

# IBM Flying Club Newsletter June 1997

## Start Up, "Clear Prop" - Jon Butts

Hot news is the Summer BBQ! All welcome to join us at Hursley on July 18th, see Jeff's event section for details. Any of the non-Hampshire gang want to fly on down? If you wish it, we can arrange accomodation, lifts etc, no problem - give me a call.

Having just bought the July Edition of Flyer magazine I am am incensed at the threat to close/restrict the future use of all the small GA airfields in South Cambridgeshire - outrageous! As an IBM Club, by constitution, we cannot join the campaign against, but I hope \*many\* of you will do as I have been prompted to do as an individual - join the PFA and make a pledge toward the costs of a possible legal challenge.

Final call for the stragglers who have not renewed their membership in 1997 (yawn) - we dont want to lose anyone, but this IS the last newsletter you'll receive unless you get yourself onto the 1997 Members list

## Anyone interested in doing it in groups? - Dave Sawdon

Old Sarum are just starting to offer formation flying training so I had a go yesterday as one of the first 2 "students" - it's unbelievably good fun!

I was flying with Chas Boyack (new OSFC DCFI, ex-RAF and Mid Wallop QFI), the other "stude" was flying with Bob Cole (CAA test pilot, ex-RAF Lightning QFI and much more besides). Both in Bulldogs.

The afternoon started with a "mass brief" on formation flying by Chas and then a brief on the trip. The flight was called Sarum Blue and I was Blue 1 for the first session, then changing to Blue 2 after a run and break to land, change lead and stream take-off.

This was how it went.... Engine start at 15:15, we call for taxi and blue 2 tucks-in behind. Checks complete, thumbs up from "2" so we call for departure and line-up on the downwind side of the rwy so that our slipstream doesn't bother "2". Both to 2000 RPM against the brakes, thumbs up from "2" and off we go. We add power faster than usual and pull high so that "2" can keep out of our slipstream. At 500ft clean with prop back to 2600, MAP to 24" and mixture back to 6.5psi we turn right so that "2" can slot into echelon starboard as we climb through 1000ft. We operate at 24" MAP initially so that "2" has power in reserve but he signals us to decrease power as he hasn't got enough margin. Levelling at 5000ft above cloud we set up a racetrack so that "2" can practise forming in echelon port and starboard. Then they call ready for line astern, we say "go" and they disappear. They call "ready for tailchase" and we start various gentle manouevering so they can follow - ending up with a formation run and break followed by a stream landing. The lesson for anyone leading is to be very smooth and accurate, whenever possible signal intentions and think about where the sun is so that "2" doesn't get blinded for too long.

It all seems quite easy so far!

Taxying around it's our turn to be "2". We give a thumbs up and "1" calls for departure. 2000 against the brakes on the upwind side of "1", thumbs up and it's the start of my turn to work hard. Handed to me at about 1000ft Vertical position isn't too tough but achieving the exact longitudinal position is interesting. "Why can't I keep up?" pops into my head, followed by "why am I overtaking?" followed by "this is hard - but fun"

The aim is to achieve half a wingspan separation by lining up the wingtip light with the spinner at the same time as being able to see straight down the elevator hinge line.

After a while I was starting to get the hang of the inertia and anticipation so "1" gave the signal for a left turn. On the outside of the turn you need to climb to match bank with "1" and also increase power to maintain station - surprisingly difficult, on the inside of course you do the reverse (it seemed so easy in the classroom).

Eventually time for line-astern. Half a fuselage length behind and just below it looked closer than I expected. Slightly easier to fly but no hand signals so no warning of turns, descents, climbs, etc.

After a short time we start the tailchase, dropping back a little "1" turns, dives, pulls, gentle wingover then seems to dive a long way and go up a long way suddenly I realise we are half way around a loop but the concentration on the other aircraft is so total that I'm really not aware of anything else ("1" is always responsible for lookout, R/T, etc). After a while "1" waggles his wings as a signal to rejoin so I move forward to 2 wingspans out on the level diagonal and then try to gently slide forward and in to echelon right. Back to the airfield, change to echelon port. "1" calls break in 30 seconds "break-break-go" and pulls into a tight turn onto downwind we count 10 then do the same, pre-landing checks (the first time I've looked into the cockpit virtually for 40 minutes), oval circuit, stream landing to pats on the back and cups of tea. \*Big\* smile time.

