



Australian Government

Australian Transport Safety Bureau

Aircraft proximity event between a Cessna 172S, VH-FPV, and a Piper PA-28-161, VH-OWO

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Addendum

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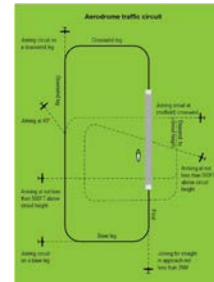
Aircraft proximity event between a Cessna 172S, VH-FPV, and a Piper PA-28-161, VH-OWO

What happened

On 29 January 2014, at about 1100 Eastern Daylight-savings Time (EDT), the student pilot of a Piper PA-28-161 aircraft, registered VH-OWO (OWO), taxied to runway 17 Left (17 L) at Moorabbin Airport, Victoria to conduct five solo circuits.

At about the same time, a Cessna 172S aircraft, registered VH-FPV (FPV), was conducting circuits from runway 17 L with a student pilot and instructor on board. The air traffic controller (controller) had asked the instructor of FPV on the previous circuit to keep the circuits closer to the runway.

Circuit pattern



Source: Civil Aviation Safety Authority

After completing his first touch-and-go circuit, the pilot of OWO was following an aircraft on upwind. When approaching 500 ft above ground level (AGL), prior to commencing the turn onto crosswind, the pilot observed the aircraft ahead continuing to climb straight ahead, and assumed it was departing for the training area. He then commenced the turn onto crosswind.

At about 1105, the pilot of an aircraft broadcast that they were turning downwind just as the pilot of OWO commenced his turn onto downwind. He immediately sighted the aircraft he had been following to his right and realised he had turned inside it. He was then given a new sequencing instruction by the controller.

The pilot of OWO reported that, having 'cut off' an aircraft in the circuit, he was conscious of conducting a tight circuit and maintaining the aircraft's speed, to ensure OWO remained well in front of the following aircraft. At about 1108, as OWO turned onto final, the pilot was instructed by the controller to go around as he was then too close to an aircraft conducting a full stop landing on runway 17 L at the time.

The pilot of OWO conducted two more uneventful touch-and-go circuits and reported that he was concentrating on flying 'perfect' circuits with regard to spacing, altitude and turning landmarks such as the green roof used for turning onto final (Figure 1). At about 1121, when on his fifth and planned final circuit, the pilot of OWO reported downwind for a full stop landing. He was instructed to follow a Cessna (FPV) and sighted the aircraft.

When on about mid-downwind, the pilot moved his attention inside the cockpit to switch the fuel selector to the other fuel tank. When he had completed the fuel tank selection and the downwind checks, he looked up and sighted an aircraft on final, assumed it was FPV and continued to follow that aircraft.

At about 1123, the pilot of FPV reported that FPV was established on early final, at about 400 ft AGL, when he sighted OWO in a turn about 100 ft above and just in front of FPV. He immediately took control of the aircraft from the student and descended to increase the vertical separation between the two aircraft.

As the pilot of OWO commenced the turn onto final, at about 500 ft AGL, he sighted FPV to his right about 200 ft below OWO. He reported that at the time he was unsure whether that aircraft was landing on the parallel runway, 17 Right (17 R), however he levelled OWO off to maintain separation between the two aircraft.

The controller broadcast “OWO go around thanks, go around” with which the pilot complied immediately. The controller then asked the pilot of OWO, “Are you watching those aircraft when turning?” The pilot of OWO reported feeling somewhat rattled by the comment and apologised.

The pilot of FPV continued with the approach and reported to the controller that he had OWO in sight, to which the controller replied “that’s not the point”.

