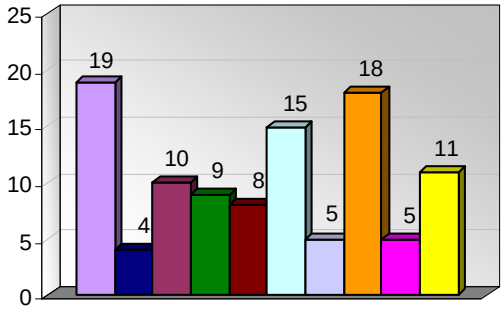
CHIRP FEEDBACK

Issue No: 40 Summer 2009

Most frequent GA Issues in CHIRP Reports 12 months to 30 March 2009

The chart shows the ten issues most frequently reported:



Handling/Operation
Lack of Airmanship - 9, Aircraft Handling - 7, Operation of Equipment - 3.

Communications - External
Between Pilots and ATC - 4.

Situational Awareness
In the Air - 10.

Aircraft Technical
Systems - 3, Propulsion - 2, Design - 3, Performance - 1.

Air Traffic Management
Level of Service - 3, Procedures/Separation of traffic - 4, Other - 1

Individual Error
Inadequate Skills/Knowledge - 8, Aircraft Handling - 1, Lack of confidence/experience - 4, Reckless Behaviour - 1, Other - 1

Maintainance
Workmanship - 1, Installation error - 1, Embodiment - 2 , Servicing error - 1.

Procedures
Use by Reporter - 6, Use by others - 7, Inadequate - 2, Incorrect/Conflicting - 1, Knowledge of - 2.

Regulation/Law
Non - Compliance - 4, Knowledge of - 1.

Near Miss
Air - 7, Ground - 4.

AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE (ATSOCAS)

Do you have any suggestions, comments about the new ATSOCAS services? If so, submit them to the ATSOCAS Survey at:
http://www.airspacesafety.com/content/ATSOCAS_Survey.asp

INFRINGEMENTS OF CONTROLLED AIRSPACE

In spite of the considerable publicity given to the dangers associated with unauthorised infringements of Controlled Airspace in this and other GA publications, several very serious incursions by GA pilots have occurred in 2009. The following are two further recent incidents.

(1)

Report Text: Prior to the flight from AAA (Essex) to Panshanger, I had verified on my chart that flying directly from LAM to Panshanger would keep me outside the southwest stub of the Stansted CTA. I planned to do this so that there would be no need to overfly BPK; my preference is to minimise VOR overflights where possible because many aircraft tend to overfly VORs and I consider it safer if we are all talking on the same frequency. This is the case when passing through the Stapleford overhead but not necessarily at BPK. Outbound there was no problem.

Leaving Panshanger at dusk, I made a right hand circuit as requested and decided to pass to the north of the Stapleford CTZ as I could not be sure of contacting them. My failure was to appreciate that a right hand circuit would take me at least a mile further north than my charted straight line and passing to the north of Stapleford would keep me to the north of my planned track. The translated track undoubtedly took me across the edge of the Stansted CTA which extends from 1500' - 2500'. Although I didn't realise that this had happened at the time, when AAA, who do not have SSR, asked me to squawk 0201, I guessed it would be for Essex Radar and immediately realised what must have happened.

Lessons Learned: The obvious lesson is to think of the impact of changes to what was originally planned. Had I re-plotted my course on the chart while in the air, I would have seen the infringement in time to correct it. I might even have done this if I hadn't been so intent on looking out for other aircraft as it was dusk and they are, to my mind, quite hard to see. It was also a beautiful red sunset covering more than half the sky - partly a distraction but also part of the joy of flying at that time of day. Another possibility would have been to squawk 0013 and listen to Essex Radar although, as I intended to fly close to Stapleford, I was actually listening to them.

(2)

Report Text: En route from BBB (Kent) to Cambridge I skirted around the Stansted CTA (noting the 2,000ft ceiling) and approached Cambridge airport from the Northeast. On the return journey after departing

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Cambridge on Runway 23, I elected to take a slightly more direct route back to BBB via Earls Cone.

I found myself slightly south of my intended track, due to the direction in which I had left Cambridge but I was comfortable parallel tracking as I assumed at 1,700ft I was under the 2,000ft ceiling for Stansted. I failed to spot that the NE extension of Stansted CTA is actually 1,500ft. I therefore infringed Stansted CTA for a few minutes until approaching Earls Cone after which I tracked down the easterly side of the CTA en route back to AAA. I did not know of my infringement until approaching AAA when the tower passed on a request from Essex Radar to squawk 0206.

