



RB-59 Gladiator

There's no question that the author was successful in creating a model design with full-size airplane looks. Pilot/passenger figures add immeasurably to the impression. Plans detail how you can form your own large bubble canopy. It's a great sport flier or intermediate trainer.

It's an eye-appealing RC sport plane from a noted Czechoslovakian designer with three-channel controls (elevator, engine, and linked rudder/nose wheel). Put in a .15 engine, and get ready for some flying fun.

■ Pavel Bosak

THE FIRST THING that I want in every model that I build is for the plane to fly well. Secondly, I like my models to look good from an aesthetic point of view. The RB-59 Gladiator was designed for the intermediate flier, keeping in mind that it should look as much like an actual aircraft as possible.

The RB-59 Gladiator is a stable model—not at all tricky. Thus, it is ideal for a relatively new flier and for sport or “Sunday” flying. It can per-

form most of the intermediate aerobatics maneuvers, so it provides a welcome change of pace as the flier's skill progresses.

The model is designed to fly with a .15 engine. For those who might want to try it as a seaplane with floats, use a .19 engine.

The wing is quite easy to build because it has no



The author with the RB-59 Gladiator. Five had been built by various people—all successful.

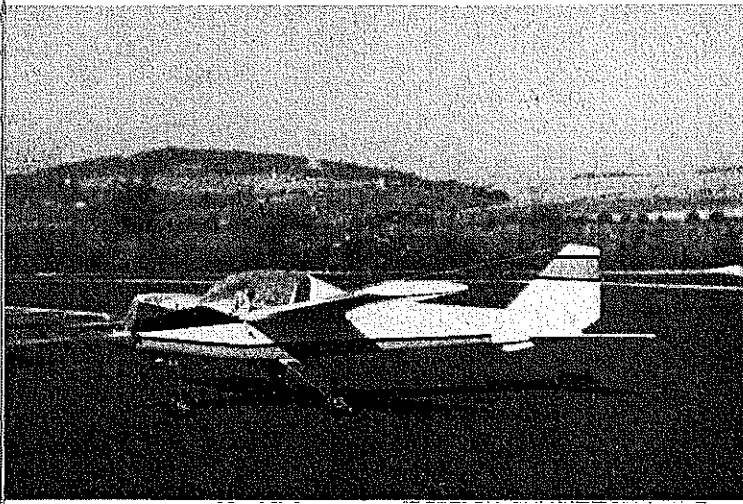
aileron. Construction basically is balsa, with the addition of spruce spars and plywood braces. Those who are into foam cutting could quite easily make a foam wing, instead, using the two rib templates shown on the plan as patterns.

Ribs for the tapered wing are shaped by the interpolation method. First, cut ply templates of the center and tip ribs. Sandwich between them 12 balsa rectangles corresponding to the ribs for one wing-half (slightly oversize and with grain lengthwise). Drill two holes in the “sandwich,” and bolt together all the pieces. Carve and sand the balsa rectangles to conform to the ply shapes. (Do each half separately and oppositely.)

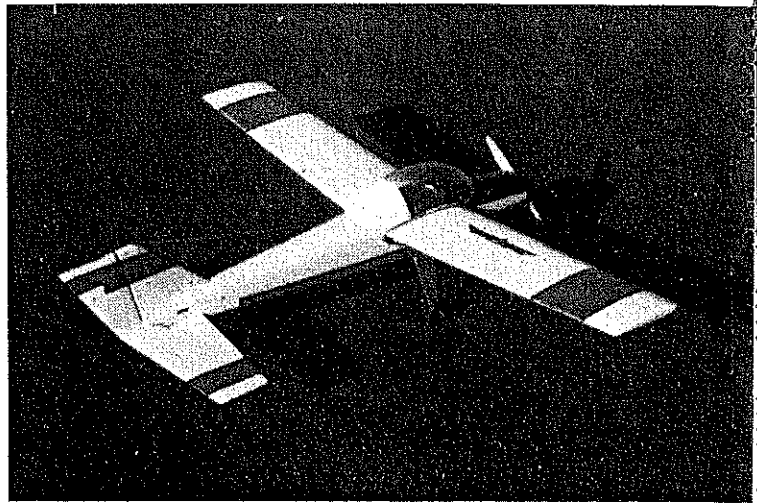
Cut out two of the 3/16 balsa main wing spars (W-16). You can now start assembling the wing.

It is advisable to build the wing on a jig, with the leading and trailing edges blocked up to the proper height. This will help avoid any twists or warps that might otherwise occur. Cement in place all the ribs, all the balsa and spruce spars, and the leading and trailing edges as per the plan. Join the two wing halves together with 3/32 ply wing braces (W-15). Put on the 1/8 balsa sheeting, cap strips, and wing tips. When everything is dry, sand the entire wing until it is smooth.

Stabilizer and Fin. They can be built-up as shown on the plans, or they can be shaped from 1/8-in. sheet balsa. The elevator and rudder are made from sheet balsa.



The wing builds easy since there are no ailerons. Tapering ribs are formed by the carved and sanded "sandwich" method. Goes quickly.



First flight checkout procedure calls for taxiing it with neutral rudder. If it's straight, you're ready to try the first takeoff.

Fuselage. Begin by cutting out all of the parts. Start with the formers, followed by the fuselage sides—which are strengthened with 1/32 ply doublers. You can use a commercially-available engine mount or cut one from 1/4-in. plywood. Attach the steerable nose wheel assembly to F-3, and prepare the fuel tank for installation.

Start the assembly by cementing the formers between the fuselage sides, and at the same time add the vertical fin. Plank the fuselage bottom and top rear with 3/16 balsa. Add the forward pushrods and the fuel tank before planking the upper forward section.

