



10-1 Doug DeCounter's Italeri M24 Chaffee carries the supplies for a tank at war including Italeri jerry cans, AEF Designs 50 caliber machine gun shells, and a folded-up orange I.D. panel made from facial tissue. The decals are from Tamiya.

TINY DETAILS

MAKE THE DIFFERENCE

When you look at a photograph of a model, it is often a lack of the tiniest details that makes it look unreal. Every aircraft and every armored vehicle has hundreds of tiny details that can be added to a model of that machine. It is not necessary to duplicate every tiny visible part, just do enough to suggest the presence of more such details.

It is now possible to buy superdetail parts rather than make your own. Vacuum-formed canopies, tires with the bottoms flattened and bulged to show weight, cast resin interiors, etched metal interior parts, brackets, guns and details are available from Fine Details, True Details, Academy, A.E.F. Designs, Kasten, Collectors Brass, Verlinden, Accurate Armor, Scale Model Accessories, Hudson and Allen, Kendall Model, Eduard Model Accessories, Dragon, and other firms that advertise in *Finescale Modeler* and other enthusiast magazines. It is still possible, however, to make most of those details yourself.

BASIC MATERIALS

Most superdetails can be constructed from several materials: Evergreen, Plastruct and Squadron have styrene strips in sizes from as small as .010 x .020 inches to .125 x .250 inches, and styrene plastic rods are available from .010 to .125 inches. You can create your own round plastic rod by stretching the leftover sprues or trees that the kit parts are molded on over a candle. Brass wire is available from Detail Associates and K&S in .006 to .052-inch diameters. Sprue stretching is a basic superdetailing technique that can yield wisps of plastic as fine as .005 inches or tapered rods. It is excellent for making radio antennae and similar tapered devices. To heat the sprue, use two-inch round candles so the candle won't tip over. Cut a six-inch-long piece of sprue and hold the extreme ends tightly in your fingers. Hold the sprue just above the uppermost tip of the flame and slowly rotate it while you pull on the ends. When you feel the ends begin to move apart, immediately lift the sprue from the flame and continue to pull. The harder and faster you pull, the longer and thinner the heat-stretched sprue will be. With practice, you can do a slow and gentle pull that can produce a 1/16-inch rod or, with a quick pull, you can produce a foot-long piece of plastic almost as thin as a human hair. Keep a pan of water ready to drop the plastic sprue into if it accidentally catches fire. Plastic cement will dissolve the thinner stretched sprue and the heat from Instant Plastic Adhesive or cement can melt it, so you may have to use an acrylic cement like Testor #3515 Clear Parts Cement to attach the stretched sprue or the finer plastic rods.

Facial tissue makes an excellent substitute for canvas or almost any cloth. For canvas, soak it in plastic cement and shape it as you wish. If you want to simulate cloth upholstery on 1/48-scale or larger models, coat the seat with Testor #3520 Liquid Plastic Cement and press a single layer of facial tissue into the wet cement. When it dries, trim away the excess tissue.

BASIC

SUPERDETAILING TOOLS

When you attach any thin plastic, do not use any type of plastic cement because it will dissolve the thin plastic. Use the Model Master #8874 Instant Plastic Adhesive followed by the #8875 Adhesive Accelerator to attach small plastic parts, etched metal details or interior bracing from thin strips of styrene.

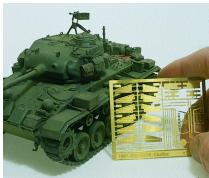
To open up instrument faces, exhaust pipes, gun ports or to provide mounting holes for control cables or antennae, use a drilling tool called a pin vise. The pin vise is designed to be held in one hand, and it has interchangeable chucks that will hold drill bits from a size 80 (.0135) to 1/8 (.125) inches. With practice, you can drill straight and true holes in the relatively soft plastic or resin used in model kits with a pin vise.

COCKPIT DETAILING

The canopies in virtually all of the plastic model aircraft kits are too thick for realism. This is not readily apparent unless you want to model a cockpit with an open canopy. Squadron and others make vacuum-formed canopies that are only about .010 inch thick and are direct replacements for the canopies in specific 1/72 and 1/48-scale kits.