Lessons Learned: The main lesson learned was that if I change my mind about the proposed return route, even only slightly, double check the chart again rather than assume the levels.

CHIRP Comment: **Both of these infringements could have been avoided by better pre-flight planning of both the outbound and the return leg and by improved situational awareness. Here are some suggestions to avoid a similar fate:**

- **Have you planned your outbound and return tracks with an adequate margin for navigation error appropriate to your experience?**
- **Have you studied the route on the map to ensure that you can maintain track in the prevailing visibility? Is your map current?**
- **Have you checked the relevant NOTAMs and temporary airspace restrictions?**
- **Is a discrete 'listening out' transponder code available; if there is and you have a transponder, have you noted the code and the associated RT frequency?**

Finally, as we have pointed out previously, even a minor incursion into Controlled Airspace can cause major problems for Air Traffic Control Officers (ATCOs) and the sequencing of inbound/outbound commercial traffic. If you are unsure of your position in relation to Controlled/ Restricted Airspace, call D & D on 121.5 MHz.

CUMULATIVE STRESS

Report Text: I had been waiting several months to do my solo qualifying cross-country flight as part of my PPL training and had had numerous false starts.

At last I arrived at the airfield on a perfect day (CAVOK and hardly any wind). As I went to pre-flight the aircraft, some other club members alerted me (I am a doctor) to a medical emergency that was in progress in a field next to the aerodrome. I ran back to the clubhouse and enlisted a friend of mine (also a doctor) to come and help; we raced to the scene and worked on the individual, who had collapsed. After half an hour we were unable to resuscitate the individual and were forced to give up. I made my way back to the airfield and thought I could still make the cross country flight (I couldn't bear the thought of cancelling again).

I pre-flighted the aircraft, and was just about to start up when one of the instructors hurried over and asked me to change aircraft because the hours to a maintenance check were almost up. So, I pre-flighted the second aircraft, and at last got airborne. All was going well as I radioed my flight details to the first ATC unit. Heading towards my first destination, a fairly busy regional airport, I was told to change to ### Approach with "they have your details". Joining base leg as instructed, I was then told to expedite my approach as there was an Airbus coming in behind me. I thought this was unusual (being a student alone in the aircraft), but did my best to keep my turns tight on to final. After landing I was told to expedite vacating the runway. I sped up a little, and just avoided putting the aircraft on two wheels as I turned right off the runway.

Still under the impression I had to hurry up, I then proceeded to join the taxiway to the General Aviation Terminal. I heard ATC mention an aircraft to which I had to give way. The only thing in sight was a large passenger jet to my left which had come off stand and was making its way towards the taxiway. As it was a couple of hundred metres away and I was still in "hurry up mode", I cut across in front (though I thought I had given it plenty of room). It was then I heard the very irate call from ATC asking me to STOP immediately, and that I had not obeyed his instruction. It was only then that ATC asked me if I had an instructor on board, which made me believe that they had assumed that I had for all of the flight, and that was why I was being asked to expedite.

Lessons Learned:

1. Stress is something that builds up, and is cumulative. I had not paid attention to the fact that I had been involved in a stressful event before take-off, and was too eager to get in the air after a long wait for what would be the last major test before my skills test.
2. Listen carefully to what ATC are telling you. If you have been through a bit more stress on the flight (e.g. all that expediting stuff), consider asking them to repeat a taxiing instruction as this is when you begin to let your mind wander, thinking you have got all the hard work done.
3. This event happened before the introduction of the student call sign. Perhaps its use would have avoided the expediting calls from ATC which added to my stress.

CHIRP Comment: **This report contains good lessons for students/inexperienced pilots, instructors and ATCOs.**

From a student perspective it is most important to recognise circumstances that might lead to a significant increase in the level of stress associated with a flying task and to understand that you, the aircraft commander, have the ultimate responsibility for the safety of the aircraft.

Also, in a case where a student is exposed to a stressful situation prior to flying, instructors have a responsibility to ensure that a student will still be able to carry out the planned exercise safely.

From an ATCO point of view, the ATC instruction to expedite clearing the runway without qualification was not helpful in the particular circumstances, although as the reporter notes, had the student prefix been in use, it is probable that this incident would have been averted.

FLY-IN PROBLEM - WHICH WAY TO JOIN?

Report Text: A situation that I encountered several years ago at a fly-in has been worrying me ever since.