Obviously it will take some time to become proficient but I'd thoroughly recommend even one trip. It's not trying to be in the same league as the so-called "fighter pilot" schools in the US, it's just an intro to formation flying. It's the most terrific fun, is an insight into a type of operation we ordinary mortals don't see and will improve your handling skills. I intend to do more of it, it's just a shame that the Queen isn't paying!

It's non-stressful, suitable for pilots at all levels (and non pilots) and can either be planned to give you training or be a demonstration - you define your needs. You can do most of the flying and log it as P1/S.

Give me a call if you want to know more, Dave Sawdon Corporate SPA for Near Field Phenomena (Ed: now also 'Near Airplane Phenomena'. Not TOO near please Dave!)

## **Aircraft Hire Required - Bob Wilkie**

I am part of a group who provide air experience flying for Scouts based in South West London. We have been doing this for about 15 years and currently fly about 700 to 800 boys a year.

We have recently been hit by aircraft availability caused by the sale of one aircraft and the loss of another in a recent crash at Biggin (nothing to do with our group I hasten to add).

Does anyone know of a four seater (it needs to be 4 to make the operation viable) that is available for hire in the Biggin, Redhill, Fair Oaks area? We would prefer to use a privately owned aircraft to avoid paying multiple club memberships. All the pilots who fly the Scouts are experienced (it is a Scout Association rule that pilots must have at least 100 PIC to fly Scouts).

If there is such an aircraft out there that is available can you please let me know. If we don't find an appropriate one soon we will have to start trimming down the operation. We would all hate to have to do this as the boys get so much out of the flights.

Bob Wilkie - Availability Manager for the Sainsbury's Group South Bank 0171-202-5511 Internal 435511 IEA. GBIBM4D @ IBMMAIL / Internet bob\_wilkie@uk.ibm.com

## Stuck Stick - Irv Lee

Another one for the safety section this month, which has made me think I need to add a little something to check-outs in future. Dave T. and Clare flew into Old Sarum the other Bank Holiday Sunday to join me, Jill, Ranjit, Liz and their family, with Paul E. too for lunch.

Dave decided he might as well take me up and have an IMC refresher before his 25 month test. He quite often does instrument approaches to Southampton but never gets put into the hold, so he wanted a bit of revision on that. We took off in G-BT with Nurse Clare and Dave's son Roy watching from the back seat, and decided it was such a pleasant day, 4000 feet was the safest place to be. We were climbing in a straight line approximately towards the Southampton VOR, so I thought I'd throw in a quick intercept to a close-by VOR Radial (well, QDM actually) just to warm Dave up. Dave acknowledged the qdm and suddenly went quiet before saying "I don't like this, the controls are VERY stiff". I immediately checked the ailerons visually, half expecting to see one hanging off, (it has been known in AA5s!) but in the couple of seconds I was doing that I heard Dave say "forget it - I know what it is!".

Any guesses? Well, he had taken a pen from the pen-holder just left of the radio. The pen holder was one of those spring-collar grippers. Any guesses yet? As he pulled the pen out, he applied some downward movement, so the pen acted like a lever, with the far end of it moving upwards. Just left of the radio is where G-BT has its auto pilot switch, with 'ON' of course being up! The tip of the pen had turned on the autopilot! Dave had just done his 'SID' checks on the VOR so it was centralised 'to' the VOR, so the autopilot had not needed to change heading at all when it switched on!

So what? Well, for one thing I'm going to amend my G-PORK checkouts to demonstrate what an autopilot 'on' feels like! I won't be demo-ing how to use it unless the pilot has an IMC rating, but that's not the point. G-PORK has an autopilot switch too, just close to the intercom switches. The checklist we use ensures autopilot off before flight, but supposing someone who had never experienced an autopilot before accidentally switched it on? Very worrying I should imagine!

## Any recommendations for me? - Danny Elliott

I've got a new whizzo PC at home and guess what I want to put on it - aviation software! I'd appreciate any recommendations from members as to their favourite Pilot Logs, Nav and Flightplanners, not to mention Flight simulators! Thanks in advance - Danny Elliott (Ed: I hope you're getting connected to the Net, Danny - as a retiree you can get our Newsletters \*much\* easier that way - and our Web Site has the back-issues and lots of piccies!)

