

THE BEAST

Shoulder wing or cabin version, plans for both are detailed! A fine sport free-flight for .020 to .049 power.

By Don McGovern

► All pylon haters' gather 'round,— here's plans for a shoulder wing sport free-flight, and if that is not for you, a cabin version, single rudder is also shown. Wing area may be increased for those who wish to calm it down a bit, and an .020 may be used if you prefer less power built in.

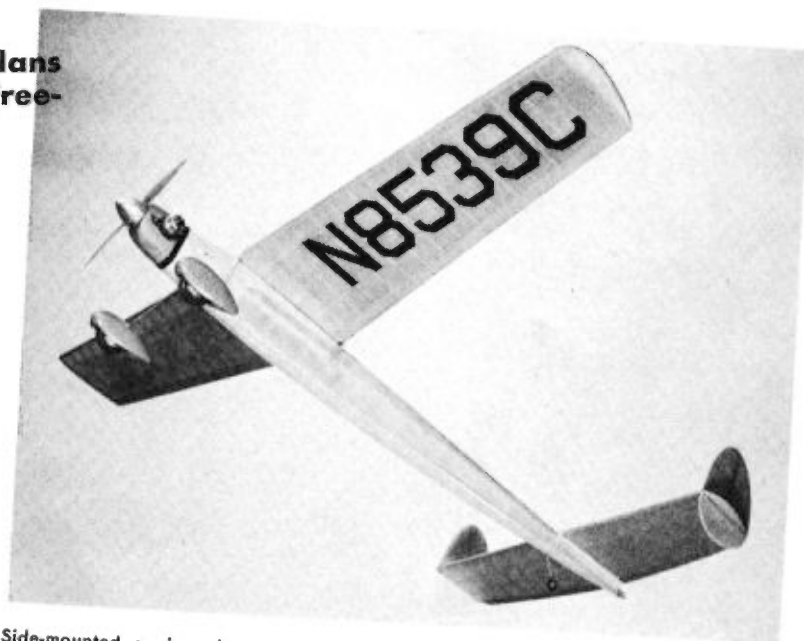
A glance at the framework in the photo will reveal the built-up rib structure, used both on the wing and stab. The built up ribs were used for several good reasons. First, they are by far, the easiest type ribs to make, especially when dealing with a tapered wing configuration. Secondly, all spars are recessed away from the covering, and yet are close to full depth. Then too, weight is also saved, and it adds to the appearance of the model and provides a change of pace.

Wing Assembly: The tapered trailing edge and the $\frac{3}{16}$ " x $\frac{1}{4}$ " leading edge are first pinned in place, over the plan. $\frac{1}{16}$ " sq. bottom camber strips are now cut to length and cemented in place at each rib position. $\frac{1}{16}$ " sheet spars are next. Taper to height required at wing center and tip, and cement to the $\frac{1}{16}$ " sq. bottom camber strips.

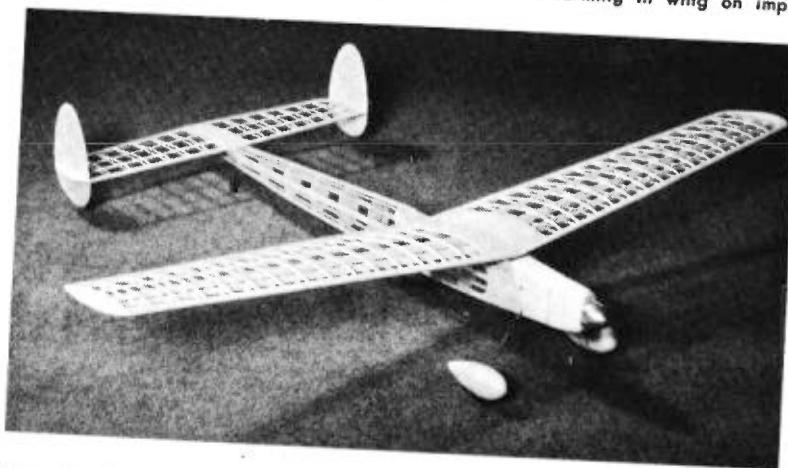
A template is now cut from celluloid, plywood, or hard balsa (Better yet, use a French curve if available.) Select firm medium grade $\frac{1}{16}$ " sheet, and strip off $\frac{3}{32}$ " deep airfoiled top camber strips. Trim each to the length required as it is installed. It is as simple as that and makes a beautiful and efficient structure in less time than any other method. Repeat same procedure for the stab.

Fuselage: A crutch of $\frac{1}{8}$ " x $\frac{1}{4}$ " medium grade strip provides the starting point. The formers are cut as indicated and positioned. Bend the gear wire to shape and strap on ply former. Drill

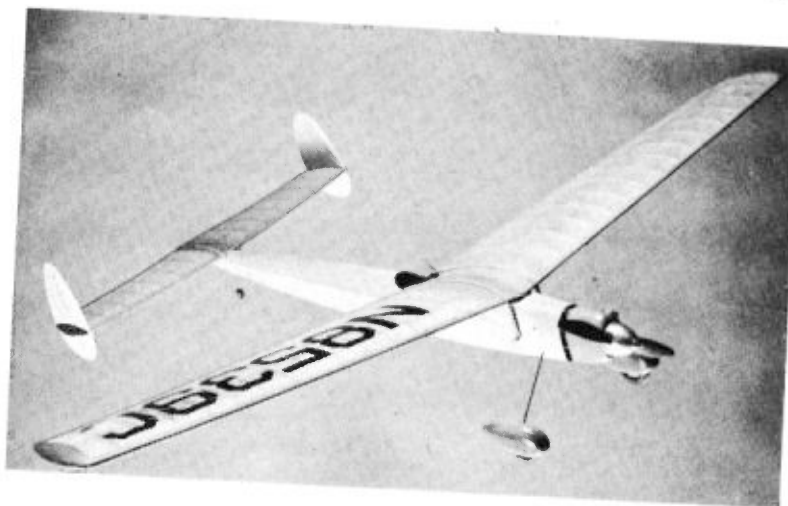
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Side-mounted engine chosen to prevent a crater from forming in wing on impact.



(Above) Strip ribs from sheet with template. (Below) Planform layout is evident.



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the engine mounting holes in the firewall and secure the retaining nuts with washers and soldered wire to prevent rotation. The fuel tank, if not an integral part of your engine, is next installed, together with a timing device if desired. The nose areas are now sheeted, and all structures sanded prior to covering.

The wheelpants add much to the appearance, but are optional of course. It is quite practical to fly with them in place, and in most cases, little damage is dealt them as they are mounted on the gear wire, rather than to a brittle strut fairing. As they are made of lamination lines are always visible and serve as a guide.

Covering and Finishing: This is pretty much routine, and the simple straight lines of the model cause no

problem. Original had red-orange "Silkspan" on the flying surfaces, white silk on the fuselage. With black decals and trim, it made a colorful craft in flight. Use fuelproof dope throughout.

Flying: Balance the model carefully and trim as necessary. Check for any visible warps in the surfaces or in alignment. Warps may be steamed out, twisting in the opposite direction and holding till cool. A tea kettle is quite useful for this purpose.

Test glide into tall grass. Adjust the glide to be bouyant, without any severe turn or stalling tendency. Glide again from an altitude if possible as a further check. For first power flights, try prop on backwards to cut the thrust, and limit power and fuel. Strive for a gentle right spiral under power, flaring into a left hand glide pattern. Good luck! ●