Australian Government
Australian Transport Safety Bureau

Near collision involving Beechcraft A36, VH-CKX, and Fairchild SA226-TC, VH-KGX

Geraldton Airport, Western Australia, on 19 March 2024

ATSB Transport Safety Report
Aviation Occurrence Investigation (Short)
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Addendum

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Investigation summary

What happened

On 19 March 2024, a Fairchild SA226-TC Metroliner, registered VH-KGX and operated by CASAIR, taxied at Geraldton, Western Australia for runway 03. About one minute later, a Beechcraft A36 Bonanza, registered VH-CKX and operated by Shine Aviation, taxied for runway 14. After reaching their respective runway thresholds, both pilots attempted to contact the other, however, they did not hear each other, nor could they see each other. A third aircraft assisted by relaying information. Based on the information received, the Bonanza and Metroliner pilots commenced their take-off within 3 seconds of each other. The Metroliner crossed runway 14 about 400 m in front of the Bonanza, with a vertical separation of about 250–300 ft.

What the ATSB found

The ATSB found that, when aircraft were positioned at the thresholds of runway 03 and 14 (and 08), they will unlikely be visible to each other due to the position of the airport buildings. Further, they may not be contactable on VHF radio due to potential shielding effects. This resulted in the pilots being unable to verify each other's position and intentions prior to commencing their take-off.

While the pilot of the third aircraft was attempting to assist, the details provided were inaccurate and incomplete. This inadvertently resulted in misinterpretation by the Bonanza and Metroliner pilots and influenced their decision to take off.

What has been done as a result

CASAIR emphasised to its flight crew that in situations where communication difficulties were identified, flight crew should stop or slow down until completely assured of the situation. Further, to assist in flight preparation and planning, CASAIR amended its aerodrome documentation to include a caution regarding limited visibility and potential VHF shielding at Geraldton.

Shine Aviation highlighted to its pilots the importance of being completely certain of other aircraft's position and intentions and not making assumptions. It also advised that, when a third party provided assistance, that pilot should take responsibility for accurately communicating all relevant information. Further, although CTAF radio communications were an assessed item for pilot checks, it was not included in their training syllabus, which has since been amended.

Geraldton Airport conducted informal radio checks and identified that, when operating at opposite ends of the aerodrome, VHF shielding was possible. It has submitted an amendment to the En Route Supplement Australia to highlight this possibility.

Safety message

Operations at non-controlled aerodromes require pilots to monitor traffic and maintain separation through the use of VHF radio in conjunction with a vigilant lookout. This principle of alerted see and avoid can be an effective measure against collisions. However, situations may arise where VHF radio communications difficulty is encountered and/or visibility is limited. In this case, it is critical that pilots take all reasonable measures to verify the position and intentions of known traffic. A third party may be available to assist and when doing so, that party must ensure they accurately relay all relevant information. Where necessary, all involved should actively organise a separation plan.

The ATSB SafetyWatch highlights the broad safety concerns that come out of our investigation findings and from the occurrence data reported to us by industry. One of the safety concerns is reducing the collision risk around non-towered airports.

The investigation

Decisions regarding the scope of an investigation are based on many factors, including the level of safety benefit likely to be obtained from an investigation and the associated resources required. For this occurrence, a limited-scope investigation was conducted in order to produce a short investigation report, and allow for greater industry awareness of findings that affect safety and potential learning opportunities.

The occurrence

On 19 March 2024, at about 0803 local time, a Fairchild SA226-TC Metroliner aircraft, registered VH-KGX and operated by CASAIR, began taxiing for runway 03 at Geraldton, Western Australia, for a flight to Cobra Station with the pilot and 9 passengers. A minute later, a Beechcraft A36 Bonanza aircraft, registered VH-CKX and operated by Shine Aviation, began taxiing for runway 14 for a flight to East Wallabi Island with the pilot and 5 passengers.

The pilots of both aircraft made appropriate broadcasts (refer to section titled *CTAF audio recordings*) on the common traffic advisory frequency (CTAF),[1] and after reaching their respective runway thresholds, attempted to establish radio contact to ascertain their position and intentions. Both pilots reported that they were unable to establish contact with the other, nor were they able to see the other from their relative positions.

At the same time, VH-MVQ, a Cessna 172 (company aircraft to the Bonanza) was on taxiway Charlie, holding short[2] of runway 14. The pilot attempted to assist by providing traffic information, initially to the Bonanza pilot and later to the Metroliner pilot. The Cessna pilot's last traffic advice was not addressed to a particular aircraft and advised that both aircraft were holding short for each other.

Both the Bonanza and Metroliner pilots later reported that, following that transmission they believed that they were safe to proceed with their take-off. At 0808:38, the Bonanza pilot broadcast that they were rolling on runway 14, which was followed immediately by the Metroliner pilot broadcasting that they were rolling on runway 03. Neither pilot heard the other pilot's rolling call. The Metroliner commenced take-off at 0808:52 followed 3 seconds later by the Bonanza (refer to section titled *Flight tracking data*).

