

size plans

A scale model for
•5-1 c.c. engines



THE publication of the Luton Minor in the "Aircraft Described" series, in the May, 1953, *AEROMODELLER*, resulted in a minor flood of letters requesting a flying scale version of this delightful little ultra-light. As it happened, a few weeks later we received flying photographs of the model detailed here, and immediately investigated this machine with a view to its suitability for the average modeller.

Many modellers have avoided flying scale jobs for various reasons, the main snags being the amount of work required and the greater susceptibility to damage likely to be encountered. The Minor is the complete answer to all that—so much so that even a comparative novice can build and fly it with confidence. Construction is very simple and the model so strong and light that it will absorb a tremendous amount of rough handling during the trimming stage with little likelihood of serious damage.

As shown, any motor up to 1 c.c. may be used; the prototype used a Dart, which meant a little nose ballast, but with a 6×4 prop take-off was accomplished in about fifteen yards in still air. The climb was slow and steady—true to scale—and is extremely pretty to watch.

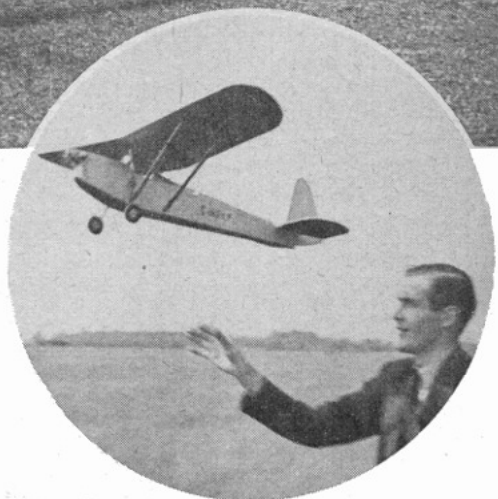
The fuselage is of conventional box construction, the two sides being first joined at the cockpit and the ends then drawn to position. Add formers and stringers and motor mount; with larger motors it is advisable to drop the thrust-line slightly, to allow sufficient ply all round. Add noseblocks and form the wire centre-section struts, binding securely to the longerons. Check incidence and fuselage line-up before fitting the top and bottom fuselage sheeting. Fair the struts and insert the tubes for the wing strut retaining bands and top undercarriage shock absorbers, then sand all over and cover.

The wing ribs are cut from medium balsa (hard will raise the C.G. severely, due to the amount of material) and quarter-grain spars are recommended. The full-size machine has no dihedral, but it is safer to employ a little on the model, as shown. The strut-fixing tubes must be firmly cemented to the undersurface.



Eric
Fearnley's

LUTON MINOR



The tail poses no problems, and the 3/16 in. sq. construction of the fin is straightforward.

One-eighth inch dowels and shaped trailing edges are used for the wing struts. The lower hooks are bound and cemented in place, but the top fitting should not be completed until the rigging stage is reached. The undercarriage passes through brass bushes in the fuselage at the rear, the front fitting flush to the fuselage bottom. The shock struts are well soldered in position, hooks being formed at the top for the rubber. Heavy wheels are advisable.

After covering and doping (heavyweight Modelspan was used on the prototype), cement the fin in place and fit wing and tail. Hook struts in place and, with the model square on the table, prop each tip to the required dihedral and complete the top strut fittings. Add details—tailskid, headrest, etc.—and instal the motor, using washers to obtain the indicated sidethrust. The dummy cylinder forms the fuel tank. Add other finishing details.

Balance where indicated, using ballast, and check for warps and alignment. The flying speed is low, so first glide tests should be made with care. The glide must be straight, and the rudder fixed in position when straight flight is obtained. Using low power, a gentle turn to the left should occur—if the turn is steep, adjust the thrust-line before attempting further flights. Do *not* touch the rudder. Increase revs., following this procedure. The glide is a gentle float, but avoid trimming too near the stall or a tendency to drop a wing on the last part of the glide may appear.

MATERIALS

8, 3/16"×3/16"×36". 8, 1/4"×1/4"×36". 2, 1/2"×3"×36". 1, 1/4"×1/2"×36". 2, 1/8"×3/8"×36 t.e. 1, 1/16"×3"×36". 1, 1/32"×3"×36". 2, 1/4"×36" dowel. 2, 36×16 s.w.g. wire. Scrap 1/4" sheet, 3/16" ply, block, etc.

