



Al Jones built this 1/48 scale Hasegawa A6M5 Zero straight from the box. True, Al is an experienced and skillful modeler – readers may remember him from FSM's Workbench Reviews – but he built this kit with no modifications and not much more than the tools you see on the opposite page.

## Cover Story

# START – OR RESTART – YOUR MODELING!

Here's all you need to begin building

*By Mark Hembree Photos by Jim Forbes*

**M**aybe you've never built a plastic scale model before. Or, maybe you built models when you were a kid but gave them up for more important things (sports, dating, whatever). Perhaps you were a more serious modeler than that but

you haven't built a model in years.

In any event, you wouldn't be reading this unless you were thinking of getting back into building models. If you've been away from the hobby, you'll quickly see how kits, tools, and the supplies to build them are better than ever. And if you're

just starting out, you'll have it easier than beginners have ever had it before. In either case, you'll have plenty of company – the vast majority of our readers rate themselves as beginners or intermediate modelers. So let's jump in, goof up a couple of kits, and start building!

# 1: LET'S GET STARTED

## Basic tools and supplies

|  |              |
|--|--------------|
| White glue . . . . .                     | \$2          |
| Super glue (1 oz.) . . . . .             | \$7          |
| Super glue accelerator (2 oz.) . . . . . | \$6          |
| Super glue debonder (1 oz.) . . . . .    | \$4          |
| Sanding sticks . . . . .                 | \$12         |
| Sprue cutter . . . . .                   | \$11         |
| Budget brushes . . . . .                 | \$3          |
| Hobby knife . . . . .                    | \$3          |
| Tweezers . . . . .                       | \$5          |
| Assorted sandpaper . . . . .             | \$5          |
| Model cement . . . . .                   | \$2          |
| Filler putty . . . . .                   | \$7          |
| Paint set . . . . .                      | \$9          |
| Masking tape . . . . .                   | \$4          |
| Thinner . . . . .                        | \$3          |
| Scissors . . . . .                       | \$7          |
| Decal tweezers . . . . .                 | \$4          |
| Toothpicks . . . . .                     | \$1          |
| Clothespins . . . . .                    | \$1          |
| Rubber bands . . . . .                   | \$1          |
| Spray paint . . . . .                    | \$5          |
| Respirator mask . . . . .                | \$15         |
| <b>TOTAL . . . . .</b>                   | <b>\$117</b> |

**BY THE TIME** you've decided you want to build a model, you probably know what you'd like to build. But before you play Pebble Beach, take a trip to the driving range and whack a bucket of balls to practice your swing. If there's an easy kit of what you want, great – but if you've a yen to build an 18th-century sailing ship with teak decking and all the rigging, or something similarly complicated, consider starting with something easier. Many kits are labeled by degree of difficulty or level of modeling skill.

### The glue for you

For beginners, styrene cement in a tube is probably the easiest way to bond plastic parts. Just a little dab will do: Pick up a tiny drop of glue on the tip of a toothpick and apply it to the mating surfaces of the parts you're joining. The more quickly you use the glue after it's out of the tube, the better. Otherwise it gets stringy, and those strings can mar your model. (Returning modelers no doubt remember this well.)

One of the first steps toward cleaner construction is to use liquid styrene



It's not hard to get going on your first model (or your first model in years). Here, a coat hanger serves as a stand for a 1/25 scale AMT/Ertl 1949 Mercury prepped with a coat of white spray-can primer and ready for painting. Clockwise from the car: white glue for clear parts; super glue accelerator, super glue, and (very important) super glue debonder; clippers for removing parts from the sprue without damaging them; sanding sticks for smoothing parts; small and larger paintbrush; hobby knife; various grades of sandpaper; tweezers for grasping tiny parts; a tube of glue; and putty to fill seams.



