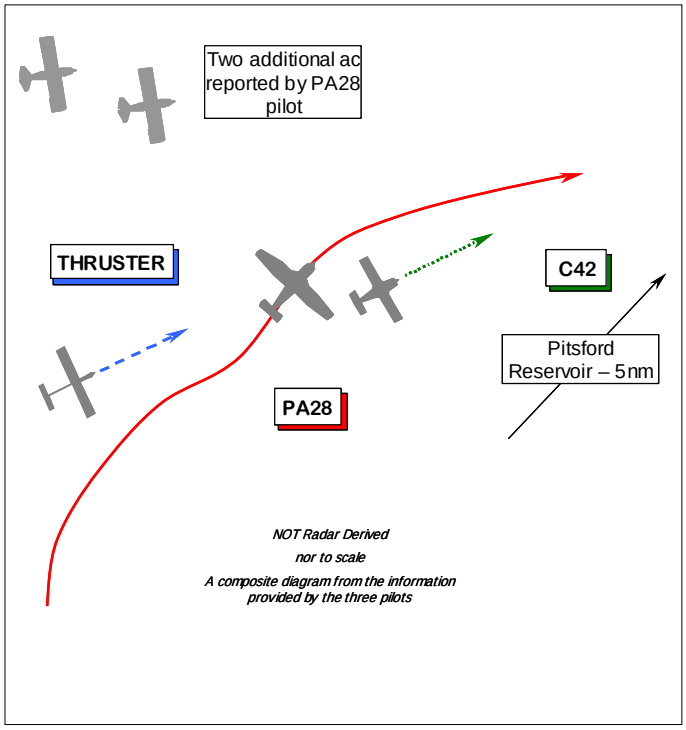
AIRPROX REPORT No 2010128

Date/Time: 4 Sep 2010 1010Z (Saturday)

Position: 5116N 00057W (5nm SW of Pitsford Reservoir)

Airspace: London FIR (*Class:* G)

	Reporting Ac	*Reported Ac*
Type:	C42 Microlight	PA28-161
Operator:	Civ Pte	Civ Pte
Alt/FL:	1400ft QFE (1007mb)	1800ft QFE (1007mb)
Weather:	VMC NR	VMC CLBC
Visibility:	15nm	10km
Reported Separation:	40ft V/10ft H	100-200ft V/100m H
Recorded Separation:	Not recorded	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE C42 MICROLIGHT (ML) PILOT reports he was inbound VFR to Sywell for a light ac rally and listening out with Sywell INFORMATION on 122·700MHz [a modified BS was provided]. Following his white and dark blue C42 was a Thruster Sprint in his 7 o'clock position flown by a colleague.

Approaching a position 5nm SW of Pitsford Reservoir [the feature notified as the assembly area for the rally 4nm WNW of Sywell] heading 060°, in a level cruise at 1400ft QFE (1007mb), he was just entering Sywell's published arrival procedure for RW03 at 75kt when a PA28 passed 40ft above and 10ft to port of his ac as it overtook him. The blue and white PA28 – registration given – was flying an estimated 30-40kt faster and crossed L – R, within 5 to 10° of his heading. No avoiding action was taken, there was no time; by the time he saw it, the PA28 was above him and the separation was increasing during the overtake. Assessing the Risk as 'high', he added the airspace was busy with multiple ac inbound to the rally.

The PA28 overtook the Thruster Sprint to starboard and included within the C42 pilot's report was a written account from the Thruster pilot (summarised below). The C42 pilot did not report the Airprox on the RT but discussed the occurrence at Sywell after he had landed.

THE PA28-161 PILOT reports that he was inbound to the light ac rally at Sywell from Wycombe and was in receipt of a 'modified' BS from Sywell INFORMATION on 122·700MHz. A squawk of A7000 was selected with Mode C; Mode S is not fitted. His ac is coloured blue and white.

On arrival in the vicinity, to the W of Northampton, he was heading N at 100kt, level at 2200ft QNH (1022mb) and his intention was to follow the suggested VFR arrival route in the AIC issued for the rally – Yellow 062/2010.

At that point there were two ac in his 10-11 o'clock position: a small high-wing ac [the C42] leading another ac some distance behind [the Thruster], crossing L to R. Once the high-wing ac had passed in front, he then turned R to position behind it and slowed to 90kt.

