

GA FEEDBACK

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A LOW INSTRUCTION?

I was handed over from one MATZ to another for transit. I was at 1000ft and requested to route overhead the airfield. I was told that this was not acceptable due to shortly departing traffic and could I see #### cathedral. I said I could. I was told to transit, routing overhead #### cathedral at 1000ft QFE. I declined and requested a climb to 3000ft to route overhead. The controller told me "Negative. Route overhead xxxxx cathedral at 1000ft". I again declined pointing out that if I did do I would be illegal. He replied "Oh no you won't". I replied "Oh yes I will - ANO Rule 5 applies". After a delay I was given an alternative routing. I was flying a light single engine helicopter and if I had complied with this ATC instruction I would have breached Rule 5 (1) (b) and 5 (1) (c) (i).

Rule 5 (1) (b) states: A helicopter shall not fly below such height as would enable it to alight without danger to persons or property on the surface, in the event of failure of a power unit.

Rule 5 (1) (c) (i) states: Except with the permission in writing of the Authority and in accordance with any conditions therein specified a helicopter shall not fly over a congested area of a city, town or settlement below a height of 1500 feet above the highest fixed object within 600 metres of the helicopter

THE RIGHT PRIORITY?

To set the scene: I have been flying gliders since 1985, taking up microlighting in 1986, and have been a microlight instructor from 1990. I consider myself a 'hands on - stick and rudder - seat of the pants' pilot, rather than a 'procedure' pilot. I am more used to being in the circuit with a student or demonstrating unusual attitudes and forced landings than going cross-country. Though I have held an R/T licence since 1991, I seldom use it, and have always preferred to be non-radio. I have around 1500 hours flying time, on gliders, microlights (both weightshift and 3-axis) and group A. Until recently, I have seldom ventured more than 50 miles

from my airfield of departure, and have not felt the need to have radio contact with any air traffic unit.

Earlier this year, I started to fly my light aircraft fairly regularly (after PFA supervised conversion training). It is radio equipped, and has mode C transponder and GPS moving map. It is also 2 or 3 times faster than most of my previous aircraft, so going places has become a reality. It is a particularly tricky aircraft to operate, especially during the take off, as the workload is extremely high for the first couple of minutes - the regular appearance of the type in the accident bulletins bears this out.

As my local airfield is adjacent to a military airfield, it is almost obligatory to talk with them for departures and returns. I have gone out of my way to embrace this new technology, and to gain a degree of skill and confidence in R/T - it is very obvious that a 7000 Charlie squawk has got to be safer than just a primary 'pop-up' return, with no radio contact.

Recently my big day arrived - my long dreamed of flight to Cornwall and back in a day - meaning I'd have to speak to all the air traffic units on the way. Though daunting, I knew that this should be fine as, if I can converse usefully with the local airfields, what difference is a few more stations on the way?

All proceeded well, MATZ penetration and Flight Information Service (FIS), followed by a FIS from several airfields en route. I tried ### (a major airport) but they were busy and didn't want to know, telling me to remain clear of controlled airspace and call en route, so London Information seemed the best bet until I was able to contact the next airfield ###. My passenger, a non-pilot, was being very useful, and was often pointing out distant traffic before I had sighted it.

I was actually speaking to the next en route airfield, giving a read back to the air traffic unit, when my passenger was gesturing to the 3 o'clock position, indicating traffic. As I continued my obligatory read back, I was struggling to look over my passenger to assess the traffic he had identified, looking far into the distance for the typical traffic he was picking up for me. As soon as my read back was complete, I gave my passenger's traffic my full attention and was very surprised to

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see a high wing aircraft, passing just seconds behind me, maybe 100 metres, closing speed about 170 kts and only about 100 feet below, passing right to left.

See and Avoid - the open FIR - my fault - well, both of our faults - but no hint of this conflicting traffic from the radio, despite receiving a FIS at all times. Usually when receiving a Flight Information Service, I am accustomed to receiving traffic information on aircraft I have not yet seen, probably 5 miles away. Only some of the time, 50% perhaps, do these turn into actual sightings despite straining to view in the 'conflicting' direction.