The pilot of a GA-8 Airvan (VH-AVP, another company aircraft to the Bonanza) was waiting in line behind the Cessna and reported that, when they became aware of a potential conflict, they made a transmission to alert the Bonanza pilot. By this time the Bonanza had advanced 100 m along the runway, but the pilot did not hear this transmission and continued their take-off. The Metroliner pilot heard the call, however, as they were past their low speed abort regime, they elected to continue their take-off.

The Metroliner entered the runway 14 strip just before 0809:24, about 400 m ahead of the Bonanza, with a vertical separation of 250–300 ft. The Metroliner cleared runway 14 one second later (Figure 1). Once both the Bonanza and Metroliner were airborne, the pilots were able to establish and maintain effective 2-way radio communications with each other.

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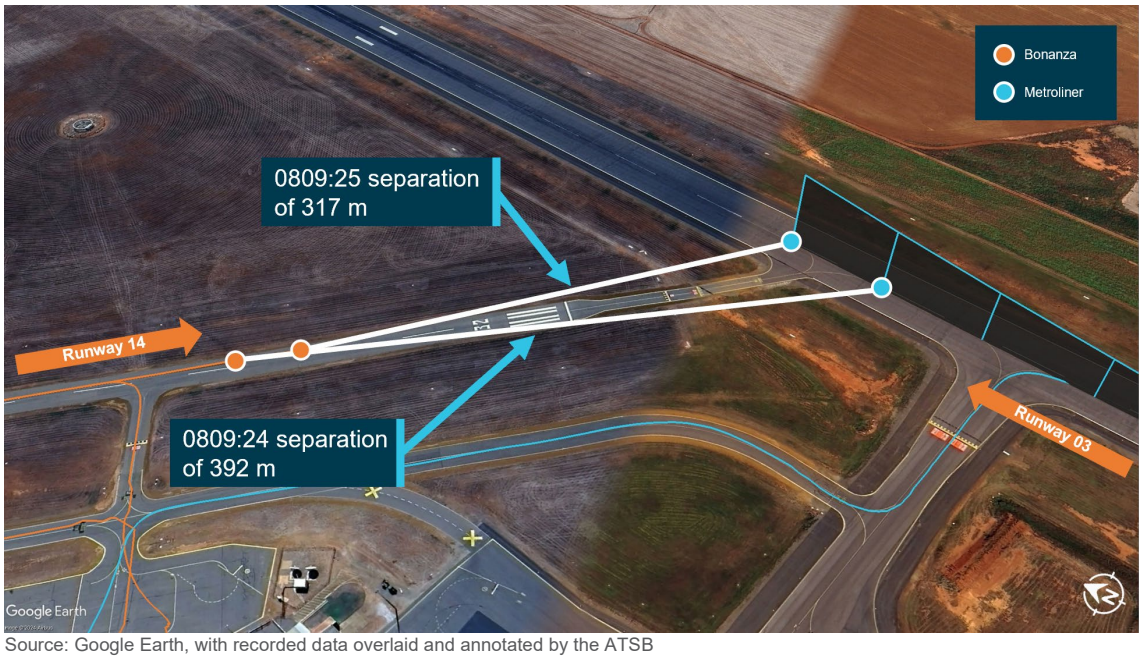
1 Common traffic advisory frequency (CTAF): a designated frequency on which pilots make positional broadcasts when operating in the vicinity of a non-controlled aerodrome or with a broadcast area.

2 The term 'holding short' typically indicates that the aircraft has stopped at the marked runway holding point and that no part of the aircraft extends onto the runway.

Figure 1: Closest position of VH-CKX (Bonanza) and VH-KGX (Metroliner)



Source: Google Earth, with recorded data overlaid and annotated by the ATSB

Context

Pilot information

VH-CKX

The pilot held a commercial pilot licence (aeroplane) and a valid class 1 aviation medical certificate. They reported a total of 2,127 flying hours of which they had flown 155 hours on type. Their last proficiency check was in March 2024.

The pilot reported being familiar with operations at Geraldton having been based there for over 4 years.

VH-KGX

The pilot held an air transport pilot licence (aeroplane) and a valid class 1 aviation medical certificate. They reported a total of 13,092 flying hours, which included 1,632 hours on type. Their last proficiency check was in December 2023.

The pilot reported having operated at Geraldton about 6 times in recent months.

Aircraft information

VH-CKX was a Beechcraft A36 Bonanza single piston-engine aircraft manufactured in the United States in 1974 and was first registered in Australia in 1974. The Bonanza has a maximum seating capacity of 6, including the pilot.

VH-KGX was a Fairchild SA226-TC Metroliner twin turboprop aircraft manufactured in the United States in 1980 and was first registered in Australia in 1997. VH-KGX was configured to carry a maximum of 12 passengers and 2 flight crew.

