

**Aviation Safety Investigation Report
199501623**

**Cessna Aircraft Company
C150
Boeing Co
B737-400**

31 May 1995

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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.

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:	199501623	Occurrence Type:	Incident
Location:	Canberra		
State:	NSW	Inv Category:	4
Date:	Wednesday 31 May 1995		
Time:	1005 hours	Time Zone	EST
Highest Injury Level:	None		

Aircraft Manufacturer:	Boeing Co		
Aircraft Model:	737-476		
Aircraft Registration:	VH-TJT	Serial Number:	
Type of Operation:	Air Transport Passenger Scheduled		
Damage to Aircraft:	Nil		
Departure Point:	Melbourne VIC		
Departure Time:	2246 EST		
Destination:	Canberra ACT		

Aircraft Manufacturer:	Cessna Aircraft Company		
Aircraft Model:	150M		
Aircraft Registration:	VH-ILL	Serial Number:	15079384
Type of Operation:	Instructional Dual		
Damage to Aircraft:	Nil		
Departure Point:	Canberra ACT		
Departure Time:	2327 EST		
Destination:	Canberra ACT		

Approved for Release: Monday, January 8, 1996

FACTUAL INFORMATION

The Boeing 737 had landed on runway 35 and commenced taxiing back to the terminal. There was a requirement to cross that runway again in order to reach the terminal. After being instructed to hold short of runway 35, the crew were subsequently given a clearance to cross and to hold short of runway 30. The crew replied to this instruction with the aircraft callsign only, consistent with the requirements of AIP OPS CTL paragraph 15.1 to 15.3 and OPS CTL paragraph 25 - note 1 and 3.

At this time, the crew turned on the navigation and landing lights in accordance with their company Standard Operating Procedures (SOPS) and crossed runway 35.

A Cessna 152 was on final approach for runway 30 and was cleared for a touch-and-go.

After crossing runway 35, the crew of the Boeing confirmed between themselves that they were cleared to cross runway 30 and, in doing so, left the navigation and landing lights on as they proceeded to cross this runway.

Before entering the runway strip they checked both approaches. The co-pilot looked to the right while the pilot in command looked to the left, the direction from which the Cessna was approaching. At this time, the Cessna was in the final stage of its approach. The pilot-in-command did not see the Cessna. As the two aircraft were transmitting on different frequencies, the crew of the Boeing did not hear the landing clearance given to the pilot of the Cessna.

As the Cessna was touching down the Surface Movement Controller (SMC) and the Aerodrome Controller (ADC) observed the Boeing infringe the flight strip of runway 30. The crew of the Boeing were instructed to hold position by the SMC while the ADC instructed the pilot of the Cessna to stop immediately.

The Cessna stopped at the intersection of runway 35 and 30. The Boeing stopped within the flight strip of runway 30. The distance between the two aircraft was 525 metres. The crew of the Boeing were then cleared to cross runway 30, after which, the pilot of the Cessna was given a clearance to take off.

Analysis of the Automatic Voice Recorder (AVR) tape confirmed that the SMC had, in fact, issued the instruction to hold short of runway 30. The tape also indicates that, at the same time the instruction was given to hold short of runway 30, there was a transmission from another station which was not discernable. The over-transmission made it difficult to clearly hear this part of the clearance. The crew of the Boeing were sure, however, that they heard a clearance to cross both runways. It has been common in the past for such a clearance to be given at Canberra.

The weather at the time of the incident, as described by the Automatic Terminal Information Service (ATIS), indicated light and variable winds with a visibility of more than 10 kms in haze.

ANALYSIS

As it was not uncommon to receive a clearance to cross both runways at Canberra, the crew of the Boeing appeared to have the expectation of such a clearance in this incident. Even though the transmission from another station may have made it difficult for the Boeing crew to clearly hear the instruction to hold short of runway 30, this expectation appears to have overridden any possible ambiguity the crew may have had about the clearance instruction. As the crew were sure they had heard the instruction to cross both runways, it was not necessary for them to clarify these instructions.

The acknowledgement of the clearance instruction with the aircraft callsign indicated an understanding of that instruction. ATC would not, therefore, have been alerted to the misunderstanding.

At the time the pilot-in-command scanned the final approach area to runway 30, shortly before the Boeing commenced crossing that runway, the Cessna may have been difficult to sight. At that time, it is likely that the Cessna was below the line of hills to the south-east of the aerodrome. The haze that existed at the time of the incident would have affected the visibility and may have increased the difficulty in sighting the Cessna.

CONCLUSIONS

Findings

1. The SMC issued the Boeing with a clearance instruction to cross runway 35 but to hold short of runway 30.
2. The instruction to hold short of runway 30 was overtransmitted by another station.
3. The crew did not check or confirm the unclear instruction.
4. The crew acknowledged the instruction with the aircraft callsign only. Such an acknowledgement indicated to SMC that the crew understood the instruction to hold short of runway 30.
5. As the crew of the Boeing was transmitting on a different frequency to the pilot of the Cessna, they did not hear the landing clearance that was given to the Cessna.
6. The pilot in command did not see the Cessna on its final approach to runway 30.

Significant Factors

1. The crew appeared to have had an expectation to be issued with a clearance instruction to cross both runways.
2. The acknowledgement of the instruction with the callsign only did not alert ATC to the misunderstanding.
3. The Cessna may have been difficult to see on its approach path due to a line of hills to the south-east of the aerodrome.
4. The visibility at the time of the incident was affected by haze.

