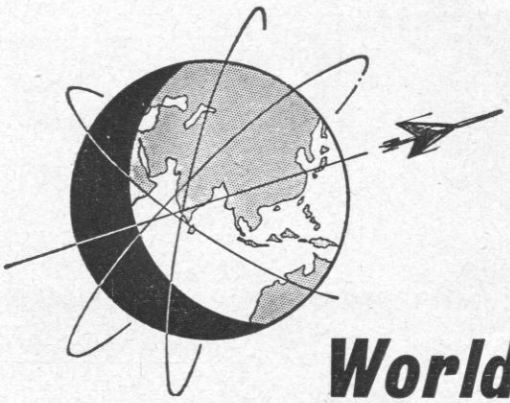

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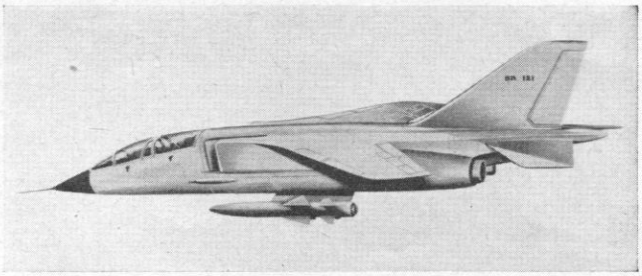


An impression of the Breguet 121 *strike/trainer which is to be built under a joint Anglo-French agreement (BAC participating) for the French A.F. and R.A.F.; further details, June issue, page* 188

"Autoflare" approved

IT WAS ANNOUNCED on 3rd June that the Air Registration Board has decided to approve "autoflare"—automatic touch-down—for use in Trident aircraft in passenger service with B.E.A. This follows more than six hundred autoflare landings by Tridents.

Autoflare, developed by Smiths Aviation Division and Hawker Siddeley, is an intermediate stage in the "blind landing" programme. It achieves automatically the most difficult part of the final approach and landing—the correct combination of speed and descent path, followed by the automatic throttling-back of the engines and the final flare-out and touch-down on the runway. During this sequence the pilot is concerned only with the comparatively easy task of keeping the aircraft lined-up with the runway.

First stage in the introduction of automatic landing was official approval, in February 1964, of the coupled approach and automatic throttle facility. This was followed, in November 1964, by a reduction in the B.E.A. weather minima for the Trident. Landings made with autoflare are consistently accurate. Although autoflare will not be used for landings in very low visibility (because the pilot must keep lined-up with the runway), it will, by eliminating undershoot and overshoot errors, greatly assist the pilot in fine weather as well as in marginal conditions.

The use of autoflare in regular services, in addition to reducing the pilot's work load, will provide operational experience in preparation for the introduction of the "blind" autoland system in three or four years' time.

Autoland, working on the triplex (automatic fault-survival) principle—in which three separate autopilots and their associated circuits work in parallel—will provide a much higher degree of operational regularity, particularly in marginal weather conditions. Its introduction in the Trident will enable landings to be made almost irrespective of runway visibility.

New Herald versions

Handley Page have announced two new versions of the Herald: the Series 600 and 700. For both these aircraft, equipped with more powerful Dart 532/9 engines, the maximum take-off weight is increased by 2,000 lb. to 45,000 lb., the landing weight by 3,500 lb. to 43,000 lb., and the zero-fuel weight by 3,500 lb. to 40,500 lb. Fuel capacity of the outer integral-wing tanks is increased by 280 gal. to give a total capacity of 1,360 Imp. gal.

A new 2-deg. take-off flap setting reduces take-off length at maximum weight, and adaptive braking is fitted to minimise landing distance. With this system, full braking can be selected before landing so that maximum retardation is provided on touch-down—yet there is no chance of the wheels locking at any time. The forward crew-door has been moved from the port to the starboard side.

The Herald 700 can carry fifty-two passengers plus baggage over a stage length of 1,070 nautical miles, with full reserves—an improvement of 20 per cent in range compared with the Series 200 Herald. A high-density version of the Series 700 can seat up to sixty passengers. For the Series 600 Herald the fuselage has been stretched by 60 in. and the interior arranged to take up to sixty-eight passengers.

