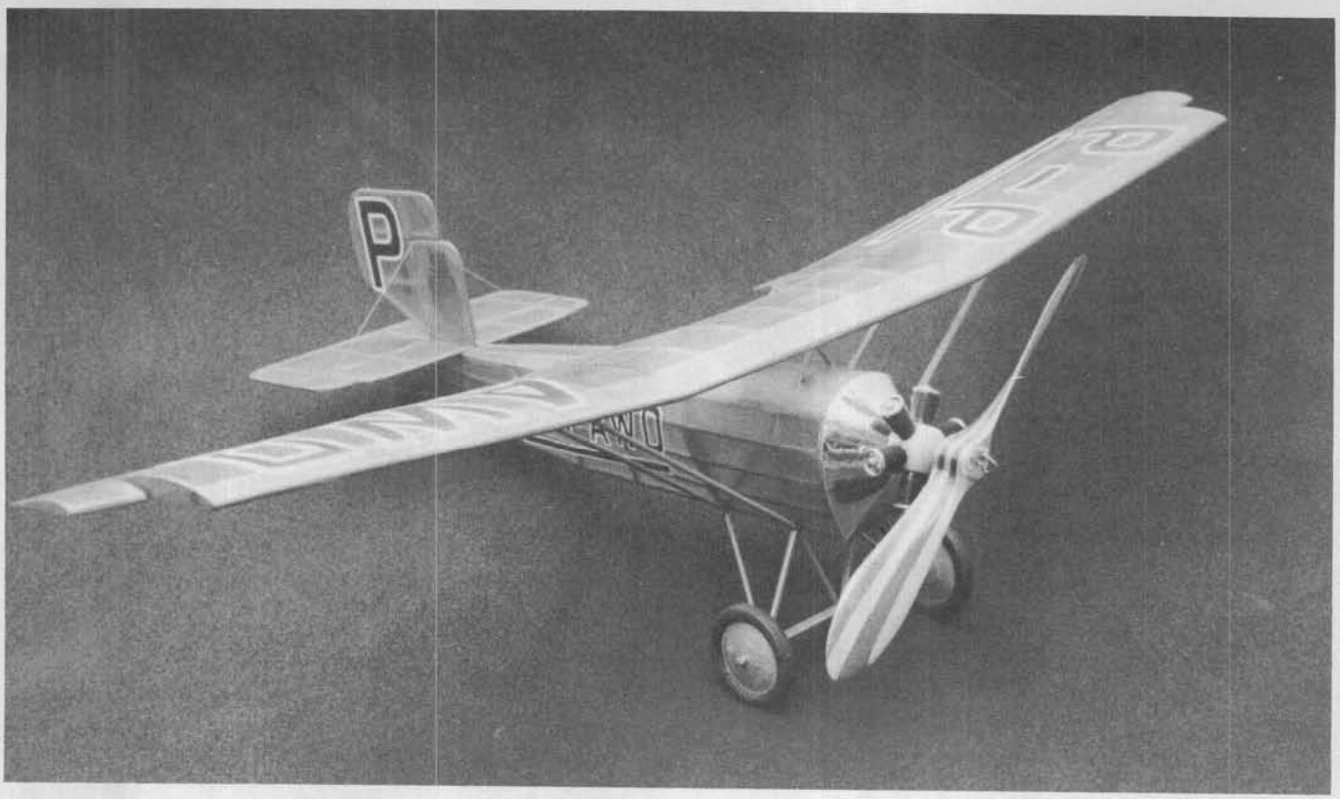


SAMOLOT DKD III

By WALT MOONEY. . .Here's a Polish Peanut with an added bonus: twice Peanut-size plans are available too; build either or both and you'll have a good-flying, out-of-the-ordinary model of a Polish lightplane.

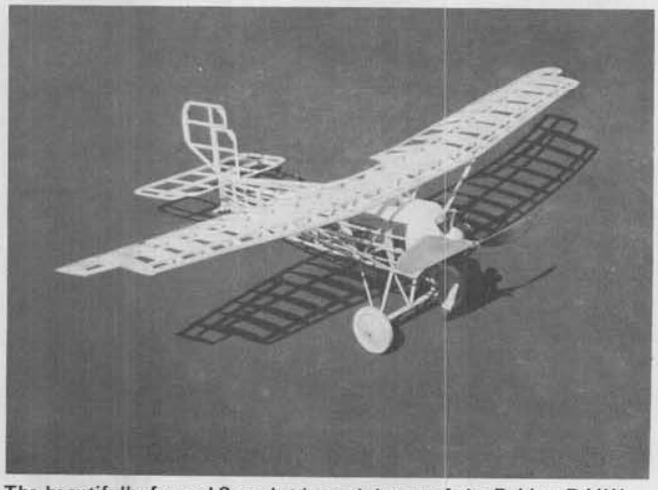
• There are a lot of reasons that a model builder might want to build a model of a specific full-size aircraft. The possession of a good three-view of an obscure design is enough to trigger off this builder. In the case of the Samolot DKD III, once the three-view was at hand the registrationletters, "P-PAWD" was all that was needed.

