



May 2008

SKYWRITINGS

Newsletter of the *Mid Kent*



Light Aircraft Association

Mike's Mutterings

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Editor



Henham Park Fly-In

Take a quintessentially summers day, a country estate, a few market stalls, some old cars, some old aeroplanes with pilots to match and you have the ingredients for Henham. Henham Park is a fly-in that happens once a year, for those that went to Woodchurch, it is on similar lines. It is situated a few miles south of Beccles airfield in Suffolk.

Unfortunately the 'health & safety' brigade have managed to protect us to such a degree that many well-known events no longer exist. For the time being at least, John Hill the organiser tells me Henham is



Wing Walkers at Henham Park

May Meeting - 29th May 2008 – Golf Club at 8pm
The Antonov AN2

safe. The loos were clean and the Marshall's relied on 'common sense', which worked for me.

This year the fly-in was scheduled for 11th May and what a scorcher. The wind was less than 10 knots down the runway with about 600 meters available. At least 7 Mid-Kent Strut aircraft attended, one from Heathfield, one from Headcorn, one from Biggin and four from Farthing Corner. The air was smooth on the whole flight with the exception of final approach and the viz meant even Richard could have flown without a GPS. (He normally flies with three).



The old cars and bikes were a delight, even some of the gawdy American jobs had to be appreciated for the care their owners had taken over them. Mid-afternoon a Lancaster bomber escorted by a solitary Hurricane did a fly-by at about 300ft. Apart from the run of the mill attractions they had a young lad with a dirt bike charging through hoops of fire and the Utterly Butterly team in their new guise with some spectacular flying. The girls that do the wing-walking must weight about 7 stones and can contort their bodies inverted at 100mph into positions I thought were reserved for private only. I think the blonde has visions of a career move and

being a supportive sort of chap I feel I must support her.

There were over 70 aircraft in attendance with many interesting LAA types amongst them; from most Kent airfields it's less than an hour each way so next year why not join us for a burger and ice cream, landing fees courtesy of the Halesworth Lions Club who are responsible for organizing the whole event in aid of local charities.

[Last Months Meeting - Visit from Ken Craigie](#)

Regrettably I was unable to attend last months meeting but I understand that it was a talk well received and as always good to here from the office what is going on and the chance to hear first hand so many thanks to Ken for making the trip south.

[Next Months Meeting - Talk On Operating the AN2](#)

We are pleased to confirm the talk from the operators of the AN2 which for those that do not know too much about this aeroplane the following information is reproduced from the entry in Wikipedia the on line encyclopedia and we fully acknowledge this fine method of research. The An-2 is the largest single-engine biplane ever produced. By 1960 the USSR had produced over 5,000 units. Since 1960, most An-2s have been built at Poland's WSK factory in Mielec, with over 13,000 made there before full production ended in 1991. Limited production from parts stocks, as well as spares and maintenance coverage continues. China also builds the An-2 under license as the Shijiazhuang Y-5.

The An-2 was designed as a utility aircraft for use in forestry and agriculture. However, the basic airframe is highly adaptable and numerous variants have been developed. These include hopper-equipped versions for crop-dusting, scientific versions for atmospheric sampling, water-bombers for fighting forest-fires, flying ambulances, float-equipped seaplane versions, lightly armed combat versions for dropping paratroops, and of course the most common An-2T version, which is the 12-seater passenger aircraft. All versions (other than the An-3) are powered by a 1000-horsepower 9-cylinder Shvetsov ASh-62 radial engine, which was developed from the Wright R-1820.



The An-2 has design features which make it suitable for operation in remote areas with unsurfaced airstrips:

It has a pneumatic brake system (similar to those used on heavy road vehicles) to stop on short runways.

It has an air line fitted to the compressor, so the pressure in the tires and shock absorbers can be adjusted without the need for special equipment.

The batteries are large and easy to remove, so the aircraft does not need a ground power unit to supply power.

There is no need for an external fuel pump to refuel the aircraft, as it has an onboard pump that allows the tanks to be filled from simple fuel drums.

It has a minimum of complex systems. The crucial wing leading edge slats that give the aircraft its slow flight ability are fully automatic, being held closed by the airflow over the wings. Once the airspeed drops below 40 mph (64 km/h), the slats will extend because they are on elastic rubber springs.

Take-off run: 170 m, landing run: 215 m (these numbers will of course vary depending on take-off/landing weight, outside air temperature, surface roughness, and headwind).



An interesting note from the pilot's handbook reads: *"If the engine quits in instrument conditions (blind flying when you can't see the ground) or at night, the pilot should pull the control column full aft (it won't stall) and keep the wings level. The leading-edge slats will snap out at about 40 mph (64 km/h), and when the airplane slows to a forward speed of about 25 mph [40 km/h], the airplane will sink at about a parachute descent rate until the aircraft hits the ground."*

The An-2 has no stall speed quoted in the operating handbook. Pilots of the An-2 say one can fly the aircraft in full control at 30 mph (as a contrast, a modern Cessna 4-seater light aircraft has a stall speed of

around 55 mph). This slow stall speed makes it possible for the aircraft to fly backwards (if the aircraft is pointed into a headwind of, say, 35 mph, it will travel backwards at 5 mph whilst under full control). (This is, of course, also possible with almost any other real Short Take Off and Landing (STOL) aircraft.)



