

Thermal Thicket Lab

New \$1,400,000 laboratories have been opened at the Bradford, England, works of English Electric Co. Ltd. These will provide facilities for the development by the company's Aircraft Equipment Division of advanced electrical systems and components for aircraft and guided weapons. The division is developing equipment for aircraft which will fly in what was recently described as the "thermal thickets." This means aircraft which will fly at such high speeds that they will heat up to very high temperatures.

The exacting conditions which will be met by future aircraft and guided weapons can be simulated in the new laboratories. The facilities are also being used to improve present day aircraft.

TCA Addition

A tenth Lockheed Super G Constellation has been added to the fleet of Trans-Canada Air Lines. It is equipped with RCA C-band weather radar, and 500 gallon wing-tip tanks, for use on non-stop transatlantic and trans-continental service.

RAF Britannias

Further 7 Bristol Britannias have been ordered for the Royal Air Force, making a total of 20 in all.

New 707 Development

Boeing Airplane Co. has announced a new short to medium range version of the 707 jet airliner, designated the 720. This will replace the previously announced 717.

Britannia Testing

Further icing trials are being conducted with a Bristol Britannia 312, the long-range version. The plane's Proteus 755 engines have been modified to eliminate the icing problem encountered in certain monsoon conditions. Tests are taking place at Singapore. Two of the engines have been equipped with a device designed by Bristol Aero-Engines Ltd., whereby air tapped from the engine compressor is reintroduced through a number of small nozzles in the engine intake duct. The entry ducts of the other two engines have an improved heating system which heats critical parts of the engine to 280-300 degrees Centigrade.

Bonaventure Captain

Captain William M. Landmore, aged 41, of Brantford, Ont., and Ottawa, has been appointed in command of the Royal Canadian Navy's new aircraft carrier, HMCS Bonaventure. His appointment takes effect from January 17. Captain H. V. W. Groos, who has been in command of the carrier since it was commissioned last summer, becomes Commodore of the RCN Barracks and commanding officer of HMCS Naden, Esquimalt, B.C.

Dual Role Hercules

The Lockheed C-130 B Hercules will be available in two versions. It can be used as an aerial jet tanker, or as freighter with a payload of 44,000 lb. In former role the C-130 B will utilize portable in-flight refueling kits.

Economy Service

The new "economy" class to be introduced by the scheduled international airlines on North Atlantic routes beginning April 1, will bring fares 20% below those in the present tourist range. Decision was reached at a Paris conference of the International Air Transport Association, at which the chair was taken by Hugh B. Main, vice-president of Canadian Pacific Air Lines. The 15-day excursion fare is to be discontinued "for the time being." First-class and tourist fares are to be raised slightly, \$35 and \$25 respectively on the basic New York-London route. New fares are subject to government approval.

Montreal Agent

Electrodesign, Montreal, has been appointed Canadian representative of Control Electronics Co. Inc., Huntington Station, N.Y.

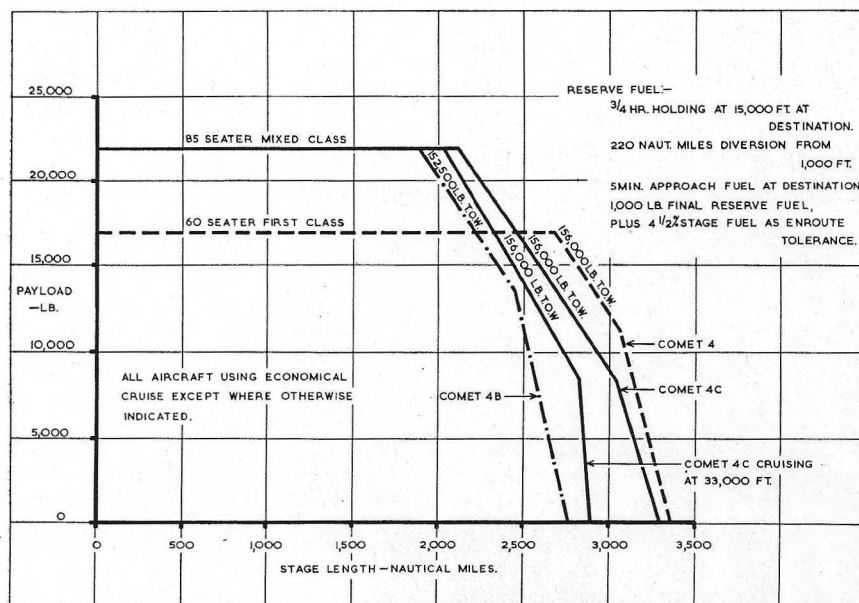
Helicopter Increase

Record year in helicopter sales by Bell Helicopter Corp., Fort Worth, Texas, pushed the 1957 figure up 30% compared with 1956. Commercial gross volume for 1957 was about \$10 million. Similar increase is anticipated in 1958.

Conway Thrust

Rolls Royce Conway, ordered for their DC-8's by TCA, have been tested at dry rating of 17,250 lb. thrust.

Intermediate Mark 4C Comet



COMET 4C PERFORMANCE. Payload and range comparisons of the Comets.

An additional version of the Comet has been developed by the de Havilland Aircraft Co. Ltd., Hatfield, England. This will be known as the Comet 4C. It is intended as an intermediate jet transport between the continental Mark 4B and the intercontinental Mark 4.

Structurally, the new mark combines the large capacity fuselage of the continental machine with the increased span of the intercontinental Comet. De Havilland's claim a substantially bigger payload at the cost of only a small reduction in range, resulting in exceptional economy and versatility of operation.

The continental version serves for stages up to 2,000 miles, while the Comet 4 was developed to serve up to 3,000 miles. The new Comet 4C will carry 21,765 lb., say 85 mixed class passengers, on stages of up to 2,475 miles. Maximum tourist seating capacity would be 99 passengers. The 4C has the same

engines as the other marks: Rolls Royce Avon RA 29's, of 10,500 lb. thrust.

Normal operating Mach number of the 4C remains at .74, same as for the other marks. But structural considerations make it necessary to reduce the normal operating IAS limit slightly. This affects the true air speed only when the aircraft is operated below its maximum-speed height of 33,000 ft. because at lower altitudes the maximum operating speed is dictated by the indicated airspeed and not by the limiting Mach number.

Payload-range capabilities of the three aircraft are compared in the accompanying chart. For this purpose it has been assumed that all three are flown at their respective altitudes for maximum range, which is above maximum speed height. A line has been plotted showing the reduction in range which occurs for the 4C when the maximum cruising speed procedure is adopted.