



Australian Government

Australian Transport Safety Bureau

Separation issue due to runway incursion involving Cessna 172, VH-EKV, and Beech 58, VH-MLB

Alice Springs Airport, Northern Territory, 16 June 2016

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Addendum

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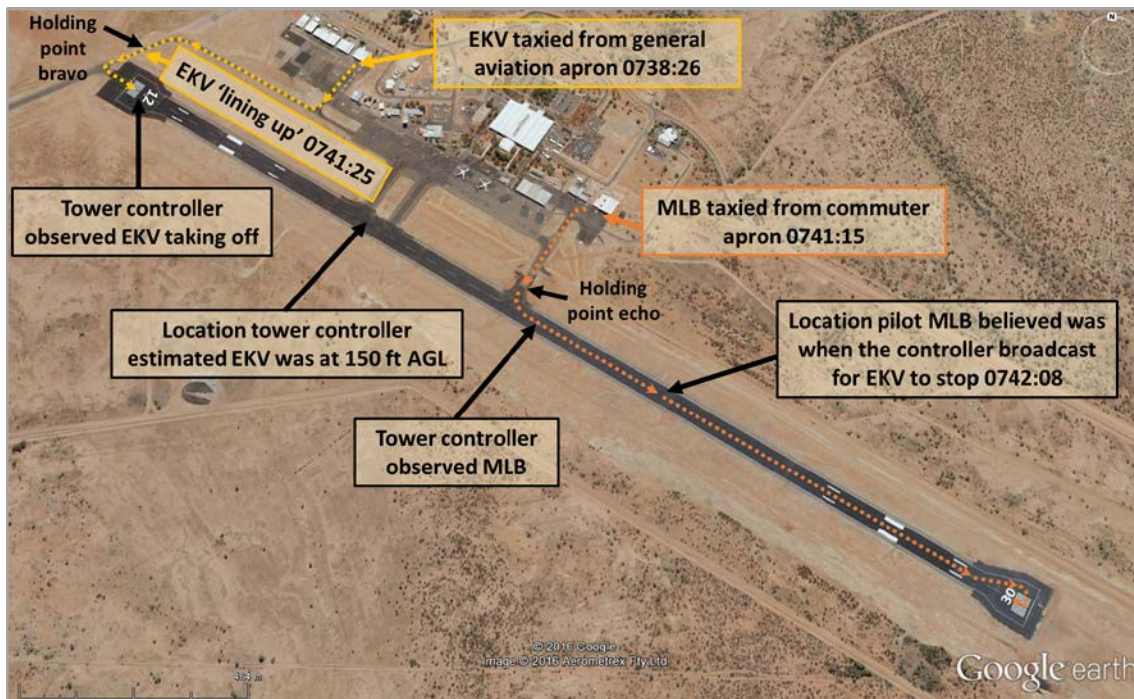
Separation issue due to runway incursion involving Cessna 172, VH-EKV, and Beech 58, VH-MLB

What happened

At about 0738 Central Standard Time (CST), a Cessna 172 aircraft, registered VH-EKV (EKV), taxied to depart from runway 12 at Alice Springs Airport, Northern Territory for Ayers Rock. The pilot and two passengers were on board the private flight. The air traffic control Tower was scheduled to open at 0800. At the time of departure, procedures for operating in the vicinity of non-controlled aerodromes applied at Alice Springs Airport. The airport has a common traffic advisory frequency (CTAF) when the Tower is closed.

The aircraft was located on the general aviation apron and taxied for holding point bravo for runway 12 (yellow line in Figure 1). The pilot of EKV broadcast a taxi call on the CTAF.

Figure 1: Alice Springs Airport showing the taxi routes and relevant locations of EKV (yellow line) and MLB (orange line)



Source: Google earth, modified by the ATSB

The transcripts of the relevant CTAF recordings are shown below, with the time, who made the broadcast, the transmission, and readability.¹

Time	Source	Broadcast	Readability
0738:26	EKV	All stations EKV Cessna 172 taxiing for the runway 12 [AFRU ² 'Alice Spring CTAF']	5. Perfectly readable

¹ As outlined in the Airservices aeronautical information publication (AIP), the readability scale is as follows: 1. Unreadable, 2. Readable now and then, 3. Readable but with difficulty, 4. Readable, 5. Perfectly readable.

