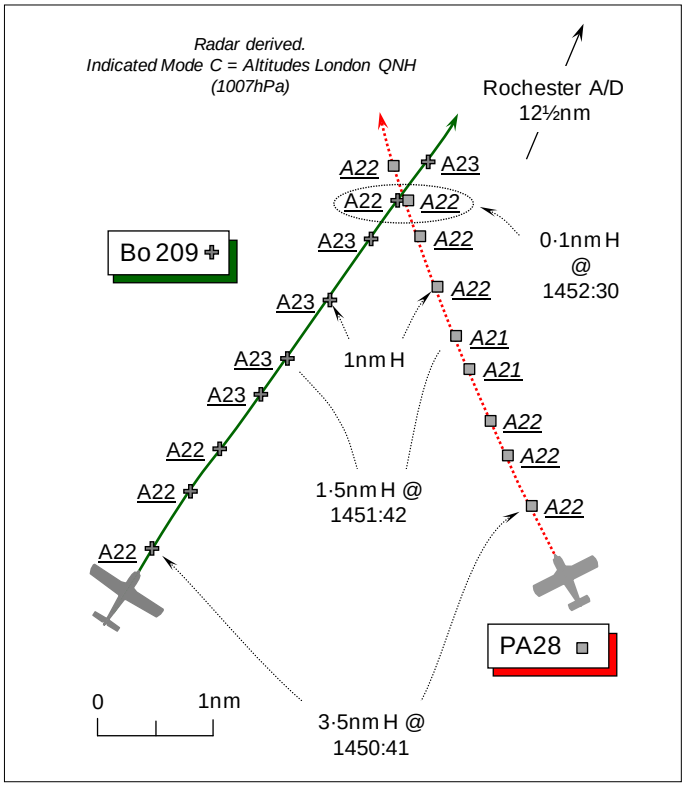
AIRPROX REPORT No 2011105

Date/Time:	14 Aug 2011 1452Z (Sunday)	
Position:	5111N 00018E (12½nm SW of Rochester A/D)	
Airspace:	London FIR	(*Class:* G)
	Reporting Ac	*Reported Ac*
Type:	Bolkow 209	PA28
Operator:	Civ Pte	Civ Trg
Alt/FL:	2300ft QNH (1008hPa)	2200ft QNH (1007hPa)
Weather:	VMC No Cloud	NR
Visibility:	20km+	NR
Reported Separation:	10ft V/100m H	NR
Recorded Separation:	<0·1nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE MESSERSCHMITT BOLKOW Bo209 MONSUN (Bo209) PILOT reports he was inbound to Rochester from Bembridge with two pilots aboard under VFR; he was not in receipt of an ATS, but was about to call Rochester on 122·25MHz. His aeroplane is coloured blue/white and the strobe light was on.

On the 040 radial MAYFIELD VOR 22nm he thought, but actually as he was approaching a range of 14nm, heading 040° at 115kt, cruising level at 2300ft QNH (1008hPa), the other ac – a low-wing single engine aeroplane with a fixed undercarriage approached from his starboard rear quarter just below his level. When he saw it, the pilot of the other ac was executing what appeared to be very late avoiding action by turning L to pass astern and diving beneath his ac's tailplane. He took no avoiding action because the other ac had approached from his starboard rear quarter with a 'high' Risk of collision. Minimum vertical separation was 10ft below his aeroplane at a range of 100m.

UKAB Note (1): A review of the LAC radar recording originally suggested that this Airprox had occurred earlier at 1447, somewhat closer to Rochester A/D with a DA20, whose pilot helpfully provided a report. However, further analysis of the radar data revealed that the geometry did not closely match the encounter reported by the Bo209 pilot and that the DA20 was not the reported ac. Furthermore, no reference was made to the Bo209 squawking A7000 with Mode C in the pilot's written account. Following further discussion with the Bo209 pilot it was ascertained that the Airprox occurred in a position 040° MAY 14nm, not the 040° MAY 22nm reported. The reported ac was identified as a PA28 that subsequently landed at Biggin Hill. To date, despite contact with the successors to the company that owned the ac when the Airprox occurred, the identity of the PA28 pilot remains unknown.

