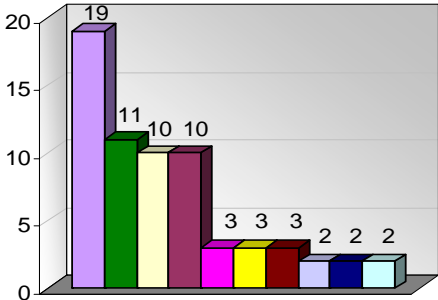


CHIRP FEEDBACK

Issue No: 36

Summer 2008

Most frequent GA Issues Reported
12 months to April 2008



- Handling/Operation**
Airmanship, Handling of A/c, Operation of Equipment
- Aircraft Technical**
Propulsion, Design, Systems
- Procedures**
Use by Reporter, Use by Others, Adequacy
- Situational Awareness**
In the Air
- Regulation/Law**
Compliance Of, Knowledge Of, Absense Of
- Near Miss**
Airprox, Near Collision with Terrain, Loss of Separation
- Air Traffic Management**
Level of Service, Separation
- Airports**
Runways, Bird Control
- Communications - External**
With ATC
- Individual Error**
Conflict, Lack of Leadership, Insufficient Team Work

Number of Reports since the Last Issue: 14

Report Topics Have Included:

- Overflights of gliding sites.
- PPL/NPPL licence requirements unclear.
- Handing over/taking over control.
- Runway incursion.
- Misidentification in Control Zone.
- Switch mis-selection.

REPORTS

SUMMER PERFORMANCE - NOT SO HOT

CHIRP Narrative: We all look forward to those hot, clear summer days when we can forget about weather problems, relax and enjoy the flight, or can we?

Report Text: We were two-up at maximum all up weight with no headwind and a 5kt crosswind. The air felt flat and still. The dust from the combined harvester drifted slowly away from the runway.

I had flown off that strip around 1,000 times. The entry point to the runway is about 40yds from the start. I don't generally backtrack as I fly solo and have 150yds left at the take off point.

Acceleration was slow and airspeed was a long time coming. The abort point came and we were NEARLY flying, so I pressed on. We JUST got off before the end of the runway. Climb out was reasonable and I calmed down. So do those TORR checks folks, I was nearly a statistic there!

CHIRP Comment: This near accident highlights several important points:

For many GA aircraft the change in performance when operating at or close to maximum all up weight, with zero headwind and, as in this case a reasonably high ambient temperature, can be dramatic. Therefore, even if the airfield/strip is very familiar to you, refer to your performance charts and calculate your Take Off Run/Distance Required, remembering to add any relevant factors, such as that for a grass surface, as recommended in CAA GA Safety Sense leaflet No. 7.

Deciding to abort a take-off is one of the most difficult decisions for most pilots, since there is always a strong temptation to continue in the hope that it will be alright. For this reason, professional pilots are required to use

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An incident/experience to report? Submit a secure web report at: www.chirp.co.uk

A General Aviation Safety Newsletter

from **CHIRP** the Confidential Human Factors Incident Reporting Programme

calculated performance data on every take off and to brief the exact procedure for rejecting the take off. For GA pilots, identifying the point on the strip at which the take off can be safely abandoned if performance is not as expected should be a key part of your take off planning.

Always use the full length of the runway/strip unless there is a specific reason not to do so and the Take Off Distance Available is significantly greater than your calculated Take Off Distance Required. Remember to use the appropriate short take off technique, if required.

A final point; as glider pilots know well, significant thermal up draughts can be found in the vicinity of wheat fields; however, downdraughts or localised winds can develop over adjacent grass fields, so monitor the windsock in light, variable wind conditions.

ALMOST A FATAL DISTRACTION

Report Text: It was a hot humid summer day and I was operating at close to M.A.U.W. I had been cleared to backtrack the runway for departure. The wind was very light and virtually across the grass strip in use. I was in the middle of carrying out my magneto checks and had done the first magneto and started on the second when I received a call from ATC regarding an insignificant change in wind strength and direction. In order to acknowledge this information, I had to move my hand from the magneto switches to the PTT button on top of the control column. After acknowledging the wind I applied full power for take off. I was rather surprised by the lack of 'get up and go' and attributed this to the grass, weather conditions and the uphill slope of the runway.

Having staggered into the air on the edge of a stall I cleared trees by a small margin. I suspected that carburettor icing was causing the problem and cautiously applied carburettor heat, which seemed to improve the engine performance. Having eventually coaxed the aircraft to a safe height I scanned my panel and realised to my horror that I was operating with one magneto switched off. I hastily switched it on and engine performance was instantly restored.

