

CHIRP GA FEEDBACK

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EDITORIAL

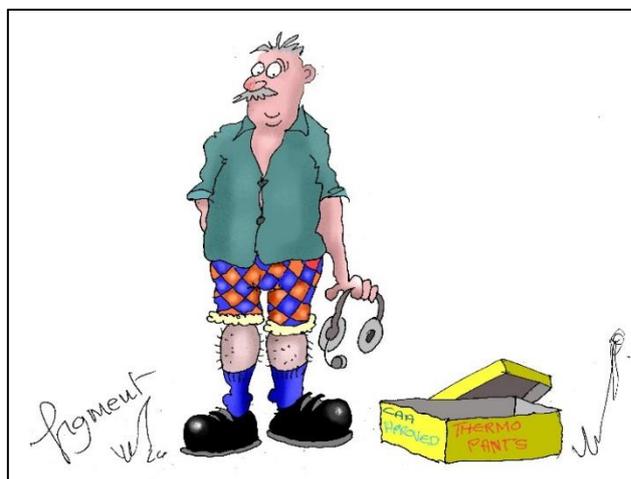
Dress to impress! As winter draws on it is time to consider what the fashion conscious aviator is wearing this season. Clearly, it is important to maintain some of the aviator mystique, which includes looking the part as well as being able to talk with your hands in the bar. Sunglasses (Aviators – natch!) are de rigueur except on moonless nights – even then it's rarely too dark to be cool. But what about the rest of the outfit? Stylish of course but what about comfort, practicality and protection?

Comfort is about more than simply being – comfortable. Discomfort is a distraction and, as we see regularly in reports to CHIRP, distraction can be a link in an incident chain. Taken to extremes of hot and cold, discomfort can have a serious impact on mental

performance with all that implies for Situational Awareness (SA) and decision making. Given the weather in the UK, clothing needs to be flexible in terms of keeping us warm and dry during the walk round, warm enough for winter mornings but, cool enough when the sun is streaming through the windscreen. Passengers should dress for the same thermal conditions as the pilot to avoid conflicts of interest. Remember: no stick – no vote!

We also see reports about loose articles. Does your flying gear (and that of your passengers) have pockets that gape when sitting down such that the contents can fall out? Are your pens and pencils secure but accessible when you need them? Does your footwear allow you full rudder travel and in some aircraft types, sufficiently precise control over the full range of brake pedal applications? Is there enough tread on the soles to stop your feet slipping off the pedals but not enough tread to pick up stones and carry them into the cockpit? Some pilots like gloves – others don't. The important thing is to be able to operate small switches without difficulty.

We have mentioned protection from the elements during routine operations but what about protection in the event of an emergency? The majority of the recent reports about engine failures have involved aircraft making it back to, or close to, an airfield. But if you find yourself in a field in the countryside during a cold winter's day there is a real risk of getting very cold, even hypothermic, while you wait for assistance. And a recent [AAIB](#) report details the importance of wearing clothes that would provide some protection in the event of a fire. Wearing natural fibres next to the skin is a sensible precaution to minimise burns and gloves will protect your hands. For outer layers, military style nomex flying suits are good, but modern outdoor adventure wear, especially those using natural or treated fibres, combine light weight and weather/temperature versatility with a multitude of zipped pockets for keeping the things you need securely. If weight and bulk are not issues, the old fighter boys had it right – there is little to beat a traditional leather flying jacket with lots of secure pockets, totally windproof and warm, especially when layered with wool or cotton. They also goes wonderfully with a moustache.





And, finally, a word about Hi-Viz jackets. Not in the cockpit please. Loose fitting, reflective, inflammable and charged with static. Nuff said.

In summary, what you choose to wear is as important as all the other preparations you make for your flight. There is a lot of choice and it needs thinking about each and every time you plan to fly – except for the sunglasses.

Ian Dugmore – Chief Executive

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ATTENTION TO PITOT COVERS AND FILLER CAPS

Report Text: Following an uneventful VFR navigation exercise and landing back at my home base, I refuelled the club [aircraft] and started to think about putting the aircraft to bed. I removed all the bugs from the leading edges of the aircraft and replaced the aircraft cover, leaving it clean and presentable for the next pilot. What I didn't realise was, following the refuel my focus was on closing the bowser down and moving the aircraft back to its parking slot and I had failed to replace the fuel filler cap. It was only by chance that the rain held off over night and my mistake was picked up the following morning by the club CFI; this had the potential to contaminate fuel in the tanks possibly causing damage to aircraft systems. It was also noted that the pitot head cover had been left off overnight, which could also have caused issues had it become blocked during this period. This is a prominent inclusion within the aircraft checklist.

