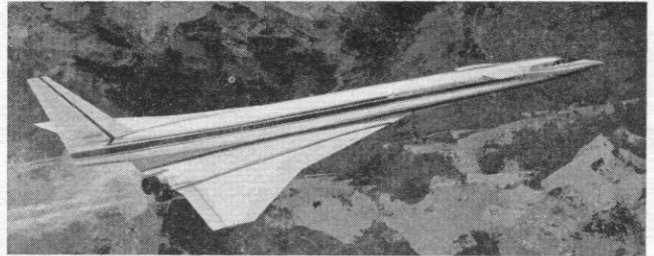


World Air News



An impression of the proposed North American NAC-60 supersonic (Mach 2.65) transport; note the canard foreplane behind the cockpit. For further details, see March issue, p. 68

U.K. defence plans

DURING THIS YEAR'S debate on defence, in the House of Commons in February, the following points emerged. The R.A.F. is to have the Hawker Siddeley P.1154 V/STOL strike-fighter to replace the Hunter, and the Hawker Siddeley 681 STOL tactical transport to replace the Beverley and Hastings. The Royal Navy is to have a Spey-engined version of the McDonnell F-4 Phantom II all-weather fighter to replace its Sea Vixens; and the Army is to have 150 light helicopters, type still to be decided but of American design.

Since a special version of the P.1154 for the Royal Navy does not seem to be envisaged, the P.1154 for the R.A.F. will, according to the Defence Minister, Mr. Peter Thorneycroft, be as simple and robust as possible; as well as its ground-attack function, it will also be capable of "some daylight interceptor role". Powered by a 35,000-lb. s.t. Bristol Siddeley BS.100 vectored-thrust engine, the Mach-2.5 P.1154 is, according to some reports, expected to fly in late 1966 and will be in R.A.F. service by 1970. It is believed that the initial R.A.F. requirement is for 150 P.1154s.

Main item of news about the H.S.681, which is described and illustrated on pp. 108-9 of this issue, is that it will be powered by four Rolls-Royce Medways.

The Phantom IIs for the Royal Navy—about fifty or sixty are anticipated—are to be powered by Rolls-Royce Speys which, it has been reported, will enable the aircraft to operate at reduced weight (less fuel) and thus be suitable for British carriers.

The three types of helicopter considered for the Army are the Agusta-Bell 47G-3

(for which Westland's hold manufacturing rights), the Hiller E4 (Short's licence), and the Hughes 300. Mr. Thorneycroft said that the order would be for 150 helicopters, fifty to be purchased from abroad and 100 to be built under licence in Britain.

Other points arising from the debate, and the previously published *Statement on Defence 1964* (H.M.S.O., price 6s. 6d.) are that Vulcan B.2s, Jet Provosts, Gnats and Wessex Mk. 2s will continue to be delivered to the R.A.F. in 1964-65; and that new deliveries will include Lightning F.3s, Beagle 206s and the communications version of the Hawker Siddeley 748. Shackleton MR.IIIIs are to be fitted with auxiliary jet engines; but there is no mention of a Shackleton replacement, although maritime versions of the VC10 and Trident have been studied and BAC are believed to have projected a completely new MR. aircraft.

The Royal Navy's three "Tiger" class cruisers are to be rebuilt with flight decks aft so that each ship will be able to carry four Wessex helicopters.

Lockheed A-11

Revealed by President Johnson in Washington on 29th February, the Lockheed A-11 has been under development since 1959 in a state of secrecy that rivals that of the best Soviet establishments. Officially stated to be a long-range interceptor—but more probably intended as a U-2 replacement—the A-11 is claimed to have been tested in sustained flight at a speed of more than 2,000 m.p.h. and at heights of over 70,000 ft.; its range is said to be "thousands of miles". Eleven or twelve A-11s are now flying from

Edwards A.F.B. and the type is "almost ready to be accepted formally by the U.S.A.F." The serial of the machine illustrated here, 60-6934, indicates that it was built in fiscal year 1960.

Little else has been released about the A-11, except that it is built largely of titanium and that it was designed by Clarence L. Johnson (photo in December 1963 issue, page 389), who was responsible for the U-2 and F-104 Starfighter. Apparently of modified ogival planform, the A-11 is about 96 ft. long and has a span of about 45 ft. Its two engines—Pratt & Whitney JT11D-20Bs, each developing some 34,000-lb. thrust with after-burning—are installed in long nacelles with 6-ft. diameter intakes and additional intakes at the rear, surmounted by all-moving fins. Ventral fins are fitted under the nacelles and there is a third ventral fin, under the rear fuselage, that hinges sideways to provide clearance for take-off and landing.

