

# Austrish

Build this simple free-flight sports model for 0.3 to 0.75 c.c. motors by Vic Smeed.



VIC SMEED has an almost unbelievable record of popular models to his credit. They stretch back into the distant past — all seem to fly well, almost regardless of how they are built! This Auster-ish looking model should provide hours of pleasure either as a simple free-flight sports model or with the now popular radio-assist. Radio-assist tends to be used not as a means of making a model gyrate around the sky but more for keeping a naturally stable model out of the local woods! Whichever way you decide to build your model, let's cut the cackle and get down to Vic's building instructions . . .

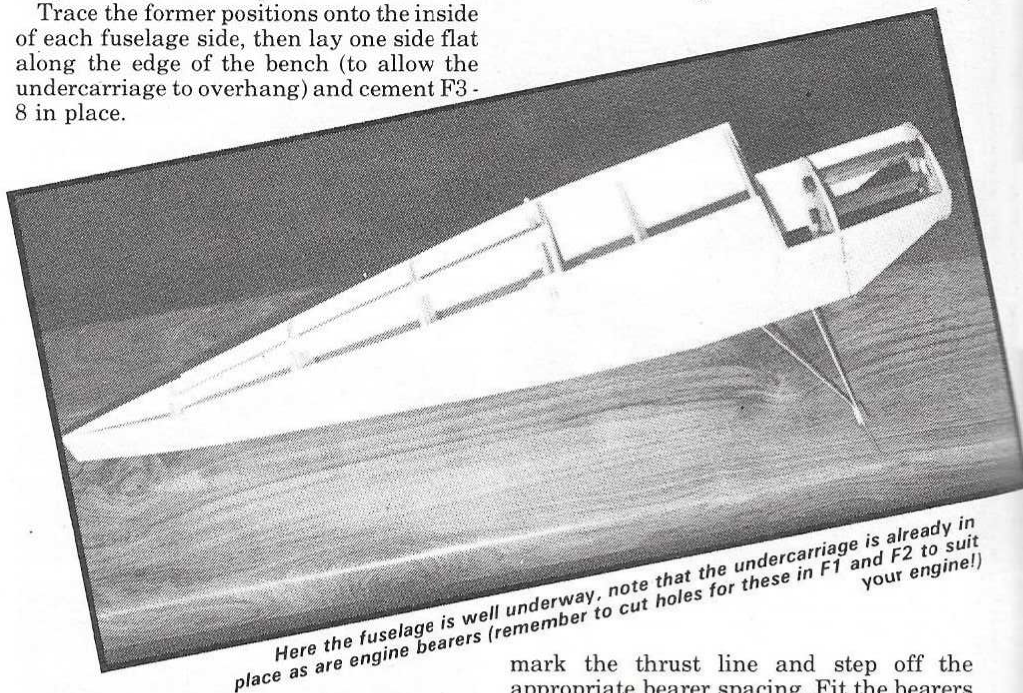
## Fuselage

Trace and cut the fuselage sides from medium light  $\frac{1}{16}$ in. balsa sheet. Note that the cabin windows are *not* cut out. The depth of the sides in the underwing area is a shade over 4in., so either a narrow strip must be added to a 4in. sheet in the affected area or two 3in. sheets must be butt-joined. It will be found easiest to cut as much as possible of a side from 4in. sheet, then place the piece on the plan and butt part of the cut-away scrap in position and trace off the missing portion. If one side is completed first it can be used as a template for the second. The shape is simple to cut, using a steel rule, since all lines are straight.

The sides have to be assembled on F4, F7 and F8 initially, and since F4 carries the front leg of the undercarriage and it is far easier to sew this in place before assembling the fuselage, F5 and F6 may as well be fitted, with the undercarriage rear leg already sewn to F6. Cut out the formers, bend the undercarriage parts to shape (note that each part is flat, except for the slight angle in the last  $\frac{1}{2}$ in. of the rear leg), drill the formers as

indicated and sew the wire in place with Terylene thread or carpet thread.

Trace the former positions onto the inside of each fuselage side, then lay one side flat along the edge of the bench (to allow the undercarriage to overhang) and cement F3-8 in place.



