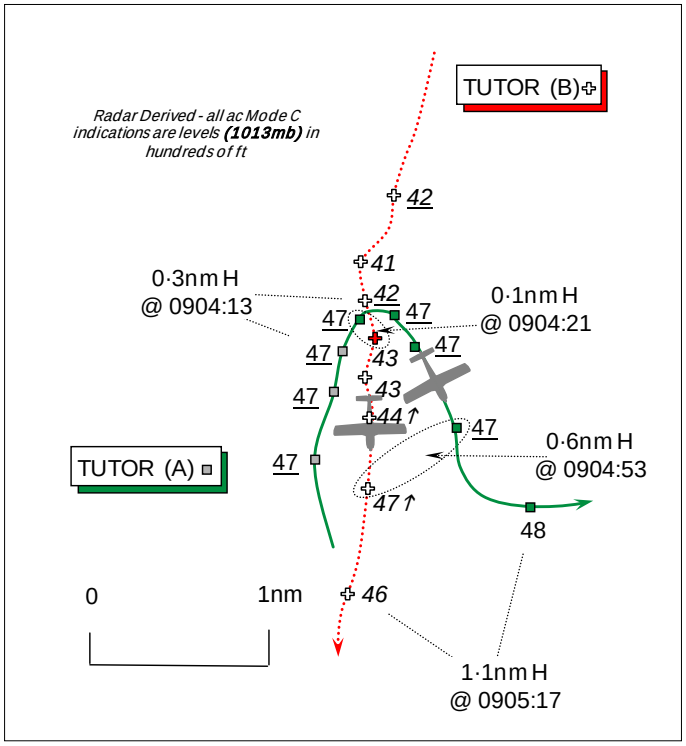
AIRPROX REPORT No 2010158

Date/Time:	12 Oct 2010 0904Z	
Position:	5252N 00024W (8nm SE of Barkston Heath - elev 367ft)	
Airspace:	Lincolnshire AIAA (*Class:* G)	
	Reporting Ac	*Reported Ac*
Type:	Grob Tutor T Mk1	Grob Tutor T Mk1
Operator:	HQ Air (Trg)	HQ Air (Trg)
Alt/FL:	5000ft RPS	5000ft RPS
Weather:	VMC CLBL	VMC CLAC
Visibility:	10km	40km
Reported Separation:	200ft V/nil H	300ft V
Recorded Separation:	Nil V @ 0·6nm H 400ft V @ 0·1nm Min H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PILOT OF GROB TUTOR T Mk1 (A) reports he was flying a local dual staff continuation training flight from Barkston Heath. He was operating on a discrete frequency not in receipt of an ATS, squawking A2637 [Cranwell] with Mode C; elementary Mode S is fitted, TCAS is not. The ac has a white colour-scheme; the HISLs, nav lights and the landing-light were on.

Flying at 100kt in a level cruise at 5000ft Barnsley RPS, he was operating VFR some 2000ft above and 20km clear of cloud, in between layers, with an in-flight visibility of 20km out of the sun. About 9½nm SSE of Barkston Heath he saw another Tutor to starboard about 200ft below his aeroplane after it crossed from L – R on an almost perpendicular flight path. The other Tutor appeared from below his starboard wing, climbing, and within 5sec had ascended to the same altitude with a 'medium' Risk of collision. At the time the other ac was spotted, no avoiding action was required as they were no longer on conflicting flight paths. After he had switched to Cranwell APPROACH, an Airprox was reported on Stud 5.

THE PILOT OF GROB TUTOR T Mk1 (B), a QFI, reports he was instructing a local dual GH sortie from Cranwell that included stalling and steep turns. He was not in receipt of an ATS, but monitoring a discrete frequency [the same frequency as the crew of Tutor (A)] plus GUARD – 243·00MHz. A squawk of A2637 [Cranwell] was selected with Mode C; elementary Mode S is fitted but TCAS is not. The ac has a white colour-scheme; the HISLs and the landing-light were on.

