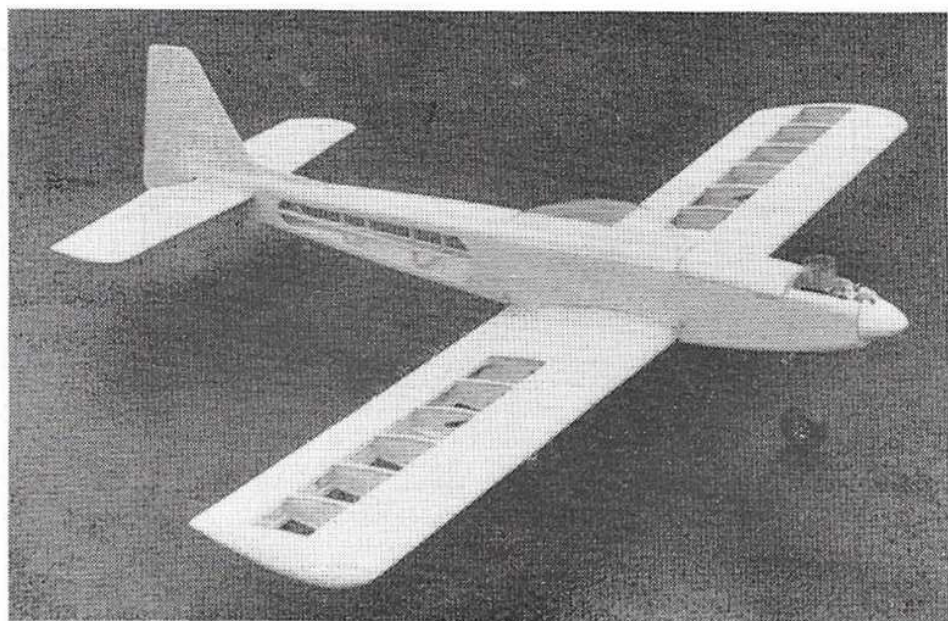




## **Graupner's "KWIK-FLY III"**

***exceptional value in multi kits—  
delightfully accurate die-cutting—  
—a very pleasant model to fly***

**R.M.'s REVIEW MODEL BUILT BY PAUL NEWELL**



**T**HIS must surely be the most complete kit on the market for a full-house multi and is certainly the best value. Quality gleams at you from all directions and the die-cutting can only be described as superb, both in crispness and accuracy. A general description of the kit contents was given in the August '68 Trade News, so suffice it to say here that pre-fabrication goes to considerable lengths, an outstanding feature being that the front fuselage sides are pre-curved to nose planform and even have the ply doublers ready contact-cemented in place!

The instructions are supplied in two booklets, in the usual Graupner manner; one in German with all the illustrations, the other

being a set of translations in English, French and Italian, together with the plan captions. A third multi lingual booklet describes radio installation but is, as usual, allied to the Graupner/Grundig equipment.