UKAB Note (2): The Bo209, identified by its Mode S AID, is shown squawking A7000 on a direct track between MAY VOR and Rochester A/D at 1450:41, tracking 040°, maintaining a level cruise indicating 2200ft Mode C London QNH (1007hPa); at this point the PA28 is shown in the Bo209's 2o'clock at a range of 3·5nm indicating 2200ft London QNH (1007hPa). Each ac maintains a steady course as they converge, but their respective altitudes fluctuate slightly; the Bo209 climbing to 2300ft for a period and the PA28 descending slightly to 2100ft before resuming a level cruise at 2200ft as the ac close to a range of 1nm. The CPA of 0·1nm occurs just after 1452:30, in between radar

sweeps, as the Bo209 crosses marginally ahead of the PA28 with both ac indicating 2200ft London QNH. No avoiding action is apparent from either ac as the range increases with both ac maintaining a steady course.

ATSI reports that the Airprox occurred at 1452:30 UTC, 18.9nm to the east of Gatwick Airport on the MAY(VOR) 010 radial at 14.2nm in Class G airspace.

The Airprox was reported by the pilot of a Messerschmitt Bolkow Bo209, which was operating on a VFR flight from Bembridge to Rochester. The Bo209 was not in receipt of an air traffic control service and the pilot reported that the Airprox occurred at 1450 UTC at a position on the MAY(VOR) 040 radial at 22nm. The Bo209 pilot's written report did not show that a transponder was being operated. The Airprox Notification listed the second ac as a Diamond DA20 and the pilot's written report indicated he was operating VFR, squawking A5021 and in receipt of a BS from Farnborough LARS.

Based on these reports, CAA ATSI requested radar and RTF transcription for the two ac concerned. At 1447:35, the radar recordings show the DA20 squawing A5021 and passing in close proximity to another primary contact on the MAY(VOR) 030 radial at 22.9nm, being the approximate time and position of the reported Airprox. An initial investigation was completed by ATSI based on the available facts.

After the CAA ATSI investigation was concluded, UKAB advised that the 2nd ac was not the DA20, but had now been traced as being a Cherokee PA28, on a Farnborough LARS squawk A5024 inbound to Biggin Hill.

Radar recordings were re-examined and showed that the Airprox occured at 1452:30, at a position 10nm further SW than the original reported position. Mode S identified the Bo209 ac, which was squawking A7000 and came into close proximity with an ac squawking 5024. Unfortunately it was not feasible to trace the PA28 pilot and no report was available. Due to the elapsed time no transcription was available for the PA28 and neither Biggin Hill or Farnborough had retained the flight progress strip data beyond the 3 month requirement.

ATSI had access to area radar recordings, together with the written report from the Bo209 pilot and the Farnborough RT recording which terminated at 1450.

The 1420UTC Manston METAR: 35006KT 9999 BKN048 19/11 Q1007=
The 1420UTC Gatwick METAR: 24007KT 9999 FEW044 20/11 Q1007=

At 1443:00, radar recordings show the Bo209 in a position 13nm W of MAY, indicating an altitude of 2100ft and the PA28, 1.9nm NW of MAY, indicating an altitude of 2200ft. At 1445:11, the two ac are shown tracking NE separated by approximately 9nm.

At 1448:40, radar recordings show the PA28 (MAY031R at 9.4nm) has turned onto a northwesterly track and on a converging track with the Bo209 (MAY340R at 8nm). The distance between the two ac is 7.5nm.

During the period of RTF recording for Farnborough LARS E, there is no transmission from or to the subject PA28. This recording ends at 1450. It is considered likely that the PA28 was in receipt of a BS.

At 1450:27, radar recordings show the two ac converging at a range of 3.9nm and both ac are indicating an altitude of 2200ft.

At 1451:59 the range between the two ac was 1.1nm. The Bo209 was indicating an altitude of 2300ft and the PA28 an altitude of 2100ft.

At 1452:33, radar recordings show both ac tracks crossing in very close proximity, on the MAY011R at 14.2NM, with both ac indicating an altitude of 2200ft. The two ac then diverge on a steady course.

The PA28 was reported to have landed at Biggin Hill at 1509.

