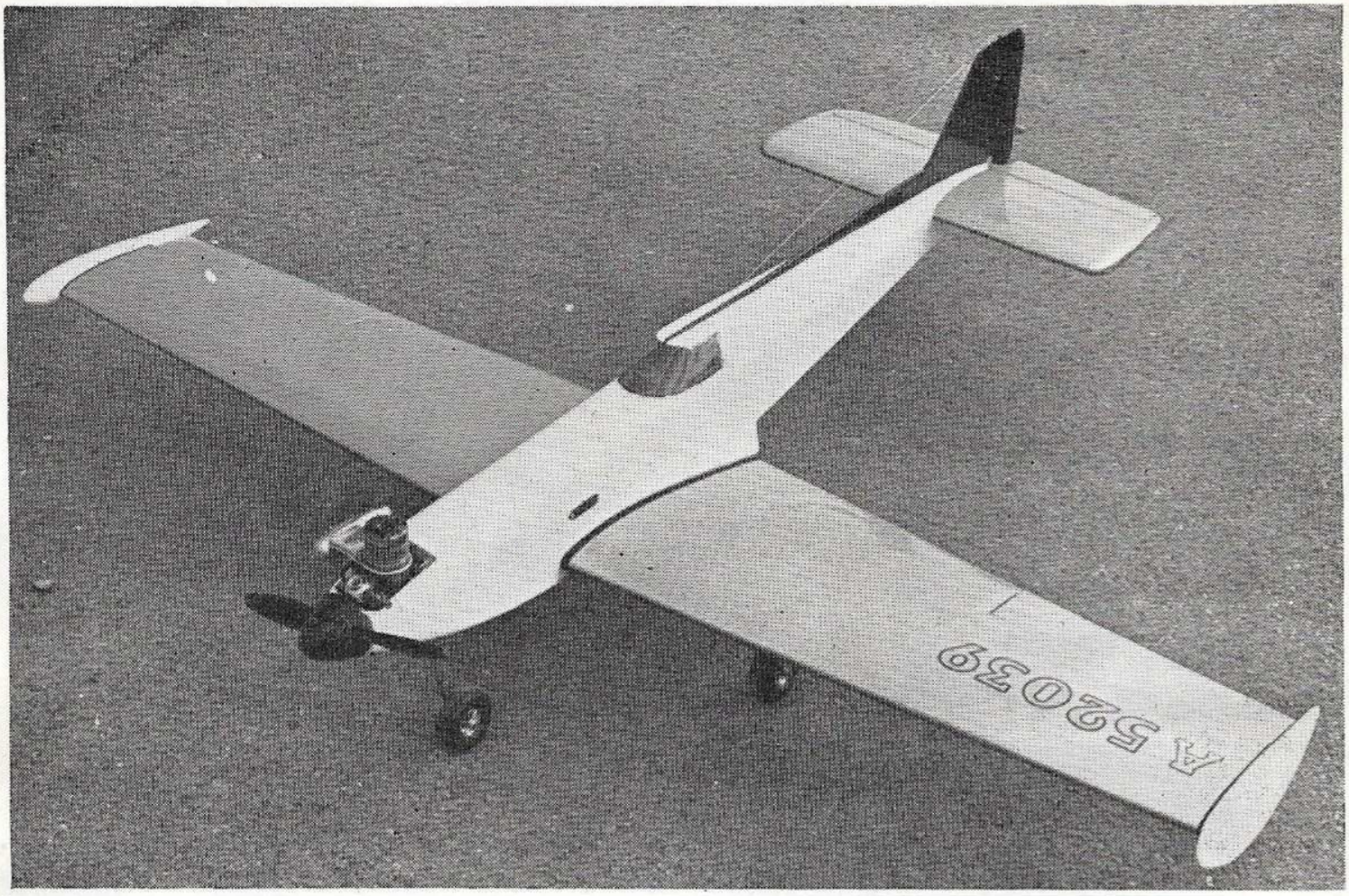


build an Aerocrat by BILL SIMMONDS

—a smooth-flying, groovy multi with those "light-aircraft" looks

AFTER having a somewhat chequered career in my efforts to become a proportional flier (following four years single channel and about six months with reeds), I finally achieved real success with the purchase of a rather battered V.K. *Cherokee.* Two clubmates had already learnt to fly on this and, with the help of several of the club members, I managed to get airborne and log some flying hours.

