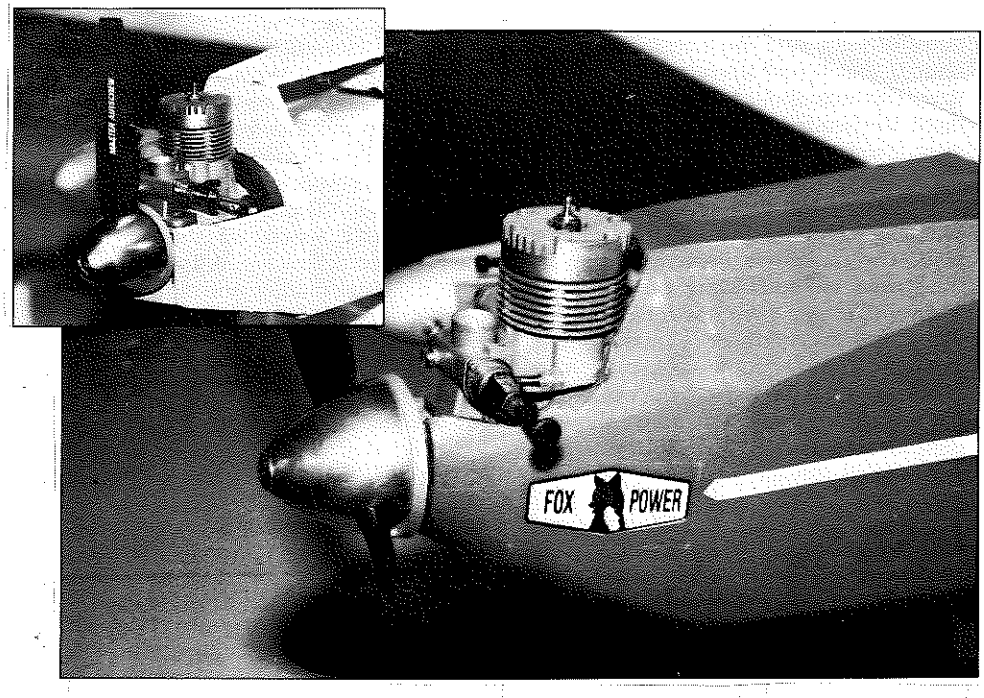

The Sumpthin' Special is reminiscent of the early 1940s. It was designed purely from the mind of a person who is more than fascinated by aircraft, particularly those styled when he was a teenager in the mid forties.

It has an open cockpit and a tailwheel. These two characteristics place this aircraft into a very short span of time, as earlier designs had radial engines and lots of wires bracing the wing and tail, while later aircraft all have enclosed cockpits and nosewheels.

The Special is "SOMETHING" Special in the mind of this designer, and hopefully a lot of other people his age.

CONSTRUCTION

The wing is standard spar and ribs, and should present no problem for the average or beginner builder. The prototype was assembled on an A-Justo-Jig, which is really a handy tool for the guys who build a lot. Most other builders can work right over the plans by using shims under the trailing edge of the wings. The ribs are semi-symetrical, and so will need a jig shim. Other than that, both wing panels can be finished over the plans without reading any instructions. Join the two halves so as to have 1-1/2 inch dihedral under each tip, then glass the center section.

The fuselage is basically planks and triangle stock. Cut the sides from 3/16 medium firm (close grain) balsa. No need to use 1/4... the extra weight is not needed. Use three-inch wide planks. Make a tracing of the wing saddle with thin paper or plastic, then lay this on the side planks and carefully cut both together. Also cut both of the stabilizer slots at the same time.

Cut the formers from the ply sizes shown on the plans. Carefully align the sides, and glue the formers into place. The landing gear block and it's ply diagonal brace can be glued now. Add the vertical grain doubler sheeting to the insides of the tank compartment, and install the wing saddle doubler before you put in the 1/2-inch tri-stock corner stringers. While you're working with the tri-stock, go ahead and add the reinforcement pieces to the firewall and LG block. Glue in the vertical grain doublers just forward of the horizontal stab. Make up the tail cone piece to approximate size.