## Any Dave Clark 10-30s for me? - Richard Valler

Ed: Richard is looking for a set of Dave Clark 10-30 headsets specifically because they are usable in an open cockpit. For anyone who does not know, Richard owns an Evans Vp1 homebuilt at Thruxton. Anyway on the DC10-30 the mike points back towards your mouth, avoiding wind noise (or something like that). Anyone out there got some and want to trade-up or sell? (Evans Vp1 Pilots have always appeared to me to sit ON, rather than IN, their aircraft - so I imagine wind must be quite a common problem for these guys - if you can help Richard please give him a call!)

## Propellor Safety - Dave Ashford

Below is an article which I first saw on the AVWeb Internet Site (<http://www.avweb.com/toc/index.html>). It is reproduced below with the author's knowledge and permission. Paul D Adler is an aircraft owner and pilot based at Martha's Vineyard who had a close

shave when hand-swinging a propeller. The experience prompted him to investigate further and subsequently write the article below. It may be of interest to those of you who rotate propellers by hand - it has certainly made me think twice about what I have been doing.

## **Don't Touch That Propeller!**

by Paul D. Adler ([blackdog@vineyard.net](mailto:blackdog@vineyard.net))

Most of us have been taught to hand rotate the propeller before normal startup or after shutdown for the following suggested reasons:

1. When the outside temperature is below 20 degrees F to loosen and limber the oil before startup, which will make normal starting easier, distribute oil on bearing surfaces, and conserve battery life.
2. If your aircraft is stored longer than 10 days to lubricate the internal engine components.
3. To align the prop in a vertical position for outside storage so as to allow rain and ice to evacuate the spinner area.
4. To move the propeller out of the way for attaching a tow bar.

But few of us have been properly trained about the proper precautions that need to be taken before touching that propeller. Few CFIs or pilot examiners provide guidance about propeller safety, apparently assuming the aircraft manual provides this information. In most cases, it doesn't.

Hands off

I have come to the conclusion that there are no compelling reasons to ever hand rotate the propeller. Consider this:

- With the advent of multi-viscosity oils, which most of us now use, it is not necessary for anyone to pre-rotate the propeller for oil limbering...as Cessna still suggests, though Lycoming does not.
- If your aircraft is in storage, I would not rotate the propeller unless I knew the spark plugs were removed and/or the magneto ignition completely disconnected. (Unless the mag has an internal grounding spring, a disconnected 'P' lead leaves the mag hot.)
- As far as rotating your prop to place it in a vertical position for ice and water drainage or to attach your tow bar is it worth risking your life? Propellers are most likely to start spinning when the engine is warm with residual fuel in the carburetor!

Some mechanics suggest rotating the propeller in the reverse direction which will prevent an inadvertent start as the impulse coupling is not activated with reverse propeller rotation. However, Airborne says that possible damage to dry vacuum pump vanes may result by reverse rotation.

Hot mag

If you are one of those adventurous pilots who still ignores all these warnings, at least be mindful of the following. There have been several thousand recalls of faulty ignition switches, starting capacitors, starters, and magnetos in all types of aircraft, that will allow a propeller to start spinning inadvertently when rotated, even if the keys are out of the ignition. Even with a properly working ignition switch, if the wire known as a 'P' lead, running from the ignition to the magnetos, becomes disconnected or cut (from vibration or whatever), once again you have what is known as a 'hot mag' situation. This 'P' lead wire can come loose at anytime without notice. All of the above scenarios may be intermittent, making it difficult, if not impossible, to locate the problem.

One very simple check for a potential 'hot mag' situation is to carefully watch your RPM drop either

during your initial run up or before a shutdown, assuming your tachometer is working properly to report this RPM change. If, when alternating from left to right magneto by switching with your ignition, you do not notice a magneto drop, this may indicate a 'hot mag' situation, which could be caused by a disconnected 'P' lead. Or, before shutdown, while the engine is running and you are stationary and secure, you can briefly switch the ignition key to an off position and listen if the engine wants to stop. (Do this only at idle RPM.) If it does, your ignition system is most likely working correctly at that moment. Also, make sure your ignition key can not exit the ignition with the ignition switched in the on position!