Having done some 200 flights with the *Cherokee,* I changed to a much modified *Uplift.* This had 8in. lopped off the wingspan and 3in. off the tailplane and was, in fact, a build-up of several pranged models. It proved to be very fast and a bit hairy. Aerobatic performance was limited, too, so after about 180 flights with the thing, I thought I would design a model of my own. "Design" — as usual — being said with tongue firmly in cheek.

I looked up the articles on several of the current trendy models to see what the experts had to say on the matter, then took the opportunity to fly replicas of their designs whenever possible, to see if I agreed with what they had said. This gave me a formula from which to work when drawing up my dream machine. I could well have called it *Twistupmoonfli* but, in the end, settled for the rather light-aircrafty-sounding name you see here.

Flying characteristics

You will note that there is no downthrust or side thrust shown on the plan, as I have not found either to be necessary. Although some sidethrust may be needed to straighten out bunts on some models, the prototype flew straight off the board, as they say, with only a touch of up-trim — and I even have to take this off in windy conditions.

Take-offs are clean and smooth . . . just a touch of elevator to unstick and *Aerocrat* will climb away nicely on its own. Once in the air, it is fast and smooth — really smooth. It will go through the schedule with ease, and, in fact, will do anything of which the pilot is capable. It also handles well at low speeds and is not prone to tip-stalling.

Landings are easy (a prime requirement since my early experiences!).... just keep the power on a bit if it's windy, chopping right down at the very last moment.

All in all, it seems to be an easy, pleasant model to fly; docile enough for the average flyer to handle with ease, yet, as I said, with a very high potential. Several of my club-mates, having had a go with *Aerocrat,* seemed — to my surprise — to be quite impressed. Enough to suggest I submit the plans and some snaps to

AEROCRAT FLY-BY

We visited Bill's home flying strip to try out the model, and took these pictures. Top right: coming in on low motor. Left: an inverted pass. Right: another approach. Below: ready for off.

R.M. The Editors seemed also to be impressed — at anyrate by *Aerocrat's* appearance—(a change from all the "fishy" type shapes around??) enough for one of them to pay a visit to our club field and fling the model around the sky for himself — not to mention bashing away with the telephoto. So here it is; if you feel like getting back to a model that at least looks *something* like an aeroplane, try an *Aerocrat*!

Constructional pointers

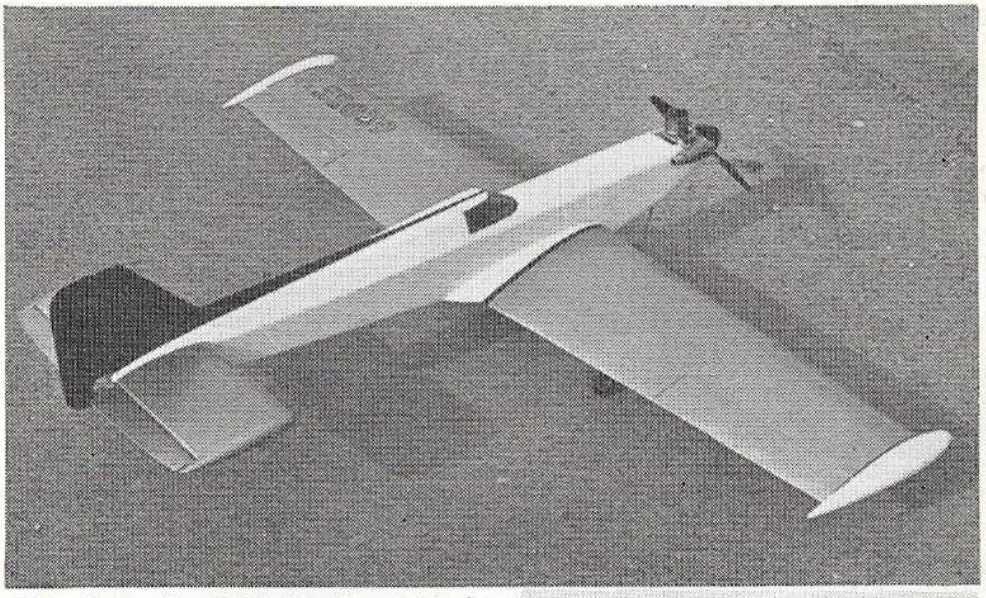
I do not propose to go into much detail about building *Aerocrat* because most chaps who would build a model of this type will already have their own pet methods, so just a few pointers...

