



*Start ½A racing with
a model that meets
the semi-scale require-
ments in full*

Cupid

by Ron Moulton

THE S.M.A.E. specification for a team racer holds that models shall be either scale or semi-scale. How we digress from that elementary requirement in our class "A" racers of today! Any rule-abiding jury with the fortitude to withstand the abuse of would-be competitors might be fully justified in eliminating 25 per cent. of the entry in some of our contests.

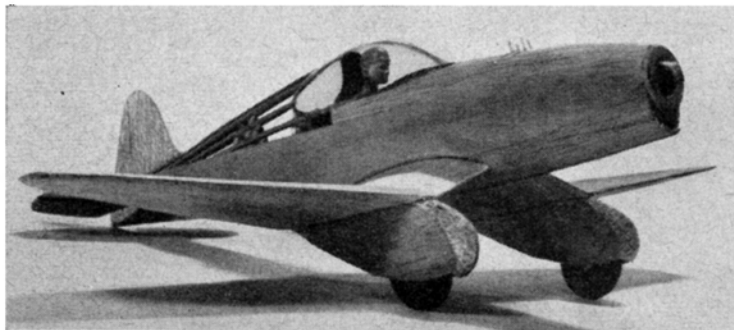
Let's get away from the dangling undercarriage, external fuel filter, postage stamp fin, ruler winged, short fuselage, pimpled canopy Class "A" monstrosities that appear with depressing monotony, and take a leaf out of the Don Walker Class "B" racer book. His designs, flown so successfully with Ray Tuthill engines, have shown the way to win with the fastest—and realistic models.

Speed is not necessarily a function of how small one can reduce a chord or fuselage—it is derived from practical streamlining and we hope that in the newly-instituted Class "½A" consideration for appearance and streamlining will stem the degeneration which has overtaken the 2.5 c.c. class.

The structural specification for ½A calls for a 1.5 c.c. engine, 55 sq. in. (including the area within the fuselage) projected wing area, 10 c.c. fuel tank, 1½ in. x 2½ in. cockpit, 1½ in. wheels and 38 ft. 2½ in. lines (110 laps equals 5 miles). From experience we can expect an *ultimate* performance of 70-80 laps at 75-85 m.p.h., but that is looking perhaps two seasons ahead when development is butting its never-satisfied head against the tough

barrier of purchasing power and who can afford the fastest engine. For the moment let's enjoy life with a healthy, cheap, plain bearing 1.5 and be satisfied with loads of fun and a range of 30-40 laps at 70 m.p.h. That's the figure we claim for Cupid, not unnoticeably derived from Neil Loving's wonderful little homebuilt, and as snappy a model to fly as is the full size.

Scale has to suffer (shame!) with the 1½-in. wheel requirement and the need for prop. clearance and ground stability with a forward centre of gravity—here we must also pen the advice of using one of the new B.M.A. (Skyleada) solid dural spinners to take the occasional landing tumble when the wind gets under the tail. The original had an A.M.15 and straight from the first flight it was obvious that little Cupid was a fast piece of work. Clocked at 65 m.p.h. with a 6 x 9, it held the flight straight and level as though in a groove, and with a minimum of line tension (weight is only 8 ounces—with fuel). Using 6 x 6 or 6 x 8, speed improves to 70 m.p.h. plus. Our only word of caution calls for full-up elevator to keep the tail down during take-off and landing, and if your building has made the model excessively nose-heavy, drag the C.G. back to F4 position prior to the covering stage, by adding ballast in the space over the tailplane. All set? Cupid needs only four sheets of 3-in. balsa and three pieces of strip plus sundry scrap and ply, so it's a cheap good-looker that can be ready for test flights in remarkably little time.



Based on the Loving Love with amendments to meet the ½A team racer specifications, Cupid is painted in the livery of pale blue and white as used on the full-size, but carries the designer's S.M.A.E. insurance number for registration. At left, the airframe prior to engine installation. Cowling is cut to permit engine fitting, then replaced with holes for cylinder and intake. Chin intake is supported by front former until sanding is completed.

CUPID

DESIGNED BY

R.G. Moulton

COPYRIGHT OF

THE AEROMODELLER PLANS SERVICE

38, CLARENDON RD., WATFORD HERTS

ALL WOODS ARE BALSA UNLESS OTHERWISE STATED.

COVER OVERALL WITH LIGHTWEIGHT TISSUE, CLEAR DOPE STRINGERED REAR FUSELAGE (2 COATS). SANDING SEALER REMAINDER (3 COATS) APPLY COLOUR AS DIAGRAM.

MATERIALS REQUIRED

- | | |
|-----------------------------|--------------------------|
| 1 OFF 1/8" x 1/4" x 36" | SCRAP 1/2" x 3/16" BALSA |
| 2 " 3/32" x 3/32" x 36" | COCKPIT CANOPY |
| 2 " 1/16" x 3" x 36" | PAIR OF 1/2" WHEELS |
| 2 " 3/32" x 3" x 36" | 10 CC. TANK |
| 1 " 3" x 7" x 1/8" PLY | 1/4" SPINNER |
| 1 " 1/4" x 1/16" x 7" BEECH | BELLCRANK |
| 1 " 7" x 3/32" DOWEL | CLASS B PILOT |
| 1 " 36" x 18 SW.G. WIRE | TISSUE, DOPE, ETC. |

ALL-UP WEIGHT : 8 OZ.

USE 6" x 6", 6" x 8" PROPS

ASSEMBLY: (1) FIT F3, F4 OVER BEARERS BOLTED TO ENGINE. ADD BASIC SIDES, F6, F10, BELLCRANK ASSEMBLY TAILPLANE, F5, F7, F8, F9. CARD FLUTES, STRINGERS. MAKE WING, BEVEL SIDES TO ACCEPT AND ATTACH. FIT TANK, REMOVE ENGINE, ADD F1, F2, FUSELAGE BOTTOM. PLANK UPPER NOSE TO BUTT ON F6, LOWER NOSE FROM F2 TO WING.

