

PREVIEW of the Hampshire Aeroplane Club's Halcyon twin is given in this first photograph of the type. It is powered by two Walter Minors. A progress report appears on page 381



and with 20,000lb from 5,500 to about 9,400 n.m. But Lockheed have said nothing about such drag-reduction, and may not even adopt blown-flaps. Maximum payload will be 77,000lb, and cruising speed 440 to 500kt.

Georgia Division are due to fly the first machine—the military designation has yet to be divulged—by mid-1964, and to deliver in 1965. In *Flight* of June 10 last we commented that Lockheed claimed a 32-month lead-time on a commercial version, so that the latter should be available at about the same time as the civil variant of the Short Belfast. The P & W JT3D-11 is rated at 22,000lb wet, and is a new engine. Little of the basic C-130 can be retained in the new freighter, and the wings and tail are swept. Hold cross-section will be 10ft wide by 9ft high, comparing with 11ft 8in by 8ft 9in for the AW.660 and 16ft 1in by 13ft 9in for the SC.5 Belfast. The eventual number bought will certainly exceed 100, and the actual selling price per aircraft will be around \$5m.

“Little Farnborough” at Luton

STYLED “First International Aircraft Exhibition and Convention, London,” a new British aircraft show will take place at Luton Airport between August 29 and September 2. Principal exhibits will be light and executive aircraft and associated equipment. An open area of about 10 acres will contain display sites, each with its own tent or caravan. For the first four days admission will be confined to Government representatives, business executives and guests.

Ryan's Flex Wing

IT was announced on March 8 that the US Army Transportation Research Command have awarded the Aerospace Division of Ryan Aeronautical Co a contract for the flight testing of a powered test vehicle for the Flex Wing. Based on studies pioneered by Francis M. Rogallo of NASA's Langley Research Center, the Flex Wing consists of a triangular membrane attached to sharply swept leading edges and a central keel, each of which may be rigid or inflatable. The complete assembly can be folded into a small package, yet deployed faster than a parachute, when it assumes the form of a pair of conical surfaces side-by-side, flying point-first—like a paper dart.

Ryan are so encouraged by their research that the concept appears likely to have wide applications. Configurations have been tested, both in free flight and in tunnels, from sea level to 200,000ft and from low speeds up to M4.9. Immediate applications include the lifting of utility aircraft, manned or unmanned payload carriers, tower gliders and emergency wings for V/STOL vehicles. Indicative of the work being done is the free-flight testing of an unusually manoeuvrable radio-controlled 5ft model with a 1.5 h.p. engine, the fact that a Boeing-Vertol H-21 helicopter can tow an 18,000lb load supported by a Flex Wing without reduction in speed, and that Ryan have received a NASA study contract for Flex-Wing recovery of the first stage of the Saturn booster.

Money for Manpowered Flight

THE Manpowered Aircraft Group Committee of the Royal Aeronautical Society has announced two awards, up to a maximum of £1,500 each, to enable designs for manpowered aircraft to be developed. One goes to a group at the Department of Aeronautics and Astronautics of Southampton University (Miss A. J. Marsden, Mr A. Lassiere, and Mr D. J. M. Williams), and the second to the Hatfield Manpowered Aircraft Club, of which the chairman is Mr J. C. Wimpenny and the secretary Mr E. C. Clear Hill.

The committee has considered a number of projects, some of which are still in very early design-stages. In addition to the two above-mentioned schemes, the designs of four other groups who have applied for assistance are currently under discussion. These applicants are: a group at Aviation Traders Ltd, Southend (Messrs B. C. Basu, A. P. Drescher, M. H. Jung, B. A. Kerry and M. D. Prentice); Mr P. M. Savage of Imperial College; Mr I. D. Lawrie and Mr F. Bridges of the Vickers-Armstrongs Apprentices Association, Weybridge; and Mr C. Hodgess-Roper, of South Woodford.

Contributions from individuals and firms have increased the Manpowered Aircraft Group's fund for assisting such designs to almost £5,000. The committee to the group has collected information about wind tunnels which might be made available for tests, and other offers of help have been received.