Even now I find it hard to believe that a momentary distraction during my power checks could have led to such a serious error, but it happened. In hindsight I should have aborted my take off as soon as I detected a lack of 'get up and go'. I should also have scanned my panel in more detail when the climb out became so marginal. I should not have assumed carburettor icing was the problem, even though the conditions prevailing could have caused it.

Lessons Learned:

- Do not allow radio communications to distract you from essential checks.
- Always check that full rpm is being achieved before committing to take off.
- Abort early if something seems not right.

Hopefully I learnt about flying from that.

CHIRP Comment: This incident is another reminder of how easily a cognitive failure can occur when a well-

practised check sequence is interrupted – If in any doubt, start the sequence again.

Also, as the reporter correctly concludes, confirming that you have full take off power early in the take off run should be a standard 'Vital Action' check.

A SIMPLE CROSS-COUNTRY FLIGHT?

Report Text: I had a business meeting in Eastern England and arranged for a colleague to pick me up from AAA. I told him that I would phone early on the day to let him know if the weather was going to allow me to fly and if not, I would drive to my meeting. It would be my first time into AAA.

The TAF turned out to be CAVOK along the whole route and I phoned AAA to check their weather. They also had CAVOK and I told them my details and that I would be arriving at 11.30.

I took off in bright clear weather and set course for AAA, climbing to 3,000ft and received a good radar service from several military airfields. The weather was still CAVOK but around 15 miles from AAA a strip of broken cloud started to drift in from the west at about 2,000 feet. However, I could see the ground easily though the large gaps and together with the GPS and the radar controller, I was quite happy to continue. In addition, I could see ahead that there were no clouds and I assumed that AAA was still CAVOK.

I had been given the Regional QNH and was still at 3,000ft on that setting. I then heard a conversation between the military controller and another aircraft who stated that their intended destination was poor visibility and that he would divert to AAA. About five minutes later, the aircraft called the military controller and said he had AAA in sight with good visibility and was changing frequency. This put a small doubt in my mind about the visibility lower down, but not unduly. I requested a descent to 2,000ft; the gaps in the cloud started to fill in and I went for the largest hole. As I did so I asked the radar controller if I had any conflicting traffic; the answer was negative.

At 2,000ft the gap started to close in so I requested descent to 1,500ft. The radar controller told me that I would be out of radar coverage and advised me to change frequency to AAA. I did as I was advised and whilst still descending through the gap, gave my first call to AAA. There was no reply and I checked the frequency I had set. This was Ok, so I called again, but I still received no reply.

As I descended through 1,000ft, the cloud closed in completely. I suddenly saw that firstly the visibility was down to about 4,000 metres; secondly, that the altimeter showed 700ft and thirdly, and more importantly, the ground looked about 300ft below! Of course, I was still on Regional QNH and not QFE!

My GPS showed that AAA was smack bang ahead and then I saw buildings through the murk on a heading of 290 degrees, which looked like hangars. During these anxious minutes, I had been constantly calling AAA without success.

I immediately turned right to join some sort of very low left hand circuit and then set the altimeter to the QNH I had been given before take off. I then took off 3 mb to

allow for AAA QFE and saw to my horror that I was actually at 250 feet! I climbed into the murk as far as I dared and got to 400 feet and called downwind. Still silence from AAA.

I rapidly looked at my options:

Option 1 was to continue a low circuit into AAA. When I phoned ahead, the controller had told me the runway in use and I was on a sort of downwind leg and about to turn base leg.

Option 2 was to climb into the low cloud and hope to pop out of it quickly. I am not IMC or IR rated, so that was out unless I was in dire trouble; therefore absolutely the last resort.

There was no option 3 as I could see it; the cloud and visibility was getting worse all the time - and quickly. I had to get down on the ground fast!

I lowered the flaps 20 degrees and slowed to 80mph. I turned base leg where I thought it was by using my GPS and I was just about keeping the airfield in sight; visibility was now down to less than 2,000 metres within 5 minutes!

The arrow on my GPS pointed towards the airfield and I turned final on what I thought was the active south-westerly runway. As I approached, I realised that I was on final to the south-easterly runway, which had an 80 degree crosswind and I was also on the wrong heading for final approach! More calls to AAA, this time in much higher tones but still with no answer.