You can also make your own thin plastic canopy by stretching Squadron's butyrate heat-stretching thermal plastic over the original kit's canopy. Fill the kit's canopy with modeling clay and mount it on a six-inch-long piece of pencil. Clamp the pencil in a vise or to the edge of the workbench. Light a small two-inch candle and hold the sheet plastic three or four inches above the candle until it sags, then immediately move the plastic over the canopy and pull down evenly and quickly. The canopy should capture all of the detail and shape of the original. If not, leave the plastic over the candle just a moment longer, but have a pan of water ready to drop the plastic into should it catch fire. Mark a line with felt tip pen to indicate the edge of the canopy and trim it to shape with scissors.

Simulate tinted canopies with an airbrushed application of nine parts Gloss Clear #2017 to one part Willow Green #2028 or True Blue #2030.



10-2 An Italeri M24 Chaffee superdetailed by Doug DeCounter to match photos of identical tanks in battle. The model has been upgraded with etched brass parts from On the Mark including fender guard supports, light guards, tie-downs, the turret vane sight and latches.

INTERIOR DETAILS

Your research should produce some photographs of the interior of the aircraft or armor you are modeling. If not, study similar aircraft or armor, to fill in some of the areas not visible in the photographs of the prototype for your model. The 1/48-scale and larger aircraft usually include interiors that can provide a guide to what parts are necessary to include and which can be ignored, especially when you duplicate a similar interior in smaller-scale aircraft.

A number of firms offer instrument panels designed for specific aircraft in specific scales. Other firms offer complete cast resin interiors. If you're new to the hobby, you might want to buy one of these instrument kits and an appropriate cast resin interior, if only to see whether you want to build your own for the next aircraft you model.

Even the cast resin cockpit interiors can be superdetailed or you can add these touches to your own cockpits. Make interior cables with copper wire strands and control levers from stretched sprue. After the seats are complete, make seatbelts and harnesses from masking tape – a single layer for 1/72 scale and sticky-face-to-sticky-face double layers for 1/48 or 1/32 scale. Make buckles from pieces of clear plastic tape painted with Aluminum #1781 and cut the tape to about the thickness of a piece of thread.

The coil spring-style guitar strings can be used to simulate oxygen hoses in 1/72 and 1/48-scale aircraft. The strings are available in several sizes. The strings can also be used for conduit on 1/48-scale or larger armored vehicles.

Apply drops of Model Master #8876 Clear Parts Cement to the instrument panel gauges after the decals are in place to simulate glass faces. For colored indicator lights, mix a drop of orange or red paint in a puddle of Clear Parts Cement and apply it with a toothpick. Simulate rivets and small knobs with drops of aluminum paint applied with a sharp toothpick. Add Waldron or a similar brand of replacement decals.

For ultimate realism, build a new instrument panel from sheet styrene using Waldron hole punches for the instrument locations, then add Waldron's etched bezels and decal instrument faces to create a more realistic instrument panel.

OPEN EXHAUSTS, INTAKES AND GUN BARRELS

To open up gun barrels, round air intakes, or exhausts, start with a drill bit about half the diameter of the final opening. It is easier to find the center of the part with the smaller bit. Now, drill the hole larger with a bit three-fourths the size of the hole. Finish with the final-size bit. If the three-fourths size hole is a bit off center, use a jeweler's file to finish the hole. If the hole is too small for a jeweler's file, use the drill bit as a file by moving it in and out of the hole with a rubbing action.

K&S makes brass and aluminum tubing from 1/16 to 1/2-inch diameter. You can make this tube look like scale-size exhaust pipes, gun barrels or carburetor intakes by rotating a hobby knife in the open end to chamfer the thick edges to a sharp edge.

If you can find a piece of tubing to match the size of the gun, replace the gun with the tube. *Model Master Tube Glue Nozzles #8805* are one source. Some hobby stores sell a variety of sizes of hypodermic-type miniature tubes and other hardware. For guns, cannons, intake or exhaust tubes 1/16 inch or larger, use K&S brass or aluminum tube.

