

TOP-FLITE

P-40 WARHAWK

R.C.M. & E. Kit Review
No. 65

By Jack Barnard

FIRST a few basic details, the model has a wing span of 60 in., overall length 49 in., and has a total wing area of 606 sq. in. The all-up weight is stated to be between 5½ lb. and 6½ lb. The recommended power range is from .40 to .60 engines.

I could not resist finishing the model in the R.A.F. colour scheme as used on the Tomahawks on 112 Squadron in Egypt, but for scale contests it can really only be built as a Warhawk. The Tomahawk cowl is quite different to the Warhawk, and as the main part of the cowl in the kit is a plastic moulding, modification would be difficult. I have promised myself, however, that after the concrete runway has modified the nose (and it will!) I will reshape in balsa to the Tomahawk configuration.

A large full-size plan is included in the kit, covered with useful hints which help to make the building simple and straightforward, and I could not fault the plan, diagrams, or instructions. I made only one deviation from the plan, making a removable hatch to the tank compartment.

Apart from that, the model is built exactly as per plan, while on the subject of the tank, there is plenty of room for a 12 oz. type. Most of the die-cut parts were easily pushed out of the sheet, and only a few required the help of a sharp knife.

There are no building problems with the wing, construction is quite conventional. The wing has a symmetrical section, is completely balsa-sheeted, and has large block balsa tips which have to be carved to shape. The block balsa ailerons and flaps make up practically the whole of the trailing edge and are of large area, in fact, a warning note on the plan states that because of their large area they are prone to flutter problems if the control linkages are at all slack!

The wings have quite a large amount of dihedral, 2¼ in. under each tip. The wing is held to the fuselage by one ¼ in. dowel at the front and two nylon bolts at the rear, the bolts screwing into tapped holes (tap provided) in a hardwood crosspiece.

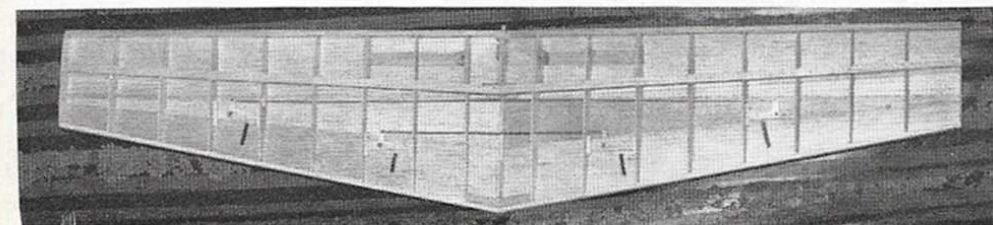
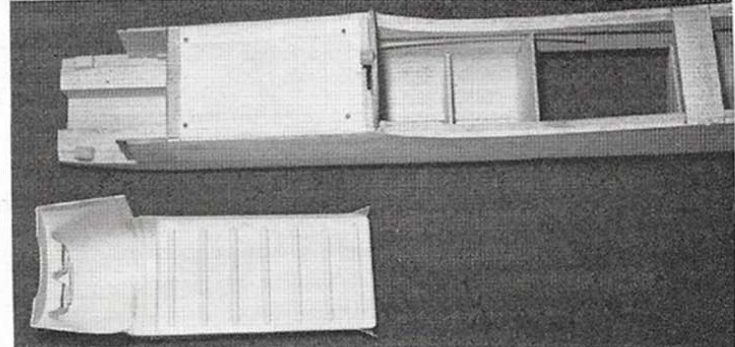
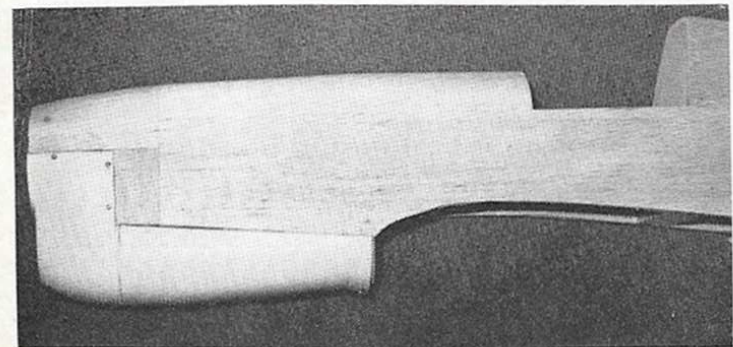
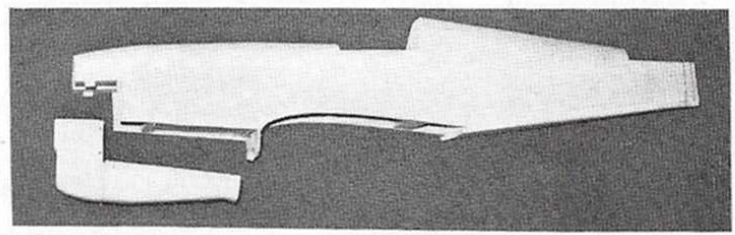
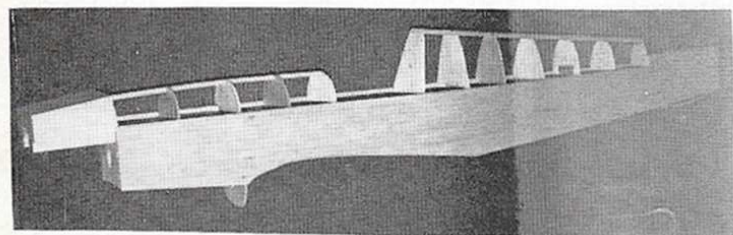
A fixed undercarriage is provided, a retractable set is available which retracts to the rear, turning as it does so exactly as per the real thing. The undercarriage is canted forward slightly, and the wheel's point of contact with the ground is 3 in. ahead of the C. of G., so the model should not tip too easily on to that plastic cowl, but I foresee a sharp swing on take-off! (Retracts should be the American Turf-Tracs - Ed.)

