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**Australian Transport Safety Bureau**

# Aircraft proximity event between a Fairchild SA227, VH-HVH and an Aerospatiale AS.350, VH-JRJ

near Bathurst Island Airport, Northern Territory, 21 June 2013

**ATSB Transport Safety Report**  
Aviation Occurrence Investigation  
AO-2013-105  
Final – 17 September 2013

Released in accordance with section 25 of the *Transport Safety Investigation Act 2003*

#### **Publishing information**

**Published by:** Australian Transport Safety Bureau  
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#### **Addendum**

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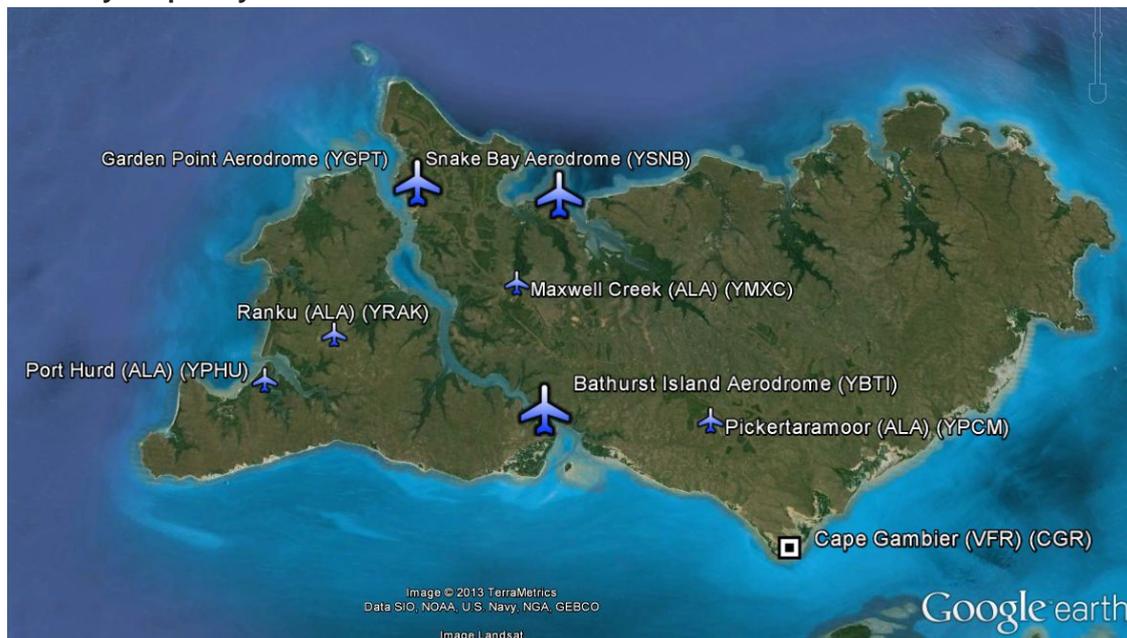
# Aircraft proximity event between a Fairchild SA227, VH-HVH and an Aerospatiale AS.350, VH-JRJ

## What happened

On 21 June 2013, at about 1700 Central Standard Time,<sup>1</sup> a Hardy Aviation Fairchild SA227 aircraft, registered VH-HVH (HVH), was being operated on a scheduled passenger flight from Bathurst Island to Darwin, Northern Territory. Prior to departing, the crew broadcast a taxi, entering the runway, and a rolling call on the Bathurst Island common traffic advisory frequency (CTAF).<sup>2</sup> After takeoff, the crew broadcast another call advising that they intended to depart the circuit on the downwind leg, on climb to 5,000 ft.

At about the same time, the pilot of an Aerospatiale AS.350 helicopter, registered VH-JRJ (JRJ), was departing Barra Base, near the Port Hurd aeroplane landing area (ALA) (Figure 1) for a ferry flight to Darwin. The pilot reported broadcasting a taxi and an airborne call on the CTAF. He had planned to overfly the Bathurst Island aerodrome, along the coast to Cape Gambier and then to Darwin (Figure 2).

**Figure 1: Bathurst Island and surrounding aerodromes using the common traffic advisory frequency**



Source: Google earth

When at 16 NM and 7 NM from the Bathurst Island aerodrome, the pilot of JRJ broadcast on the CTAF advising he was overflying the aerodrome and then flying coastal to Cape Gambier. At 1708, JRJ was 3 NM to the west of the aerodrome at 2,589 ft (Figure 2).<sup>3</sup>

<sup>1</sup> Central Standard Time (CST) was Coordinated Universal Time (UTC) + 9.5 hours.