Now anyone could tell you that a Pea Pod would have to be green, and my intention was to cover the model with green tissue until I talked to Bill Hannan who said he had some data on colors in the Polish language and we could decipher the information I had and do the model in the correct color scheme. Sooooo, after a good bit of head scratching, we determined that the model should be dark blue with black letters and white pin stripes. The model in the photos is covered and decorated accordingly.

Shortly after the model was completed, Bill said he had some information that would make me hate him. At the next meeting of the Scale Staffel Tommy Wilson brought in a translation done by a Polish friend and Bill said he had received a Polish Profile both of which gave the main color as Dark Green. Wot a revoltin' development! Well, anyway the photos are only black and white, so they are OK. Unless the model gets recovered its not likely to get a lot of points from the scale judges at any of the Flight Masters contests, however.

So be it, if you like the Samolot DKD III, you can finish it in the proper colors.

Continued on page 87



The beautifully-framed Samolot is reminiscent of the Fokker D VIII, although the DKD has proportionally larger tail surfaces.

The P-PAWD should be finished in dark green covering, very appropriate for its registration letters. Control surfaces are built separately.

ful old camera broke, was fixed. . .and broke again. Dan Rutherford, 4705 237th Place S.E., Bothell, Washington 98021. •

Beaver. . . . . *Continued from page 20*

even further imrpoved. My best performance with a stock prop has been with a 12 X 6 Top Flite prop but by thinning blades and by taking some meat off prop hubs I have achieved even better performance. My plane will loop and roll and will do the prettiest touch and go's. It will R.O.G. from grass and has been very successfully flown off the water. The model is super stable and I would recommend it for anyone's first electric project. I hope you enjoy your Electric Beaver and I look forward to hearing thousands of little Electric Beavers whirring through the skies showing all those unbelievers that electric power is fun and practical. •

Samolot . . . . . *Continued from page 52*

The DKD III is reminiscent of the Fokker D VIII in its aerodynamic configuration. The size of the horizontal and vertical tail is proportionately larger and thus the DKD III model should be somewhat easier to trim out satisfactorily for flight. The configuration is also somewhat more angular in appearance and is therefore of interest. The model is built with all the movable control surfaces as separate entities.

The model in the photos was built twice Peanut scale size and the plans are dimensioned accordingly. Divide all the dimensions given by two if you intend to build a Peanut Scale version directly off the magazine plans.

There are four major structural components that must be constructed and the details required to complete the model. The major components are the fuselage, the wing, the horizontal tail, and the vertical tail. The details include, the dummy engine, the landing gear, the wing and cabane struts, and the propeller/thrust bearing/propeller hook assembly.

The major components structures are built up using balsa sticks and ribs or formers cut out of sheet balsa.

The wing structure is composed of ribs R-1 through R-12, the leading edge, top and bottom main and rear spars, aileron attach spars, aileron spars, wing cutout outlines, gussets, and trailing edges. The ailerons are made so they can be separated from the wing and therefore adjustable for flight trimming. It is probably best to build the wing and the ailerons at the same time so that the whole assembly will fit together without the tolerance problems that would be likely if the ailerons were constructed separately. Cut all the wing ribs from the correct thickness sheet balsa. Pin the bottom main and rear spars down over the plan, and cement ribs R-1 through R-10 in place on top of them. Cement the aileron attach spars in place and temporarily locate a 1/32nd-thick spacer between them and the aileron spars. Cement the aileron rib parts of R-6 through R-9, and ribs R-11 and R-12 to the aileron spar. Cement the wing trailing edge in place at the rear of the ribs. (Because the wing ribs have under camber the bottom rear spar must be elevated above the plan by about 1/16th inch during wing assembly.) Now add the wing cutout outline parts between the spar and the aft end of ribs R-2. These parts are cut from 3/32nd. sheet balsa. Four are required, two at the lower spar and two later when the top spars have been installed.

While the wing structure is still pinned to the plan, cement the leading edge stick in place. It will have to be shimmed up above the plan to properly fit on the forward end of the ribs. Cut the wing leading and trailing edges at the dihedral break locations and raise each tip 3/4 inch (or 3/8 inth for the Peanut). Now cement the top spar sticks in place and add the top wing outline parts, tapering their aft ends so they match the wing airfoil when installed.

The horizontal and vertical tail structures are built directly over the plan and need no further instruction.

