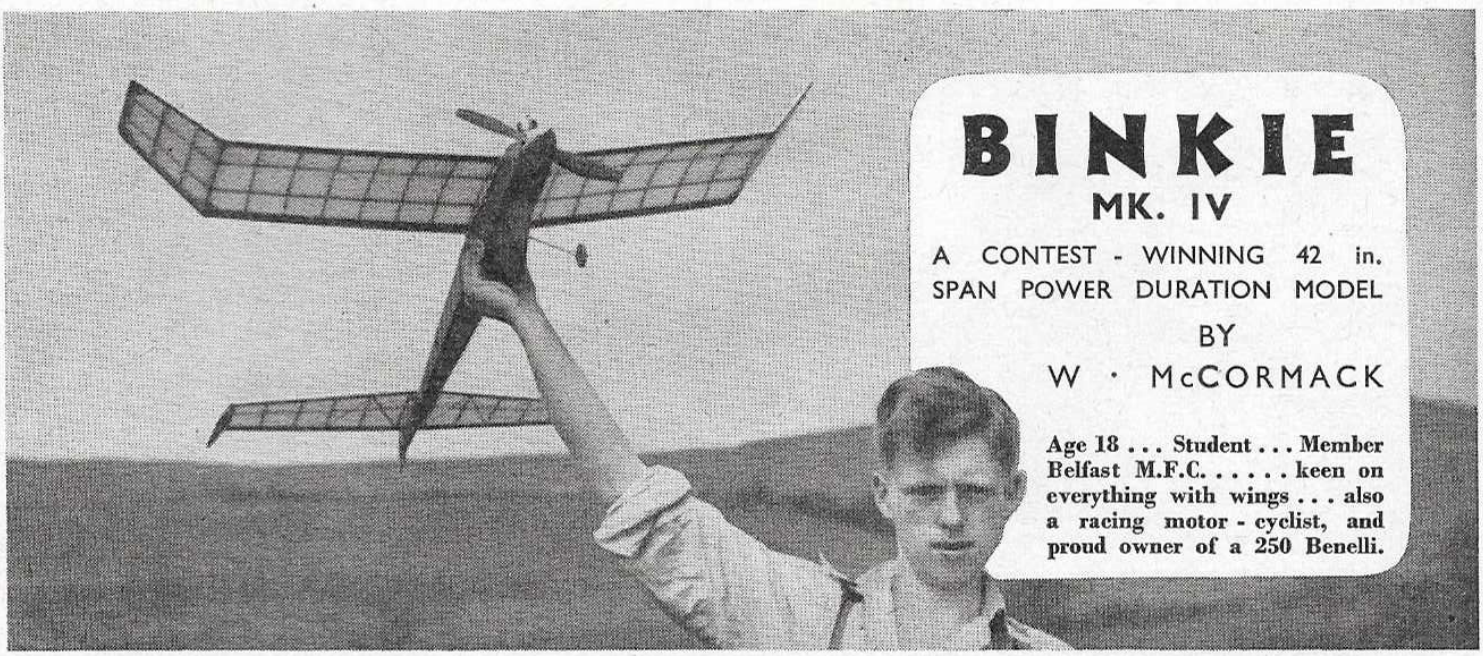


BINKIE
MK. IV

A CONTEST - WINNING 42 in. SPAN POWER DURATION MODEL

BY

W · McCORMACK

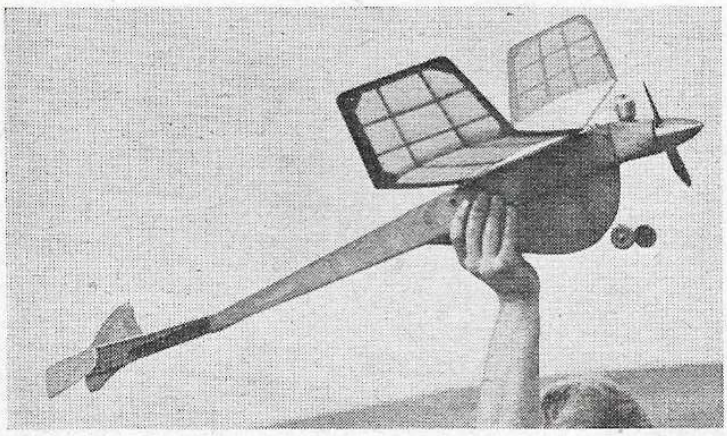
Age 18 . . . Student . . . Member Belfast M.F.C. . . . . keen on everything with wings . . . also a racing motor - cyclist, and proud owner of a 250 Benelli.

BINKIE Mk. I was built in 1948 for the Belfast M.F.C.'s first power ratio competition and with a Mk. 1 Mills in front it finished 2nd, averaging 6·2 : 1. A larger Elfin powered version was built for the same comp. in 1949 and without any trimming flights whatsoever it won, averaging 7 : 1 in a half gale. "Gipsy" Drew, captain of the Irish Wakefield team, flew an identical model into 4th place in the International power ratio event at Cranfield. Binkie III, which was the same as Mk. IV except for the u/c and cowling and a few structural points, was flown at the B.M.F.C. annual Rally and finished first with 229 secs. on 17 secs. engine run.

Mk. IV was flown with the dope hardly dry and in a half gale on Sunday, June 4th, 1949, and with two o.o.s. flights clocked 15·76 : 1 to finish 4th in the M.A.C.I. Northern Area Rally.

Trimmed to the maximum in really good weather conditions Binkie was proved to be capable of 4½ mins., and on 18–20 sec. motor runs.

Construction : Cut out fuse sides and F's 2–5. Lay one side flat on plan and fix formers in positions shown. When dry fix other fuselage side and after chamfering off the insides at the tail end sandwich fin in position. Cement in ⅛ sq. spacers and tailplane support. Securely bind and cement u/c to F3 and slot in underbelly keel. Bolt engine to F2 and fit F1 to mainbearing housing. Form cowl with planks of 3/32 × ¼ balsa. Fit dowels etc., and cover with rag tissue or Modelspan.



Assemble both wing spars to conform with dihedral as shown and assemble wings in usual manner, one panel at a time. The ¾ × 5/32 T.E. should be cut from 3/16 in. sheet and sanded down. The completed wing is covered in Modelspan.

Pin down L.E. and T.E. of tailplane and fit lower c/strips in a similar manner to the spacers on a fuselage side. Cement main spar on top and add upper capstrips, holding them in place with pins until dry.

Trimming : Adjust C.G. position with plasticine mixed with lead shot until model balances ½ in. behind main spar.

Adjust prop to stop horizontal on compression and hand launch into wind. The model should have a slow hovering glide with a strong tendency to soar.

Offset trim tab to give fairly wide left hand circle on the glide. Try first power flights with the engine running as slowly as possible and gradually increase power on successive flights. Any looping tendencies should be corrected by using more downthrust. Do NOT move C.G. back or add positive to tailplane, otherwise all the advantages of this layout will be lost. 10° is the *absolute minimum* amount of downthrust with an Elfin and with hot fuels it is as well to increase this to some 15°.

If the model spins under power, check for warps as the spiral stability is exceptionally good when accurately built.

Once flying on full power, tighten up the left hand circle until the model corkscrews vertically upwards; it will then roll off the top when the engine cuts instead of going into a series of stalls.

One of the most successful low C.L.A designs of recent years, Binkie presents a functional appearance with its 'drop-snoot' and keel under-belly. The performance should convert many a Pylon fan to shoulder wings and low slung area.