

CHIRP General Aviation FEEDBACK

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Editorial

I am pleased to be writing this, my first editorial for General Aviation FEEDBACK as CHIRP's new Chief Executive. I have been involved with Flight Safety in various ways for many years, including nearly 13 years at the AAIB, part of which I spent as an advisor to the General Aviation Advisory Board. Further back, I served on the secretariat of the UK Airprox Board and (even further back) as a Flight Safety Officer in the RAF. Above all, I've been flying for 40 years and suppose I must have seen and learnt a lot in that time (although it doesn't always show or feel like it). Now, working with our highly experienced Advisory Board members, I want to ensure that CHIRP remains a relevant and worthwhile programme for all.

I would like to express my sincere thanks to my predecessor, Ian Dugmore, who has retired after more than 5 years as Chief Executive. I had the pleasure of sharing an all-too-brief handover with Ian, during which time his dedication and passion towards CHIRP were clear to see. So was his sense of humour. As well as his 'front of house' duties, Ian has worked hard to ensure that CHIRP moves with the times and remains lean and efficient while staying true to its core values. Thank you Ian.

I want to ensure that FEEDBACK continues to 'do what it says on the tin' and remains informative and educational for its many readers. Our Advisory Board members bring all their knowledge and experience to the table when discussing your reports but your input is the most important - after all, you were there! So when you sit down to write a CHIRP report, I urge you to share not only what happened or what was wrong, but why you think it happened, how it affected you and others, what you did to mitigate the risks - and why you're still here to tell the tale! Those of you who, like me, grew up on '*I learned about flying from that*' articles will know what I'm getting at. And we're all still learning.

Ken Fairbank - Chief Executive

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COMMENT ON FEEDBACK EDITION 79 - SUMMARY OF GROUND ERRORS

Report Text: I too have left the fuel cap off an aircraft before proceeding into the sky. Luckily the cap in question was attached to a lanyard within the tank and so all that occurred was a scratch in the paintwork. An instructor at the time taught me a neat trick - to take the fuel cap and place it on the pilot's seat when fuelling. That way it could not be accidentally left off, as you would see it when getting into the aircraft and remember your folly.

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FLIGHT INTO CONTROLLED AIRSPACE

Report Text: Overview: Andrewsfield to Redhill, return flight of approximately 35 minutes, Mode S. While climbing away and tracking 190°, my climb broke into Stansted's TMA - 2000 ft in that region. I realised after 50-75 ft and dived to remain clear, heading south.

This came about as a result of a frequency change from Andrewsfield to Farnborough North for a Basic Service - my service on the leg north. I was instructed to switch to Southend although not in their 'zone'. I was thrown by this, said so to Farnborough, was told why, so went for frequency selection and contact with Southend, still in the climb.

At that time, it was crystal clear but the sun was shining straight through the screen below the visor and above the coaming, so anything forward was extremely hard to see. Notwithstanding, the rule of Aviate, Navigate and Communicate was transposed. My mistake.

Continuing south and switching from Southend to Biggin Approach at the QE2 Bridge for transit, I then tracked 230° into the Thames Zone. This was because I had GPS reading problems, now with the sun marginally lower but more intense. I have flown this route hundreds of times for maintenance, know all parameters and should also know how to behave.

I got this wrong twice in 35 minutes which is not clever. It's no good saying I have flown myself to the Arctic Circle if I can't manage this type of journey without incident. Talk about learning from that!

As far as the route goes, I do know it by heart, only do it VFR, and can almost do the 'every blade of grass along the way' bit. Please do not consider this arrogance. Height, contacts, zones and boundaries both up and down this route are burned into the brain by now.

That said, I have found on one or two previous occasions Farnborough North wanting me to work Southend. That condition is thus variable (possibly one, by now, I should therefore be ready for...) and causes me difficulty. Before the 'global' introduction of Farnborough's cover it was simple. With Farnborough's new areas it historically has been - and vastly improved - but the need to switch to another agency on a route north/south most definitely in Farnborough's 'patch' seems unfortunate when Southend's cover is primarily offset to the east of my route. This anomaly doesn't appear anywhere else in the UK as radars continually evolve en-route and interlink so well accordingly.