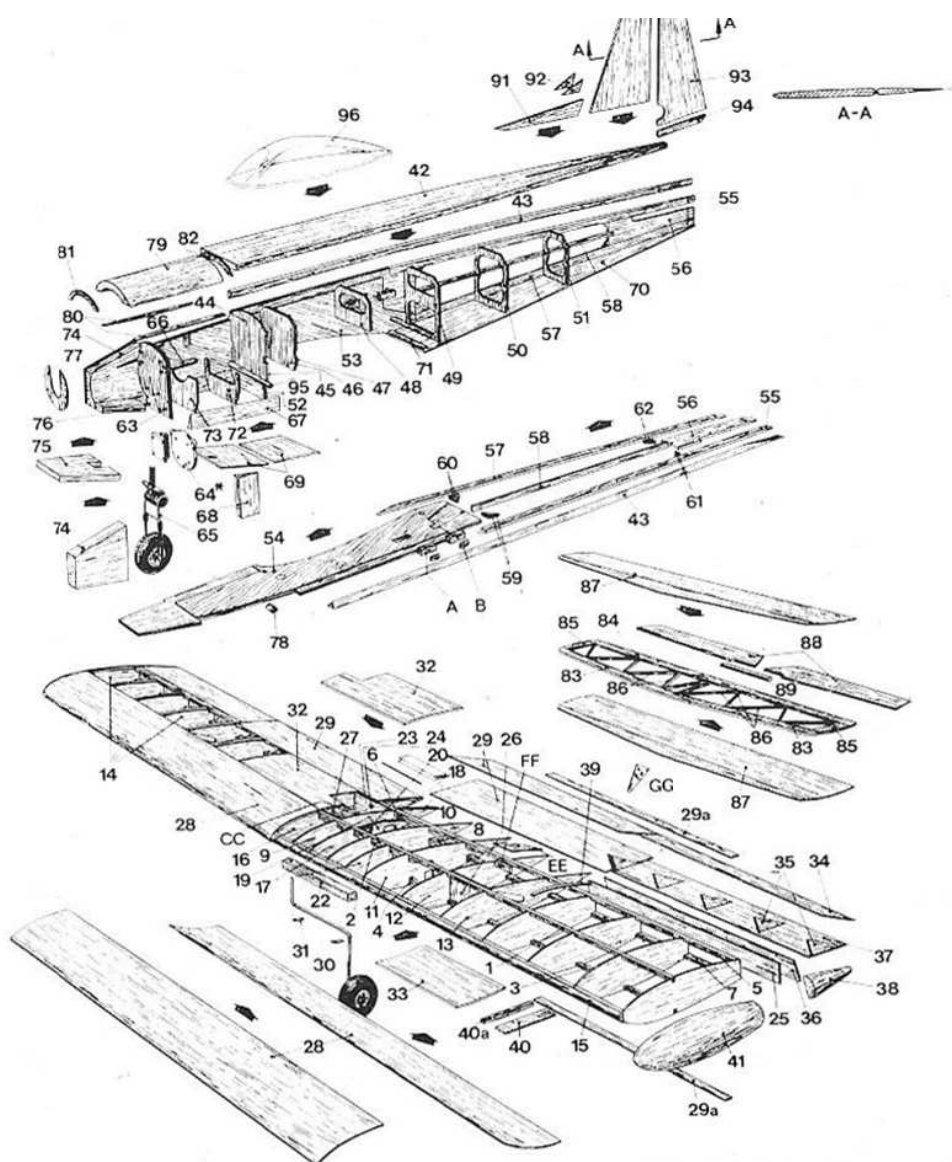
### Constructional comments

I approached building the *Kwik-Fly* with the good intention of following the instructions exactly, but being one of those people who never do things the easy way, soon departed from the suggested sequence. I think many builders will do likewise, particularly as the model can be assembled almost completely from the exploded drawing. However, it is worth devoting an evening to reading the instructions through—and also to get the feel of the metric sizes of balsa.

