

**BUILD
THIS SLICK
NEW STUNTER
for .29—.35 engines**

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VALERIE II



BECAUSE of its function, a stunt model has to conform with a certain code of proportions to be successful, which leaves restricted scope for the actual shape of the finished aeroplane. Keeping to this code, however, we can, for instance, change the wing planform from straight taper to elliptical or have wing mounted undercarriage instead of fuselage mounted, wire spreader type. Even a different colour scheme can change the appearance of a model to a certain extent and parts which are not quite so aerodynamically important can be made decorative as well as functional.

Valerie II was designed with these limitations in mind, and confidence in the design was justified, as she has been found to be extremely stable, yet completely acrobatic.

Construction

Commence by cutting out and numbering all parts. Bend main undercarriage and tailwheel wires and bind firmly to F3 and the ply facing to F12 respectively. Make all pivots, bearings and horns as shown. Make fuel tank from tinplate to dimensions given.

Cement bearers to fuselage sides, D1 and add doublers D2 and D3. When dry, cement formers F1, F3, F13 and fuel tank between fuselage sides and hold with rubber bands, check for alignment and leave to dry thoroughly.

The wing is built upside down to keep the top surface flat. Place spars S1 over position on plan, and with suitable packing under the trailing edge, cement in all the ribs, checking that they are all at right

angles to the trailing edge and the building board. Add the $\frac{1}{4} \times \frac{1}{4}$ in. leading edge, centre section and leading edge sheeting and leave to dry.

Sand down the flaps and tailplane parts, join the elevators and hinge to the tailplane as shown, using small dowels to strengthen the tailplane/fin joints. Join flaps and hinge to the wing.

Turn over the wing and cement in the pieces WA and WB and the bellcrank platform, drilled as indicated. Solder leadouts to the bellcrank, but leave the other ends for the moment. Now install in the wing and connect to the flaps; also connect the elevator pushrod to the bellcrank. The leading edge and centre section sheeting may now be completed. Shape the tip blocks, part and hollow out, adding weight to one and drilling the other to take the leadouts, cement to the wing, using the parting line to check alignment. Add the tip sheeting and sand the completed wing to shape. Fix the brass guides and bend the leadouts to form loops. Bind with copper wire and solder.

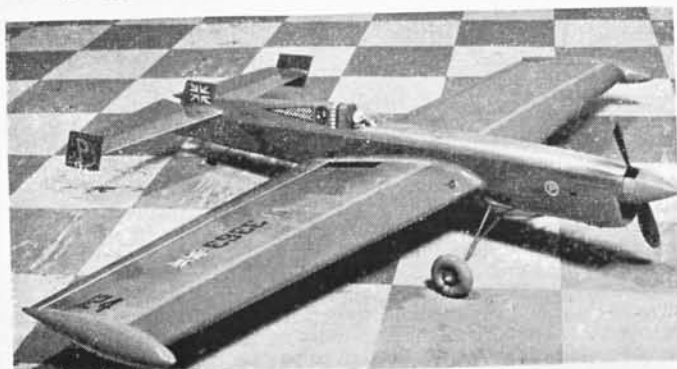
The completed wing may now be cemented firmly to the fuselage, checking alignment carefully. Replace the small pieces removed from the fuselage and add braces D4 and D5. Thread formers F10, F11 and F12 on to the elevator pushrod and cement in place, now add formers F2 and F4 to F9, checking for any bowing tendency in the fuselage.

Cut out appropriate slot and fix the tailplane assembly, align carefully and connect to the elevator pushrod. Check for free movement. The rear fuselage decking pieces, D6 and D7, centre fin and rudder may now be cemented in place.

Bolt in the motor and solder wire across the bolt heads; add the $\frac{3}{8}$ in. thick nose filler piece, top block and spinner former. Build-in the air duct as shown and cement the bottom sheeting firmly in place. Roughly carve the cowl to shape and cement lightly in place, sand the fuselage to shape, add the cockpit, flap and U/C fairings and then blow off all balsa dust (preferably outdoors!).

Finishing

Give the entire model two coats of sanding sealer and lightly sand with fine garnet paper; then cover with whatever material you prefer, dope and colour to personal choice. Add wheels, prop and spinner (a 2 in. spinner may be used instead of 1 $\frac{3}{4}$ in. if desired). The model should be flown on 55 ft. to 65 ft. lines.



Photos above and left emphasise the racy lines of John Taylor's original. (We cannot help feeling it must be rather distracting flying from a Marley tile runway!) Fairred u/c legs now replace those shown in photos of prototype.