AIRPROX REPORT No 2010150

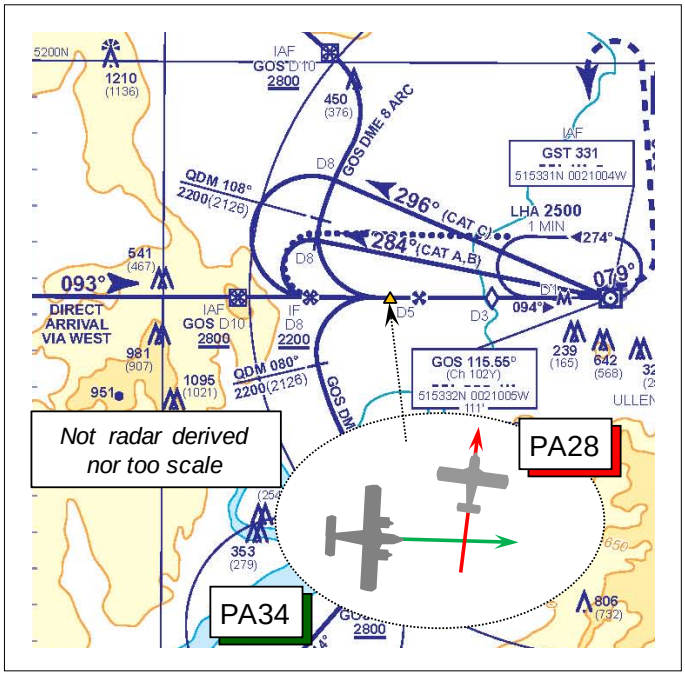
Date/Time: 7 Oct 2010 0956Z

Position: 5153N 00220W (6nm W of Gloucester - elev 101ft)

Airspace: London FIR (*Class:* G)

Reporter: Gloucester ATC

	1st Ac	*2nd Ac*
Type:	PA34	PA28
Operator:	Civ Trg	Civ Pte
Alt/FL:	2000ft QNH (1018mb)	2000ft QNH (1018mb)
Weather:	IMC In Cloud	VMC CLBC
Visibility:	Nil	10nm
Reported Separation:	2-500ft V/½-1 H	Not seen
Recorded Separation:	Not recorded	



CONTROLLER REPORTED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE GLOUCESTERSHIRE AIRPORT APPROACH CONTROLLER (APP) reports that at 0950 the PA34 crew reported outbound for an NDB/DME approach to RW09. The PA28 pilot reported on frequency 10nm SW of the Airport, routeing northbound, level at 1900ft QNH at 0954. As the PA28 approached the FAT to RW09 he passed TI to the pilots of both ac about each other. The PA34 was completing the base turn and reported IMC. However, he believed from radar returns at 0956 that the 2 ac were converging. When asked, the PA34 pilot reported he was still flying in IMC and asked for the range of the PA28. APP reported that the PA28 was believed to be 12 o'clock at 1nm, but below the PA34's level, flying VFR in VMC. A later conversation with the PA34 pilot revealed the PA28 was at a similar level.

The 0950UTC METAR: 16007KT 9999 FEW012 15/11 Q1018=

THE PIPER PA34-200-T (PA34) PILOT, a flying instructor, reports he was conducting a dual IFR training flight at Gloucestershire Airport under a PS from GLOSTER APP on 128·55MHz. A squawk of A7000 was selected with Mode C; neither Mode S nor TCAS are fitted.

Whilst executing an NDB approach to RW09, he was advised by APP of VFR traffic crossing their inbound track from S to N at a similar altitude. He advised ATC twice that they were still in cloud, and requested the position of the traffic - a PA28. IMC in cloud, descending through 2000ft QNH (1018mb) at 100kt, heading 093° approaching 6nm DME on a bearing of 273° from Gloucestershire Airport during final descent, they 'popped' out of cloud into a gap and saw the PA28 passing from R – L about ½ - 1nm away at 10 o'clock, slightly high, flying away from them after it had crossed ahead with a 'high' Risk of collision. He telephoned ATC on landing back at base to discuss how similar events could be avoided in future. He thought it advisable to give avoiding action advice to VFR traffic to keep them clear of the NDB approach lane.

His ac has a white and blue livery; the white HISL and tail-fin anti-collision beacon were on.

THE PIPER CHEROKEE WARRIOR II (PA28) PILOT reports he had departed from Compton Abbas under VFR for Manchester/Barton, routeing via Bath, Cosford and Ashcroft at 100kt. A BS was provided by Bristol and Filton ATC and approaching a position 10nm SW of Gloucestershire Airport he requested a BS from GLOSTER APP on 128·55MHz, which was agreed. He informed GLOSTER APP of his route on a heading of 007° and was asked to report abeam Worcester - he was not asked to select a squawk. The flight proceeded uneventfully in a level cruise at 2000ft QNH (1018mb) some 300ft below cloud with an in-flight visibility of 10nm until approaching Worcester, when cloud 'limited VMC' so he elected to divert back to Gloucestershire Airport to review weather conditions before attempting to continue onward to his destination. He informed the controller of his intentions, retraced his outbound track and was told to expect a straight in approach for RW18 at Gloucestershire, which he completed to an uneventful landing.