Fuselage construction also is conventional, no problems, all parts fit snugly, including the canopy, which is easily epoxied into place. The fin, rudder, tailplane and elevator are ready shaped from ¼ in. sheet balsa. The tailwheel strut is held to the fuselage with a nylon moulding, the top of the strut bent over and epoxied into the rudder to give tailwheel steering.

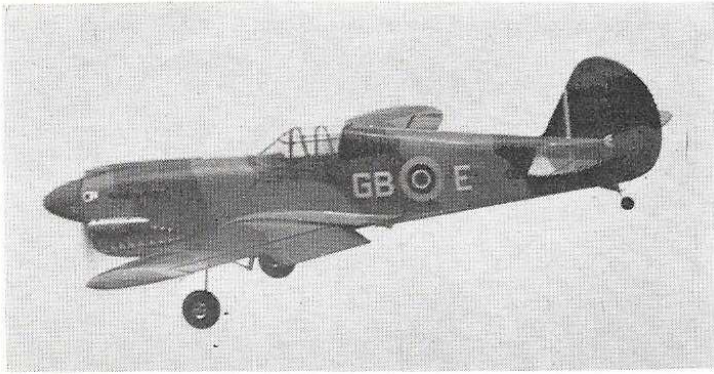
As the whole model is sheeted, or block balsa, with no open framework, I decided to cover it with lightweight Modelspan, doped, filled and painted with Humbrol enamels.

The dummy exhausts and upper cooler are plastic mouldings supplied with the kit.

I elected to use a S.T.51 motor for the test flights, as this is about midway along the suggested power range, and fitted a 11 x 7 prop, although I normally use a 11 x 6 for this engine. It seemed that so much of the prop was hidden behind that large spinner that a little more pitch would be useful over the working area! The spinner is not provided, and the one I fitted is from Micro-Mold. It is not as sharply-pointed as the one suggested in



P-40 under construction. Above: fuselage details, showing assembly through basic structure stage to left, to completed basic unit. Note the A.B.S. vacuum formed cowl. Left: basic wing structure - note aileron and flap linkages.



the plan, a good point to my way of thinking, but would, of course, lose points at a scale contest, get the point? Well, never mind. My *Horizon* gear, with its small servos, fitted easily into the fuselage and wing. The radio needs to be positioned as far forward as possible in this model; I positioned mine as suggested in the plan, and the C. of G. came out a little too far to the rear - only about a $\frac{1}{4}$ in., but it was quite obvious during the test flying.

The all-up weight of my model is 6 lb. 10 oz., a little over the top, but I must confess to a little fibreglass reinforcement inside the plastic mouldings which probably account for the extra ounces.

Flying

The swing to the left as the tail came up on take-off was rather sharp; we did not get a picture of this as the cameraman was taking rather violent avoiding action, but on the next take-off we were ready for it and managed a fairly straight run.

I had not built side thrust into the model, but would advise about 3 deg., as a little right rudder trim was required throughout the flight. Full down trim was required, proving that my rearward C. of G. was not acceptable. The model flew quite nicely when trimmed out, but it was obvious from take-off that a .60 motor is a must, the .51 flew it O.K. and would perhaps be a good choice for scale work, but if you want aerobatics plus a little in reserve you need a .60.

With flaps down the model can be flown quite slowly. The trim changes are not violent, but will, of course, depend on the model's speed when the flaps are lowered; we cut the speed right down before lowering them. A lot of height is lost as the flaps are raised, full power should be applied before raising them in the air, and I would not advise attempting to raise them if the model is less than 50 ft. above the ground until a little practice in the exercise has been carried out at height, and one becomes used to the characteristics. Speed is a little difficult to judge on approaches with flap down, and there is a tendency towards too low a speed. On one occasion a wing did drop quite sharply when the speed dropped a little too low on a turn into wind for a landing ap-

proach. Flapless landings are quite nice, and quite frankly I would not bother with the flap at all unless you are going in for scale contest work or want to fly from your back garden.

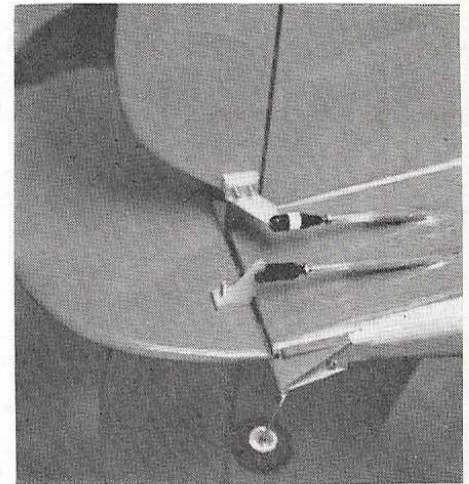
As can be seen from the photos, a nice-looking model, reasonably easy to build and fly, and certainly a good project for Class 2, with a lot of scope for the scale fan to modify and add as required.

British Distributor

RipMax Ltd., RipMax Corner, Green Lane, Enfield, Middx.

Price

£29.95



Right: tailcone control surface linkage and steerable tailwheel. Below: two views of the nose section showing (left) the motor installation and (right) the cowl. Bottom: wing and fuselage radio installations.

