

AIRPROX REPORT No 2011138

Date/Time: 2 Oct 2011 1342Z (Sunday)

Position: 5046N 00130W
(13nm E Bournemouth)

Airspace: London FIR (Class: G)

Reporting Ac Reported Ac

Type: Zenair Zodiac Robin 2160

Operator: Civ Pte Civ Pte

Alt/FL: 1700ft 1400ft
QNH (1024mb) NK

Weather: VMC CAVOK VMC CLBC

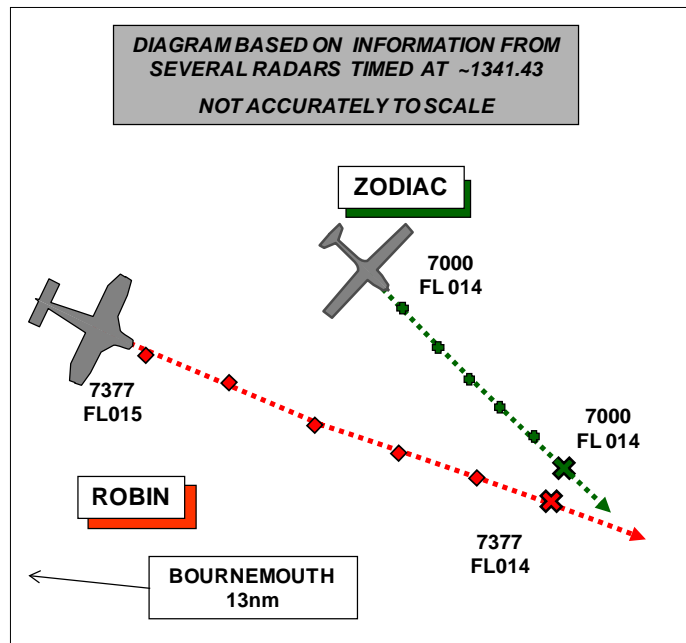
Visibility: >10km 30km

Reported Separation:

0 V/30m H 400ft V/1nm H

Recorded Separation:

0 V/0.1nm H (See UKAB Note (1))



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE ZENAIR ZODIAC PILOT reports that he was en-route from Old Sarum to Bembridge under VFR in a blue and white ac with strobes fitted, squawking 7000 with Mode C, but Mode S and ACAS were not fitted and he was listening out on Solent Radar. He was flying straight and level heading 130°, outside controlled airspace, at 75kts and at 1700ft on the QNH of 1024mb. Approaching abeam Beaulieu Disused Airfield he first noticed a previously unseen ac in his 2 o'clock position, about 50-100ft ahead, and level with him; the ac crossed from his R to L, passing immediately in front of him. He had no time to take any avoiding action as the whole incident was over in seconds and he considered the risk to be high. The ac was a red and white, low-wing, single engine, tricycle-undercarriage type similar to a PA28.

After the incident, while he continued onwards towards Bembridge, he saw the ac tracking along the N coast of the IoW towards Cowes. Neither he nor his passenger (who is a PPL holder) was at any point aware of the ac prior to the incident.

THE ROBIN 2160 PILOT reports flying a VFR private flight, in a red and white ac with a strobe fitted, from Compton Abbas to Goodwood squawking as directed (7377 with Mode C) while in receipt of a BS from Bournemouth LARS. While heading 135° at 105kt, midway between Stoney Cross and Beulieu he saw an ac 2nm away on a slowly converging course from the L at same level, but moving more slowly than his ac. He recognised that there might be a conflict and so he decided to descend from 1800ft to 1300-1400ft to pass well below and safely in front of the other ac; he did not consider that the incident was an Airprox nor was there any risk of collision.

In retrospect however, he thought that the safety of this course of action was dependent on the other ac maintaining height, course and speed and the accuracy of his judgement of its level and speed; passing behind is usually a better option but, in this case this would have involved a major course alteration.

The Bournemouth controller didn't alert him to any potential conflict.

ATSI reports that the Robin was operating VFR and, at the time of the incident, was in receipt of a BS from Bournemouth LARS. Meanwhile the Zodiac was also operating VFR but was maintaining a

listening watch on the Solent Radar frequency; the Solent Monitoring Code of 0011 was not displayed.

ATSI had access to RTF and radar recordings together with written reports from both pilots. The radar recordings displayed the Mode C indications of both ac in terms of flight level on the standard pressure setting of 1013mb. For the purposes of adjusting the Mode C indication to altitude the ratio of 1mb = 27ft has been used.

The Bournemouth METARs are provided for 1320 and 1350 UTC:

METAR EGHH 021320Z 19005KT 130V200 CAVOK 23/14 Q1023=
METAR EGHH 021350Z 18006KT 130V200 CAVOK 23/13 Q1023=

At 1328:40 the Robin pilot contacted Bournemouth Radar requesting a BS; a BS was agreed by the controller and the Robin was instructed to squawk the Bournemouth Conspicuity Code of 7377 and to report passing Stoney Cross. At 1336:20 the Robin reported passing Stoney Cross and the controller instructed him to report at Cowes.

