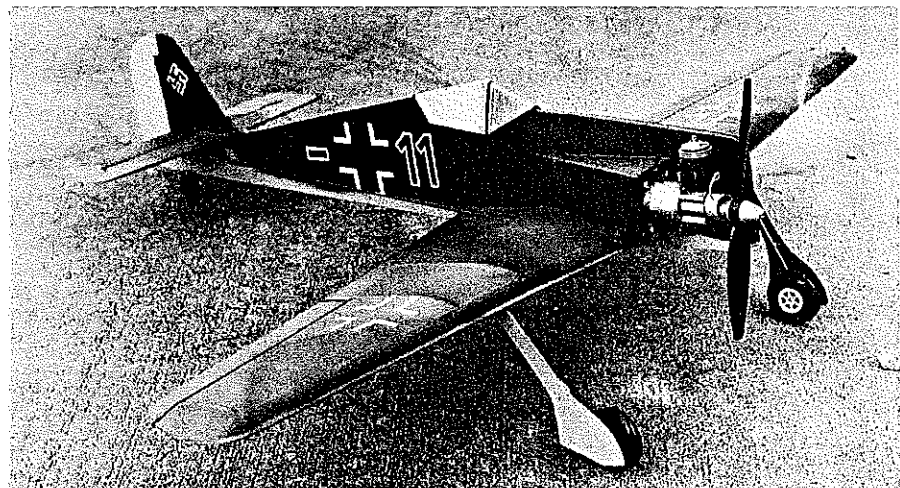


Colored plastic electrical tape was useful for the insignia and control outlines. Such detailing is easy to apply, and it makes the appearance come alive. The wide-stance landing gear comes in handy for landings. Eliminate the wheel-well covers (or even the whole landing gear) if most of your flying is over grass. The covers add much to the FW 190's character, though.

