

**Aviation Safety Investigation Report  
198904288**

**Boeing 737**

**20 November 1989**

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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).**

**Occurrence Number:** 198904288  
**Location:** Coolangatta QLD  
**Date:** 20 November 1989  
**Highest Injury Level:** Nil  
**Injuries:**

**Occurrence Type:** Incident

**Time:** 0617-0632

	Fatal	Serious	Minor	None
Crew	0	0	0	0
Ground	0	0	0	-
Passenger	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Aircraft Details:** Boeing 737  
**Registration:** G-BNRT  
**Serial Number:**  
**Operation Type:** Regular Public Transport  
**Damage Level:** Nil  
**Departure Point:** Brisbane QLD  
**Departure Time:** 609  
**Destination:** Coolangatta QLD

**Approved for Release:** 12th December 1989

#### **Circumstances:**

The aircraft was tracking direct from Brisbane to Coolangatta and reported over Jacobs Well at 0618 hours. The track from Jacobs Well to Coolangatta is 148 degrees magnetic and the Jacobs Well VOR (VHF Omni Range) is 26 nautical miles (47 kilometres) from Coolangatta. At 0622 hours the pilot was instructed by Coolangatta Tower to make a runway 14 VOR/DME approach (an instrument approach procedure). The weather conditions at Coolangatta were unsuitable for a visual approach with rainshowers, cloud at one thousand feet, and visibility reduced in rainshowers. As the pilot approached overhead Coolangatta he was advised that the conditions were now on the minima, which is a cloud ceiling of 629 feet and visibility of 3.5 kilometres. The pilot was then given instructions on the missed approach procedure, in the event that he may not have become visual by the minima. The pilot commenced the instrument procedure, but elected to not carry out the normal entry procedure due to the presence of heavy rain in the procedure turn area, and turned left to intercept the outbound track of 350 degrees magnetic. Brisbane Radar was observing this manoeuvre and advised Coolangatta Tower that the aircraft did not appear to be carrying out the normal procedure. The radar operator continued to observe the aircraft, and at about the time the aircraft return began to fade from his screen, he was of the opinion that the aircraft was well west of the inbound radial (330 degrees magnetic) and may have been carrying out an incorrect procedure. Coolangatta Tower was immediately informed, and the tower operator, who could not visually sight the aircraft, decided that the safest course of action was to have the aircraft abandon the approach. Accordingly, he gave instructions to the pilot to climb to 4 000 feet and to track direct to the Coolangatta VOR. The pilot acknowledged the instruction, and advised that he was on the correct inbound radial (330 degrees magnetic) and climbing to 4000 feet. Due to the prevailing weather in the terminal area the pilot decided to return to Brisbane rather than enter the holding pattern. The aircraft was then cleared to track from overhead Coolangatta to Brisbane via a left turn to intercept the outbound track. Brisbane radar observed the aircraft to make a right turn rather than a left turn as instructed.

Subsequent examination of recorded radar returns showed that the aircraft had not carried out the normal entry procedure for the 14 VOR/DME approach. The aircraft track appeared to be as described by the pilot, and although a small divergence to the west of the inbound radial may have occurred during interception, there is no evidence to suggest that the aircraft was not tracking within tolerances on final approach. The pilot had decided not to carry out the normal entry procedure due to an engine consideration, which is a limitation imposed by the manufacturer on the operation of the engine in heavy precipitation. For the same reason, he had decided to make a right turn on his departure, but had unfortunately not advised air traffic control of his preference. The aircraft did not descend below published minimum altitudes during the instrument procedure. During the right turn, the aircraft remained above the minimum approach altitude, which is 3000 feet within a five nautical mile (nine kilometre) radius of Coolangatta. The aircraft was also above the lowest safe radar altitude, and was not likely to come in close proximity to terrain during the turn to intercept the outbound track.