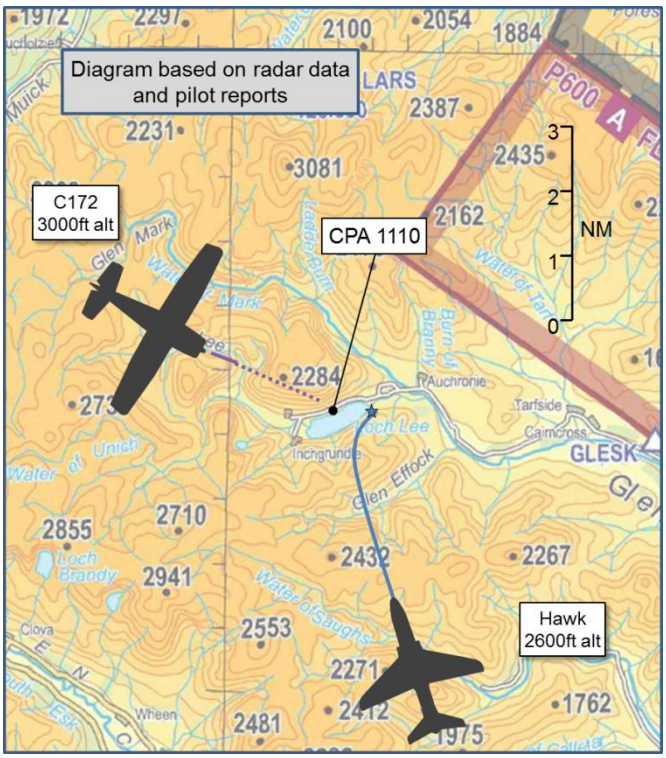
AIRPROX REPORT No 2015028

Date: 27 Mar 2015 Time: 1110Z Position: 5654N 00256W Location: Loch Lee, Scotland

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C172	Hawk
Operator	Civ Pte	HQ Air (Trg)
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	None
Provider	Aberdeen	N/A
Altitude/FL	3000ft	2600ft
ACAS/TAS	Not fitted	TCAS I
Alert	N/A	TA
Transponder	A,C	A, C, S
Reported		
Colours	Blue and White	Black
Lighting	Red flashing fin beacon.	Strobes
Conditions	VMC	VMC
Visibility	>40km	>10km
Altitude/FL	3000ft	1600ft
Altimeter	QNH (1013hPa)	agl
Heading	085°	350°
Speed	103kt	420kt
Separation		
Reported	20ft V/1-2nm H	400ft V/1nm H
Recorded	NK	



THE C172 PILOT reports that he was on a local VFR flight and was in the Glen Lee area. He had been transiting at 5000ft, but cumulus cloud formations forced him to descend to 3000ft. Whilst tracking west to east approximately over Loch Lee, he saw a Hawk T2 in the 2 o'clock position, about 1-2nm away and at the same level, it was quickly moving right to left. He rolled briefly to the right with the intention of passing behind the Hawk; however, it quickly crossed his path ahead, and then rolled sharply right before continuing north. He continued to look south in case there was a following aircraft, and contacted Aberdeen to advise of the Hawk's routing in order to assist them with Traffic Information.

He assessed the risk of collision as 'Low'.

THE HAWK PILOT reports that he was conducting a low-level attack sortie in LFA14 when he became visual with a light-aircraft so he manoeuvred to avoid a collision. Due to the mountainous terrain there was limited TCAS situational awareness provided; however, 39 seconds prior to the incident, a TCAS contact was displayed, indicating 500ft above the Hawk. The Hawk pilot made a broadcast on a VHF frequency that covers the area and 2 seconds later the TCAS TA audio warning generated. The student handling pilot then began a gentle climb but the instructor reminded him that the contact was above and, as the aircraft was 500ft above the minimum authorised flying height of 250ft, he then descended and turned away from the TCAS contact location. Four seconds later both pilots became visual with the light-aircraft, and eight seconds later the instructor took control and gave a large "wing-waggle" to signify to the other pilot that he had been seen. The Hawk was at 1600ft agl at the point that the two aircraft were roughly 1nm abeam, 400ft below the light-aircraft.

He assessed the risk of collision as 'None'.

Factual Background

The weather at Aberdeen was reported as:

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EGPD 271050Z 24007KT 210V280 9999 FEW030 09/M00 Q1013 NOSIG=
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Analysis and Investigation

CAA ATSI

The C172 was in receipt of a Basic Service from Aberdeen, operating up to altitude 5000ft. The aircraft was in and out of radar cover and the Aberdeen radar controller was busy with IFR traffic inbound to Aberdeen. When the Hawk was 7.3nm south-southwest of the C172, and climbing, the C172 had faded from radar cover. The Hawk continued north and then northeast at around 2600ft altitude. At 1109:15 the pilot of the C172 advised Aberdeen that a Hawk had just passed them from right to left and the Aberdeen controller asked the C172 to report his position as the C172 was not visible on radar. The C172 was not visible on radar until the Hawk was 9.3nm north of the C172 and the geometry of the Airprox was not possible to determine. Under a Basic Service, the controller is not required to monitor the flight and, although a warning shall be passed if a definite risk of collision exists, the Aberdeen Radar controller could not have determined a definite risk of collision due to the C172 not being visible on radar.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. The geometry was reported as converging; therefore, the C172 pilot was required to give way.[2]

Comments

HQ Air Command

Both aircraft involved were conducting their flights under VFR in Class G airspace, and both aircraft were using all available means to detect and avoid other aircraft. However, it is worth noting that the military aircraft involved transmitted a position report on the VHF 'common frequency' in use under a trial across Scotland but that this was not received by the Cessna as its pilot had chosen to select the Aberdeen frequency for a Basic Service. Good lookout from both pilots, with enhanced SA provided by TCAS for the Hawk crew, led to sound decision making and sensible manoeuvring once the pilots had sighted each other's aircraft.

Summary

An Airprox was reported on 27 March at 1110 between a C172 and a Hawk. The C172 was at 3000ft altitude, saw the Hawk 1-2nm away, and turned to go behind. The low-flying Hawk received a TA on his TCAS which helped him to visually acquire the C172. He took action to descend and turn away from the confliction before subsequently becoming visual with the C172.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings and reports from the appropriate ATC and operating authorities.

The Board noted that both pilots were flying in Class G airspace at levels where see-and-avoid was the main mitigation against mid-air collision. The C172 could not receive more than a Basic Service

[1] SERA.3205 Proximity.
[2] SERA.3205 Converging.

because he was not visible on Aberdeen's radar and the Hawk was also at low-level. The Board noted that the Hawk pilot gained Traffic Information from his TCAS and subsequently became visual with the C172 with enough time to give it a wide berth. In the hope of warning others of his position, the Board also noted that the Hawk pilot had transmitted on the recently instigated VHF low-level common frequency, 135.475 MHz, which was being trialled in Scotland at the time. That the C172 pilot was not on this frequency caused the Board to wonder whether publicity had been effective within the civil aviation community to its launch; they therefore resolved to make a recommendation to the CAA and HQ Air Command to review the effectiveness of the promulgation of the initiative. Notwithstanding, the Board noted that the Hawk pilot had become visual with the C172 at an early stage, and that both pilots agreed that the aircraft were between 1 and 2nm apart at CPA. The Board consequently assessed this to be a sighting report where normal operations and safety parameters had pertained; risk Category E.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A sighting report.

Degree of Risk: E

Recommendation: HQ Air Cmd and the CAA review the effectiveness of the promulgation of the ongoing VHF Low-Level Common frequency trial to the civil aviation community.