Heading NE, he became visual with Pitsford Reservoir assembly area and tracked towards it whilst resetting his altimeter to the Sywell QFE (1007mb). The assembly area was to be flown not below 1500ft QFE and he also reduced speed to 80kt as he was aware he was still gaining on the ac in

front. At this time he also noted two additional ac off his port wing-tip joining from the NW. The separation between the lead ac, which was now to the R of his track at a speed of about 70kt, and his PA28 was still reducing. He was reluctant to reduce speed any further, as this would not increase the separation and he felt it would be unsafe to do so in case he had to take any sudden action at the resulting low airspeed that could potentially put him in a stall/spin situation. His first option of a LH orbit was prevented by the other ac closing off his port wing-tip, which could have caused a head-on conflict with either of them. A RH orbit was also considered, but this would have taken him closer to the lead ac and they were to the N of Northampton by this time, over built-up areas of the City. Also, he was acutely aware that there was another ac behind him but he had no idea of its position or proximity so S turns to increase separation were therefore discounted. He felt he was becoming increasingly boxed-in but could see ahead that there were no ac at the Pitsford Assembly Area and decided his best option would be to pass the small high wing ac into clear airspace beyond. Both ac were on similar parallel tracks and he felt the risk was minimal. He positioned further to the L of the lead ac, mindful of the other two ac off his port wing tip, and accelerated to about 100kt. This also caused his ac to climb slightly, prior to re-trimming, and further increased the separation. The ac ahead and now to his R, which now appeared to be a small two seat high-wing very light ac type [the C42 ML], then passed down his RH side and under his starboard wing tip, 100-200ft below and about 100m away with a 'low' Risk.

Once he had passed the C42, he continued to Pitsford Reservoir Assembly Area. With no other ac now in the area, he began a descent and slowed to begin his approach to RW03 at Sywell. Late on base-leg flying at about 75-80kt he began catching-up two Piper Cub type ac, but he was able to turn finals for the hard RW03 whilst they extended their base leg before turning for the grass runway.

He added that multiple ac in close proximity flying on converging tracks at the time of the Airprox was a significant factor.

THE THRUSTER T600N SPRINT PILOT provided a supplementary account stating that he was also flying to the rally at Sywell and following his colleague, 500m astern of the C42 ML whilst listening out with Sywell INFORMATION on 122·700MHz. Flying a track of 060°, NW abeam Northampton approaching Pitsford Reservoir, he spotted a PA28 in his 4 o'clock - 300m away heading about 050° on a similar course. The PA28 was flying about 30-40kt faster and overtook from R to L in front of his ac, flying between his Thruster and the C42 at the same level. He did not feel there was any Risk at this point, even though the PA28 pilot did not give way to his ac, nor to his colleague's C42, by altering course to the R. It was not until the PA28, now to port of the C42, climbed slightly and unexpectedly turned R by 15-30° that there was a 'high' Risk of a collision with the C42 ahead. From his position 500m directly astern of the C42, the PA28 appeared to fly directly over the top of the C42 with very little vertical separation. The RT was very busy, so he was unable to make a radio call to warn the C42 pilot of the imminent danger posed by the proximity of the PA28.

UKAB Note (1): The AIC issued for the rally – Yellow 062/2010 dated 12 Aug 2010 - promulgated procedures for the event that had been devised to ensure the safety of participants and also create an orderly flow of traffic, including a Temporary Restricted Area in force within a 4nm radius of Sywell ARP (sfc - 3500ft agl).

A modified BS was available from Sywell INFORMATION during the period of the Airprox, and all radio equipped ac, including Microlights and Autogyros, were required to proceed to an Assembly Area at Pitsford Reservoir (4 nm WNW of Sywell) via suggested routes depending on the direction of arrival.

At Para 4.2.2, it was specified that:

> 'Prior to reaching Pitsford monitor 'Sywell INFORMATION' on 122·700MHz on which regular broadcasts will include the active runway and QFE. NO RADIO CALLS ARE NECESSARY FOR JOINING. Fly an anticlockwise holding pattern at Pitsford 020/200 degrees not below 1500 ft……..'

Hence, the modified BS.

UKAB Note (2): This Airprox is not apparrent on the LATCC (Mil) radar recordings despite extensive analysis of the recorded data. A large number of ac are shown as intermittent primary contacts approaching Sywell via the notified Assembly Area at Pitsford Reservoir. Therefore, in the absence of Mode S data it is not possible to identify the C42 or Thruster Sprint from the myriad of other ac in the vicinity. Furthermore, no ac squawking A7000 with Mode C is shown approaching the Assembly Area in the manner described by the PA28 pilot. That is not to say that he did not comply with the promulgated procedures, just that it is not possible to identify his ac with certainty.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac and radar video recordings.

