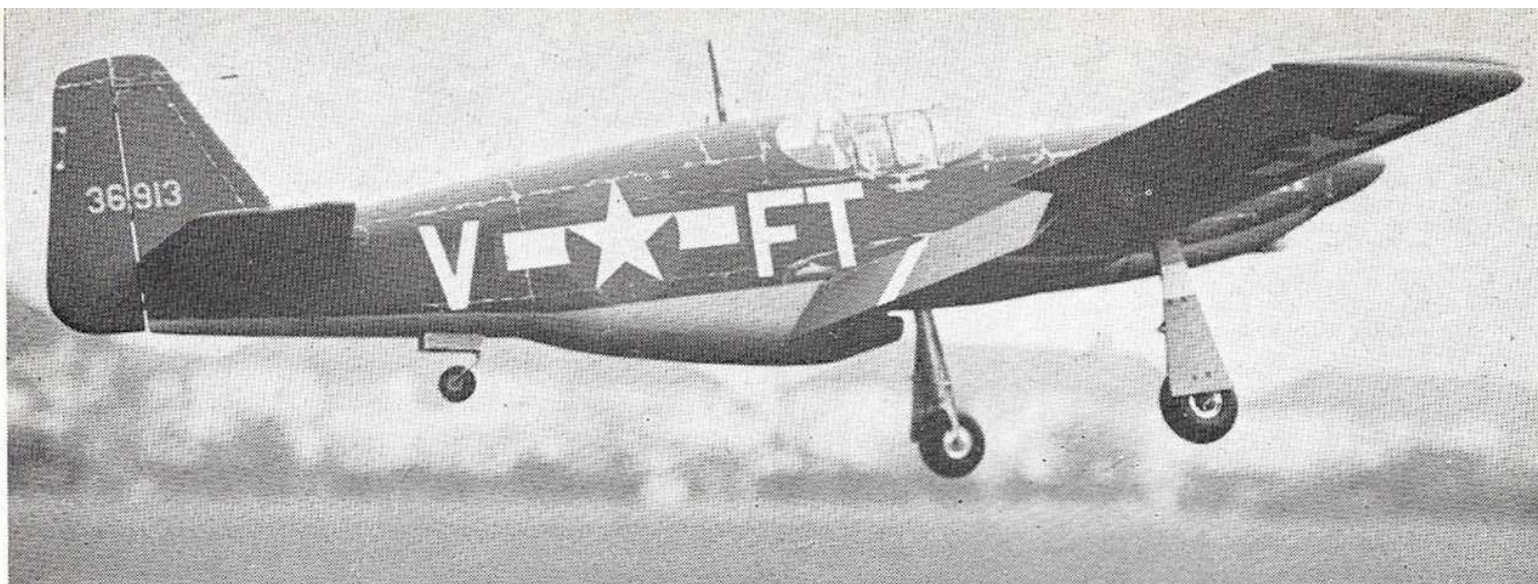


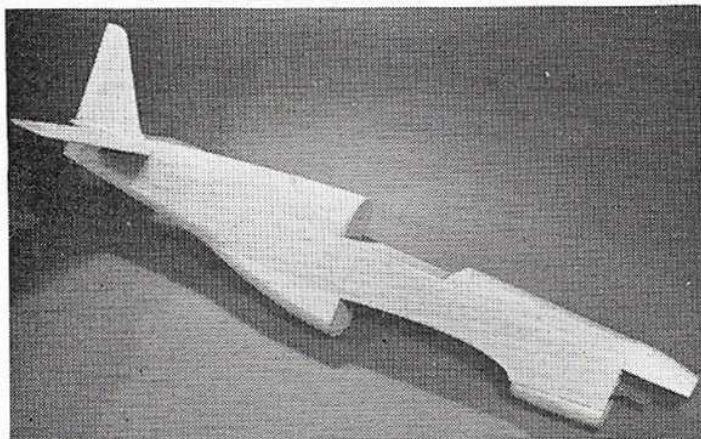


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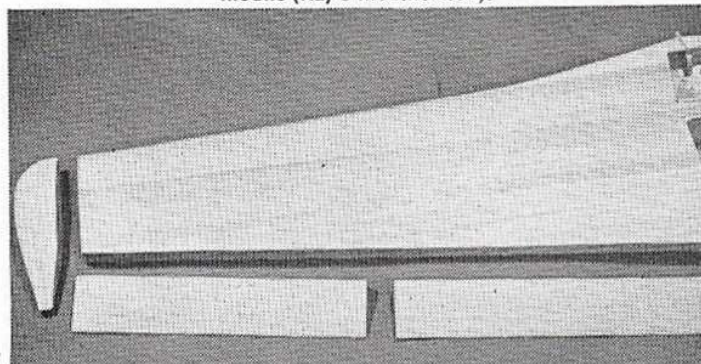
TEST REPORT