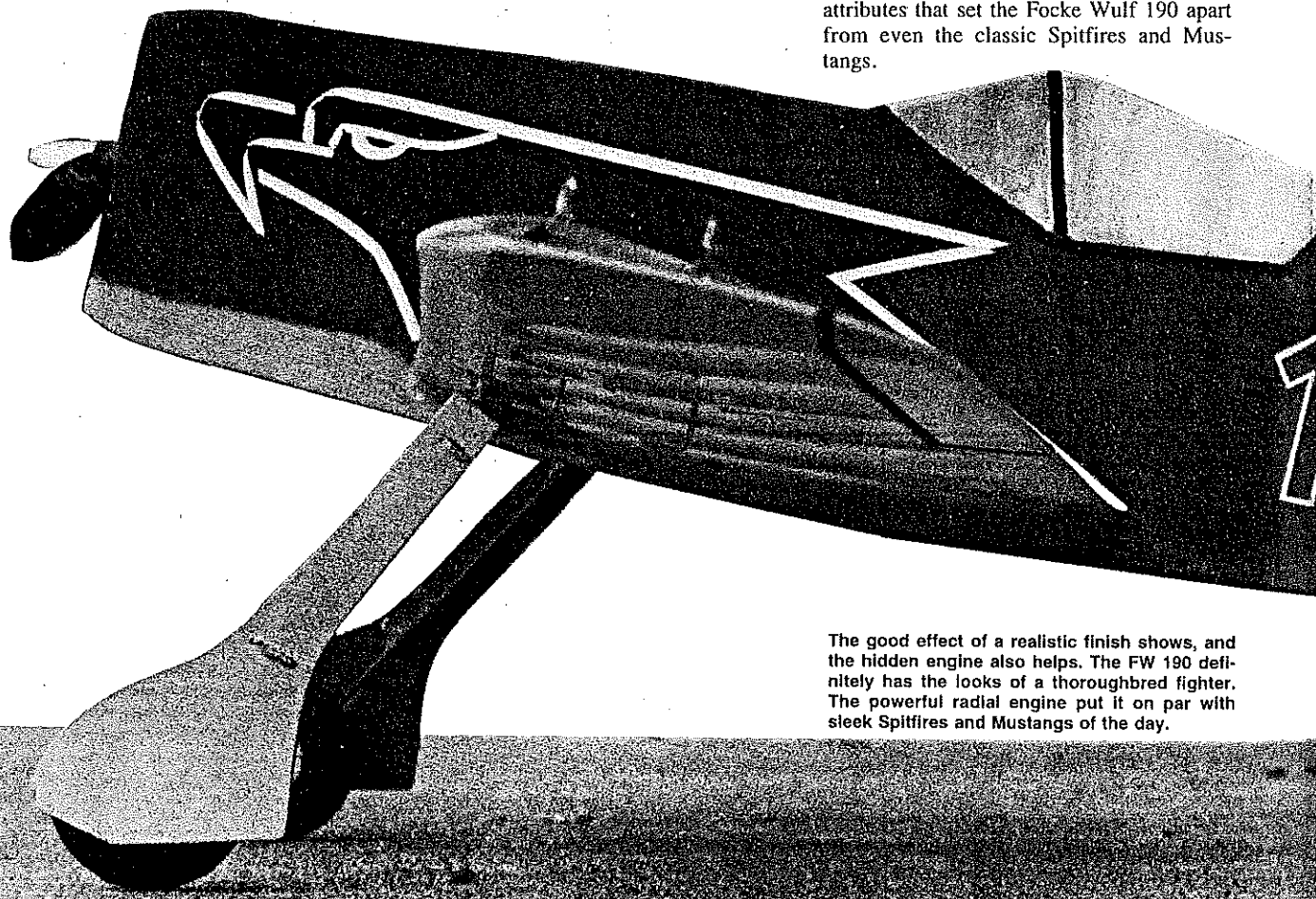


The prototype is one of the all-time modeling favorites. This 1/2A Control Line version with profile fuselage is easy to build and fun to fly. Will do most all of the maneuvers except for squares. **John Paul**

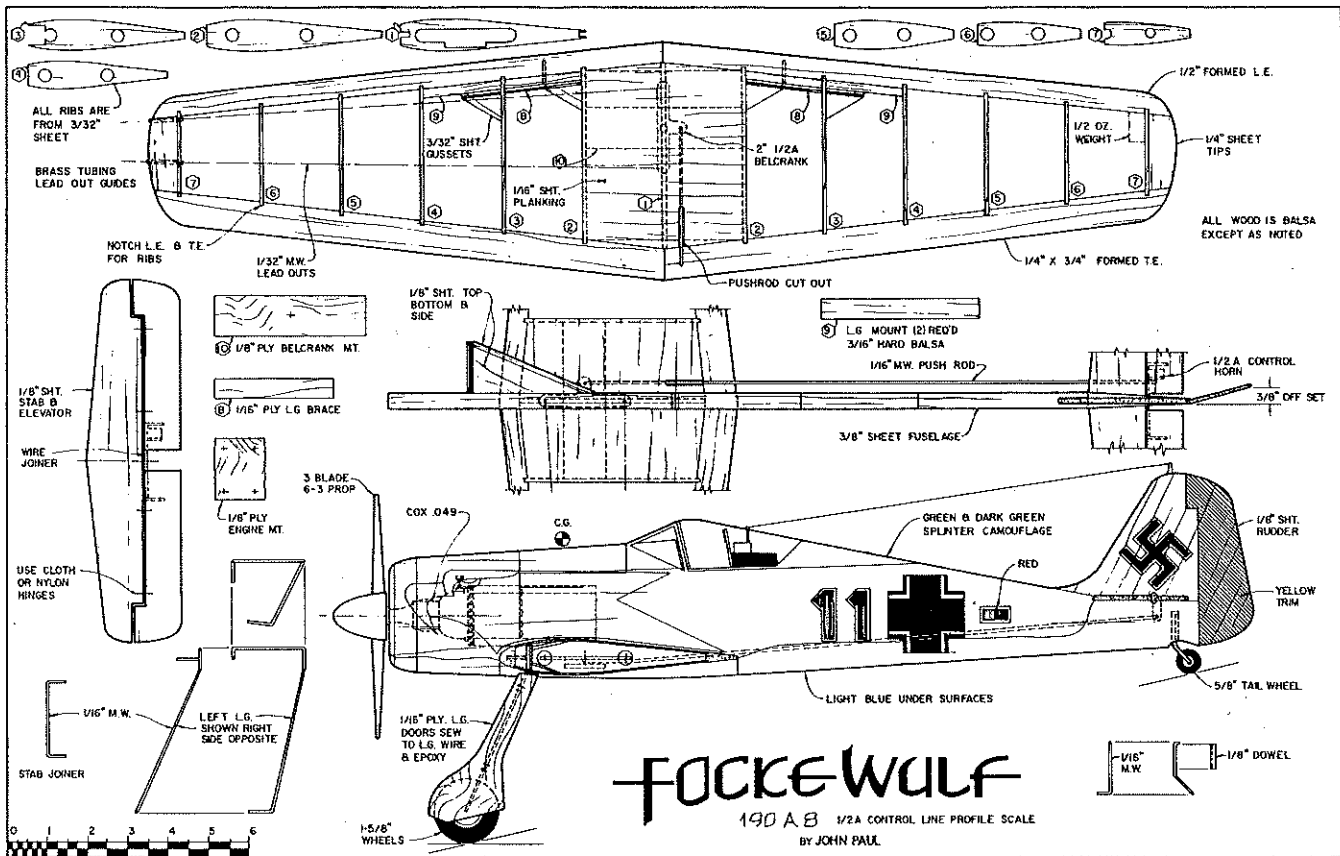
NOT EVERY aircraft is created equal. Some have a certain indefinable character that sets them apart from the rest. The Focke Wulf 190 is one of those. It's very name evokes a memory to most every aviation enthusiast.

