

MOSS TROOPER

35 inch low-wing sports
free flight for up to 1 cc
by M. E. JONES



BEFORE we begin, let's explain the name! A Moss Trooper is defined in a dictionary as a Freebooter of the Scottish Border. This model was designed and built to a deliberate specification which was as follows: (1) A reasonably easy model and fairly quick to build. (2) A semi-scale model with realistic looks. (3) And by utilizing the minimum of balsa wood varieties, the cost could be kept down, therefore the minimum of waste wood was left over. The most accurate way to describe this model is to say it is a cross between a scale Grumman Wildcat, a Garland Linnet, a Cessna 172, and a Percival Provost trainer! !

The main feature which adds the most character to the model is the almost scale looking nose cowling which is based on the type used in most modern light aircraft to enclose the flat Lycoming or Rolls Royce Continental piston engines, plus the blown type cockpit cover which the French seem to go in for. But for certain details, the model is a conventional low winger which anyone used to building from APS designs can tackle with ease.

Construction

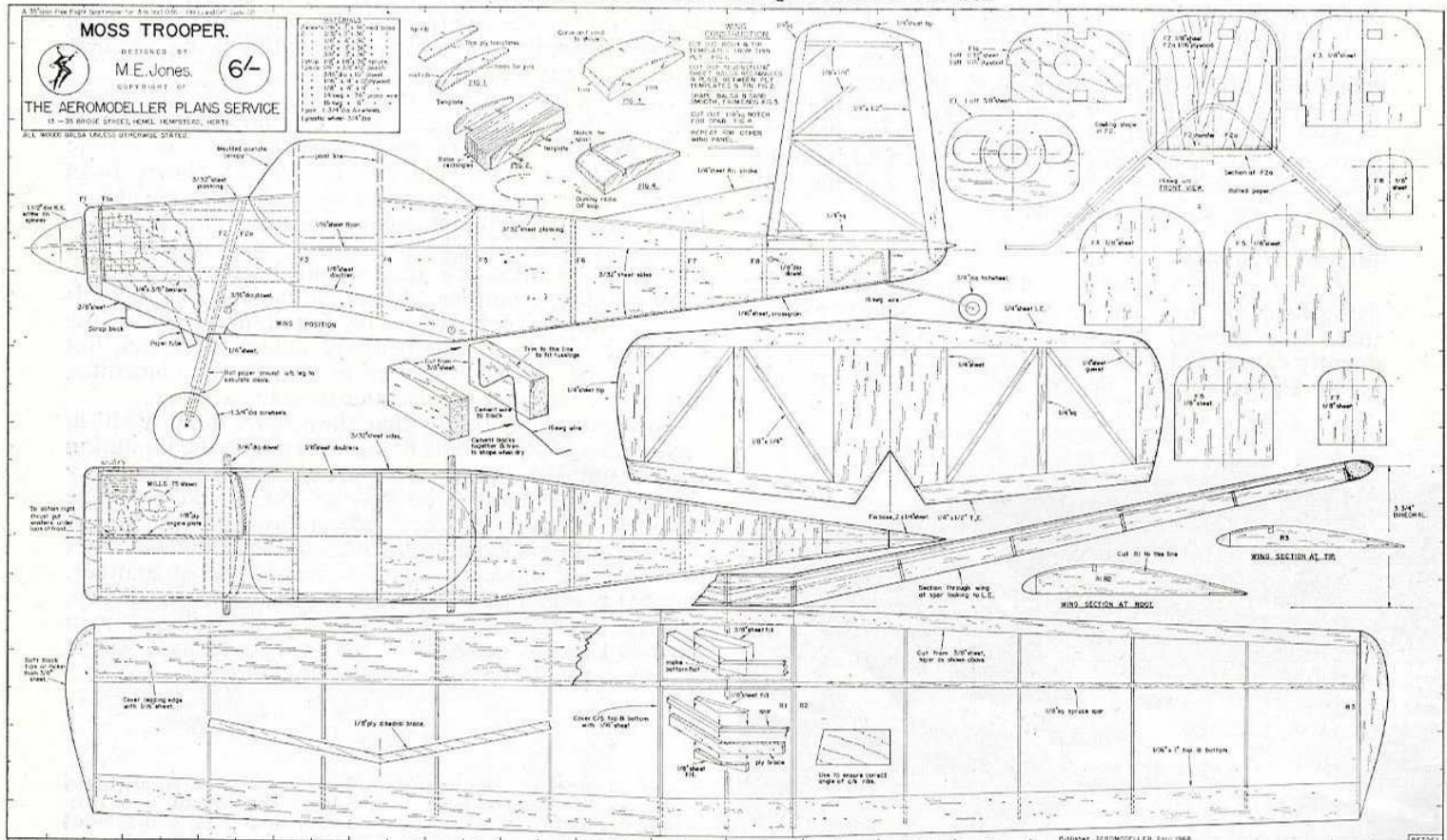
The best way to start is to build the nose cowling from medium 1/4 in. sheet balsa. From 3 in. wide sheet it will be necessary to build up the rear bulkhead from two pieces. The point to remember here is to build all the engine compartment edges so they all cement onto the rear bulkhead against the edge. The reason for this is the rear bulkhead will take the punishment in a hard landing and will stop the rest of the engine compartment pushing back. The rest of the 1/4 in. sheet can now be used to make the tail, the fin, the fillet to the fin, and by using it to cut two wing-tip ribs for each wing-tip they can be cemented together in two's to make the wing-tip blocks. The 1/8 in. sheet can now be cut into the fuselage formers, necessary wing ribs and the piece which the tail wheel leg is sewn to.

The 1/16th sheet will make the fuselage sides, the fuselage decking, wing ribs and capping.

A point to note here is that the built nose section can

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be kept completely free from the rest of the fuselage until the very end, and that includes the painting and doping. There is an advantage in the fact that there is a much neater join with the engine access lid or hatch when sawn free with a fine bladed saw.

The undercarriage is normal but use $1\frac{3}{4}$ in. wheels or approx. for proportional effect. The wings are slightly tapered but by using the wing root rib as a pattern they can be made parallel if so desired. The only hard part of the model to construct is the cockpit canopy. It is a large shape to be moulded in one piece, this can be built up from flat sheets of acetate but a moulded structure is less angular in appearance.

Finish

Cover the wings from a sheet of heavyweight tissue and the rest with lightweight modelspan tissue. Two coats of clear dope with one or two coats of Humbrol enamel should be enough for the average modeller. The registration on the prototype G-ARNF is from a full-size Piper Colt of The Cheltenham Aero Club, both of which are

now defunct. This model was aimed at economy, therefore if a moulded cockpit is required it is much cheaper to make the mould from English hard wood instead of Balsa block this is of course, unless you don't mind today's prices.

Flying

This model is a short nose specimen, so you will need all the tricks and ideas to bring the weight forward to get the wings to balance at the point one-third back from the leading edge. It will help to make the engine bearers from a thicker wood. Also use one-eighth ply to sandwich between the engine section and the fuselage.

Due to its short stumpy shape the original does not respond too well to test gliding, therefore it is suggested that after getting balance and approx. trim from gliding, trim properly under power using short powered hops. The prototype had a Mills .75 diesel which needed full thrust to take it forward above stalling point with an 8 in. propeller, though a 7 in. propeller is recommended for engines under 1 cc.