² Alice Springs Airport has an aerodrome frequency response unit (AFRU) installed. The AFRU is to provide an automatic response to CTAF broadcasts to indicate to an operator that the correct radio frequency was selected and to

Following the broadcast by the pilot of EKV, several broadcasts were made on the CTAF where the airport rescue and firefighting service were conducting routine radio checks.

At 0741:15, the pilot of a Beech 58 aircraft, registered VH-MLB (MLB), broadcast a taxi call on the CTAF (the readability was 2, as the call was badly broken and very hard to understand). The aircraft was located on the commuter apron and taxied for holding point echo with the intention of then backtracking on the runway in preparation for a runway 30 departure (for a flight to Nyirripi) (orange line in Figure 1). The pilot and two passengers were on board the charter flight.

0741:15	MLB	Alice springs traffic MLB taxiing and backtracking runway 30 for Nirripi Alice Springs [AFRU tone]	2. Readable now and then
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At 0741:25, the pilot of EKV broadcast that they were lining up on runway 12 (Figure 1).

0741:25	EKV	EKV lining up on 12 [No AFRU tone]	5. Perfectly readable
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The pilot of MLB reported that they did not hear this broadcast from EKV, nor the earlier broadcast that they were taxiing for runway 12.

At 0741:30, the pilot of a Piper PA32 broadcast a taxi call (the readability was 3, with a loud squeal). The PA32 was located at the general aviation apron, close to where EKV had taxied earlier, and was taxiing for runway 12.

0741:30	PA32	Alice springs traffic [registration] taxiing runway 12 Alice Spring [AFRU tone]	3. Readable but with difficulty
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The pilot of MLB responded to the broadcast by the pilot of the PA32, asking if they were happy for MLB to taxi (which included entering and backtracking the runway) for runway 30, and advised that they were 'shortly to depart'.

0741:38	MLB	Aircraft taxiing runway 12 you happy for me to taxi runway 30 shortly to depart [No AFRU tone]	5. Perfectly readable
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The pilot of the PA32 responded to that broadcast by indicating that they would hold short of runway 12.

0741:43	PA32R	Affirm [registration] will hold short [No AFRU tone]	4. Readable
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The pilot of MLB responded, thanking the pilot of the PA32.

0741:47	MLB	MLB thank you [No AFRU tone]	5. Perfectly readable
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Following this exchange between the pilot of the PA32 and the pilot of MLB, several broadcasts were made on the CTAF, where the airport fire and rescue service were conducting radio checks (at 0741:53, 0741:59, and 0742:02).

The pilot of MLB approached holding point echo and reported looking for other aircraft on approach or lined up on either runway (12 or 30). The pilot of MLB did not see any other aircraft and had not heard any other aircraft on the CTAF except for the PA32, so entered the runway and commenced backtracking runway 30 (orange line in Figure 1).

At about the same time, the pilot of EKV commenced take-off on runway 12. At about take-off speed, the pilot reported observing another aircraft enter the runway and start taxiing on runway

confirm the operation of the radio's transmitter and receiver, and the volume setting. If a broadcast has not been made on the CTAF in the preceding five minutes, and this transmission is over 2 seconds in length, a voice identification from the ARFU 'Alice Springs CTAF' is generated. If a broadcast has been made on the CTAF in the preceding five minutes, a 300-millisecond tone will be generated after each transmission over two seconds long.

12 (away from them). The pilot assessed that it would be more dangerous to stop, so continued with the take-off.

An air traffic controller arrived in the control tower (which was due to open at 0800) and observed a Cessna 172 aircraft (EKV) taking off on runway 12 and a Beech 58 aircraft (MLB) taxiing on the same runway, about half way down the runway (Figure 1). The controller advised the pilot of EKV to stop immediately.

0742:08	ATC	EKV stop immediately stop immediately [No AFRU tone]	5. Perfectly readable
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The pilot of EKV reported not hearing the advice to stop immediately, but was busy with the take-off. The controller reported that EKV was airborne approximately 500 m before the position of MLB and passed overhead MLB at about 150 feet above ground level. The pilot reported banking the aircraft to the north at about 500 feet and two-thirds of the way down the length of the runway to avoid any possible conflict with the aircraft (MLB) on the runway.

The pilot of MLB heard the controller's advice to another aircraft to stop, but was not aware of the reason. During the turn at the end of the runway to line up on runway 30, the pilot noticed a Cessna 172 (EKV) in a left turn toward the north. The pilot broadcast on the CTAF for the aircraft in the Alice Springs circuit area to notify their intentions.