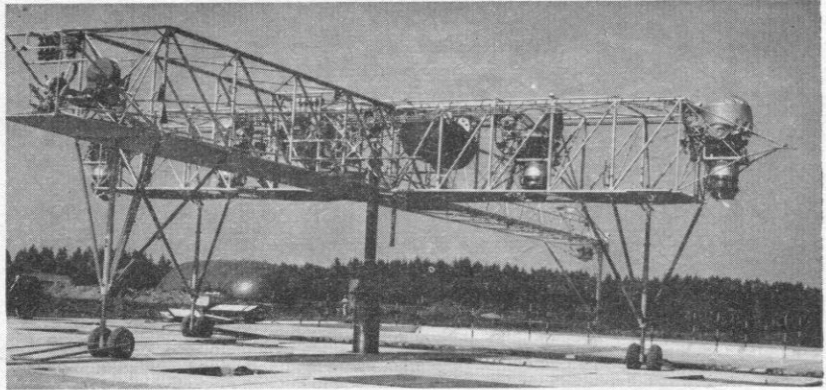
It has been said officially that the A-11 will assist in the development of the U.S.A.'s supersonic transport and while this is undoubtedly true, the primary function of the machine is still a mystery. The designation A-11 is believed to be a Lockheed one and not indicating "attack". However, the U-2 role seems the most likely.

Turbo-Skyvan backing

The Government has authorised Short Brothers and Harland Ltd. to proceed with further development and initial production of their Turbo-Skyvan. The cost is to be met from within a £10 million conditional grant already made to the company. It is believed that about £1½

First photos to be released of the 2,000-m.p.h. Lockheed A-11 (alias "Johnson Special"?), together with provisional drawing opposite. Picture below shows central ventral fin folded for ground clearance





Subject of a joint Anglo-German feasibility study is the Dornier Do 31 V/STOL transport. LEFT: Model of prototype with two Bristol Siddeley Pegasus vectored-thrust engines and six Rolls-Royce RB.162s for lift; production version will be larger and with ten lift engines. RIGHT: Control problems are being investigated with this hovering rig

million is needed for the Turbo-Skyvan programme. This means that Short's will now be in a position to offer firm delivery dates on the Turbo-Skyvan and will have a fully certificated aircraft available at the end of 1965. Production machines will be powered by two 632-s.h.p. Turboméca Astazou Xs.

S.S.T. orders

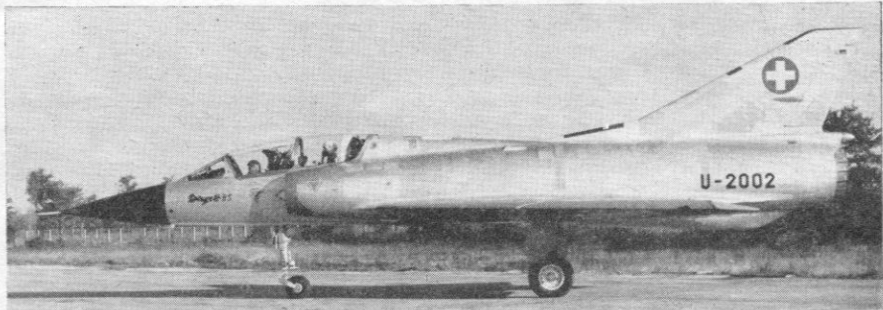
Trans World Airlines have ordered two more BAC/Sud Concorde, increasing their order from four to six. The total number of Concorde now on order is thirty-nine. B.O.A.C. and Air France, whose contract for eight Concorde each was announced last month, have now each reserved six delivery positions for the U.S. supersonic transport, which they regard as complementary to the Concorde.

