



Australian Government

Australian Transport Safety Bureau

Near collision involving a Beech BE76, VH-SRO and a Cessna 172, VH-EEM

27 km S Archerfield Airport, Queensland, 30 May 2014

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Addendum

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Near collision involving a Beech BE76, VH-SRO and a Cessna 172, VH-EEM

What happened

On 30 May 2014 at about 0900 Eastern Standard Time (EST), a Beech BE76 aircraft, registered VH-SRO (SRO), departed Archerfield Airport, Queensland, for a local flight to the training area south of the airport, with an instructor and a pilot in command under supervision (ICUS) on board. At about 0920, the student pilot of a Cessna 172 aircraft, registered VH-EEM (EEM), departed Archerfield for a solo local area flight. The student's planned route was to track 135° (south-east) outbound from Archerfield at 1,000 ft above mean sea level (AMSL), and when overhead the Logan Motorway, climb to 2,500 ft AMSL and track towards Logan Village. At Logan Village, the student pilot climbed the aircraft to 3,000 ft AMSL and practiced turns before tracking towards Jimboomba (Figure 1). The pilot of another aircraft in the vicinity broadcast on the area frequency and the student pilot of EEM sighted that aircraft and responded.

Figure 1: Aircraft tracks overlaid on Brisbane visual terminal chart



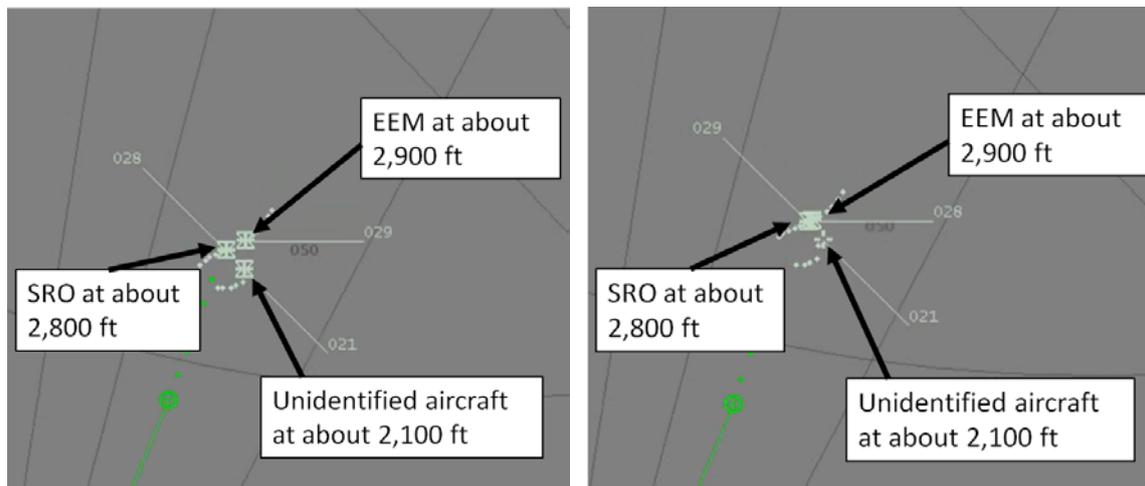
Source: Airservices Australia and pilot recollection

After completing training exercises at 3,000 ft AMSL south of Jimboomba, the pilots of SRO commenced tracking north towards Park Ridge to return to Archerfield. At about 0940 EST, while at 6 km south of Park Ridge and 3,000 ft AMSL, the instructor in SRO sighted EEM on a

converging heading in his 1 o'clock position,¹ and immediately took control of the aircraft from the pilot under supervision. He conducted a descent and estimated that EEM passed about 50 ft above SRO and about 100m away horizontally. The student pilot of EEM observed SRO pass below and to the right.

Radar data provided to the ATSB by Airservices Australia indicated that EEM passed about 100 ft over SRO (Figure 2), with aircraft altitudes unverified.

Figure 2: Radar display of the incident



Source: Airservices Australia

Pilot comments

Instructor of VH-SRO

The instructor of SRO reported that the normal procedures were to track anticlockwise around the southern training area. When operating in the training area, although there was no requirement to do so for aircraft operating under visual flight rules (VFR), Brisbane Centre air traffic control (ATC) had occasionally alerted pilots, when aircraft appeared to come into close proximity on the radar screen. He was not advised of EEM by ATC in this incident.

Student pilot of VH-EEM

The student pilot of EEM reported that he was maintaining 3,000 ft AMSL to attempt to remain above any aircraft tracking towards, and on descent to Park Ridge, as aircraft were required to report at Park Ridge at 1,500 ft AMSL. As SRO was a low wing aircraft and EEM high-winged, neither pilot would have been able to sight the other aircraft when SRO was above EEM.

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.

Aircraft operator (VH-EEM and VH-SRO)

As a result of this occurrence and following discussions with the Civil Aviation Safety Authority (CASA) and Airservices Australia, the operator has implemented a new procedure for company pilots on entry to the southern (D673) and eastern (D666, D675) training areas. At the standard departure points from Archerfield Airport, pilots are to contact Brisbane Centre ATC on frequency

¹ The clock code is used to denote the direction of an aircraft or surface feature relative to the current heading of the observer's aircraft, expressed in terms of position on an analogue clock face. Twelve o'clock is ahead while an aircraft observed abeam to the left would be said to be at 9 o'clock.

125.7 MHz and request traffic in their destined training area. Company pilots will be reminded that this action is in addition to the need to maintain an effective lookout for other aircraft.

The procedures and limitations in the provision of information services in Class G airspace, are detailed in *AIP GEN 3.3 – 2.16 Surveillance Information Services (SIS) to VFR Flights in Class E and Class G Airspace*, <http://www.airservicesaustralia.com/aip/aip.asp?pg=10>.

Safety message

This incident highlights the importance of communication and the limitations of unalerted see-and-avoid principles. Issues associated with unalerted see-and-avoid have been detailed in the ATSB's research report *Limitations of the See-and-Avoid Principle*. The report highlights that unalerted see-and-avoid relies entirely on the pilot's ability to sight other aircraft. Broadcasting on the local area frequency is known as radio-alerted see-and-avoid, and assists by supporting a pilot's visual lookout for traffic. An alerted traffic search is more likely to be successful as knowing where to look greatly increases the chances of sighting traffic. The report is available at www.atsb.gov.au/publications/2009/see-and-avoid.aspx.

General details

Occurrence details

Date and time:	30 May 2014 – 0950 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	27 km S Archerfield Airport, Queensland	
	Latitude: 27° 48.75' S	Longitude: 152° 58.77' E

Aircraft details: VH-SRO

Manufacturer and model:	Beech Aircraft Corporation	
Registration:	VH-SRO	
Serial number:	ME-58	
Type of operation:	Flying training – dual	
Persons on board:	Crew – 2	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

Aircraft details: VH-EEM

Manufacturer and model:	Cessna Aircraft Company	
Registration:	VH-EEM	
Serial number:	17280487	
Type of operation:	Flying training – solo	
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 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 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.