0743:57	MLB	Aircraft in circuit area at Alice Springs MLB just request your intentions [AFRU tone]	5. Perfectly readable
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The pilot of EKV then gave a departure call at 0744:14 (readability was 4).

0744:14	EKV	EKV on climb to 3,000 departed time 14 [AFRU tone]	4. Readable
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The pilot of MLB believed that the pilot of the Cessna 172 (EKV) had responded to their broadcast, and reported that the readability from the Cessna 172 was very poor. The pilot of MLB responded to the Cessna 172 at 0744:27, but that broadcast was over-transmitted by another aircraft making a taxi broadcast.

The next broadcast recorded from MLB was at 0747:19, where the pilot broadcast a departure call. The pilot reported having made lining-up and holding broadcasts, which may have been over-transmitted, and also making a rolling broadcast that was not recorded on the CTAF.

Both aircraft departed without further incident.

Pilot comment VH-EKV

The pilot reported generally operating at Alice Springs Airport when the tower was open, so would normally communicate with the tower controller. At the time of the occurrence, the Tower had not opened and the pilot reported hearing radio calls, but commented that radio calls from aircraft were not as clear as those made from the tower controllers. The pilot was aware that there was another aircraft departing to Nyirripi (destination of MLB).

Pilot comment VH-MLB

The pilot reported identifying the location of the PA32 as they approached holding point echo. The pilot commented that there were some white buildings in the distance behind the threshold of runway 12 that may have made it difficult to see EKV. The pilot indicated that the runway, although long, it is quite flat, and the whole runway was visible. The pilot also indicated that they were focused on known traffic. The pilot recognised the aircraft registration of the PA32 and the voice of the pilot, and confirmed the location of that aircraft before entering the runway.

The pilot reported that the winds were calm. They elected to use runway 30 as it was the most convenient runway for their departure.

Radio communication - Alice Springs airport

A study was conducted in 2010 by the Civil Aviation Safety Authority (CASA) to review the airspace classification above Alice Springs, [Aeronautical Study of Alice Springs \(YBAS\) January 2010](#), and is available from the CASA website. The study consulted with stakeholders and did not identify any radio transmission 'black spots'.

ATSB comment

The relevant communication recordings for the Alice Springs CTAF were obtained by the ATSB from Airservices Australia and the relevant broadcasts were given a readability level by the ATSB using the standard in radiotelephony communications as published in the AIP. The communications recorded are not necessarily what a pilot hears in their respective aircraft.

The ATSB could not establish why the pilots of both aircraft did not hear the broadcasts from the other aircraft.

Safety message

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 such concern is [Safety around non-controlled aerodromes](#), which highlights that it is difficult for pilots to detect another aircraft through visual observation alone. The ATSB has identified that insufficient communication between pilots operating in the same area is the most common cause of safety incidents near non-controlled aerodromes.



This incident highlights the fundamental importance of effective communication, particularly during operations at a non-controlled aerodrome. The Civil Aviation Safety Authority (CASA) has produced several publications and resources that provide important safety advice related to operations in the vicinity of non-controlled aerodromes. Relevant guidance and explanatory material provided by CASA includes the following:

- [CASA Civil Aviation Advisory Publication \(CAAP\) CAAP 166-1\(3\) Operations in the vicinity of non-controlled aerodromes](#),
- [CAAP 166-2\(1\) Pilots' responsibility for collision avoidance in the vicinity of non-controlled aerodromes using 'see-and-avoid'](#),
- [Operations at non-towered aerodromes booklet](#).

General details

Occurrence details

Date and time:	16 June 2016 – 0743 CST	
Occurrence category:	Incident	
Primary occurrence type:	Separation issue	
Location:	Alice Springs Airport, Northern Territory	
	Latitude: 23° 48.50' S	Longitude: 133° 54.05' E

Aircraft details – VH-EKV

Manufacturer and model:	Cessna Aircraft Company 172L	
Registration:	VH-EKV	
Serial number:	17260094	
Type of operation:	Private – Pleasure / Travel	
Persons on board:	Crew – 1	Passengers – 2
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	Nil	

Aircraft details – VH-MLB

Manufacturer and model:	Beech Aircraft Corp 58	
Registration:	VH-MLB	
Serial number:	TH-1675	
Type of operation:	Charter - Passenger	
Persons on board:	Crew – 1	Passengers – 2
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	Nil	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and 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 that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to operations involving the travelling public.

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

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine 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.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.