

**Aviation Safety Investigation Report  
199600613**

**Boeing Co  
B747**

**27 February 1996**

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

**NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at [www.atsb.gov.au](http://www.atsb.gov.au).**



For international operations the airline concerned delegates the responsibility for all English language radio transmissions to a flight radio operator. The radio operator on this flight had accumulated some 25 years experience, including several flights into Sydney over the last seven years. When the flight radio operator read back "five thousand" on the second occasion, the controller was satisfied that the clearance had been understood. Recorded radio communications confirmed that the controller had used correct radio phraseology and that the flight radio operator had correctly read back the descent clearance.

It was later found that the flight radio operator believed the instruction had been to descend to "two five thousand", which he initially interpreted as 25,000 ft, although the aircraft had already descended to 6,000 ft. He chose not to question the clearance as he rationalised the controller had meant 2,500 ft. He called out "two thousand five hundred" to the non-handling pilot, who entered these numbers in the altitude select window on the mode control panel. When the controller issued the frequency change, and confirmed the descent clearance, the flight radio operator believed that 5,000 ft was the altitude at or below which the frequency change was to be made. All crew members on the flight deck were listening on headphones at the time of the occurrence and said they were somewhat confused by the clearance instruction, but chose not to query it.

#### SAFETY ACTION

As a result of the investigation, the Bureau issued the following Interim Recommendation to Airservices Australia on 17 July 1996:

"IR960050

The Bureau of Air Safety Investigation recommends that Airservices Australia amend radiotelephony phraseology in the Australian Manual of Air Traffic Services and Aeronautical Information Publication to eliminate the possibilities for misunderstanding in the use of the word "to" in climb/descent instructions."

On 27 August 1996, Airservices Australia responded as follows:

"Reference is made to BASI Air Safety Interim Recommendation No. IR960050 relating to the use of the word "to" in climb/descent instructions.

This matter has been widely debated in a number of workshops held with the aviation industry, Defence and CASA during the review of phraseologies used in Australia. In the interests of international harmonisation and in concert with our agreed position with Australian aviation interests, Airservices will continue to align with ICAO and retain the use of the word "to" with level change instructions. Use of the word "to" in this context is consistent with ICAO Doc 4444, PANS RAC, Part IX Phraseologies Section 3, paragraph 3.1 .2.

Given the need for clarity in communications and to reinforce the point made by ICAO at Part IX, paragraph 2.1 " ATS personnel and other ground personnel will be expected to use appropriate subsidiary phraseologies which should be as clear and concise as possible and designed to avoid possible confusion by those persons using a language other than one of their national languages", the Bureau's Interim Recommendation has been forwarded to our ATS Training Section for further action.



With regard to the publication of instrument approaches on charts to assist VFR pilots, as discussed in IR 950206, I understand that CASA is in the process of reviewing this recommendation. In addition, publication of instrument approaches on charts is currently under discussion in the Airspace 2000 proposals on pages 36 and 68 of the document titled "Airspace 2000 - A Plan for the Future Management of Australian Airspace".

The response has been classified as OPEN.

