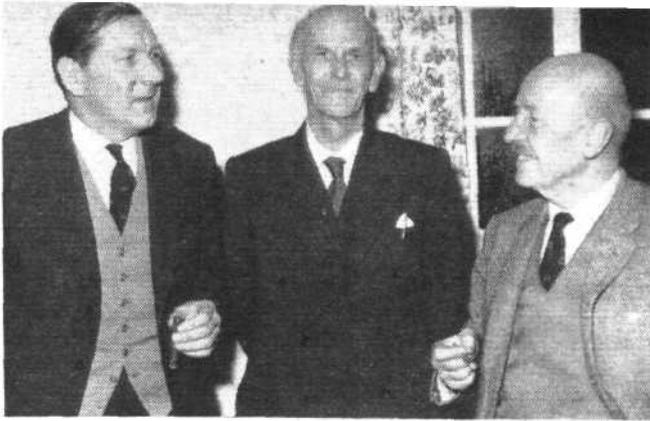


RETIRING after 38 years with Hawker Aircraft is Mr A. R. Turner, assistant experimental supervisor at Dunsfold Airfield. Here, at a farewell party, he is with chief test pilot Bill Bedford (left) and Gp Capt "George" Bulman (right), chief test pilot from 1933 to 1945



have a factory price of approximately £2,500 and a probable retail price of some £2,900.

The simple method of construction employed makes use of fuselage girders, either prefabricated in welded steel tube or stamped out of sheet metal, connected by substantially flat spacing and bracing structures. The company is currently negotiating with companies in this country, Canada and Switzerland, with the object of producing the two aircraft on a large scale.

Commuting by VTOL

"ALL the signs are that we are on the threshold of a new era of materials of enormously greater strength than we use today. But it will take time and money, for much research and development remains to be tackled, and a whole new technique learnt. With the lighter aircraft and engines which will then become available and with the development of air traffic control VTOL also becomes a certainty, firstly from open country, but as the noise problem is conquered, penetrating farther into cities. Once this is achieved it is hard to set any limit to the use to which these vehicles can be put."

This glimpse into the VTOL future was given by Air Chief Marshal Sir Ralph Cochrane to the Institute of Transport in London last Monday. Sir Ralph, formerly Vice-Chief of the Air Staff and now in charge of Rolls-Royce long-term research, was delivering the Brancker Memorial lecture; his subject was *Aviation—the Next Stage?*

Sperry/BEA Helicopter Flight Director

BEA and Sperry combined last week to demonstrate the latest version of a flight director which will allow helicopters to be accurately and easily flown on instruments. Roll and pitch commands for stabilization, and for speed-, heading- and height-holding and turns at constant rate at any speed, are presented on a standard Zero Reader cross-pointer. Collective-pitch commands for barometric height and glide-slope holding at low speeds are shown on a Smiths Para-Visual Director unit. The cross-pointer gives control-position demands and not attitude instructions, and the experimental Whirlwind proved easy to fly in turbulence on this instrument alone. A *Flight* representative with limited helicopter experience was able to fly the Whirlwind accurately at set speeds and make turns without difficulty.

The present test equipment is the result of several years of joint BEA, Sperry and MoA effort and will lead in due course to instruments incorporating roller-blind attitude presentation as well as control demands. BEA have been systematically preparing for airline helicopter operations. Their work, and that of other companies, will be the subject of a special-feature review of helicopter all-weather operation in *Flight* next week.

VHF Radio For Transport Command

AN initial order worth £500,000 has been placed with the Airborne Radio and Radar Division of Elliott Brothers (London) Ltd for 21-series VHF communication and navigation radio for Transport Command aircraft. Elliott have for some time been manufacturing this lightweight radio under licence from the Bendix Corporation and the units so far produced have been fitted in a wide variety of aircraft and used in Britain, South America, South Africa, Australia and the Far East. American-made 21-series radio has been ordered by many civil operators and several air forces.

The Elliott equipment now ordered will be fitted in Transport Command Argosies, Belfasts and Comet 4Cs, the first two of which will have automatic landing capability.

Salisbury Rendezvous

ANNUALLY, representatives of the aircraft firms which have outposts at Boscombe Down converge on Salisbury for a social rendezvous with Service and civilian officers of the Aeroplane and Armament Experimental Establishment. On Wednesday of last week the eighth such function was held, with an attendance of about a hundred representatives and guests—a total slightly below that expected, owing to the southward-moving influenza epidemic.