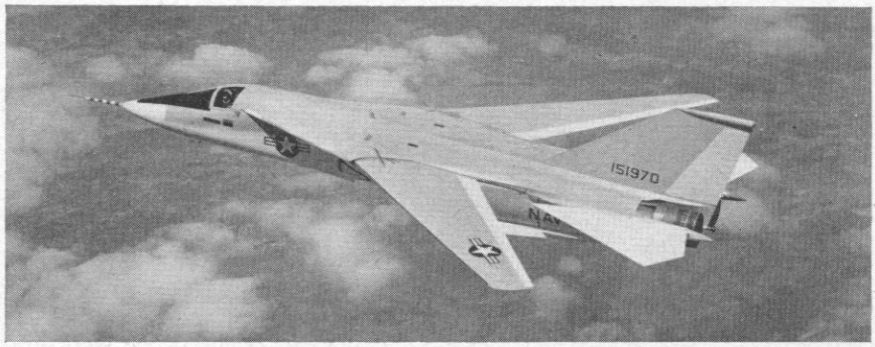
Latest order for the Herald is for two fifty-seat machines for the Republic of China operator, Far Eastern Air Transport. Herald sales now total fifty-four, for fifteen operators.

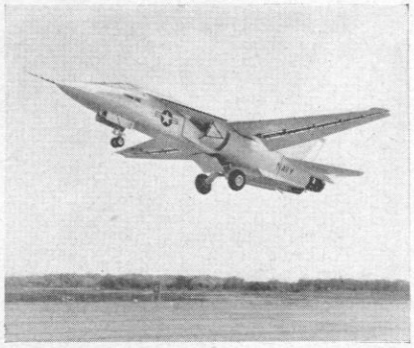
Twin Otter flies

Flight trials of the D.H. Canada Twin Otter started—a month ahead of schedule—at Downsview with some short hops up to 100 ft. on the evening of 19th May, followed by the first full flight on the 20th. Using about 20 deg. of flap the Twin Otter, with a load of test equipment and tanks three-quarters full, left the ground in three times its own length.

The Twin Otter is a jointly-funded enterprise of de Havilland Canada with the Canadian Department of Defence Production. It has been produced to meet a

LEFT: *The first batch of Northrop F-5s has been delivered to the Republic of Korea A.F.; two-seat F-5B in foreground.*
RIGHT: *The Canadair CL-84 Dynavert prototype made its first hovering flight on 7th May*





Two views of the first General Dynamics/Grumman F-111B (U.S. Navy version) during its maiden flight on 18th May. The F-111B is 6 ft. shorter than the U.S.A.F.'s F-111A but has longer wings (70 ft. span extended instead of 63 ft.)

world-wide requirement for a medium-sized turbine-powered STOL utility transport. Powered by two 579-e.s.h.p. Pratt & Whitney PT6A-20 free-turbine engines, it will initially be certified at a maximum take-off weight of 10,500 lb. and can seat up to fifteen passengers.

Italian tourer

S.I.A.I.-Marchetti have completed a new four-seat all-metal tourer/light executive aircraft. Designated S.205, it is offered with engines of 180 to 300 h.p. and with fixed or retractable tricycle undercarriage. Wide use is made of honeycomb construction in the wing, which is of laminar section. Dimensions are 34 ft. 10¼ in. span, 26 ft. 2¾ in. length and 9 ft. 10 in. height. The S.205/18CR version with 180-h.p. engine and retractable undercarriage has a top speed of 164 m.p.h., cruises at 134 m.p.h. on 50 per cent power, and has a range of 845 miles. Weight empty is 1,498 lb. and loaded 2,645 lb.

