AIRPROX REPORT No 2013040

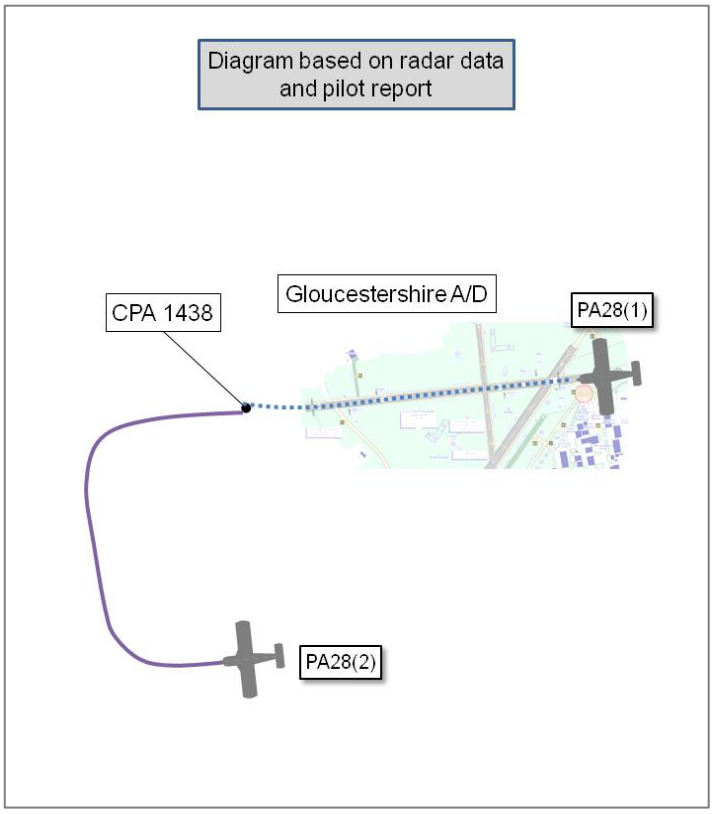
Date/Time: 19 May 2013 1438Z (Sunday)

Position: 5154N 00210W (Gloucestershire A/D)

Airspace: Gloucestershire ATZ (*Class*: G)

Reporter: Gloucestershire ADC

	1st Ac	*2nd Ac*
Type:	PA28(1)	PA28(2)
Operator:	Civ Trg	Civ Club
Alt/FL:	200ft QNH (NK)	NK NK
Weather:	VMC CLBC	NK
Visibility:	>10km	NK
Reported Separation:	100ft V/100m H	NK
Recorded Separation:	NK	



CONTROLLER REPORTED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE GLOUCESTERSHIRE ADC reports that he cleared the PA28(1) pilot for T/O from the in-use RW27. He had conducted a scan of the RWY and departure track to the NW prior to issuing the clearance. As PA28(1) climbed out, the pilot asked whether Gloster knew about an ac 'approximately 1 mile west' of the A/D, opposite direction, which the pilot had made a turn to avoid. The ADC looked out to the W and advised PA28(1) that he could not see any other ac, and had no other known ac airborne in that direction. He looked further L towards the SW and observed another ac in a R turn, approximately half a mile from the A/D. The ac proceeded to land on RW09 without clearance and vacated to park. The fire crew were alerted and assisted the ac to parking.

The ADC removed himself from the operational position and went to meet the pilot. In discussion with the pilot it was clear that he had mistakenly been in communication with Shobdon [EGBS]; he had been receiving a service from them but was convinced that he had been speaking to Gloucestershire [EGBJ]. Shobdon ATC had advised of their runway in use, which was RW09 and which was reciprocal to the runway in use at Gloucestershire. The pilot also stated that he had misplaced his knee board and when looking at his chart misread 'EGBS' for 'EGBJ', therefore tuning to the wrong RTF.