Having been designed around the unconventional radial engine, the FW 190's profile is distinctive. One author called it elegant lethality; others called it simply awesome efficiency. In a time when the majority of fighter aircraft were being designed around the sleek in-line engines, the Focke Wulf was rather unique.

The future obviously belonged to the sleek, or at least the designers thought so. Little did they realize that the FW 190 would marshal in a stream of new fighters that would prove them wrong. Brute power elegantly faired into a rugged airframe that was light and smooth to fly—these were the attributes that set the Focke Wulf 190 apart from even the classic Spitfires and Mustangs.



The good effect of a realistic finish shows, and the hidden engine also helps. The FW 190 definitely has the looks of a thoroughbred fighter. The powerful radial engine put it on par with sleek Spitfires and Mustangs of the day.



The Focke Wulf 190 was designed in 1938, as a possible replacement for the Messerschmitt 109. From the beginning it

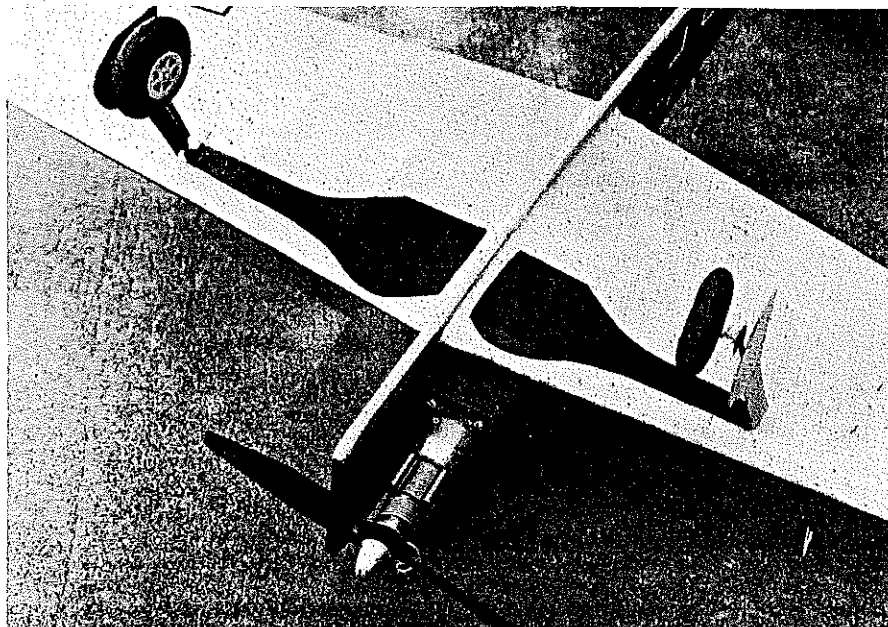
was a totally new concept in design. The Focke Wulf 190 proved to be everything it was supposed to be: fast (up to 408 mph),

maneuverable, and deadly. It could carry over 20 combinations of weapons and still perform well.

# FOCKE WULF

## FW 190





Overlap of the engine mount with the wing-fuselage joint adds considerable strength. Wheel wells can be indicated with pieces cut from a black trim sheet, or they can be painted on the covering.

It was so hot an item that the RAF had devised several plans to steal a FW 190 from the Germans. Ironically one was unexpectedly delivered to them on a foggy English evening in 1942. It seems the pilot had become disoriented over the English Channel during a dogfight; when he had decided to head for home, he landed in England instead.

The RAF was pleased, to say the least, and the Focke Wulf 190 was given a thorough testing. It was almost an even match for the best Spitfire of that date; the performances of both were uncannily parallel. The RAF determined the best way to beat the Focke Wulf 190 was with skill and a lot of tight turning.

