

The Folly Flyer

The Newsletter of Aylesbury & District Model Flying Club

Volume 13 Issue 2

www.admfc.co.uk

May 2005

Power Duration Winner - Mick Stiff



2nd - Martin McIntosh



Below - The Nuke Airborne System next to a 20p piece for scale. Two servos, a receiver and a speed controller - 10 gm total weight!



3rd - Terry Rowe



CONTACTS

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WEBSITE:- www.admfc.co.uk

FLYING TIMES

- Folly Farm** - Tuesday, Thursday & Saturday - 10am - 8pm. Sunday - 9-30am - 5pm.
Bank Holidays 10 am - 5pm. Electric, rubber and gliders may be flown at any time.
- Cublington** - There are no restrictions on flying times.

CLUB SHOP

'Meanad' add-on silencers	-	£5.	-	Ring Mike Smart.
Transfers	- Sheet of three	£1.	-	Ring Bob Playle.
Training Videos	- for hire to club members.		-	Ring Bob Playle.

TRAINING

Fixed wing training takes place every Saturday and Sunday afternoon at Folly Farm between 2pm and 5pm **by appointment only with the duty instructor**. Please ring the duty instructor by 7.30pm Thursday for the following Saturday or by 7.30pm Friday for the following Sunday.

Please note **NO TRAINING** indicates that a Club Competition takes place that day. Telephone me beforehand if you wish to take a chance on the time available afterwards. **RG**

2 April 2005	Richard Ginger	(688030)	3 April 2005	Robert Adkins	(07900 497195)
9 April 2005	Bob Playle	(01442 825693)	10 April 2005	NO TRAINING	
16 April 2005	Mike Smart	(658142)	17 April 2005	NO TRAINING	
23 April 2005	Paul Thorne	(613870)	24 April 2005	Mick Stiff	(415997)
30 April 2005	Richard Ginger		1 May 2005	NO TRAINING	
7 May 2005	Bob Playle		8 May 2005	Peter Dunnett	(334708)
14 May 2005	Mike Smart		15 May 2005	NO TRAINING	
21 May 2005	Paul Thorne		22 May 2005	Tony Wood	
28 May 2005	Robert Adkins		29 May 2005	Richard Ginger	
4 June 2005	Bob Playle		5 June 2005	NO TRAINING	
11 June 2005	Tony Wood		12 June 2005	NO TRAINING	
18 June 2005	Mike Smart		19 June 2005	NO TRAINING	
25 June 2005	Paul Thorne		26 June 2005	NO TRAINING	

THE NEWSLETTER

The newsletter is produced by Mike Smart, 85-87, Quainton Road, Waddesdon, Aylesbury, Bucks. HP18 0LP.
The Club Newsletter is a forum for all members and material for publication is invited, however the Committee do not necessarily subscribe to views expressed by contributors.
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EDITORIAL

The DeAgostini Spitfire seems to have attracted more than its fair share of attention. There was talk about it at the Club meeting, the internet discussion forums have been full of it and I am led to believe that even the BMFA have had words to say.

If you don't know what I am talking about, then you must have been away from the planet in the early part of the year. This is of course one of the 'buy it in weekly instalments' magazines that appear in January each year, as advertised on the TV. You buy a magazine each week at a grossly inflated price and you get a few bits of your Spitfire to put together. After a long time and around £400, you should have a model Spitfire, although I have to say that were it not for the camouflage, it could be almost any low wing model. I'm not quite sure how you get the engine and radio, but no doubt it is worked out somehow.

Anyway, the point of this rambling is that you get a video with the first issue that shows you (allegedly) how to put it together. Now Mick bought the first issue and he lent me the video to watch. (I think he is secretly building one of these). It is hilarious - you must borrow it. One of the highlights for me is where the guy is gluing together some of the early parts from his tiny pot of white glue, presumably supplied to assemble the whole model. He uses a small paintbrush to apply the glue and lightly wipes it on the edge of the parts, but not sadly, on the interlocking tongues which actually mate with the other part!

Of course, the very worrying thing is that a complete novice might actually get all the magazines, build it and try to fly it! On the other hand I suppose, a complete novice could walk into a model shop and buy any model and try to fly it.

www.admfc.co.uk has been updated with the second quarter training schedule in the members area (password deb09rant)

I've added some links and made two links pages from one as I was running out of space.

BRC Hobbies are worth checking out, their prices seem very keen. Servos for example - two micro Tower 5 gram servos for £13.75 seems like good value to me, they would be ideal for the Orion E if you haven't got a pair already.