Meteorological information

The weather at Geraldton at the time of the incident was good with visibility greater than 25 km and no cloud below 10,000 ft. The wind was 140° (south-easterly) at 19 kt, which favoured operations on runway 14 and runway 21. The pilot of the Metroliner initially planned their departure from runway 21 but amended this to runway 03 to allow for an on-track departure.

Geraldton Airport

General information

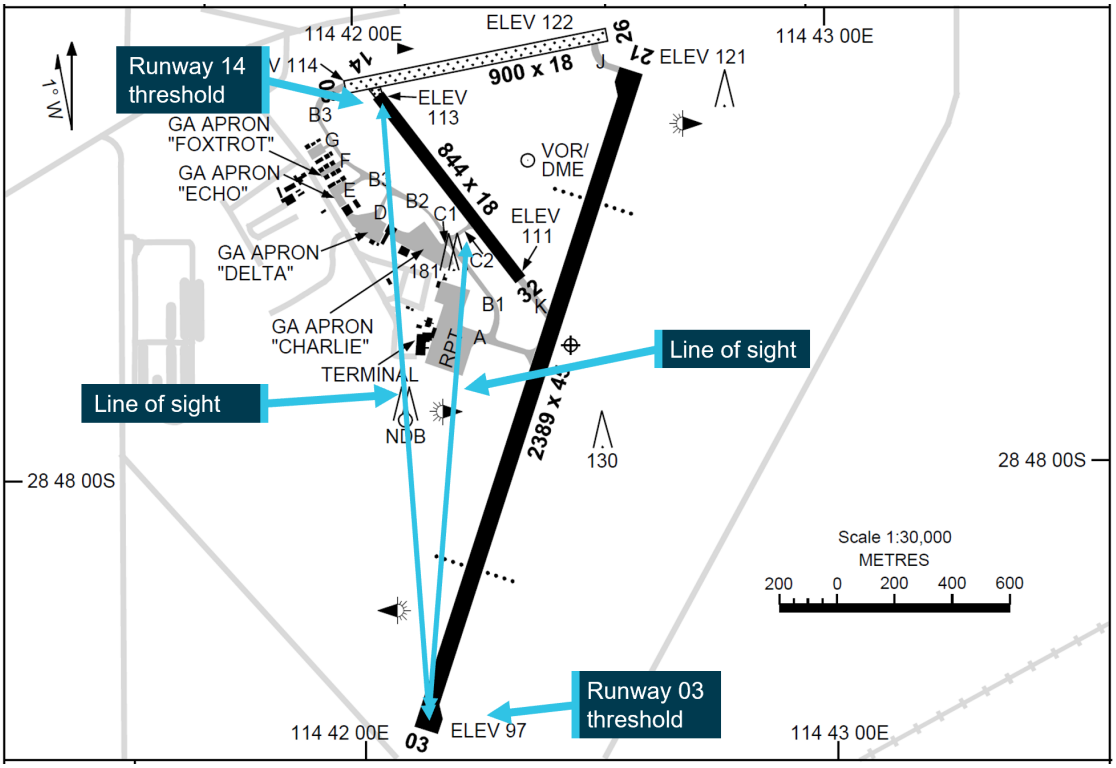
Geraldton Airport was a certified, non-controlled aerodrome located 11.11 km to the east-south-east of the city of Geraldton, Western Australia. Its elevation was 122 ft, and it had 2 sealed runways, 03/21[3] and 14/32, with a third gravel runway 08/26.

Geraldton Airport was located within class G uncontrolled airspace. The CTAF was assigned the discrete very high frequency (VHF) 126.8 and it had an aerodrome frequency response unit.[4]

Visual limitations

The thresholds of runways 03 and 14 were separated by a distance of 2,168 m and the majority of airport infrastructure such as the terminal, hangars and aprons were situated between those thresholds (Figure 2).

Figure 2: Geraldton Airport chart extract



Source: Airservices Australia, annotated by the ATSB

The En Route Supplement Australia provided information to pilots on the operations specific to each aerodrome. The entry for Geraldton Airport did not include any information about visibility between the thresholds of runways 03 and 14 (or 08).

The pilots involved in this incident reported not being able to see each other from the thresholds of their respective runways and photographs obtained from Geraldton Airport (Figure 3, Figure 4) showed the visibility from the 03 and 14 runway thresholds.

[3] Runway numbering: represents the magnetic heading closest to the runway orientation.

[4] Aerodrome frequency response unit (AFRU): a device that provides an automatic response when the pilot transmits on the traffic frequency (normally a CTAF) for a particular non-controlled aerodrome. This helps pilots to both confirm they are using the right frequency and makes them aware of potential traffic in the area.

