouble.

As a result, my display case has a huge variety of models in it, but unfortunately a lot of my smaller World War II armor models (like my 1/35 scale Kübelwagen) get lost in the crowd, **1**. I started wondering if I could build something that would combine the best qualities of a diorama and display base. Something that would not only show the models “in context” but also separate them from the rest of the models on the shelf.

Base basics

After hunting through some catalogs, I ran across Custom Dioramics’ 1/35 scale WW II flak emplacement/bunker (No. CD 7002), **2**. The one-piece base is hollow and molded from light plastic foam, **3**. The base is wonderfully detailed and would be great for displaying some of my smaller antiaircraft gun models, but it could use some more real estate out front where I could park a command car or halftrack. I decided to fashion a bigger base for the emplacement and extend the groundwork forward.

After posing some models in front of the base, I decided to put the emplacement at the rear of a 15”-deep base. I didn’t want to spend a lot of time wood-working, so I cut the base panel out of ¼” “project board” I found at my home-improvement store. The manufactured project board is smooth, dead flat, and cuts easily with a jigsaw. To finish off its edge, I added a frame I made from ¼”-round pine trim molding. The molding was easy to cut in my modeling miter box with a hand saw, **4**, and I attached the trim to the base with yellow carpenter’s wood glue. The emplacement fit inside the base nicely, **5**.

I painted the wooden base using dark-brown textured spray paint from a craft store. The paint has a slight pebbly texture that helps hide the difference between the pine trim molding and the manufactured base board. The paint would also seal up the wood to protect it from the groundwork glues and paints I’d be adding later.

Groundwork

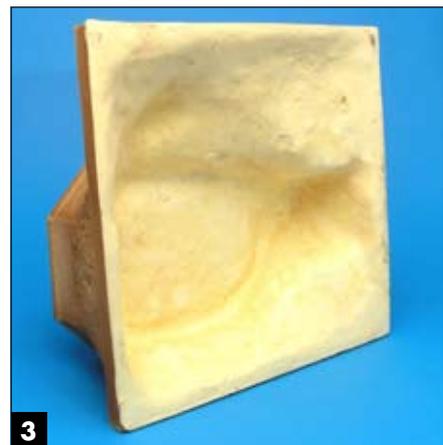
Now I needed to fill in the space in front of the emplacement with some realistic groundwork. I airbrushed the gun emplacement’s walls Tamiya sky gray (XF-19), then painted the exposed boulders Tamiya medium gray (XF-20). When the paint was dry, I attached the molded-foam emplacement to the base using a hot-glue gun, then added a piece of ¼” foam-core board in front to help fill some of the base’s empty space, **6**, so I wouldn’t



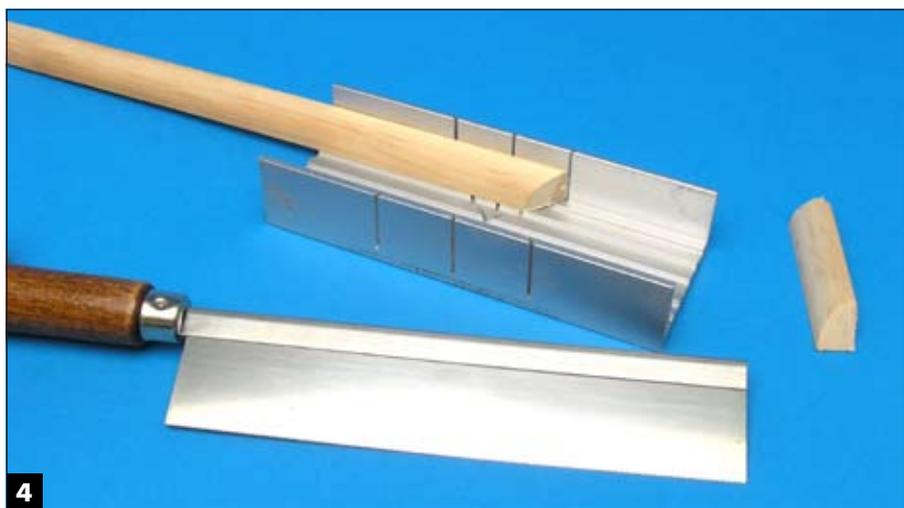
1 Can you spot the Kübelwagen? Matthew’s smaller armor modelers needed a space of their own in his crowded display case.