My problem - why the CHIRP? My concern is simple. I have always trusted my own look out, and have no one but myself to blame for my close encounters with other traffic. Pilots like myself choosing to work an air traffic frequency (especially with squawk and Charlie) should be welcomed by all air traffic units, as now they know who you are, they have a bright return, identified, with height, and obviously speed and direction from their own information.

Yet there is a cost to the pilot, in compromised lookout and concentration on both navigation and lookout, due to the (albeit small, usually) workload and cockpit actions required for accurate radio work.

Should I have expected to be warned of this very serious collision risk traffic?

Did no radar unit in the local area see the conflict? Should I have asked for a Radar Information Service?

Should I have cut short my obligatory read back to concentrate on my passenger's information, which on this occasion was thousands of times more important than any information I might have been getting from the radio?

In relation to the questions:

A Flight Information Service (FIS) is a non-radar service that provides operational information to assist with the safe and efficient conduct of a flight. The information may include, subject to controller workload, information on other aircraft reported in the same vicinity. However, these will only be aircraft that are in contact with the FIS or known to be in the area. Separation from traffic reported by an FIS controller remains the pilot's responsibility. A controller may attempt to identify a flight for monitoring and co-ordination purposes only. Such identification does not imply that a radar service is being provided or that the controller will continuously monitor the flight.

A Radar Information Service (RIS) provides a higher level of service than an FIS, but may not always be made available to GA aircraft, for reasons of controller workload. An RIS will provide traffic information but not avoiding action. The pilot remains responsible for

separation and must advise the controller of heading/level changes.

It must always be remembered that when flying in the open FIR, an RIS will only provide information on aircraft known to or observed by the radar controller. Consequently a good visual lookout scan must be maintained at all times. GA Safety Sense Leaflet 8D - Air Traffic Services Outside Controlled Airspace - issued by CAA (SRG), provides more details on the services available.

Finally, the option to ask ATC to "Standby" is always available.

SAFETY FIRST

Low voltage warning light illuminated and shortly after the RNAV and GPS failed. All electrics other than VHF II turned off. Mk 1 eyeball navigation used to complete flight to planned destination.

Aircraft landed safely but battery was "flat". Engineering inspection revealed failed alternator, which was replaced.

In retrospect, it would have been safer to divert to a nearby airfield than to continue to the destination, which was an engineering base.

I did not declare an emergency or warn the engineering base of the problem, which in retrospect would have been the safer option. However, lesson learnt, even though I landed safely!

In addition to reducing the electrical load following an alternator failure, it is worth making one attempt to reset the alternator, to see if it can be recovered.

FUEL LESSON

The design of the ### flex-wing incorporates two fuel tanks, each of equal capacity. The rear tank is permanently connected to the pipe work, but the connection to the under-seat tank can only be made after the aircraft has been rigged and the fuel tank fitted in position. The intention on this flight was to check fuel consumption by marking the 2-litre level on the transparent tank, filling it up with a measured quantity of fuel and noting the flight time for the level to drop to the 2-litre mark.

On this particular morning the weather was overcast with a light variable wind. The engine was run up to full power and checked OK using the rear tank only, not wishing to use any of the measured fuel in the under-seat tank, and the engine shut down. The fuel tap was then turned to the under-seat tank. After getting kitted out the engine was started, vital actions carried out followed

by a taxi to clear sheep from the mown grass strip of 500m and back to the take-off position, a total of engine running time of about 4 minutes.

On take-off the aircraft reached a height of about 200 ft and the engine lost power. The aircraft was banked to the left in an attempt to land on a track at 90 deg to the runway alongside a man-made reservoir. The right hand wheel struck the bank adjacent to the track causing the trike to twist round and disintegrate as it did so. Most of the twist was taken out in the monopole; this resulted in very little damage to the wing.