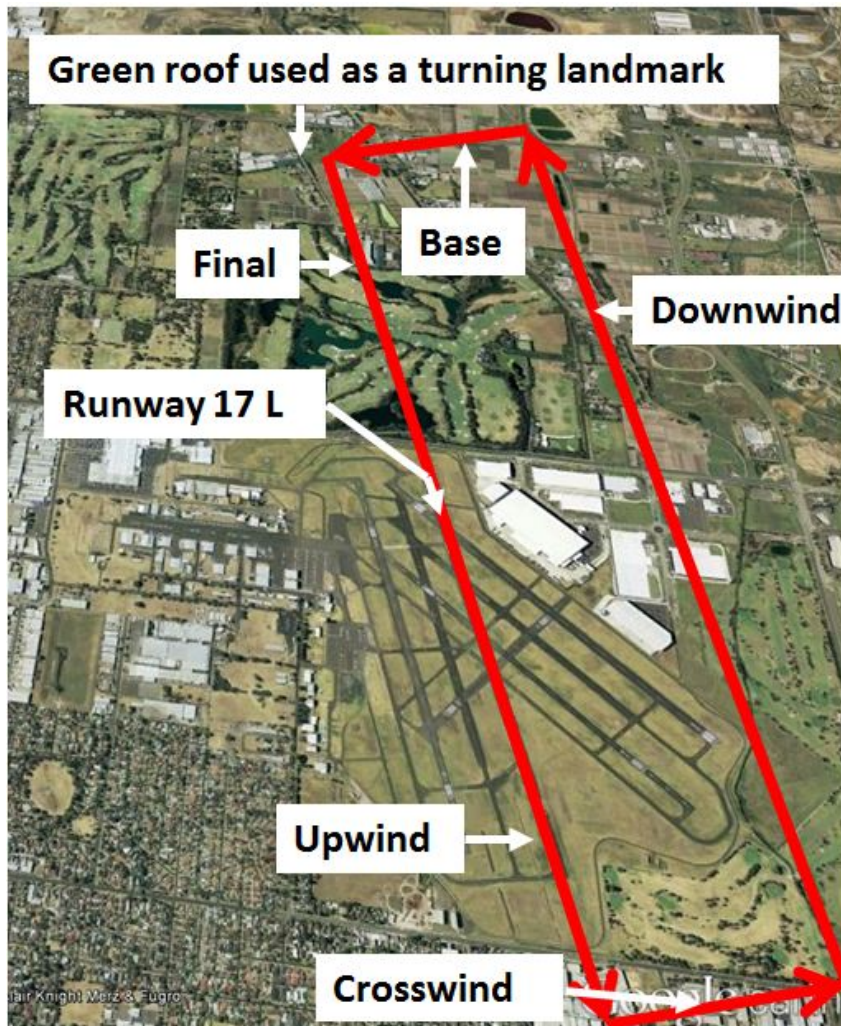
OWO conducted a final circuit before being cleared to land on runway 17 R and reported that he paid particular attention to keeping the aircraft in front of him in sight. Airservices Australia advised that the controller acted professionally and in accordance with procedures throughout the incident.

Controller comments

The air traffic controller provided the following comments:

- The controller frequently assisted student pilots to maintain adequate separation
- This sort of occurrence happens frequently at Moorabbin.
- The controller did not consider it to be a proximity event and estimated the aircraft came within about 200 to 300 ft of each other. The controller did not observe either aircraft taking any avoiding action.
- The comment to the student pilot of OWO was intended to elicit a response indicating that he would pay more attention to observing the other aircraft in the circuit.
- Many student pilots seem to be focused on flying a ‘perfect’ circuit, using ground features, and not following sequencing instructions or paying sufficient attention to other aircraft in the circuit. When an aircraft ahead flies a wider or slower circuit, the pilot is unable to maintain adequate separation with it.
- Education is needed to ensure pilots are aware of their responsibilities to maintain separation in Class D airspace. In visual meteorological conditions (VMC), there is a joint responsibility in Class D airspace between pilot and air traffic controllers to maintain separation.

Figure 1: Circuit flown by VH-OWO including circuit 'legs'



Source: Google earth and pilot recollection

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-OWO

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

Pilot briefing

The operator conducted a briefing of staff and student pilots, addressing the need for situational awareness, visual scanning and prioritising tasks. An emphasis was placed on developing an effective scan and maintaining a listening watch to assist in building an awareness of the other aircraft operating in the airspace. Pilots were advised to maintain traffic separation and not fly circuits solely by reference to ground features.

Safety message

The Civil Aviation Safety Authority booklet, *Class D airspace*, www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_93379, advises pilots that when operating in Class D airspace, they must sight and maintain separation from other aircraft. The ATC instruction to ‘follow’ an aircraft requires pilots to see the preceding aircraft and regulate your speed and approach path to achieve separation. Pilots and ATC have a dual responsibility to maintain situational awareness of other traffic.

This incident highlights the importance of adjusting the circuit flown, varying the shape of the circuit, and the aircraft speed to ensure the pilot is able to comply with a sequencing instruction. It is also a reminder to keep a good lookout at all times, including in Class D airspace.

General details

Occurrence details

Date and time:	25 January 2014 – 1200 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	Moorabbin Airport, Victoria	
	Latitude: 37° 58.55' S	Longitude: 145° 06.13' E

Aircraft details: VH-OWO

Manufacturer and model:	Piper Aircraft Corporation PA-28-161	
Registration:	VH-OWO	
Serial number:	28-7916066	
Type of operation:	Flying training – solo	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

Aircraft details: VH-FPV

Manufacturer and model:	Cessna Aircraft Company 172S	
Registration:	VH-FPV	
Serial number:	172S8311	
Type of operation:	Flying training – dual	
Persons on board:	Crew – 2	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.