2 Custom Dioramics’ molded-foam gun emplacement would be the perfect cornerstone for Matthew’s diorama.



3 The nicely detailed base is lightweight and hollow. The foam takes paint and groundwork material well.

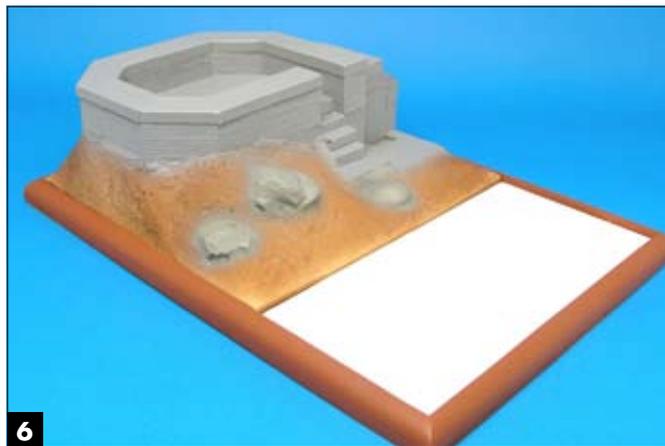


4 Matthew trimmed the corners of the pine molding to shape with a hobby saw and a miter box.



5

The materials for the wooden base cost less than \$15 at a home-improvement store. Matthew attached the pine edge molding to the base with yellow carpenter's glue.



6

Matthew painted the base with textured spray paint from a craft store. He filled the front section of the base with a piece of foam-core board.



7

Powdered Sculptamold is ideal for sculpting groundwork. When mixed with water, it makes a dough-like material that's easy to shape and form. It doesn't shrink and dries rock-hard.

Matthew blended the Sculptamold up over the edge of the Custom Dioramics' emplacement. If Sculptamold gets on the painted edge of the base, it can be removed with a damp sponge before it dries completely.

have to add a ton of groundwork filler.

I used Amaco Sculptamold to fill in the rest of the groundwork. Sculptamold is a plaster-like powder, 7. Mix it with a little water and it can be sculpted like dough. I mixed up a batch and used it to fill in the front of the base. (On a personal note, if you get caught using your wife's good Williams-Sonoma mixing bowls to mix groundwork, dip into your modeling budget and buy some flowers and/or candy. Quickly.)

Sculptamold can be added in layers, so it's better to mix up several small batches than to mix more than you can use at one time. I filled the base up to the top of the molding, then smeared the Sculptamold up over the edge of the molded-foam

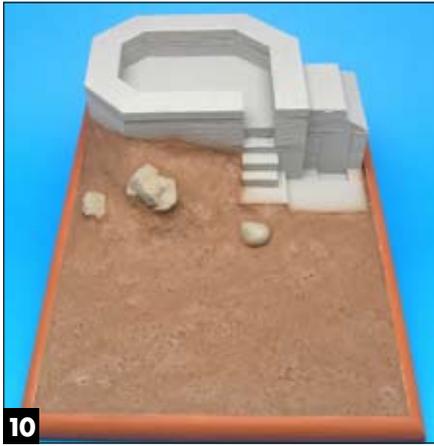


8



9

Matthew painted around the base's molded-in details with a brush, then painted the large, flat areas with his airbrush.



10 The Sculptamold blends in nicely with the molded-foam groundwork.

The emplacement needs to look a little more war-weary. A little weathering will do the trick.



11



12



13

Matthew found a wide variety of groundwork materials in the model-railroad section of his hobby shop.

A dark wash of artist's oil paint deepened the emplacement's molded-in details. Matthew added vertical streaks from the emplacement's top edge to simulate the wear and tear of exposure to rain and weather.

emplacement to help hide its straight front edge, **8**. As the Sculptamold started to harden, I moistened my fingers with water and used them to smooth out the groundwork. In a couple of days, the Sculptamold was dry and ready for paint.

Dirty work

I painted the groundwork with Tamiya flat earth (XF-52). I used a brush to paint around the molded-in rocks and emplacement, **9**, then filled in the large, flat areas using my airbrush, **10**.

All the parts were the right colors, but everything looked a little too new to have been sitting outside in the harsh weather of the front lines, **11**. A dark wash would

do the trick. I mixed Winsor & Newton raw umber artist's oil paint with mineral spirits until the mixture was the consistency of strong black coffee. I applied it to the emplacement and groundwork with a wide brush. It deepened the recessed details, and I added vertical streaks from the upper edge to simulate the wear and tear of rain and harsh weather, **12**.

To add a little greenery to the base, I bought Woodland Scenics groundwork supplies in the model-railroad section of my hobby shop, **13**. I bought some water-based scenic cement (No. S191) and two shades of static flock grass; burnt grass (No. FL633) and medium green (No. FL635).



14

Although it's designed for model railroads, static grass is ideal for simulating grass in 1/35 scale.



15

Working a section at a time, Matthew applied scenic cement to the base, then shook on some static grass. Mixing different colors of static grass together keeps the battlefield from looking like a golf course.