The PA34 was not seen nor was he aware of any separation issues until he was contacted by Compton Abbas Ops. His aeroplane has a cream colour-scheme and the HISLs were on.

UKAB Note (1): This Clee Hill Radar was out of service on this day; consequently, this Airprox occurred outwith the available recorded radar coverage.

ATSI reports that the Airprox occured at 0956:50 UTC, in Class G airspace, 6nm to the W of Gloucestershire Airport. The PA34 was an IFR training flight, from Filton inbound to Gloucestershire Airport for the procedural NDB/DME approach to RW09, which requires a letdown to the W of Gloucestershire Airport.

Gloucestershire ATC is equipped with a primary radar system (MARIS 900), without SSR. The radar is utilised to expedite the procedural environment, without surveillance capability and the provision of a radar service is subject to manning levels and the availability of appropriately qualified staff. The UK AIP entry for Gloucestershire at AD 2-EGBJ-1-6 (8 Apr 10), Paragraph 2.18, states:

> 'Radar services (Primary only) within 25 NM below FL80, availability subject to manning. Use of 'Radar' suffix denotes availability only. Provision of a specific radar service is not implied.'

The GLOSTER APP controller was qualified to operate radar, but at the time of the Airprox, the controller was providing an Approach Control Procedural service.

The PA34 crew first called Gloster APP at 0934:33, inbound IFR at FL50 and a PS was agreed. The PA34 crew was cleared to the GST NDB with no delay for the NDB/DME approach to RW09 with information 'Golf'. The PA34 crew requested one hold before commencing the NDB procedure.

At 0945:02, the PA34 crew reported outbound in the hold at FL50 and APP responded, "[PA34 C/S] *roger cleared NDB DME approach runway 0-9 QNH 1-0-1-8 report beacon outbound."* The pilot gave a correct readback.

At 0949:32 the PA34 pilot reported beacon outbound and APP instructed the pilot, *"....report base turn complete."* The UK AIP at AD 2-EGBJ-8-3, states for the extended holding pattern:

> 'Extend the outbound leg [274°] of NDB(L) GST holding pattern descending to 2200. At GOS DME 8 turn left to intercept FAT...'

At 0951:38 the limited radar data available shows the PA34, 3nm NW of Gloucestershire Airport outbound on the procedure, displaying a squawk of A7000 and indicating FL41 Mode C. The ac's radar return then fades from coverage.

At 0953:32, the PA28 pilot established communication with Gloster APP and reported, "..[PA28 C/S] *is a PA28 from..Compton Abbas..to Manchester Barton routeing via Cosford..our..present position is..to the..southwest of Gloucester..and our heading is to the west of..your zone..so we are at present..1 thousand 9 hundred feet 1-0-1-7..Basic Service if possible please."* APP agreed a BS on the QNH (1018mb) and instructed the PA28 pilot to report at Worcester, which was acknowledged

correctly. At 0954:49, APP passed TI to the PA28 pilot, "[PA28 C/S] *traffic similar..level will be a PA 34 making a..approach to runway 0-9 that traffic not yet established inbound on the final approach track."* The PA28 pilot responded, "..[PA28 C/S] *is looking for traffic."*

Then at 0955:12, APP passed TI to the PA34 pilot, "..*traffic..south of the extended centreline routeing northbound is a Cherokee will be similar level on your er base turn complete."* The PA34 pilot replied, *"..roger* [PA34 C/S]*..is India Mike Charlie this time",* which APP acknowledged, *"roger."* At 0955:33 the PA34 pilot requested, *"..the range of the traffic."* APP replied, "[PA34 C/S] *procedural traffic* [sic] *I believe the traffic's northbound just passing through the extended centreline",* which the PA34 pilot acknowledged, *"roger."* The PA34 pilot reported base turn complete at 0956:05 and the controller believed from displayed radar returns that the two ac were converging. APP asked the PA34 pilot, "*Are you still IMC"* and at the request of the pilot, APP repeated the message. The PA34 pilot replied, *"..affirm and I just needed a range from..from Golf Sierra Tango for the traffic would appreciate it."*

The controller, using radar information, responded*, "Roger I believe the traffic's..1 mile in your 12 o'clock but if you're I-M-C he's V F R below."* At 0956:49 the PA34 pilot reported, "[PA34 C/S]*..we've just passed him..less than half a mile."* The PA34 then continued the approach without further incident.