Regarding my GPS: I have an iPad running Sky Demon which is yoke-mounted and can be finger broadened or shrunk to enable pinpoint accuracy - particularly with reference to zonal boundaries. It has my route 'track up and down' embedded and I generally fly it like a railway. It also benefits from zonal altitude warnings and that was what I saw regarding Stansted, hence the immediate dive. I also have a Garmin yoke-mounted on P2's side with the same track in case of a need for redundancy. The Thames incursion baffles me and has to be down to my lack of attention while switching to Biggin Approach for transit and checking the VOR inbound track.

If I flew the same route today with identical conditions, what would I do differently? As explained, the exceptionally bright low-aspect sun combined with one of those deep blue, gin-clear sky days made all things (such as instrument reading) exceptionally difficult. I am a golfer and wear a universal type hat with long curved peak which could possibly help blank out the sun and help with instrument reading - but of course won't help lookout for other airborne items.

CHIRPComment: The reporter should be commended for his honesty and for highlighting that good weather can present its own challenges that require as much forethought as poor conditions. A bright low sun is very difficult to cope with; a baseball cap with a long peak can help but, as the reporter says, at what cost to lookout? If a Traffic Service (TS) is available, the reduced lookout may be worth accepting. When requesting a TS in these conditions, it can be helpful to explain to ATC the conditions being encountered. Electronic aids that are normally relied upon cannot help if they cannot be clearly seen; in the circumstances described a paper chart could have been more useable.

The airspace in the area is complex and audio warnings about airspace boundaries would not be unusual. Human beings are adept at 'tuning out' these audio warnings either through overload, distraction or repetition - the warnings are there and the ears hear them, but the brain does not assimilate the information. The boundary between Farnborough and Southend LARS is not marked on charts and it is likely that the aircraft's track put it east of the line. Whatever the reason, the requirement to contact Southend was unexpected and a distraction on a familiar route, which underlines an old maxim: treat every flight as though it is the first time you have flown the flight.

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POOR AIRMANSHIP - BAD PRACTICES

Report Text: On downwind, I heard a King Air pilot call entering the runway and backtracking for departure. I kept an eye on the aircraft and prepared for a go-around (which was looking likely). As I turned final, I saw the King Air turning to line up, and heard it report "lined up".

I called final, (less than 1 nm out from touch down) and going around. Tower acknowledged my go-around call, and the King Air pilot promptly came over the radio with "departing". I was almost overhead the King Air at this point, with the aircraft just visual under my nose.

As the aircraft got airborne, the distance between us got alarmingly close. I ended up slowing back to Vx, climbing up high to avoid any collision, and made sure I was well out of the way of the wake turbulence.

All this could have been avoided, if the King Air had just held position when the tower reported I was downwind or, alternatively, held position as I went around.

Any feedback on this issue would be appreciated, not sure if I am over-reacting to the whole situation, or whether this is indeed an issue for concern.

Lessons Learned: Perhaps, make my position more clear to other traffic?

CHIRP Comment: The airfield concerned features Air/Ground Radio and noise sensitive areas that make extending downwind undesirable. The King Air pilot could have waited until the reporter landed (assuming he was aware of the other aircraft) but it was a judgement call about how much time he had available. However, any misjudgement or lack of courtesy was not in itself a safety hazard. The hazard arose when the reporter went around without taking lateral separation from the runway and climb out lane, risking losing sight of the aircraft ahead. Once the departing aircraft started to disappear under the nose, judgement about separation and relative flight paths would have become very difficult, very quickly. It is far better to make a small track adjustment when the hazard is still out the front than be forced to take avoiding action when it is close at hand.

The reporter is correct to point out a safety concern here, but the need to carry out a safe go around with adequate lateral separation while maintaining visual contact with the conflicting traffic was the important lesson from the report.