As usual, feedback (favourable or otherwise) is welcome and if there is anything you'd like me to add to the site, let me know and if it is appropriate and in good taste, I'll do what I can to add it...

Paul Yorke

I'm sure you will all join me in welcoming our latest new members, Alex Healy and Pieter Van Zyl. Welcome to the Club guys!

Bring & Buy

Thanks to all those who attended and our two auctioneers, Roger and Les. As a result of your efforts, we ended up with exactly £32 profit for the Club.

Practice with AULD models on even frequencies

Firstly, congratulations to all those who have finished and flown their models. However, it appears that a few of you may be flying at Folly Farm, using the even frequencies you have been allotted for the competition and also using makeshift frequency pegs.

As you are probably aware, it is against Club Rules to fly on evens and to use an un-official frequency peg.

Evens are only permitted to be used at competitions under controlled conditions, where of course you do not need to have a peg.

Clearly, you need to have a test flight and practice, so in the short term at least, you may fly on even numbers at Folly Farm on non-power flying days only, i.e., Monday, Wednesday and Friday and you may fly at Cublington on any days.

Before doing so, please check with any other members flying on the adjacent frequency either side of yours that they are happy for you to fly.

Special pegs have now been manufactured and they will be posted to those who have even frequencies for the AULD.

These are blue and slightly larger than the normal ones. They have ADMFC on instead of your name and belong to the Club. Please look after them as they will probably have to be returned at some time - loss will result in the Club seeking financial reimbursement.

These are temporary measures authorised by the Committee, subject to ratification at a later date, if appropriate.

The Ferrari Formula 1 Team fired their entire pit crew yesterday. The announcement followed Ferrari's decision to take advantage of the UK Government's Youth Employment scheme and employ people from Glasgow.

The decision to hire them was brought on by a recent documentary on how unemployed youths from the Glasgow area were able to remove a set of wheels in less than 6 seconds without proper

equipment, whereas Ferrari's existing crew can only do it in 8 seconds with millions of euros worth of high tech equipment.

Tony Blair went on record as saying this was a bold move by the Ferrari management, which demonstrated the international recognition of the UK under New Labour. As most races are won and lost in the pits, Ferrari now have an advantage over every team.

However, Ferrari may have got more than they bargained for....At the crew's first practice session, the Glasgow pit crew successfully changed the tyres in under 6 seconds, and then within 12 seconds they had re-sprayed, re-badged, and sold the vehicle to the Red Bull Racing team for 8 bottles of Stella, a kilo of heroin and some photos of Coulthard's bird in the shower.

(Maybe they had something to do with BAR's extra fuel tank as well? - Ed)

Nuke Airborne System

On the cover is a picture of the Nuke Airborne System with a 20p piece for size comparison. This little collection of receiver, speed controller and two servos has an amazing weight of 10 grams!

The BEC receiver has an approximate range of 150 metres (reduced by 30% when used with electric power), uses GWS half-size crystals and will run up to 4 servos.

The speed controller has an operating voltage of 7.2 to 12V and will work with 2 or 3 cell Li-Poly batteries. Auto cut-off is 72% of a fully charged battery.

You can buy this airborne system from your model shop for around £90.

I intend using this system initially in a Lee 1/24th scale rubber powered foam Spitfire which weighs 40 grams and has a wing span of 470mm (18.5"). I will be replacing the rubber power with a KP 01 geared electric motor and using a 145 mAh Li-Poly battery for motive power.

I will keep you posted.....

Qantas Pilot Reports

After every flight, Qantas Airlines pilots fill out a form called a gripe sheet, which conveys to the mechanics problems encountered with the aircraft during the flight that need repair or correction.

The mechanics read and correct the problem, and then respond in writing on the lower half of the form what remedial action was taken and the pilot reviews the gripe sheets before the next flight. Never let it be said that ground crews and engineers lack a sense of humour.

Here are some actual logged maintenance complaints and problems as submitted by Qantas pilots and the solution as recorded by Qantas maintenance engineers.

(P = The problem logged by the pilot.)
(S = The solution and action taken by the engineers.)

P: Left inside main tyre almost needs replacement.
S: Almost replaced left inside main tyre.

P: Test flight OK, except auto-land very rough.
S: Auto-land not installed on this aircraft.

P: Something loose in cockpit.
S: Something tightened in cockpit.

P: Dead bugs on windshield.
S: Live bugs on backorder.

P: Autopilot in altitude-hold mode produces a 200 feet per minute descent.
S: Cannot reproduce problem on ground.

P: Evidence of leak on right main landing gear.
S: Evidence removed.