The pilot was able to walk away from the crash suffering only pulled muscles in the back and bruising, a credit to the design of the trike.

Subsequent examination showed the carburettor bowls (twin carburettors) to be nearly empty but the reason for this could only be guessed at, an airlock perhaps?

A good general principle, whenever possible, is to check the feed from each tank in turn prior to take off. Remember to leave sufficient time for fuel flow from the tank to the engine to be checked. Always take off and climb on a tank that has been checked.

THE RIGHT WAY?

After returning from a trip to Northern Europe, I called in at a Belgian airfield for fuel, where I met 2 non-UK pilots who had made a diversion. In conversation I noted one was an instructor, the other a student and they were on a qualifying trip to a UK airfield, so as to gain a Dutch International PPL. I noted the chart that the student was using was out of date, and remarked that UK charts are updated and re-issued every year. The instructor's attitude was that "the student couldn't lose his licence as he hadn't got one". When I suggested perhaps the instructor could, his attitude was most flippant.

Not an accident report, but a possible cause of a future one!

IF YOU THINK IT'S ALRIGHT ...

At short notice I was asked to take a VIP passenger to a hotel and was given the phone number. I called the hotel on my mobile and received details on its location (Lat & Long) and where to land - "White 'H' at rear of hotel". The flight was also for the benefit of a prospective customer who was accompanied by a rotary wing instructor. Once the hotel was located I flew round once to locate the 'H', but none of us could see it. There was an area of grass, which was mown beside a copper

beech tree with a mown pathway to the hotel. This we all agreed was the place to land.

Before making the return trip to collect the passenger I phoned to inform the hotel of my ETA. I was informed by the passenger that the initial landing had not been at the right place and one of the hotel guests had been "upset" by our landing. The hotel management had remonstrated to my passenger about the landing, although they had known of the time of my first and second landings. Prior to my second landing the white 'H' had been refurbished by a hotel gardener (weeds cleared and white paint applied). This was why both I and the more experienced instructor were able to spot the correct place easily on the second arrival.

My initial instruction for landing did not point out that the landing place was "100m behind the hotel on a second lawn behind a copper beech tree".

Next time I will ask the question "Is the white 'H' really there and obvious, have you checked it today to see if it's visible from the air?"

Just how many things do we need to do before landing? The only way seems to be to visit the site by road beforehand, which negates the purpose of the helicopter.

The mown area was where a marquee had been erected!!

When planning to land at an unfamiliar site, make sure that you know exactly where the site is located and how to identify it from the air.

This is equally important for light aircraft operating into farm and other grass strips.

RISK AWARE?

Recently at a large public event a helicopter arrived with its rear navigation light hanging out on about 3-4 inches of wire only several inches away from the tail rotor. The pilot was duly informed by ATC and shut down.

Later I was really surprised when the pilot started-up, re-positioned for fuel and then departed to the East in the same condition. Obviously he has b#### of steel! You wouldn't think the same chap had previously suffered a tail rotor failure in a similar type!

A SIDESLIP SLIP!

In relation to the report titled 'Unstable Approach' in GAFB Issue 5 Page 4, several individuals have pointed out that the reason a flexwing is not able to sideslip is the absence of a rudder, not ailerons as the reporter suggested.

RE-SET & CHECKED?

Having made a simple error, this reporter handled a difficult in-flight situation extremely well.

It is axiomatic that problems in aviation rarely have a single cause. This story started on the day before the outward journey, when I checked my aircraft, a pressurised twin, and found the battery was flat. No obvious cause was found. The aircraft started on a GPU, and the alternators were charging. 20 minutes of ground running replaced the charge, but the next morning we used the GPU again, and all was well for the four-hour non-stop flight to southern Europe. On landing, the battery was fine, but in accordance with advice from the engineer, I pulled all the circuit breakers.