THE PA28(1) PILOT reports conducting an instructional sortie with a student. He was operating under VFR in VMC in receipt of an ACS from Gloster TWR [122.900MHz]. The white and red ac had navigation lights and rotating beacon selected on, as was the SSR transponder with Modes A and C. The ac was not fitted with an ACAS. On T/O from RW27, the student reported seeing another ac ahead. The instructor initially assumed it to be another departing ac but almost immediately realised that no ac had taken off ahead of them, and in fact this ac was on a reciprocal heading. The student initiated a turn to the R, as per noise abatement procedures; the instructor elected to take control at that point to ensure that separation was maintained and to allow the student to regain composure. During this turn he looked back towards the A/D and saw the conflicting ac on short final for RW09. At this point he was advised to contact APP [128.550MHz] and he contacted ATC to inform them of

the situation he had just witnessed. He initially stated that the conflicting ac was about 0.5nm from him but this was erroneous. His best estimation was that the two ac were no more than 100m apart at the closest point, but due to the noise abatement procedures he did not believe there was an imminent risk of collision, although the potential for such was substantial.

He assessed the risk of collision as 'None'.

[UKAB Note(1): The UK AIP entry for Gloucester A/D noise abatement procedures, at AD 2.EGBJ-10 sub-paragraph (d), states:

> 'Departures Runway 27 - All departing aircraft are to execute a 10° right turn when passing the upwind end of the runway. Tracking 280 MAG, climb through 600ft QFE before turning left. Avoid over flight of the village and church on the right. Jet aircraft are to climb through 1400 ft QNH before executing any turn. Aircraft unable to comply with 10° turn after takeoff should advise ATC and climb straight ahead through 1400 ft QNH.']

THE PA28(2) PILOT declined to file a report.

ATSI reports the Airprox occurred at 1438:28, 0.5nm to the SW of Gloucestershire A/D, within the Class G airspace of the Gloucestershire (Gloster) ATZ, between PA28(1) and PA28(2).

Background

The PA28(1) pilot was departing from Gloster RW27 for a local VFR flight to the NW and was in receipt of an ACS from Gloster TWR [122.900MHz]. The PA28(2) pilot was operating on a VFR flight inbound to Gloster from Sleap A/D, had mistakenly selected the incorrect RTF and was in communication with Shobdon Information [123.500MHz], in receipt of a BS.

Gloster ATSU, were providing a split Aerodrome and Approach Control Service from the VCR without the aid of surveillance equipment with RW27 in use. The Shobdon FISO's workload was assessed as moderate with RW09 in use.

CAA ATSI had access to RTF recordings for Gloster APP and Shobdon Information, together with area radar recording, written reports from the Gloster Aerodrome Controller, Shobdon FISO and the PA28(1) pilot. No written report was received from the PA28(2) pilot.

The Gloster Airport weather was recorded as follows:
METAR EGBJ 191420Z 30004KT 240V350 9999 SCT045 18/07 Q1013=

Factual History

At 1421:09, the PA28(2) was 29.3nm N of Gloster displaying an SSR code 0010 to indicate that the pilot was monitoring Birmingham RTF. The PA28(2) was not displaying Mode C level reporting.

At 1430:22, the PA28(2) was 9.8nm NNW of Gloster (25.2nm SE of Shobdon) when the SSR code was changed to 7000. The PA28(2) pilot made an initial call to Shobdon Information [123.500MHz], "*Gloster Tower* [PA28(2) C/S]". The Shobdon FISO's written report indicated that there was an intervening call from another ac. The Shobdon FISO reported that the call received from the PA28(2) pilot was unclear and of readability 3 to 4 with added difficulty due to a strong foreign accent. [ATSI Note: The quality of the recorded RTF from the PA28(2) pilot was distorted, of readability 2-3 and was very likely to have been degraded due to the 25nm range of the ac from Shobdon and the ac's level]. The Shobdon FISO continued to pass instructions to other ac.

At 1432:10, the PA28(2) was 5.8nm NNW of Gloster and the pilot called Shobdon Information again, "*Gloster Information* [PA28(2) C/S]". The FISO indicated receiving part of the C/S and in response transmitted, "*Station calling Shobdon information say again your callsign*". The PA28(2) pilot replied, "*It's* [PA28(2) C/S] *er Piper Arrow er inbound to yourself six miles to the northwest er at er three*

thousand feet er will be joining overhead er for runway two seven right hand". The Shobdon FISO responded "[PA28(2) C/S] *it's Runway zero nine right hand Q F E one zero zero one*", which was acknowledged by the PA28(2) pilot, "*Q F E one zero zero one for zero niner runway righthand* [PA28(2) C/S]".

At 1433:36, the PA28(2) was 3.2nm northwest of Gloster. The PA28(2) pilot then routed towards the O/H, passing to the N of the A/D. He reported, "[PA28(2) C/S] *overhead descending on the deadside to join righthand for zero nine to land*". The Shobdon FISO replied, "[PA28(2) C/S] *roger report downwind*".