P: DME volume unbelievably loud.
S: DME volume set to more believable level.

P: Friction locks cause throttle levers to stick.
S: That's what they're there for.

P: IFF inoperative.
S: IFF always inoperative in OFF mode.

P: Suspected crack in windshield.
S: Suspect you're right.

P: Number 3 engine missing.
S: Engine found on right wing after brief search.

P: Aircraft handles funny.
S: Aircraft warned to straighten up, fly right, and be serious.

P: Target radar hums.
S: Reprogrammed target radar with lyrics.

P: Mouse in cockpit.
S: Cat installed.

P: Noise coming from under instrument panel.
S: Sounds like a midget pounding on something with a hammer.
S: Took hammer away from midget.

Thanks to Phil Taylor - Ed

Competitions

Turnout has been a bit mixed so far, low on the Power Duration Comp, almost non-existent for the Helicopter Comp (had to be cancelled) and magnificent for the Glider Comp - 14 entrants!

More of the latter please!

By the way, Dave Harbour entered his first gliding competition and came 5th! Well done Dave.

And Finally....

Most of you seem to have done a lot better than me and built your Orion E. I am struggling a little and not finding it particularly inspiring!

No doubt you will have noticed that there are a fair number of little mistakes in the kit and the instructions. It's a shame really, because it is not a bad kit and not bad wood either. Oh well.....

SEAPLANE TECHNOLOGY

Centaur has landed

A UK seaplane contravenes traditional thinking by employing marine design and materials to produce a lighter, stronger aircraft which can operate on water and land. **Christopher Sell** reports

IN AN AGE OF PROGRESSIVE maritime technology, where Ellen MacArthur can use the latest technology to help her set a new round-the-world record, it's clear that complementary industries could benefit from the advances that modern materials and hull design can offer.

Such thinking has seemingly been taken up by the traditional seaplane market with one UK company looking to break away from tried-and-tested thinking by adopting composites and marine technology to produce lighter, stronger seaplanes, which could operate in rougher weather and have greater access to shore berths around the world.

Seaplane design, according to James Labouchere, managing director of Salisbury-based Warrior (Aero Marine) has changed little since the 1930s and manufacturing technology is out of the 1940s. He explained that current seaplane designs use a mixture of bulbous noses, proud forebodies and pronounced ridges that seriously affect aerodynamic and hydrodynamic efficiency. But while seaplane design has stood still, marine designs have altered to the extent that the

average speed of fast ferries has doubled in the past 20 years, while trimarans and catamarans have broken every available off-shore sailing record.

After working in various areas of the high-speed marine industry, including design and construction of fast multihulls, in 1992 Labouchere received the Royal Aeronautical Society's Handley Page Award to develop a series of new-concept seaplane hulls.

This has resulted in the Centaur, a seaplane that contravenes traditional thinking by employing marine design and materials to produce a lighter, stronger aircraft able to carry a greater payload with a more efficient and controlled take-off. And as an added bonus the plane has an undercarriage,

meaning it can operate on both sea and land.

'It was significant that we had not read any seaplane design textbooks, and that turned out to be an asset,' said Labouchere. 'Had we done so it would have taken us in the wrong direction and we would have come up with a design that creates a great big bow wave — meaning problems as soon as the plane accelerated.'

In contrast, Warrior's hull design cuts through the water, allowing it to travel twice as fast in displacement mode as conventional seaplanes. Aerodynamic lift takes more than half of the aircraft's weight off the water and with a tap on the back-stick energy is translated into flying mode. Furthermore, as the design cuts through the

'It was significant that we had not read any seaplane design textbooks — and that turned out to be a positive asset' James Labouchere, Warrior



water it does not push a visible bow wave, thus avoiding the drag hump conventional seaplanes encounter during acceleration. This characteristic is unique to the Centaur.

This patented design means the plane is unconventionally stable, docile and efficient in rough water. Labouchere claimed that it can handle short, steep waves over 80 per cent larger than those tolerated by conventional seaplanes.

'But it has been a long process,' said Labouchere. 'An amphibious seaplane with an undercarriage — so it operates on both land and sea — is extremely challenging because there are many more design criteria than with just a land plane,' he said.

To achieve this, Warrior used a combination of computational flow dynamics (CFD) and privately-developed software which carried out performance configuration assessment during development and testing. The software allowed the team to simulate the whole aircraft's geometry and look at the effect of adjustment configuration on take-off performance — based on empirical data taken from the model hull tests. The effects on lift and drag of hull geometry, flap geometry, weight, balance, power and tail surface definition could therefore all be reviewed graphically, allowing the design to be optimised. 'So we have a very valuable optimisation tool, which traditional seaplane developers of the past have not had,' said Labouchere. He believes the Centaur design holds many advantages over traditional seaplanes.