Since the collapse of the Soviet Union and the Eastern European communist states, most airlines in these areas have been withdrawing their An-2s from service as some of these aircraft are now over 40 years old. Private operators are still using the planes as their stability, capacity and slow-flying ability make them very popular, for instance for skydiving.

In the early 1980s Antonov experimented with a development of the An-2 powered by a modern turboprop engine. The unit used was a 1450 horsepower Glushenkov engine, and aircraft fitted with this engine were fitted with a longer, more streamlined nose to accommodate it. Whilst their high noise levels, increasing maintenance costs, high fuel consumption and unsophisticated nature (the pre-flight checks alone take between 30 and 40 minutes) makes them obsolete in

Europe, the huge number of aircraft available means that prices are low (from as little as \$30,000 for a serviceable example). This makes them ideal for the developing world, where their ability to carry large loads into short airstrips makes them assets to airlines on a budget. Many ex-Aeroflot An-2s work as regional airliners in Africa, Central and South America, Cuba and the Indian subcontinent.

North Korea has a number of the aircraft. It is believed that the wooden propellers and canvas wings on their variants (the Y-5 version license-built in China) give them a low radar cross-section, and therefore a limited degree of "stealth". In a war they would probably be used to parachute or deliver special forces troops behind enemy lines for sabotage operations. The An-2's ability, looks and flying characteristics, and its status as "The World's Biggest Biplane" mean that demand for the aircraft is increasing in the United States and Western Europe, where they are prized by collectors of classic aircraft. This makes the An-2 an increasingly common sight at airshows. However, in nearly all Western nations (the USA, Canada, the United Kingdom, France, Germany, etc.) one may not use the An-2 commercially (despite its obvious potential as a bush plane and parachute aircraft). This is because the aircraft has not been certified by the relevant national aviation authorities, which limits its use. These restrictions vary by country, but all prevent the An-2 being used for any 'for profit' purpose. In the United States, An-2s imported since 1993 are limited to flights within 300 miles of their home airport, and may only land at that same airfield; the An-2s that PZL produced, however, are exempt due to a bilateral agreement with Poland.

This should wet the appetite for what we are sure to prove a highly illuminating talk and not to forget you can fly the UK example on a PPL as at least one of our members has done.

After One Good Flyout

Well , one hopes the good old British weather that allowed such a good run out to Henham Park isn't going to muss up the flying season like it did to our proposed flyout to Amiens which after a truly poor Saturday knocked that one into touch. One can only hope for better things for the rest of the year.

Talking of further events one that is always popular is The Breckland Strut Annual Fathers Day Fly-In and Bar B Q on the 15th June at the Norfolk Gliding Club Tibenham so if you look at www.brecklandstrut.co.uk all the details are posted.

The RAF Strike Back - Doesn't It Make You Day-dream....

Two British traffic patrol officers from North Berwick, East of Edinburgh, were involved in an unusual incident while checking for speeding motorists on the A1 great North Road.

One of the officers (who are not named) used a hand held radar device to check the speed of a vehicle approaching over the crest of a hill and was surprised when the speed was recorded at over 300 mph. The machine then stopped working and the officers were not able to reset it. The radar had in fact locked on to a NATO Tornado fighter jet over the North Sea

which was engaged in a low flying exercise over the Borders district. Back at police headquarters the Chief Constable fired off a stiff complaint to the RAF liaison office.

Back came the reply in true laconic RAF style."Thank you for your message which allows us to complete the file on this incident. You may be interested to know that the tactical computer in the Tornado had automatically locked on to your 'hostile radar equipment' and sent a jamming signal back to it . Furthermore the Sidewinder air to ground missiles aboard the fully armed aircraft had also locked on to the target . Fortunately the Dutch pilot flying the Tornado responded to the missile status alert intelligently and was able to override the automatic protection system before the missile was launched.'" Mmmm !

Mode S Transponders - The second Consultation.

I am sure you will all have heard at least something about Mode S transponders, well listen up because NOW is the time to respond to a CAA Consultation on the subject. The date for submission of you views is rapidly approaching - 31st May. Don't stick your head in the sand (or somewhere more personal), or expect 'the others' to do something about this. It is your responsibility too. Read on, check out the websites, and then respond or you'll have nobody to blame but yourself if we get impositions imposed upon us that will cause us inconvenience and expense.

The CAA's original intention was that every airborne vehicle would be fitted with a Mode S transponder, from hang

glider to jet liner but following the initial consultation they had to have a rethink. Basically CAA decided that those commercial aircraft that fly in airspace where mode A/C transponder used to be mandatory now have to carry Mode S transponders instead, and there would be a second consultation based on a new set of proposals for the rest of us.