#### Expert advice

Following my propeller incident, I wrote letters to the FAA and NASA concerning inadvertent propeller starts. On March 9, 1994, the FAA issued 'Priority Letter Airworthiness Directive 96-06-09,' followed by 'Owner Advisory SEB94-5A' issued on March 18, 1994, alerting every registered pilot concerning a potential defective capacitor within the magneto that could cause an inadvertent propeller start. Following this directive, I contacted Tim Davis (expert from Teledyne Continental Motors) regarding Bendix magnetos, and discovered several other reasons that supported my belief to never trust your ignition system.

Assuming you have a working ignition system, and you still feel that hand rotation of the propeller is essential, here are some additional precautions to implement. First, always assume that the propeller may start and then implement the following safety precautions:

1. The ignition key should be out of the ignition and the switch in the 'off' position.
2. The mixture control should be in the mixture shutoff position. (Beware even if this control is in the off position, the engine can start if there is residual fuel in the carburetors from priming or whatever.)
3. Make sure the aircraft is secured by wheel chocks and/or tiedowns.
4. Engage the emergency brake.
5. If a pilot is available, place him or her in the front seat for added safety to shut down the aircraft if it inadvertently starts.
6. Make sure you have been taught the proper way to evacuate the propeller area from an inadvertent start. Your survival rate is minimal without proper training, especially when you are not prepared for the propeller to start spinning.

Older pilots seem to be well aware, from experience, of the dangers surrounding propellers. But we newer pilots, taught by new instructors, may not be fully aware of the threat. If this information reaches just one pilot and saves his life, I am thankful. Meanwhile, happy flying and be proud of the fact that we are still part of the most well organized aviation community in the world, and we shall stay that way if we continue to communicate.

## "Bravo Tango" - Clare Grange

Dave T and I obtained our shares in BT (Grumman Tiger) at the beginning of December and are really delighted with the aircraft so far. Dave has been fondly called "Group Captain" for some time now, but since selling his share in ZERO to James Mason he's now only a one 'plane man!!!! There are four of us in the BT syndicate which so far is working very well. Dave and I have two weekends out of four and seem to be able to fly during the week (weather and work permitting!) as and when we want. One of the other syndicate members does not fly very much which again increases our opportunities to fly. Dave is a bit outnumbered really as the syndicate consists of a doctor, dentist, myself and one IBMer! He's well looked after!!

The 'plane is well equipped with two VORs, ADF, RNAV, two altimeters, two radios, autopilot, and transponder. It's been resprayed (definitely the smartest Tiger in the fleet!!) and we've had new

carpets. Where have we been? Land's End, Coventry, Culdrose, White Waltham to name a few, various "tourist trips" up and down the coast, and nav exercises. Land's End and Culdrose were very good trips especially given the time of year, Dec and March! Both days were gorgeous, visibility excellent and the sun shining!

Culdrose was special for a number of reasons. It was lovely to see 9 club aircraft and 26 members arrive in style! We were also very well looked after and I believe our hosts were impressed with our enthusiasm! Irv's Rutan and Chris Thompson's Auster were quite the centre of attraction. Irv also made himself the centre of attraction on the return journey upsetting the female St.Mawgan controller! He now knows what the Papa Yankee is!

Paul Goodman and Jim Hull were the back seat passengers in BT and quite well behaved! Jim's in-flight catering was most welcome. We were all enjoying the flight and scenery until Dave in the P2 seat announced : "I don't know how to tell you this! " What's the matter?" I said thinking something was wrong. Reply: "You're 0.03 nm off track!" He and his newly acquired GPS would have been ejected had I been able. All joking apart Dave and I are enjoying our flying and looking forward to many more trips in BT .

## Comedy Corner - Luke Webster

Here are some actual maintenance complaints submitted by US Air Force pilots and the replies from the maintenance crews. "Squawks" are problem listings that pilots generally leave for maintenance crews.

Problem: "Left inside main tire almost needs replacement."  
Solution: "Almost replaced left inside main tire."

Problem: "Test flight OK, except autoland very rough."  
Solution: "Autoland not installed on this aircraft."

Problem #1: "#2 Propeller seeping prop fluid."  
Solution #1: "#2 Propeller seepage normal."  
Problem #2: "#1, #3, and #4 propellers lack normal seepage."

Problem: "The autopilot doesn't."  
Signed off: "IT DOES NOW."