The recommended joining procedure for this fly-in specified a straight-in approach to the westerly runway over a nearby town and avoiding an adjacent ATZ. This I intended to do. Whilst abeam the town a faster aircraft overtook me and, instead of following the recommended straight-in approach, proceeded to the dead-side to join downwind for a right-hand circuit. Accordingly, I broke off my straight-in approach and followed this aircraft around the circuit. On base leg, just prior to turning on final I became aware of another aircraft to my left obviously on final after a straight-in approach. I immediately dived to avoid this aircraft and, after carefully observing the approach path made a non-standard 270° turn to the left to join behind this aircraft on final approach and land. I believe the aircraft I avoided carried out a missed approach thereafter.

Due to the confused situation and being somewhat shaken by the experience, I failed to identify the other aircraft or its pilot. Neither did that pilot or I file an Airprox report, which I now feel I should have done. I am still not sure who had the right-of-way according to the Rules of the Air! I assume that I had, since I was technically the lower aircraft.

This emphasises the importance of checking the approach path prior to turning on final, but my scan obviously was inadequate on this occasion.

Fly-ins are fraught at the best of times, but although there was only an A/G radio facility operating, I feel that more positive joining instructions could have been communicated, both via the aerodrome's website and by the radio operator.

CHIRP Comment: **Fly-ins are popular events and often result in a large number of pilots arriving and departing at around the same time. For this reason, as in this case, many organisers publish detailed instructions for visiting pilots; this close encounter is a good example of why it is important that these are reviewed, understood and complied with by all pilots.**

In the situation described, the safe option would have been to have continued the straight-in approach, as recommended or, if this was not possible, to reposition for a further straight-in approach.

CIRCUIT PROCEDURES

One of the most frequently reported topics is very close encounters between aircraft in the visual circuit. The following reports are typical:

(1)

Report Text: There are increasingly two "sanctioned" circuits flown at many airfields. The "normal" circuit and the short or "microlight" circuit. The latter is causing increasing safety risks through inserting traffic in front of established traffic on normal circuit finals. I am not sure whether some of these slower aircraft pilots realise how little forward visibility some quite common "faster" aircraft have in approach configuration. Inserting yourself into No. 1 position does not mean that you now are No. 1 or that the pilot behind can fly slower than you or can even see you.

I have experienced three similar close encounters in the past twelve months or so, two being with microlights. The third is highlighted because on this occasion the other party was (I assume) a professional pilot conducting professional operations who should have been more traffic aware.

I was visiting a regional fly-in in my RV6. On arrival at the circuit it was very busy with the Air/Ground radio operator reporting at least 10 aircraft in the circuit and advising extreme caution. I joined the circuit at down wind with several aircraft in front of me and followed in turn. The circuit "extended itself" a couple of miles to accommodate the traffic volume.

On turning onto final there were four aircraft in front and while on final approach more aircraft called, "Final" (presumably behind). Our landing light was on for max conspicuity. When we were number 2 to land, the aircraft in front (a PA28) started to weave, presumably to give the landed aircraft time to vacate. This resulted in the gap between me and the PA28 in front reducing.

At this point the local joy ride aircraft pushed in from "base" leg into the "final stack" between us and the PA28 (there was no evidence the pilot had either understood that there were aircraft on finals, or looked). He was only just in my line of sight and I was lucky to see him as I was concentrating on managing the gap to the PA28. Any lower and I would not have seen him.

He caused us to have to take immediate action to abort our approach. This problem was compounded by the initiation of aerobatic activity on the "north" side of the runway (sanctioned by the air/ground operator during our final approach) meaning that the "go around" had to be flown over the public area to avoid the aerobatic activities but still in uncomfortable proximity to them.

The other "point" is the aerobatic activity. At all other fly-ins that I have attended the airfield is closed while aerobatic activities take place.

Lesson Learned: Be incredibly cautious when in a circuit and someone calls "down wind, microlight circuit" or there are commercial joyride activities going on!

There seems to be a lack of awareness by some pilots of slower aircraft of the problems they cause mixing with others.

Suggestions: If airfields want to operate a microlight circuit then the details, procedures and priorities should be published in Flight Guides and all pilots using the circuit briefed on the rules. In particular, joining finals from a short circuit should be done with great care. If the airfield does not publish a "microlight circuit" then normal rules of circuits in turn should apply to all.

CHIRP Comment: **In the case of fly-ins where no specific procedures for the event are published; it is most important to consult your Flight Guide and/or contact the airfield as part of your pre-flight planning to ensure that you are aware of the circuit procedures and whether you might encounter slower/faster aircraft.**

Busy circuits involving a wide range of aircraft types/speeds, as often encountered at fly-ins, can be stressful; in such circumstances maintaining good

circuit discipline and situational awareness is essential. This includes:

- If the visual circuit is very busy on your arrival, consider the option of delaying your join.
- Join by the recommended local procedure or, if none, a standard 'overhead' join. Form a mental picture of the traffic ahead and possible speed differentials; plan your entry accordingly.
- Limit R/T to the essential calls.
- Make the 'Downwind' call in the correct place; if unable, make a 'Downwind - Late' call; this helps other pilots' situational awareness.
- Fly a standard circuit pattern, or that published.
- If in doubt about your separation from a preceding aircraft, make a go-around and reposition.