Open the vent holes in wings or the small triangular fillets in landing gears by drilling into the center of the opening with a 1/16-inch drill bit, then enlarge the opening to size with round, square, knife-edged, or triangular jeweler's files. Etched brass gun-sights and cooling grids are available for both aircraft and armor. Cut them with fingernail nippers or sprue cutters and attach with Instant Plastic Adhesive.

ENGINE DETAILS

There is no need to detail more than the portion of the engine that is visible through its openings unless, of course, you are modeling an early era aircraft with an exposed engine. For a diorama, you might want to build an engine or modify an existing kit engine, and install it with an open access panel. The access panel can be made by heat-stretching Squadron's butyrate heat-stretching thermal plastic over the engine area of the kit's fuselage as described earlier for making canopies. Remove the engine cover from the kit with a razor saw during the assembly process and substitute the heat-formed cover in an open position.

For a variety in the sizes of cables and pipes on jet aircraft engines, select several different sizes of the smallest plastic rods, stretch some plastic sprue for even finer pipes and use both thin solder and single strands of copper wire. Match the proportions of the different sizes to photographs of the prototype engine.

Add spark plug wires using single strands of 14 gauge household lamp cord stranded copper wire, inserted into holes drilled with a pin vise. Add pushrod tubes to radial engines using stretched sprue or plastic rod. Use a half-dozen strands of copper wire to simulate wiring harnesses. For exhausts or air intakes that are supposed to be metal pipes, drill into the "open" end of the exhaust with a drill bit about half the exhaust diameter, then twirling the end of a hobby knife blade into the hole to chamfer or taper the edges so they appear to be a pipe. Replace any molded-in screen or mesh grills with etched brass parts from after-market companies that specialize in such products. For less expensive mesh effects, paint the areas flat black, then dry



10-3 To open the barrel of a gun, mark the center of the hole with a compass point, then drill the hole using a pin vise.

brush the screen area so that only the screen is colored.

DETAILING LANDING GEAR BAYS

Hopefully, you will have located photographs of the interior of the wheel wells for the type of aircraft you are modeling. Most aircraft models, even in 1/32 scale, lack complete interior detail in the wheel wells. On the 1/72-scale models, there is often no detail at all. The wheel well doors are usually too thick. Use the heat-stretching process described for making new canopies earlier in this chapter to make duplicates of the wheel well doors in thin clear plastic. You can make them in two layers if the kit includes interior details and, if not, build up the details with strips of styrene to match your photographs of the prototype.

To accent the details on landing gear struts, use three or four colors of Metalizer or shades of color, each slightly lighter than the next. On telescopic landing gear struts, paint the shiny telescoping portion with Stainless Steel Metalizer #1402 and polish with a cotton swab.

To make superdetailed tires, carefully fill any seams on two-piece tires and sand them so there's no trace of the joint. Cut new treads with a razor saw. Use a household iron, covered with a double layer of waxed paper, to soften the bottom of the tire so it can be made to appear slightly flat and bulged from the weight of the aircraft or armor. If you'd prefer, True Details makes cast resin tires for most 1/72 and 1/48-scale aircraft that have full tread and are flattened and bulged to look as though they were supporting the weight of the real aircraft.

MOVABLE AIRCRAFT CONTROL SURFACES

"Movable" control surfaces can add much to the realism of the model. They must, however, be cut during the initial kit-assembly process. Movable control surfaces can be simulated by cutting the flaps from the model with a razor saw. If the shape of the hinged joint is complex or includes protruding hinges, it may be necessary to use a jeweler's saw (available from hobby shops) to remove the flaps. On some models, you can simply slice through the molded-in seam by making several dozen passes with a hobby knife. Any of these methods will leave an unrealistic gap between the control surface and the wing, rudder, or stabilizer. On 1/72-scale models, these gaps can sometimes be filled with a single bead of Instant Adhesive or five-minute epoxy. On large-scale models, a strip of .010-inch-thick Evergreen sheet styrene may be added to the flap to replace the material removed by cutting.