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TWO DRONES OPERATING ON A PARK HOME SITE

Report Text: My information comes from a friend who lives on a park home site. Two drones were being operated by two operators, engaged in surveillance on this site by the site owner. He heard the sound of the drone over his garden, and asked the two operators if they were there for any particular reason; they said that they had been asked by the site owner to do this, and that every one of their sites would be doing the same thing.

As this site company owns numerous other sites around the UK, this may infringe on any airfields close to their sites. My informant is also worried about the close vicinity of the coast in this particular case, which is used by air ambulance helicopters to land and support local ambulances.

CHIRP Comment: CHIRP intends to launch a confidential drone safety reporting programme later this year which will be described in more detail closer to its launch. While there may not be a direct safety issue here, the reporter has a genuine concern and the report provides the opportunity to discuss what advice CHIRP might give to members of the public who report concerns about drones. Complaints about drone activity should be reported to the police, who are likely to prioritise reports about drones in the vicinity of airfields. Members of the public concerned about drone operations in the vicinity of an airfield could also contact the airfield operator/ATC and/or the CAA. Commercial drone operators should have a Permission for Commercial Operations, granted by the CAA.

From the perspective of the drone operator and the person/organisation employing a drone operator, it would be good practice to publicise the activity in advance to people likely to be in proximity.

On 13 March 2019 the drone flight restriction zone around airports and airfields changed. The existing 1 km restriction from the airfield boundary was replaced by a restriction using the airfield's existing aerodrome traffic zone (which has a radius of either 2 or 2.5 nm) and 5 km by 1 km zones extending outwards from the threshold of each runway. These zones extend upwards to a height of 2,000 ft above the airfield. It is illegal to fly any drone at any time within these restricted zones unless permission has been granted from ATC at the airport or, if ATC is not operational, from the airport itself.

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REFUSAL OF TRAFFIC SERVICE

Report Text: I was instructing a student (Ex 18 navigation), returning to home base from a landaway. At my suggestion the student had agreed a LARS Traffic Service. The weather was generally fine albeit in an unstable westerly flow and with reasonably strong winds.

[CHIRP Note: The reporter provided weather information which showed a gusty westerly wind, good visibility and few or scattered clouds at 3000 ft. There was 40% probability of this reducing to 4000 m with broken cloud at 1400 ft and the possibility of some thunderstorm activity]

While on an easterly heading at about 2500 ft, I took control and turned left on to west to demonstrate and reiterate the effect of wind on groundspeed and hence on planned times and fuels. I neglected to inform the controller of my change in heading and was then asked what my heading was. I told the controller I had turned on to west and was informed that I should advise a planned change of heading or level before doing so. I acknowledged my error and informed the controller that I would be manoeuvring at my current position for the next 4 minutes in the block from 1500 ft (base of the radar provision for a surveillance-based service) to below the base of controlled airspace. I was told that a Traffic Service was not possible for manoeuvring traffic and was immediately downgraded to a Basic Service. I was surprised by the controller's refusal of a

Traffic Service particularly as the frequency was not busy, although that is of course not necessarily an indication of controller workload. Once I had landed and debriefed the student, I rang the ATSU and spoke to a supervisor. My recollection of the conversation is that he confirmed the controller's assertion that a Traffic Service could not be applied to manoeuvring traffic and that this was as stated in the MATS Part 1 (CAP 493).

I would like to emphasise that both the controller and supervisor were entirely courteous and professional throughout, it's just that my understanding of a Traffic Service from CAP774 is that it can be applied to manoeuvring traffic. If this is not the case, it should be brought to pilots' attention. I think this is either a complete 'send three and four pence' moment from me or there may be ambiguity or misunderstanding somewhere in the pilot / controller / supervisor / regulation loop.

CHIRPComment: When a Traffic Service has been agreed, a turn through 180 degrees without first advising the controller was incorrect, as the reporter acknowledged. There is no obligation on a controller to provide a service and there may be a number of reasons why he or she cannot. CAP493 (The Manual of Air Traffic Services Part 1) states in Section 1 Chapter 12 Part 3 *Traffic Service*:

When operating under their own navigation, pilots may alter course as required; however, unless safety is likely to be compromised, pilots will not change their general route or manoeuvring area without first advising and obtaining a response from the controller.

