Aviation Safety Investigation Report 199701646

Beech Aircraft Corp Bonanza

16 May 1997

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Aviation Safety Investigation Report

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Occurrence Number: 199701646 **Occurrence Type:** Incident
Location: Bundaberg, Non Directional Beacon
State: QLD **Inv Category:** 4
Date: Friday 16 May 1997
Time: 1930 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Beech Aircraft Corp
Aircraft Model: A36
Aircraft Registration: VH-ILG **Serial Number:** E-892
Type of Operation: Non-commercial Pleasure/Travel
Damage to Aircraft: Nil
Departure Point: Archerfield Qld
Departure Time: 1816 EST
Destination: Bundaberg Qld

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Commercial	80.0	460

Approved for Release: Tuesday, June 9, 1998

[redacted]

The pilot of a Brasilia aircraft had an estimated time of arrival (ETA) over Bundaberg non-directional beacon (NDB) of 0920 UTC. On descent, he was notified by Brisbane Centre of a Shorts 3-60 inbound to Bundaberg from Gladstone, ETA 0917 and a Beech A36 inbound to Bundaberg from Hervey Bay, ETA 0927.

When the Shorts pilot changed to the Bundaberg mandatory broadcast zone (MBZ) frequency 126.9 MHz, he advised that he was on the inbound leg of the runway 14 NDB approach. As the Beech 36 was several minutes behind the Brasilia, it was not in conflict at that time.

When the Brasilia was approaching the NDB, the Shorts pilot advised he was at the minima, not visual, and was executing a missed approach. The Brasilia pilot maintained 3,600 ft and tracked over the aid.

When the Shorts pilot advised that he was 5 NM by GPS south of the NDB and maintaining 2,600 ft, the Brasilia pilot commenced an NDB approach. When the Brasilia was turning inbound, the Shorts pilot advised he was over the aid and would commence an approach and follow the Brasilia in the procedure.

At the minima for the NDB approach procedure, the Brasilia crew were not visual with the runway, and commenced a missed approach in heavy rain at 0927. The Brasilia pilot was aware that the Beech 36 was now in conflict (ETA 0927), and tried to contact the pilot on both the mandatory broadcast zone (MBZ) and area frequencies without any response. Brisbane Centre was then contacted to ascertain the whereabouts of the Beech 36. Brisbane Centre said that the pilot had last reported when he changed to the MBZ frequency. Brisbane Centre then passed traffic on a DHC8 inbound from Brisbane to Bundaberg ETA 0935. Communications were established between the Brasilia and the DHC8 on the MBZ frequency.

The Brasilia pilot then executed a sector entry for a further attempt at the NDB approach. As the Brasilia approached the aid, the Shorts pilot advised that he was going around at the minima, and he also tried to contact the pilot of the Beech 36. As the Brasilia pilot commenced the second approach, the Shorts pilot advised that he was diverting to Brisbane. When the Brasilia pilot was turning inbound, the DHC8 pilot advised that he was over the aid and would follow the Brasilia in the procedure.

The Brasilia pilot said that approaching 800 ft they noticed the weather was improving, and they became visual at approximately 700 ft. After landing on runway 14, the Brasilia pilot executed a 180-degree turn to backtrack and saw the landing lights of an aircraft on short final for runway 14. The Brasilia pilots turned on all landing lights to illuminate themselves to the oncoming aircraft, then expedited to the taxiway as the other aircraft executed a low-level go-around and joined left downwind. The Brasilia pilot said he assumed the aircraft they had seen was the Beech 36, and he made a broadcast to the pilot of the inbound DHC-8 to alert him of the circuit traffic. The pilot of the Beech 36 was still unable to be contacted on the radio, and he landed in front of the approaching DHC-8, taxied off the runway, and parked. Prior to shutdown, the Brasilia pilot heard Brisbane Centre ask the DHC-8 pilot to attempt to contact the pilot of the Beech 36 on the superseded MBZ frequency 119.1 MHz. The pilot of the Beech 36 was located on this frequency and the pilot of the DHC-8 advised him of the correct frequency.

The investigation revealed that the pilot of the Beech 36 had been referring to an out-of-date Bundaberg runway 14 NDB instrument approach procedure. The page showed the superseded MBZ frequency. The pilot had written the correct frequency, which he had obtained from the en-route supplement, on his flight plan. However, he had not referred to the flight plan again. Due to the adverse weather conditions and high workload, he had only referred to the out-of-date approach chart, and this had led him to select the incorrect frequency. During his arrival, because he had not heard any radio transmissions from the other aircraft that were inbound, he assumed that they had landed. He had then conducted a holding pattern, a sector entry, and the NDB approach procedure with the crews of the other aircraft being unaware of his presence.

