

at leading edge. Glue 1/16 sq. strip into position at trailing edge. Cut tapered spars from medium weight balsa, using the patterns shown on the plan. Glue the spars to the bottom strips.

Burnish the inner face of the 1/16 x 3/16 top strips with a smooth piece of plastic or pencil. This will produce a curvature which will make it easy to glue the strips over the spars at all points of contact. Glue the 3/16 sheet tips in place and add the balsa brace to the center section. When stabilizer is dry, trim leading edge to airfoil shape and sand entire stab thoroughly. Install the plywood hook as shown.

If you are building the sub-rudder version, install a DT hook formed of soft wire (large paper clip) to the trailing edge of the stab. If you are building the aft rudder version make a DT hole as shown on the plan.

SUB-RUDDER FUSELAGE

Cut out the pylon and rudder, and pre-glue all adjoining surfaces. Pin the 1/8 x 1/8 strips in place at pylon area. Pin 3/16 x 3/16 strips in place at rudder area. Glue the 1/8 x 1/2 fuselage top, bottom and vertical members in place. Add the 1/8 sheet doubler at the pylon area and glue the 3/16 sheet in place at the rudder area. The pylon and rudder are now glued into position. Be sure the pylon is in perfect alignment over the plan. Now, glue the 1/4 fill strips in place at the front end of the fuselage.

Glue the 1/8 x 1/8 strips in place at pylon area and add the 1/8 inch sheet doubler. Glue the 1/8 x 1/2 diagonal member in place. Trim the strip to fit between the doublers. Now, glue the 3/16 sheet in place at the rudder area. Install the landing gear wire as shown, unless you use the type of engine mount that provides for a wire skid.

When the fuselage is dry, remove from plan and use it as a pattern for the fuselage sides. Cut out and glue the two sides to the fuselage framework and weight down until dry.

Remove the fuselage from the board and construct the wing platform from 1/8 inch sheet (medium-hard) balsa. Glue the platform to the pylon and add the 3/4 inch trailing edge to both sides of the pylon. Install the 3/32 x 3/32 strip runners and install the 3/16 dowels.

Add the balsa fairing (stabilizer stop) and 3/32 plywood stabilizer platform. Cover the area behind the platform with 3/32 sheet balsa. Glue the DT hook in place and install the dowel through the fuselage as shown on the plan. Add the incidence block and glue a strip of 1/8 x 3/32 spruce to the front of the rudder.

Install the gas tank (approx. one ounce) unless you plan on using a pen bladder or pacifier fuel system.

Cut the balsa nose blocks to the

shape shown on the top view of the plan. Epoxy the two 1/8 plywood firewalls to the front end. NOTE: Blind mounting nuts may be required on the backside of the firewall, depending on what type of engine mount you select.

When the fuselage is complete, sand thoroughly, rounding off all sharp corners. Finish the sanding with a fine grain sand paper and add the 1/4 inch aluminum DT snuffer tube to the rear end of the fuselage. One end of the tube should be crimped.

Cover the fuselage with Japanese tissue and apply six or seven coats of thinned dope. Cover the nose of the fuselage with gauze, silk or nylon, to help keep the firewall permanently fixed in place. Coat well with epoxy.

AFT RUDDER FUSELAGE

Construction is the same, other than the tail section, which is considered self-explanatory.

FLYING

There is no substitute for a well adjusted model. The more you fly your machine, the better it will perform for you in competition. The best designs are no better than poor designs if they are not flight-trimmed properly. Take plenty of time to go through the trimming process. Many of the best contest flyers will fly a new machine 30 or 40 times before they are ready to take on competition. The more you practice flying (under windy conditions, too) the better you will know your plane and what to expect on every flight.

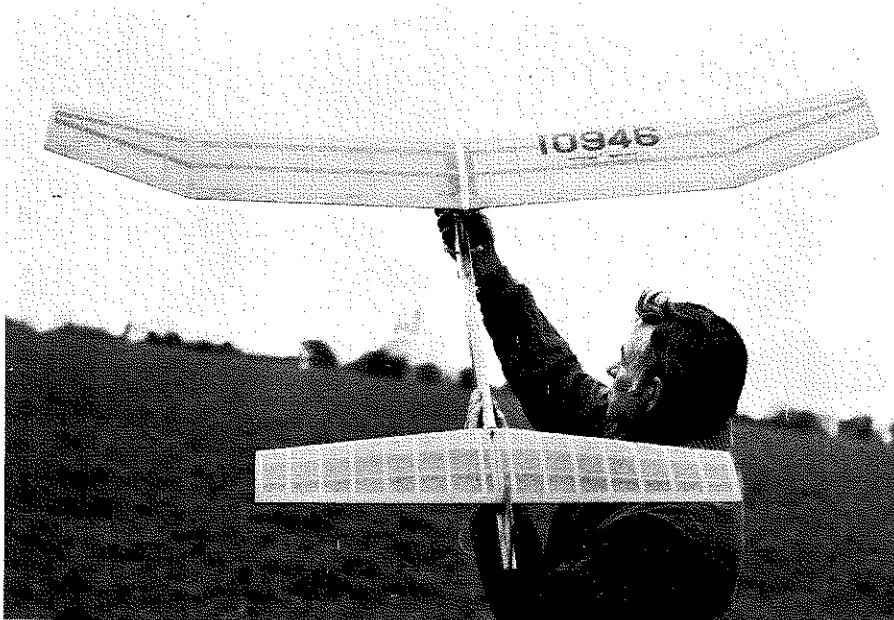
Before you test glide your Okie Bird, visually check all flying surfaces. They must be perfectly flat, with the exception of the right inboard panel, which

should have about 3/16 inch wash-in. The stab should be tilted for a left glide turn, and the C.G. should be located close to the point shown on the plan. The rudder tab on the sub-rudder ship is 1/16 to 3/32 to the left. Begin with only 1/32 left rudder tab on aft rudder ship. Gently toss the model into the wind with the nose pointed slightly downward. If it stalls, remove balsa from the 1/8 incidence chunk until the stall is eliminated. The model should have a long flat glide with a slight left turn.

Make the first power flight at about three-fourths power, with a four second engine run. The Okie Bird should climb steeply to the right. If it turns too tightly to the right, add more left rudder tab. If it goes straight, at a steep angle, without any right turn, decrease the amount of left rudder. Gradually increase the power and engine runs until your plane is climbing to the right at about an 80 degree angle.

Here are some things to watch for while testing your plane. If it dips to the right under full power, then pulls its nose up and climbs, add a bit more left engine thrust. The additional left thrust should take care of the "dip." If the plane climbs properly to the right with the nose up and after the speed increases the climb flattens and the right wing drops, add more wash-in to the right inboard wing panel.

Correct the glide turn with stab tilt and correct the power turn with rudder tab; or in the case of a right dip as mentioned earlier, more left engine thrust. And remember, the rudder tab is very sensitive. Move it only 1/32 of an inch when making power turn adjustments.



The stab did clear the author's head, barely (no pun intended), as he launched. Design had many hours of flight testing before being published.

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