Esher & District Model Flying Club

www.edmfc.org.uk

May 2009

CHAIRMAN'S CHAT (aka JB's Jabber!)

Firstly many thanks to Tony Major for having put in such sterling committee work over many years. Although I have served on the committee many years ago I'm new to the chairman's position. I feel we've already got a few improvements or changes to the good. We now have new buddy box Txs and leads in the field club box. The leads cater for linking new/old and old/old Futaba Txs. There is an arrow that can be put on the catch fencing to show circuit direction when needs arise. Most importantly there are now some local flying rules for Downside posted up for all to take a look at. Please read them as they summarise the flying rules very well – an excellent ready reference. They also have useful info about our location for emergency services to find us etc. Well done Keith and Alistair for this.

Competitions have started already with good attendance and seem as popular as always. There's something for everyone. Whatever your ability competition flying is an excellent way to sharpen up your flying skills and I would encourage everyone to have a go – you may even win a pot, or two even! Well done Ray for the organisation, also with help from Tony M - thanks guys.

Can I also remind you not to leave any litter in the flying field! In the summer Chris will have horses in the field and the last thing anyone wants is a horse chewing on a broken propeller, swallowing an old glowplug or getting a nicotine habit – so don't forget to take any dog ends home too!

Some of you guys have expressed an interest in possibly doing a Crossfire (X-fire) like the white one I fly. If you are still interested in ordering one please let me know ASAP as Pete Ross is likely to do a small production run very soon. You need to get your order in soon so as not to miss the chance of having one these excellent flying machines. Cheers. Price is £58.75.

As always the committee are open to suggestions (nothing too disgusting please!) for improving the club so please let us know your ideas and thoughts about your club. **JB**

Fuel

Tony Major has fuel available, If you want some just give Tony a ring and he will bring it down to the field the following Saturday.

10% Nitro+ML70 oil = £11 5% Nitro+ML70 = £9

There is also some caster oil based fuel 5% Nitro – good for running in and older engines at only £5 per gallon.

Diary

30/05 – Sat Second League Competition & Fitzwilliam Novice Cup.

20/06 – Sat Third League Competition.

25/07 – Sat Forth League Competition.

02/08 – Sun Sun Summer BBQ and Fly-in at NESCOT Guests welcome. Gates open 11 a.m. Please let Tony Fuller know ASAP if you are coming and how many in your party. Scale Competition will also be held at BBQ.

19/09 – Sat Fifth League Competition.

Competitions 1st League Comp

Saturday 28th March saw our first league competition this year with a good entry.

League No:1 was Timed 9 manoeuvres - Take off, 3 loops, 3 rolls, 3 reversals (1/2 loop followed by 1/2 roll) timed from start moving to full stop.

Place	Name	Time	Points
1	Keith England	26.1"	15
2	John Bransgrove	40.0"	12
3	Ian Kenyon	57.8"	10
4	Alistair Guyan	1'01.0"	8
5	Ray Evans	1'07.2"	6
6	Tony Major	1'09.0"	4
7	Fred Clarke	1'10.0"	2
8	Dave Roberts	1'51.7"	2
DNF	Tony Fuller	Dead Stick	
DNF	Steve Pringle	Crash	
DNF	Arthur Elvin	DNF	

League No:2 is for the less advanced fliers and is aimed to be simple enough for any beginner to have a go. For the first competition this was "Count to 80 whilst flying".

Place	Name	Time	Points
1	Tony Petrucci	64"	2

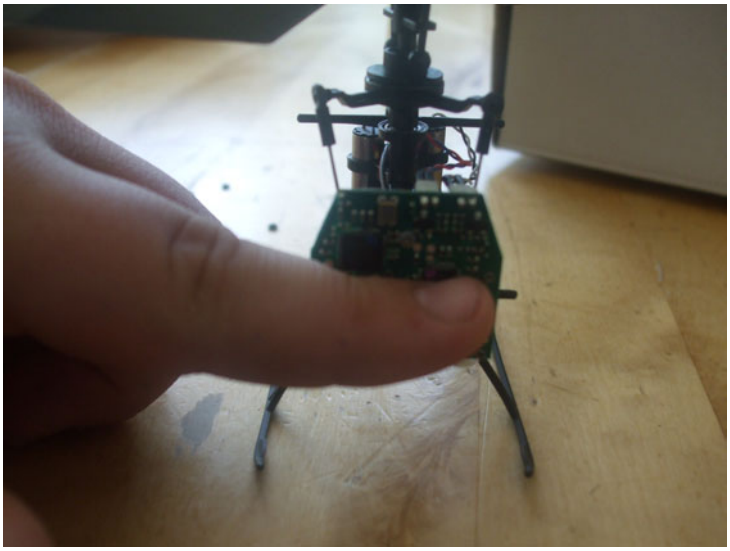
Tony was the only participant in League 2 so come on you guys – give it a go at the next comp.

Blade MCx

The appearance of micro technology on the R/C market has been so big that you would have had to been dead not to realise. One of the examples of this breakthrough is the mighty (or mini depending on your perspective!) E-Flite Blade MCx. This is one of a series of 'Blade' helicopters from the same manufacturer with the most popular being the Blade 400.

The Box is REALLY Small!

The first thing you get when you open the box is the manual which is about A5-ish in size. I bought the Bind n' Fly version which comes with no transmitter and I used my Spektrum DX7 with it but it will work with any DSM2 equipped transmitter. There is also an RTF version. The idea of it is simple; the transmitter has to be "bonded" to the receiver. This is the process whereby the receiver 'learns' the transmitter (and model number) to work with. Easy!



The '5 in 1' unit is a circuit board with the gyro, ESC, servos, receiver and mixer and it really is that small.

