PHOTOS BY FUDO TAKAGI

Peanut 'Ol' Ironsides'

By WALT MOONEY . . . A possible threat to the "Big 3", Lacey, Cougar, and Tailwind, this easy-to-build model has all of the requirements.

• Here is a little homebuilt that has all the right shapes to make a great little peanut scale model. The Tailwind, the Cougar, and the Lacey have, to some extent, dominated the peanut scale contests, so when a three-view of Ol' Ironsides turned up, it looked like a natural to give the T, C, and L a little competition.

This model has the same general configuration as the aforementioned trio, with what appear to be some possible advantages over them. First, Ol' Ironsides is a single place airplane and thus has a narrower and therefore lower drag fuselage. Second, the original airplane has plywood structure, and is absolutely slab sided. Third, it has simple, straight-edged surfaces.

The model has sheet balsa fuselage structure and built-up tissue covered wings and tail surfaces. After extensive flying tests, the size of the vertical tail was increased to that shown on the plans. The model will fly very well outside with the scale vertical, but it would not turn in a small enough circle to fly indoors. With the larger tail, it will circle safely inside the width of a basketball court.

All of the wood structure utilizes balsa. Music wire is used for the landing gear, propeller shaft hook, and the rear motor peg. Use wire of 1/32 diameter or smaller.

Start building the model by cutting all the parts out of balsa sheet. The fuselage sides, bulkheads, "C", "D", "E", and 12 ribs are cut from 1/32 sheet. The top and bottom of the fuselage is also made from 1/32 sheet aft of the cowl area. The cowl sides, wing tips, and bulkhead "A" are cut from 1/8 sheet. Bulkhead "B", 4 wheel pant sides, and the vertical tail is cut from 1/16 sheet, as are the two root ribs. The nose block and the 2 center parts of the wheel pants are made from quarter inch thick balsa.

Save the circles cut out of the thin bulkheads to be used as the side reinforcements for the rear motor peg. Save the square cutout of bulkhead "A" to use as a backplate on the nose block. Make the wheels from 3/16 balsa, or use hardwood wheels.

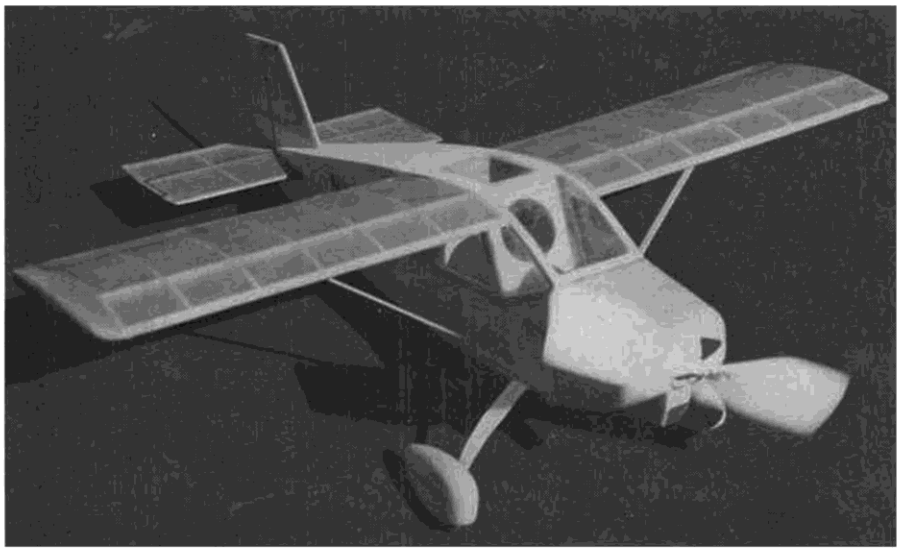
The leading and trailing edges of the wing, the trailing edges of the horizontal tail and the tail tips are made from 1/16 x 1/8 sticks. The wing spar is the same. The leading edge, spar, and the ribs of the horizontal tail are made from 1/16 square sticks.

The top and bottom of the cowl is made from 1/16 thick sheet.

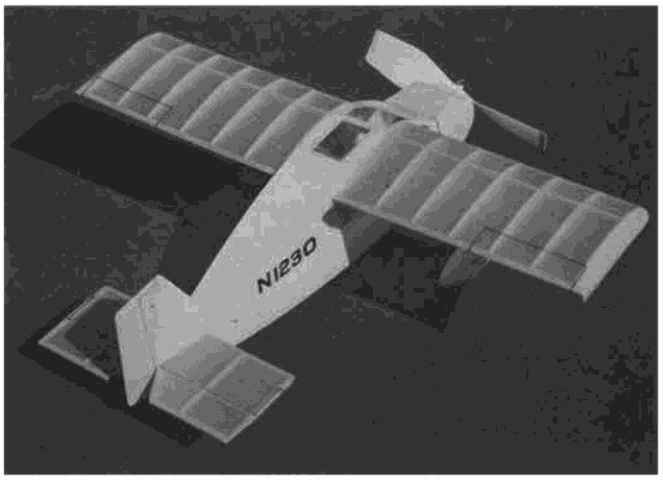
Note that all of the various thicknesses can be built up of laminations from the thinner sheet if desired, but if you have been building models for a while, your scrap box probably can supply all the thicker balsa required.