Similarly, regarding levels, the same document/reference states:

Pilots may select their own operating levels or may be allocated levels to fly by the controller for positioning and/or sequencing of traffic or for navigational assistance. If a level is unacceptable to the pilot, he will advise the controller immediately. Unless safety is likely to be compromised, a pilot will not change level or level band without first advising and obtaining a response from the controller, as the aircraft may be coordinated against other airspace users without reference to the pilot.

The MATS Part 1 goes on to state:

Note: In order to reduce RT loading and increase flexibility, pilots who require to frequently change level whilst receiving Traffic Service will request a level 'block' to operate within.

This report provides a good opportunity to inform or remind pilots seeking a Traffic Service that it is possible to request a manoeuvring area and level block and to remind controllers that the MATS Part 1 makes provision for providing a Traffic Service in a block of airspace. However, a Traffic Service is not normally provided below 1500 ft for reasons of radar performance limitations.

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LOSS OF ENGINE POWER

Report Text: On a VFR flight from Kidlington to Guernsey, I had just entered the Channel Islands Control Zone in the cruise at 5000 ft when the aircraft hit a patch of turbulence throwing me against my straps.

Immediately there was a major reduction in engine power, which didn't respond to opening the throttle. I turned on the booster pump and changed fuel tanks with no improvement. At this point I put out a Mayday and turned towards Alderney as my nearest airfield. I was unable to maintain height and quickly realised that, with a strong SW wind I was not going to reach Alderney and was facing a ditching in the Channel.

I returned to seeking possible causes and, having selected Alternate air, I reached across to check the magnetos. At this point I realised that the switch was turned to right mag only (or slightly beyond). Re-selecting both restored normal engine output and I was able to cancel my Mayday and continue safely.

Analysing how the magneto selection had come about I realised that, in the turbulence, my knee must have connected with the other two keys on the ignition key ring and forced the ignition key round - not something I have ever seen before or would have thought possible. It was probably only possible because the key ring itself was a chunky and a fairly firm fit on the keys.

Lessons Learned: Methodical situation analysis in extremis works. Keep the ignition key separate from other keys.

CHIRPComment: The incident was an unusual one but served to demonstrate that Murphy is alive and well; if something is possible, no matter how unlikely it may be, eventually it will happen to someone. The reporter had remained calm, analysed the situation logically using a careful and systematic check with nothing assumed or skipped. His prompt action in declaring a Mayday and turning towards land is to be commended (a Mayday can always be cancelled or downgraded if the situation improves). Well done!

The point about keys and key-rings is a good one. There can be a lot of leverage generated when a force is applied to other keys on a ring. Both objects and limbs can be thrown around in turbulence - when you're getting comfy before a flight and checking control movements, perhaps that's a good time to check your key is as secure and protected as it can be.

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CHANGES TO 8.33 KHZ FREQUENCIES

Report Text: I was returning from White Waltham to Thruxton and called the airfield but got no response. When I called a second time, Southampton Tower answered. They were helpful but did not have the new frequency. I quickly realised that the frequency I had written in my PLOG was 118.208 but the new Thruxton frequency was what? (It is 118.280 - a subtle but vital difference).

With Southampton unable to help, I was reluctant to approach Thruxton with a low sun in haze and with training aircraft in the circuit, so I called the Distress and Diversion Unit for assistance. They responded quickly and were very helpful. They gave me the correct frequency and I made contact with Thruxton and landed safely.

Lessons Learned: After the event I reflected on what happened and was slightly annoyed with myself because I always plan my flights carefully, check NOTAMs, density altitudes, dew point etc. I note radio frequencies not just for my destination but nearby airfields in case of diversion.

What I didn't do was double check carefully enough what I'd written down. I will in future. Being a reasonably experienced pilot, I quickly realised what had happened, but it occurred to me that an inexperienced pilot could find this distraction far more worrying. The biggest lesson is - pay attention to detail.

