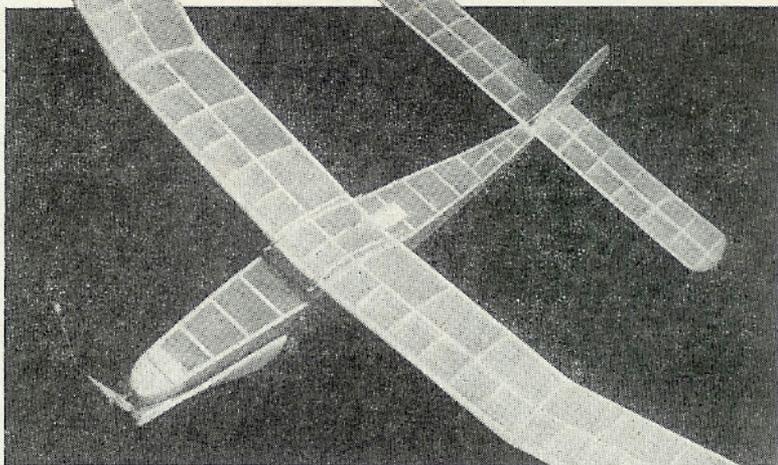


● RON WARRING'S
36 INCH LIGHTWEIGHT
CONTEST RUBBER MODEL

FLIP FLOP

Tip fins, parasol wing, single blade folding prop, and under-cambered wing section are design features of this latest Warring Lightweight. Mr. and Mrs. R. H. W. are caught in the process of winding-up for a test flight, in the bottom photo.



PRIOR to "Flip-Flop" the last lightweight built by the writer was in 1945. This was really a "medium weight" model rather than a true lightweight and the immediate forerunner of the *Zombie* Wakefield design. The era of this type of "heavy" lightweight was past, however. With freewheeling propeller and long, slow climb they were, perhaps, more consistent than the orthodox post-war "lightweights" but had a noticeably higher sinking speed on the glide.

"Flip-Flop" was built in late 1950. Since then it has had various outings, none in competitions, and undergone one or two developments. The design layout has been largely influenced by two

particular post-war models, fellow club member Bill Geddie's "Tiercel"—an F.A.I. rubber model—and Roy Yeabsley's "Gee Bee", which won the 1950 Bill White Cup. It includes a number of the best design features of these two models, with the addition of some further ideas.

One of the main differences between "Flip-Flop" and its contemporaries is that it has a very long power run—eighty to ninety seconds on full turns. Initial climb is quite fast, after which "Flip-Flop" plods along in a steady climb for almost the whole of the power run, reaching a very good height. Normal duration should be in the region of $3\frac{1}{4}$ to $3\frac{1}{2}$ minutes without benefit of rising air currents. For most of the power run the propeller appears to flop around, generating just that extra amount of thrust necessary to take the model upwards.

Power trim is obtained by adjusting sidethrust to give a reasonable right-hand circle. No down-thrust should be needed, provided the model balances where shown on the plan. Adjust the wing fore and aft for glide trim if necessary.

On the glide, with propeller folded, the model should then fly straight. The ideal trim is to have a left-hand circle on the glide and this is achieved by sticking a length of $\frac{1}{8}$ in. square balsa under the trailing edge of the port wing, just outboard of the tip dihedral joint. Adjust the length of this strip until the required turn is obtained. The presence of this strip will scarcely affect the power trim.

A possible trouble is that the long motor may show a tendency to bunch at the rear anchorage. Use a bobbin here and bind the motor close up to the bobbin. The motor should comfortably take a thousand turns.

Building instructions are included with each full-size copy of the $\frac{1}{4}$ scale reproduction opposite, which can be obtained price 4/- post free from the Aeromodeller Plans Service.