Lessons Learned - Aircraft checklists and manuals are produced to ensure that the aircraft are operated in a manner which reduces the risks to aircraft and operator. It is paramount that these checks are given full concentration and not just paid lip service, especially as a low hour's private pilot. External factors have the potential to shift your focus onto other tasks, the use of checklists gives you the ability to return to the task in hand and ensure it is brought to its full conclusion.

CHIRP Comment: The reporter is commended for submitting this honest report. It is not just inexperienced pilots that are vulnerable to making this kind of error – we all are. A change of routine or an interruption can result in forgetting items even when, as in this case, the club has an 'in-brief' checking process to minimise errors. If there is an interruption to a check list it is sensible to restart the checks from the beginning of the appropriate section to avoid missing items out. If an aircraft is left without the fuel caps being fitted, the fuel should be checked for water content before the aircraft is flown again; the club has confirmed that the fuel was checked before this aircraft flew again.

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BRAKED TOO HARD

Report Text: Having just completed a test flight, I landed at my home airfield. The weather was fine and the wind was about 12 knots which was a little gusty and was swinging from SSW to WSW. I have landed at that field hundreds of times before so it was all very familiar.

The approach and landing were good and the aircraft touched down lightly and without incident. The aircraft decelerated on the grass to a fast walking pace. I wanted to turn off at the intersection to avoid back tracking with a moderate tailwind, so I applied the brakes to bring the aircraft to a safe turning speed and to my horror it tipped onto its nose. I had the control stick pulled fully back and the aircraft was still into wind.



My only explanation is that I applied more brake than I had intended. The aircraft was within the weight and balance envelope, but at the time of landing the fuel tank was only 1/4 full. The [aircraft] has the fuel tank aft of the main wheels so the C of G was a little forward, but not excessively so. During maintenance, I had removed both wheels, changed the tyres and thoroughly cleaned the brakes. I was wearing a pair of the same soft shoes that I normally fly in. I think that a combination of wanting to turn off at the intersection, freshly maintained brakes and a slightly forward C of G resulted in losing balance due to over braking. I had a good 400

Metres of runway ahead and should have just let the aircraft roll to a stop rather trying to avoid a backtrack in what was really only a moderate wind. I don't normally use the brakes on the runway other than for turning.

Lessons Learned - Let the aircraft roll to a stop before commencing taxiing. While I thought I had a good reason for wanting to turn off at the intersection, I should have realised that in the current configuration, using both brakes was not advisable. After any maintenance don't take anything for granted, having cleaned the brakes and drums it was likely they would feel different. Don't change the normal technique. I never normally brake on a landing roll as you simply don't need to in a [] and there was no danger whatsoever of running off the end runway. An expensive and humiliating lesson learned. Tail draggers need a lot of respect, I will not do that again!

CHIRP Comment: Good advice from the reporter. On any post maintenance test flight it is prudent to expect the unexpected. The reporter also makes a good point about wearing appropriate footwear [see CHIRP Editorial above]. In addition to variable performance of the wheel brakes, it is necessary to be alert to potential variations in the friction provided by the landing surfaces. Puddles on a hard strip provide obvious indications of such variations but it might not be so obvious for transitions between wet grass and dry grass.

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SITUATIONAL AWARENESS DURING PRACTICED FORCED LANDING (PFL)

Report Text: For this sortie, I decided to spend some time doing general handling, and then practise some emergency procedures. In the area where I fly, there is a large ridge of high ground reaching up to about 800ft amsl, and in the 'foothills' of that ridge there is an area of rolling countryside, and this was the area in which I decided to perform a practice forced landing (PFL). After all, in real life, if the hamster dies you have no choice but to choose the best field that you can to land in, even if all available choices are less than ideal, hence my choice of area for the PFL, which I wanted to be challenging.