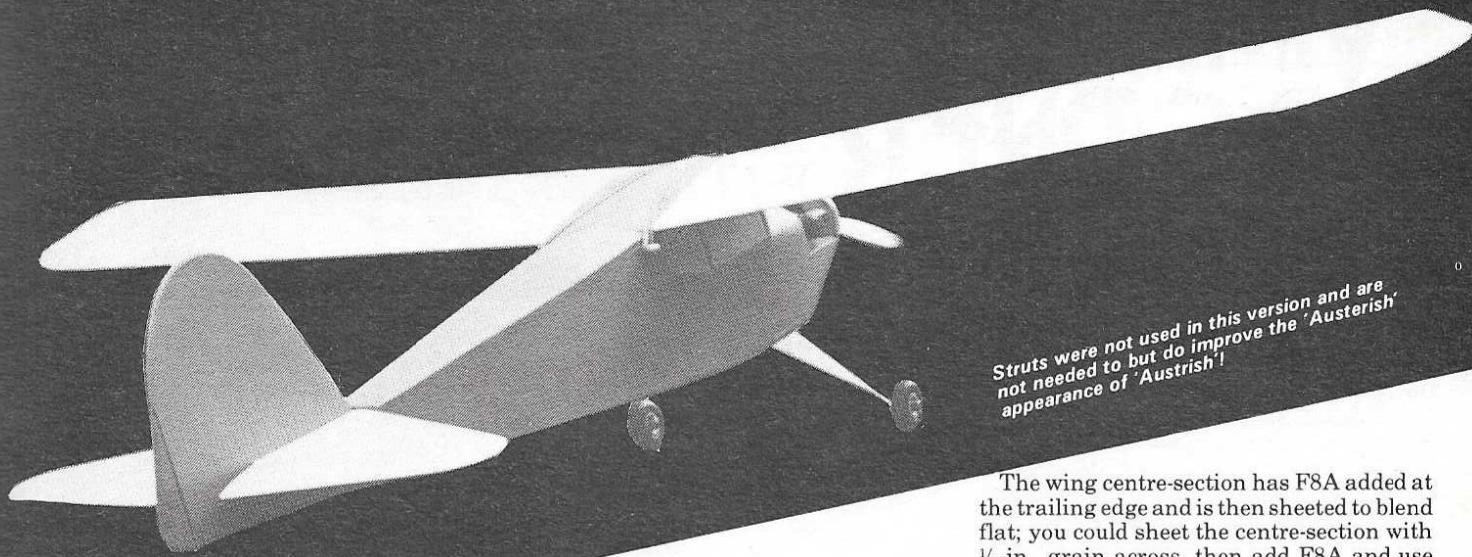
Check that each is square to the side and leave to set. Now add the second side, checking alignment at the tail, and again leave to set thoroughly. Then gently draw in the tail ends and add F9 to F11; cement the tail ends together and pin or clamp lightly till dry. Fit the softish  $\frac{1}{8}$ in.  $\times$   $\frac{3}{8}$ in. spine from F8 to F11. Draw in the nose the small amount necessary to fit F2 and hold with rubber bands till set. Note that F2 needs to be slotted to receive engine bearers to suit your engine, but the bearers can be inserted later, using a card template to get them angled correctly. Everything forward of F2

hangs on F2, so that in a bad crash the former will break away, limiting the area of damage.

Clean up the wire areas, bind with thin copper wire and solder the undercarriage. Sheet the top (aft of F8) and the bottom (aft of F2) with short lengths of  $\frac{1}{16}$ in. grain across the fuselage. Trace and cut out F1,

mark the thrust line and step off the appropriate bearer spacing. Fit the bearers using a template, then cut and cement the near-triangular  $\frac{3}{16}$ in. side panels between F2 and F1. Plank the underside with softish  $\frac{3}{16}$ in. or  $\frac{1}{4}$ in. strips. The top of the nose is planked with moderately hard  $\frac{1}{16}$ in. strips from F1 to F3 (glued to F4). Plank the cabin windshield — it could be acetate sheet but sheet balsa with a painted or Fablon representation of windows etc. is recommended.

Cut the top planking to form a hatch between F1 and F2 which probably need only be slightly less than half the width but will depend on engine and tank access requirements. Small part-formers inside the



