

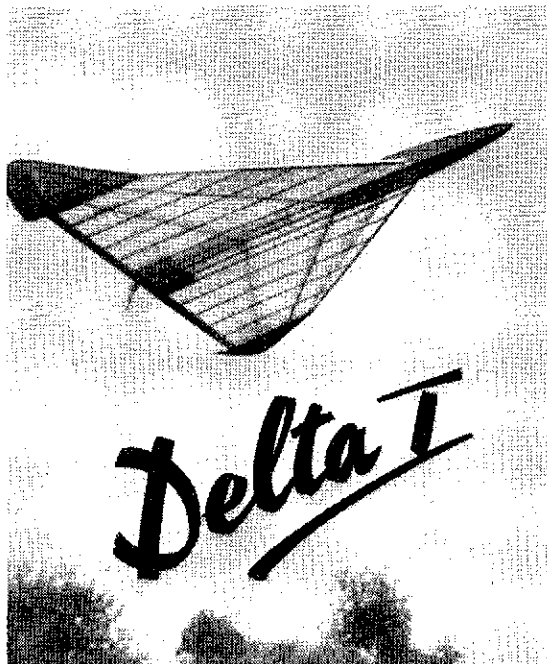
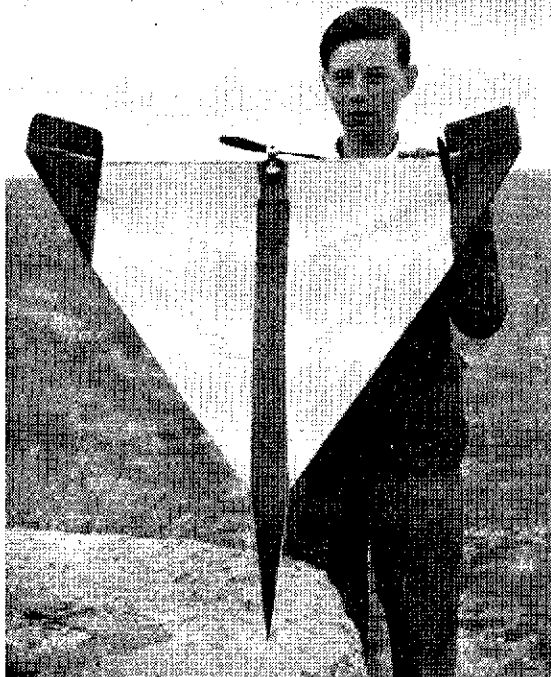
## Build this 465 sq. inch Delta for the Mills '75

Designed by J. R. LANCASTER

Member of Dartford M.F.C. . . . modelling for four years . . . deplures pylon jobs . . . prefers the unusual.

**D**ELTA'S are in fashion this year, the Gloster Javelin, one of this countries most potent fighters, the Avro 707's, the Boulton Paul's, the little Fairey, lately the magnificent Avro 698, and now this interesting model—all demonstrate the advantageous speed range and manœuvrability of the flying triangle. Delta I, is the result of a desire for the unorthodox, and represents creditable success for its schoolboy designer who had nothing but good sound common sense to provide him with design facts. Unusual construction is employed, and we can vouch for its extreme rigidity which will withstand any serious and sudden contact with *terra firma*.

Side-port motors are advised, so that an ordinary prop. can be fitted back to front, and the engine run clockwise. Rotary valve engines will need specially carved pusher props. to run in the normal anti-clockwise manner.



### Construction

Pin the twenty-one strips of  $\frac{1}{8} \times \frac{1}{8}$  in. hard Balsa over each rib position, and cement the  $\frac{1}{4}$  in. sheet trailing edge in place after the rear edge has been rounded. Then add the leading edge in the same way, and whilst drying, cut out the three pairs of spars. These are cemented in place next, making sure that all butt joints in the centre are pre-cemented and strong. When thoroughly set, the spars will be rigid enough for the upper surface  $\frac{1}{4} \times \frac{1}{8}$  in. contours to be curved over and cemented at front and rear. The top curve of the centre rib is cut away to take the  $\frac{1}{16}$  in. and  $\frac{1}{8}$  in. sheet engine platform, on top of which, the  $\frac{1}{4}$  in. sq. hardwood bearers are Britflixed in place. Part of this platform, and the trailing edge, should be cut away for the engine crankcase and tank.

Once removed from the board, the tip dihedral can be cranked just outside of the double ribs for the fins, which are fitted next, then the trimming tabs. Cut the fuselage sides and formers F1, 2, 3, 4, from  $\frac{1}{8}$  in. sheet and assemble on to the centre section, with diagonal cross bracing as shown. Wire skids for landing are securely attached at nose and dihedral cranks, then the whole model is covered with lightweight Modelspan. One coat only of clear dope was used on the original, which bore an exclamation, that can be seen in the photograph, and might well be heard regularly wherever the Delta is flown.

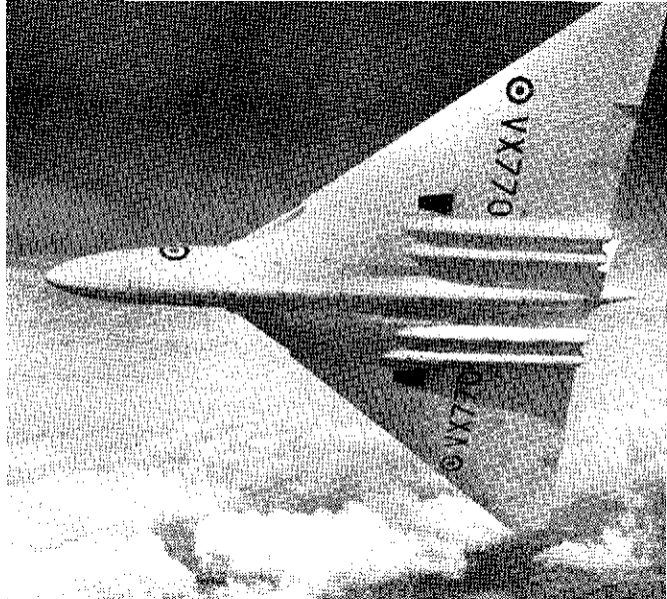
### Trimming

Correct balance is important, and a ballast box is provided in the nose so that final adjustment can be made after construction. If a Mills '75 or

similar side-port induction motor is used, fit the propeller on back to front, and flick start in a clockwise direction.

With the engine running at "medium" revs. launch gently by holding the trailing edge just inboard of the dihedral, and supporting the wing with the flats of the hand. Launching angle should be at about 15 degrees, and the correct turn should be to the left under power and opposite on the glide. For both glide and climb, the two trim tabs can be deflected in unison, if one is deflected more than the other, a turn will result. Stall recovery of the Delta is amazing, it is almost worthwhile arranging purposely, just to see the result!

Complete building instructions are issued with each full size copy of the  $\frac{1}{4}$  scale plan below, which is obtainable price 4/6 post free from the Aero-modeller Plans Service.



*The Arro 698, the Delta of the year superbly photographed by Cyril Peckham, courtesy of the Hawker Siddeley Group.*