German Transall

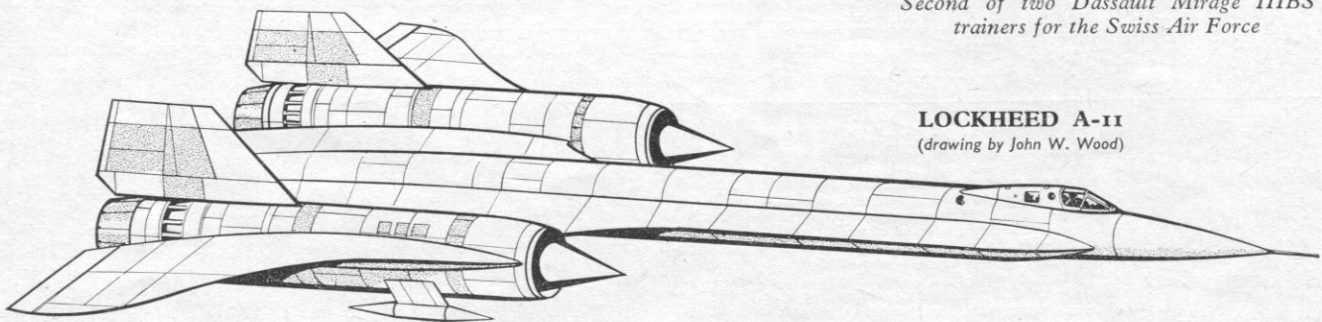
The first Transall C-160 (registered D-9509) built by Hamburger Flugzeugbau G.m.b.H. made its maiden flight on 19th February. This is the third flying prototype and associated in the programme are the Vereinigte Flugtechnische Werke (formerly "Weser") and Nord-Aviation of France. The first prototype flew on 25th



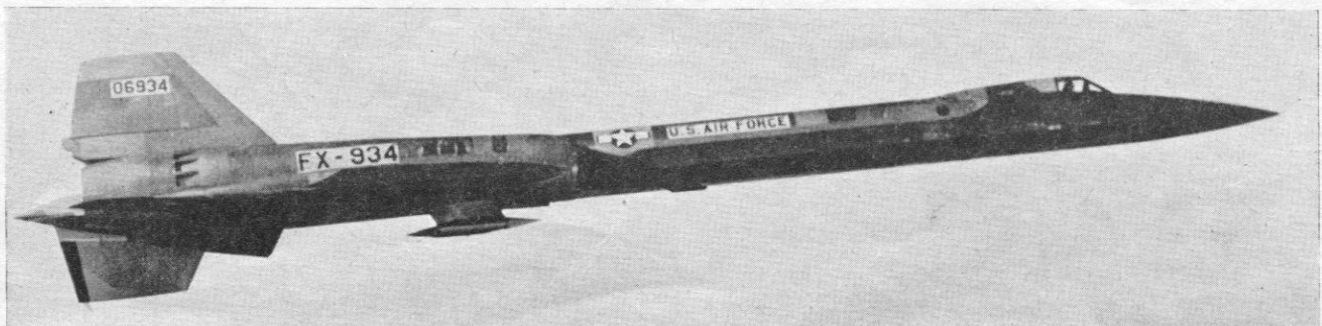
First flown 30/12/63, the prototype D.H. Canada Turbo-Beaver (578-s.h.p. Pratt & Whitney PT-6A) is the 1,525th Beaver built



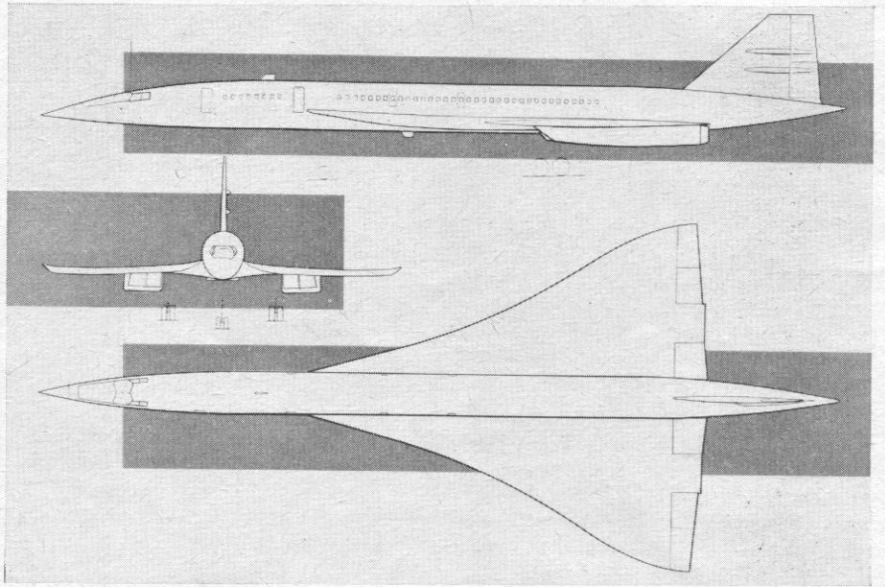
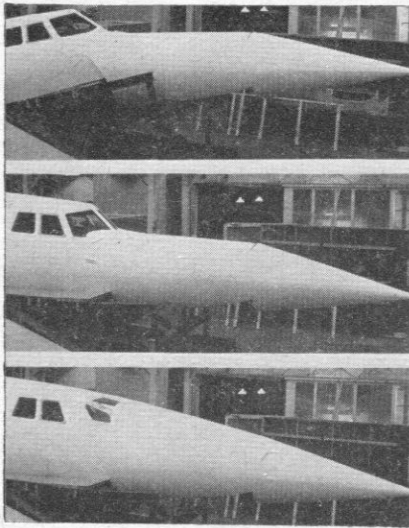
Second of two Dassault Mirage IIIBS trainers for the Swiss Air Force



