

SORRELL "HIPERBIPE" SNS-7

By PRES BRUNING . . . One of the most eye-catching of modern biplanes, we'll probably see many versions in model form. Just to get warmed up, try this one on for size.

The Sorrell SNS-7 High Performance Biplane, "HIPERBIPE", is a very interesting, very 3-dimensional looking airplane, and quite an aerobatic performer as well. This is one of those planes that just cries to be built in model form. As a Peanut, it is quite large. You can imagine how big it would be as a Walnut. Dig that large square fuselage (plenty of room for rubber to flop around in)! Also, that flying fuselage allows you to use the scale horizontal stabilizer.

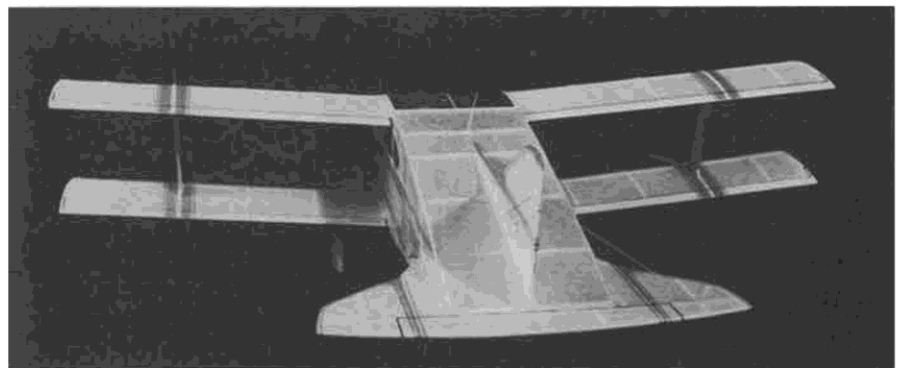
Let's begin construction by talking about the fuselage. I built two identical sides inside of a cardboard cut-out profile. To space the two fuselage halves apart accurately, I taped a cardboard section between the landing gear vertical pieces. Next, I taped a folded-over piece the width of the cross pieces to top, bottom, and trailing edge of the fuselage rear. Now being rigidly braced, glue in the remaining cross pieces, removing the cardboard afterwards. Now add the remaining longitudinal stringers. Cover canopy base line from the second vertical back from nose block to the

fourth vertical with black Dri-mark stained bond paper. Now add in bass-wood cabin bracing struts and landing gear. Two verticals of medium hard 1/16 square balsa were added in the center ahead of the motor peg, 1/2 inch apart from each other, to prevent bending of the motor peg. Next, cover the entire fuselage, minus canopy area, with white superfine Japanese tissue. Now is the time to add the tissue trim

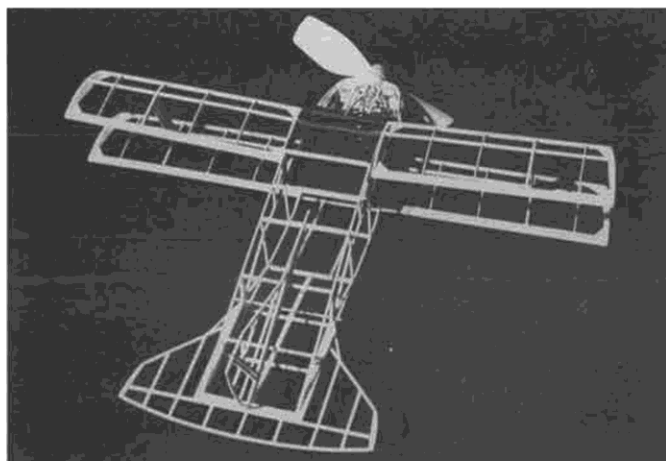
and lettering.