After sanding the entire fuselage, cut out the slot for the stabilizer, and glue it in place. Make sure that the stab is square with the fin and that it is set at 0° incidence. Glue in the wing rubber-band dowels and their small plywood doublers. The main landing gear is made from 1/8-in. aluminum, or you may be able to find a suitable one that is ready-made.

Canopy/Cockpit. Study the sketches. Use the top view of the canopy and templates A, B, and C for making a die. In making the die and punch, be sure to allow for the thickness of 1/32-in. Plexiglas (or whatever plastic material is used).

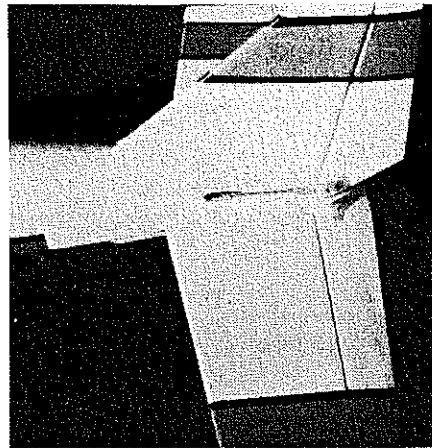
Warm the plastic canopy material. Place it over the die, and pull down on the punch to form the shape. When the material has cooled, remove the punch and trim off the excess flashing.

Trim the canopy to fit the wing. Glue on the end formers, and glue to wing. Adding a pilot figure inside the canopy will do much for the

plane's realism.

Finishing. You may have your own favorite method, in which case I suggest that you follow it. Here is what I did.

The model was clear-doped twice, sanding after each coat. Then it was painted with a mix of talcum powder and clear dope as a filler. Again it was sanded. All gaps and dents were filled, and fillets added where necessary. Another sanding, another application of clear dope, and then the



You have a choice in building the tail feathers. They can be built-up as per the plans or cut from balsa sheet of proper thickness.

entire model was covered with thin silkspan.

Next came six coats of clear, wet-sanding with No. 400 paper. A color coat was applied, followed by a coat of clear fuel-proofer.

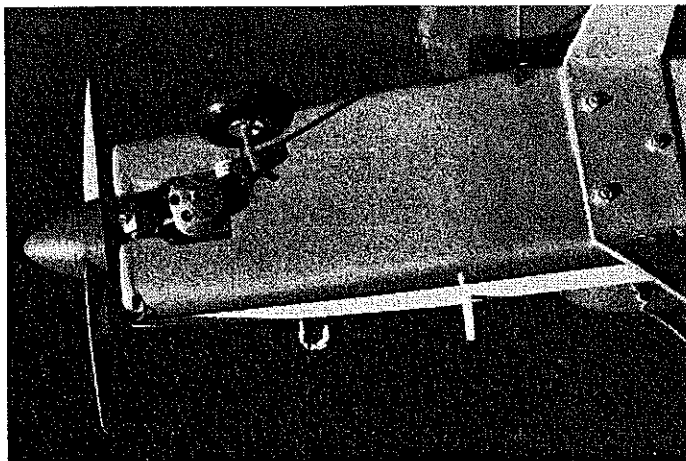
Final assembly. Attach the main landing gear and the engine. Hinge the rudder and elevator, then install the servos and pushrods. Attach the engine throttle and steerable nose wheel to their servos. Check the model's balance point, and adjust with weights as necessary so that the model will balance where the arrow is shown on the side view.

Flying. You will find that the first flights are easy, assuming that the flying surfaces are straight (no warps or twists) and that the plane balances properly. Try taxiing with the rudder in neutral; adjust the nose wheel for small corrections. If it taxis straight, try the first takeoff—which will result without any control inputs once it gains the necessary speed. The more experienced flier can lift off sooner by using the elevator.

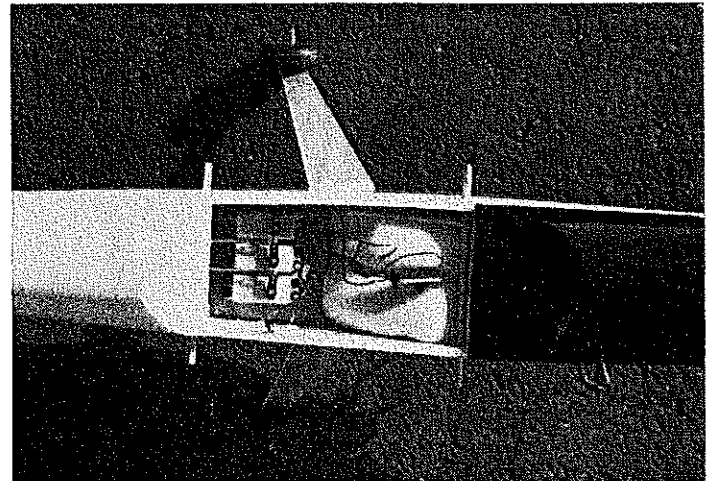
Members of our club have built five Gladiators, and each of them flew well on the first try. It will perform all of the intermediate maneuvers, including outside loops. To make it spin, give full rudder and elevator; to recover, just neutralize the controls.

I think it would be interesting to fly a Gladiator with ailerons, but that would be another story.

I wish a lot of nice flying hours to anyone who builds the Gladiator.



Author used a diesel engine—very popular in Europe—but any smooth-running .15 glow should be fine. He didn't need a muffler where he flew, but you should be sure to install one on yours. Here, they're a must.



Plenty of room under the wing for servos, radio, and batteries. Rubber-banded wing prevents serious shock damage from minor mishaps.