The Focke Wulf 190 has always been one of my favorite designs. When a friend approached me with the idea of building a 1/2A Combat models in Profile Scale, we took little time in choosing sides and designs. The Focke Wulf 190 I chose is presented here.

The event has proven to be a lot of fun and very exciting. At this size the models are not too fast to keep up with but fast enough to

retain that thrill of close Combat flying. The sight of two fully-decorated warbirds in the same circle is fun, too.

Construction was kept simple, retaining the lines of the original aircraft as closely as possible. The offset engine mount adds a lot to the appearance, and it is strong and easy to build. Remember to use lightweight wood where possible, as it is all-up weight that will determine the nimbleness of your model.

**Begin with the wing.** First, cut out all the parts. Notch the leading and trailing edges for better strength. Take care to keep the wing true while you build it; shim the trailing edge up as well as the leading edge. The symmetrical airfoil allows for inverted flight, and it is somewhat tricky to build flat, take your time and make sure that it is free from warps.

Add the bellcrank mount and control system; see that it is free from warps without binding. Bend the landing gear struts, and sandwich them between items 8 and 9 with a good epoxy glue. Wrap this assembly with

heavy thread, and fit it into the wing. Add gussets to strengthen the mounts, and then plank the center section.

Finish-sand the wing: Add the tip weight, and then set the wing aside. If you use the new instant cyanoacrylate glues, you can build this whole model in a matter of a few hours.

**Total surfaces.** Cut out and sand. Glue in the rudder offset as shown on the plans. Bend a wire stab joiner, and assemble the stabilizer and elevator.

I used the old-fashioned sewn hinges on the original model because they are fast and free. I recommend the new nylon hinges or cloth hinges, but use whatever you are most familiar with. Just make sure that the hinges are free, as binding controls on a model this small and responsive are usually fatal.

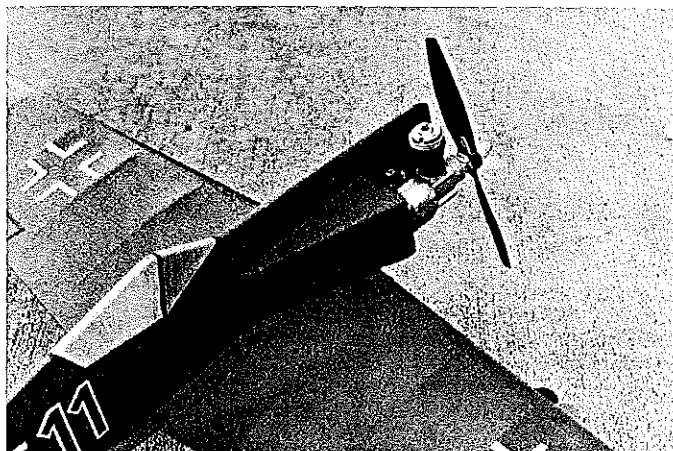
**Fuselage.** Find a lightweight sheet of 3/8 balsa that is flat. You may have to laminate two narrower pieces to make it wide enough for the cockpit area. Cut out the engine mount parts as shown on the plan, and carefully assemble the unit onto the fuselage. Check for proper alignment, as we do not want any unusual thrust angles to be built in. When the glue has dried, wrap the plywood firewall with lightweight glass cloth, folding it back over the top and bottom and side of the engine mount. Set the assembly aside to dry.

**Miscellaneous.** Cut the wheel well doors from 1/16 plywood, and sew them to the landing gear with copper wire. Solder the wire to the main landing gear wire; when cool, coat the wire-to-plywood joint with epoxy. This will keep the gear doors in place. If you plan on flying over grass, you may wish to leave off the gear doors (and maybe even the complete landing gear).

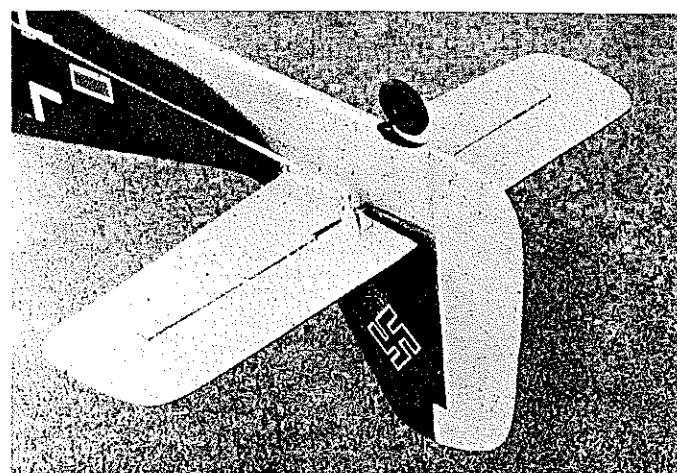
Bend the tail wheel strut from wire, and wrap it and the hardwood dowel mounting plug with thread. Drill a hole in the fuselage, and after wiping it well with glue, insert the tail wheel unit.