Top Flite "MUSTANG"

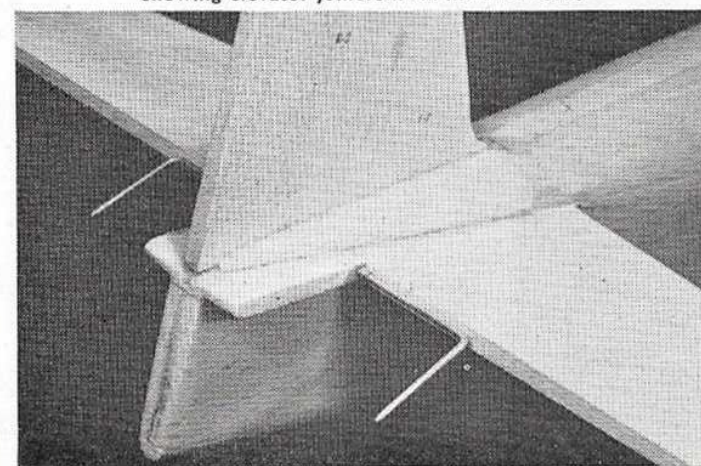
— new "Standoff Scale" kit, designed by Dave Platt



Fuselage is very robust but not too heavy—note cast metal motor mount (Ray's modification).



Wing looks very small without ailerons and flaps! Below: empennage, showing elevator joiners from internal horn.



THIS is what one might call a "bi-focal" test-report, as it were, because Ray Brown, who built the basic airframe, was unable to complete the model owing to business commitments, so finishing, installation and flying, were done by Dave Hughes . . .

Basic building—Ray Brown

When I received the new TopFlite *Mustang* from Ripmax to review for RADIO MODELLER, I at first thought I was probably in for a lot of work. However, as designer Dave Platt says, there's no more in it, really, than an ordinary aerobatic sport model, so it is well within the scope of the average r/c modeller.

Labelled "Standoff Scale," it is actually very near true-scale in outline and, in the air, it will certainly look the part, yet the construction is quite uncomplicated, as I say, having been very thoughtfully designed for best effect with least effort.

A description of the kit contents appeared in the October issue of R.M., to which I would only add that the timber used was up to the usual high TopFlite standards—hard and firm, but not too heavy, and the die-cutting was good, apart from one or two of the thicker sheets (I replaced the rudder, which had its trailing edge crunched—would have been better saw-cut, I feel).

The plan is very clear and easy to work from—though I think one or two more "sections" would have been helpful when carving the scoop and cowl areas. All the stages of construction are covered in perspective sketches arranged around the plan—and there's even a diagram showing how to make the most economical use of iron-on covering material should this be used. I followed the instructions religiously and found no snags at all in constructing the airframe. Even the rear turtle deck is no trouble when the instructions are adhered to.

One thing that especially impressed me was the very fine canopy included in the kit. It is quite the best I have seen in any kit to date. So nice, in fact, that I took extra care in preparing it—masking off the panes before scraping the areas to be painted, to provide a key for the paint, and keep the clear areas protected.

It is very easy to fit a cast aluminium motor mount, instead of using the wooden engine bearers provided, and I did this because I much prefer the rigidity given by a metal mount, and the way it obviates the need for lock-nuts or blind nuts. (Motors never seem to come loose when mounted on metal, as it cannot "squash"

like wooden bearers!). It was only necessary to draw round the firewall provided, and cut out a replacement from $\frac{1}{4}$ in. plywood. Otherwise, I followed the instructions to a "T" and, believe me, you end up with a very robust, very near-scale, replica of the Mustang—and not too heavy, either. I really recommend it to those who want a quickly built, practical, Class-2 scale model for everyday sport use. (Incidentally, the wing will accommodate KDH retract gear, if required).

