

**SERIOUS INCIDENT**

<b>Aircraft Type and Registration:</b>	Jabiru J400, G-CCPV	
<b>No &amp; Type of Engines:</b>	1 Jabiru 3300A piston engine	
<b>Year of Manufacture:</b>	2006 (Serial no: PFA 325-14058)	
<b>Date &amp; Time (UTC):</b>	17 August 2021 at 1326 hrs	
<b>Location:</b>	Tevioyhead, Northwest of Spadeadam danger area, Scottish Borders	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - None
<b>Injuries:</b>	Crew - None	Passengers - N/A
<b>Nature of Damage:</b>	None	
<b>Commander's Licence:</b>	Light Aircraft Pilot's Licence	
<b>Commander's Age:</b>	71 years	
<b>Commander's Flying Experience:</b>	491 hours (of which 266 were on type) Last 90 days - 20 hours Last 28 days - 6 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot, flight data and ATC recordings	

**Synopsis**

During a planned VFR flight, the aircraft entered cloud over high ground. The pilot quickly became disoriented and lost control. The aircraft emerged from the cloud with enough height available to regain control and the flight continued safely. Forecasts were available prior to the flight that predicted low cloud on the planned route. CAP1535S, Skyway Code version 3 includes a chapter on meteorology with advice for GA pilots on weather decision making.

**History of the flight**

The pilot used an internet forecast to check the weather and noted a south-westerly wind of 20 kt, good visibility, and overcast cloud with a base of 3,500 ft. The pilot departed from a privately owned airstrip in the Scottish Borders area at 1302 hrs. The intended destination was Sleaf (EGCV). The highest spot elevation in the vicinity of the planned route was 1,953 ft amsl.

The pilot requested and received a basic service from Scottish Control. At around 1320 hrs he was flying at 2,500 ft approaching high ground to the north-west of the Spadeadam danger area (D501A). He estimated that there was 800 ft between the cloud base and the high ground. The pilot reported that as he was approaching the highest point on his planned route the cloud suddenly descended and he entered it. He attempted to climb using full power and became disoriented. He felt that the aircraft stalled and that he had

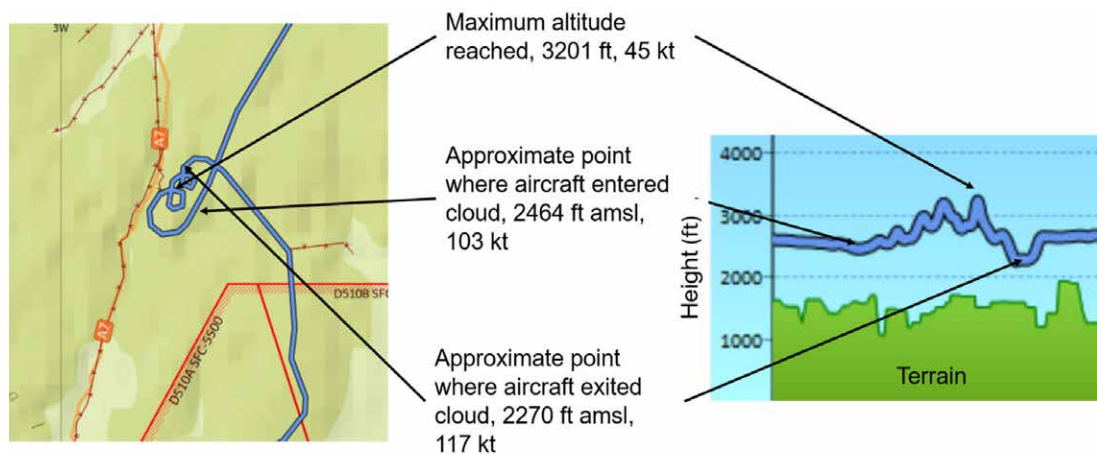
lost control. The aircraft completed three 360° right turns before it emerged from the cloud. The aircraft was in the cloud for between three and four minutes.

The pilot headed for the only area that he could see was clear of cloud and inadvertently entered the Spadeadam danger area. The controller noticed G-CCPV had entered the danger area and contacted the pilot. When informed that the pilot had lost control in IMC the controller offered help and coordinated with the Spadeadam controller. The Scottish controller proactively followed up with the pilot of G-CCPV later in the flight to check on his safety.

The pilot quickly left the danger area and intended to continue to Sleep. Later he felt that the weather was not suitable to continue and safely diverted to Kirkbride.

### Recorded information

Flight data was obtained from the pilot's mobile navigation application.



**Figure 1**

Aircraft track, altitude (ft amsl) and ground speeds (kt) during inadvertent entry to IMC

### Aircraft information

The aircraft was equipped with an attitude indicator and a turn and slip indicator. Flight in IMC was not permitted in this permit to fly aircraft.

### Meteorology

The pilot reported he used a web service to check the weather on the day. This service provided METARs and TAFs for aerodromes.

The Met Office aftercast stated there was an area of high pressure to the west of the UK bringing a north-westerly flow over the country with a complex frontal system over Scotland and northern England.

The Met Office form 215 showed a warm front lying in proximity to the departure airstrip and described weather conditions in the relevant area of generally 20 km visibility, with broken

or overcast cloud with bases at 1,500-2,500 ft amsl and widespread scattered or broken cloud at 500-1,000 ft amsl, occasionally lowering to the surface near the warm front and in coastal areas.

The METARs at relevant stations were consistent with this forecast. At Spadeadam (station height of approximately 950 ft) the METARs showed the cloud base remained consistently broken or overcast at 1,500-1,700 ft agl throughout the period.

## Personnel

The pilot reported he had completed IMC training approximately 20 years ago but had not completed any refresher training or instrument flying practice since then. It is not possible to add any instrument qualifications to a LAPL and only VFR flight is permitted with this type of licence.

## The Skyway Code

CAP1535S, Skyway Code version 3<sup>1</sup> includes a chapter on meteorology with advice for GA pilots on weather decision making. It recommends use of Metform 215 and reminds pilots that TAFs and METARs give cloud levels in height above aerodrome elevation. It recommends '*VFR flight with a cloud ceiling of 1500ft or less (AGL) warrants special attention to terrain and obstacles.*'

## Analysis

The pilot formed an impression that the cloud would be high enough to attempt his planned flight, which included flight in the vicinity of terrain with a spot elevation of 1,953 ft amsl. He entered cloud over high ground and quickly became disoriented and lost control of the aircraft. The aircraft was equipped with basic instruments to monitor attitude in IMC but the IMC training the pilot had completed in the past was little help as it had not been practiced on a regular basis. IFR flight was not permitted in this aircraft or on the pilot's LAPL. Instrument flying practice would require a safety pilot and simulated IMC conditions or an instructor in a different aircraft.

It was fortunate that the aircraft was still high enough when it exited the cloud that the pilot could regain control before striking terrain. The Met Office aftercast showed that forecasts were available prior to the flight that would have revealed that low cloud was likely on the planned route.

## Conclusion

The pilot became disoriented in inadvertent IMC over high ground and lost control of the aircraft. The event shows that instrument flying skills degrade without practice. CAP1535S, Skyway Code version provides valuable safety advice for general aviation pilots on meteorology and weather decision making.

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### Footnote

<sup>1</sup> CAA (2021), CAP1535S Skyway Code Version 3, <https://publicapps.caa.co.uk/docs/33/CAP1535S%20Skyway%20Code%20Version%203.pdf> [Accessed on 16/11/2021]