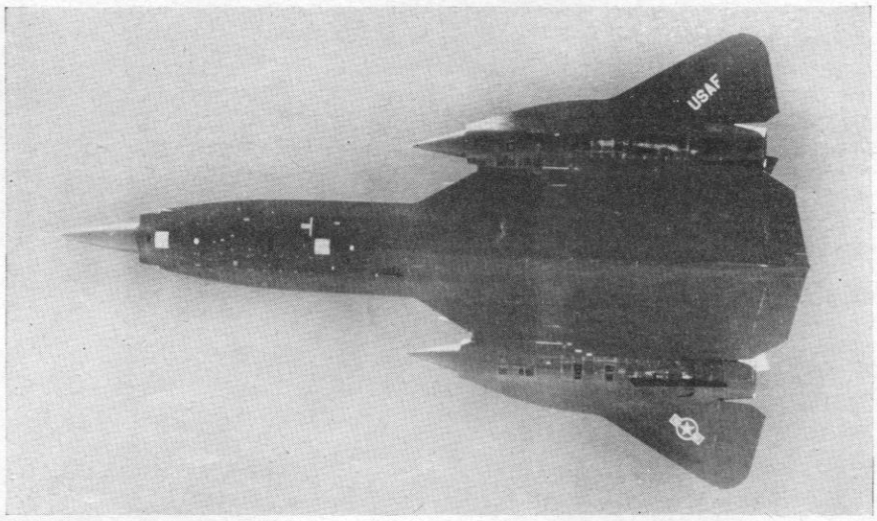
Lockheed YF-12A's records

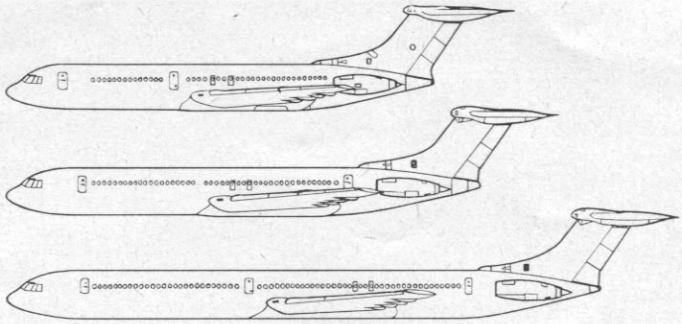
The Lockheed YF-12A, flying from Edwards A.F.B., and piloted by Col. Robert L. Stephens, U.S.A.F., recently broke four world records in one day (6th May). Details are as follows, with figures

The D.H. Canada Twin Otter completed its first full flight on 20th May

ABOVE: *A new Italian four-seater, the S.I.A.I.-Marchetti S.205*

BELOW: *Col. Robert L. Stephens and Lt.-Col. Daniel Andre in the Lockheed YF-12A in which they broke four world records in one day—see news item*





LEFT: *The first of two Nord 262s (still in French marks) for Japan Domestic Airlines.* ABOVE: *Reproduced here by courtesy of "Aircraft Engineering" is that journal's interpretation of a possible Super VC10 development (bottom) seating over two hundred passengers in a 37-ft. longer fuselage—compared with a Super VC10 (centre) and Standard VC10 (top)*

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for the previous records, which were held by Russians, in brackets:

Straightline 15- to 25-kilometre speed record 2,062 m.p.h. (1,665.89 m.p.h.).

500-kilometre closed course 1,642 m.p.h. (1,452 m.p.h.).

1,000-kilometre closed course 1,688 m.p.h. (1,441.217 m.p.h.).

Sustained altitude in horizontal flight 80,000 ft. (74,376 ft.).

Douglas DC-8 orders

Trans Caribbean Airways have ordered a Model 61 Douglas DC-8F combined cargo-passenger airliner for delivery in February 1967. The Model 61 has a stretched fuselage (see June issue, page 190). A recent order from K.L.M. Royal Dutch Airlines for one DC-8F Jet Trader (their seventeenth DC-8) brings sales of all variants to 273.

Belfast "air bus"

The Minister of Aviation, Mr. Roy Jenkins, was recently shown a mock-up of the high-density two-deck passenger version of the Belfast at the Short Bros. and Harland factory at Queen's Island. A direct development of the Belfast freighter now in production for the Royal Air Force, the civil "air bus" can carry 284 passengers in four separate cabins, two on the upper deck and two on the lower; passengers board the aircraft in four streams simultaneously through large doors.