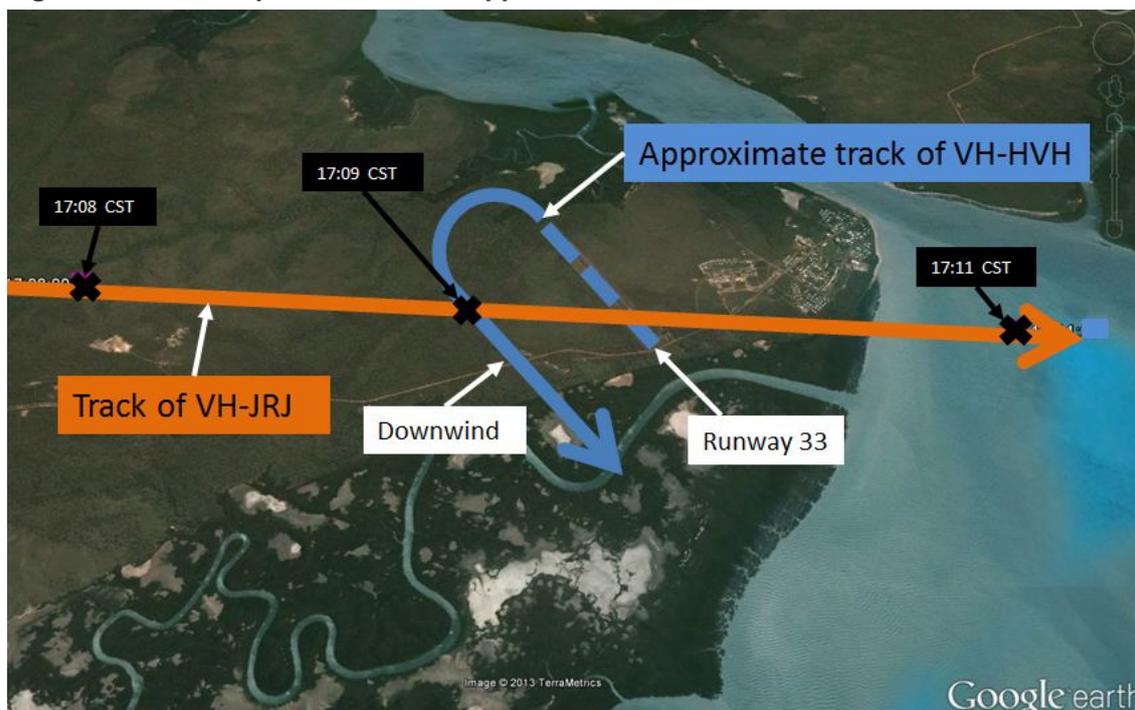
<sup>2</sup> The Bathurst Island aerodrome shares a common CTAF frequency with a number of aerodromes at Bathurst Island, including Garden Point, Snake Bay, Maxwell Creek, Ranku, Port Hurd and Pickertaramoor.

<sup>3</sup> VH-JRJ was fitted with 'Spidertracks', which recorded data regarding the helicopter's track.

At 1709, HVH was heading downwind following take-off and climbing through 2,000 ft when the first officer exclaimed on sighting a helicopter (JRJ). The captain had been recording the departure time and looked up and saw JRJ about 50-100 ft above and 400 m to his right. The first officer initiated a descent and JRJ passed overhead.

At 1711, JRJ was about 1 NM to the east of the aerodrome at 2,025 ft. JRJ was fitted with a GPS monitoring system, Spidertracks, that provided route reports to the operator. The relevant data was provided to the ATSB.

**Figure 2: VH-JRJ ‘Spidertracks’ and approximate track of VH-HVH**



Source: Google earth

The crew of HVH had not heard any radio calls from the pilot of JRJ on the CTAF. The captain called the pilot of JRJ, who responded. The pilot of JRJ reported hearing an aircraft taxiing at Bathurst Island, but as he had planned to overfly the aerodrome at 2,500 ft, he did not believe the aircraft would be in conflict. The pilot of JRJ also stated that he did not see HVH.

### ***Pilot comments (VH-HVH)***

The captain reported that broadcasts made on the very high frequency (VHF) radio (CTAF) on the ground at any of the aerodromes on Bathurst Island had limited coverage due to a lack of ground infrastructure. Consequently, only aircraft operating in the immediate vicinity of that location would hear broadcasts. While on the ground, pilots use the high frequency (HF) radio to contact Melbourne centre. The captain stated that the background noise associated with the HF radio could be a distraction and make it difficult to hear broadcasts made on the VHF. The captain suggested that enhanced VHF coverage would improve communications, enabling pilots to hear broadcasts made both on the ground and airborne over a larger area.

### ***Pilot comments (VH-JRJ)***

The pilot of JRJ reported that there was radio congestion at the time, which was normal for the area given the number of aerodromes using the same CTAF. He reported that JRJ had not descended from 2,589 ft until it had passed HVH.