Figure 3: View of runway 14 threshold from runway 03 threshold

Source: Geraldton Airport, annotated by the ATSB

Figure 4: View of runway 03 threshold from runway 14 threshold

Source: Geraldton Airport, annotated by the ATSB

Recorded information

CTAF audio recordings

A recording of the CTAF transmissions at the time of the incident was obtained and a summary of the key transmissions is in Table 1.

Table 1: Geraldton CTAF radio transmissions

Time	Station	Transmission
0804:15	VH-KGX	Geraldton traffic, Metro Kilo Golf Xray entering backtracking amended runway zero three, Geraldton.
0804:31	VH-CKX	and traffic Geraldton, Charlie Kilo Xray taxis runway one four departure to the northwest
0806:48	VH-CKX	Metroliner, Charlie Kilo Xray, your current position please.
0807:13	VH-CKX	Metroliner for runway zero three, Charlie Kilo Xray.
0807:23	VH-CKX	Mike Victor Quebec, Charlie Kilo Xray, do you know Metroliner's position?
0807:30	VH-MVQ	Charlie Kilo Xray, Mike Victor Quebec, yeah, he's still on the runway hasn't departed yet, I'm guessing he's on centre.
0807:36	VH-CKX	Garbled transmission with interference to begin, then: Understood.
0807:38	VH-KGX	Kilo Golf Xray is just holding zero three for a moment, Geraldton.
0807:53	VH-KGX	Geraldton traffic for departure on runway one four, say your position please.
0808:01	VH-CKX	Metroliner runway zero three, Charlie Kilo Xray.
0808:15	VH-MVQ	Charlie Kilo Xray, Mike Victor Quebec, ah yeah, I don't know if you got his last transmission but he's holding short runway zero three.
0808:22	VH-KGX	roger, understand traffic, it's coming through a bit muffled, just understand that you're holding short confirm.
0808:34	VH-MVQ	ahh right now, ahh you guys are both holding short for each other. (confirmed as VH-MVQ)
0808:38	VH-KGX	Garbled transmission with interference to begin, appears two stations transmitting at same time, then: Roger.
0808:39	VH-CKX	OK copy that, Charlie Kilo Xray, Metroliner… pause... we're lining up shortly rolling 14 overhead departure outbound to the north-west climbing two thousand five hundred.
0808:50	VH-KGX	Geraldton traffic, Kilo Golf Xray rolling runway zero three.
0809:08	VH-AVP	[Bonanza pilot's name] he's rolling.

Flight tracking data

Flight tracking data was retrieved from both the Bonanza and Metroliner. Key locations and associated transmissions/events are shown in Figure 5.

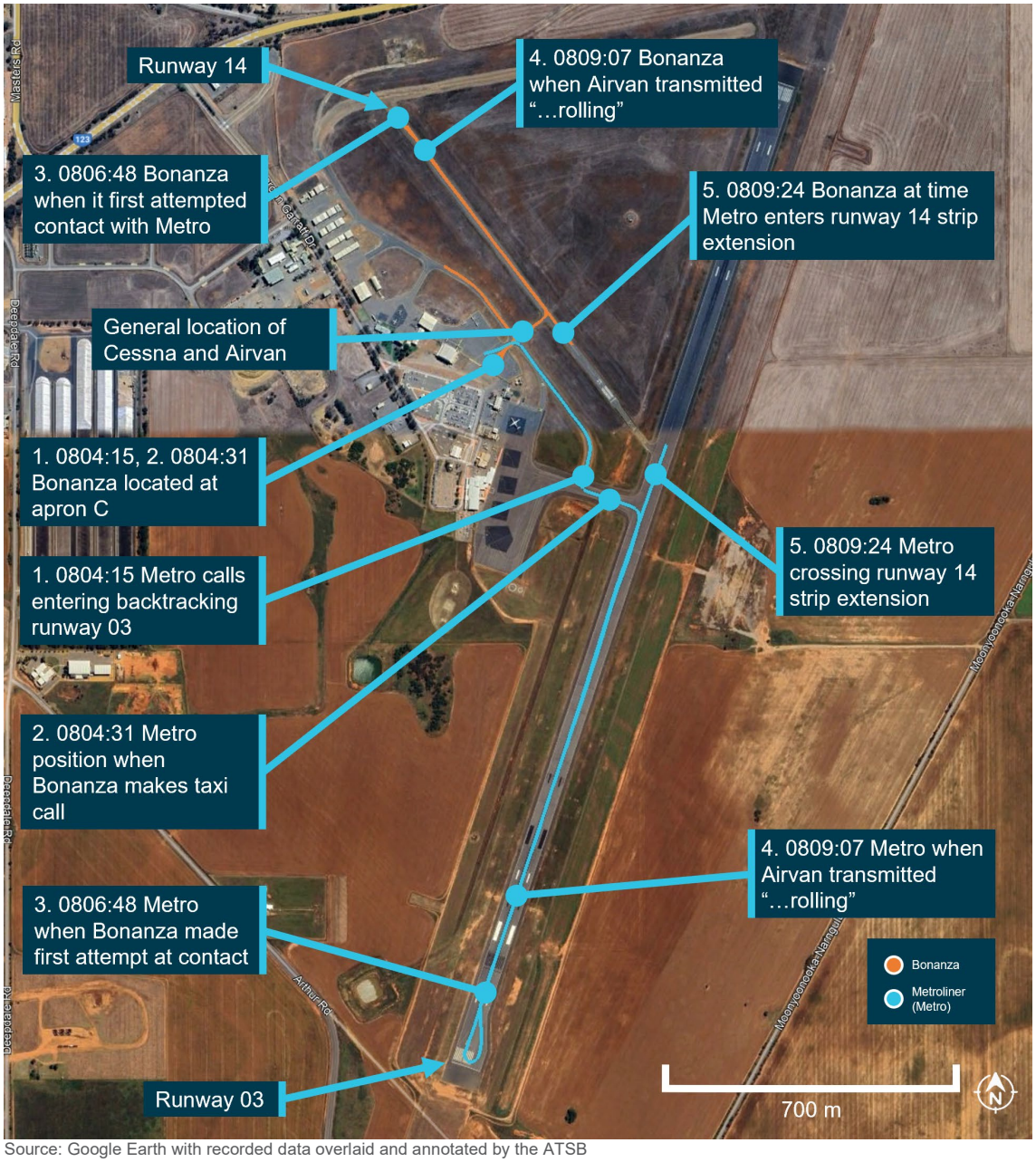
At the time the pilot of the Metroliner transmitted their entering/backtracking call (Figure 5, Label 1), the tracking data showed their position as approaching taxiway A, with the Bonanza located at apron C. When the Bonanza pilot made their taxi call the Metroliner was just entering runway 03 and both aircraft were still within line of sight (Figure 5, Label 2).

