

GREAT BRITAIN

AVRO TYPE 711 ASHTON



Five-seat research aircraft

Remarkable because it is one of the very few multi-seat jet aircraft built expressly for research purposes, the Ashton series of low-wing monoplanes were manufactured for the British Ministry of Supply, the first one flying for the first time on September 1, 1950. The design of the Type 711 was adapted from the earlier propeller-driven Avro Tudor 2, and six Ashtons were built, each intended for high-altitude research of a separate matter. To man the extensive recording and testing equipment, a crew of five is carried.

The following is a brief summing-up of the research duties carried out by each of the six Avro 711 Ashton aircraft that were completed: the Ashton WB490 (code marking) was employed in the field of jet engine research. It was fitted with a special autopilot installation and external wing fuel tanks. Refrigeration, pressurization, temperature control and humidification of an aircraft were studied in the Ashton bearing the marking WB491. It too is now converted to jet engine testing by the Napier Co. At the 1955 annual aircraft display at Farnborough in England, this machine appeared with a 13,000-lb. thrust Rolls Royce Company bypass turbojet engine. Installed in a pod under the fuselage, this turbine is one of the latest to be flight-tested with the Ashton. The pod is offset by one foot to the port of the Ashton's centre line in order to provide clearance between the engine air in-

take and the crew escape chute. The Ashton WB492 is used for radar bombing research and has wing installations for either bomb nacelles or long-range fuel tanks. Earlier employed for research of brush wear at high altitudes, the WB493 has for some time been flight-testing the "re-heat" Olympus turbojet engine. The Ashton WB494 had a pressurized bombardier's compartment with a belly "pannier" for visual bombing research, while the Ashton code-marked WE670 was used for bomb ballistics research. It was recently transferred to testing of the R.A.14 turbojet for the Rolls-Royce to the vitally necessary occupation of turbojet engine testing.

Searching the depths of the complex fields of aircraft electronics and turbojet engines, which are rapidly becoming two of the most competitive areas in the world today, the Ashton series of large research planes have provided the British aircraft industry with much data acquired from the long hours they spent in the air, exploring every useful detail of the equipment they were loaded with.

TECHNICAL DATA — Maximum speed: 439 mph at 35,000 ft. Range: 1725 miles. Ceiling: App. 55,000 ft. Weight: Max. take-off: 72,000 lbs. Engines: Four 5000-lb. thrust Rolls-Royce Nene turbojets. Armament: None. Wingspan: 120 ft. Length: 89 ft. 6½ in. ■