Shorts' believe that an aircraft of this size, carrying nearly 300 passengers, offers the best solution to those airlines in various parts of the world where the present high rate of increase in passenger traffic points to the use of "air bus" operations in the very near future. A first estimate of direct operating costs indicates that a figure 20 per cent below the best existing turboprop aircraft costs could be expected. This version of the Belfast could be supplied on a very short delivery.

HS.748 for Channel Airways

Channel Airways, one of Britain's largest independent airlines, have ordered two Hawker Siddeley 748s. Each will have a high-density 58/62-seat layout and will be delivered before the end of this year. Backbone of the Channel fleet at present is nine Viscounts but these are restricted from operating at three of Channel Airways' bases in Southern England—Portsmouth, Rochester and Ipswich, all of which have short grass runways and have to be served by DC-3s. The HS.748 has been chosen as the most suitable replacement for the DC-3s.

HS.125 production increased

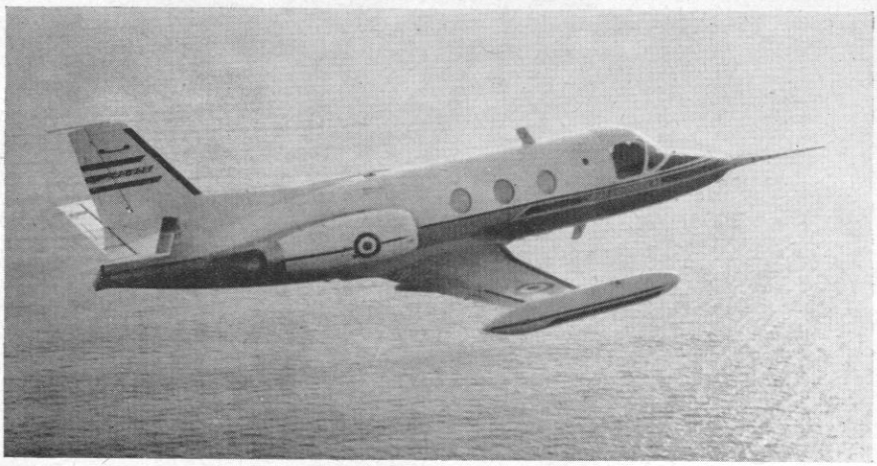
The number of Hawker Siddeley 125 business jets in production is again to be increased to keep pace with demand. Construction of a further fifty at Chester has been authorised, bringing the total laid down to 160. This move follows a detailed survey of market prospects overseas, particularly in North America.

Over twenty HS.125s have already been delivered, to eight countries, and of the sixty-four sales announced, forty-two aircraft, valued at more than £10 million, are for export.

Phantom contract for Hawker Siddeley

Hawker Siddeley Aviation have been selected as the aircraft weapons system sister-design company for all the U.S. Phantom aircraft being purchased for the Royal Navy and the R.A.F. H.S.A. will also be responsible for normal services associated with in-service support and with changes necessary to keep the aircraft operationally up-to-date during its service life.

The prototype Piaggio-Douglas PD 808 is expected to complete its flight trials during the summer, and a second PD 808 will fly this autumn



F-111 orders

A total of 454 General Dynamics F-111s are now on order for the U.S. Forces—twenty-three development aircraft and 431 production machines. The development order includes eighteen F-111As for the U.S. Air Force and five F-111Bs for the Navy. The initial production order includes twenty-four for the Navy and 407 for the Air Force.

Variable-geometry projects

Some details of the Mirage IIIG variable-geometry project have been released by Dassault at the Paris Air Show. Described as a "half-size TFX", it is intended for speeds of over Mach 2.2 at altitude, and would be supersonic at low level. Proposed powerplant is the S.N.E.C.M.A. TF-306 by-pass engine.

The IIIG is said to fit the operational requirements of European air forces.

Britain's contender in this field is the BAC P.45, which is believed to be about two-thirds the weight of the TFX (F-111) and is to have Bristol Siddeley engines. Mr. Denis Healey, Britain's Defence Minister, recently announced that Britain and France are to co-operate on a design study for a variable-geometry aircraft which, he said, might eventually replace the Lightning, Buccaneer and Phantom.