On this occasion, while on final approach to the selected field (which is about 100ft amsl), I elected to go a little lower than normal before initiating my missed approach, because I wanted to see what an open field looks like from a lower level, and since there were no buildings, vehicles or people visible nearby, I judged that this would be legal. The lowest point on my 'approach' was therefore about 300ft. At this point, and pleased with the exercise (I would have lived!) I selected full power and began the climb away. Looking up from the field, I was somewhat

disconcerted to see, less than a mile away, a rather large treeline and that I was actually looking upwards at it. The top of the treeline was probably a good 250ft above me and was on top of a small sub-ridge below the main ridge, which at this point was still a good four miles away or so. Because I had descended for the PFL from above the height of the larger ridge, I had failed to see the smaller ridge in the foreground and a mile beyond my 'landing' field, because it was well below the main ridge. It was down in the 'ground clutter', as it were, and as I was concentrating on the field and the landing procedures, I hadn't seen the ridge under my 'exit route'. With less than a mile to run before the treeline, I judged that I had insufficient lateral distance available to clear the treeline. Thinking quickly, I decided to turn gently right in order to parallel the treeline and its associated ridge, while also taking care to avoid overbanking. With that terrain feature now to my left, I now had plenty more space to complete the recovery manoeuvre and climb away safely. All aspects of the rest of the flight were routine.

Lessons Learned - I do not consider that at any point the situation was critical; I would judge it more 'marginal', in that there was not much room for error and the favourable outcome was mainly due to my fast decision making ability based on my overall flying experience and familiarity with my aircraft. I am fortunately not prone to freezing-up in panic! I do consider, however, that for a less experienced Pilot, this situation could well have been considered dangerous. I also do not consider that the lower height reached before initiating the missed approach would have been a factor had that previously unnoticed ridgeline not been there. Certainly, had there been no ridgeline, the 300ft height would have presented no safety or legal problem. The main point is that I failed to see the ridgeline across my exit route while I was selecting a suitable landing field. Essentially, this was a failure of my situational awareness. In future, in addition to the usual factors of wind direction, slope, surface and all the other things to look for, 'Exit Route' will now be added to my 'wish-list' of things to look for when selecting a suitable field for a PFL. Always be aware that you need to get away from the field as well as pretend to be going in there. I don't remember being taught that on my PPL course, but common sense should really have informed me!

CHIRP Comment: In the UK the rules of the air require aircraft to fly no closer than 500ft from any person, vessel, vehicle or structure (see page 54 of the [Skyway Code](#)). It can be difficult to judge 500ft, particularly in hilly or rolling terrain. Flights below 400ft are more likely to encounter drones and flights down to 300ft are at the same height as the taller electricity pylons and wires. Therefore the reporter is correct; there are hazards associated with conducting PFLs away from airfields, particularly when descending below 500ft.

All pilots are encouraged to practise forced landings but only instructors are routinely taught how to practise them safely away from an airfield. Many PFL skills can be practised at a safe altitude: achieving and maintaining the optimum gliding speed; identifying the wind direction and selecting a suitable field; diagnosing the aircraft problem and carrying out the appropriate drills; making a May Day call; managing the flight path to achieve an appropriate position in relation to the chosen field at around 1000ft from where a landing can be made. The descent from the 1000ft point is the second part of a PFL and can best be carried out at an airfield unless the pilot had been briefed to identify hazards in the overshoot and climb-away area. In addition to powerlines, masts, wind turbines etc, pilots need to be aware of visual illusions such as the difficulty of identifying ridges in the foreground against a background of higher terrain – a problem exacerbated by flying towards a low sun. Another hazard that may not be obvious is the possibility in windy conditions of encountering strong downdrafts in the lee of terrain. Of course, it is also important to practise the entire PFL evolution from start to finish. If this is not permitted/practical at home base, it could be better to carry it out at another airfield than perform it out in the open FIR unless an appropriate briefing has been carried out.

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MULTIPLE LANDING FEES MAY REDUCE SAFETY

Report Text: This is not an event, but is a general observation concerning something that I feel is detrimental to flight safety.

At [] Airport, not only are the GA landing fees exorbitantly high, amounting to roughly ten percent of the hourly cost of the flying, but also they count it as a landing (and therefore charge for it) if you perform a missed approach. Unless, that is, it's ATC who tell you to go around, say if the runway is obstructed or something. Or, supposedly, if you declare an emergency, although the exact definition of that is not clear. No pilot, for instance, is going to declare an emergency simply because he has botched his final approach and elects to go around for safety's sake. And this is the point I am making. It should always be an option for a pilot to go-around, to perform a missed approach, without having to worry about being penalised financially. Some pilots, like me, are only just able to afford to fly. Extra landing fees add considerably to the cost of a flight. Now, absolutely, in an ideal world, cost should not be a consideration when you are deciding whether to proceed with a possibly dangerous approach that you are not happy with. But the financial consideration - "Can I afford to go around" should NEVER be a consideration. And so I consider this practice dangerous, the practice of charging pilots a full landing fee for a

missed approach. It should simply not be a factor. Sure, if a pilot performs a touch-and-go, yes, he's landed and should be (and is) charged. But a missed approach should NEVER attract a landing fee. Flight safety should be the ONLY consideration in deciding to go-around.