**Basic finishing supplies** are easy to come by. A small starter set of paints is less than \$10 and has many of the basic colors you need. If you choose enamels, you'll need thinner for cleaning brushes. Any time you paint, you'll need masking tape; the brand shown here is Scotchmark Paper Tape, which is low-tack and pliable. Of course, you'll need more sandpaper and sanding sticks. Clothespins hold parts for painting or clamp them while glue dries. Use toothpicks to apply glue, putty, even tiny bits of paint. The flat-bladed tweezers are for decals; the tips are rounded to avoid tearing delicate decal film.

cement. It takes a little more manual skill: You hold the parts together, wet a brush with cement, and touch the joint with the brush. Capillary action draws the cement out of the brush and into the joint, bonding the two pieces – no strings, no glue

oozing out from a joint. Sounds easy, but the tricky part is holding two pieces and one brush with two hands.

Super glue joins dissimilar materials such as plastic, rubber, resin, and steel. Super glue accelerator will set the bond



**You can get a great finish with spray-can paints. Be sure to include a good dual-cartridge respirator on the same shopping list – and be sure to wear it whenever you spray paint.**

almost immediately. However, don't use super glue without a bottle of debonder literally within arm's reach!

### Ready, set, shop!

Much of what you need to build models can be found around the home – scissors, toothpicks, white glue, rubber bands, clothespins, sandpaper, etc. Other supplies can be easily found in the hobby section of a craft, discount, or department store.

For specialized tools and materials, cut to the chase scene – go to your local hobby shop. For instance, while a department store's hobby section may have one or two types of model cement, a well-stocked hobby shop will have several different types of cements and glues, files and sanding sticks, plus an assortment of model-sized clamps and vises to hold parts after

they're glued. One piece of advice: Make a list before you go. Once you're in a hobby shop, it's easy to get carried away!

We've provided a checklist for you here. But you still have a few choices to make, notably in the area of paints. Kit instructions usually suggest specific colors for major parts, but many other choices are up to you. You can buy starter sets containing eight or nine bottles, or perhaps a deluxe set of 24. Start small if you like. Later on, you'll have a better idea of exactly what you need.

Most paint sets are labeled according to the type of models for which they're intended, e.g. "military aircraft" (lots of flat grays and olive drab) or "automotive" (more bright glosses); it's up to you. Many of the sets include two or three inexpensive brushes, and a few of the bigger ones

may even throw in a set of fine-grade sanding films. You can get sets of enamel or acrylic paints; I like acrylic paint because it cleans up with soap and water.

You can use a brush and bottled paints for painting small details or even whole models (see "Brush-painting a war-weary Corsair" in the January 2007 FSM). But larger areas are easier to cover smoothly with spray-can paints.

Along with painting comes masking. The beige masking tape you're about to steal from the kitchen drawer may not be the best for the job. A hobby shop will have specialized tape that's a little less tacky and, thus, leaves less residue (and more of the paint) behind when you peel it off. Also effective, and perhaps a little less pricey, 3M Painter's Tape is low-tack, flexible, and costs about \$4 for a ¾"-wide, 60-yard roll.

### Where will you build?

Basic modeling doesn't require major home renovation. (Let's take it one hobby at a time.) Lots of people use a TV tray for a workbench. In areas where spilling paint or glue would be an interior-decorating disaster, put down a drop cloth to prevent permanent stains. Your workspace should be well lit; a dedicated lamp is a good idea. Also, you want good ventilation. A small fan can help keep glue fumes out from under your nose. If you're spray painting, you need even more ventilation. Remember: If you can smell it, you're breathing it.

It would be nice to have an expansive countertop with shelves for supplies, but a tackle box or parts organizer can serve the same purpose of keeping your stuff straight until the next time you sit down to build.

## 2: INTERMEDIATE TOOLS

**IT'S NOT THE TOOLS**, it's the skill of the modeler. Well, OK, it's the tools, too.

As your modeling skill increases, so will your desire to improve your results. Better tools can provide answers to modeling challenges. For example, after a few drips, runs, and errors, you understand it's hard to be precise with a spray can. The answer? An airbrush. Or perhaps you're having a hard time with hand-painted details. The answer? Better masking techniques or better masking tape – or maybe an airbrush.