Dart-powered Convair flies

The prototype Convair 600, a converted 240D fitted with Rolls-Royce Dart R.Da.10 propjets, was rolled out by General Dynamics at San Diego, California, on 12th May and made its first flight on 20th May. Certification is planned to be completed in September and deliveries to airlines will start in October. The second Convair 600, a Dart-powered 340/440D, is scheduled to fly in August.

A total of fifty-one Dart-powered Convair 600s has been ordered by four American operators—Central Airlines (10), Trans-Texas Airways (25), Hawaiian Airlines (7) and Caribbean Atlantic Airlines (9).

S.A.A.F. news

The South African Air Force has taken delivery of a Cessna 320C Skynight which is being evaluated for a coastal recce. role. The S.A.A.F. is also looking for a Shackleton replacement or supplement; the Breguet Atlantic is the most likely choice.

Turbo-Porter Demonstration

THE LATEST VERSION OF the Pilatus Turbo-Porter, powered by a 640-h.p. Turbomeca Astazou X, is to be demonstrated at Leavesden on 12th to 16th July by the U.K. agents Air-Porter Ltd., 2 Basil Street, London, S.W.3 (Tel.: KNIghtsbridge 4438), in co-operation with Bristol Siddeley.

N94294, the prototype Dart-powered Convair 600, flew on 20th May

NEWS IN BRIEF

No. 25 Squadron, R.A.F., is now a surface-to-air missile unit, based at North Coates, Lincs., and equipped with air-portable Bloodhound Mk.2s.

The Swiss Air Force is to form two light transport squadrons, No. 7 with Pilatus Turbo-Porters, and No. 15 with Sud Alouette III helicopters.

Kingdom of Libya Airlines (K.L.A.), a new company, have ordered two Sud Caravelle VIRs. Caravelle sales now total 194.

The Lockheed XH-51A rigid-rotor compound helicopter set up a new world speed record of 259 m.p.h. on 13th May.

No. 92 Squadron, R.A.F., equipped with Lightning F.2s at Leconfield, Yorks., is to receive its Standard on 3rd September.

Ansett-A.N.A. have taken up their option for a fourteenth Fokker Friendship, bringing world sales of the type to a total of 321.

The R.N.Z.A.F. has taken delivery of three Lockheed C-130H transports, which will equip No. 40 Squadron at Whenuapai near Auckland.

McDonnell RF-4C Phantoms are now being delivered to the U.S.A.F.'s 10th T.R.W. at Alconbury. Next U.K.-based unit to receive Phantoms (F-4Cs) will be the 81st T.F.W. at Bentwaters.

The first BAC One-Eleven for Aer Lingus, EI-ANE "St. Mel" (photo May issue, page 172) was delivered to Dublin on 14th May.

The U.S. Army now has some two hundred fixed-wing aircraft and three hundred helicopters operating in Vietnam.

The Morane-Saulnier firm, recently acquired from Potez by Sud-Aviation, will in future be known as G.E.M.S. (Gérance des Etablissements Morane-Saulnier).

A New Zealand firm, Air Parts (N.Z.) Ltd. at Rukuhia Airport, Hamilton, is to build the Fletcher FU-24 under licence.

The U.S.A.F. is sending a special unit of twelve Northrop F-5As to Vietnam to test the type's combat capabilities there.

Sabena have taken an option on two Concordes for delivery during "the first two years after the aircraft becomes operational".

New Zealand's Defence Ministry has announced that two Westland Wasps are to be purchased for the Navy.

U.S. ARMED FORCES DAY—TOP, LEFT: *At Bentwaters, a 20th TFW F-100F with Unit Citation marks on the fin.* TOP, RIGHT: *At Lakenheath, Hunter F.6 XF516 of 229 O.C.U. with 234 Sqn. markings on its nose.* BOTTOM: *Also at Lakenheath, Beverley C.1 XB287 with revised 47 Sqn. markings on its fins (black-and-grey crane's head on a blue-waves and white disc); and XS111, last production Gnat T.1, in C.F.S. "Red Arrows" colours (Photos: R. Levy)*