New autopilot and weather radar from Bendix

BENDIX has designed a new autopilot for turboprop aircraft. The company's main emphasis for the FCS-8700B is smoothness of manoeuvres and transitions. Large-scale integrated circuits are used, and high reliability is claimed.

The FCS-8700B has two altitude pre-selects—useful if ATC has given a step clearance—and IAS hold for climb, cruise and descent. A turbulence mode is standard, and the danger of pitch runaway is reduced by monitoring both pitch and trim servos. This is done because the pitch servo tends to compensate if the trim servo fails (and vice versa). There is then a violent pitch-change when the compensating servo reaches its limit.

Other features include altitude alert, manual or automatic glideslope capture, yaw damper and automatic crosswind correction. Bendix has type certification for the Cheyenne III, King Air 90, Metro, and Merlin. Cost is $40,000, including 4in flight director, vertical gyro and installation kit.

Bendix introduced its four-colour RDR 1150HP weather radar at the show. The fourth colour, magenta, indicates severe weather—rainfall exceeding 50mm/hr. The other colours indicate conventional jane of rainfall—red is for 12-50mm/hr, yellow for 4-12mm/hr, and green for 0-4mm/hr. The radar also has full weather attenuation compensation, and pressing the WS A button flashes magenta area.

Garrett and Tracor’s new RNav

GARRETT AIRESEARCH and Tracor have signed an agreement under which Bendix venture Airnav 400 area-navigation system. Airnav 400 will be available before the end of the year, and will comprise dual Tractor 7800 Omega/ VLFs and a single Garrett Airnav 300 which includes DME/DME capability.

Dual Omegas have to be included to satisfy overwater requirements, but the single Airnav control and display unit (CDU) will be used to control both the RNav and the Omega. The redundancy requirement is met by supplying a standard 7800 CDU for emergency use.

The units are connected by a digital data-bus. The Omega is updated automatically when VORs and DMEs are around, and the navigation changes to Omega automatically when out of VOR/DME range. DME/DME navigation is used whenever possible.

Garrett and Tracor are offering the whole system for $118,000, which is considerably less than purchasing the units separately. Like the Airnav 300, the 400 stores 40 waypoints, and tapes with international and domestic flight-data will be supplied.

Garrett claims that combination with its newly announced Gems engine management system (see our NBAA first report, September 12) will virtually provide the pilot with a full flight management system—very unusual for anything smaller than an airliner.

Dowty and Hamilton Standard’s latest propellers

TWO propellers dominated the Dowty stand. One was the R-320 I.C. composite-bladed propeller selected by Saab-Fairchild for the SF-340 commuter. It is a four-bladed 126in diameter propeller. The blade consists of a polyurethane foam core, carbon-fibre spars, and a glassfibre envelope.

Driven by a CT7 engine in the SF-340, the propeller offers automatic feathering, reverse, and fine pitch. It has only 200 parts, six oil seals, and no mechanical pitch locks. Fail-safety is claimed.

The second propeller was the R-333, a metal-bladed version of the type selected for British Aerospace’s Jetstream 31, and similar to that used on Fairchild Swearingen Metro III and Merlin IV C aircraft. It is 106in in diameter, and of similar ARA-D section to the R-320.

Dowty also showed a comprehensive range of products from its group factories, including actuators and landing gear.

Hamilton Standard displayed its de Havilland Dash 7 propeller, which uses an aluminium spar, glassfibre shell and polyurethane foam core. The 130in propeller has also been selected for the Brasilia and Casa Nurtano CN.235, and is claimed to offer low noise, high aerodynamic efficiency, and easy maintenance as well as low weight.

Hamilton Standard also showed its multi-appear, multi-bladed control system (Macs), which is an engine-mounted electronic fuel controller suitable for turbfans, turboprops and turboshafts. Macs has been chosen for the A.129, WG30, Dash 8, Brasilia, ATR-42 and Sial-Marchetti S.211.

The company is to open the first part of a 108,000ft² overhaul facility at Maastricht early next year. This facility is a joint venture with Netherlands-based engineering group VMF-Stork, and it will cater for fuel controllers, propellers, hydraulics, pneumatics, electrics and environmental control systems.

Pulses...

Sfena has sold more than 1,000 Ministab two-axis helicopter autopilots, and is looking at IFR certificating a Jet Ranger, having already done this for a Long-Banger.

Sim hopes to obtain FAA single-pilot IFR certification for the SA.365N Dauphin 2 fitted with its 155D automatic flight-control system by early November. The similarly equipped AS.555F Twin-Star should be single-pilot IFR certificated by the end of 1981.

Wulfsberg has introduced a new Flitefone with an HF option. The company has opened 14 new North American ground stations.

Marathon Battery has taken over static-inverter manufacturer Flitronics.

NBAA review Equipment/Engines

Garrett seeks new airframes for ATF3

GARRETT claims that Falcon 20s retrofitted with TRF3s would gain 50 per cent in specific fuel consumption. The company is also proposing four ATF3s for the Gulfstream 2 and 3. Flight understands that Rockwell is considering an ATF-5 powered Sabre 85. The 5,440lb ATF3 has just been certificated for the Falcon 200 and EU-25A Guardian.

The two latest versions of Garrett’s TPE331 are the 1,250 s.h.p. TPE331-14 and 1,645 s.h.p. TPE331-15. Both types use the same upgraded 331, but have different gearbox. The -15 has been chosen for the Gruman G111 Albatross and is aimed at 30-passenger commuter aircraft, while the 14 is intended for small corporate aircraft.