

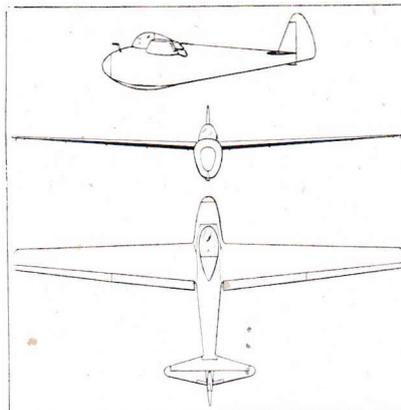
A New British Sailplane

A description of a prototype sailplane suitable for cross-country flying

Two enterprising young men, Mr. K. W. Radburn and Mr. T. E. Brown, trading under the name of Broburn Sailplanes, Limited, have designed, built and flown their machine, the Wanderlust, in 18 months. They employed no outside labour and possessed no power equipment or special tools. Both are men of experience, having been draughtsmen for some years in the experimental department of a well-known aircraft company. Their decision to build a sailplane was largely inspired by the urgent need in this country for soaring and gliding on an economical footing and within the reach of "the man in the street." It is their intention to market their product at the low figure of £360

the Wanderlust is the fact that it is the first sailplane in this country to have extended aerofoil flaps and ailerons. Furthermore, the effective braking area is considerably increased, due to the ailerons having an additional droop of 10 degrees when the flaps are fully extended. There are also two spoilers, one on each wing, for rapid reduction of altitude, and tail plane trimming is effected by tabs, one on each elevator.

The cockpit has a good field of vision and is designed to take a seat type parachute and is totally enclosed by a detachable Perspex bubble canopy. A neat instrument panel carries an altimeter, air speed indicator, variometer, turn and bank indicator and directional



release gear is manually operated by a ring at the bottom of the instrument panel.

The finish of this machine is unusual and much time has been spent on french polishing the entire surface. It is not a high gloss finish despite the number of applications, and can hardly be called an economical method of treatment, but it will be interesting to see how it stands up to the weather. Judging by the normal habits of a shellac based medium in varying temperatures, it would seem that the surface may "bloom" rather readily.

The Wanderlust is expected to be fully approved by the Air Registration Board and will fall in ARB Category C of the four categories laid down for motorless flight, and classified as an "Acrobatic or high performance sailplane." It is the intention of this company to produce about 50 assembled aircraft annually and production on these lines is hoped to begin towards the end of this year. G. H.

PROTOTYPE SAILPLANE WANDERLUST

Leading Particulars

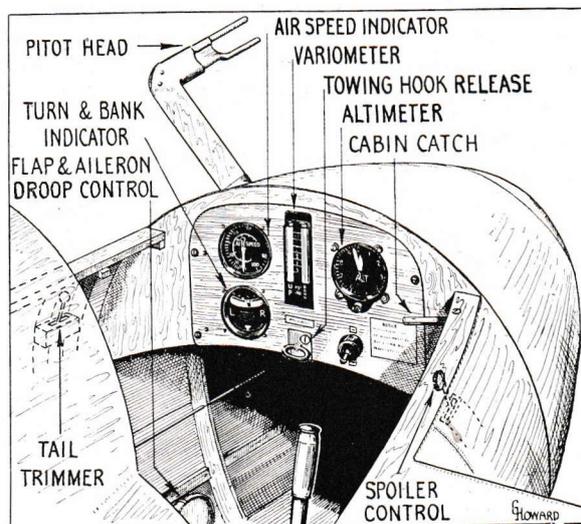
Span	10.3 metres (34 ft.).
Length	5.5 metres (18.25 ft.).
Height (tail down)	1.2 metres (4 ft.).
Total wing area	6.9 square metres (75 sq. ft.).
Flap area	1.2 square metres (13 sq. ft.).
Tail plane and elevator area	1.1 square metres (12 sq. ft.).
Fin and rudder area	0.67 square metres (7.75 sq. ft.).
Root chord	102 centimetres (3.33 ft.).
Tip chord	50 centimetres (1.5 ft.).
Aspect ratio	15.4.
Root wing section	N.A.C.A. 23021.
Tip wing section	N.A.C.A. 4312.
Dihedral	4°.
Weight empty	113 kilograms (250lb.).
All up weight	204 kilograms (450lb.).
Wing loading	24.4 kilograms per square metre (5lb./sq. ft.).
Maximum permissible speed	193 kilometres (120 miles) an hour.
Stalling speed (flaps neutral)	56.3 kilometres (32.4 miles) an hour.
Stalling speed (flaps down)	48 kilometres (28 miles) an hour.

and eventually to sell kits of fully manufactured parts for £200. They have the backing of the Board of Trade, who evidently see an "exportable" future in the scheme.

The Wanderlust is a single place machine designed for fast cross-country flying. Consequently, in order to get greater penetration power the wing loading is—for a sailplane—comparatively high, 24.4 kilograms per square metre (5 lb./sq. ft.). Construction is of plywood with the exception of a portion of the wing, which has fabric covering. Ribs and fuselage formers are all of 9.5 millimetre Gaboon ply, one millimetre ply is used for covering all control surfaces. Jointing throughout is by Bakelite glue. The full cantilever wing has been made in one piece, but all subsequent models it is hoped will have detachable halves for ease of transport or stowage.

The most interesting feature of

compass. The compass is likely to be a K.D.G. instrument, which at the time of these notes was under development. The towing hook



The cockpit arrangement of the Broburn sailplane. A Perspex moulding, as seen in the drawing above, covers the cockpit.