Lessons Learned - Please investigate this and recommend that, for safety's sake, a go-around will not be charged. And please ensure that this is publicised so that all pilots know about it.

CHIRP Comment: It could be difficult for airfield operators to distinguish between aircraft conducting chargeable actions and those that would be exempt. Pilots conducting instrument approaches to overshoot may expect to

pay the charges for the instrument approach and pilots in the circuit who stated their intention to go around may expect to pay as though they had carried out a touch and go. The reporter's concern relates only to situations in which the pilot intends to land but subsequently goes around for safety reasons. Landing fees are cheap relative to the other costs of flying and pilots should not be thinking about the costs while in the circuit. However, the imposition of a landing fee for an aborted approach could influence the decision to go around or to continue with a less than optimum approach. The CAA has previously encouraged airfield operators to waive charges in such circumstances. CHIRP will contact the Airfield Operators Group and the Airport Operators' Association to reiterate the safety concerns associated with charging for unplanned go-arounds.



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CLOSE TO OTHER AIRCRAFT WHEN TURNING ONTO BASE LEG

Report Text: I was familiar with the destination airfield and the possibility of auto-gyros - which can be difficult to spot - in the circuit, which is left hand. On calling for join, my recollection is that there were three aircraft in circuit plus some in vicinity. I announced that I would join from the dead side and called again when there. Passing over the upwind numbers I saw an aircraft taking off and believed there were two ahead of me in the circuit. I made a downwind call.

During downwind checks I spotted an auto-gyro ahead in my approx 10 o'clock and noted I was gaining rapidly. The auto-gyro was safely inside my circuit path so no change in my heading was needed. I overtook i.e. he was directly to my left, shortly before being in line with the runway end. We were at the same height and I remember thinking that from the relative speeds he must be almost hovering and that as I had seen auto-gyros make steep approaches from close in it was likely I would need to find him again when I was on final and that by then he would be in front once more.

My attention then turned to finding the other aircraft. I don't recall whether I first heard the other aircraft call final or saw him on final but I became visual and noted that he seemed to be low for his distance out from the threshold. I concluded that I needed to extend my downwind slightly more than normal and did so. At some point I decided to commence a gentler than normal turn from downwind on to base while maintaining height so as to maintain separation from the aircraft on final. I think I habitually lift the wing of high wing aircraft to check before turning but I can't say that I definitely did so this time. Indeed it's possible I was more (too) focussed on the aircraft on final. I do know that I started that turn several moments (I can't put any time frame on it) AFTER I last looked at the auto-gyro, but at a time when I thought it must be well behind me. Another moment passed and with my aircraft slightly banked I saw the auto gyro pass under me and disappear to my right rear. I can't estimate the separation, but it was closer than I would have wanted. I remember thinking at the time it must have turned towards me, but in retrospect if it had been continuing down wind, rather than my perception of it almost hovering, then my turn to base would have brought us into potential conflict. Indeed the auto-gyro is likely to have been continuing downwind as he would have considered himself to be number two to the aircraft on final.

With the auto gyro out of sight behind I concluded I should simply follow the aircraft on final and land as the number two. I managed to discuss the incident with the auto gyro pilot and there were two significant differences in our perspectives. He assessed we were much closer than I would have estimated. He also believed I had

passed under his craft whereas I saw him to my left under my left wing and I was slightly banked at the time, so he must have passed under my flight path.

Lessons Learned:

LESSON 1: Having spotted the (sometimes difficult to spot) auto gyro I may have "patted myself on the back" and allowed myself to divert too much of my attention to finding the other aircraft. Hence I didn't think sufficient "what ifs?" about the likely actions and future path/position of the auto gyro.

LESSON 2: I should have made an extra call on the downwind leg to indicate that I had seen and was overtaking the auto gyro. That is probably the most significant thing that would have led to me, or the auto gyro pilot, or the FISO, or all of us taking action to maintain separation and prevent the incident.

LESSON 3A: Before making any turn (however gentle) check properly. That means looking not just in the direction of the turn but back in the direction from which other aircraft, on an originally similar heading, will come into conflict with your new heading.

LESSON 3B: Having spotted another aircraft, maintain positive awareness of it and particularly so BEFORE making any change of heading (or height).

CHIRP Comment: It appears that the reporter had an erroneous mental model of the circuit traffic caused by misjudging the autogyro's speed. It can be very difficult to anticipate the flight path and progress round the circuit of aircraft with different performance characteristics and, as the reporter suggests, using the RT to build and maintain Situational Awareness for oneself and other pilots in the circuit could be invaluable. There is also excellent advice on conducting visual circuits on pages 90-93 of the [Skyway Code](#), including circuits with aircraft of mixed performance.

