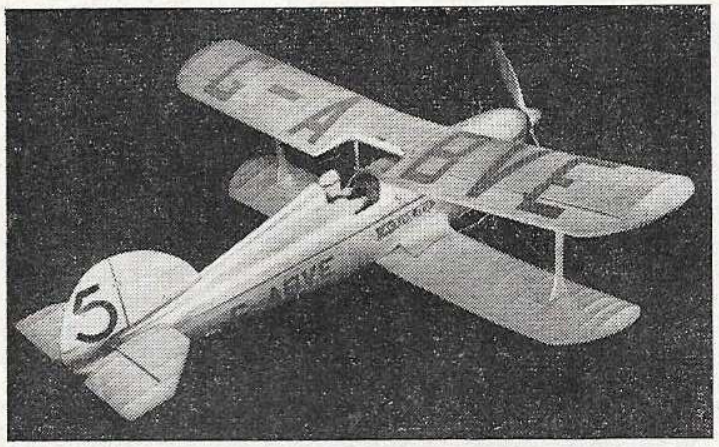
A 36-inch wingspan 1½" to 1' Super-Scale free flight model of a pre-war aerobatic racer for 1 c.c.

By Flt.Lt. E. H. NORMAN

ACTIVE-MK II
ARROW AIRCRAFT CORP'N LTD.

THIS DELIGHTFUL SILVER biplane which collected prizes for Flt.-Lt. Norman at the R.A.F. Championships and All Britain Rallies last season is one of the prettiest models we have ever seen. The full-size Arrow Active Mk. II was developed from an earlier version which has a solid centre pylon carrying the upper wing. Designed by A. C. Thornton who also designed the famous Blackburn Bluebird, it was flown in the Kings Cup for 1932 (unplaced) and in 1933 (5th) by Flying Officer H. H. Leach. The diminutive span (by British standards) of 24 ft. and generous power developed by a D.H. Gypsy III gave it a top speed of 145 m.p.h. and it is very pleasing to note that in spite of its age, it is currently being renovated at Croydon. Hopes are high that it will be seen at the 1958 Aerobatic Contests and Air Races.



The model has a fairly high wing loading and does therefore need a minimum of 1 c.c. power. Displaying inherent stability with offsets and surface angles as detailed on the plan, it is the perfect scale subject for the perfectionist. As will be seen in the photos here, the original model duplicates the full-size ability to fold its wings for storage and construction is virtually rib for rib, and lace for lace on the fabric-covered area of the fuselage.

Only deviation from scale is in the tail area which has been increased; again for the perfectionist we have provided precise scale tailplane details, so that those with the ability to trim out the difficulties incurred by the smaller tailplane can be satisfied with a perfect scale model. Fuselage construction is based on a horizontal crutch and the multiple scale-like stringers provide a high degree of strength.

First build the basic $\frac{3}{16}$ sq. crutch over the plan view. Ply wing supports F6a, F7c are fitted to F6 and F7 and the main u/c leg bound to the front of F6a. Now erect bottom portions of all formers over the basic crutch, fit the keel and stringers to retain formers in correct vertical position and maintain fuselage contours. Make the centre section wire frame and bind to the crutch after removing the latter from the building board, then fit the upper halves of all formers and complete with stringers and sheeting. Fit the front bulkhead and engine mounts, then complete the cowl, adding fore and aft u/c struts with formers on all legs. Now build up centre section for the upper wing and bind in place. All that remains are the lower stub wings, fairing blocks and incidental sheeting. Wing and tail assembly are more straightforward embodying scale structure with inter-spar $\frac{1}{8}$-in. square bracing and nose ribs.

The original model has a nose cowl made from glass fibre and despite the prangs during the initial trimming stages, finding out details for the plan opposite, it survived everything with hardly a scratch. Colour scheme is all silver with dark blue trimming and registration and the arrow trade mark printed above should be duplicated on either side of the fuselage.