## Safety action

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. The ATSB has been advised of the following proactive safety action in response to this occurrence.

### **Operator of VH-JRJ**

As a result of this occurrence, the operator of VH-JRJ has advised the ATSB that they are taking the following safety actions:

#### **Mandatory reading**

The operator has mandated that all pilots read CAAP 166-1

[www.casa.gov.au/wcmswr/assets/main/download/caaps/ops/166-1.pdf](http://www.casa.gov.au/wcmswr/assets/main/download/caaps/ops/166-1.pdf)

and the ATSB publication Safety in the vicinity of non-towered aerodromes:

[www.atsb.gov.au/publications/2008/ar-2008-044\(2\).aspx](http://www.atsb.gov.au/publications/2008/ar-2008-044(2).aspx)

#### **Forum**

The operator has opened a forum on an internal operator bulletin board and instructed all pilots to advise on their understanding of the literature and procedures in the vicinity of non-towered aerodromes to evaluate and determine if there are any deficiencies within their operations.

#### **Flight Safety Instruction**

The operator issued a company Flight Safety Instruction advising the company of the incident and advises pilots to

‘monitor the relevant radio frequency in the vicinity of non-towered airfields and keep a sharp look out while transiting over or around such airports. Switch on landing/strobe/search lights when available to aid in making Company helicopters more visible in the vicinity of busy/often used airfields. Never assume that there is/will be no aircraft taxiing, transiting, landing or taking off from such airports no matter how remote or unused the airport or ALA may appear to be.’

#### **Safety Notice**

The company also issued a Safety Notice regarding flight in the vicinity of non-towered aerodromes specifically reminding pilots to:

- Maintain a lookout for other aircraft at all times.
- Always make the standard radio broadcasts — even when you think there is no nearby traffic.
- Achieve radio alerted see-and-avoid by making all of the standard broadcasts within 10 NM of a non-towered aerodrome.
- Use the same procedures at all non-towered aerodromes, unless otherwise stated in the En Route Supplement Australia (ERSA).
- Be aware that any radio-equipped aircraft could be conducting straight-in approaches at non-towered aerodromes
- Avoid overflying aerodromes where possible, and take note of IFR inbound and outbound routes.

## Safety message

This incident emphasises the importance of alerted see-and-avoid practices. Issues associated with unalerted see-and-avoid have been documented in an Australian Transport Safety Bureau (ATSB) research report *Limitations of the See-and-Avoid Principle*. Unalerted see-and-avoid relies entirely on the ability of the pilot to sight the other aircraft.

A broadcast made on the CTAF is radio-alerted see-and-avoid, which is more likely to be successful because knowing where to look greatly increases the pilot's chance of sighting the traffic. The *Limitations of See-and-Avoid Principle* research report is available at [www.atsb.gov.au/publications/2009/see-and-avoid.aspx](http://www.atsb.gov.au/publications/2009/see-and-avoid.aspx).

In addition, *Safety around non-towered aerodromes* is one of the focuses of the ATSB SafetyWatch campaign and is available at [www.atsb.gov.au/safetywatch/safety-around-aeros.aspx](http://www.atsb.gov.au/safetywatch/safety-around-aeros.aspx).



## General details

### Occurrence details

|                          |  |                          |
|--------------------------|--|--------------------------|
| Date and time:           | 21 June 2013 – 1709 CST                          |                          |
| Occurrence category:     | Serious incident                                 |                          |
| Primary occurrence type: | Aircraft proximity event                         |                          |
| Location:                | near Bathurst Island Airport, Northern Territory |                          |
|                          | Latitude: 11° 46.15' S                           | Longitude: 130° 37.18' E |

### Fairchild SA227, VH-HVH

|                         |                                    |                  |
|-------------------------|------------------------------------|------------------|
| Manufacturer and model: | Fairchild Industries Inc. SA227-DC |                  |
| Registration:           | VH-HVH                             |                  |
| Type of operation:      | Air transport - low capacity       |                  |
| Persons on board:       | Crew – 2                           | Passengers – 19  |
| Injuries:               | Crew – Nil                         | Passengers – Nil |
| Damage:                 | Nil                                |                  |

### Aerospatiale AS.350, VH-JRJ

|                         |                                |                  |
|-------------------------|--------------------------------|------------------|
| Manufacturer and model: | Aerospatiale Industries AS.350 |                  |
| Registration:           | VH-JRJ                         |                  |
| Type of operation:      | Private                        |                  |
| Persons on board:       | Crew – 1                       | Passengers – Nil |
| Injuries:               | Crew – Nil                     | Passengers – Nil |
| Damage:                 | Nil                            |                  |

## About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The Bureau 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 fare-paying passenger operations.

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.