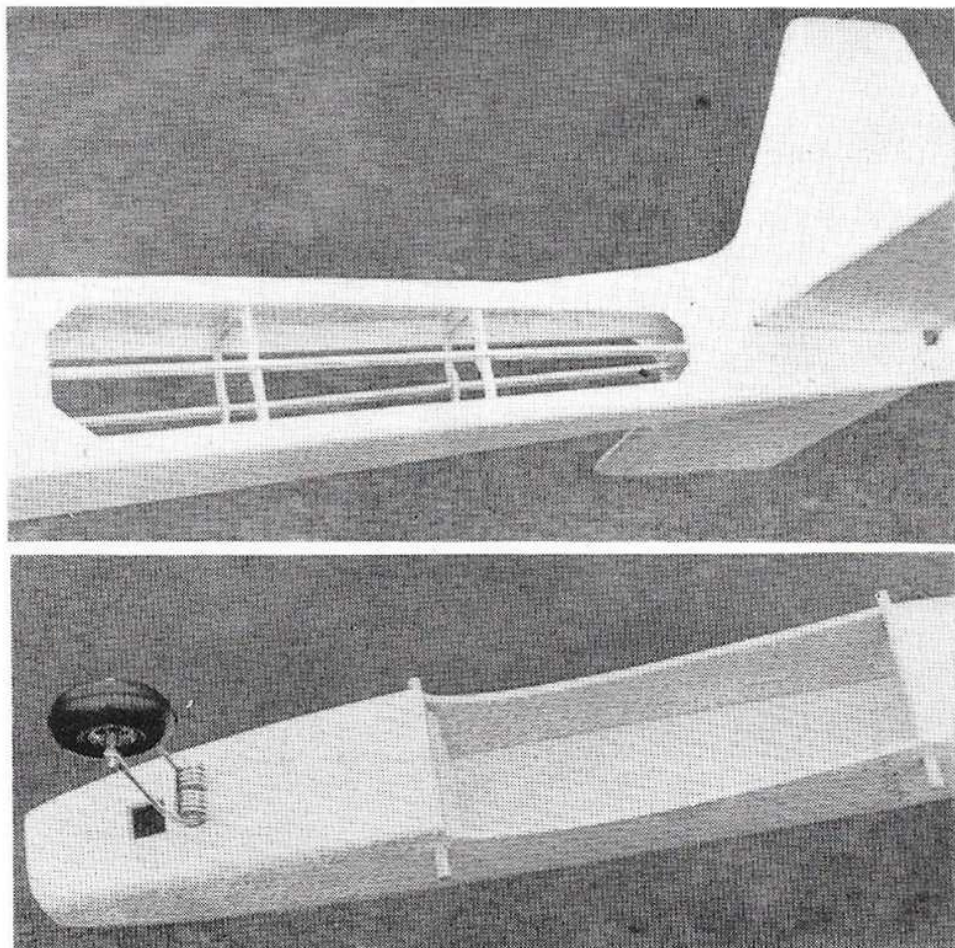
Commencing construction with the wing, I was delighted to find that the die-cutting was so accurate, and the leading edge notches so good a fit, that a whole panel could be assembled straight away—almost like building on a jig. The instructions suggest building one wing panel on the lower spar, the two halves of which have been previously joined at the appropriate dihedral angle, but here I could anticipate some difficulty in getting the ribs seated properly in the notches in the leading edge. Building, as I do, "in-the-air" rather than on a board, the wing was built using the leading edge and rear spar, the latter being effectively the trailing edge until the sheeting was added.

I had decided to use tube and cable for the aileron linkage, so this was fitted before adding the lower surface sheeting. Using PTFE tubing (from Model Flight Accessories), this was roughened on the outside with coarse sandpaper and secured in place with fillets of fibreglass. Surface matting is best used here since, being very fine, it forms around the tubing easily. For aileron horns, I used the ED nylon type, omitting the screws and clamping piece, and simply fibreglassing them in place before adding the top sheeting.

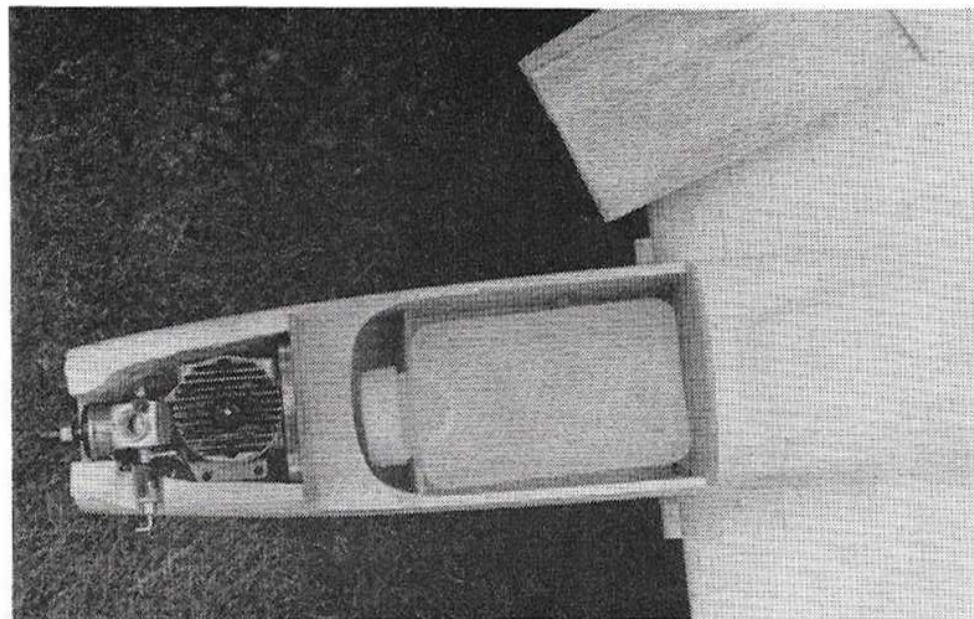
Fuselage construction is again simplified by the use of pre-cut parts. The top deck effectively serves as a jig, once the triangular corner fillet strips have been