The PA34 crew was in receipt of a PS and was passed TI regarding the PA28 operating VFR. The Manual of Air Traffic Services (MATS) Part 1, Section 1, Chapter 11, Page 10, states:

> 'A Procedural Service is an ATS where, in addition to the provisions of a Basic Service, the controller provides restrictions, instructions and approach clearances, which if complied with, shall achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic.
>
> A Procedural Service does not require information derived from an ATS surveillance system. Therefore, due to the ability for autonomous flight in Class F/G airspace, pilots in receipt of a Procedural Service should be aware of the high likelihood of encountering conflicting traffic without warnings being provided by ATC.'
>
> 'The controller shall provide traffic information, if it is considered that a confliction may exist, on aircraft being provided with a Basic Service and those where traffic information has been passed by another ATS unit; however, there is no requirement for deconfliction advice to be passed, and the pilot is wholly responsible for collision avoidance. The controller may, subject to workload, also provide traffic information on other aircraft participating in the Procedural Service, in order to improve the pilot's situational awareness.'

The controller believed, from the radar information available, that the two ac were converging and having confirmed that the PA34 was IMC, then passed a warning regarding the believed position of the PA28, again using radar derived information.

The PA28 was in receipt of a BS and had been passed TI on the PA34. The MATS Part 1, Section 1, Chapter 11, Page 4, Paragraph 3.1.1, states:

> 'A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.'

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequency, radar video recordings, a report from the air traffic controller and a report from the appropriate ATC authority.

Only rudimentary radar equipment is available to Gloucestershire controllers, but the controller had used it to provide TI to the PA34 crew. Whilst noting that the installed primary radar is not ideal compared to more sophisticated equipments, controller Members were surprised that the controller had not made more use it, which the ATSI report had explained was used merely to expedite the procedural environment and was without a true surveillance capability. Basically, the radar was used here to enhance the controller's situational awareness whilst providing a PS rather being able to offer of a full surveillance based DS.

Evidently the PA34 crew was operating IFR, in cloud, whilst turning inbound on the procedure until they flew into a gap and saw the PA28. APP was only required to ensure deconfliction minima against other IFR flights participating in the PS and in this case the PA28 pilot was operating VFR under a BS. However, APP had perceived the potential for a conflict with the PA28 and wisely passed TI to the PA28 pilot whose pilot was operating in VMC clear beneath cloud. Some controller Members thought that an opportunity was lost here and the controller could have done more by asking the PA28 pilot to route clear of the FAT. The CAA ATS Policy Advisor commented that this situation was covered in the MATS Pt 1, which at Part 1, Section 1, Chapter 11, Page 12, states:

'Controllers may, subject to workload, initiate agreements (as defined in Service Principles) with pilots of aircraft under a Basic Service to restrict their flight profile in order to co-ordinate them with aircraft in receipt of a Procedural Service. However, controllers shall limit the occasions on which they make such agreements to those where it is clear that a confliction exists, and only when controller workload permits.'

Notwithstanding the facility to do so, there was no compunction on the controller to restrict the PA28 pilot's flight profile as he was reasonably expecting him to fulfil his responsibilities whilst operating VFR to 'see and avoid' other ac. Members pointed out that pilots executing IFR approach procedures in Class G airspace under a PS must remain alert to the potential of encountering and avoiding in accordance with the rules of the air conflicting ac about which neither TI nor deconfliction advice has been provided because the controller did not know about the other ac. In this occurrence, with the PA28 approaching from beneath cloud on the PA34 pilot's starboard side, it was the latter who was nominally required to 'give way'. However, the Rules can only work if pilots can spot the other ac in time to take action and with the PA34 legitimately descending in cloud in accordance with the procedure this was unlikely. One controller Member wondered why the PA34 pilot continued to descend and suggested the pilot might not have understood the limitations of the PS with regard to separation from other VFR traffic. However, it was plain from the PA34 instructor's remarks that he was well aware not only of his responsibilities but what the controller might potentially do in this situation.

The IFR approach 'feather' is clearly marked on NATS/CAA VFR charts and experienced pilot Members thought it unwise to plan a route through an IFR approach at an altitude where a conflict was likely to occur with ac flying IFR procedures in cloud. That said, this was Class G airspace and the PA28 pilot was legitimately entitled to fly where he did maintaining VMC; moreover, he had sensibly called APP and obtained a BS.

The available radar recording had not shown this Airprox and without radar, with Mode C data to judge the relative altitudes, it was not feasible to examine the exact geometry of this occurrence. Nevertheless, Members recognised that when descending through 2000ft QNH the PA34 pilot saw the PA28 after it had crossed through his 12 o'clock and that there was no need to take any avoiding action.

The controller who initiated the Airprox report did not provide an estimate of the separation from his radar display. Flying VFR, some 300ft below cloud with 10nm in-flight visibility, the PA28 pilot had received TI about the PA34 and was looking out for it. However, he did not see it and would have been unable to do so whilst the twin was in cloud. The only measure available to the Members, therefore, was that reported by the PA34 pilot, who estimated that the PA28 had passed about ½ - 1nm away, 200-500ft above his ac. In the Board's view this was not close enough to the PA34 to cause concern. The PA28 was flying clear of cloud and each pilot was proceeding with due regard for one another. Members concluded, therefore, that this was a controller perceived conflict and agreed unanimously that in the circumstances reported here there was no Risk of a collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A controller perceived conflict.

Degree of Risk: C.