Readers will wish to know that hard copies of the Skyway Code are given away free to attendees at General Aviation Safety Council (GASCo) Safety Evenings. The dates and locations for these evenings can be found on the GASCo website at www.gasco.org.uk

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FURTHER COMMENTS ON CESSNA SEAT LATCHES

In Edition 72 of GA FEEDBACK our comments on a report entitled - Seat Failure on Take Off – recommended compliance with [FAA AD 2011-10-09](#) but did not mention that there are secondary modifications available to prevent seat movement. It is not CHIRP's role to recommend any particular safety modification and we have been unable to determine whether any of the available secondary modifications have been approved. EASA is now responsible for the regulation of Cessna 100, 200 and 300 models and will be able to advise on whether FAA approval will suffice. However, readers may wish to be aware that there is relevant advice recently published on the Textron Aircraft (Cessna) web-site, [SEB07-5 Revision 6, Pilot and Co-pilot Secondary Seat Stop Installation](#). Once again, owners will need to check whether there is EASA approval before proceeding with any installation.

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DID YOU KNOW....

The Single European Rules of the Air require aircraft fitted with transponders to have them switched on. Insomniacs may wish to refer to the full EU Implementing Regulation (EU) No 923/2012 by following the link:

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02012R0923-20171012&qid=1510301994097&from=EN>.

The relevant section is Section 13 which states:

SSR Transponder

SERA.13001 Operation of an SSR transponder

- (a) When an aircraft carries a serviceable SSR transponder, the pilot shall operate the transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where SSR is used for ATS purposes.
- (b) Pilots shall not operate the IDENT feature unless requested by ATS.
- (c) Except for flight in airspace designated by the competent authority for mandatory operation of transponder, aircraft without sufficient electrical power supply are exempted from the requirement to operate the transponder at all times.

PITOT HEATERS

This report has been shared by our colleagues in the [US Aviation Safety Reporting System \(ASRS\)](#) - Ever Present Proverbial Pitot Heat

CHIRP – Confidential & Independent Reporting

This SR22 pilot experienced aircraft icing while IFR in IMC. He kept the wings, propeller, and windshield clear of ice, but the routine associated with his VMC habits caused another problem.

I was on an IFR flight plan.... We had been in and out of the clouds picking up light rime ice.... Occasional use of the aircraft's ice protection system was easily keeping the wings, propeller, and windshield clear of ice build-ups.... We were initially above the clouds at 10,000 feet, but soon realized we would again be in the clouds. Center gave us a climb to 11,000 feet MSL where we remained in IMC. The Controller reported another aircraft ahead of us was in VMC at 13,000 feet MSL and offered a climb to 13,000 feet MSL.

As I considered the options of climbing to 13,000 feet (we had supplemental oxygen on board), I first noted significant ice accumulating on the windshield and wings, and then the airspeed began to fluctuate and suddenly dropped to 60 knots on the Primary Flight Display (PFD). I immediately recognized a Pitot-Static System failure, disconnected the autopilot, and began hand flying using the attitude indicator and standby instruments as primary references. I also immediately noted that, although the Ice-Protection Switch was on, the Pitot Heat Switch was in the OFF position. I turned on the pitot heat, selected alternate static air, and advised Center. The Center Controller cleared me for a descent to 8,000 feet, which I initiated slowly using only the attitude indicator as a reference. Within 2 minutes the airspeed indicator and altimeter began indicating normally.... We broke out into VMC at approximately 8,000 feet MSL. The rest of the trip was uneventful, and a safe landing was completed.

In hindsight I realized that I traditionally do not turn on the pitot heat because most of my personal flying is VFR.... I will now...always turn on the pitot heat before take-off, regardless of the flight conditions.

PROJECT PEGASUS

Project PEGASUS is a Home Office campaign coordinating Border Force, National Crime Agency and Police initiatives to increase vigilance in and around the UK's GA airfields. Members of the GA community are encouraged to be alert to unusual or suspicious activity on and around airfields and report it using the confidential crimestoppers free phone line 0800 555 111. Flying club officials and aerodrome operators may wish to [download all the campaign materials here](#) including posters, leaflets and social media graphics.

Reports received by CHIRP are accepted in good faith. While every effort is made to ensure the accuracy of editorials, analyses and comments published in FEEDBACK, please remember that CHIRP does not possess any executive authority.

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