

CHIRP GA FEEDBACK

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After reviewing more than 50 applications for the post of Chief Executive CHIRP, the Trust has appointed Air Commodore Ian Dugmore RAF (Rtd) as the new Chief Executive to replace Peter Tait, who is to retire later this year after having completed more than seventeen years in the role.

Prior to his retirement from the Royal Air Force Ian held a number of senior safety related posts including Director of Aviation Regulation and Safety, Ministry of Defence. Ian is currently the Director of the UK Airprox Board (UKAB) and will take over as Chief Executive in September after completing the current term of his UKAB contract.

As some readers will be aware, when the Trust was formed in 1996, there was no General Aviation Programme. Following discussions with the Civil Aviation Authority, the GA Programme was launched in 1999 with the objective of improving safety awareness among the GA communities through other individuals' experiences/near miss incidents.

In the fourteen years that the programme has been in existence, we have received 1,000 GA reports and published 56 issues of this newsletter.

GAFB 54/55 - A COMMENT (1)

Report Text: Congratulations on your Whittle Safety award, you have done much to deserve this.

Items in the latest and earlier issues of CHIRP GA FEEDBACK indicate that some correspondents have too great a consideration for rules at the expense of airmanship and common sense. Strict adherence to complex rules is necessary for IFR commercial air transport operations in Controlled Airspace, but private fliers under VFR would be better advised to follow the advice for road drivers in the Highway Code to exercise courtesy and consideration while at the same time anticipating the unexpected.

It is not uncommon at my local gliding club for sailplanes to fly at low level when slope soaring among the mountains and to see operational helicopters on emergency (or perhaps training) missions. As Club Safety Officer I would be very critical of any pilot who did not give these helicopters a wide berth whatever the Rules of the Air say about 'steam giving way to sail'.

Statistically half of all mid-air collisions take place in the circuit and standard patterns minimise this risk, however for many reasons, good or bad, pilots may not completely comply; in such cases a degree of tolerance and mutual understanding is preferable to legalistic hectoring.

Angry pilots are unsafe pilots!

CHIRP Comment: This comment deserves careful consideration and references a word that appears to be used less frequently in general aviation today than hitherto - 'airmanship'.

Good airmanship can be defined in several ways but is essentially the ability to analyse a particular situation accurately, plan the most appropriate course of action for your experience and exercise good judgement in executing the plan. The exercising of good judgement includes considering the impact of your plan on other users of the airspace or, to use an old-fashioned and underused word, 'courtesy'.

Good airmanship is not a rigid application of the rules and a determination to proceed on the basis that "I am right"; however, too often this appears to be the basis on which some pilots elect to take a particular course of action.

Exercising good airmanship will enhance your personal safety by enabling you to identify the safest course of action early and thus avoid potentially hazardous situations developing.

A final point - Training a student pilot to understand and develop an ability to exercise good airmanship is of equal if not more importance than training him/her to make a good landing or fly an accurate steep turn.

GAFB 55 - A COMMENT (2)

In the last issue of GA FEEDBACK (Issue 55; Page 1) we published a comment on the report 'Close Encounter with a Helimed' that appeared in GA FEEDBACK Issue 54. Paragraph 6 of the reporter's comment included the statement, "...Any aircraft which is in potential conflict with any other aircraft, HEMS or otherwise, must follow the rules (Rules of the Air Regulations) and if it has right of way must maintain its height and speed."

Report Text: I've just been reading the excellent contribution 'Close Encounter with HELIMED (GAFB 54)'. It goes a long way to explaining the situation but may contain an error, which I'm sure has been pointed out to you ad nauseam by now!

The respondent states in Paragraph 6 that an aircraft "... must follow the rules and if it has right of way must maintain its height and speed." I believe that this may be in error and that the requirement is the aircraft should maintain course and speed.

Rule 9 explains who has right of way but does not state, explicitly or implicitly, that the aircraft with right of way must maintain height and speed. However, Rule 8; Paragraph (5) states that '... an aircraft which has the right-of-way under this rule shall maintain its course and speed.' (My highlighting).

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The Standardised European Rules of the Air (SERA), which come in to force on 4th December 2014, also state as follows:

SERA.3210 Right-of-way

- (a) The aircraft that has the right-of-way shall maintain its heading and speed.

The important point is that a pilot with right-of-way does not have to maintain height, just course. However, and perhaps even more importantly, both pilots are equally responsible for taking all possible measures for collision avoidance [Rule 8(1)], including both manoeuvring in any way appropriate, whether having right-of-way or not.

CHIRP Comment: We are grateful for this comment as we missed the error in the comment published in the last issue.

It is worth remembering that an aircraft with the right-of-way retains the option to change height should the converging aircraft fail to give way.