The wing itself, before the ailerons and flaps are fitted, looks rather frighteningly small! Once the hinged surfaces are added, however, confidence is restored, as they add a further $2\frac{1}{2}$ in. to the chord, which represents a fair amount more area. An interesting feature here is the large amount of "washout" built into the wing. A special wedge-shaped strip jig is provided to ensure this is done correctly. It should certainly ensure that there's no tendency to tip-stall and flick-roll on take off... (result of bitter experience, Dave?) There's so much "twist" in the wings that there has to be a perceptible "step" between flaps and ailerons, if the ready shaped pieces for these parts are used, but this does not detract from the appearance at all, and it is only when viewed from the exact side elevation that the extent of the washout is really obvious.

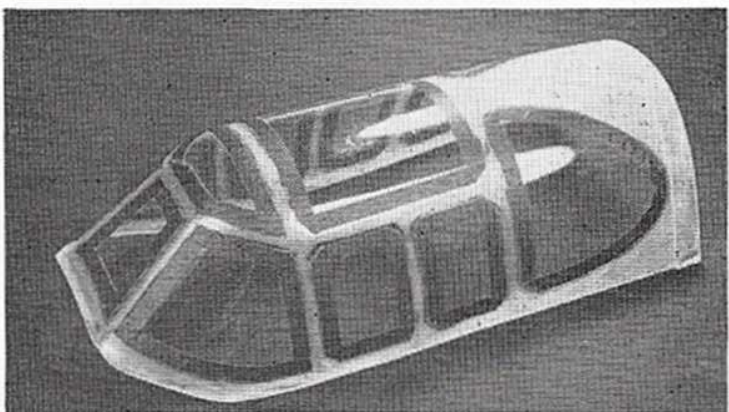
The bell-cranks for the flaps and ailerons are, of course, built into the wing in the normal manner, before the sheeting is done, so one must be sure to have all the desired movement, and really slop-free linkages, to avoid trouble later on. (Don't forget that, to get plenty of movement on the flaps, the servo push-rod must go to the inner hole of the bellcrank, while the flap push-rod comes away from its outer hole. This is clearly shown on the wing plan, but one might inadvertently use both outer holes, if not forewarned.) The elevator horn is an internal one, on the wire elevator joiner (just like a control-liner!) and the rudder horn emerges in the conventional way from the fuselage side.

Finishing and installation—Dave Hughes

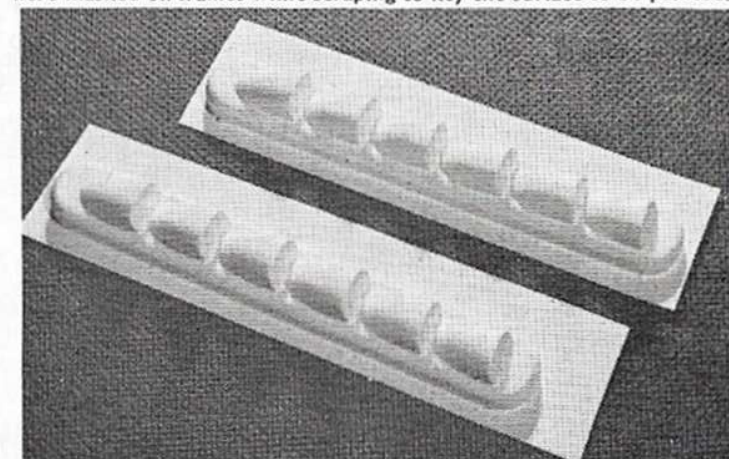
With the beautiful set of colourful "decals" (water-slide transfers) provided in the kit, it would seem wasteful to choose a colour scheme other than that of Gentile's P51B, "Shangri La" on which these are based. The Olive drab is represented, in Humbrol Authentic Colours, by HX1, Dark Green, and the undersurfaces by HX4, Sea Grey Medium, which seemed a closer match to the shade shown in the Profile Publication (No. 100) than the HX5 Light Aircraft Grey. A touch of silver paint here and there along the panel lines and other wear points, provided the necessary "weathering" effect (some may feel that I overdid this bit, but I got rather carried away!) and the whole machine was matted down with a coat of Kingston Diamond "Translac" clear matt polyurethane, which also fuelproofed it, of course.

