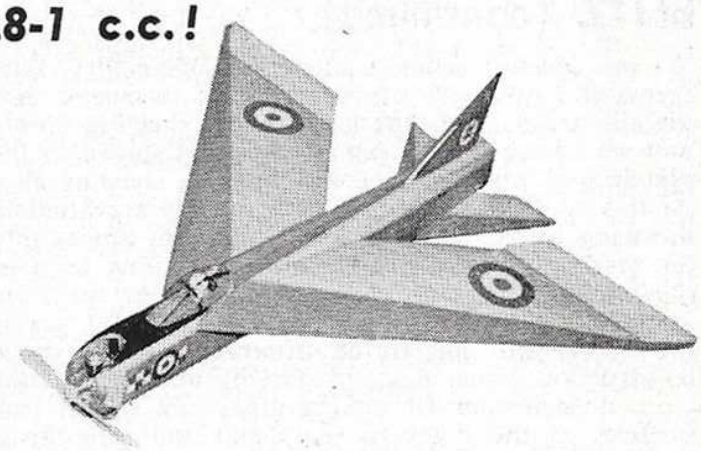
TRY THIS EYE-CATCHER FOR .8-1 c.c.!

BLITZ



A 26¾ in. span semi-scale by Bruce Osborne

DEVELOPED FROM A PROFILE chuck glider to test the general configuration of the B.A.C. Lightning for semi-scale free flight work, *Blitz* has been a great success and has attracted considerable attention at many contests, including the Nationals. Of very solid construction *Blitz* was designed to spend more time on the flying field, than the building board.

The chuck glider version showed a marked tendency to dive sharply and roll at the same time when hand launched, so in this powered free flight version the poor glide performance was overcome by increasing the scale wing area. The elevons on the wing may look rather odd but they are essential, as they make up for the lack of tailplane area. The wing sweepback angle was decreased to aid the poor spiral stability, together with the elevons providing a wash-out effect to prevent tip stall in flight, the fin was also reduced in area to this end. Anhedral effect on the wing is intentional so do not be tempted to add any dihedral. Inconsistent performance of this type of model due to small changes in trim or wind gusts was overcome by using a tough all sheet structure and rugged fuselage so that even after a hard landing the trim always stays the same.

Commence construction by cutting the underside of the wings from hard $\frac{1}{16}$ in. sheet and cementing the butt joint, then pin the sheeting to the building board and cement all the ribs in place as well as the

BLITZ

$\frac{1}{16}$ in. centre section stiffeners. When dry sand across the ribs with a sanding block to ensure they are all true and flat. The leading edge sheeting should now be cemented and pinned down as shown in the sketch, and when dry the trailing edge sheeting also. At this stage the elevons and trim tabs are fitted to the wing by pushing the soft aluminium hinges into the leading edge of the elevon and trailing edge of the wing, setting the elevon trailing edge up $\frac{1}{2}$ in. at the same time. Do not cement this joint yet as the model still has to be trimmed. The fuselage construction comes next, so start by marking out the $\frac{3}{4}$ in. nose former F1, taking great care to get true surfaces as these govern the down and side thrust angles. Next cut the $\frac{1}{16}$ in. plywood bulk head to shape but do not cement to F1 yet. Cut the $\frac{3}{32}$ in. fuselage sides and formers F2, F3, F4 to shape and cement together in a simple box structure hold with pins until dry. When dry cement the wing into position as shown and add top and bottom $\frac{1}{16}$ in. sheeting. The tailplane parts are cut from $\frac{3}{16}$ in. sheet and joined together with $\frac{3}{16}$ in. keys and the whole assembly is cemented to fuselage with soft block packing. Fin ribs R1 and R2 are cut from $\frac{1}{16}$ in. sheet and then the $\frac{1}{16}$ in. sides are cemented on. Cement fin to fuselage, and $\frac{3}{4}$ in. soft spine on, together with cockpit canopy. The 1 mm. plywood facing for F1 should now be cemented on, the engine screwed in, and the $\frac{1}{2}$ in. soft sheet cowl cemented around the engine and carved to shape.

To finish, give the model a good sanding all over and brush on one coat of sanding sealer. When rubbed down apply one coat of Belco brushing cellulose or colour dope and apply any markings you wish. We advise you to consult the details given on the scale Lightning drawing in this issue for the best results. Give one coat of fuel proofer and screw an external fuel tank on to the cowling if extra long flights are wanted.

For the test flights set the elevons up $\frac{1}{2}$ in. and hand glide into the wind. *Blitz* glides with its nose up, but do not allow it to "mush". When satisfied with the trim, cement elevon in place and use the small trim tabs for turn correction. With the engine running at half power trim for a wide left hand turn under power and a right hand glide. Power turn can be adjusted if desired by fixing a $\frac{3}{8}$ in. x $\frac{1}{4}$ in. aluminium tab at the base of the fin. With full power *Blitz* climbs at 75 deg. and levels out at 50 ft., into a left-hand power circle, so for the best small field performance only use three-quarters full engine power.