At 0806:48 (Figure 5, Label 3), the Bonanza was lined up and holding on runway 14 when the pilot made their first attempt to contact the Metroliner. The Metroliner had not yet reached the threshold of runway 03 and lined up on runway 03 at 0807:30.

At 0808:52, the Metroliner commenced its take-off roll, followed by the Bonanza rolling at 0808:55. When the Airvan pilot attempted to alert the Bonanza at 0809:07, the Bonanza had progressed about 100 m along runway 14. The Metroliner had progressed about 400 m (Figure 5, Label 4).

The Metroliner entered the runway strip of runway 14 just prior to 0809:24, about 400 m in front of the Bonanza, with about 250–300 ft vertical separation (Figure 5, Label 5). It was clear of runway 14 just after 0809:25. The Bonanza reached the centreline of runway 03 at 0809:33 by which time the Metroliner was at a distance of 560 m and climbing away from the Bonanza.

Figure 5: Flight tracking data overlay



Source: Google Earth with recorded data overlaid and annotated by the ATSB

Communication between the aircraft

Interviews with the pilots of the Metroliner, Bonanza and Cessna confirmed that all 3 had recognised some difficulty in communicating. The CTAF audio recordings confirmed that although both pilots attempted to, they did not establish direct contact with each other. There were a number of transmissions that were not responded to and some instances of over transmission or interference in the 2-minute period prior to the incident.

The Bonanza pilot reported that the last radio transmission heard from the Metroliner was their entering/backtracking broadcast.

The Metroliner pilot reported they heard several garbled/muffled transmissions during their taxi for runway 03 but they were only able to understand 2 transmissions, one of which was what they believed was that 4 aircraft were holding for runway 14. The other transmission heard was '[Bonanza pilot's name] he's rolling'.

Decision to take off

The Bonanza pilot reported that, when they lined up on runway 14, they had expected the Metroliner to have already departed. Although they had asked the Cessna pilot about the Metroliner, they did not request the Cessna pilot to directly contact the Metroliner to confirm their position and intentions. After being advised by the Cessna pilot that both aircraft were holding for each other, the Bonanza pilot reported that they believed this gave them the opportunity to announce they were rolling and commence take-off.

The Metroliner pilot had expressed some mild frustration at being delayed following refuelling at Geraldton, due to having to locate their passengers. They did not report any time pressure but said that they could accept the tailwind on runway 03, which would allow an on track departure. The Metroliner pilot reported that of the radio transmissions that they were able to understand, they believed they heard that 4 aircraft were holding on runway 14. They understood this to be that those aircraft were waiting for the Metroliner allowing them to announce rolling and commence take-off.

Third party assistance

The Cessna pilot reported being able to clearly hear both the Bonanza and the Metroliner pilots, but they could only see the Bonanza. However, from the broadcasts, the Cessna pilot realised there was some confusion as to who was communicating with each other. When making the broadcast stating 'right now you guys are both holding for each other', the Cessna pilot stated during interview that this transmission was not directed at a particular aircraft, and they intended to let both know they were holding for each other. By the time they realised both aircraft had commenced take-off, the Cessna pilot assessed it was too late for the Bonanza to stop and therefore did not make an advisory broadcast.

