

# Auster Alpine



## Full Size Plan for 18in. Span Rubber Powered Model of Auster Alpine by Ron Warring.

**Chosen** by the Automobile Association for aerial survey work to assist their road patrols, the Auster Alpine makes an attractive model for exhibition or flying. The A.A. colour scheme is detailed on the smaller drawing, finish being "A.A. yellow" and black. Plans given on the following two pages are full-size and show alternative wing construction. The port wing drawing shows scale rib and riblet positions which can be followed in making an exhibition model. This wing, however, works out on the heavy side for a flying model and so for the latter purpose the wings should be constructed on the more "open" framework detailed on the plan, using 1/16 in. ribs.

Fuselage sides are cut from very light 1/16 in. sheet to the outline shape. The position of the formers should be marked accurately and the sides assembled on formers 2a and 3 first, noting that they will have to be pinned in place to conform to the top and bottom taper. When set, the sides can be aligned and cemented together at the rear. Then insert formers 4 and 5, pinning the sides to former 4, if necessary. If the formers appear to be on the weak side, brace with 3/32 in. sq. strips cemented across.

Former 2 should now be tentatively positioned and the sides pulled in and joined with former 1. Hold with rubber bands, then position former 2 accurately and cement. Bend the 18 S.W.G. wire undercarriage legs to shape and bind and cement to the bottom of former 2a.

## Quick to Build – Easy to fly – Scale Appearance.

Cement the 1/16 in. sheet bracing pieces inside the fuselage just in front of former 5 to act as reinforcements for the rear peg. Cut the center top stringer and cement in place, together with the two short 1/16 in. sq. stringers. The latter will bow to the correct curve after tissue covering and dopping.

The upper cowling is formed from 1/32 in. sheet, using two pieces joined on former 2. It is best to cut these to shape by trial and error and then cement in place. The lower cowling (between formers 1 and 2) is also cut from 1/32 in. sheet. The whole of the fuselage bottom from former 2 back is covered with 1/32 in. sheet. At this stage the fuselage assembly can be smoothed with sandpaper, very lightly rounding the bottom edges.

Four 1/16 in. sheet root ribs are cut. Cement two of these to the sides of the fuselage, as shown, and the others are used for the wing frames. Build up the cabin frames from 1/16 in. sq. strips sanded down, trimmed to length and cemented in place.

The wing panels are built separately, flat over the plan. Pin down leading and trailing edges and cut and cement on the tip pieces. Then add the ribs and finally the mainspar, noting that the latter projects beyond the root rib. In the case of a scale wing frame a false spar must be used at the aileron position, the main ribs finishing at this spar. The aileron riblets are differently spaced. In all cases the ribs should be slotted into the trailing edge for additional strength.

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The wings are best assembled on the fuselage before covering, if you want the neatest job. However, it is much easier to cover first, then cement to the fuselage before water-spraying and dopping. In the latter case, make sure first that the wing panels fit snugly against the fuselage root ribs, with the projecting main-spar fitting the slot in the fuselage side just behind former 2a. The correct dihedral – 5/8 in. at each tip rib-should be given automatically by the slope of the sides. The mainspar ends are cemented to the back of former 2a for added strength.

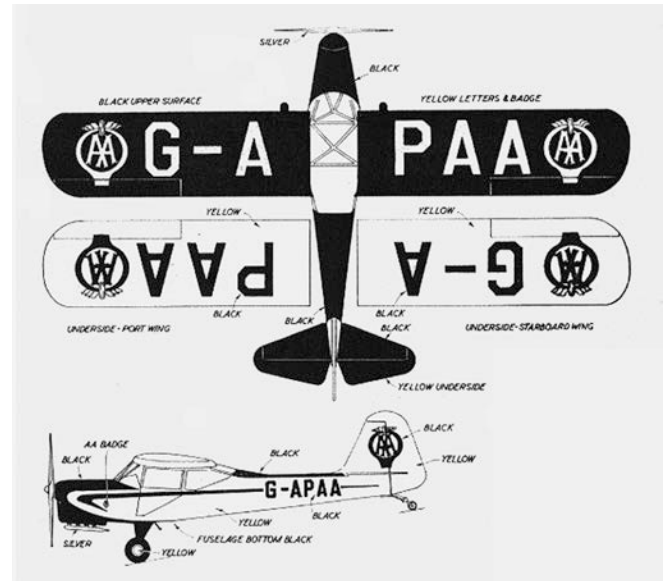
Only the aft decking of the fuselage needs to be tissue covered. The wings are tissue covered on both surfaces. For a flying model, use black and yellow tissue for the wing covering. On an exhibition model, where weight is not important, the colour finish can be given with coloured dopes.

The fin and tailplane are cut from very light quarter-grain in. sheet, sanded down perfectly smooth and with the edges rounded before cementing in place. Check that they line up accurately with the wings.

The fuselage should be colour doped yellow with well thinned colour dope in the case of a flying model, preferably sprayed on. To get a better finish on an exhibition model, either use grain filler on the sheet sides first, or cover with tissue. Detail fittings are added after colouring. Cabin windows and door outline (both sides) are painted on or drawn on carefully with a ball point pen. The windshield, and the whole of the center section, is covered with thin acetate sheet.

The undercarriage fairings are cut from sheet balsa and cement to the fuselage sides, joining the legs only at the stub axle position. They can be secured to the wire by sewing with cotton, or you can rely on the cement joint to the fuselage to keep them in position. On a flying model they can be omitted entirely, or formed from card of sheet plastic doubled round the wire.

Wing struts should be cut to length from 1/8 x 1/16in. strip, sanded to a streamlined section. These are cemented in place permanently, after first dopping



black. The jury struts can be sanded down from 1/16 in. sq., or use small slivers of bamboo.

Yellow markings on a flying model can be cut from yellow paper or transfer sheets and fixed in place over black tissue. Similarly the undersurface markings can be cut from black paper, stuck over yellow tissue covering. Use colour dope for the black fuselage trim, but black tissue for covering the upper surface of the tailplane. The A.A. insignia is a little difficult to draw unless you are something of an artist, but you may be able to find badges of suitable size printed on A.A. literature which you can cut out and stick in place.

**Model Aircraft Magazine September 1957**