Two days later, I taxied it to the pumps, at what was a busy airport. The alternators were charging - apparently - as there was no warning light. However, after refuelling, there was no power for a re-start (The first warning). The battery was removed, checked and charged by the local FBO, who was charming and helpful. The verdict was that it was old, but serviceable, and that one cell was probably "tired".

Three days later, we set off for home, IFR in airways, but with 30km visibility. Forty minutes into the flight, at FL 170, I noticed a small leak of oil from the compass, and a bubble. This occupied some attention, then the radio calls became weak. There was no alternator failure light on either side, but the battery voltage fell suddenly and sharply to 8v. All transmissions ceased, the transponder went dead, there were no NAV indications, and although I could hear French ATC, I could not respond. Aviate, navigate, communicate. The litany kept repeating itself: the GPS, bless it, showed that I was two minutes short of my last cleared reporting point. "Leave controlled airspace and proceed visually to an airfield" seemed sensible. Fortunately, we were within 20 miles of a large Southern French airport. I descended on the side of the field opposite the control tower, let down the wheels - there was just enough battery power - and planned to spiral down hopefully in sight of, but well away from the airfield in question. However this airport had very large jets going in at one end, and taking off from the other, so I was very dubious about making an unannounced precautionary landing. A scan of the French Map showed another - military - field approximately 10 miles away, and this appeared now, from about 6000 feet, much the better bet. I circled, did a pass down the runway, saw the wind-sock (the first time in 16 years of flying that I have ever USED the wind-sock - it's always been ATC) and came in on final.

Blues, greens, reds. Damn, no greens, there's no power to the electrics. Are the wheels down - can't ask the tower? There's no-one there and anyway how would they know my predicament and communicate? Aviate, aviate, aviate. Go around, climb to 1000 feet, GET OUT THE MANUAL AND READ THE EMERGENCY GEAR

LOWERING SECTION. Not an ideal time to use the device for the first time ever. Which way is clockwise? Fortunately, three turns and it's fully gone, so the gear must be down. Come back, low approach, no flaps, touch down just over the threshold, gear fine, pull over off the runway, shut down.

Then, what? A private pilot with his wife and small children has just landed unscheduled and unannounced at a French Military Airfield! Still, we're all alive, and any problem on the ground can only cost money, and time, not life.

The soldiers turn up: I push the children out first, and stand at the side looking sheepish. The French Commandant of the airfield could not have been more helpful. He waved aside my hesitant French, saw that I was a bit shaken and listened carefully to the story. We informed French ATC that we were down and safe, so there was no need for SAR. However, I would need to move the aircraft to the apron and arrange recovery from Britain. A phone call to my maintenance organisation left them mystified as to the cause of the problem.

Next, how to move the aircraft? Could we re-start and get off the runway fringe, to the apron, the Commandant asked? I agreed but explained that the battery was completely flat. No problem said the Commandant, and a young lad was dispatched to get a Ground Power Unit. The terminals fitted. Next the start. Go back to the beginning and do the full pre-start checklist. Gauges, fuel, etc ... circuit breakers all in ... NO! The two main alternator field breakers were OUT. They are tucked away right at the back of the panel, almost behind the pilot's seat on the left. They looked "in", even felt "in", but as I sprung them, they were clearly "out".

In an instant all became clear. The battery failure after re-fuelling, the failure in the air, the lot. In my enthusiasm to prevent an inadvertent battery discharge after arrival in Spain, I had pulled the lot. I had not pushed the two most rearward back in. The alternators indicated no failure, the voltage went up and stayed up, the radios came on, all seemed well.

We taxied to the apron. I then got out and spoke to the Commandant once again. We went over the whole problem once again. Was I certain that I had located the fault? It helped that he was a pilot, and that he understood that 90% is the amount of brain you leave on the runway. The re-start and trip back was uneventful. I have placarded the aircraft panel, warning of the lack of an alternator warning light indication if the breakers are pulled.

The French were absolutely wonderful, and the attitude of a Military commander in the circumstances unbelievably generous and considerate. There are so many lessons here.

Aviate, navigate, communicate, and it is better to be down here ...