The critical part comes now. Pull the fuselage sides together at the tail, and assure that you have them on the same center line as the firewall and other formers. Bevel and sand the inside of both sides for maximum nyrods (or push rods, if you prefer) installed you'll want access to the internal area of the aft fuselage. I used a forked arrow shaft push rod for the elevator, and a nyrod for the rudder. The shaft has a support about 12 inches ahead of the hinge, and the nyrod is anchored in three places.

The horizontal stabilizer can be installed now. Measure carefully to assure yourself that it is square to the fuselage. Glue it.

One worthy note on the vertical stabilizer is that part of it is extended down into the fuselage to be attached to the horizontal stab. This gives two-point attachment that is much stronger than just scabbing it to the top skin with a couple of gussets.

The tailwheel bracket and wire can be attached now. Just punch right up through the horizontal stab. The main gear and wheel pants don't need explanation.

Attaching the wing comes now. I usually check it two or three times with an incidence meter to assure that the saddle is a good fit, then I'll measure from the tips back to the tail a couple of times. I drill, tap, and install one mating of surfaces. An easy way to accomplish this is to glue some sandpaper to both sides of a piece of flat sheet stock (or use a double-sided sanding stick), then run this up and down between the fuselage planks until you have the taper needed. Glue the tail together.

Add the tail wheel ply mount, and some of the top and bottom fuselage planking. Keep in mind that until you have the control bolt completely before doing the other one.

The tank and its shelf can be installed now. In this sequence you'll be able to fit formers F-1A and F-2A. After positioning the motor mount, drill bolt holes and install the blind mounting nuts; a little thick CA will hold them in place. Drill the holes through F-1A for the fuel, vent, and drain lines. Install the tank and lines, and plank over the fuel compartment.

Hang the engine (read the segment on Flying before choosing your engine.) Then add the engine cowl sheeting. Carve and sand all the bumps and lumps down to a pleasing shape to match the spinner, then remove the engine to fuel-proof the area.

Originally, the design called for a bubble canopy that would be detached when the wing came off, but after much head scratching and recalling the opening statement, the open cockpit was adopted... and it looks good... as long as you don't seat Barney Google or an unzipped female in there.

With the servos in the location shown, the receiver and battery pack need to be as far forward as possible to meet balance limits.

FINISHING

Look in your library of aircraft photos, and pick a theme that appeals. The Special should be flashy, but not wild.

FLYING

I wish I could say that the Special flew hands-off on its test hop. It *almost* did. As soon as the throttle was advanced for some high speed taxi test runs, the Special jumped into the air. We climbed it out to about a hundred feet and the trims seemed to be pretty good, so we ran through the procedures of pitch and roll checks, when we noticed that it had a tendency of a slight yaw. This was about two minutes into the flight. We headed it right into the wind and were steering with rudder to see what it needed, when at about 300 yards out it just quit listening to the transmitter and went into a slow, rolling dive into the wet bean field. The radio was dead when we got there, and wouldn't work on the bench afterward, either. *Then* it was remembered that *that* receiver had been in another aircraft that had crashed a couple weeks prior. It had checked out on the ground, but evidently it had something loose that didn't show up until we used it again. *There's a lesson here.*

A careful salvage job saved the wing, vertical fin, elevators, landing gear, engine, and not much else. We managed to recover one former and the fire-wall, but the rest of the fuselage was totalled. The Special flew so beautifully for its short life that we had to build another. That's why you may see some differences in the photos. A mistake in the building of the Special was the selection of the FOX Sports Quickie. With its oversized carb, a .50 size muffler, and radical internal porting, it is just too much engine for this type of aircraft. I was told that it was a detuned Quickie 500 engine, but I thought it would work. It did... like a Porsche engine in a VW Bug! Unlimited vertical performance was *not* what we had in mind when the Special was designed. **MB**