An evening spent in painting up one of those white plastic "IM" pilots was rewarding—I think—as he sits in the "office," sliced off at the waist, looking very lifelike. I added to the wings the little streamlined lump to which are attached the jettison fuel tanks—not shown on the plan but, nevertheless, appearing on the boxtop illustration. (I may try actual drop-off tanks one day, but let's get it flying first!). Finally, some rolled paper tubes, odd nuts and bits of wire served to "pretty up" the otherwise rather bare looking torsion-bar undercarriage legs, into some slight resemblance to the detail visible in various photographs.

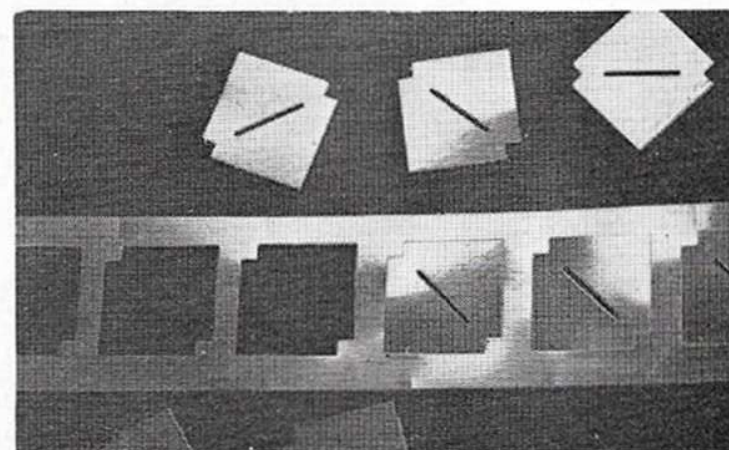
The H.P.61 sits nicely up front—inverted, of course!—with quite a bit of built-in downthrust, one notices, and I managed to coax a 12oz. I.M. fuel tank into the



Finely moulded canopy is very clear and really substantial. Shown here masked on frames while scraping to key the surface to be painted.



Moulded plastic exhaust manifolds are supplied, but would seem to represent the Allison engine version since the outlets for the Merlin should be angled downwards—as shown on boxtop painting.



Above: novel die-stamped mylar hinges—slot goes along hinge-line. Below: "IM" pilot and "weathered" paintwork add "service" realism!





tank bay by squashing it up together and then letting it expand into place!

Installation of the Futaba DigiMax 5 proved interesting. The plan shows the flap and aileron servos mounted upright in the wing, but I found this was physically impossible if the push-rods were to be inside the wing! It seems a more comfortable arrangement to have these servos lying down flat, however, and only requires four small angle brackets to be made, from 16g. aluminium sheet, to mount them, and small $\frac{1}{8}$ in. ply plates on the inside lower surface of the wing centre-section.

The remaining three servos fit nicely on a tray in the fuselage, together with the on/off switch, while the receiver aerial is led out through the turtle decking, up the mast and thence to the fin, in a more or less scale fashion.