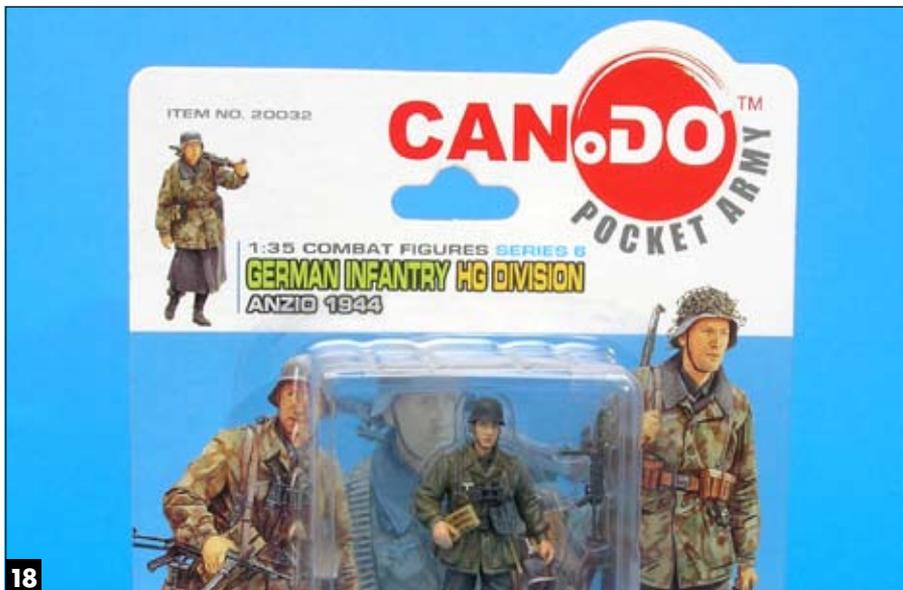
16

As the glue dried, Matthew shook off the excess static grass.



17

Matthew didn't apply static grass to the road or the ground leading up to the bunker and stairs. Heavy traffic would have worn the grass away.



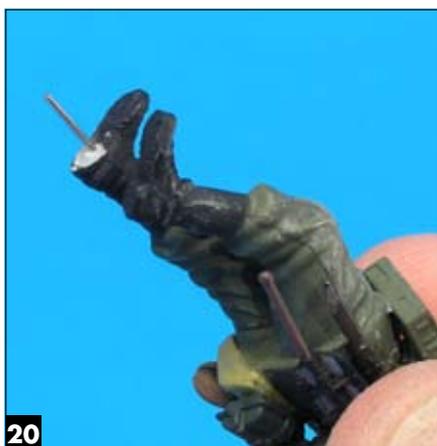
18

Dragon's Can.Do line of 1/35 scale figures come in a variety of uniforms and poses.



19

The Dragon figures are realistically painted and cost about \$5 each.



20

Matthew added a straight pin to each figure's foot to secure them to the base.



21

Tamiya's 20mm Flak 38 is one of the company's older kits, but it's still accurate and looks great when it's carefully assembled and painted.



22

The finished Tamiya 20mm anti-aircraft gun fits nicely in the gun emplacement. The gun could be towed and was used throughout the war.



23

The Bego Kübelwagen looks great parked in front, but there are other options.

Static grass is a fine, fuzzy material that's great for simulating grass, **14**. To apply it, I painted the scenic cement onto the base using a wide brush. While it was still wet, I shook some static grass over it, **15**. Gently squeezing the container helps "puff" the flocking out over the glue evenly. I added the flocking a small section at a time and mixed the colors together to keep things from getting too monochromatic, **16**.

I covered everything but the "parking spot" in the front and the area leading up to the stairs and bunker door, **17**. When the glue was dry, I shook the excess grass off the base.

Guys and guns

With the basework done, I needed to fill it up with troops and equipment. I am a famously bad figure painter. Despite years of practice, my figures still look like lawn ornaments, so I decided to cheat a little and man my gun emplacement with off-the-rack troops. Dragon makes a nice line of painted 1/35 scale German troops in its Can.Do Pocket Army line, **18**. The figures are about \$5 each, and although I hate to admit it, they're much nicer than anything I could do on my own, **19**. I bought a bunch from the "Series 3 Barbarossa 1941" collection. I superglued a straight pin to the foot of each trooper, **20**. The pins easily push into the foam base, so I can move the figures around from time to time to change the display.

I armed the emplacement with Tamiya's 20mm Flak 38 anti-aircraft gun

The base's versatility makes it easy to display lots of different vehicles. Here Matthew's Dragon SdKfz 250/10 halftrack stops by.

(kit No. 35102), **21**. The 20mm was used throughout the war, normally with a six-man crew. It looks right at home on top of the emplacement, **22**.

I finished off the project by parking Bego's Kübelwagen in front, after adding a tree to the rear corner of the base, **23**. The tree's a stick I picked up off the sidewalk while I was walking my dog; I pruned it down a little and glued it in place with white glue.

Thanks to the base's versatility, I can use it to display a variety of anti-aircraft gun and vehicle models. Finally, my smaller armor models can claim a home of their own on my shelf! **FSM**

SOURCES

Groundwork materials Woodland Scenics, 573-346-5555, www.woodlandscenics.com

Gun emplacement/bunker Custom Dioramics/VLS Corporation, 636-356-4888, www.modelmecca.com

Sculptamold American Art Clay Co., 800-374-1600, www.amaco.com