The Board was briefed that the Airprox was not evident on recorded radar data, but the radar recording did confirm that there was a large volume of traffic inbound to Sywell converging on the Assembly Area from all around. The GA Pilot Member has experience of various rallies, both in the UK and abroad; he explained that it is not an easy task to integrate into the inbound flow with so many disparate types of ac of greatly varying performance levels arriving from different directions. The smaller ac can be difficult to spot in the first instance and the widely differing speed ranges made it difficult to judge spacing in any inbound sequence. He emphasised that this rally is a very popular event attracting many ac from all over the Country and safe participation relies on good airmanship coupled with sound common sense. A number of Members, pilots and controllers alike, also have experience of such events and concurred that they could present a challenge for less experienced pilots. The GA pilot Member's view was that the procedures developed for the event had generally proved satisfactory provided pilots complied with them and exercised good overall airmanship.

The CAA ATS Policy and Standards Advisor commented on the use of a 'Modified' Basic Service and was concerned that this was not a term that he recognised within the range of ATSs promulgated for use within the UK outside CAS. Practically speaking, no form of ATS was afforded to rally traffic, especially within the ATZ, and this was effectively, a one-way 'listening watch'. Nevertheless, controller Members who had operated an aerodrome Flight Information Service during such events commented that these can be extremely busy scenarios, it was debatable, therefore, whether this volume of traffic could be operated under a more positive or more RT intensive form of ATS. The GA pilot Member said that in his experience, attempting to apply more positive control to such events limited the flow rate of inbound traffic to an unacceptable degree. However, another Member added that stipulated 'slot-times' could be helpful in smoothing out the peaks and troughs in the traffic flow. Nevertheless the Policy and Standards Advisor elected to review the use of this 'Modified' Basic Service in more detail outwith the meeting.

Notwithstanding the promulgated arrival routes, this Airprox occurred whilst ac were in transit to the Assembly Area, outside the ATZ, in the 'Open FIR' where see and avoid in accordance with the Rules of the Air applied. Broadly, the reports from the two pilots involved, together with that of the Thruster Sprint pilot, all agreed on the relative positions of ac during the encounter, except the crucial point of the minimum separation. It was clear to the Board that the PA28 pilot had spotted both the C42 and the Thruster and elected to follow the C42, not realising initially the significant speed differential before he found he had limited room for manoeuvre. A GA Member pointed out that pilots of slower microlight types must expect to be overtaken by other aeroplanes that are plainly not capable of being flown safely at such slow speeds. Thus, appreciation of differing ac performance needed to be taken into account by everyone involved. Members also noted the significance of the low-wing PA28 overtaking to port and above the high-wing C42; the C42 pilot would not have been able to see the PA28 until it started to draw alongside and flew into his field of view ahead. Plainly, it would have come as quite a surprise when the PA28 overtook his C42, from his perspective passing 40ft above and 10ft to port of his ac, contrary to the Rules of the Air, but the separation might have been difficult to gauge. It was evident that the PA28 pilot had the C42 in plain view for some time,

whilst considering the apparently limited options available to him, having 'tucked-in' behind a slower ac. Notwithstanding the AIC's instruction that the Assembly Area he was approaching had to be flown at or above 1500ft QFE, the fast-jet pilot Member believed that the PA28 pilot was perhaps forgetting the vertical option, which was to overtake by passing well clear on the R after descending beneath the C42, resulting in a slightly increased speed, but allowing him to keep the C42 in sight throughout and also completing the manoeuvre more quickly, regaining height before reaching the assembly area. Nonetheless, it was the PA28 pilot that chose the separation during the overtake manoeuvre to port of the C42, which he estimated was about 100m away and 100-200ft below his starboard wing tip, but might not have been visible to him throughout in his low-wing aeroplane. The C42 pilot's colleague in the Thruster believed the PA28 passed directly over the top of the C42 with very little vertical separation, but from his perspective he would not have been able to judge the horizontal separation accurately at the point that the PA28 actually overtook the C42. In the absence of radar data the pilots' differing perceptions of the separation during this encounter could not be resolved independently, but it was clear to the Members that the C42 pilot had been justifiably concerned at being overtaken to port. The Board concluded that this Airprox had resulted because the PA28 pilot flew close enough to the C42 to cause its pilot concern. In the Board's view, however, there was no evidence of an actual Risk of collision in these circumstances.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA28 pilot flew close enough to the C42 to cause its pilot concern.

Degree of Risk: C.