The fuselage structure follows standard time honored techniques. Two fuselage side frames are built directly over the plans. These are removed from the plan and carefully separated from each other using a thin razor blade as a separating tool. The side frames are assembled into a fuselage box frame by cementing them

together at the extreme aft end and adding cross pieces top and bottom from location T-7 to T-1 using the fuselage top view to determine cross piece length. Cut the formers T-1 through T-7 and two each of S-1 through S-4 from the appropriate thickness of sheet balsa and cement them onto the box structure. Now add three stringers to each side and the top of the fuselage. Thin sheet balsa covers the top of the fuselage from T-1 to T-4. Carefully cut the cockpit hole out of the top cover between T-3 and T-4.

Forward of T-1 there is a carved motor mount block, at the front face of which is hexagon shaped to match the shape of the dummy engine. This block should be hollowed as indicated by the dotted lines.

The dummy engine is built up using Williams Bros. cylinders and thrust bearing and a hardwood crankcase. (At least so goes the plans, and that is what would have been done on the model in the photos except that when I was looking for a suitable piece of hardwood in my scrap box, I found a nylon toilet bowl fitting nut exactly the right size for the crankcase.)

Shape the hardwood hex and cut a hole in the center to accept the thrust bearing. Then drill a hole in each side of the hex to accept the bases of the dummy cylinders. Note that the Anzani engine was a twin-row engine, (actually two threes) and adjacent cylinders are staggered slightly. Dress snaps were used to simulate the cylinder heads.

Make up all the hardwood struts and fit them before the model is covered. They can be temporarily cemented in place on the structure and assembly alignment checked.

Disassemble the still-uncovered model. Bend the main landing gear wire to the shape indicated in the front view and install it in the fuselage frame.

Before covering any part of the model, use sandpaper to shape the leading and trailing edges of the flying surfaces. Sandpaper all the structural components making sure there are no unwanted projections or spots of glue, etc. that would interfere with a smooth covering job. Then cover the model with lightweight tissue. The tissue should be a dark green color.(!)

Use thinned white glue for the paper adhesive or use a glue stick. The adhesive should be applied only around the outlines of the area to be covered except in the case of the lower side of the wing where the undercamber requires that the adhesive be applied to every rib. The grain of the tissue should be lined up with the long dimension of the part being covered, for instance, the tissue grain should be spanwise on the wing.

When all the parts have been covered and the adhesive is dry, fog on a light coat of water and let it dry to shrink the tissue to get a smooth, tight covering. When the parts are thoroughly dry, give them two coats of thin clear dope. Let this dry completely and inspect the parts for warps and the covering for wrinkles. The easiest way to remove wrinkles is to cut the area of wrinkled covering away and recover that area with new tissue. Done carefully at this time such patches can be attached with adhesive water shrunk, and doped, removing the wrinkles with patches which are virtually unnoticeable.

Red tissue can probably be used for the body of the lettering. Pin striping around the wing letters was 1/8-inch wide white trim tape. Vertical tail striping was 3/32 and fuselage letter outlines was 1/16. This can also be trim tape but on the model in the photos was done with a brush, freehand. The Mielec shield was painted on the fin before the fin was attached to anything.

The top of the fuselage from T-3 to T-4 around the cockpit opening and the motor mount block forward of T-1 is covered with bright aluminum stickybacked shelf paper.

Balsa wheels have their disks painted aluminum and their tires painted flat black. Paint all the struts to match the color of your tissue.

The propeller in the photos was carved from a block laminated out of alternating mahogany and basswood slabs. This results in a very pretty propeller, but is not very close to scale. A plastic, commercially available propeller such as the Peck-Polymers seven-inch diameter one, painted dark brown would be nearer right and a lot easier to make. Make up a "Z" hook propeller shaft and install the propeller according to the detail drawn between the engine in the side and top views.

Assemble all the components into a complete aircraft. Half-inch lengths of 1/32 x 3/32 balsa were used to simulate surface control hinges. Simply cement the surfaces in place using these hinge simulations in three places as spacers to create the surface gaps. They can be easily cracked and reglued if they need to be set in a slightly different position for flying adjustments. Cement the wing in place on the cabane struts and cement the wing struts in place. Use monofilament line to make the tail brace wires. The windshield is a small rectangle of clear plastic. The rear motor peg is 3/32-inch in diameter and can be dowel, bamboo, or aluminum tubing.

The model should balance about half way between the two wing spars, and the one in the photos required a little bit of right roll adjustment in both ailerons to resist a tendency to spiral dive to the left under power. If you can, do your first test flights over tall grass. Power for the model in the photos was four strands of 1/8th flat rubber twice the length of the motor base.

Have fun with your model of an early Polish lightplane. And don't let anyone tell you P-Pawds aren't green. •

Electronics. . . . *Continued from page 21*

cluding instructions for building a case, and a built-in charger. Neither of these are recommended with the availability of so many similar items to choose from, but the rest of the project is worthwhile. All of the solid state components are still available, and except for having to etch your