A PACK OF BALLOONS

Report Text: This flight was the last of a series of very enjoyable solo cross countries to several airfields well north of my usual stamping ground, leaving a final longish southbound transit back to my base airfield. I worked ### (Military airfield) LARS until they closed at about 1700A and after signing off with ### I couldn't fail to notice a couple of hot air balloons ahead, above and to the west of my intended track.

The wind was light from the east and visibility was excellent, but a little hazy at ground level; a glorious late summer day. Bearing in mind that hot air balloons often hunt in packs during the late afternoon on light wind days I scanned carefully ahead and down. Sure enough a mile or two ahead I picked out another balloon at very low level just to the east of my track, it had obviously just lifted off and was clearly no factor. The balloon was a fairly dull green and grey and was quite difficult to see against the fields in the slight haze at ground level.

I kept up a good lookout ahead just in case and saw nothing else. Imagine my surprise about a minute or so later when I glimpsed out of the corner of my eye at 10 o'clock low, the top of a green and grey hot air balloon perhaps 100 feet below and maybe 80 feet to my left. After a momentary double take I acknowledged a wave - or perhaps a clenched fist - from an occupant of the balloon basket.

Whilst I was pondering what sort of superheated air produced such a fantastic rate of climb I looked further back and saw the original green and grey balloon still at least 1,000ft below. I don't consider this was an Airprox as I never felt that I was in danger of hitting the balloon, had it been in a more vulnerable position I'm pretty certain I would have seen it on or above the horizon or filling the left side of the windscreen, and I would have been easily able to carry out effective avoiding action. I was keeping a very good look out at the time as I was using an 'Aware' box to assist with navigation so I was able to keep my gaze out of the cockpit. The field of view from my aircraft is excellent downwards and directly forwards, not so good upwards due to the high wing. I was a little concerned that I may have alarmed the balloonist(s) by my inadvertent proximity.

Lessons Learned: During the rest of the longish (at 65kts) flight home I gave the encounter some thought. Despite being forearmed by an awareness of the possibility of encountering further balloons after seeing the first two and ensuring I kept a specially good look out, the second green/grey balloon was still invisible to me until I flew past it, maybe because it was always in my blind spot just under the nose or merged into the background due to its colouring being very effective camouflage.

I don't know about wearing reflective tabards when walking around airfields, maybe a giant version should be mandatory for balloons. I've had a few close encounters over 40 years of flying, including a very close one on climb out with a Harrier at 250ft AGL some years ago (I did file that one!) but I never thought I would not see a large balloon in good enough time to be able to remain well clear. I certainly "learnt about flying from that".

CHIRP Comment: This report is a good reminder that not only is it important to maintain an effective lookout scan in straight and level flight but it is also important to manoeuvre the aircraft regularly when cruising to eliminate as far as possible any visual blind-spots.

The risk of collision is greatest when the other aircraft closes on a constant bearing. In such a situation, in the absence of a change in attitude of the reporter's aircraft, the other aircraft will remain in the blind-spot. In spite of being aware that the weather conditions were suitable for balloons and maintaining "a good lookout ahead", the reporter failed to spot a relatively large object until very late.

Two other points are worth making in relation to balloons. The first is that whilst the normal rate of climb for a balloon is in the order of 200-300 ft/min, a rate of climb of 500-600ft/min can be readily achieved. Perhaps of more significance is that if a balloon carries out a 'cold descent' manoeuvre the rate of descent could be as high as 1,000ft/min.

WHAT WAS THAT? WHAT TO DO?

Report Text: I had departed XXX airport for a local pleasure flight in my microlight and had just levelled off at 2,500 feet on the QNH. I detected a single slight bump that was noticeable, but not that significant.

Having replaced the exhaust the previous day, I was particularly attentive to how the aircraft was performing. My first thought was to look back towards the side of the aircraft on which the exhaust is located (the engine is at the rear), to see if the exhaust was still in the correct position. I could see the exhaust silencer and all appeared OK. I was puzzled by what I had felt and was convinced that it was not the sort of feeling generated by a minor bit of turbulence. Further external visual checks of wings and wheels showed nothing untoward. Temperature readings were normal and there was no discernible change in engine noise or any vibration. Since I could find no reason to explain the incident and the aircraft felt normal, I continued to fly in the local area for a further 30 minutes and thought no more of it.

After landing and exiting the aircraft I was puzzled why there was liquid on the tail boom (when I was moving

the aircraft), as it was a clear, dry day. It was at this point that I noticed the coolant header bottle was missing. Inspecting the aircraft further, the only damage I could find was to one propeller blade where the outer gel coating had broken off on the rearward surface of the blade (the propeller silhouette was complete, just 2 areas of 1-1.5mm thick surface coating missing).

