AIRPROX REPORT No 2010115

Date/Time: 13 Aug 2010 (Friday) 1321:27Z

Position: 5504N 00346W (5nm W Dumfries)

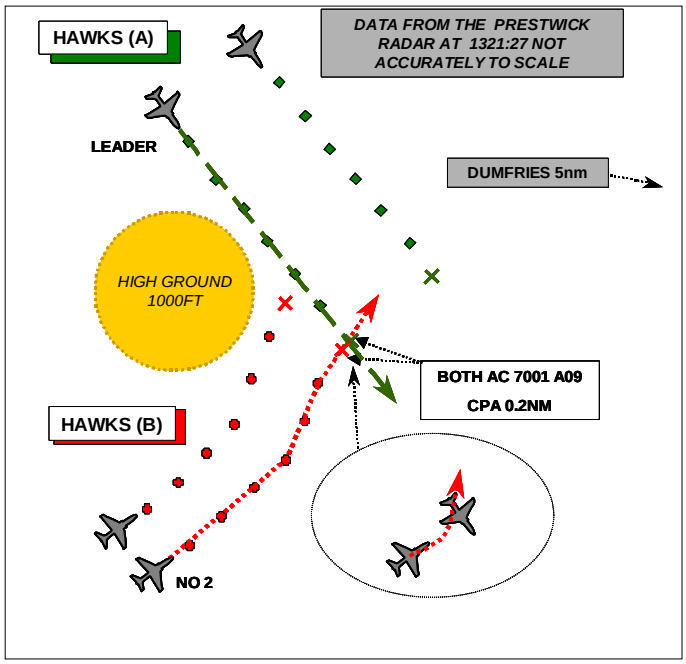
Airspace:	UKDLFS	(*Class: G*)
	Reporting Ac	*Reporting Ac*
Type:	HAWK	HAWK
Operator:	HQ AIR (Trg)	HQ AIR (Ops)
Alt/FL:	250ft (RPS 1010mb)	350ft (RPS 1010mb)
Weather:	VMC NR	VMC CLBC
Visibility:	NR	30km

Reported Separation:

150ft V/500ft H V 100ft/H 100ft

Recorded Separation:

0 V/ 0.2nm H



BOTH PILOTS FILED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE HAWK T Mk1 (A Leader) PILOT reports that he was leading a pair of black Hawk ac with HISL switched on, squawking 7001 with Mode C, on a low-level training flight in LFA16 operating on a tactical frequency. While heading 150° at 420kt and at a nominal 250ft agl, he initially saw the northerly ac of a pair of Hawks about 1.5nm away. He immediately searched for a second ac and saw another Hawk at a range of about 1nm away at a similar height in his 2 o'clock position and coming directly towards him. He immediately banked to the left before rolling out and commencing a climb and he saw the southerly Hawk passing below and behind him.

THE HAWK (B No2) PILOT reports that he was a student pilot of the No2 of a pair ac on a 2v1 low-level evasion flight with an instructor in the rear seat of black Hawk ac with HISL switched on, squawking 7001 with Mode C and operating on a [different] tactical frequency. While 5nm W of Dumfries in LFA 16 and about 30min into the sortie in a very high workload situation, heading 020° at 440kt, he was expecting to be engaged as part of the exercise and an ac was seen in the left 11 o'clock at 10km [See UKAB Notes (2) and (3) – the Bounce]. Shortly after this another ac [See UKAB Note (2) – Hawk (A) Leader] was seen to cross the nose of the leader and then his own ac at approx 2-3km; assuming this ac to be the bounce both formation members took 'practice air-to-air shots' on it. He did not have time to assimilate the status of the distant ac. Very shortly afterwards a previously unseen ac passed from left to left to right very close ahead of him (estimated as 100ft), at the same height. The timescale from first sighting to the Airprox was approx 5-7sec [See UKAB Note (3)]. He saw the other ac too late to take any avoiding action and estimated the risk as being very high. After discussion in the debrief he thought that the ac he had the Airprox with was not the Bounce but the wingman of the other formation.

