

**FROG POWAVAN. 25/-**

48 in. wing span. 25 $\frac{3}{4}$  in. length. 250 sq. ins. wing area. Our weight, 16 oz. with Frog 100 diesel.

**Packaging**

Multi-coloured, attractively printed carton boxes are now an established Frog trademark. It is a pity that rigidity has had to suffer for the sake of the distinctive colour printing, for not only is this type of packaging difficult to stack in shop counter or shelf display, but the risk of damage to individual kits in postal transit also requires considerable additional wrapping. We were pleased to note that NO damage to contents was found in our review kits, and that the tightly packed contents are now accessible through the box lid, and not through the box end as in earlier kits.

**Quality of Contents**

Good grade balsa and hardwood parts, with ready shaped leading and trailing edges, and every sheet part die-stamped with perfect accuracy, make this a kit of A1 quality.

**Completeness**

Apart from the need to supplement the supply of cement, the kit is complete to the finest detail. Even the elastic bands for assembly of the completed model, and tiny woodscrews for holding the alloy cowling, are supplied.

**Ease of Assembly**

Frog kits are so near to being completely prefabricated that we might expect the instructions to read "shake the box in the left hand, squirt cement with the right, and the kit will assemble itself". We found the Powavan almost as simple as that to build. We say *almost* because this model is made from what appears to be literally hundreds of component parts. Halfway through construction, which takes longer than average for a 48 in. contest job, we began to wonder if the dozens of pieces that go to make the fuselage were really necessary! However, our patience won through, and though our test model exceeded the specified 13 oz. by 3 extra oz. we were satisfied that we had a virtually indestructible model. In fact, when on test it landed, without intent, on the Managing Editor's office roof with a resounding crash usually indicative of a write-off, the only damage was a smashed celluloid wheel which had taken most of the impact.

Powavan is not for hasty builders, it is a model for those who enjoy building as much as high performance flying.

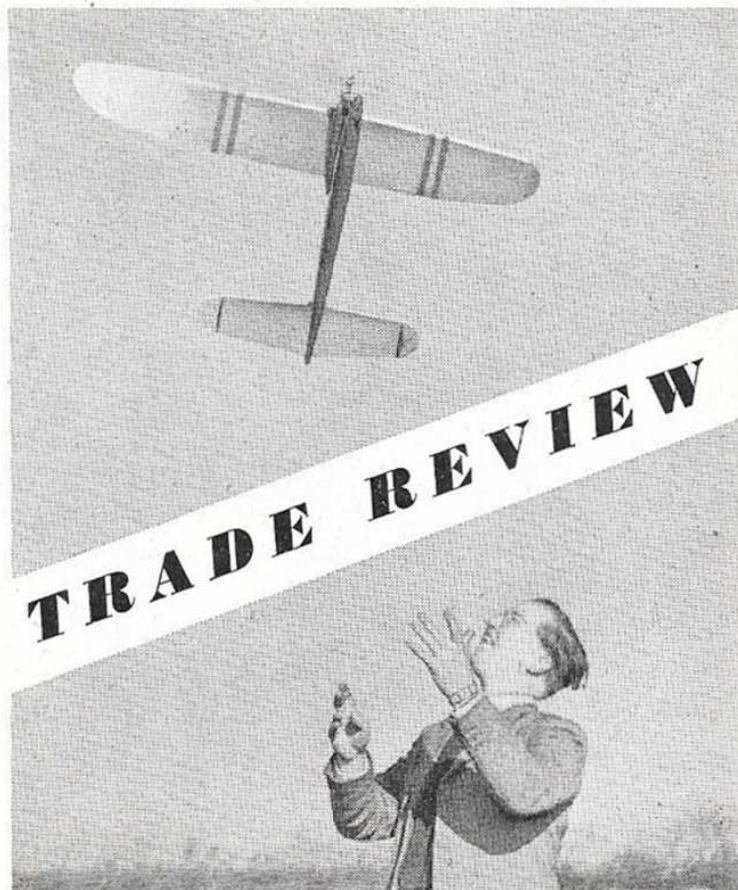
**Instructions**

Are without fault and key perfectly with numbered parts shown on the plan. The flying instructions are unique in that they describe exactly the best method of trimming.

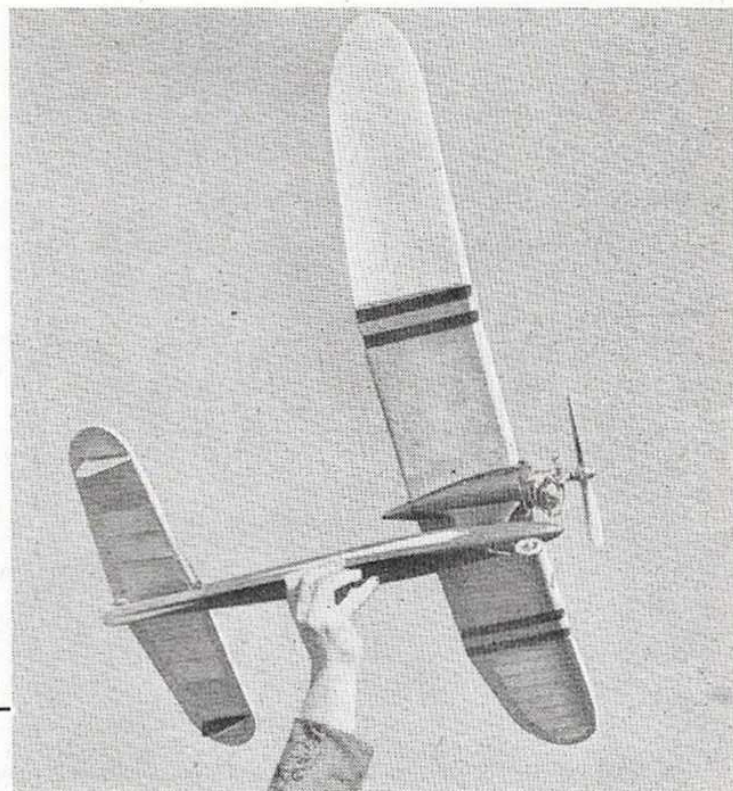
Value is 100 per cent.

**Flying**

Fitted with a Frog 100, driving a Frog 8 in.  $\times$  5 in. prop., the test model was put through all forms of trim; but the advised straight climb, and left-hand glide turn, proved best with regular still air ratios of between 6:1 and 9:1. This may sound a trifle far fetched for a contest model with a 9 oz./sq. ft. wing loading, and a power loading as high as .07 b.h.p./lb. but the ability of the Powavan to sustain a steady near-vertical climb, without the slightest tendency to stall, is something which calls for greater study of this unusual high



thrust-line layout. No downthrust was needed; but 3/16 in. packing under the tailplane T.E. was required (due to wash out on the wings of our particular model) before the model assumed its remarkably flat glide. A right hand turn is not to be advised at any time, nor is movement of the whole tail unit as a trimmer for turn. The trim tab itself is sensitive to a fractional movement.



*In our heading photograph, Ron Moulton demonstrates the Powavan's vertical climb. View on the right displays the unusual layout.*