

# Ilyushin takes the wraps off Il-114

The first pictures of the Ilyushin Il-114 prototype regional airliner, taken at the Zhukovsky flight-test centre near Moscow, reveal its ultra-wide chord low-noise propellers, high-lift double-slotted flaps and advanced cockpit.

Close in appearance to the British Aerospace ATP, the Il-114's Soviet-built CB-34 propellers

are of carbonfibre-reinforced composite and weigh 250kg. The starboard unit is instrumented for flight tests. Large airbrakes can be seen forward of wing flaps.

The five-tube electronic flight instrumentation in a fuselage mockup has 20cm-square displays employing "dark cockpit" principles. □



CB-34 propellers use carbonfibre-reinforced composites

## Airbus and Boeing give ELS go-ahead

Airbus Industrie and Boeing have given the go-ahead for the development of systems designed to replace flight documentation with computer stored data. The systems will be installed on Airbus A340 and Boeing 777 aircraft.

Called the Electronic Library System (ELS), they will also have a ground-based database which will share information, stored on optical disk, with that in use in the air.

Companies working on the systems include Honeywell and a consortium of Sextant Avionique, Sundstrand Data Control and Jeppesen-Sanderson.

Data will be stored on the flight computer and called up on flightdeck and cabin crew terminals. Full development of ELS will depend on resolving the problem of alerting crews to updates and changes in manuals.

Careful consideration will also have to be given to the layout of menus, indexing and key word or phrase searches. Special items such as minimum equipment lists would require careful cross-

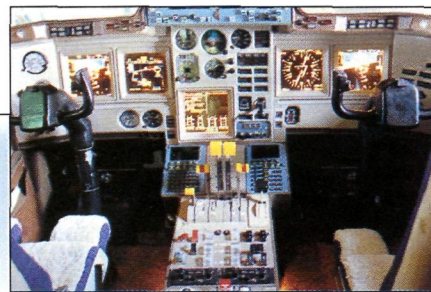
referencing.

ELS will feature immediate access to "need-to-know" information, and will include general data combined with airline-customised additions.

Honeywell is working on an electronic library system with sufficient storage capacity for large-scale displays, of both navigation data and terrain, which would not only scroll with the movement of the aircraft but pan, zoom and operate reverse video.

Data on terrain and obstructions would be correlated with a navigation system of sufficient accuracy: such as the flight management system (FMS). It could "talk to" an FMS directly to find the latitude and longitude of the aircraft, and call up the relevant surrounding terrain from its database.

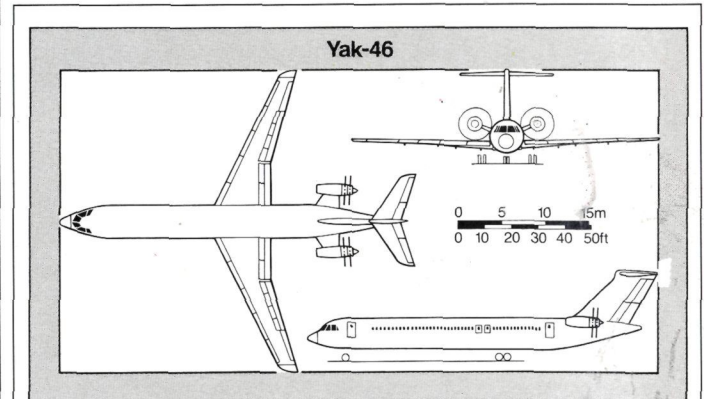
The US company is testing a flat-plate display, 210mm x 149mm, in consultation with Airbus. It gives a good black-on-white picture to the size of a standard let-down plate with some zoom capability. □



Cockpit mockup shows five tube displays



ATP lookalike uses high-lift double-slotted flaps



### YAKOLEV PLANS PROPFAN YAK-42 DERIVATIVE

The Yakovlev Design Bureau is planning a propfan-powered 150-seat derivative of the Yak-42 with fly-by-wire controls and electronic flight instrumentation, for service entry in 1997. The Yak-46 will use 112kN-thrust Lotarev D-27 engines being developed. Yakovlev intends to fit tipsails (not shown).