

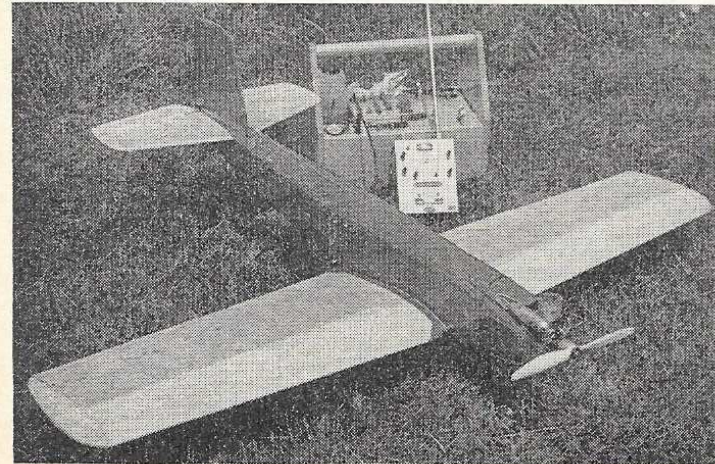
## THE NEXT STEP . . . .

*in the Editorial radio control progress*

NOT having the sort of mind which delights in accurate statistics or, in this case, flight records, we can only state that our multi *Super 60*, described in the June issue, was just starting on its fourth gallon of fuel when it met its doom. This is a lot of flying and it speaks worlds of this design that it stood up to all sorts of pilot error crashes, from wing tip to tree top landings. During its flying career the airframe was submitted to various stresses and strains for which it was never designed or intended and that eventually the wings should fold during Cuban 8's, gave no legitimate cause for surprise. The amazing part about the subsequent crash, that buried the model some 10 in. in the ground, was that the overall damage was light and could, if necessary, have been repaired.

However, some time before this, we had realised that we were growing out of the *Super 60* and started on a replacement. We had received a Robbe *Thor* kit for review, when they first arrived here, but its completion had been held up due to lack of suitable equipment and flying experience. The O.S. Minitron Superhet 10 obviously filled the bill equipment-wise and the *Super 60* had provided the experience, so the *Thor* was almost ready to have the equipment installed, when the *Super 60* made its last flight.

Although the equipment was still working after the crash, we took expert advice and asked Harry Brooks to check over the Rx and the five Duramites which are fitted with Brooks amplifiers. We found one or two irregularities caused by the crash which could have given trouble and proved the wisdom of a thorough check after such mishaps.



The *Thor* kit is very complete, with pre-formed u/c, wheels, etc., plus all the balsa and ply parts pre-shaped or die cut and, generally, the selection and quality of the wood is very good. The two sheet plan has all parts numbered and these tie in with a table on one of the sheets. As the model can be flown rudder only, ailerons, although shown on the plan, have no constructional parts supplied.

With three exceptions, two intentional and one accidental, the plan was adhered to precisely throughout. The exceptions were (a) increasing the thickness of the tailplane by  $\frac{1}{4}$  in. and sanding to a streamline section: (b) binding the u/c to its former with iron wire, which was then soldered to the u/c wire, this in addition to the aluminium mounting clips supplied: (c) setting the dihedral at 2 in. under one wing tip, instead of both (accidental).

The kit went together well, and made up into an attractive model, a little on the small side for the weight, possibly, but compact and rugged. The fuselage, being designed for Telecont gear, allowed ample room for the relayless O.S. and Duramites to be installed without undue cramping and with adequate rubber packing round the Tx.

The *Thor* is designed for a 35 motor, but it is stated that engines up to 8 c.c. can be used. We were doubtful of the ability of our 35, fitted with a silencer, to haul it off the comparatively rough grass field where we do all our flying, so decided on a bigger motor with plenty of oomph for take-off and which could be throttled back if necessary in the air. Obvious choice was our new O.S. 50 with a silencer (obligatory on our airfield) fitted with an exhaust baffle. This is a beautiful motor to handle, powerful, smooth

and with wonderfully progressive throttling. Other items we used to complete the model were Skol-kits nylon; Bradshaw 8 oz. clunk tank, Soraco control horns, a K.K. 12 X 6 in. propeller and Kwick-links for all the hook-ups where adjustment was likely.

