Aviation Safety Investigation Report 199500087

Boeing Co
B737

15 January 1995

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Aviation Safety Investigation Report

199500087

Occurrence Number:	199500087	**Occurrence Type:**	Incident
Location:	41km NW Hobart		
State:	TAS	**Inv Category:**	4
Date:	Sunday 15 January 1995		
Time:	1752 hours	**Time Zone**	ESuT
Highest Injury Level:	None		

Aircraft Manufacturer:	Boeing Co		
Aircraft Model:	737-376		
Aircraft Registration:	VH-TJA	**Serial Number:**	24295
Type of Operation:	Air Transport Domestic High Capacity Passenger Scheduled		
Damage to Aircraft:	Nil		
Departure Point:	Sydney NSW		
Departure Time:			
Destination:	Hobart TAS		

Approved for Release: Friday, July 26, 1996

From an inbound track on the 007 degrees radial, the aircraft was cleared to track via the 22 nautical mile distance measuring equipment (DME) arc to intercept the localiser for an instrument landing system (ILS) approach to runway 12. The aircraft was cleared to descend to 4000 feet not below the DME steps. Shortly after the aircraft turned left to intercept the localiser, a ground proximity warning system (GPWS) terrain warning occurred. The aircraft was immediately climbed to 5000 feet.

After stabilising the aircraft at 5000 feet, localiser capture occurred and the aircraft recommenced descent to 4000 feet. After passing Tea Tree locator, it became obvious to the crew that the electronic navigation picture was inconsistent with the relative bearing from Tea Tree. The captain ordered a go-around. The aircraft flew another ILS procedure without incident.

The digital flight data recorder (DFDR) showed that the GPWS had activated as the aircraft approached/overflew a 2953 foot spot height while turning to intercept the localiser and maintaining 4000 feet. DFDR information also showed that the aircraft was maintaining a track well to the left of the localiser until the go-around was initiated. The electronic navigation picture falsely indicated that the aircraft was on track.

The investigation determined that the aircraft's track across the 2953 foot spot height caused the GPWS to activate. However, no reason was found as to why the electronic navigation picture was giving a false indication. No fault was found with either the ground installation or the aircraft equipment and there have been no further similar problems in this aircraft. The operator suspects that the faulty navigation picture was probably caused by a passenger operating an electronic device in the cabin.

Significant Factors

The following factors were considered relevant to the development of the incident:

1. The GPWS was activated because the combination of aircraft altitude, spot height elevation, terrain closure rate and track fell within GPWS activation parameters.

2. The reason for the faulty navigation picture was not determined but the most likely reason was operation of an electronic device in the passenger cabin.

Safety action

1. Electronic Navigation Picture.

In regard to the faulty electronic navigation picture, the company now makes a PA announcement at the top of descent warning passengers not to use any electronic devices from that point for the remainder of the flight.

2. Ground Proximity Warning System.

Since this occurrence, the minimum altitude permitted by air traffic control for an aircraft on the 22 mile DME arc, prior to localiser interception, is now 5000 feet. There have been no further GPWS activations over the subject spot height since the 5000 feet minimum altitude was implemented.