Air Cdre J. F. Roulston, the AOC, made a gallant first appearance at such a function after having barely recovered from "flu": in a brief speech he referred to the recent aircraft industry mergers,

CUSHION RIDING: Seen, right, on a recent test with its stabilizing fin in place, Britten-Norman's Cushioncraft is shortly to resume trials. Reinforced fan-track-supporting rollers have been fitted, and spoilers on either side of the duct control lateral motion when operated by pedals. The scene is Bembridge Airport, Isle of Wight

pointing out that they still made possible "excellent parties like this," and saying how appreciative he was of the function and how well it had been arranged. The air commodore (who took over as AOC last year from Air Cdre A. E. Clouston) was introduced by a member of the organizing committee, Mr. P. E. Pearce of Bristol Siddeley, who welcomed the representatives' guests. Despite the mergers, there were more firms than ever represented at this year's Salisbury function; 32 were listed, compared with 29 in 1960.

VLF as a Navigation Aid

A RECENT series of flights with the RAE Comet 2E to Malta and Africa have shown that the VLF ranging equipment first exhibited at the SBAC Show last year, and described in *Flight* for September 16, is giving positional accuracies of about one mile. Presumably both GBR Rugby on 16kc/s and Balboa in the Panama Canal zone are now being used, together with the Marconi frequency standard carried in the aircraft. Range measurement is done by keeping a continuous count of phase changes in the signal from the transmitter with the stable oscillator. Six special VLF transmitters could give world-wide coverage, but several problems remain to be solved, not least that of providing the airborne frequency standard in a form manageable for routine operations.

IN BRIEF

The first Republic F-105 Thunderchiefs to be based outside the USA are soon to join the 36th Tactical Wing at Bitburg, Germany.

The Short Sunderland which is being brought to this country for preservation is to be flown over from Brest to Pembroke Dock by a French Navy crew on March 24.

A consortium consisting of Hiller, Chance Vought and Ryan is to develop a VTOL assault transport for the USAF, Army and Navy. Detailed design will begin "in four or five months," and the aircraft should be ready to fly by the summer of 1963.

United Aircraft Corporation have announced that an option for licence-manufacture of the Sikorsky S-61D has been granted to Weser Flugzeugbau GmbH, Bremen, Germany. United state that "the twin-turbine, boat-hull S-61D is being offered to the Federal German Republic to fill its large helicopter transport requirement."

On the night of February 7 a Black Knight reached an apo_ge of 350 miles and landed 60 miles from its pad at Woomera. Announcing this, Mr A. S. Hulme, Australian Minister for Supply, said that the firing had been authorized to measure radio noise, ionospheric measurements and observations of re-entry phenomena.

A Defence Ministry spokesman said in Bonn last week that the RAF is to provide 80 instructors for the West German Air Force, for a two-and-a-half year tour of duty. Of the 100 RAF instructors detached to train West German pilots under the 1958 agreement, 65 were staying for a second 2½ year tour, beginning this year. The RAF were posting 35 of the original 100 to other duties; 15 others would take their places.

A "Swedish evening" is being held by the London Society of Air-Britain in the lecture-theatre of the new Holborn Central Library, 32-38 Theobalds Road, London WC1, on March 1. A talk is to be given by the Swedish Air Attaché, Col G. Tegner, and widescreen films of the Draken and Lansen will be shown. At the meeting, a draw for the Society's 100th enrolment will be made.

The increased MATS air-lift ability authorized by President Kennedy (February 10 issue, page 169) begins with 23 Lockheed C-130s and 30 Boeing C-135s. The latter will be similar to the 450 KC-135 tankers in service with SAC, apart from deletion of the fuel-transfer boom, and they will carry a 64,000lb payload more than 4,000 miles. First delivery is scheduled for June this year.

Barry Radley, well known as a Hunting Aircraft test pilot (he joined Hunting Percival in 1953 and took part in Jet Provost development flying), is leaving the company to join IATA. He took up his new appointment last Wednesday (February 15), becoming assistant to the technical director, Mr S. Krzyczkowski. In his Montreal post, Mr Radley will be responsible for the flight technical group. An ETPS graduate (No 8 Course, 1949), he is also an ARAeS.