Owing to its fine bow and high length-to-beam ratio resulting in a negligible bow wave, it is able to handle twice as much rough water as conventional seaplanes. Moreover, the ability to fold its wings allows it to access five times as many coastal facilities as normal seaplanes. This ability is common in military aircraft, but unique to the Centaur in the commercial sector.

Another first is the material — a resin infusion composite — used in the manufacture of the plane. While this is not new, Labouchere claimed that there is no other certified composite seaplane on the market. Vinyl ester-epoxy laminating resin is an established composite in the marine and automotive industries and is impervious to bacteria, acidic fresh water and salt water. It also heralds good impact and shock-absorption

properties, with good resistance to fatigue.

The composite will mean the plane has a longer life due to its resistance to corrosion. 'Conventional seaplanes are made of aircraft-grade aluminium with a magnesium content which corrodes quickly in salt water,' he said. Unlike marine-grade aluminium it cannot be welded as it will lose its flexibility. Instead it is glued or riveted together.

'You are hard pushed to make a metal seaplane that survives 10 years before being rebuilt,' said Labouchere. 'That is in cool water, but in the tropics the salt eats into a plane much quicker and often it may not last more than four years,' he said. The current way of dealing with tropical conditions is to progressively rebuild the plane, by replacing a section each season until it is totally upgraded.

He added that Warrior has been using cutting-edge manufacturing processes borrowed from the marine industry rather than the aviation industry. The reason for this is that the

marine industry allows more freedom than the heavily-legislated aviation industry.

Will this mean there is a market for a costly seat in such a plane though? Labouchere thinks so, comparing the cost per seat for a seaplane to that of helicopter travel. Not only that, but the high performance of the design, which gives greater lift and greater load capacity, results in a much greater payload range reflected in lower cost-per-seat mile.

This, together with the fact that seaplanes account for about six per cent of general aviation suggests there is a sizeable market to capitalise upon. Indeed, the results of a recent study, not counting military and big carriers, suggests there are more active civil seaplanes than their helicopter counterparts.

Warrior is looking to fly the first passengers by mid-2006. Only then will we see if the seaplane market will benefit from hi-tech marine technology that will turn it into a more accessible, high-utility form of transport.

'Salt corrosion means you are hard pushed to make a conventional metal seaplane that lasts 10 years before being rebuilt' James Labouchere

A computer drawing of how the Centaur will finally look, far left, work on the engine, top right, and trials of the scale model, bottom right



CLASSIFIEDS

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CLUB DIARY

Club Meetings are held on the second Monday of each month at the Rivets Sports & Social Club, Whitehead Way, Mandeville Road, Aylesbury. 7.30pm for 8pm.

Start Time

May 9th	8pm	Club Meeting	-	Professional Model Making A talk with photo's, books etc. covering 60 years of Model Making - professional tips through to how the Hawker Harrier began as a model. Speaker - Ron Settler
May 15th	10.30am	Folly Farm	-	Fun Fly Competition
May 21st - 22nd			-	Sandown Park Model Symposium
June 5th	10.30am	Folly Farm	-	AULD 1
June 12th	10.30am	Folly Farm	-	Electroslot 1
June 13th	8pm	Club Meeting	-	TBA
June 19th	10.30am	Folly Farm	-	Aerobatic Competition
June 26th	10.30am	Folly Farm	-	Electroslot 2
July 6th	7pm	Folly Farm	-	AULD 2
July 11th	8pm	Club Meeting	-	TBA
July 17th	10.00am	Folly Farm	-	Peter Hales Scale Competition
August 7th	10.30am	Folly Farm	-	Open Glider Competition
August 10th	7pm	Folly Farm	-	AULD 3
August 14th	2pm	Folly Farm	-	Electroslot 3
August 28th	10.30am	Folly Farm	-	Daryl Hooper Open Glider Competition
September 12th	8pm	Club Meeting	-	TBA
September 18th	10.30am	Folly Farm	-	Les Edwards 100" Glider Competition
September 25th	10.30am	Folly Farm	-	AULD 4
October 9th	10.30am	Folly Farm	-	Electroslot 4
October 10th	8pm	Club Meeting	-	TBA
November 14th	8pm	Club Meeting	-	Bring & Buy Sale
December 12th	8pm	Club Meeting	-	AGM