The coolant bottle is on my pre-flight check-list, but only as a visual check for the contents level. I cannot recall how the bottle was fixed to the mounting bracket that remained in place on the engine. There had been an additional lock-wire securing the bottle (which has a moulded-in eyelet on the top surface) to the mounting bracket. The locking wire had broken and the remains were still attached to the mounting bracket on the engine. I had topped up the coolant in the bottle about 4 weeks previously and all appeared secure when I re-tightened the bottle cap. However, since I cannot recall what the fixing method was, I cannot explain why there was a failure.

Lessons Learned:

1. Although, the bump I experienced during the flight felt very minor, I was aware that something had happened as it felt different to a bump caused by turbulence. In hindsight, I should have returned directly to the airfield to check that everything was OK.

2. I thought I had a comprehensive pre-flight check list. There are several items on my list that I visually check and physically test to see that they are secure. However, although I looked at the coolant bottle on every inspection, I did not include a physical check that it was secure. So lesson learnt is to review my check list and ensure that there is nothing else that needs to be added. Any failure of a component is likely to lead to something going through the propeller at the rear.

CHIRP Comment: It is very tempting to ignore an unusual noise/event when there are no apparent consequences; however, the reporter's conclusion that he should have landed as soon as practicable and carried out a thorough investigation into the cause would have been the correct course of action.

Also, when carrying out an external pre-flight check, it is good practice to include the physical security of all items/equipment that are exposed to the airstream/propeller slipstream in flight.

A DEUCE OF A DAY!

Report Text: A cold and very clear winter afternoon found me in my fixed wing Microlight, patiently awaiting the arrival of an aircraft downwind for the westerly runway at AAA. With my checks completed and the Rotax 447 two-stroke engine warming up nicely during the five-minute wait, I lined up once the landing aircraft had vacated the strip. Finally rolling, with max 6,000 rpm, I was off the soggy surface within 75 yards and held the aircraft in ground effect until the speed built up to 55mph when I began a steady climb at 600 feet per minute with all instruments normal.

Suddenly, without warning, the engine lost power and would not respond to changes in the throttle setting, finally stopping. My height at this point was about 350

feet above very sodden arable acres glistening below. Fortunately my only chance of a safe emergency landing was about half a mile to my right, the one remaining paved runway left on a nearby disused military airfield.

Over the last two years I had studied this possible escape route on numerous departures from AAA, should I ever need it; this time I needed it badly! In my mind the word 'Aviate' echoed loud and clear as I lowered the nose towards the threshold half a mile away, converting height into speed and distance, touching down 150 yards on the runway. Much relieved, I set about checking all was well with the airframe, having been aware of a noisy landing on the now rough wartime surface.

I was soon joined by two colleagues who had been alerted to the incident. They both assisted as I checked for fuel leaks and any contamination in the gascolator and carburettor bowls, neither of which had any. Once primed the engine started once more and when tested to max revs seemed perfectly normal. After a long engine run and a short practice take off hop I decided to risk flying back the short distance to land on the easterly runway at AAA even though the wind was a light westerly. Taxiing back to the northerly end of the 600-yard runway I turned and applied full power before releasing the brakes and rolling into a blinding low sun and made a normal take-off.

My intention was to gain sufficient height to cross the boggy fields and land back at base less than a mile away. The engine sounded strong and healthy on max revs, so I decided to climb for safety and test the engine within gliding distance of the runway at AAA. At about 450ft the engine failed again and shut down. In anticipation of this happening I lowered the nose immediately and used the height gained to turn onto the centre-line for the easterly runway at AAA and to make a passable dead stick landing coming to a halt no more than 20 yards from my starting point for the first flight earlier.

Back at the hanger the 'debrief' began with those who had witnessed one or both emergencies. Two forced landings in a day were indeed pushing my luck but I was at least back at base and both the aircraft and I were mercifully in one piece. Time was getting on and the light was fading, so feeling somewhat shattered I postponed a post mortem until the next day, tucked my aircraft back into the hangar, and returned home for a stiff whisky!

Post Mortem - Firstly, I had not run the engine for over three weeks when it had performed perfectly on a one-hour flight. I had left a full tank of fuel ready for the next flight. Start up had been normal on full choke. Warm up had been at low revs for nearly ten minutes waiting for runway clearance. Pre-Take Off checks were normal and the Cylinder Head Temperatures and Engine Gas Temperatures satisfactory, with the fuel gauge indicating nearly full.

Engine failures - On both occasions combustion had ceased completely after a few seconds. Throttle settings had no effect. Back on the ground the primer bulb took several 'pumps' to harden up, indicating the carburettor bowl had been empty. Once primed again the engine fired and operated normally.

Initial conclusion - There had been a fuel blockage/obstruction of some kind. The next day I disassembled the fuel system from the tank to the gascolator and checked the fuel flow to the pump and carburettor. All seemed normal with nothing obvious to cause a blockage. Finally I did a normal start up followed by an extended ground run on max revs which was satisfactory with no sign at all of misfiring.