LOCKHEED A-11
(drawing by John W. Wood)



World Air News . . .



These photos of the Concorde mock-up show (TOP TO BOTTOM): the cockpit vizor lowered and nose drooped for take-off and landing; vizor lowered and nose raised as in subsonic flight; and vizor and nose both raised for transonic and supersonic flight. The new drawing (ABOVE) shows a revised wing-root shape with upswept leading edge

February 1963 from the Nord field at Melun-Villaroche, while the second prototype made its first flight on 25th May 1963, from the "Weser" field at Bremen-Lemwerder.

Grant for young fliers

The Norfolk and Norwich Aero Club at Swanton Morley has been chosen to receive the first Air League grant to help train young people to fly. It is expected that the club's new youth section will be operating this summer. About twenty-five young people, aged between 16 and 21, will be taking part. The Air League hopes that this "pilot scheme" will encourage other flying clubs to organise their own youth sections.

Attack Crusader

Ling-Temco-Vought have won the U.S. Navy's light-attack aircraft (VAL) competition—for a Skyhawk replacement—with a much-modified version of their F-8E Crusader fighter. To be known as the A-7A, it will be powered by a non-after-burning version of the Pratt & Whitney

TF-30 engine now being developed for the General Dynamics F-111. Principal airframe changes will be the fitting of a larger wing (without variable incidence), a shorter nose for better pilot visibility, and redesigned fin and rudder. Combat radius will be about 600 miles and war-load "substantially greater" than the A-4E Skyhawk's 8,200 lb. L-T-V expect that total procurement for the A-7A will exceed the 1,300 Crusaders built.

British export council

An export council, representing manufacturers, the Ministry of Aviation and the Board of Trade, has been formed to promote sales abroad of the products of the British aircraft and space industry. Chairman of the council is Mr. J. J. Parkes, a past president of the S.B.A.C. and chairman of Alvis Ltd. It may be remembered that in May 1963 the Air League published a *Memorandum on French Aviation* which, among other things, recommended that the S.B.A.C. in conjunction with the Board of Trade should study the French organisation for

export with a view to setting up a similar body in Britain.

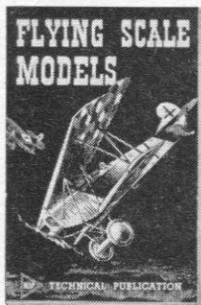
French trainer projects

Two more French firms, Breguet and Potez, are preparing designs for a new supersonic trainer. First to be announced (see March issue, p. 70) was the Dassault Cavalier, powered by two General Electric J-85s, and with an estimated speed of Mach 1.5. The aircraft are intended to be available in two versions, a two-seat trainer and a single-seat ground-attack machine, similar in concept to the Northrop T-38 Talon and F-5.

Pilatus sales

Recent Pilatus Porter deliveries have included the second to Aero-Sud of Algiers, the second to Aer-Alpi of Cortina (PC-6A), the fourth and fifth to Bird & Sons Inc. of Seattle (PC-6A), the second and third to C. Itoh & Co. of Japan, two PC-6As to Fairchild, and the third and