Operating VFR some 2000ft above and 10km clear of cloud with an in-flight visibility of 40km, after climbing 200ft and levelling off at 5000ft Barnsley RPS, heading S at 100kt, his student began the HASELL checks before commencing the stalling phase of the exercise. At this point he noticed another Tutor, previously obscured by the canopy arch, approaching from his 2 o'clock directly towards them about 300ft above his aeroplane and climbing, he thought. He was clear of the other ac and no avoiding action was necessary or taken. The sortie was continued maintaining visual contact with the other Tutor and listening out on the discrete frequency and GUARD. He assessed the Risk as 'low'.

That day the area to the SE of Cranwell was very busy and numerous ac were sighted. Adding that communication provides an element of SA with regard to the positioning of other ac, he stressed it is not in any way failsafe and good lookout discipline is essential. He had seen a Tutor operating to the S of them a few minutes earlier, but lost sight of it as it departed to the S, thus he believed the area was potentially clear of that particular ac as no further sightings had been made.

UKAB Note (1): The Claxby Radar recording shows the two Tutor ac approaching the Airprox location some 8nm SE of Barkston Heath. Tutor (A) maintains 4700ft Mode C (1013mb) as the ac close; Tutor (B) is shown flying broadly level at 4200ft Mode C (1013mb) and crosses 400-500ft directly underneath Tutor (A), in between sweeps, from L – R progressing southerly. At the point of minimum horizontal separation, Tutor (B) is shown off Tutor (A)'s starboard wing at range of 0·1nm some 400ft below, as Tutor (A) turns R SSE'ly maintaining level. Tutor (B) subsequently climbs to the same level as Tutor (A) whilst the tracks diverge and the range increases to 0·6nm before Tutor (A) hauls off to the E.

HQ AIR (TRG) comments that this was a conflict in Class G airspace. The pilot of Tutor (B) sighted Tutor (A) in time to assess that no avoiding action was required, but the resulting separation was sufficiently low to cause the pilot of Tutor (A) concern. The ongoing installation of ACAS to the Tutor II fleet should reduce the number of these occurrences. However, lookout must remain the primary means of deconfliction, assisted by such aids.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar video recordings and comment from the appropriate operating authority.

Neither of these two Tutor crews were in receipt of an ATS whilst operating under VFR in VMC in the 'see and avoid' environment of the Class G Lincolnshire AIAA, albeit both were 'listening out' on the same discrete frequency. The Board concurred that the crux of this Airprox was visual acquisition of each other's ac. The PiC in Tutor (A) reports that he did not see Tutor (B) until it emerged from under his starboard wing, he thought 200ft below them. The radar recording shows that this occurred at the CPA, or very shortly afterwards as Tutor (A) turned about to the R, where 400ft of vertical separation was evident, based on their verified Mode C indications. Therefore, it was plain to the Members that the crew of Tutor (A) had not seen Tutor (B) approaching from the N beforehand – effectively a non-sighting by the crew of Tutor (A) and in the Board's view part of the Cause.

For their part, the instructor and his student in Tutor (B) had not seen Tutor (A) until after their HASELL checks when the QFI spotted it emerging from behind the ac's canopy arch he reported, about 300ft above them. Although in the Board's view this was a late sighting of Tutor (A) and the other part of the Cause, the vertical separation was such that neither crew took any avoiding action and it was clear they both maintained visual contact on the other ac as Tutor (B) subsequently climbed up through Tutor (A)'s altitude and the ac diverged. The Board concluded, therefore, that the Cause of this Airprox was effectively a non-sighting by the pilots of Tutor (A) and a late sighting by the pilots of Tutor (B), but in the circumstances conscientiously reported here no Risk of a collision had existed.

The HQ Air pilot Member briefed the Board that the Tutor ACAS installation programme is progressively equipping the fleet with a version of TCAS I; the Units that were involved here are scheduled to have their ac modified from June of this year. The Board welcomed this encouraging news. Pilot Members recognised that TCAS I was not a substitute for a good lookout scan regimen, as highlighted within the Command's comments, because it will not detect ac that are not equipped with SSR. Nevertheless in the circumstances described here, TCAS I could have provided both crews with a warning of the presence of each other's ac somewhat earlier than their visual scan had done.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Effectively a non-sighting by the pilots of Tutor (A) and a late sighting by the pilots of Tutor (B).

Degree of Risk: C.