Wings — these are built as one unit, upside-down on the board, commencing by laying the upper spar over the plan and fitting the ribs over it, half-slotting the ribs and $\frac{1}{8}$in. ply dihedral brace to fit into each other. The lower spar is then added, to lock the whole lot together, after which l.e. and u/c blocks are fitted, before sheeting the lower surface. After this, the wing is turned right-way-up and the tips propped up to keep the structure true. The fittings for controls etc., are fitted at this stage, before sheeting the top surface, after which the ailerons are cut out. The tip ribs are not glued, so that they may be pushed in to locate the tip "tanks" later.

These latter are built in two halves, from block balsa, and hollowed out after shaping.

Tail unit — the tailplane and fin are built in the usual manner, but the fin passes through the slot left in the sheeting on the tailplane, and locates into the bottom of the fuselage for extra strength.

Fuselage — the two sides are built over the plan, leaving out the $\frac{1}{4}$in. sheet panels in the top of the tank bay and adding the $\frac{1}{16}$in. ply doublers. The two sides and formers are mounted onto the $\frac{1}{2}\times 4$in. top sheeting, fitting in the two $\frac{1}{8}$in. ply gussetted tank supports. The $\frac{1}{4}$in. sheet panels are then fitted in the top half of the



Bill Simmonds finished his original "Aerocrat" in white enamel for the fuselage, with wings and tailplane in gold Solarfilm—black fin/rudder and trim—and very attractive it looks, too. The tip "tanks" are optional, but we think they add to the appearance.

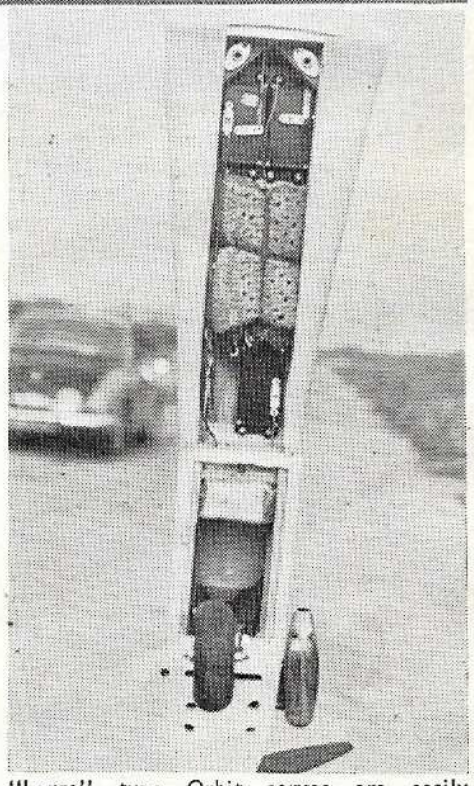
tank bay, locating the nosewheel fittings and engine mount at this stage, after which the balsa nose blocks are added and the fuselage is sheeted overall — except the underside — with $\frac{1}{16}$in. balsa. Leave the underside, however, until the servos and pushrods have been installed.

The fairing is made by temporarily fitting the wing, and sheeting the fuselage underside with $\frac{3}{32}$in. sheet — grain crosswise — starting just behind the t.e. with a two inch strip overlapping by 2in., to provide a platform for the fairing. The tops of the fairings are made from $\frac{1}{16}$in. sheet, first making a pattern from thin card.

Access to the tank bay is through the underside of the fuselage, just aft of the nosewheel, and it is best to fit a completely removable hatch as there is just room enough to squeeze an 8oz. plastic bottle tank in above the tank support, with space below it for the Deac.

Finishing

Wings and tailplane of the original are finished in gold Solarfilm, with a generous overlap on the centre section, as I did not use



"Large" type Orbit servos are easily accommodated in the "Aerocrat," as shown here. Note Rx is located between throttle servo and the other two. Fuel tank may be seen in this shot, with forward under-hatch removed. Note also wide wing-seat/fairings.

a fibreglass bandage. The fuselage is finished in white enamel, rather than using a film and juggling around with all the fiddly bits, tank bay and so on, but this, of course, is a case of personal preference.