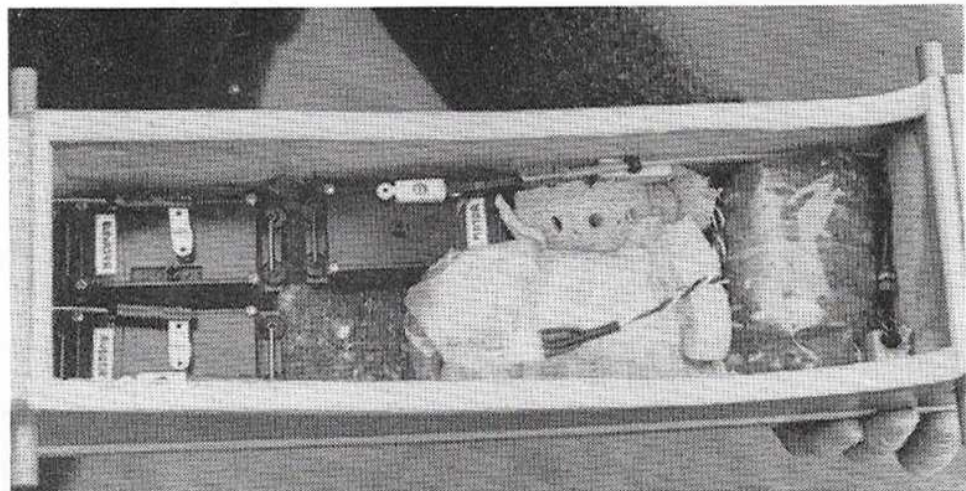
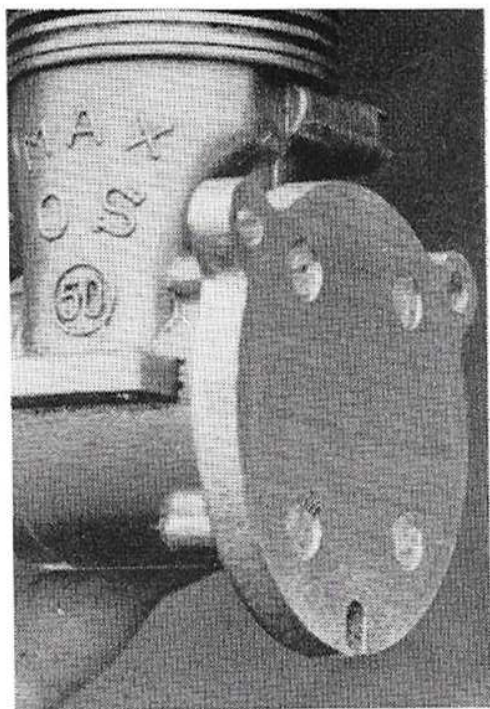
Construction at a glance! This beautiful exploded view from the instruction manual is the perfect visual-aid to building.



Right. The open-framework rear fuselage, best covered in nylon. Plenty of room for equipment at front end!