At 1434:50, the PA28(2) pilot reported, "[PA28(2) C/S] *downwind for zero nine*" and the Shobdon FISO replied, "[PA28(2) C/S] *er traffic is one Cessna one five two er late downwind*". The PA28(2) pilot's reply was unreadable. The Shobdon FISO's written report indicated that the PA28(2) was not seen downwind so the assistant was asked to scan the downwind leg. Nothing was seen. At 1435:08, the Shobdon FISO called the PA28(2) with no response. This was followed by two further calls with no response.

Meanwhile, the PA28(1) pilot at Gloster A/D was at the holding point ready for a departure from RW27. At 1436:21, the Gloster TWR issued take off clearance, "[PA28(1) C/S] *clear for take off with a right turn to the northwest surface wind three four zero degrees less than five*".

At 1436:28, the PA28(2) was shown on radar downwind RH for Gloster RW09. As the PA28(1) was rolling the PA28(2) was shown turning onto R base for RW09, 1.4nm SW of Gloster. At 1438:00 the PA28(2) was shown on short final for RW09.

The PA28(1) did not appear on radar until 1438:42, after the Airprox has occurred, after the PA28(1) pilot made a R turn and tracked W. By using the radar recording and projected flight path history, it was estimated that the Airprox occurred at 1438:28, shortly after the PA28(1) pilot became airborne. The PA28(2) was estimated to have passed less than 0.1nm to the S of the PA28(1), on a 0.5nm final for RW09. The PA28(1) pilot's written report estimated that the PA28(2) was to his L and below and estimated the horizontal distance between the two aircraft as 100m at the CPA.

At 1438:07, the PA28(1) pilot was instructed to contact Gloster APP [128.550MHz]. He replied, "*Er* [PA28(1) C/S] *contact approach we just saw and aircraft coming along the zero nine ahead of us er any update on that traffic*". The Gloster TWR responded, "*Er no I've got nothing here erm at all*". This was acknowledged by the PA28(1) pilot, "*Roger*". The Gloster TWR asked the PA28(1) pilot if he knew the ac type; the PA28(1) pilot replied "*er negative but I think he has touched-down on zero nine*".

At 1438:59, the PA28(2) pilot called Gloster TWR, "*and* [PA28(2) C/S] *Gloster*". There was no response to this call and was likely not heard by the Gloster TWR. The Gloster TWR first responded to the PA28(1) pilot, "*and* [PA28(1) C/S] *yeah apologies for that he's not actually speaking to anybody and erm has just landed er sorry sorry for that*". The PA28(2) pilot vacated the runway and parked on the Apron.

The PA28(1) pilot reported, "*er* [PA28(1) C/S] *we just did a slightly evasive manoeuvre that's all er we'll contact approach now one two two decimal eight er we'll go to one two eight decimal five five*". The Gloster TWR advised the PA28(1) pilot that the other ac had not spoken to Gloster APP either and in response the PA28(1) pilot reported it was most likely to be a suspect radio failure. The PA28(1) pilot then changed to Gloster APP.

The Shobdon FISO became increasingly concerned at the loss of contact with the PA28(2) pilot and D & D were advised. A subsequent call from Gloster confirmed the arrival of the PA28(2) at Gloster and Shobdon then updated D & D.

The Aerodrome controller's written report indicated that, when questioned, the PA28(2) pilot had reported that when looking at his chart he had misread EGBS (Shobdon) for EGBJ (Gloster) and

selected the wrong frequency, contacting Shobdon for an ATS instead of Gloster. Shobdon had advised him that RW09 was in use, which was reciprocal to RW27 in use at Gloster.

Analysis

The PA28(2) pilot, when looking at his chart, mis-identified EGBS as Gloster, which resulted in the him calling Shobdon instead of Gloster. It is likely that because of a combination of the distance from Shobdon and the foreign accent of the pilot, the quality of the PA28(2) transmissions was readability 2-3. The PA28(2) made two initial calls "*Gloster Tower*" and then "*Gloster Information*". However, the quality of the transmission made the calls unclear and consequently these were not heard by the Shobdon FISO. The Shobdon FISO's workload was moderate and he tried to establish two way communication with the unknown ac. The FISO transmitted "*Station calling Shobdon information say again your callsign*" and the pilot responded "It's [PA28(2) C/S] *er Piper Arrow er inbound to yourself six miles to the northwest er at er three thousand feet er will be joining overhead er for runway two seven right hand*".