Operations at non-controlled aerodromes

At and around non-controlled aerodromes, pilots are required to be aware of other aircraft by maintaining a listening watch on the appropriate frequency. In accordance with Civil Aviation Safety Regulations Part 91 Manual of Standards Chapter 21, pilots must also make radio broadcasts when reasonably necessary to avoid the risk of collision with another aircraft.

This is the basis of alerted see and avoid. An 'alerted' search is one where the pilot is alerted to another aircraft's presence, typically through radio communications or aircraft based alerting systems. Broadcasting on the CTAF to any other traffic in the vicinity of a non-controlled aerodrome is known as radio-alerted see-and-avoid and assists by supporting the pilot's situational awareness and visual lookout for traffic with the expectation of visually acquiring the subject in a particular area.

Civil Aviation Safety Authority advisory circulars AC 91-10[5] and AC 91-14[6] provided additional guidance on the recommended broadcasts which focus on the provision of a pilot's position and intentions to enhance situational awareness. AC 91-10 advised:

> 8.6.1 Whenever pilots determine that there is a potential for traffic conflict, they should make radio broadcasts as necessary to avoid the risk of a collision or an Airprox event. Pilots should not be hesitant to call and clarify another aircraft's position and intentions if there is any uncertainty.
>
> 8.6.4 In addition to making their own broadcasts, pilots should listen to other broadcasts by other aircraft, an air traffic service or CA/GRS to increase situational awareness.

AC 91-14 advised:

> 10.1.5 Pilots should be mindful that transmitting information by radio does not guarantee receipt and complete understanding of that information. Many of the worst aviation accidents in history have their genesis in misunderstanding of radio calls, over-transmissions, or poor language/phraseology which undermined the value of the information being transmitted.
>
> 10.1.6 Without understanding and confirming the transmitted information, the potential for alerted see-and-avoid is reduced to the less safe situation of unalerted see-and-avoid.

VHF communication at Geraldton Airport

VHF radio requires line of sight between stations in order to maximise transmission quality. Obstacles between stations such as terrain and buildings can attenuate the radio signal, in terms of both strength and clarity. VHF radio is also susceptible to over transmission, where 2 stations transmit at the same time, which may cancel one or both transmissions. Neither the Bonanza nor the Metroliner had any other devices or aids for traffic awareness other than VHF radio.

Following the incident, Geraldton Airport staff conducted informal radio tests at the thresholds of runway 03 and 14 using vehicle mounted VHF radios. They noted a number of factors that could impact radio signal strength, including vehicle height in comparison to aircraft height, radio age/condition and if the radio was handheld or vehicle mounted. However, the testing identified varied levels of VHF radio reception and that there was the possibility of shielding due to the buildings.

Similar occurrence

ATSB Investigation (AO-2023-025)

On 6 June 2023, a Piper PA-28-161, registered VH-ENL, taxied for runway 36 at Mildura, Victoria. At about the same time, a QantasLink Bombardier DHC-8-315 (Dash 8), registered VH-TQH, began to taxi for runway 09. Both aircraft broadcast their intentions on the local common traffic advisory frequency. The pilot of the PA-28 was aware of the Dash 8, but the crew of the Dash 8 were not aware of the PA-28. Both aircraft commenced their take-off at about the same time and the Dash 8 crossed ahead of the PA-28 at the runway intersection of 09/36 by about 600 m.

The pilot of the PA-28 was unable to visually sight the location of the Dash 8 due to airport buildings and assumed that the Dash 8 was still backtracking on runway 09. They did not directly contact the Dash 8 to positively organise separation. They also incorrectly referred to the runway direction at Mildura Airport as 'runway 35' instead of 'runway 36'.

The Dash 8 crew was focused on obtaining their pre-departure information from air traffic control and had the volume for the radio tuned to the common traffic advisory frequency turned down. An over transmission from air traffic control meant that the Dash 8 crew only received certain elements of the PA-28 pilot's radio calls. This likely led to an incomplete comprehension of traffic by the Dash 8 crew who believed that the PA-28 was not at Mildura (due to the incorrect reference

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5 CASA AC 91-10 v1.2 *Operations in the vicinity of non-controlled aerodromes* August 2024

6 CASA AC 91-14 v1.0 *Pilots' responsibility for collision avoidance* October 2021

to runway 35). However, they did not seek further information of the source of the radio calls to positively identify the traffic location.

The investigation found that, due to the topography and buildings at Mildura Airport, aircraft are not directly visible to each other on the threshold of runways 09, 27 and 36. The Dash 8 crew did not give a rolling call on runway 09, nor were they required to. The lack of a requirement for mandatory rolling calls increased the risk of aircraft not being aware of each other immediately prior to take-off.