The second consultation basically consists of four proposals :-

- 1) Mandatory carriage of Mode S in airspace class A to E
- 2) Implementation of Mandatory Transponder Zones (TMZs)
- 3) Gliders flying over FL100 to carry mode S
- 4) International flights to carry mode S Transponder

Having attended the second consultation meeting at Turweston recently it appears that the CAA still has some glaring holes in their proposals, and it was obvious that many of their ideas had not been thought through.

The “Transponder Mandatory Zone” appears to be just a concept at the moment and the CAA could not explain how a zone would be established in terms of consultation with airspace users, or even how it would be operated. A TMZ placed at a known bottle neck would force non transponder equipped aircraft around the edges and the bottle neck would simply be moved, perhaps making the airspace situation worse. If the TMZ is placed in a

busy corridor (i.e. between Luton and Stanstead) this could cut the country in half for some aircraft, most likely the kind of aircraft that who already have restricted weight capability / fuel reserves and who would find it difficult to fly around the area.

It was not clear if by carrying Mode S you would have a “right” of access to a TMZ, or indeed other classes of airspace. This point was voiced because often airspace controllers (and possibly future TMZ controllers) can be busy and difficult to contact (e.g. Farnborough Radar West) and this could leave aircraft orbiting in busy areas awaiting clearances. How that improves safety is a mystery. To expect us to be happy with the establishment of TMZs when the concept is so vague would seem somewhat hopeful on the part of the CAA.

There advantage of Mode S to GA is difficult to see. The CAA is trying to persuade us that we will all see a benefit in safety but the reality is that it will be commercial air transport that reaps the major benefit whilst GA carries more than its share of the financial burden of implementation. The cost of the unit (£2000) plus fitting is a substantial amount from the recreational flyers budget and it would not be unreasonable for the government to meet some of the cost (for example by waving VAT on the purchase and installation costs on what is effectively “safety equipment”), after all, they will be reaping additional income from GA when the extra Avgas fuel tax comes in at the end of the year.

It is reported by the CAA that there are presently only three ground stations in the UK which can interrogate Mode S transmissions: Heathrow, Manchester and Prestwick. For all

'OLD' IS WHEN .. You don't care where your wife goes as long as you don't have to go with her!

other UK radar stations a Mode S signal will appear on the screen exactly as if you were squawking mode A/C. The CAA were unable to tell us when all ground based radar stations would be upgraded....if at all. For example Manston revived their broken radar system by fitting the second hand radar released from Prestwick.

The mandatory carriage of Mode S on international flights was of great concern. There would be absolutely no purpose served by insisting on GA aircraft flying in VFR outside of controlled airspace to have to use Mode S to cross an international border. One glimmer of hope was that CAA said it would take a lead from what other states in Europe did, and it looks like our near neighbors will not be implementing this requirement.

That said, CAA could not tell us how advanced other European states were with their Mode S plans, their only guidance was based on information that was in some case, three years old. In a rapidly changing regulatory climate that was wholly unacceptable.

The gliding fraternity would require Mode S over 10,000ft and no real solution was offered to tackle the power source issues. The results from the CAA trial on the "low power transponder" proved it to be unsatisfactory, the power saving was minimal compared to a large reduction in range. No further work is proposed in this area. CAA is working with BGA on testing a Mode S/battery power pack but it as yet unclear on what sort of duration can be expected from such a system. There are of course, many small LAA aircraft that also have no electrical system, they too will need to find a solution if they wish to operate in areas where the carriage of a transponder becomes mandatory. There was also the administrative night-

mare for people requiring modification authorization in order to fit the Mode S hardware and make changes to electrical systems, fit generators / batteries etc and how long this could take. This is not so much of a problem for Permit aircraft but for certified for C of A aircraft this could be an expensive and drawn out issue.

The CAA is inviting comments on the second consultation and the closing date is 31st May 2008. If they only get 30 letters then the whole issue will be railroaded through, 3000 letters and they will have to address some of the issues listed above. There is a lot of information on the LAA and CAA web sites so as I say, please check them out and reply to the consultation. Your letter will make a difference, do nothing and we will all ultimately be forced down a road we do not want to take, and it will be an expensive road.

More information is available on the LAA website at www.laa.uk.com, and on the CAA site at www.caa.co.uk/modes.

You can respond on-line or via snail mail to:

Postal responses to be posted to Mode S Consultation

K6,G6

Civil Aviation Authority

CAA House

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Yesterday I ordered a so called "all day breakfast" from Biggles Café and it lasted a mere ten minutes. I want a refund.

Yours, Hyam A Mona

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www.solleysicecreams.co.uk

June Meeting

June 26th sees us at Steve Solley's for tea and a BBQ. All are welcome but please give Steve a ring on the telephone number opposite so that he can plan food accordingly. If you wish to fly in that will be fine but please get a briefing from Steve first. A sketch chart for flying in is available at:-

www.midkentstrut.freeserve.co.uk/ripple.gif

If you are driving in then a map is available at:-

<http://tiny.cc/A2IkK>

Yesterday I clipped some power cables. Am I now current?

Dates for your Diary

May 29	AN2 Talk
Jun 26	Tea at Ripple
Jul 31	BBQ