Ling-Temco-Vought are to build an attack version of the Crusader, the A-7A



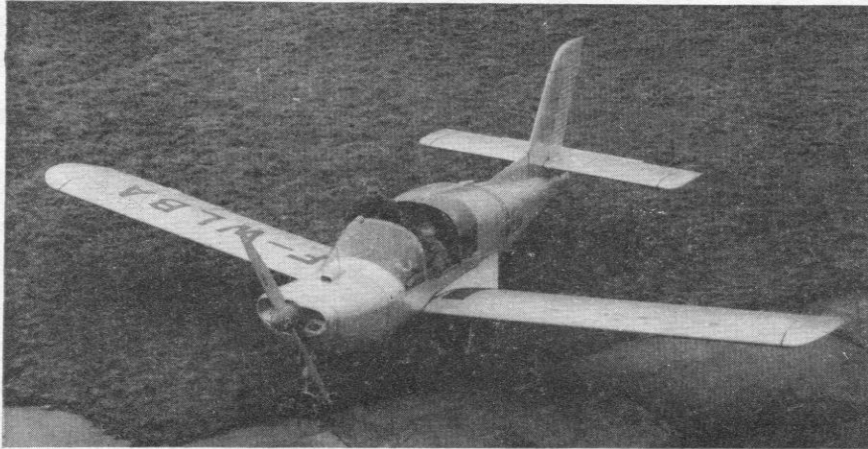
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Latest member of the Rallye family, the four-seat S.E.E.M.S.892 Commodore, powered by a 150-h.p. Lycoming, made its first flight on 13th February

fourth to Wien Alaska Airlines (PC-6As).

Six P-3 trainers (Nos. 331-6) were sold to the Brazilian Navy in March 1963. It is doubtful whether any of these machines saw service with the Swiss A.F., and at least three of them (Nos. 335-5) were cancelled from the Swiss civil register during 1963 (HB-HOC, 'HOD and 'HOE).

74 Squadron to Leuchars

No. 74 ("Tiger") Squadron, equipped with Lightning F.1s, moved from Coltishall, Norfolk, to Leuchars, Fife, on 28th February. This is the first time that the R.A.F. has had supersonic aircraft permanently based in Scotland. Already at Leuchars are the Javelin FAW.9s of No. 23 Squadron.

No. 226 O.C.U. is to move from Middleton St. George to Coltishall this month. An article on this unit, which is equipped with Lightning T.4s and F.1s, appeared in the January issue, page 13.

Northrops for Norway

As foreshadowed in our January issue, page 8, the Royal Norwegian Air Force is to receive Northrop F-5s to re-equip some of its fighter-bomber units. Instead of twenty, however, sixty-four F-5s are to be acquired, sufficient for three squadrons, and will be delivered during 1966-7.

L.S.A.B. FILM SHOW

NEW FILMS FROM the U.S.A. and Norway will be shown at the London Society of Air-Britain meeting (7 p.m.) in the lecture theatre of the Holborn Central Library, 38 Theobalds Road (nr. Gray's Inn Road intersection), W.C.1, on Wednesday, 8th April. The films will deal with the U.S.A.F.'s Strategic Air Command, the Titan, R.Nor.A.F. RF-84Fs and a light aircraft rally at Rygge, Norway. Visitors are welcome. Fuller details (s.a.e. please!) can be obtained from: Hon. Organiser, C. W. Cain, 18 Argyll Mansions, West Kensington, London, W.14.

APRIL 1964

NEWS IN BRIEF

The BAC TSR-2 prototype was taken by road on 4th March from Weybridge to Boscombe Down, where it will make its first flight.

West Germany has ordered thirty-two more Lockheed TF-104G Starfighter two-seat trainers. The Luftwaffe at present has eighty-four.

The Libyan A.F., which shares Wheelus A.F.B. (Tripoli) with the U.S.A.F., is to be expanded, new equipment including Lockheed T-33s.

Maurice Farman, the famous French aviation pioneer (English by birth), died in Paris on 25th February at the age of 86. **The North American XB-70** Valkyrie is now expected to be rolled out this month and should fly in June.

The S.E.E.M.S. 760C Paris III, six-seat development of the Paris II, made its first flight from Tarbes on 28th February.

United Air Lines have ordered six more Douglas DC-8s, bringing their total to forty-four. The number of DC-8s now sold is 223.

Swissair have leased a Caravelle from Air France. Now registered HB-ICR, it is Swissair's eighth Caravelle.

A Hawker Siddeley Trident completed ten fully automatic landings, on 3rd March, controlled by its Smith's SEP.5 autopilot. **Ansett Flying Boat Services**, Sydney, have acquired Sunderland NZ4108 from the R.N.Z.A.F. Converted to Sandringham standard, it will become VH-BRF.

First Republic F-105F two-seat Thunderchief for the U.S.A.F. in Europe arrived at Bitburg, Germany, home of the 36th T.F.W., on 24th February.

The National Gliding Championships for 1964 will be held at the Lasham Gliding Centre, near Alton, Hants, from Saturday 16th to Sunday, 24th May.

No. 233 Squadron, R.A.F., is to be disbanded. In recent years its Valettas, based at Aden, have been flying over the whole of Arabia, the Persian Gulf and East Africa.

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