I made a decision at a height of 250ft that I would make a left turn, and then do a right turn onto final to the south-westerly runway. This dangerous manoeuvre was made because I thought no other idiot would be on finals in this murk. I gunned the engine and thought to hell with the sensitive houses just below, this was a crisis situation.

As I lined up with the south-westerly runway, just for the hell of it I called out, "G###, very very short final". The radio burst into life with "Aircraft calling short final, pass your message"! I just thought, "You must be joking if you think I am going to concentrate on that at this time".

I made an acceptable landing and then passed my details to the controller. He told me where to park and I asked if my radio was working OK as I had been calling for the last 10 minutes. He apologised and said he had been called away. When I went to speak to the controller and pay my landing fee, no one was about! It's supposed to be a licensed airfield!

I have been thinking about the situation and trying to decide where I went wrong and what safer alternative I could have come up with. With hindsight, I should have called AAA while I was at 3,000ft and when I received no response, perhaps I could have flown on top until the cloud dispersed or diverted to another airfield. However, hindsight is great and once I had gone through the hole in the cloud, I was committed. I have decided that it was mainly down to the fickle British weather. By the time my colleague turned up to collect me 10 minutes later, the weather was CAVOK again.

I would gladly welcome a response to help me understand the problem so that it does not happen to me again.

CHIRP Comment: A number of recent fatal/serious accidents investigated by the AAIB have many similarities with this report but with one essential difference; this reporter fortunately survived to learn the important lessons to be drawn from his experience.

As the reporter correctly notes, the weather in some parts of the UK can change unexpectedly; therefore unforeseen weather deteriorations en route or at the intended destination must be one of the factors always considered as part of the pre-flight planning process.

In this case, the reporter elected to continue to a point where his ability to maintain VFR became seriously in doubt with no alternative course of action available to him; this is commonly the most significant contributory factor in GA Controlled Flight into Terrain (CFIT) accidents. If you are relatively inexperienced, it is very easy to be seduced into relying too much on GPS to assist you to navigate in weather conditions that you would otherwise assess to be at or beyond the limits of your experience.

As the reporter correctly concluded, if it was not possible to descend maintaining VFR and retain the option to climb out safely, a more appropriate course of action would have been to have maintained VFR above the minimum safe altitude and diverted to a nearby airfield with suitable weather or to have returned to the departure airfield. If uncertain of your ability in similar circumstances, remember a 'PAN' call on 121.5 will provide aeronautical and navigational assistance.

PURPLE AIRSPACE INFRINGEMENT

Report Text: I had planned a flight from Southern England to the Midlands via WCO. I had checked NOTAMs and was aware of a temporary airway set up between Olney and Marham 3,000ft to FL130 between 1230hrs and 1330hrs. I confirmed this with a call to the AIS number and had noted the NOTAM on my PLOG. Due to the NOTAM I had planned an alternate route via DTY but decided to opt for the more direct route and keep below 3,000ft to avoid the temporary airway. En route I contacted Farnborough Radar for FIS and advised that I was on course for WCO. At appropriate points on the track I requested progressive altitude increases to 3,000ft avoiding controlled airspace. During this leg I was experiencing significant turbulence. Farnborough instructed me to change to en route and squawk 7000, as I reached their boundary prior to WCO. [Note: the aircraft was fitted with Mode S and I was Squawking ALT throughout the flight].

I checked the 1:500,000 chart for controlled airspace limits to see if I could climb clear of the turbulence, the WCO area has CAT at FL55+, steps to FL65+ at EGTC and higher from then on. Once clear of the London TMA, I decided to climb to avoid the turbulence and selected FL50. I attempted to contact Cranfield APP; however, they were not operating but local traffic were giving position reports so I decided to stay with them as no FIS or Radar service was available in the area on the day. I then proceeded to my final destination maintaining approx 5 mile left of track.

That evening I realised my error. I had infringed the temporary airway and had continued in controlled airspace to the north of the airway centre-line.

Cause: I believe the cause of this infringement was that I focussed too much on the weather factors, en route and landing crosswinds, and lost situational awareness of the airway. Contributory factors were my failure to indicate on my chart the presence of the NOTAM although it was on the PLOG, improvising the plan due to the turbulence and no FIS/Radar service in the area that could have given a pre-emptive warning (should have tried London Information).

Lessons Learned:

1. Follow the plan, limit improvisation (should have routed DTY due to turbulence or delay flight to outside designated times).
2. I should draw NOTAMs directly on the chart,
3. When no FIS/Radar service is available use London information.