Problem: "Something loose in cockpit."  
Solution: "Something tightened in cockpit."

Problem: "Evidence of hydraulic leak on right main landing gear."  
Solution: "Evidence removed."

Problem: "Number three engine missing."  
Solution: "Engine found on right wing after brief search."

Problem: "DME volume unbelievably loud."  
Solution: "Volume set to more believable level."

Problem: Dead bugs on windshield.  
Solution: Live bugs on order.

Problem: Autopilot in altitude hold mode produces a 200 fpm descent.  
Solution: Cannot reproduce problem on ground.

Problem: IFF inoperative.  
Solution: IFF inoperative in OFF mode.

Problem: Friction locks cause throttle levers to stick.

Solution: That's what they're there for.

## Glenforsa - Chris Thompson

I took the Auster to Glenforsa over the late May bank holiday weekend. The trip from Bourne Park (near Andover) to Carlisle took 2:45 hrs. with a little scud running on the early part of the trip. The cloud was quite low and when I requested to transit the Brize Zone northbound at 1000ft I was asked if I could cross directly overhead Fairford at or below 850ft but no overfly the actual buildings! Once past there the weather improved as forecast and at Evesham I was back to the dizzy height of 1500ft for the run up past Birmingham, then down to 1250ft for the Low Level Corridor at Manchester. At Wigan I was working Warton LARS up to Lancaster then up to 2000ft for a run loosely following the M6 through the Lake District hills to Penrith. Wartin kindly got me the latest Carlisle weather and although the cloudbase was low the viz was fine for the last part of this leg. After a quick refuel I was off again, tracking directly up the valley past Locherbie and Sanquar for West Kilbride north of Prestwick, then out across the Isle of Bute, round through the Crinnan Canal and then out northwesterly to Mull and Glenforsa resulting in a further 1:50hrs on the clock, arriving within five minutes of the planned ETA which was not bad for some 400nm in the Auster.

David (the airfield manager) was waiting to meet me and we went immediately to Craignure to pick up a "rental" car (This is a rental car that I did not have to pay any rental on!)

During the following days we mowed the airfield and got the ATC motorbike ready. We also answered many requests for information. On Thursday the ZERO boys (Ed: Dasher and Neal) arrived and Glenforsa Executive Handling delivered them promptly to their accomodation. They were immediately back and went flying again that evening in 500nm visibility and CAVOK skies. I took the Auster up around Fingal's Cave on Staffa and also took several other people for short joyrides before being forced once more into the Glenforsa Hotel bar.

The next day Jon and Debbie arrived by car the ZERO boys went off the Benbecula and Stornoway whilst Debbie stayed behind (something to do with excessive weight in ZERO). About noon the local policeman arrived in his Land Rover and asked if we had a Gee,Zed,Eee,Are,Oh, leaving to Dublin (they don't know much about airplane registrations). I said no, they had gone to Benbecula and Stornoway and out came the old notebook with immediate suspicion of ZERO doing illegal entry/departure to Ireland! The policeman kept returning every hour until ZERO did come back. (Ed: I wonder what they were thinking when, having watched us make our long-awaited approach, we went around from ten feet!)

When they did land despite my repeated attempts to get our boys arrested he was quite nice about it. They will probably tell their side of the story about seeing the Police waiting for them when they landed. (Ed: it was fun, but not as much fun as we'd just had flying over Barra, to Benbecula. Dasher and I have been to a few places for a burger and chips, its going to be hard to beat Stornaway! Back to Mull over Skye and Rhum - ace trip! Disappointed not to see Martin Talbot at any of these; wrong hemisphere probably!)

Over the fly-in weekend the weather remained perfect and we had 150 airplanes from all around the UK. This is a great place to fly and more people should try to make the pilgrimage. If you want to stay locally then hotel bookings must be made early. It is getting so big now that we desperately need more marshalling assistance especially on the Saturday.

On the Monday I had a call from a German staying in Tobermory saying he was going to fly in with a helicopter formation in 30 minutes. When they did arrive they all came down the Sound of Mull at 100ft and there were five R22's and one R44. Then they all wanted fuel which took some hasty arranging and a great deal of time. They eventually did a formation lift and departure out over the water about two and a half hours later.

The trip back was very hard work due to the heat and bumps but the journey was completed in just unde five hours total, stopping once more at Carlisle for fuel.