Safety analysis

Introduction

On 19 March 2024, a Fairchild SA226-TC Metroliner, registered VH-KGX, commenced a take-off on runway 03 at Geraldton, Western Australia. About 3 seconds later, a Beechcraft A36 Bonanza, registered VH-CKX, began to take off on runway 14. The Metroliner crossed runway 14 about 400 m in front of the Bonanza, with a vertical separation of about 250–300 ft.

This analysis will examine the factors relating to the communication issues regarding the position and intentions of each aircraft, and the location of the airport buildings potentially affecting visibility and radio calls when positioned at the runway thresholds.

Verification of traffic

The configuration of Geraldton Airport meant that when aircraft are operating simultaneously from the runway 03 and 14 (or 08) thresholds, they are likely not visible to each other, obstructed by the airport buildings situated between them. This was consistent with the photographs later taken from the runway thresholds. In this situation, pilots are solely reliant on VHF radio communications for maintaining situational awareness with other aircraft. However, from the informal testing conducted by Geraldton Airport and as shown in a previous ATSB investigation at a different airport, the location of infrastructure may also result in shielding of VHF transmissions, potentially rendering them weak and/or unreadable.

Both the Bonanza and Metroliner pilots were aware of each other's presence prior to commencing their taxi and attempted to maintain contact in preparation for their departure. However, when at either end of the aerodrome (for runway 03 and 14), they were unable to make direct contact with each other, with several transmissions reported as being weak and unreadable or unheard, as evidenced by the CTAF audio recordings and interviews with both pilots. Further, the pilots were unable to see each other's aircraft when at the thresholds. Therefore, it was likely that the buildings between the Metroliner and Bonanza aircraft had the effect of radio shielding, preventing the pilots from directly communicating, and limited visibility of their respective positions. Consequently, their only option was to relay information via the Cessna pilot, who was able to communicate with both aircraft, despite only being able to see the Bonanza.

Third-party assistance

The Cessna pilot who attempted to provide assistance did not directly ask either pilot about their intentions prior to each commencing their take-off and therefore did not have all the relevant information to relay. They also mistakenly transmitted an incorrect position for the Metroliner, advising the Bonanza pilot that the Metroliner was holding short of runway 03, instead of holding on runway 03. It was also noted that the Cessna pilot had made a broadcast intended for both pilots advising that were holding for each other.

Both the Bonanza and Metroliner pilots, based on advice from the Cessna pilot, thought that the other was holding, although neither had positively verified with each other or with the intermediary Cessna. Consequently, the advice influenced their understanding that they could safely proceed, announce rolling and commence take-off, which occurred at the same time and increased the potential for a collision.

While the Cessna pilot was not required to communicate what was occurring, nor were they responsible for the decisions made by the other pilots, they were in a position to be able to reduce confusion and increase situational awareness of all parties. As described in the Civil Aviation Safety Authority guidance, the transmission of information by radio does not guarantee that it will be received or understood. Therefore, it is imperative that all parties ensure the accurate transmission of all relevant information and verify receipt when necessary to prevent misunderstandings.

Findings

ATSB investigation report findings focus on safety factors (that is, events and conditions that increase risk). Safety factors include 'contributing factors' and 'other factors that increased risk' (that is, factors that did not meet the definition of a contributing factor for this occurrence but were still considered important to include in the report for the purpose of increasing awareness and enhancing safety). In addition, 'other findings' may be included to provide important information about topics other than safety factors.

These findings should not be read as apportioning blame or liability to any particular organisation or individual.

From the evidence available, the following findings are made with respect to the near collision involving Beechcraft A36, VH-CKX, and Fairchild SA226-TC, VH-KGX, at Geraldton Airport, Western Australia, on 19 March 2024.

Contributing factors

- Due to the position of the airport buildings at Geraldton Airport, aircraft on the thresholds of runway 03 and 14 (and 08) are likely not visible to each other and may experience VHF radio shielding. This resulted in the pilots being unable to verify each other's position and intentions for their take-off.
- The pilot of a third aircraft attempted to relay information to the incident pilots to assist with the communication difficulties. However, the details provided inadvertently lead to misinterpretation by the incident pilots, influencing their decision to take off.

Safety actions

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. All of the directly involved parties are invited to provide submissions to this draft report. As part of that process, each organisation is asked to communicate what safety actions, if any, they have carried out to reduce the risk associated with this type of occurrences in the future. The ATSB has so far been advised of the following proactive safety action in response to this occurrence.

Safety action by CASAIR (VH-KGX)

Following an internal investigation of the incident, company guidance for operations at Geraldton Airport were revised to notify flight crew that caution was required with multiple aircraft movements on intersecting runways and that communication shielding may obscure any traffic conflict. The revised guidance also included a caution that aircraft operating from runway 03 may not see or hear aircraft operating on runway 08 or 14.

CASAIR also reviewed ground radio selection procedures to ensure optimum communications but found the most effective option based on equipment and antenna installation was already in practice.

