

**Aviation Safety Investigation Report  
199600713**

**Boeing Co  
B727  
Boeing Co  
B767**

**06 March 1996**

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**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).**

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

**Occurrence Number:** 199600713                      **Occurrence Type:** Incident  
**Location:** 36km S Casino, Aerodrome  
**State:** NSW                      **Inv Category:** 4  
**Date:** Wednesday 06 March 1996  
**Time:** 0722 hours                      **Time Zone** EST  
**Highest Injury Level:** None

**Aircraft Manufacturer:** Boeing Co  
**Aircraft Model:** 727-277  
**Aircraft Registration:** VH-ANB                      **Serial Number:** 22642  
**Type of Operation:** Air Transport High Capacity Passenger Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:** Melbourne VIC  
**Departure Time:** 0605 EST  
**Destination:** Brisbane QLD

**Aircraft Manufacturer:** Boeing Co  
**Aircraft Model:** 767-338ER  
**Aircraft Registration:** VH-OGF                      **Serial Number:** 24853  
**Type of Operation:** Air Transport Domestic High Capacity Passenger Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:** Sydney NSW  
**Departure Time:** 0650 EST  
**Destination:** Brisbane QLD

**Approved for Release:** Wednesday, October 9, 1996

## FACTUAL INFORMATION

A Boeing 727 aircraft was en route from Melbourne to Brisbane via Casino and Coolangatta at flight level (FL) 350, while a Boeing 767 aircraft was en route to Brisbane from Sydney via BANDA and Coolangatta at FL370. The Boeing 767 was east of the Boeing 727's track and a few minutes behind on time estimates. There was a holding requirement at Brisbane with instrument landing system approaches in progress due to reduced visibility in passing rain showers. The Brisbane sector radar position responsible for controlling the two aircraft was manned by a trainee controller undergoing final checks prior to rating. The trainee was being supervised by a current sector controller. However, the supervising controller was not the regular training officer for the trainee and this was the first occasion that they had worked together.

The Boeing 727 was initially vectored in a northerly direction for separation from other traffic, but was shortly after instructed to turn right onto a north-easterly heading for arrival sequencing at Brisbane. The trainee controller intended to maintain the Boeing 727 on the north-easterly heading and provide a final heading to Coolangatta to meet the time required for sequencing. The Boeing 767 entered the controller's area of responsibility and the crew requested descent to FL330 due to moderate turbulence. The Boeing 767 was recleared to FL330. The new level was read back and the crew reported leaving FL370.

The supervising controller discussed with the trainee the requirement to ensure separation between the two aircraft, since they were on converging tracks with the Boeing 767 crew cleared to descend through the Boeing 727's level. Discussion centred on whether the Boeing 767 should be radar vectored to parallel the track of the Boeing 727 until the required vertical separation of 2,000 ft was established. However, as there was more than sufficient horizontal separation (minimum separation required was 5 NM), the trainee controller elected to leave the Boeing 767 under the crew's navigation and to monitor the situation. The supervising controller believed it was reasonable to allow the trainee a level of latitude for independent action greater than he normally would for a trainee as the trainee controller had almost completed training.

As separation between the two aircraft reduced to approximately 15 NM, the trainee controller's attention was diverted as he conducted coordination with another control position. As horizontal separation approached 8 NM and vertical separation was approximately 700 ft (with the Boeing 767 below the level of the Boeing 727) the trainee controller instructed the crew of the Boeing 767 to turn right onto a heading to parallel the track of the Boeing 727. During this transmission the trainee controller incorrectly advised the Boeing 767 crew that the radar heading was for sequencing, instead of separation. The trainee controller requested the crew of the Boeing 767 to expedite descent and to confirm that the aircraft was turning right. The crew advised that the aircraft was turning right and expediting descent and, shortly after, reported sighting the Boeing 727 as horizontal separation reduced to approximately 4 NM with vertical separation of 1,600 ft. Horizontal separation reduced further to just over 3 NM before 2,000 ft vertical separation was re-established.

The operating console was not fitted with an air-ground-air communication override facility to enable the supervising controller to intercede in trainee transmissions. Traffic information was not provided to either aircraft as the horizontal and vertical separation reduced to less than the standard. There was no Traffic Alert and Collision Avoidance System (TCAS) report from the B767.

## ANALYSIS

The trainee's use of the term "sequencing" instead of "separation" did not provide the level of notice to the crew of the Boeing 767 that was warranted under the circumstances. Had the crew been advised that the heading change was for separation they may have been more expeditious in complying. However, the situation should not have been allowed to develop to the stage where immediate action was required to maintain separation.

Similarly, the inclusion of a console facility that would enable the supervising controller to override the trainee's transmissions to establish appropriate separation measures would have been beneficial. But, again the situation should not have developed to the extent that such facilities were essential.

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Both controllers had discussed separation requirements for the two aircraft and the trainee was satisfied with monitoring the situation. The supervising controller deferred to the trainee's judgement because he understood the trainee was close to achieving a rating. However, the trainee became distracted and the supervising controller did not adequately monitor the trainee's subsequent control actions.

The supervising controller could have emphasised to the trainee the need to give priority to the radar display and to maintain a high scan rate to ensure separation. However, the situation would have been still totally dependant on the performance of the trainee and the supervisor. As the trainee became distracted by coordination to the detriment of control, the supervising controller was unable to intervene adequately and separation was lost between the aircraft. Monitoring of the flight paths did not provide an adequate level of separation assurance.

Early implementation of an altitude requirement or a radar heading (to parallel the track of the Boeing 727) to the crew of the Boeing 767 would have been an adequate separation assurance technique. Use of separation assurance techniques would have greatly improved the possibility of the two aircraft remaining separated.

#### **SIGNIFICANT FACTORS**

1. The supervising controller did not adequately monitor the trainee controller's actions or ensure that a suitable separation assurance technique were employed.
2. The use of inappropriate radiotelephony phraseology by the trainee controller did not impart to the crew of the Boeing 767 the need for expeditious compliance with instructions.
3. The lack of a communications override facility deterred the supervising controller from implementing timely remedial action.

#### **SAFETY ACTION**

The Bureau of Air Safety Investigation is continuing its investigation into the provision of adequate communications override facilities for air traffic control training officers. This is intended for all consoles where on-the-job training of air traffic controllers is likely to occur.