UKAB Note (1): The recording of the Prestwick radar shows the incident. Hawk (A) formation is line abreast just over 1nm apart, tracking 140° at low level with the leader on the right (to the S). Meanwhile Hawk (B) formation is to the S of Hawk (A) formation, also in line abreast formation with leader on the left (to the W) tracking initially 050° before turning left onto 005°. The ac track towards one another until the CPA at 1321:27 when Hawk (A) Leader passes through Hawk (B) No2's 12

o'clock, from left to right, at the same alt (A09), 0.2nm (360m) ahead. Hawk (A) Leader's climb is only noticeable on the recording 10 sec after the ac cross. Hawk (B) Bounce is 6nm to the N of Hawk (B) formation.

UKAB Note (2): From the radar recording it appears that the first ac reported by Hawk (B) No2 was most likely Hawk (B) Bounce (another ac squawking 7001 with Mode C), which was 3nm to the N of Hawk (A) formation, also on a similar SSE track and possibly 'skylined'. The second one mentioned was Hawk (A) No2 and the third, the one involved in the Airprox, was Hawk (A) leader.

UKAB Note (3): Seven sec before the CPA the Bounce ac was in Hawk (B) No2's 11 o'clock at a distance of about 6nm (11km) probably on a ridge. Hawk (A) No2 was also in his 11 o'clock but at a distance 2nm and probably on the far side of a valley and Hawk (A) Leader was in his 1030 at 1½ nm in the same valley.

HQ AIR (Ops) comments that the low level tactical environment is dynamic and challenging, hence the emphasis on training and achieving a mandated standard for Fast-Jet aircrew. This is a timely reminder of the importance of maintaining a good lookout and not assuming that you have seen all relevant traffic; it's the one you haven't seen that shoots (or hits) you. The Student pilot in Hawk (B) No.2 was looking for, expecting to see and aiming to negate the threat from a single Hawk Bounce, therefore it is considered that having seen the first Hawk he became fixated on neutralising that threat and his wider lookout scan was reduced as a result.

HQ AIR (TRG) comments that operating in the low level environment is all about avoiding detection which these formations achieved and being from different units they would not have known the exact routeing of each others formation. With both formations terrain masked and flying at 420kt or faster the crews did well to spot each other before CPA. This Airprox highlights the need for crews to maintain a high level of lookout at all times in the dynamic inhospitable low-level environment.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar recordings and reports from the respective Hawk operating authorities.

The Board noted that both pairs of ac had been operating legitimately in the UKDLFS but, being from different units, when 'booking out' they would only have been warned of 'mixed traffic' in the LFA and therefore there had been no route deconfliction.

Military ac practise low flying in order to use terrain screening, i.e. to shield each other from visual and/or electronic detection by opposing forces by using the terrain. In this, as with many other cases, it can also have the undesired effect of screening ac from non-opposing forces. However, the instructor pilot in of Hawk (A) leader saw the conflicting Hawk ((B) No2) about 1nm away and was able to take effective avoiding action, despite that the manoeuvre could not be seen on the radar recording. Hawk (B) No2 pilot, a supervised student, was concentrating on engaging Hawk (A) No 2 while under the mistaken impression that it was their bounce ac, and did not see Hawk (A) leader significantly closer to him but out to his left, until a distance he estimated as being 100ft and therefore to late to take any effective avoiding action.

The Board determined that, bearing in mind the terrain, both pilots had seen the conflicting ac without undue delay, but later than optimum and that this incident had been a conflict in the UKDLFS between 2 ac (pairs) both entitled to operate there. They also agreed that the existing height separation, probably assisted by the climb by Hawk (A) Leader, had ensured that there was no risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Conflict in the UKDLFS resolved by Hawk (A) Leader.

Degree of Risk: B.