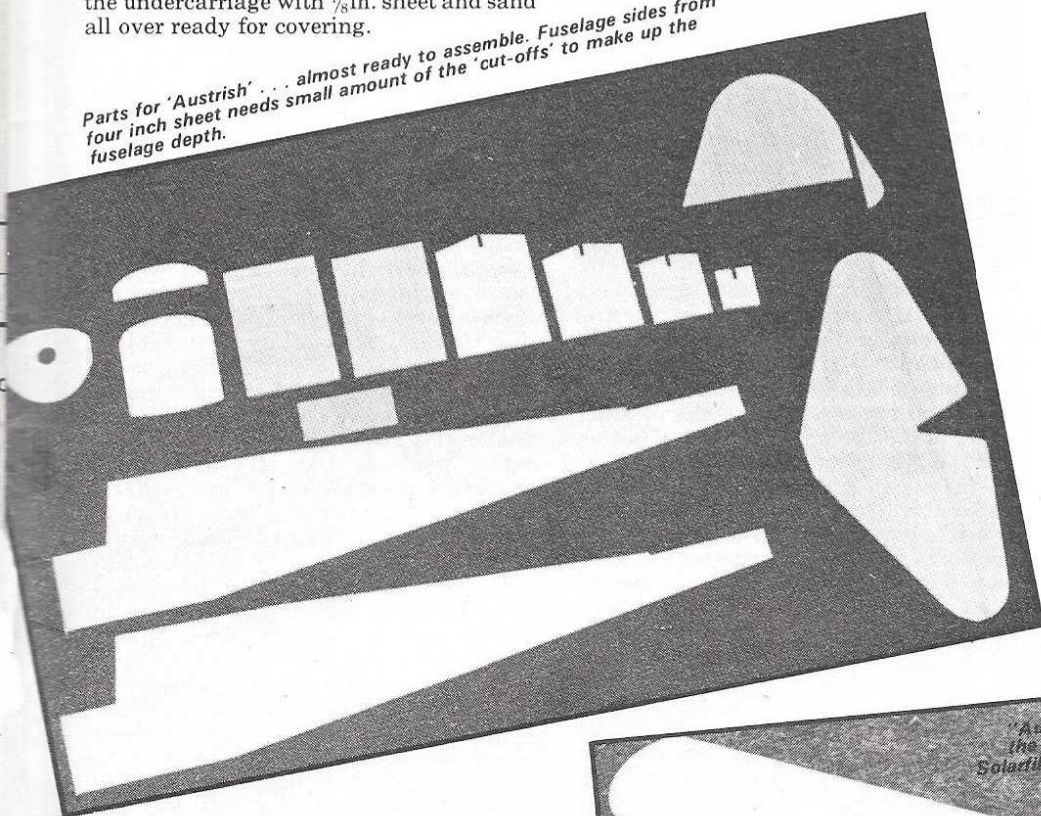
*Struts were not used in this version and are not needed to but do improve the 'Austriash' appearance of 'Austriash'!*

## Wing

planking matching the curves of F1 and F2 are desirable to maintain the hatch shape, and the detachable part can be hinged with tape or Mylar along the upper line. A wire catch to hold it closed against vibration is simple to arrange. Add wing dowels, tailwheel and, if required, epoxy a stub of tube either side for the lower end of the wing struts if fitted. Fill the triangular spaces in the undercarriage with  $\frac{1}{8}$ in. sheet and sand all over ready for covering.

This is entirely conventional, but use hard mainspars, spruce if desired, and don't forget to notch the trailing edge for the ribs. The struts are unnecessary for normal flying but add to the appearance of the model. Stubs of brass or plastic tube can be epoxied to the  $\frac{1}{16}$ in. panels shown, the panels being flush with the wing under-surface and the tubes projecting on the outside. The balsa struts have wires which just slip into the tubes on the wings and fuselage.

*Parts for 'Austriash'... almost ready to assemble. Fuselage sides from four inch sheet needs small amount of the 'cut-offs' to make up the fuselage depth.*



Note that if rudder-only lightweight radio is to be fitted, cut-outs are marked on the formers for a push-rod. (Only a very small rudder is necessary, incidentally). The push-rod etc. should be installed before sheeting the fuselage top.

## Tail Surfaces

These are simply medium/soft  $\frac{1}{8}$ in. balsa and may be cemented to the fuselage before or after covering.

September 1984

The wing centre-section has F8A added at the trailing edge and is then sheeted to blend flat; you could sheet the centre-section with  $\frac{1}{16}$ in., grain across, then add F8A and use postcard to make the fairing. If this is assembled with the wing held on the fuselage a smooth line should result. Note that there are "windows" to be painted or filmed on top.

## Covering

This can be tissue/dope or film and colours can be as you wish. Austers were seen in all colours, but you may like to look up some particular machine (the public library should have something) so that you can follow the general colour(s) and registration lettering. Tissue or film letters and numbers will certainly enhance the appearance. You could also use sand and spinach camouflage, if desired. This is *not* an accurate scale model but can be made to look quite scale-ish!

## Flying

For free flight, balance on the mainspar and check glide. Use the rudder shown as a trim tab, with soft iron wires to hold it in place. Use a tweak of right tab and run the motor very rich initially, leaning out as confidence grows. A small tab of aluminium from a milk bottle top can be cemented to the tailplane t.e. to give a little down or up elevator; it is more consistent than warping the tailplane provided it is checked before each flight. Slight right thrust may be desirable with more powerful engines.

If a radio is fitted, the fuselage has a false floor (F5) and a servo can be mounted in a servo clip (athwartship) on this. The battery pack should lodge against F4, wrapped in foam rubber, and the receiver can sit on top of it. A piece of  $\frac{1}{8}$ in. sheet cemented across the cabin will prevent battery or Rx interfering with the servo.



*'Austriash' prior to test flights - looked much the same after - no wires. This one covered in Soladur.*