Review model is fitted with O.S.50 (shown at right fitted to the radial mounting plate supplied). Note the nice comfortable fit of the large Graupner square clunk tank.



Standard Orbit servos, fitted in "E-Z" mounts, cable linkages—plenty of room for receiver and Deac.



First, some taxiing trials—Paul Newell looks anxious while Pete Charman revs up.

added. The pre-formed fuselage sides then drop into place and, when the glue has dried, the assembly can be handled without any fear of distortion. The rear fuselage sides are open framework, built up with formers and longerons by gluing the formers in place on the top decking. The die-cutting accuracy, again, was so good that no fitting was required for the wing, tailplane and fin alignments.

The neat radial engine mounting plate supplied is intended to be bolted onto the engine back-plate. Unable to obtain the correct screws for the OS50, I tapped the crankcase to take 4BA size. (Alternatively, one could use one of the numerous cast mounts available).

The completed structure, with all hardware, engine and r/c equipment (17oz.) came out at 4lb. 14oz., so it follows that if a careful watch is kept on the covering and finishing, a total weight of 5½lb. should be possible. I elected to make a compromise, however, by using nylon for covering the wings and the open area of the fuselage, and tissue for the remainder. A colour scheme was applied, using a Ripmax spray gun and Valentine's Spraygloss car cellulose, followed by two coats of boat quality clear polyurethane varnish. As a result, the total weight came out at just over 6lb.

#### Installation

The radio installation presented no problems, due to the fairly large volume of the fuselage. My

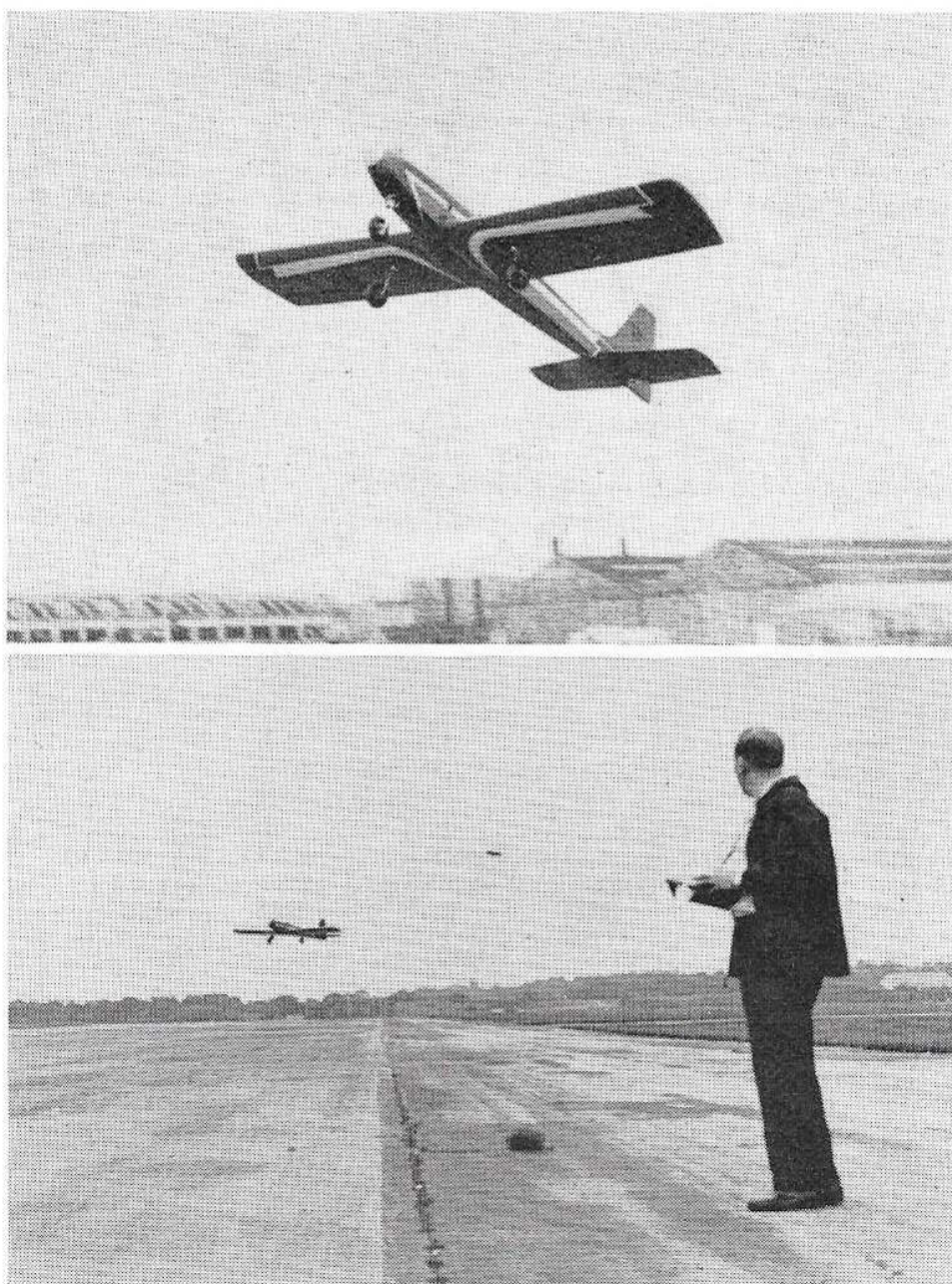
equipment (home built) comprises standard size Orbit servos, miniature receiver and 4.8v Deac. The servos are mounted on E-Z mounts, from Henry J. Nicholls and, together with the Deac, were positioned to locate the c.g. at the recommended point, with the tank empty. Having installed servos and Deac, the receiver was almost lost in the remaining space!