One final point; pilots engaged in parachute support, joy-rides and similar activities operate under some commercial pressure; however, this does not absolve them from conforming to the Rules of the Air; maintaining good circuit discipline will enable these activities to be conducted safely and expeditiously.

(2) - Close Encounter During Landing

Report Text: I took off with passenger in my flex wing microlight for a short local flight to another grass strip. Last time I had been there, it had been an open day with both the BMAA frequency (129.825 MHz) and SAFETY COM (135.475 MHz) in use.

There is only one north/south strip and all circuits are to the west. There was a light breeze indicating the southerly as the preferred runway. There was no visible traffic in the air or on the ground. I had departed the last field on 129.825 and remained on this frequency. I joined downwind and kept a good lookout at all times. I called on the radio for both downwind and final. Visibility on final was poor due to the low sun. I touched down safely and suddenly realised there was an oncoming aircraft on the same runway. We both turned right and avoided a collision.

The pilot of the other aircraft (GA) informed me that the radio frequency in use was 135.475 and he had called long final on the northerly runway. I apologised for being on a different frequency.

Putting aside the frequency issue, I could have been flying legally without a radio. I followed circuit procedures and kept a good lookout. I feel that the other pilot, also flying under VFR, could have checked for aircraft in the normal circuit and had the benefit of the sun much more behind him than in front of him. Unfortunately, he showed no sign of any responsibility, based it seems, purely on the fact that he had called long final on the correct frequency.

Lessons Learned: Check radio frequency in use before departure and remember to re-tune as part of pre-descent checks. With low sun and only a light breeze, consider landing on a downwind runway for better visibility, if machine and length of runway allow.

On turning final, if visibility is poor, consider aborting the landing.

CHIRP Comment: Whereas several years ago the BMAA was granted delegated approval to allocate the use of 129.825 MHZ to microlight airfields/strips, this is no longer the case. The frequency is now allocated by CAA (SRG) to specific airfields through the purchase/issue of a licence for the purpose of ground/air and air/ground communications. (See BMAA 'Microlight Flying' - March 2009).

In the case of this report, if the airfield was licensed for the permanent use of 129.825 then SafetyCom (135.475) should not have been used; whereas, if 129.825 had been allocated only for a specific event or not allocated, use of 135.475 would have been correct.

As the reporter notes, an important point in pre-flight planning is to ascertain the frequency in use at the intended destination. Also, in the absence of a published procedure or a ground RTF facility, best practice would be to carry out a standard 'overhead' join rather than a straight-in approach.

Gyrocopters - A Vital Difference

Report Text: As more gyrocopters are coming onto the register, there is the potential for problems in mixed helicopter/gyrocopter operations at airfields.

Gyrocopters are inherently safe except in one circumstance - reversed airflow; this is usually caused by the application of negative G. A gyrocopter's rotor auto-rotates as a reaction to an upward flow of air through the rotor blades. In negative G conditions, instead of air flow coming from below, the flow comes from above; this causes the rotor to stall and the gyrocopter falls from the sky, almost invariably with serious/fatal results.

I was taking off in my MT-03 gyrocopter when a helicopter called, "Going around" and passed directly overhead. The downwash from the helicopter was far more powerful than the up airflow through the gyrocopter's rotors and worked in the same way as negative G - reversing the airflow. The rotor blades stalled and the autogyro rolled and fell. The helicopter was past in a couple of seconds and out of the down wash the gyrocopter's descent allowed just sufficient up airflow for the rotors to develop some lift; more by good luck than competence I managed to get a modest rate of climb established, although with dramatic bank and an alarming swerve and pitch.

The helicopter pilot was naturally unaware of the effect of his down wash and probably did not know that the airflow to a gyrocopter's rotors works in the opposite way to a helicopter's.

If helicopter pilots are made aware of the problem - that if they pass directly over a gyrocopter they will stall its rotors - it would be a great help.

CHIRP Comment: Downwash of the type produced by helicopters and large fixed wing aircraft adversely affects all aircraft; however autogyros are particularly sensitive to the effects of downwash for the reasons described above and, in an extreme case, can suffer a catastrophic loss of lift.