SAFETY ACTION

As a result of this occurrence, representatives of the Bureau of Air Safety Investigation held a meeting with officers from Airservices Australia and the Civil Aviation Safety Authority to discuss the safety deficiencies identified during the investigation. Agreement was reached that as a matter of priority, the Civil Aviation Safety Authority and Airservices Australia would:

1. amend pilot operating procedures so that when a frequency change is made, notification will be provided to other traffic of the location and frequency of the MBZ/CTAF to which the pilot is changing; and

2. institute radio checks for pilots in IMC entering a MBZ/CTAF who have been previously advised of traffic information and are subsequently unable to make radio contact with the other pilot(s).

The meeting considered a number of other issues in relation to MBZ/CTAF operations and the consequent effect on safety. In this context, the Bureau representatives agreed to review these issues with a view to framing appropriate recommendations. Subsequently, the Bureau issued Interim Recommendation IR970110 to Airservices Australia and the Civil Aviation Safety Authority on 4 July 1997. The interim recommendation stated the following:

"The Bureau of Air Safety Investigation recommends that Airservices Australia and the Civil Aviation Safety Authority:

1. implement methods for the timely dissemination of the MBZ or CTAF frequency to pilots;

2. implement methods of providing to pilots confirmation of the correct selection and operation of an MBZ or CTAF frequency;

3. examine the requirement for the establishment and operation of traffic alerting services at all aerodromes during RPT operations;

4. examine the provision of additional radar coverage in the Bundaberg area; and

5. examine the provision of surveillance for other locations serviced by RPT operations".

The following response was received from Airservices Australia on 1 September 1997:

"Reference is made to the Bureau's Air Safety Interim Recommendation No IR970110 which relate to communications procedures for MBZ and CTAF. With regard to Interim Recommendation 1, Airservices have issued a NOTAM instructing pilots to report the frequency to which they are changing as part of the "Changing To" call. The frequency quoted is, whenever practicable, recorded by ATS for the information of other pilots. Airservices do not intend providing the MBZ or CTAF frequency to pilots on an individual basis as a matter of routine. Other methods of disseminating the MBZ or CTAF frequency, e.g. via AWIB broadcast will be taken into consideration.

It should be noted however, that the longevity of this procedure is not great, given the likely directions of Airspace 2000 and introduction of the National Advisory Frequency (NAF) in Class G airspace.

Interim Recommendations 2 and 3 fall within the CASA areas of responsibility for a response.

Interim Recommendations 4 and 5 relating to the provision of additional surveillance in the Bundaberg area and for other locations serviced by RPT will be considered by Airservices."

The following response was received from the Civil Aviation Safety Authority on the 13 November 1997:

"I refer to your letter of 4 July in relation to BASI Occurrence 9701646 generating Air Safety Interim Recommendation IR 970110. The occurrence resulted from incorrect frequency usage in the Bundaberg MBZ.

The following are the CASA responses to the individual parts of the Interim Recommendation:

IR part 1

The normal AIS process is designed to ensure that pilots have the correct information pre-flight. This is supported by CAR 233(1)(h)which requires pilots, before commencing a flight, to have the latest editions of maps, charts and other aeronautical information.

IR Part 2

A NOTAM was issued requiring pilots to advise the frequency changing to; this was complemented with an instruction to ATS staff to record this frequency for advice to subsequent aircraft as required. CASA is awaiting a response from BASI as to the reduction in the number of incidents since this procedure was implemented.

[The Bureau forwarded the incident information to the Civil Aviation Safety Authority on 25 November 1997.]

The CASA Board has determined to initiate a legislative process to require the provision of third party communications at uncontrolled airports served by RPT; industry and Airservices will be advised in the near future. CASA is also seeking results of the initial trials of the "beep back" facility which, in responding to radio calls, confirms selection of the correct frequency.

IR part 3

As part of the "third party communications" legislative initiative mentioned above, CASA will examine the requirement for the operation of traffic alerting services at aerodromes during RPT operations. This would need to integrated with Airspace 2000 initiatives and policy issues such as classification of operations.

IR parts 4 and 5

CASA does not have specific standards for the provision of radar services, but has encouraged use of existing radar coverage to enhance safety. While it may prove to be a significant safety enhancement to provide additional radar coverage in the Bundeberg [sic] area, it would not seem practical or cost efficient to require radar surveillance of all terminal areas serviced by RPT operations."