### Flying

After three weeks of frustration, the weather suddenly became ideal one weekend, so off to the flying field, accompanied by Dave Hughes and—as this is my first low-wing multi—Pete Charman, who is a more experienced pilot than me. A few flicks and the OS bursts into life. Switch on and throttle down. (The motor is fitted with a Kavan carburettor, which works a treat). Now check controls . . . open up and taxi down the strip to check the ground handling. Turn round and back . . . then this is it. With Pete at the controls, off she goes; gentle climb away and a slight turn to the right is evident. Correct this on trim and try a loop. Smooth, and the engine does not falter a bit. A few circuits at reduced throttle, just to get the feel of things, before landing.

A right hand tendency was corrected by lowering the left hand aileron slightly, then tank-up and off again. This time everyone had a fly, and we also managed some low passes for the camera. The landing approach showed that we had still not quite adjusted the ailerons correctly, as the model tended to be a bit edgy on elevator when throttled back. This was corrected by raising both ailerons slightly, and after this everything was practically correct. On the third flight, some manoeuvres were attempted; loops, bunts, rolls and inverted were all very satisfactory, and pleasant to perform. We could not achieve a spin at this stage, mainly due to insufficient up elevator movement. I had deliberately used reduced throws, initially—this being my first low-wing model, as I said earlier. It is much easier to increase the control surface throws gradually than to have a re-kitted model.

Whilst three flights does not sound much in one afternoon, we used the best part of half a gallon of fuel, doing numerous touch-



Top picture catches "Kwik-Fly" the instant after take-off. Centre. Pete Charman doing one of many touch-and-goes, before handing over to Paul—seen refuelling with electric pump.

and-go's. (The large size, square, Graupner tank holds about 18oz., you see).

The low-throttle characteristics of the model are excellent and the aerobatic capability, as expected, is limited only by that of the pilot and, perhaps, in our case, by the engine size. With a 50 size motor the *Kwik-Fly* makes a very pleasant model to fly, and no doubt with a 61 up front it will be every bit as hot as the prototype. So down with pen and off to the flying field . . .

**Manufacturer:** Johannes Graupner, Germany.

**Importer:** Ripmax Models & Accessories Ltd.

**Price:** £15 16s. 6d.