The written report of the Zodiac pilot states that he was flying on a track of 130° at 1700ft while squawking 7000 in the vicinity of Beaulieu Disused Airfield at the time of the Airprox.

At 1339:38 radar recordings showed the Robin (identified using Mode S) 2nm to the W of an ac squawking 7000 indicating FL014 (which converts to altitude 1700ft); both ac were N of Beaulieu disused airfield. Given the reported track and level of the ac, it is assumed that the ac squawking 7000 was the Zodiac.

At 1340:52 the two ac were 1nm apart with the Robin indicating FL015 (1800ft) and the Zodiac at FL014 (1700ft). The speed of the Robin was such that it was overtaking the Zodiac.

At 1341:32 the lateral distance between the two ac had reduced to 0.2nm. At this point the Mode C indications of both ac were not visible.

The written report from the pilot of the Robin stated that he saw the Zodiac on a slowly converging course and descended to pass in front and below the other ac.

At 1341:46 the radar recording shows that the returns of the two ac merge with the Robin crossing right to left in front of the Zodiac. The two tracks then diverged.

The Zodiac pilot's report states that he saw the Robin in his two o'clock position at the same level approximately 50 to 100ft ahead shortly before the ac crossed in front of him R to L. The pilot stated that there was no time to take avoiding action.

At 1343:40 the Robin was instructed to squawk 7000 and contact Solent Radar on 120.225 MHz.

The Solent APR controller was unaware that the pilot of the Zodiac was maintaining a listening watch on 120.225 MHz so would have been unable to offer assistance in the form of traffic information.

It is unclear whether or not the Bournemouth Radar controller was aware of the presence of the Zodiac; however, under the terms of a BS there is no requirement to pass TI.

Both ac were operating in class G airspace. CAP 774, Chapter 1, Paragraph 2 states:

'Within Class F and G airspace, regardless of the service being provided, pilots are ultimately responsible for collision avoidance and terrain clearance, and they should consider service provision to be constrained by the unpredictable nature of this environment. The Class F and G airspace environment is typified by the following:

It is not mandatory for a pilot to be in receipt of an ATS; this generates an unknown traffic environment;
Controller/FISO workload cannot be predicted;
Pilots may make sudden manoeuvres, even when in receipt of an ATS.'

The Airprox occurred at 1341:32 UTC between a Zodiac, and a Robin when the ac came into conflict in Class G airspace, 1.8nm to the E of Beaulieu Disused Airfield.

The Zodiac pilot believed that the Robin passed in front of him at the same level, 50 to 100 feet ahead whereas the pilot of the Robin reported that he had given sufficient room to the other ac in order to pass it safely; the Radar recording was unable to determine the exact geometry of the encounter.

UKAB Note (1): The Pease Pottage Radar shows the incident. The Zodiac, squawking 7000 with Mode C approaches the CPA tracking 130° at FL014. Meanwhile the Robin (G/S 112kt) is to the S of the Zodiac (G/S 70kt) tracking 105° and slowly closing with and overtaking it as shown above. At 1336:30 the Robin is at FL017 and continues to close with the Zodiac at FL014, while descending to FL015. At 1337:30 the Zodiac (FL014) is in the Robin's (FL016) 11 o'clock at 3.3nm. At 1339 the Zodiac is 2nm in the Robin's 11 o'clock. At 1340 the Zodiac is 1.7nm in the Robin's 1030, the levels unchanged. At 1341:12 both acs' Mode C drops out while the Robin is 0.5nm in the Zodiac's 4 o'clock. At 1341:42 the Robin is in the Zodiac's 2 o'clock at 0.1nm, overtaking it, the Robin's Mode C still not showing (on last seen sweep (1341:07) it showed FL015 and on the sweep 6 sec after the CPA also FL015). The Swanwick system and the Jersey recordings at 1341:43 show both ac at FL014, 0.1nm apart as the Robin overtook the Zodiac on its starboard side.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar recordings, reports from the air traffic controllers involved and a report from the appropriate ATC authorities.

The Board noted that both ac had been operating legitimately in, albeit busy, Class G airspace where 'see and avoid' is the principal method of collision avoidance. The ac were closing at almost the same alt on line of constant bearing with very little relative motion to cue a visual acquisition. Although the Zodiac had the Robin on the right, the Robin was slowly overtaking so the ANO requires both to give way; however, the Robin was always behind the Zodiac and more difficult to see so the Zodiac pilot was not well placed to 'see and avoid'. The Robin pilot had a better view of the situation developing ahead of him and Members opined that he could have initiated a turn to the left to go behind the Zodiac rather than opting to give way by descending (although not discernable on the radar recording and therefore of a small magnitude manoeuvre and/or of short duration). While descending is by the letter of the law giving way, Members agreed that a lateral and vertical solution makes pilots' intentions more visible and clearly signs that one has seen, and is giving way to, another ac.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Robin flew close enough to cause the Zodiac pilot concern.

Degree of Risk: C.