The two ac were operating in Class G airspace and the Bo209 was not in receipt of an Air Traffic Service. The PA28 was squawking 5024 and was most likely in receipt of a BS from Farnborough LARS-E. CAP 774, UK Flight Information Services, Chapter 2, Page 1. Paragraphs 1 & 5, 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.'
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> 'Basic Service relies on the pilot avoiding other traffic, unaided by controllers/FISOs. It is essential that a pilot receiving this service remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.'
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> 'Pilots should not expect any form of traffic information from a controller, as there is no such obligation placed on the controller under a Basic Service outside an Aerodrome Traffic Zone (ATZ), and the pilot remains responsible for collision avoidance at all times. However, on initial contact the controller may provide traffic information in general terms to assist with the pilot's situational awareness. This will not normally be updated by the controller unless the situation has changed markedly, or the pilot requests an update. A controller with access to surveillance derived information shall avoid the routine provision of traffic information on specific aircraft, and a pilot who considers that he requires such a regular flow of specific traffic information shall request a Traffic Service. However, if a controller considers that a definite risk of collision exists, a warning may be issued to the pilot.'

The Airprox occurred when the Bo209, operating VFR in Class G airspace and not in receipt of an in Air Traffic Service, came into close proximity with the PA28, which was most likely in receipt of BS. Under a BS there is no obligation placed upon the controller to provide TI.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included a report from the Bo209 pilot, a limited transcript of relevant RT frequencies, radar video recordings and reports from the appropriate ATC authority.

The Board was briefed on the difficulties of obtaining a report from the PA28 pilot, whose employer ceased trading after the Airprox occurred. The report was therefore incomplete and the absence of the PA28 pilot's perspective hampered assessment of the Cause of this Airprox and made it difficult to come to a meaningful conclusion as to Risk, which should be borne in mind when considering the Board's views.

It was unfortunate that the Bo209 pilot had not availed himself of a radar service to supplement his lookout as even a BS, as apparently provided to the PA28 pilot, did not guarantee that a warning would be given by ATC about other traffic in the vicinity. The recorded radar data showed the PA28 closing on a steady course to starboard of the Bo209, whose pilot reported he was flying in VMC with an in-flight visibility of 20km and no cloud to hinder his lookout. As the PA28 was closing from the R, the Bo209 pilot had a responsibility to see other ac to starboard and take action to remain clear. Members recognised that the PA28 was closing on a constant relative bearing forward of the starboard wing at exactly the same indicated altitude; therefore, it was there to be seen in the Bo209 pilot's field of view for some time. However, with little relative movement to draw attention to it, the Bo209 pilot looking 'cross-cockpit' from the LH seat, did not see the PA28 until it was turning L to

pass astern and diving beneath his ac executing what appeared to be late avoiding action. Given the Bo209 pilot's responsibility under the Rules of the Air, the Board concluded that the first part of the Cause was effectively, a non-sighting by the Bo209 pilot. Without the PA28 pilot's account the Board could only postulate what had occurred from his perspective. Some Members contended that the PA28 pilot, who was also beset with the same difficulties sighting small ac on a constant bearing at the same level, had similarly not seen the Bo209 until a late stage. Whereas other pilot Members said that its pilot might have recognised that the pilot of the Bo209 to his L was required to give way and therefore 'stood on' in the expectation the latter would turn away, but subsequently had to manoeuvre around the Bo209 himself at close quarters at a late stage. Given the Bo209 pilot's assertion that the PA28 pilot had turned astern of his aeroplane the Board could only conclude that the other part of the Cause was possibly, a late sighting by the PA28 pilot.

In the Board's determination of the inherent Risk, some Members suggested there might be insufficient information available, but this was a minority view. If the PA28 pilot had indeed 'stood on' until he had flown into close quarters and then taken robust avoiding action, pilot Members believed that it had been left too late and possibly an example of the difficulty of judging separation distances in the air. Whilst the avoiding action is not readily apparent on the radar recording, this does not cast doubt on the veracity of the Bo209 pilot's report but is perhaps a function of the slow data update rate and lack of short range discrimination available from the long range area radar recording. The separation evinced by the radar recording of <0.1nm at the same altitude suggested to some Members that neither pilot had taken appropriate action to avert a collision early enough, leading to an actual Risk of collision. However, other Members were swayed by the reporting pilot's observation that the PA28 pilot had turned to pass astern, leading the overwhelming majority of the Members to agree that, while the resulting separation was not simply fortuitous, the safety of the ac involved had been compromised.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Effectively, a non-sighting by the Bo209 pilot and possibly a late sighting by the PA28 pilot.

Degree of Risk: B.