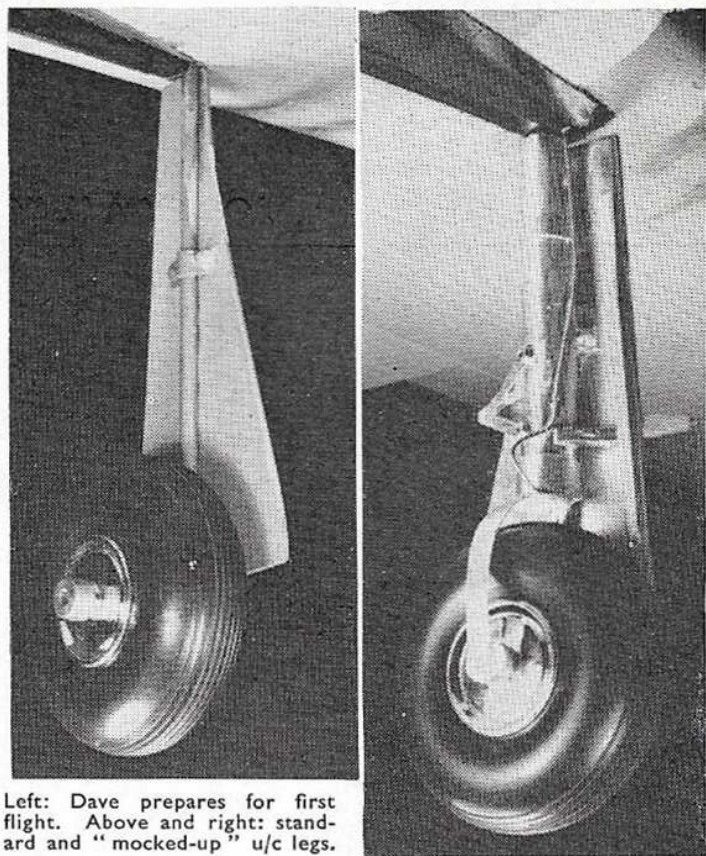
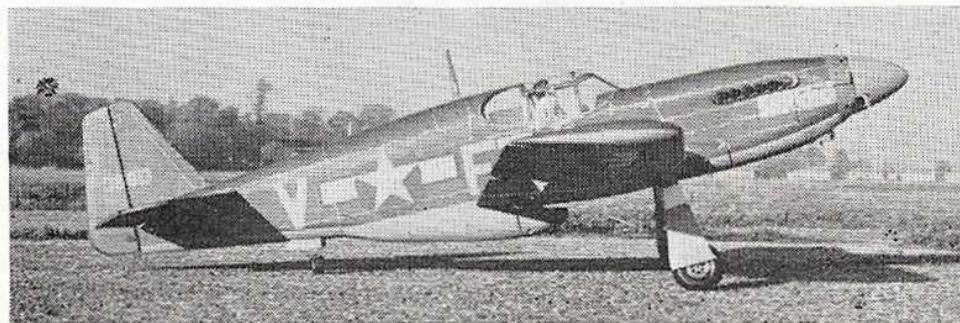
The c.g. came out slightly forward of the specified position—safe, anyway. All up weight is around 7 $\frac{1}{2}$ lb. The wing, with its two servos, and complete undercarriage, weighs 2 $\frac{3}{4}$ lb. of this total.

Flying

A short taxi, on the grass, showed that perhaps the forward c.g. wasn't going to help with this bit, anyway, as the tail kept trying to come up all the time. I therefore got Norman to hold the model while I gave her the gun and got full revs. Full up-elevator, and... she's away... a slight swing to the left is easily corrected with a little rudder, then... she's airborne... ease off that elevator, quickly... woops... there... that's better... a gentle climbing turn to the left. My fingers are trembling so that I fumble around with the trims ("Funny, this doesn't happen with gliders!")

Well, certainly no sign of a tip-stall, despite the rather unceremonious heave-off. Let's get the blessed trims sorted out then... why have I still got right rudder trim on? There... things are settling down now. A few square circuits and things feel better. But she's still rather wobbly, pitch-wise... I don't seem able to find the optimum elevator trim... with full power

That washout!—we've since heard from designer Dave Platt that sketch No. 13 on the first batch of plans showed the alignment wedge the wrong way round—hence all that washout. Later plans were overprinted and latest ones redrawn. This view shows vast amount of "wrong" washout—but it still flies!



Left: Dave prepares for first flight. Above and right: standard and "mocked-up" u/c legs.

she needs down-trim, and when I throttle back the nose drops quite steeply so I take the down-trim out again... oh, well, we'll think about that later. Meanwhile... let's try a roll... oh!—nice! Really smooth, with just a little touch of "down" on the way round. But look at the rather curious way she turns... nose held high... almost "knife-edge" fashion... wonder if that washout has anything to do with it... should I try giving rudder as well as ailerons, to keep the back-end up, in the turns? We'll think about that later, too. For now, we'd better put her down before we have a dead-stick on our hands....

Where's the wind? No—not *there*, you idiot!—it's changed since we took off... go round again... more throttle... now, line her up... coming in steady—but fast!—chop the throttle *right* back... still fast... aaaaaaah!—she kisses the wet grass as gently as a thistle-down... runs along on the main wheels for a l-o-n-g way, slows—and then tips over on her nose, very gently, as though the front wanted to stop but the tail wanted to keep on going.

If I smoked, I'd have lit up a fag, at this point. As it was, I just sighed with relief—and satisfaction. Down in one piece, and really not so very different from an ordinary aerobic sport model, as Ray said earlier!

The next half-dozen flights saw the model (and the pilot!) settled down, and the flaps were tried. The use of part-flap gives the wing more lift, brings the nose up and allows the machine to be flown slower without sinking. On full-flap, however, one can see "the anchors go out"—the model slows down suddenly and then begins to sink, but without any significant change in longitudinal trim.

An interesting and exciting model, this, with lots of intriguing possibilities in those flaps!