### It's how you finish

A single-action airbrush enables you to mix your own colors and apply them much more precisely than you can with a brush or a spray can. Modelers who say they spray camouflage schemes freehand are probably using an airbrush (or lying). An airbrush lets you apply thinner coats of paint, preserving surface detail and improving scale appearance. Masking is less of a chore because you have far less overspray than you would with a spray can. Additionally, the thinner paint dries more quickly. If you had to choose one

tool to elevate your "game," it would be an airbrush.

Other keys to achieving finer finishes include better brushes and masking materials, a polishing kit, decal setting solutions, and weathering supplies. The latter can be as simple as powdered chalk pastels or an entire weathering system such as Rustall. And for car modelers (or for anyone modeling chrome or bright metal surfaces), self-adhesive chrome foil provides a realistic finish; it's thin enough that you can burnish it down to conform to curved surfaces and raised details.



Chief among finishing supplies for the intermediate modeler is an airbrush. The Testors airbrush shown here comes with a can of propellant for an air supply. The next step up would be buying an air compressor or pressurized tank, along with all the fittings to adapt to the airbrush.

### Building skills

As your standard of finishing rises, you'll be getting a clearer look at the things you could have built better. The first things you'll notice in a good paint job are the places where you could have done a better job of filling and smoothing seams or manufacturing imperfections such as mold lines, sinkholes, or ejector-pin marks. Some people prefer filler putty, which is easy to smooth into the surrounding area. Others prefer filling with super glue, which flows more freely into depressions and is tough as nails – although that particular property also makes it tougher to smooth when it is hardened. Try both, experiment, and make mistakes. It's the best way to learn what works. When you find yourself getting excited about the particular shape or feel of a file or scribing tool, you're on your way!

As you branch out to more advanced techniques, you may find that you want to add details or even correct errors in the kit.

For example, a pin vise will help you accurately drill a locating hole to correct or add parts, wiring, or what have you. Using three-view scale drawings and accurate dimensions of the "real thing," you can measure the accuracy of a model with a scale ruler. If you decide to tear into a fuselage or ship hull to correct it, you'll find a razor saw and a motor tool will come in handy for major modifications.

The saw and motor tool will also be

useful for working on resin, whether it's a whole kit or included in the growing number of multimedia kits comprising plastic, resin, vacuum-formed, and photoetched-metal parts. If you're messing around with photoetched metal or other minute details, then fine tweezers, a small needle-nose pliers, and perhaps a hemostat (a locking surgical clamp) will help you handle tiny, fragile parts. By then you'll be looking for other tools, too.

## Intermediate finishing supplies

|    |  |      |    |  |              |
|----|--|------|----|--|--------------|
| 1  | Single-action airbrush kit . . . . .     | \$55 | 12 | Polishing kit. . . . .                   | \$18         |
| 2  | Airbrush thinner. . . . .                | \$5  | 13 | Paints (enamel, 1/2 oz.) . . . . .       | \$3          |
| 3  | Lacquer thinner . . . . .                | \$5  | 14 | Paints (acrylic, 3/4 oz.) . . . . .      | \$3          |
| 4  | Brushes . . . . .                        | \$15 | 15 | Decal setting solution (1 oz.) . . . . . | \$2          |
| 5  | Chrome foil . . . . .                    | \$5  | 16 | Artist's watercolor palette. . . . .     | \$2          |
| 6  | Filler putty. . . . .                    | \$6  | 17 | Eyedropper . . . . .                     | \$1          |
| 7  | Super glue (1 oz.) . . . . .             | \$7  | 18 | Narrow masking tape. . . . .             | \$3          |
| 8  | Super glue debonder (1 oz.) . . . . .    | \$4  | 19 | Liquid masking . . . . .                 | \$2          |
| 9  | Super glue accelerator (2 oz.) . . . . . | \$6  | 20 | Two-part epoxy . . . . .                 | \$5          |
| 10 | Small scissors. . . . .                  | \$7  | 21 | Weathering set. . . . .                  | \$15         |
| 11 | Model wax. . . . .                       | \$3  |    | <b>TOTAL . . . . .</b>                   | <b>\$172</b> |



For the intermediate builder, a few handy gadgets can make all the difference. Many are merely improvements on basic tools: For example, you can use a “third hand” and a variety of clamps instead of clothespins (perhaps), or a pin vise to boldly put holes where no holes were before. The bow sander is great for working on compound-curved surfaces without flattening them. A scribe restores, repairs, or clarifies panel lines.

