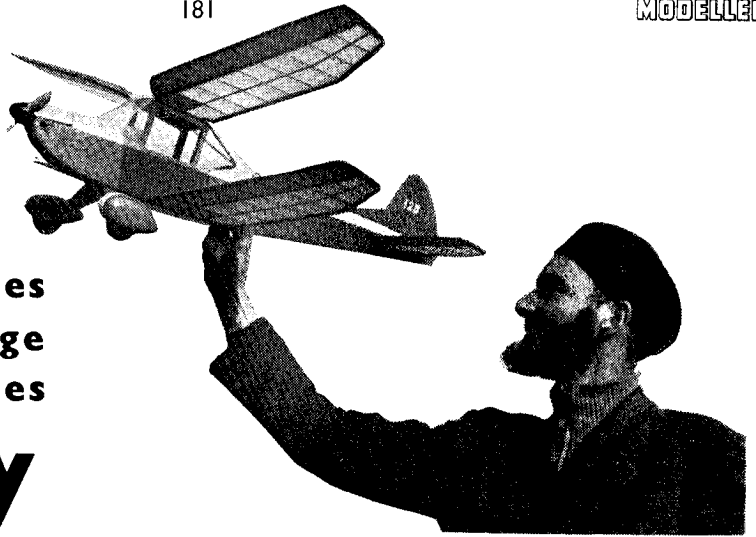


Pete Holland's

model on the
cover — a new
look in Biplanes
for a wide range
of .5-1.5cc engines

Bi-play



WHY NOT a lightweight Biplane? The gap in our plans service range of sport designs was plainly obvious. We have the medium weights for all sizes of engine; but not a single one with large area for low power—and slow flight. Pete Holland set himself the task of filling the bill within a week and came through with this new approach with time to spare.

The result was born of a spot of stability research, and the desire to clean up orthodox slab side construction. With this in view, the following points were incorporated.

1. Large decalage and stagger.
2. Low C.L.A.
3. Knock-off wings with spring top tongue.
4. No elastic bands, struts, etc.
5. Streamline cabin.
6. Suitability for .5 to 1.5 motors.

These ingredients proved to meet the case, result was a job which can be taken out of the box, given full throttle and hurled with complete abandon!

Cut out fuselage formers and sides. Make celluloid tubes to fit 12 S.W.G. u/c and bind to F.3, not forgetting the 3/32 in. ply packing piece on starboard side (this allows for wire thickness of torsion bar).

Drill bearers and bolt in motor, cement bearers to F.1 and F.3. The motor will then hold the assembly true. Now cement $\frac{1}{8}$ in. \times $\frac{1}{4}$ in. jointing strips to fuselage sides and assemble sides, formers and bearer unit. Start at the tail with the fin t.e., between the fuselage sides, and work forwards. Add fuselage bottom and cross pieces. The $\frac{1}{16}$ in. sheet top decking is wrapped over in one piece each, fore and aft, after making up the correct width using butt joints as necessary. Sand off the $\frac{1}{32}$ in. projection of the sides at the joint so that the curve falls in smoothly.

Complete by adding wing tongues, cabin uprights and cabin top.

Upper and lower wings are built from the same

plan. Note that upper wing only has the extra root panel. Make both port halves on plan then remove and build starboard halves on their undersides.

Add boxes *between* ribs, using 3/32 in. sq. strip to reinforce joints. Face roots with thick celluloid or 1 mm. ply and trim to section profile. Cement 18 s.w.g. clips to boxes to locate tongues.

Fin is $\frac{1}{8}$ in. sheet and is fixed between scrap blocks on fuselage, its t.e. is already in place and locates for verticality.

Make one pair; left and right handed of main u/c leg, and spat support. Bind and solder support to leg and assemble the legs so that the torsion bar of left leg is in front of the right leg bar, wrap tinplate round the torsion bars to form a tube and solder, leaving the bars free to rotate. See sketch. Spring end of spat support down and fit wheel(s) then bend back and solder to axle. Spats and fairings can be cemented in place.

For .5 to 1 c.c.; lightweight Modelspan all over. Colour scheme can use different colour on i.e. jointed on the wide spars. For 1 to 1.5 c.c. heavy Modelspan and a more elaborate colour dope scheme.

The original is powered by a Merlin .76 c.c. and though it required no trimming, further flights were made to ascertain the limit of trim. It was found that $\frac{1}{16}$ in. rudder and $\frac{1}{4}$ in. tailplane adjustment was possible before an excessive change of trim occurred. The normal flight pattern is left power and left or right glide to order. Though light, its excess stability takes care of turbulent conditions, so the resulting progression has no sharp edges.

A powerful .5 c.c. diesel should cope, providing the total weight is not more than 18 oz. (the Merlin was O.K. down to half revs.). At the other end of the scale, an average 1.5 c.c. motor would produce a sprightly though not overpowered combination, when around the 20 oz. mark.

Full-size copies of the 1/4th scale plan reproduced opposite can be obtained price 4/6d. post free from the "AEROMODELLER PLANS SERVICE", 38 Clarendon Road, Watford, Herts.