Before building the wings, trace the wing plans and turn over, giving you the plans of the left upper and lower wing halves. Nothing unusual about the construction, other than the tips being shaped to fit at an angle using a cardboard angle or balsa angle block to assure same set up for all four tips. Now cover,

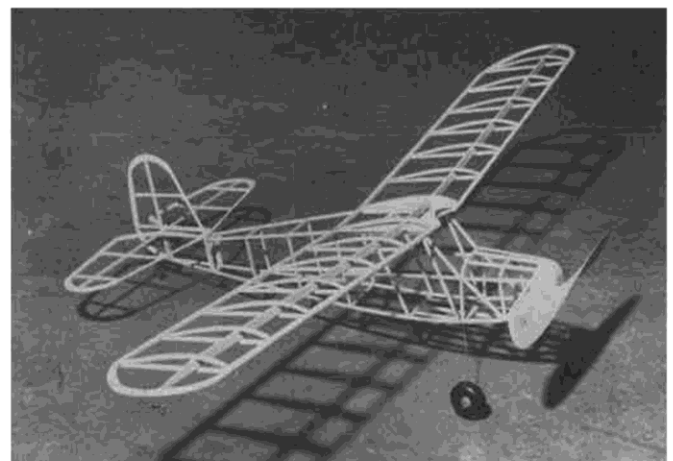
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Among many distinguishing features of the "Hiperbipe" is the continuous-width fuselage, making it operate like an airfoil in flight.



If you don't like to bend fuselage longerons, this is your plane! An interesting design from most any angle.



For next month, Walt Mooney will be back with this easy-to-build WW II Aeronca Defender O-58A, or L-3.

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water shrink (pin down), dope and decorate the wings with doped-on turquoise Tern Aero tissue. Next, glue lower wings in first, at the prescribed dihedral angle, and join lower wing spars with 5-minute epoxy. By the way, the pin striping was drawn on the doped tissue with No. F-447 Process Blue Magic Marker Studio fine-line pen obtainable at artist supply stores. This is recommended before assembling the wings, tail, etc., as it is easier to work flat than struggle between struts and flying wires.

The vertical and horizontal stabs are similarly built. For trailing edges, wet 1/16 square balsa and pin down in a curve in both cases. The vertical stab-fin and rudder are cut apart and soft wired hinged, top and bottom, with 5-minute epoxy. Also I recommend using Hot Stuff glue for the entire framework, as it doesn't add weight, but your fits must be good and snug. Covering and trimming is done the same way as for wings and fuselage. Bond the vertical stab to the fuselage. Now glue horizontal stab to the trailing edge of the fuselage and lightly spot-glue the forward stab points to the fuselage, to allow for fine flight adjustment later.

The most difficult decorating was done on the pre-doped wing struts. I drew a vertical datum line with the pen and laid out small squares on either side, working to the extremities of the struts on both sides as well. Now add the struts in before adding the top wings.

The rigging is always a time for struggle, but patience is the rule. I find it easier to anchor one end of each thread first, then work the other ends into the joints of wing and fuselage with a touch of glue on a toothpick, cutting the loose ends after completely dry. Wet the cotton thread for assured tightness.

Now add in the cabin transparencies.

This is done by carefully laying a thin bead of 5-minute epoxy around the perimeter of the window opening. Using a toothpick with window gunk caulking on the end, touch the transparency in the middle and pick up carefully, locating it in place. Twist off the toothpick. Do the same for the other side and top. The windshield was vacuum-formed over a shaped sugar-pine block, using side, plan and front-views as a form guide, allowing enough form run-off and marking the trim off line on the form with pencil. All canopy framework trim was added with Scotch brand rubber cement tape, taped to one side of Japanese tissue, then cut to appropriate width strips. With the backing pulled off one end, carefully secure strips to canopy.

The spinner is a model rocketry nose-cone, turned down with sandpaper in a clamped down electric drill, using a cardboard template to check profile accuracy. With a Dremel tool, hollow the center out, then carefully slot on either side to fit over a cut-down Tern Aero prop.

The completed model, with one loop of 1/8 Pirelli rubber, 14 inches long, weighed in at 16 grams.

After testing indoors and out, I finally adjusted my model to fly to the right using approximately 1-1/2° right thrust and +2° down thrust, and very little right rudder. A small tab of scotch tape was added on the right lower wing for indoor flying in our small grade school gymnasium. Outdoors, the tab can be removed and decrease rudder to open up the turn. Turns were flat and the flight very stable and slow. Build it light! ●