At the point when two way communication was established the FISO correctly used the callsign 'Shobdon Information', however this was not detected by the PA28(2) pilot who replied "*..inbound to yourself..*". The pilot very likely assumed that he was talking to Gloster TWR.

The PA28(2) pilot entered the Gloster ATZ in the belief that he was cleared to join overhead Gloster for a RH cct on RW09. This resulted in him flying into conflict with the PA28(1) which was departing from RW27. The PA28(2) was not observed by the Gloster TWR who was unable therefore to pass any TI or warning to the PA28(1) pilot. The Shobdon FISO gave the PA28(2) pilot appropriate joining instructions and TI in the belief that he was inbound to Shobdon.

Summary

The Airprox occurred when the PA28(2) pilot mis-identified Shobdon RTF for Gloster RTF and then selected the incorrect frequency for a join at Gloster. The PA28(2) pilot entered the Gloster ATZ in the belief that he had been cleared to join overhead for a RH cct on RW09, which resulted in him making an approach to RW09 and coming into conflict with the PA28(1), departing from RW27. The Gloster TWR and Shobdon FISO were not aware of the PA28(2) pilot's intentions and were unable to provide appropriate information to either of the two ac concerned.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included a report from the pilot of one of the ac, a transcript of the relevant RT frequency, radar video recordings, reports from the air traffic controllers involved, and a report from the appropriate ATC investigation authority.

Members first discussed the actions of the PA28(2) pilot and were in agreement that his sortie could have been planned and flown with more care. It was opined that although his confusion over the Shobdon and Gloster RTFs could be considered as an 'honest mistake', it was a mistake that had serious ramifications and which could have been effectively mitigated by better preparation. Members were at a loss as to how the 2 airfields could be confused on the map: Shobdon and Gloucester are surrounded by significantly different topography, which is clearly depicted on the map, and each A/D's RTF is printed in the same area as the A/D's name (in Shobdon's case, directly above the A/D name). Members noted that Gloucester A/D does not have a signal square, but opined that once he had arrived in the overhead the pilot had time to observe the wind sock direction and to remain in the overhead and observe other traffic if necessary. That being said, the PA28(2) pilot was faced with a situation that appeared to fit his mental model, given that Gloster had a RW09 and he thought he had been cleared to join. Some pilot Members opined that given his range from Shobdon the RT was probably distorted and broken, which might have given the PA28(2) pilot an indication that he was not near the station he was speaking to, although in the absence of an RT recording this remained conjecture. ATC Members also noted that the PA28(2) pilot prefixed his first

2 transmissions with a Gloster C/S; in the event, the Shobdon FISO did not assimilate this, probably due to the quality of RT. Likewise, the PA28(2) pilot may not have been able to make out the initial use of C/S by the Shobden FISO, which was not repeated. Notwithstanding the quality of R/T reception, Members noted that this incident served as a useful reminder, highlighting the reasoning behind the requirement not to respond to a C/S other than your own.

Some Board Members were of the opinion that this report could not be assessed due to the lack of information from the pilot of PA28(2). Whilst he did not submit a report, it was felt by the majority that enough information had been captured from other sources such that a reasonable assessment of the incident could be reached.

The PA28(1) pilot had just taken off and although initially confused by the aspect of the head-on PA28(2) flying into conflict with him, quickly assimilated the situation and remained clear of collision, albeit in the Board's opinion more by good fortune in conducting the noise abatement manoeuvre, and with safety margins much reduced below the normal.

The Board agreed that the safety barriers pertinent to this Airprox were ATC/FISO rules and procedures, controller action, aircrew rules and procedures, visual sighting, aircrew action and SA gained from RT. The Board concluded that ATC/FISO rules and procedures had been effective but that controller action had no effect because the Gloster controller was unaware of PA28(2)'s presence, and the Shobden FISO had been under the impression that the ac was inbound to his airfield. Aircrew rules and procedures and SA gained from RT were not effective, and visual sighting and aircrew action had limited effectiveness. The barriers were assessed overall as being of minimal effectiveness and the Airprox was allocated a score of 20 on the Event Risk Classification Matrix.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA28(2) pilot flew into conflict with the PA28(1).

Degree of Risk: B.

ERC Score: 20.