Possible causes - Air lock or blockage in the fuel line; blocked jet/tank vent; ignition (unlikely); carburettor icing (unlikely).

Final conclusion - Later, by coincidence, following a very cold snap, I discovered that the fuel cap air vent had probably been a victim of frozen moisture, which had originated from a small hole in the hanger roof, dripping water onto the engine cowling above the hinged access to the fuel cap, over several nights of sub zero temperatures. Following thorough checks, I flew again, some six weeks after the event, with no problems at all and the instruments indicating normal readings.

Lessons learnt: Never assume anything! The smallest item left unchecked can set off a chain reaction ending in a disaster. My pre-flight checks have been modified accordingly. My pre take off engine run will now include maximum revs for at least 30 seconds. Plan ahead should you ever need to have an emergency landing, particularly in the vicinity of your home airfield. Finally, 'safe in a hangar' can be a misconception!

CHIRP Comment: The blockage of a fuel tank vent can lead to fuel starvation/loss of power/engine failure; this will often occur at a high power setting. A pre-flight check that the vent is clear is worthwhile.

As with the previous report, the temptation to fly again in spite of not establishing the cause of the initial engine failure should be resisted. In this case the reporter planned for a subsequent failure and was fortunate that the height at which it occurred was sufficient to carry out a second successful forced landing. However, many similar cases of 'get home-itis' have resulted in more serious and occasionally, fatal consequences.

Who's In Front?

Report Text: The circuit at BBB (Air/Ground service) was very busy when we returned from a local flight on a fine day. I chose to make an overhead join to allow time for a proper mental picture of all the local traffic. Once in the overhead, I heard an R/T call from a visiting aircraft approaching BBB but assessed that I would be well out of the way by the time he joined.

Shortly after calling downwind and performing the Pre-landing checks, I heard the same aircraft calling downwind. From this I presumed his aircraft might have been faster than mine (Cessna 150). Therefore, I gave a further radio call when I was turning on to base leg. Doing this, I thought, would encourage the other pilot to extend his downwind to allow proper clearance. I also switched on the navigation lights to improve my own conspicuity.

Continuing our approach and descent, I called final as soon as I had turned onto the runway centreline. All my radio calls were suitably acknowledged by BBB A/G, who

responded with the runway conditions. About 5 seconds after my call I heard the other aircraft also call final. This started to become unsettling, but I was presumably the lower of the two aircraft and in any case must have been ahead so I continued my approach. At about 500ft and less than a mile from the runway threshold, the other aircraft's retractable undercarriage appeared upper right in our windscreen as he overtook and descended in front of us. I estimated he was about 30ft ahead and about 20ft to our right. His port wing would have been over our starboard wing. In order to escape his slipstream and to facilitate a go-around, I manoeuvred to the right and called, "Going-around". I felt at no time that the other aircraft, a low wing Beech Bonanza, had any inkling we were there.

Lessons Learned: This incident highlights the dangers of low wing and high wing aircraft both operating in the same area. It is my opinion that the other pilot showed complete disregard for my radio calls and must have presumed that "because he couldn't see me, I mustn't be there". This is a dangerous assumption and could have had catastrophic consequences.

I also felt that whilst A/G service is the lowest service provided to aviators, the radio operator might have warned the following aircraft that another aircraft was already on final approach. It is my opinion that on busy days the A/G service should relocate from the office with a view only of the apron, to the control tower, providing a panoramic view of the circuit and particularly the approach to the active runway.

Finally, I feel that perhaps, in my doubt about the approaching aircraft. I might have called and asked if he had me in visual contact.

CHIRP Comment: The combination of a high wing aircraft being followed by a faster low wing aircraft in the visual circuit is known to have been a contributory factor in close encounters and mid-air collisions. The situation described in this report presents difficult choices for the pilot of the slower aircraft. Making an R/T call to the other pilot to confirm that he/she has visual contact should assist in resolving the situation

It is important that, when planning their join and circuit pattern, pilots of faster types include an appreciation of the position of slower aircraft in the circuit pattern and the difference in speed of their aircraft compared with that of other aircraft in the circuit to avoid a dangerous situation such as that described.

We recommend that close encounters such as this are also reported to the UK Airprox Board.

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FREQUENCY REFERENCE CARDS

In GA FEEDBACK Issue 52 (3/2012) we noted that the Frequency Reference Cards available for download from the NATS AIS website were not updated with each AIRAC publication cycle as had been previously the case.

With effect from March 2013, amendments will now be published on the first AIRAC date after the change.

The Cards are available via the following link:

http://www.nats-uk.ead-it.com/public/index.php%3Foption=com_content&task=blogcategory&id=234&Itemid=354.html