Flying the Blade MCx

The Blade MCx is a lively flyer behaving like any co-ax would do. However what really sets this apart from other co axial helis is the fact that it is so quiet. Either the motors are VERY quiet or the servos are very loud but I can always here the servos buzzing when I fly. Forward flight is no problem and it can even perform backwards figure of 8s.

Overall, this heli is VERY VERY satisfying. With just a bit of trimming you can fly hands off with no drift. This will satisfy everybody's needs for a small indoor co-ax heli. Even if you are a total novice or a pro at both planes and helis, this is a fun enjoyable heli. I would recommend this to someone who gets easily bored at their desks at work, has nothing to do and wants to satisfy their R/C needs or (like me) you are a 12 year old school boy who just wants to annoy his dad with it when he is watching TV! **Ossie**

Flying Twin Engined Aircraft

I was at Shoreham airport one day when a DH104 Dove (8-12 passenger post war twin piston-engined aircraft) was being prepared for takeoff. It caught my eye as the fire crew rushed over when one engine caught fire on starting. This was quickly put out and a full inspection revealed that no damage seemed to have been done. The engines started OK a second time and I watched the pilot taxi out. The wind was northerly, so take off was towards the hills of the South Downs - which also meant a downdraft from those hills.

A Brace of Doves at Shoreham

The pilot took off as steeply as he could to gain height as quickly as possible. As the plane crossed over the A27 an engine stopped and the aircraft performed a manoeuvre that was a cross between a half roll and a stall turn before diving vertically into the River Adur. The pilot was killed instantly.

This emphasised, in a way I'm never likely to forget, the danger of twins, which are no more difficult to fly than a single engined aircraft – until one of the engines fails!

With the exception of a few twin aircraft with push pull engines like the Cessna 337 Skymaster, most have the engines in the wings and one failing will cause asymmetric thrust that will have to be countered with rudder and aileron. However the control surfaces need air flowing over them to work, the slower the aircraft and the greater the engine power, the more rudder will be needed to keep straight. Below a certain speed – the "Critical Speed" or Vmc – full rudder will not be enough to counter full thrust from the live engine. In the above accident the pilot had been flying at his best climb speed, which was below the critical speed. When his engine failed, he could not keep the aircraft straight and lost control of it.

Of course on a model you cannot judge airspeed that well so, should an engine fail, great care is needed. This then makes twin and multiengined flying a real challenge but, equally, a hugely satisfying thing to master.

You may not hear an engine stop so the first indication you have could be an uncommanded turn, the aircraft will both yaw and roll towards the dead engine, the roll being as a result of the yaw speeding up the airflow over one wing plus additional lift from the live engine's slipstream over that wing. Both rudder and aileron towards the live engine will be needed, therefore, to keep the aircraft flying straight.

Your yardstick is the rudder; if you reach full rudder and the aircraft is still turning then you must reduce power and, if you have the height, lower the nose to increase airspeed. Once you have the aircraft flying straight, power can be increased slowly and countered by increased rudder and aileron; use the power to gain speed at first before trying to climb. Use only as much power as you need to keep a safe speed and height, climbing only if you have to as this will slow the aircraft down so it will have to be gently nursed to find the speed that gives you the best climb and least drag without running out of rudder. Rolling slightly towards the live engine, i.e. keeping the live engine low, can also improve the drag by requiring less rudder and help the aircraft climb. Once you are set up on the approach to land and throttled back a bit, try to maintain this speed as you know this will allow you to add power if required. When you can make the runway OK you can throttle back further and slow to landing speed – but remember you are now committed, if you have slowed down significantly you will not be able to safely open the throttle again as you risk rolling the plane onto its back This was spectacularly demonstrated last year when one of our members tried to do a go around with a twin after one engine failed on approach; the aircraft barrel rolled into the deck inverted!

Some twins are well enough designed and light enough that the critical speed is actually lower than the stalling speed – quite unusual though and very unlikely if the model is scale.

With all the drag of a plane flying asymmetrically, it is probably not a good idea to add more drag by lowering the flaps unless you are clearly going to land long or too fast.

Don't forget that the loss of one engine from a twin does not give you half power; with all the added drag it is quite a bit less. Fortunately models are usually overpowered, but you could find that even full power on one engine only extends the glide.

If you have the height, or are already on approach and particularly if you have already slowed to landing speed, then you will find that throttling back the live engine and behaving as if you have a 'dead stick' is probably the best method to get down safely even if it means overrunning the runway.

Of course, for electric aircraft the risk of a motor failing is much less and here twins and multi's have another advantage - increased efficiency. This is quite well demonstrated by two of my power planes. My Toot Sweet biplane is 'adequately' powered by an OS 52 4 stroke and weighs 4½lb

Toot Sweet 4½lb on one OS 52 4-stroke

My Mosquito weighs 14lb and is equally adequately powered by just a pair of OS 52's. You would consider a 7lb model powered by a single OS 52 as quite underpowered!

Mosquito 14lb, two OS 52 4-strokes

In the same way, two small, cheap electric motors in the wings will fly a model better at a lower current and for longer than a single larger, more expensive, motor in the nose. So, far from being something a bit special, an electric twin or multiengine can be cheaper and easier to run than a single of the same size – look at the Multiplex Twinstar for example.

Next issue we will look at taming a twin – what you can do to help reduce the risks and also hopefully I'll have an electric twin flying which I've programmed so that I can kill either engine on a switch and practice engine out flying. I've also mixed throttle with rudder (also on a switch so it can be turned off) left rudder, for example, increases right motor power and reduces left. This should make for some interesting aerobatics. If the 'plane actually survives long enough it will make a good twin trainer for the club.

Keith