

BACK BOX

INTERSCAN—less noise near airports

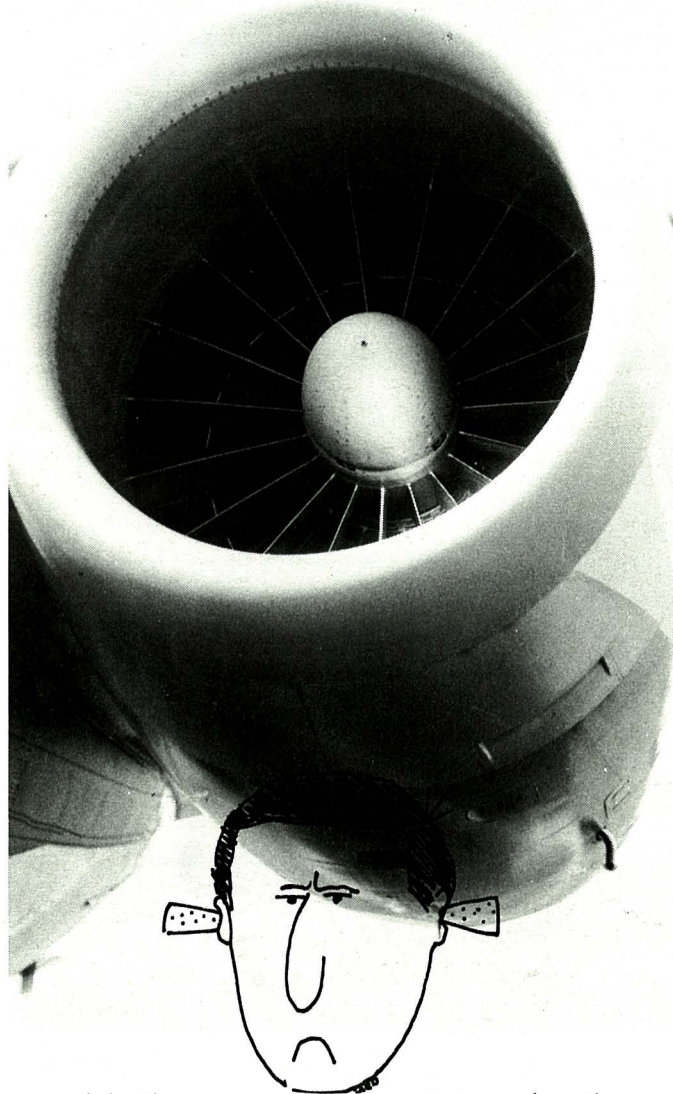
Several recent developments in civil aviation have brought hope of a quieter existence for people living near busy airports. Modern aircraft are becoming quieter. Advances in instrument landing systems for aircraft landing when visibility is poor offer hope too.

Currently used VHF instrument landing systems have their limitations; for example, they will not be suitable for use with short- and vertical-take-off aircraft, and reflections from taxiing aircraft may cause interference. In addition people living near airports suffer because all approaching aircraft have to use the same narrow flight path with a fixed shallow angle of descent.

A few years ago the International Civil Aviation Organization (ICAO) decided to look for a new instrument landing system that eliminated most of the disadvantages. This would be a standard system that would be used world-wide and would meet all the foreseeable needs of civil aviation for at least the next 25 years.

Australia's answer to ICAO's call has been the novel system known as 'Interscan'. It looks like being a particularly neat and simple solution.

'Interscan' stands for 'time interval scanning'. The idea for the system arose from



research by the CSIRO Division of Radiophysics into receiving aeriels for radio astronomy. The Division and the Commonwealth Department of Transport have developed the idea to its

present stage, where the equipment is being installed at Melbourne airport for trials under operational conditions. Amalgamated Wireless (Australasia) has been the prime contractor for pro-

duction of the equipment. A report will be presented to ICAO as a final submission during mid 1975.

Interscan gives an approaching aircraft information about its position, using several narrow microwave radio beams that are scanned to and fro. It can allow approaching aircraft to descend at an angle of up to 30° (compared with 3° with the present system). Thus aircraft can be higher during the approach, so reducing the noise on the ground.

The system can also scan sideways through 120°, which allows approaching aircraft to use a multitude of flight paths that need not even be straight. Thus the system allows incoming aircraft much greater flexibility, so they don't have to pass over populated areas.

Needless to say Interscan is not the only contender for ICAO's consideration. The potential market is very large, and the U.S. Federal Aviation Administration is reputedly spending \$U.S.90 million on developing four separate systems, only one of which will be submitted to ICAO. Britain, France, and Germany are also developing other systems.

The development of Interscan. H. B. O'Keefe. *Aircraft*, 1974, 53(7), 16-17.