Construction follows standard practice. The wings and tail are built directly over the plans. Sand the leading and trailing edges to the correct cross-section after removing them from the plan. Sand the vertical tail to the correct airfoil section.

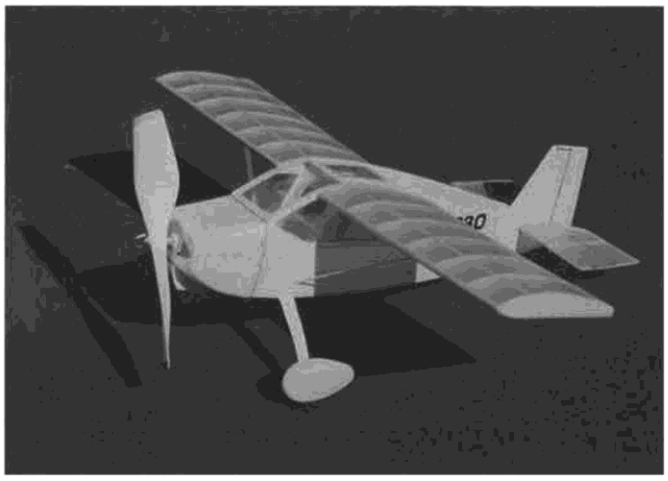
Care should be taken to insure that the fuselage is assembled with the same amount of bend in each side. If possible, get both sides from the same, or identical



Couldn't be simpler . . . a box fuselage, and straight-edged surfaces. It's obvious the designer had good visibility in mind when he drew this one up.



This one should really make the Lacey's and Cougars sit up and take notice! Sheet fuselage and wheel pants add weight, however.



A good model for the beginner in scratch-building; no teeny pieces, no molded canopy, all standard wood sizes.

pieces of balsa sheet. If one side is made from harder stock than the other it will be almost impossible to obtain a "true" fuselage. Start by cementing the sides together at the back end. Place them over the top view with the correct angle between them, to dry. When the back end is dry, bend the front ends toward each other and cement "A", and "B", in place. Then cement the top and bottom of the cowl in place. Make sure that these pieces are very carefully cut with 90 degree corners, and set very carefully in place, because they set the alignment of the fuselage.

The rest of the fuselage parts are cemented in place, and then the top and bottom skins are added. Care must be exercised around the window and windshield frames, because these areas are weak until the assembly is complete and the celluloid windows are cemented in place.

The built-up surfaces are covered with japanese tissue, water shrunk, and given two light coats of dope.

The wood parts do not absolutely require doping, but they will look better and stay cleaner if they are given a coat of sanding sealer and at least one coat of clear dope.

Let's add details on the model. Paper landing gear legs are cemented onto the wire. A balsa tail wheel is made from 1/8 inch balsa, the wire is just poked into the wheel, and the fork is painted on. Wheel pants are laminated out of three layers of balsa and carved to a streamlined shape. Wing struts are made from a hard balsa stick, 1/16 x 1/8, sanded to a streamlined cross-section. The strut attaches to the middle rib of the wing, located as shown on the side view.

The air inlet to the carburetor is block balsa. The cooling air holes are simulated by painting them onto the front of the noseblock with flat black paint, as is the airfilter opening in the front of the air inlet block. India ink is used to draw on the surface outlines and the cowl separation lines.

Use a commercially available plastic prop, or carve your own from balsa. The spinner is balsa, and is not absolutely required. It was left off of the model in the pictures.

The model was built with almost no dihedral and flys really well. What was put in was done to keep the wings from looking like they droop. A completely flat high wing appears to droop, so put the wings on with about a sixteenth of an inch of dihedral. Add the little tip plates to the underside of the wing tips as shown in the tip detail.

A single loop of one-eighth rubber powers the model. Before flying the model, make sure it has about an eighth of an inch of washout in the tip of each wing. That is, warp the wings so that the trailing edge at the tip is higher than at the roots. The model should be balanced so that it holds a level attitude when it is supported under the spar. The model in the pictures required downthrust to prevent a stall under high power at the beginning of a flight. A paper match between the nose block and the top of the cowl was enough. ●