CASAIR included discussion of the incident in a flight crew meeting, emphasising the inclusion of airfield limitations in their preparation and planning. Further, where a significant reduction in

communications quality was identified, flight crew should stop or slow down until they are completely assured of the situation.

Safety action by Shine Aviation (VH-CKX)

Shine Aviation conducted an internal investigation and scheduled an agenda item for its next flight crew meeting. It would discuss ensuring sufficient 2-way communication was established with any aircraft believed to be operating in the vicinity and where a third party assists that this party should take responsibility for accurately communicating with all involved. The operator also advised that its flight crew must be completely certain of other aircraft position and intentions, and not assume anything prior to proceeding. The operator has also provided its investigation report to Geraldton Airport for review and possible action with regard to potential VHF shielding.

Shine Aviation noted that, while CTAF radio communication and awareness was assessed during line training and any check flights, it was not documented in the line training syllabus and an amendment was actioned to correct this.

Safety action by Geraldton Airport

The Geraldton Airport manager discussed the incident with the pilots and the operator, and believed that the circumstances were relatively rare but has highlighted the possibility of VHF radio shielding to their airport team. Geraldton Airport has also submitted an amendment to the En Route Supplement Australia to alert pilots to the possibility of radio shielding when operating at opposite ends of the aerodrome.

General details

Occurrence details

Date and time:	19 March 2024 – 0809 WST	
Occurrence class:	Serious incident	
Occurrence categories:	Near collision, Air-ground-air	
Location:	Geraldton Airport, Western Australia	
	Latitude: 28.7962° S	Longitude: 114.7075° E

Aircraft details – VH-CKX

Manufacturer and model:	Beech Aircraft Corp A36	
Registration:	VH-CKX	
Operator:	Shine Aviation Service (Chrishine Nominees Pty Ltd)	
Serial number:	E-540	
Type of operation:	Part 135 Australian air transport operations-Smaller aeroplanes-Standard Part 135	
Activity:	Commercial air transport-Non-scheduled-Passenger transport	
Departure:	Geraldton Airport, Western Australia	
Destination:	Abrolhos East Wallabi Island, Western Australia	
Persons on board:	Crew – 1	Passengers – 4
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	None	

Aircraft details – VH-KGX

Manufacturer and model:	Fairchild Industries Inc SA-226-TC	
Registration:	VH-KGX	
Operator:	CASAIR PTY LTD	
Serial number:	TC-326	
Type of operation:	Part 135 Australian air transport operations-Smaller aeroplanes-Standard Part 135	
Activity:	Commercial air transport-Non-scheduled-Passenger transport	
Departure:	Geraldton Airport, Western Australia	
Destination:	Cobra Station, Western Australia	
Persons on board:	Crew – 1	Passengers – 9
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	None	

Sources and submissions

Sources of information

The sources of information during the investigation included:

- the pilot of VH-CKX and other pilots who conducted flights for the operator
- the pilot of VH-KGX
- CASAIR
- Shine Aviation
- Airservices Australia
- the Bureau of Meteorology
- the Civil Aviation Safety Authority
- Geraldton Airport.

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Submissions

Under section 26 of the *Transport Safety Investigation Act 2003*, the ATSB may provide a draft report, on a confidential basis, to any person whom the ATSB considers appropriate. That section allows a person receiving a draft report to make submissions to the ATSB about the draft report.

A draft of this report was provided to the following directly involved parties:

- the pilot of VH-CKX
- the pilot of VH-KGX
- the pilot of VH-MVQ
- CASAIR
- Shine Aviation
- the Civil Aviation Safety Authority
- Geraldton Airport.

Submissions were received from the:

- pilot of VH-KGX
- Civil Aviation Safety Authority.

The submissions were reviewed and, where considered appropriate, the text of the report was amended accordingly.

Australian Transport Safety Bureau

About the ATSB

The ATSB is an independent Commonwealth Government statutory agency. It is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers.

The ATSB's purpose is to improve the safety of, and public confidence in, aviation, rail and marine transport through:

- independent investigation of transport accidents and other safety occurrences
- safety data recording, analysis and research
- fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia, as well as participating in overseas investigations involving Australian-registered aircraft and ships. It prioritises investigations that have the potential to deliver the greatest public benefit through improvements to transport safety.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, international agreements.

Purpose of safety investigations

The objective of a safety investigation is to enhance transport safety. This is done through:

- identifying safety issues and facilitating safety action to address those issues
- providing information about occurrences and their associated safety factors to facilitate learning within the transport industry.

It is not a function of the ATSB to apportion blame or provide a means for determining liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner. The ATSB does not investigate for the purpose of taking administrative, regulatory or criminal action.

Terminology

An explanation of terminology used in ATSB investigation reports is available on the ATSB website. This includes terms such as occurrence, contributing factor, other factor that increased risk, and safety issue.