With empty tank the C.G. was as per the plan and, as far as we could see, there were no warps. Our original intention had been to make the first flights ourselves, but expert counsel prevailed and Harry Brooks kindly agreed to take this responsibility off our shoulders. Again the expert advice was correct . . .

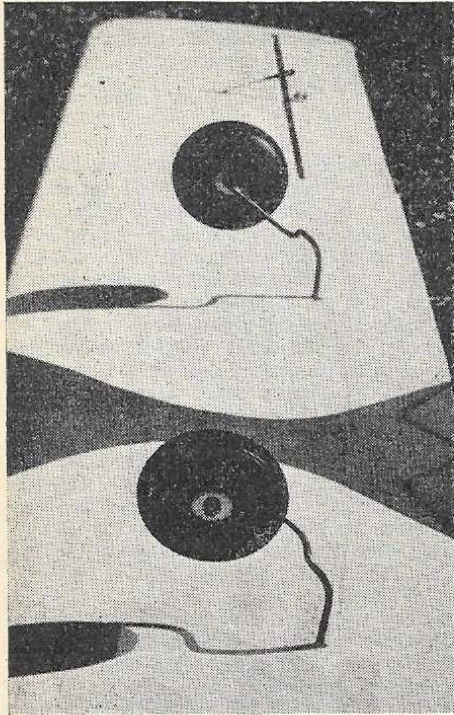
The main wheels, positioned as per the plan, are some 4 in. behind the C.G. almost at the trailing edge and doubt was expressed about the take-off characteristics with this set-up. Given a long smooth runway to build up plenty of speed, it would probably be O.K., but all of our flying is off grass and the length of runway limited by club members' energy with the mower. This means that the models are lifted off pretty quick and the main wheels are, therefore, only just aft of the C.G. To haul a model with a rearward u/c off quickly is just asking for it to stall. In addition to this problem, we had far too much movement on the elevator but, nonetheless, decided to try a test flight.

With the motor at full bore Harry got the *Thor* airborne at the very end of the take off strip and it immediately dropped the left wing tip. However, he was ready for something like this and got it safely away, when it was obvious that there was a sharp built in left turn. Several flights later, with the turn trimmed out, Harry tried some manoeuvres, but everything except rolls was frustrated by the excessive elevator movement, so we decided to call it a day and go home to do a few mods.

By dint of some hard work with pliers and hand vice, it was possible to bend the u/c so that the wheels were positioned some 3 in. further forward and we also managed to lengthen the elevator horn to reduce the movement. This time we asked our Roving Report Columnist Stewart Uwins to make the test flights, as we did not yet feel competent to fly it ourselves.

However, the u/c mods had solved the take-off problem, and the elevator-response, although still a little excessive, was 100% less sensitive. Thus encouraged, we decided to take the plunge ourselves and were delighted to find we could fly it. Compared to the staid *Super 60* it is a frightening device, with its instant response to a control and marginal stability aggravated by our building error with the dihedral. However, fly—and fly well—it does and we are delighted at having taken our next step by building a model which is designed to—and will—perform all the accepted manoeuvres. We are looking forward to a lot of fun with our *Thor* and if it is crashed, it will be due to our carelessness, not any shortcomings in the design.

Since writing the foregoing we have put in a fair bit of flying with the *Thor* and, just as with the *Super 60* at first, when we thought we would never get the hang of it, now the *Thor* is not nearly so frightening and we are really starting to enjoy our flying outings.



Heading photo close up shows how neatly the silenced O.S. 50 fits the "Thor" without modification. The photo below this shows the complete model, with our "flying box" and Tx.

Left: The undercarriage as modified to bring the wheels nearer to the c.g.

Right: Editor and model after test flying.



Now, of course, we have started on the *next* model, but a description of this will have to wait for a few months yet.

**POSTSCRIPT**

Three weeks after writing the above we have used more than two gallons of fuel with our *Thor* and are progressing nicely in learning manoeuvres, which just require hanging on the appropriate button for the correct length of time. Familiarity with the

model is now making each flight a pleasure, not a nerve racking experience, and we now appreciate that our first reaction to it was typical of the tyro who gets hold of a model which is too hot for pilot. Now we can relax, the smoothness of the *Thor* is a delight and, while it is not an easy model to fly, it will obey the signal sent instantly and accurately, then continue in the direction it is pointing, until the next signal is sent.