BOAC Avons' 2,600hr Overhaul Life

ARB approval has now been received authorizing a 2,600hr overhaul life for the Rolls-Royce Avon RA.29 Mk 524B engines powering the BOAC Comet fleet. Each engine will thus fly over a million miles in service between overhauls. Coupled with this record achievement is the fact that the total maintenance work, including scheduled and unscheduled engine removals and re-installation, is under four man-minutes per engine hour.

This latest increase in overhaul life, from 2,300 to 2,600hr, continues the rapid build-up maintained by the Avon RA.29 since it entered service in October 1958. From this high introductory life of 1,000hr, it has progressed in 200hr and 300hr steps to its present figure, and selected engines are already proceeding to 2,900hr. These are true overhaul-life rates and do not involve any scheduled part-life inspections or components changes. BOAC Avons are increasing their total running time, currently standing at more than 439,000hr, at a rate of some 5,000hr a week. Total running time of all Avons, civil and military, is well over 3½ million hr.

IN BRIEF

The East German aircraft industry is to cease all work on aircraft and will convert to general engineering.

The Folland Germ ground-effect vehicle has been demonstrated to Lt-Gen Sir Michael West, GOC Northern Command.

An agreement between Breguet and Lockheed Aircraft Service provides for co-operation in France for maintenance work involving military equipment for NATO and the USAF.

Britain's January aviation exports figures, £12.85m, was £1m more than the monthly average achieved last year. Of this total, aero-engine sales came to a record £7.5m.

It was reported from Moscow last week that a geologist flying in an Mi-4 helicopter opened the door to throw out a cigarette end—and went with it. He fell 1,050ft and landed, unhurt, in a deep snowdrift.

At the request of Soc Turboméca, SFERMA have installed an Astazou turboprop in a Do-27. The converted aircraft flew on March 2, from Bordeaux-Mérignac, in the hands of Henri Alligier.

Stanley Aviation's escape capsule for the Convair B-58 will be tested in a live ejection “some time this summer,” from a B-58 flying at over 850 m.p.h. over Edwards AFB. This fastest-ever controlled ejection will be preceded by tests with dummies.

The Worshipful Company of Carmen, one of London's ancient City livery companies, has awarded its 1960 Viva Shield—for the year's most outstanding transport improvement—to Mr Christopher Cockerell, inventor of the Hovercraft.

Due to be read at the Royal Aeronautical Society, London, tonight is the fourteenth Louis Blériot lecture, *Problems of Short Take-off and Landing*. The paper is being given by Gen Ziegler, general manager of SA Louis Breguet.

Lockheed's Georgia Division announced on March 2 that the tooling for the North American B-70 Valkyrie upper intermediate fuselage is rapidly moving into the hardware stage, and is on schedule to permit the first flight of the first aircraft to take place late in 1962. This suggests that the B-70's recent year in the doldrums has not affected the first-flight date.

Mr R. S. Easby, DFC, AFRAE, who has been sales manager (fixed-wing aircraft) of Bristol Aircraft Ltd since November 1958, will on May 1 join Sino-British (Hong Kong) Ltd as director in charge of their Tokyo branch and assistant director to the chairman, Mr John B. Macmillan. Sino-British are engineers, exporters and importers, and hold the Far East agency for a number of major British aviation concerns.

A special exhibition of metallic corrosion and preventive methods is to be held at the Science Museum, South Kensington, from noon on Monday, March 27 to 6 p.m. on Saturday, April 22. Assembled by the Corrosion Group of the Society of Chemical Industry, it will mark the First International Congress on Metallic Corrosion, to be held in London from April 10 to 14 under the presidency of Sir Harry Melville.

All three Services, the Royal Navy, Army and RAF, are participating in this year's Paris Show (May 26 to June 4). RN Scimitars are putting on an aerobatic display; there is to be a Thunderbird battery from 36 (GW) Regt, RA, and a team to man a Blue Water missile; and part of the RAF participation will be air drill by Lightnings of No 74 Sqn and a Jet Provost aerobatic team of the Central Flying School.