CHIRP Comment: The errors made by individuals and organisations throughout the transition to 8.33 kHz channels clearly demonstrate that anyone can make a mistake. The new channels contain unfamiliar numbers that were not easily recognised as erroneous - another Human Factor. It was unfortunate that Southampton ATC were unable to assist the reporter; other options included London Information (if the frequency was not too busy) or Boscombe LARS on weekdays. Also, some electronic Apps bring up airfield information, including frequencies, when the screen is touched on the airfield position - but are they up to date?! However, the reporter should be commended for contacting the D&D Cell without hesitation; the key lesson from the report is that the D&D Cell is established and ready to offer timely assistance whenever it is required.

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STUDENT HAS NO CONCEPT OF INSTRUMENT FLYING COMPETENCE

Report Text: I'm currently working as a Flight Instructor in the EU.

The student arrived at 1500 hrs (he'd been travelling from the UK that day) and I was scheduled to start a Night Rating with him that night. He arrived with only 2 nights budgeted to complete the course.

We reviewed his Log/UK Licence and Medical - it was not possible from his logged entries to confirm whether he had undertaken any Instrument Flying (IF) training sorties - he did have some logged as 'IFR' but these were flights that had comments such as 'Slow Flight/Stalls/Steep turns'. The student had applied to CAA FCL for the issue of a Night Rating based on his FAA Logs - but was rejected as some items were incorrect and he had no solo night take offs/landings.

I sought his knowledge of IF and Radio Nav aids - he admitted he'd done little and was certainly weak on both items, unable to give any brief on the IF scan or Nav aid use. I advised him then that I'd need to see traceable IF Training documentation and practical ability to fly by sole reference to instruments on a subsequent flight to check IF skills.

We completed the ground school and flew a dual night sortie to return for touch and go landings/take offs. It was evident he needed coaching /assistance with respect to Nav aids use and circuit pattern. We completed the flight and I assessed him as 'needing further work'.

The next night we met and I delved further into his past IF training - I advised the weather currently was not suitable for the flight. His demeanour changed and I was subjected to all I could describe as an interrogation. This deteriorated further when I was accused of "trying to see him over as he was only 21" (subjectively my interpretation is he thought that because he was 21, I was treating him unfairly). I requested we terminate at that point.

Lessons Learned: A minority of students training to be Airline Pilots currently set themselves targets that are nothing more than 'box ticking' exercises so they can move on to the next module and have little appreciation that the person signing them off has a duty of care - not just to the student but to any passenger they take when they are PIC. Night VFR requires a level of IF skill sets that will ensure they are able to fly safely at night should they inadvertently enter cloud - or on a moonless night with no horizon.

For an individual to expect to turn up to an ATO as an unknown entity and expect to complete Night VFR training in 2 nights is an unreasonable one as it gives no time to fully evaluate the student's competence in that time.

CHIRP Comment: The student's attitude seemed to reflect a growing society problem: an emphasis on personal entitlement and rights rather than personal responsibility. The reporter should be commended for

standing firm against the pressure that he would be bound to feel when faced with a student who would likely have committed funds and might be under time pressure to complete his training.

The report provided an example of schools over-promising and students having unreasonable expectations. There appeared to be a discontinuity between the marketing element of the school and the part that should have ensured that the student had the minimum qualifications and experience before being accepted for training. This failure put unreasonable pressure on the instructor seeking to balance good customer service with being a good instructor and examiner.

Students contemplating a course of training would be well advised to ask themselves whether they feel they have an appropriate level of experience and knowledge beforehand (even if, on paper, the minimum requirements are met) before spending any money. The temptation may be to overlook some personal deficiencies, but arriving for a course with inadequate knowledge, documentation or practical experience is likely to be more costly in the long run.

The rules about training requirements can be complex, so it is important that students speak directly with prospective training providers to establish exactly what will be required of them. Similarly, the training provider needs to satisfy itself that the training task being discussed is both appropriate and realistically achievable.

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Future CHIRP Drone Programme plans

With the rapid expansion of drone flying and numbers of drone operators, there is a growing need to establish a confidential drone reporting programme. CHIRP intends to launch such a programme later this year, more details of which will be published in due course.

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