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Australian Transport Safety Bureau

Near collision involving Cessna 172S, VH-USL, and parachutists

Lower Light (ALA), South Australia, 6 November 2016

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Addendum

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Near collision involving Cessna 172S, VH-USL, and parachutists

What happened

At about 1113, Central Daylight-saving Time (CDT) on the 6 November 2016, a Cessna 172S aircraft, registered VH-USL (USL), departed Parafield Airport, South Australia for a local flight in the western training area. The pilot was the only person on board the private flight.

The pilot reported that the aircraft has a ‘glass cockpit’¹ and they had only flown it once before with an instructor. The purpose of this flight was to become more familiar with the ‘glass cockpit’ and specifically the autopilot. Prior to taxi with the engine running, the pilot reviewed the operation of the autopilot. In addition, as preparation the pilot had read the auto pilot manual and watched some videos on the operation of the autopilot.

During the initial climb, the pilot engaged the autopilot. As the aircraft started to climb at a faster rate than expected, the pilot disconnected the autopilot and continued on to St Kilda (Figure 1).

Figure 1: Approximate flight path of USL from Parafield to just past the Lower Light ALA



Source: Google earth, modified by the ATSB

¹ A glass cockpit is an aircraft cockpit that features electronic (digital) flight instrument displays, typically large liquid-crystal display (LCD) screens, rather than the traditional style of analog dials and gauges. A glass cockpit uses several displays driven by flight management systems, that can be adjusted (multi-function display) to display flight information as needed.

When the aircraft reached 1,000 ft, the pilot again engaged the autopilot and the autopilot again started to change the attitude of the aircraft, not as expected, and the pilot disconnected the autopilot. After passing St. Kilda, the pilot initiated a climb to 2,500 ft and navigated along the VFR route towards Dublin (Figure 2). In the cruise, the pilot continued to attempt to get the autopilot to engage but it did not respond as they expected. The pilot reported that they made regular checks and would look from inside the cockpit to outside to check the aircraft was maintaining a direction to Dublin and that no other aircraft were in the vicinity.

Figure 2: Visual Terminal Chart showing Dublin, Lower Light ALA, VFR route



Source: Aircservices Australia: Visual Terminal Chart, modified by the ATSB

During this time, a Cessna 206 (C206) aircraft departed Lower Light aircraft landing area (ALA) for parachute operations. They were on climb to flight level (FL) 120 where four parachutists planned to exit the aircraft overhead the Lower Light ALA. The aircraft planned to then continue to climb to FL 140 where two other parachutists in tandem were to exit the aircraft.

The pilot contacted the Adelaide Approach controller and received a clearance to climb initially to FL 120. Approaching FL 120, the pilot received a clearance to drop the first parachutists and then climb to FL 140. The controller also advised them that there was an unverified aircraft (USL) about 3 NM to the south of Lower Light ALA at 2,500 ft. At about 1123, the pilot broadcast on the area frequency advising traffic in the Lower Light area that in about three minutes they would be at FL

120 and would conduct a parachute drop. The pilot of USL reported that they heard this broadcast but no subsequent broadcasts from the aircraft.

The parachute operator's safety officer was listening on the radio frequencies (parachute operation frequency, area frequency and Adelaide Approach frequency) and was standing in front of the operator's hangar. The safety officer reported that they heard the broadcast made that the four parachutists had exited the aircraft (this was not recorded on the area or Adelaide approach frequencies). At about the same time, the safety officer saw a Cessna 172 (C172) aircraft (USL) fly directly over the hangar from the south, heading towards where the safety officer expected to see the four parachutes open. The safety officer contacted the C206 pilot on the radio to let the pilot know that there was an aircraft flying directly towards the parachutists. The safety officer observed the parachutes open near the C172 and observed the C172 aircraft turn to the right slightly and then make a left turn away from Lower Light ALA.

At about the same time, the pilot looked out and observed parachutes just below and to the left of the aircraft at a distance of about 200 m. After checking that it was all clear, the pilot turned the aircraft to the left to manoeuvre away from Lower Light ALA.

At about 1126, the C206 pilot broadcast that the traffic adjacent to Lower Light ALA to depart the area immediately, as there were parachutists in the air. However, the pilot heard no response from the pilot of USL. The C206 pilot contacted Adelaide Approach and advised that an aircraft had interfered with the parachutists. The controller replied that the traffic was outside controlled airspace and they did not have any details on the aircraft. As the C172 was heading away from the area, the controller approved the C206 to drop the remaining parachutes and then descend from FL140.

The pilot of USL disconnected the autopilot, navigated to Dublin, returned to Parafield via the inbound VFR route, and landed without further incident. The six parachutists landed without further incident.

Pilot comment

The pilot reported that they were distracted while trying to operate the autopilot and were not aware that they had flown close to the Lower Light ALA. They heard the broadcast from the C206 pilot but they did not realise that they were that close to the ALA and did not take any action. When the parachutes were sighted, the pilot checked the area before turning, to ensure they were not about to turn into another parachute which was taking action to avoid his aircraft.

After the incident, the pilot reported they informed the flying school where the pilot hired the aircraft about the incident and that they believed the autopilot had a problem.

The pilot reported that the weather was clear and the wind was about 8 knots from the west.

Aircraft owner

The maintenance release for USL contained an endorsement that the autopilot roll servo was unserviceable in August 2016 and another roll servo was installed. On 26 October 2016, the autopilot roll servo was replaced with an exchange servo. There were no other endorsements on the maintenance release about the autopilot.

The aircraft owner reported that apart from the replacement of the autopilot servo there had been no defects recorded about the serviceability of the autopilot. Subsequent to the incident, the operator conducted a full test in flight of the autopilot on USL and no fault was found with the autopilot or with any of its functions.

Parachute operator

The parachute operator reported that in the past they have contacted flying schools in the area notifying them of the frequencies that their pilot will use to notify that there are parachute operations. The parachute operator indicated that there have been other 'close calls' reported but this was the closest that an aircraft has come to a collision with a parachutist.

A search of the ATSB database confirmed three other notifications from 2006 to 2016 where an aircraft was near parachutists at the Lower Light ALA.

Findings

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

- The pilot of the Cessna 172 was distracted by the operation of the aircraft autopilot and as a result, had reduced awareness of the aircraft's position and flew in close proximity to four parachutists.

Safety message

This incident highlights the importance to maintain situational awareness through active navigation and active listening to radio communications. Ensuring you are listening to the correct frequencies and communicating on the correct frequencies helps to maintain your situational awareness but also that of other pilots flying in your area.

The Civil Aviation Safety Authority (CASA) has developed the *Look out! Situational awareness* DVD and video for pilots to learn more about the safety-critical skills that makes up situational awareness. There is a strong emphasis on the need to prepare and plan for every flight. The DVD gives a definition of situational awareness as “what’s happened, what’s happening and what might happen”.

The CASA Safety Video - [Situational awareness](#) is available from the CASA website and the CASA *Look out! Situational awareness* DVD is available from the [CASA online store](#).

General details

Occurrence details

Date and time:	6 November 2016– 1126 CDT	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	Lower Light (ALA), South Australia	
	Latitude: 34° 30.97' S	Longitude: 138° 25.48' E

Aircraft details – VH-USL

Manufacturer and model:	Cessna Aircraft Company 172S	
Registration:	VH-USL	
Serial number:	172S10254	
Type of operation:	Private	
Persons on board:	Crew – 1	Passengers – 0
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.