Align and glue the stabilizer assembly to the fuselage, checking to make sure it is on square when viewed from the top and the

*Continued on page 151*



The unusual engine mount is clean, simple, and rugged. It has withstood several encounters with Mother Earth. The pushrod opening in the wing should be kept as small as possible to minimize oil entry.



A simple and strong model is a sure formula for success. Note pushrod hookup and sewn hinges. Tail-wheel strut can anchor a Combat streamer.



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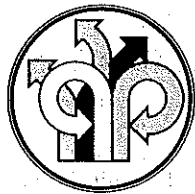
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clear over the design and the surrounding area.

If you hesitate to apply a design made in this fashion to a new model, it might be a good idea to practice on an old model once or twice to get the feel for how much dope is required. A great advantage in making special designs in this manner is that a ruined design does not mean a ruined model finish!

Send items on CL Scale to Bill Boss, 77-06 269th St., New Hyde Park, NY 11040.

### FW 190/Paul

*Continued from page 68*

front. Add the rudder, square it, and set aside to dry.

Give the wing assembly a good sanding. Apply two coats of dope to seal the wood. Sand the rough spots, and cover the wing with lightweight silkspan. I prefer to put the silkspan on wet to allow for any irregular curves that might exist. Cover each panel separately as well as the tips. Give the finished wing a light spray of water, and set it aside for the covering to shrink.

When the wing is dry begin fitting it to the fuselage assembly. This helps add a lot of strength to the model. When the fit looks good, epoxy the wing to the fuselage and check for squareness. I stress alignment a lot because a model that is built true will fly true, and will not have any strange habits when flying either upright or inverted. After the epoxy has cured, give the entire model five coats of clear dope, sanding well between coats.

The finish makes the model come alive when it comes to profiles. Look around for a color scheme you like, and try to copy it. There are several books available that have color plans of the Focke Wulf 190. The colors shown on the plan and on the model are authentic. I used military flats for the background colors and plastic tape for the insignia, trim, numbers, and control outlines.

Add the wheels, engine, and propeller. Hook up the pushrod, and balance the model. Do not try to fly the model without balancing it, as it can be very tricky to fly with the wrong balance point. Add whatever weight it needs before you head for the flying field.

The original model is flown on 35-ft. steel lines, which markedly improve a 1/2A's performance over the cloth Dacron lines. Steel lines also are much safer.

**Flying.** Once at the field, hook up the control lines and check out how they work. Adjust the handle to ensure neutral control on the model when the handle is in neutral. For the first few flights, feel the model out slowly. Begin with climbs and dives, and gradually work up to loops, figure eights, and inverted flight. The Focke Wulf 190 will do all the stunts (except the squares) without difficulty.

Before you try any Combat matches, I suggest you get well acquainted with the model's minimum and maximum turning radius. It will help save you from pulling out

too late in the heat of a duel. Get to know you 190 intimately, then con your flying buddy into building a Spitfire and . . .

### CL Combat/Johnson

*Continued from page 72*

one direction or another. A fully-deflected tab would probably make for an interesting flight that would amuse your opponent, at least.

I use 1/32-in. plywood for the actual tabs. This is plenty heavy and can be cut by scissors or knife. Fuel-proofing is optional, but keep unsealed wood away from wet grass, because your neat trim tab will warp and then you'll need a tab on the tab. Contact cement works very well for securing the wood to the aluminum and then to the wing. It's about the best thing I've found for hooking tabs to plastic-covered wings. If you're doing it, put a thin coat on both surfaces and allow it to dry (you can read the instructions on the bottle while you wait). Aluminum works real well for the hinge material, probably about .010-in. is right. If you use thinner material, it will bend more easily, but thicker seems to hold the setting better.

You can cut the aluminum with scissors easily, but you'll notice that the strips like to curl up after they've been cut—which is going to make it hard to attach them. Take a piece of hardwood, like a motor mount, and run it back and forth across the strip while holding it on a hard surface like a table or bench. You may have to flip it over a couple times but pretty soon the aluminum will give up and stay straight so that you can attach it with no problems. Be sure to leave a little room between the trim tab and the trailing edge for adjustment. This is something that can be done in a few minutes at the field, and even if your models are always built straight, it can be used for that one