

**Aviation Safety Investigation Report  
199702755**

**Swearingen Aviation Corp  
Metro 2  
Beech Aircraft Corp  
1900D**

**15 August 1997**

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**Occurrence Number:** 199702755                      **Occurrence Type:** Incident  
**Location:** 19km S Port Macquarie, Aerodrome  
**State:** NSW                      **Inv Category:** 4  
**Date:** Friday 15 August 1997  
**Time:** 1430 hours                      **Time Zone** EST  
**Highest Injury Level:** None

**Aircraft Manufacturer:** Beech Aircraft Corp  
**Aircraft Model:** 1900D  
**Aircraft Registration:** VH-SMH                      **Serial Number:** UE-191  
**Type of Operation:** Air Transport Domestic Low Capacity Passenger Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:** Sydney NSW  
**Departure Time:** 1407 EST  
**Destination:** Port Macquarie NSW

**Aircraft Manufacturer:** Swearingen Aviation Corp  
**Aircraft Model:** SA226-TC  
**Aircraft Registration:** VH-MKS                      **Serial Number:** TC-262  
**Type of Operation:** Air Transport Domestic Low Capacity Passenger Scheduled  
**Damage to Aircraft:** Nil  
**Departure Point:** Port Macquarie NSW  
**Departure Time:** 1427 EST  
**Destination:** Williamtown NSW

**Approved for Release:** Thursday, March 5, 1998

## FACTUAL INFORMATION

A Beech 1900 (B1900), callsign SMH, had departed Sydney on a flight to Port Macquarie, NSW. The crew were maintaining the aircraft at flight level (FL) 210 in controlled airspace. The airspace was controlled by Brisbane Sector 15C.

A Swearingen SW4 (Metro) had departed Port Macquarie on a flight to Williamtown, NSW. The crew were maintaining the aircraft at FL140. The base of controlled airspace was 12,500 ft.

At 1433 EST, the crew of the B1900 commenced descent into Port Macquarie but were restricted to FL150 by sector control due to the opposite direction conflict with the Metro.

A second B1900, callsign IMH, was also on the control frequency and had commenced descent into Williamtown. This aircraft was well south of the conflicting aircraft and there were no restrictions for its descent.



At 1436, the sector controller instructed the crew of IMH to contact Sydney flight service (FIS5) on frequency 121.6 Mhz. The reply was broken but included the words "? Mike Hotel". Almost immediately the crew of IMH asked the controller to confirm that the previous transmission was for them. This was confirmed by the controller and the crew transferred to FIS5 as instructed.

The controller then noticed on radar that SMH had descended below its assigned level and attempted to contact the crew to instruct them to return their aircraft to FL150 for separation with the Metro. There was no answer.

The crew of SMH had acknowledged the frequency transfer instruction issued to IMH and had contacted FIS5. The flight service officer had received the correct coordination on SMH and had informed the crew that there was no instrument flight rules traffic conflicting with their intended flight path in his area of responsibility. FIS 5 provided a traffic information service for aircraft travelling outside controlled airspace; that is, at and below 12,500 ft.

The crew of SMH decided that, as control had transferred them to FIS5, the controller was approving their descent from controlled airspace. Consequently they elected to continue descent from FL150. However, they had not received a specific clearance to descend below FL150.

As soon as the controller realised that the crew of SMH was not on the control frequency, he coordinated with the flight service officer to broadcast on 121.6 Mhz an instruction to the crew to maintain FL150. On receiving this instruction, the crew maintained FL140 because that was the level they were passing at the time. They reported to FIS5 that they were maintaining FL140 and this information reached the controller at approximately 1438, by which time the two aircraft had passed each other. The controller then issued a clearance for the crew of SMH to leave controlled airspace on descent.

Neither crew saw the other aircraft and radar analysis indicates that they passed at 1437 with approximately 2.6 NM horizontal separation and 200 ft vertical separation. The appropriate standard was 5 NM or 1,000 ft.

There was a breakdown of separation standards.

## ANALYSIS

The crew of SMH were expecting further descent as they approached FL150 and, hearing such an instruction issued to IMH, misheard the callsign and acted as if the instruction was issued to them. The controller only heard the last two letters of the response and, therefore, did not instantly recognise that the wrong crew had responded. As soon as the crew of IMH questioned the callsign for whom the instruction was intended, the controller commenced action to contact the crew of SMH to re-introduce positive separation that he had observed to have been contravened.

Because they believed that they had been transferred from control frequency, the crew of SMH incorrectly assumed that sector control had no further restrictions for them and descended. They did not receive, nor did they seek, a clearance to descend from FL150.

## SIGNIFICANT FACTORS

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1. The crew of SMH misheard the callsign "IMH" when an instruction for descent was issued to the crew of IMH.
2. The crew of SMH descended below their assigned level.