CHIRP Comment: This is a commendable report with some useful lessons, the most important being to mark any relevant NOTAM information on your chart, so that you don't subsequently forget it.

OVERFLYING GLIDING SITES

Report Text: The gliding club at Camphill has been experiencing an increasing number of aircraft flying through the airspace below the maximum winch launch altitude promulgated on the aeronautical charts. There are major conurbations with GA airfields around the site which put it en-route for aircraft transiting between Leeds and Birmingham or Manchester and Sheffield. If the aircraft use the Pole Hill and Trent radio aids, the direct track between them passes only 2½ nm west of Camphill, and, with the prevailing winds being from the west, they are more likely to drift off track to the east! There have also been light twins and helicopters, who could be operating on flight plans using only radio charts, which do not show gliding sites.

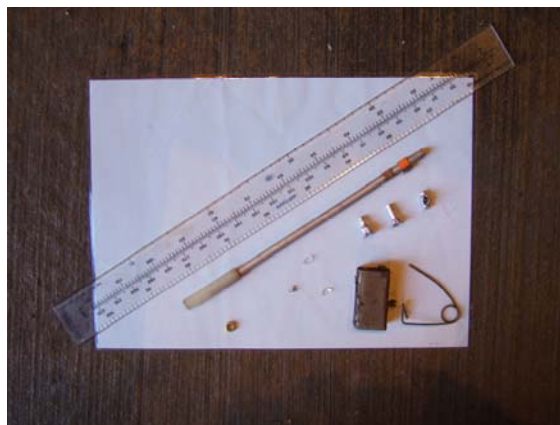
Basic navigational airmanship should include planning to avoid gliding sites because of the possibility of a number of gliders, in close proximity, using the same lift source, but Camphill does have a variety of factors that make it more likely that the unwary could be led into crossing the site too low. Being situated in the Peak District and on top of a ridge, the maximum winch launch altitude is considerably higher than other sites; combining this with the whole of the Western sector from South to North-North-East having Controlled Airspace with a published minimum altitude of 3,500', there is only 100' clearance between that and the 3,400' maximum winch launch altitude published on the chart. Any aircraft flying at 3,000' to ensure clearance of the Controlled Airspace is well into the operational height of the winch if they have not planned to avoid the area. Raising awareness of the site among the GA and commercial community would be beneficial.

CHIRP Comment: This is a useful reminder of the importance of planning your flight to avoid gliding sites unless well above the maximum promulgated height, and the potential danger in not doing so.

LOOSE ARTICLES – A REMINDER

Report Text: I had recently purchased a previously owned aircraft, which had only just received its Permit to Fly. A few days later I was undertaking some routine maintenance when I noticed that the altimeter appeared loose. On checking, I found that one of the 2 bolts securing it had no nut or washer fitted. I therefore elected to fit new items before attempting to locate the missing ones. Unfortunately I dropped a nut and it disappeared underneath the cockpit floor (a length of structural fibrelam). A quick reach around was unable to locate the nut so I looked underneath the aircraft and discovered a 2" aperture in the thin fibreglass fuselage, which should hopefully allow the loose article to drop out.

Through various tapping and moving of the airframe, I managed to remove not a nut, but what was obviously the original of the 6" pitot extension tube fitted to the aircraft. Next, a flight planning ruler appeared and this was removed after an awful lot of effort. A 9V battery appeared, as did a wing bolt securing nappy pin, 3 large rivet tails and some glass. It took over 2 hours of hard work and perseverance to remove the articles pictured below, including, I'm pleased to say, the nut which I had dropped! There was no sign of the original missing nut and washer, but I am happy there is now nothing left under the cockpit floor and that they almost certainly dropped out of the aforementioned 2" aperture.



I can't even guess how long all these articles had lain under the cockpit floor, but clearly one or all of the previous owners had lost articles and done nothing about them, including what should have been (in my opinion at least) a mandatory entry in the logbook. I'm extremely glad I managed to retrieve the array of FOD I did, and shudder to think what could have happened in the event that they had reached one of the flying controls, no matter how unlikely this may be in a non-aerobatic microlight. I should mention that in my day job I am an aircraft engineer in the RAF, with a great deal of experience in the recovery actions carried out when anything is lost (or suspected as being lost) in the airframe or cockpit area..

Lesson Learned: This shouldn't really need saying, but ALWAYS recover anything you have dropped. Is it really worth the risk of turning a blind eye when your safety and that of your passengers is at stake?
