● **Winner of the Stourbridge, Walsall, and Dudley races, plus the Festival Championships at Wembley Stadium, that fast class B team racer . . .**

Scramble

BY

JOHNNY JONES

A pioneer controliner . . . . member Birmingham M.A.C. . . . age 31 . . . draughtsman by trade . . . has been aeromodelling for 17 years . . . principal interest is control-line.

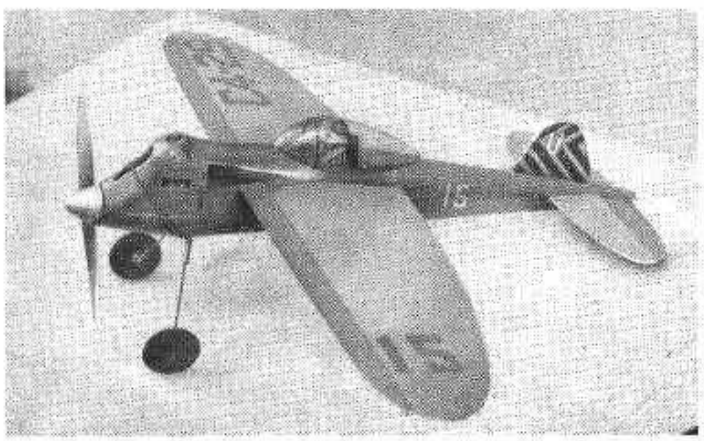
SCRAMBLE is a development from a season of team race comps and was designed to give the best possible performance under the conditions encountered in this type of flying.

It features lightweight, simple, yet rugged construction. The original was spinner landed four times during the first day, the only damage being broken props. The wing section is the fourth tried and was found to be the strongest, offering less drag than any of the others, without sacrificing the glide, which is over half a lap.

The first model won the Stourbridge C/L Rally, doing the five mile race in six minutes, also coming first in the speed at 76 m.p.h. The engine was a Hurricane 24 Canadian motor. The Wembley winner is the fastest and this model is " hot ". Since Wembley it was placed first at Dudley on August Saturday and second in the speed event at 81 m.p.h. At Walsall C/L Rally it came first again and second in the speed event at 80 m.p.h. This is using straight fuels 3 : 1 Methanol and Castor Oil. " Hot " fuels have been tried with speeds increased to 86 m.p.h. but the laps were down to 50 with the 26 c.c. tank (they have been 72 laps at 80 m.p.h.). The reasons for this performance are, the lightness of the model (16 ozs.), and the slim lines which help reduce drag. The model can easily be modified to take the new Amco BB 3·5 and should be even faster than with the Hurricane 24 now used.

Construction :

Fuselage. Cut out the crutch and cement engine bearers, as shown, using Britfix. Next, cement the vertical top and bottom sheets in place after placing the tank in position between the crutch ; cement the ply bulkhead " B " after first binding the undercart wire to it, and cement well. Now place the formers " C ", " D " and " E " in position and allow to dry. Cut out stabilizer and elevator from *hard* 3/32 in. sheet, now cement stabiliser into slot at rear end of Fuse. Cut fin from 1/32 in. ply and cement in place on top of stabiliser. Bend 16 s.w.g. wire and insert into *one half elevator* and solder control horn in place. Place through fuselage and fix other half of elevator. Cement linen hinges as shown.



Wings. The ribs are cut from 1/16 in. sheet as a *curved plate section*, one top, and one bottom, to give symmetrical section. Cement to mainspar leading and trailing edge, top and bottom. Hardwood bellcrank support is now cemented to mainspar, insert bellcrank and lead-out wires, then cover whole wing with 1/32 in. medium sheet. Cut out at centre of sheet to allow movement of bellcrank. Add tip blocks and sand to airfoil section. Slide wing into fuselage and cement well in place ; couple up control rod to control horn from bellcrank, making sure that this works smoothly. Insert balsa block between L.E. and keel for rigid support. The fuse can now be covered in with 1/16 in. sheet as shape drawn on plan. Fit motor in, and balance model, drill bearers to take motor bolts. Cement in lower nose block and build up engine cowl, sanding to shape. Cover entire model with lightweight rag tissue. Two coats of clear dope are then put on, sanding between each one. Paint inside of cockpit and add pilot. Cement canopy in place and cover with tape until model has been coloured. One coat of primer and two of colour were used on original, sanding between each.

The final item is fitting the wheels and fairing of u/c wire. Now—Scramble ! !

The plan on the opposite page is a 1/4 scale reproduction of the full size plans which are available price 4/– post free from the Aeromodeller Plans Service.

Designer Jones and Scramble in top photo, and other view, left show the slim lines of the design, which was based on the small dimensions of the 5 c.c. Hurricane. 3·5 motors fit easily.

SCRAMBLE

DESIGNED BY
J.W. JONES

4/-

THE AEROMODELLER PLANS SERVICE
AERODROME, STANBRIDGE, NR LEIGHTON BUZZARD, BEDS.

WOODS ARE BALSA UNLESS OTHERWISE STATED

R:
EL WAS ORIGINALLY POWERED WITH
URRICANE 2.4 & HAS BEEN OFFICIALLY
CKED AT 45 M.P.H. OVER 32 LAPS
TIME (HALF TIME) 32 M.P.H.

DATA

WING SPAN	27"
AREA	131 SQ INS
TAILPLANE SPAN	11"
AREA	2 1/2 SQ INS
ELEVATOR	1 3/4"
C/A LENGTH	22 1/2"
POWER	3.5 - 5 CC
WEIGHT	16 OZS

MATERIALS REQUIRED

2 SHEETS OF 1/16 x 3" x 36" BALSA MED	1 PIECE OF PLY 1/16 x 2" x 3 1/4"
3 " " 3/32 x 3" x 36" " HARD	1 " " " 1/16 x 1/2" x 1 1/2"
6 " " 1/32 x 3" x 36" " MED	1 " " " 1/32 x 4" x 3"
1 STRIP OF 1/4 x 3" x 36" " HARD	18" OF 14 S.W.G. PIANO WIRE
1 BALSA BLOCK 3" x 2 1/8" x 2 1/2"	24" " 16 " " "
1 " " 3" x 2 1/8" x 2 1/2"	36" " 24 " " "
2 " " 4" x 1/2" x 1/2"	2 HARDWOOD STRIPS 6" x 1/16" x 3/4"
1 DURAL BELLCRANK	2 " " 6" x 1/16" x 3/4"

2" OF 1/8" DIA DOWLING
2 - 2" DIA WHEELS
1 1/4" DIA SPINNER
SMALL SHEET OF TIN PLATE
1 SMALL COTTER PIN
COPPER TUBING FOR TANK & WING TIP
CELLULOID COCKPIT CANOPY
TAPE FOR CELLULOID HINGES