### Intermediate building supplies

|   |                    |      |    |                              |              |
|---|--------------------|------|----|------------------------------|--------------|
| 1 | Sprue cutter.....  | \$11 | 8  | Rechargeable motor tool..... | \$35         |
| 2 | Pin vise.....      | \$10 | 9  | “Third-hand” stand.....      | \$13         |
| 3 | Drill bit set..... | \$14 | 10 | Bow sander.....              | \$22         |
| 4 | Clamps (5).....    | \$4  | 11 | Hemostat.....                | \$7          |
| 5 | Scribe.....        | \$12 | 12 | Detail files.....            | \$6          |
| 6 | Razor saw.....     | \$8  | 13 | Steel straightedge.....      | \$7          |
| 7 | Pliers.....        | \$3  |    | <b>TOTAL.....</b>            | <b>\$152</b> |

## 3: ADVANCED MODELING

AT THE HIGHEST LEVELS of modeling, certain tools cease to be optional – they’re a must. And they can be expensive.

Again, the airbrush leads the way to the next modeling level. Yes, you can get a good finish with a spray can, and an even better finish with a single-action airbrush. But a double-action airbrush, which allows you to adjust the air/paint mix in midstroke, is essential to achieve the whole gamut of finishes, from solid colors to subtly graduated shades and swirls.

An airbrush also is essential for spraying custom lacquers. These are fairly “hot” paints that may require special surface preparation to keep them from eating your model alive – but the results can be spectacular. If you’re going to be spraying lacquers, or just plain spraying a lot, you

should invest in a vented spray booth. This can cost several hundred dollars, but it’s a worthy investment to protect your health. You could even use it to dispel fumes from other household tasks, such as refinishing furniture (just trying to help out with the spouse).

Another refinement is to replace a hobby knife with a scalpel, which is sharper and more exact. Also in the interest of accuracy, a caliper provides precise measurements. Scratchbuilders who use metal wouldn’t be without a sheet-metal bender and a soldering iron. For thin sheet metal or plastic, a punch-and-die set can be used to make holes (or discs) of consistent size.

For the sort of minuscule details that make most of us look at a model and

shake our heads in wonder, a magnifying lamp or headset helps you see what you’re building. Along the same lines, a color-balanced work light provides better light by which to accurately judge colors.

### You’ll know what’s right

It’s exciting to see something and imagine its potential – whether it’s box art on a kit you covet or the tools you know will make your next model a masterpiece. Scale modeling is a hobby, and it’s supposed to be fun – so if you want something, by golly, go out and get it! On the other hand, if you wait until your skills develop to the point at which the lack of a tool is holding you back, you’ll probably feel better about spending the money. *Then* go out and get it! **FSM**



Advanced modelers have some serious, specialized tools. You can run into some big bucks buying some of this stuff – but if results are paramount, sometimes nothing else will do. Once you get to this level, there may be no cure for your condition!

### Advanced tools and supplies

- 1 Double-action airbrush.....\$100
- 2 Magnifier lamp .....\$40
- 3 Sheet metal bender .....\$90
- 4 Scalpel.....\$15
- 5 Multi-speed motor tool.....\$80
- 6 Dial caliper .....\$35
- 7 Soldering iron .....\$10
- 8 Riffle file set.....\$15
- 9 Custom lacquer (2 oz.).....\$6
- 10 Headset magnifier.....\$25
- 11 Punch-and-die set .....\$40
- 12 Color-balanced work light.....\$65

**Not shown:**

- Spray booth.....\$450
- Miniature lathe .....\$550

**TOTAL.....\$1,521**



It's fun to fool with tip-top tools, but they're not mandatory. As Al's Zero attests, building a good kit straight from the box still makes a good model.