

Firebirds Model Club

Newsletter November 2014

Welcome to the firebirds club newsletter see below for a clickable table of content headings.

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Committee News

Here's the latest from the committee room.

Poplars Flying Times

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
13:00-18:00 QF	13:00-18:00 All		13:00-18:00 All	13:00-21:00 QF	10:00-14:00 All	10:00-13:00 All
18:00-21:00 All						

Hamble Flying Site Trial

The very small amount of feedback we got regarding the Hamble site makes it clear that generally it is not being used by the club's members. A number of reasons stick out, distance to travel by a lot of members, restricted use, dog walkers, and of course football. The trial is now over and the site will be abandoned. Please do not fly there anymore.

Balsa brain quiz night 21st November 2014

Note that this will be on **Friday** instead of the usual club meeting on Thursday. So don't turn up on Thursday for a meeting because there won't be one.

After 30 years of trying, Firebirds won this even last year so we are defending our title. If you were in last year's winning team, Roger would very much appreciate you getting in touch and joining in this year too.

We would also like to field a second team in the event (as we did last year) to back up our first team and increase our win chances. Teams are typically 4-6 people. Please contact Roger (details at the end of this newsletter) if you would like to join in.

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The quiz has a mixture of questions on model and full size aircraft. There will be a free supper too.

October Bring & Buy Sale



Once again Russell stepped forward and was chief auctioneer at our Bring & Buy sale. He was aided and abetted by Paul, Roger and myself.

This event was fairly well attended and although the bidding started slow, it did get moving later. A few items didn't sell but most were successfully sold.

There were a good few models in the sale too. Here's a shot of the excited crowd drooling over some high value lot.

Well ok, it's a few people showing mild interest in a cheap toy.



Christmas buffet 11th December 2014

As this meeting will be earlier in the month than our usual gatherings, it's worth highlighting it now. There will be a free buffet, annual raffle prize draw and trophy awards.

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Pete has already obtained the following prizes and a few more bits and bobs will be added. There'll be an opportunity to buy more tickets on the night as well as any time you can catch Pete between now and then.

1. Cloud Jumper
2. bundle of balsa
3. Glue Gun
4. Allen key wrench set
5. Solder Iron
6. Super Sportster Plane
7. T Craft Plane Build kit
8. Escapade Plane
9. Wot 4 Foamy
10. Irvine 46
11. Pogo Plane
12. small Engine
13. X5c Quad copter

Note: The December newsletter will be quite brief because there's very little time to get it out. Plus of course we'll be on the run up to Christmas so I'll have a lot of other things on my plate (quite literally).

Committee Vacancy

Fancy stepping up for a place on the committee? I'm taking a break next year so I hope to hand the baton over to an enthusiastic member. Failing that, I am also happy to hand over to someone who has been grudgingly press ganged into the Membership Secretary & Newsletter editor role. Note that familiarity with Microsoft Word is required for the newsletter editing. Microsoft Excel is being used for the membership list. A Laptop will be provided with the necessary software installed. If you only fancy a part of this deal, then do please contact the committee to register your interest as I'm sure the role can be shared. I will of course support the handover process.

Old News

I occasionally get asked questions about content in previous newsletters. If you do need to look something up in an old newsletter, I have been putting them on the firebirds website <http://www.firebirds.org.uk>. Just click on the "News" item on the left menu and all the newsletters I've done are on there.

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Down at the Field



Well our first picture was taken by Rob C quite a few weeks ago when the weather was nice. He took pity on me after last month when I had only one photo in this section so thank you Rob for this submission. I guess it'll be a while before we see days like this again.

More recently....

One of the risks with hand-launching your own models is that there's precious little time to sort out any "issues" there might be with the plane's setup.

Regardless, Pete has become something of an expert at dealing with this situation and usually manages to get the plane away without incident even if it is a bit squirrely to start with.

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Occasionally though, even Pete has to pay the ferryman.

Here we see the crumpled nose of one of his many jets. I guess that this 'crumple zone' has protected the rest of the plane to a degree.

That battery pack looks like it's taken a pounding though. Still, there's no smoke. Actually I recognise the brand, it's a Zippy "Compact" range. What's up Pete? Not compact enough for you?



But wait! What's this? The nose is detachable.

So basically, Pete just makes a new nose, sticks it on and he's good to go again.

I don't know if he had a pack of noses in the car already or whether he had to go home and make one.

Either way, it's a pretty quick fix.

Thanks to Roger for supplying the photos.

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I hadn't seen Jim down the field for a while so it was good to see him with a bunch of models.

Annoyingly, this Ultimate Biplane decided to give engine trouble so Jim relied on other models for the day's flying.



Thank you Russell for taking a few snaps of my Zlin 50L. The light was very poor mainly on account of Poplars Farm being completely the wrong way round for weekend flying and photography.

I'm testing the C of G here (and the fuel clunk). One still needs a bit of adjustment, the other is OK.

After the most recent C of G adjustment and associated weight reduction, the Zlin was going fairly well.

Read more about this plane in this month's Fly Past article.

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Safety Matters

I have a couple of tales from the flying field for you this month.



First up, take a look at this melted NiMH battery from a Spektrum DX8 transmitter. This one belongs to Terry. Paul A. is also familiar with this situation because he had one melt too. In fact his battery looked worse than this.

Having looked around on the internet, it's a common problem.

The cause? It turns out that the DX8 charging circuitry has no means to shut off the charge current as the battery reaches capacity and starts to heat up.

Overheating is not normally a problem at the low charge currents (probably about 200mA-250mA for this 2000mah pack) used by the little

wall plug chargers. The reason is that the battery can easily dissipate the heat as it is charging.

That is until you factor in the shrink wrapped battery pack, surrounded by foam packing that is inside a plastic box. Then heat dissipation becomes much more difficult.

The foam packing is in there because Spektrum also sell a larger battery for this TX, which is a 4000mah LiPo not a 2000mah NiMH. When installing the LiPo, the foam has to be discarded to make way for this larger battery. The foam simply stops the smaller pack from rattling around in the TX.

So basically, the message is, if you are doing a long charge on one of these, watch out for this problem. Check the voltage of the pack (say by turning on the TX every hour or so and reading the screen) to see when it's nearing completion. You could open the back to let the heat out too. I would be extremely wary of leaving this on charge overnight in the house while you're sleeping.

At £30-£35 the Spektrum branded LiPo replacement battery is expensive. (example: <http://www.sussex-model-centre.co.uk/shopexd.asp?id=33559>)

An alternative to the Spektrum branded version of the LiPo is HobbyKing's one, at just about £12. Here's the link:

http://www.hobbyking.com/hobbyking/store/_37361_Turnigy_4000mAh_Spektrum_DX8_Intelligent_Transmitter_Pack_UK_Warehouse_.html?strSearch=dx8

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I've been using the Spektrum LiPo for over a year now. I highly recommend it because it only needs charging every two or three months and doesn't seem to suffer from the heating problem. The irony here is that LiPos are normally the scary batteries. NiMH batteries have always been the tame ones.

Secondly, here's an unusual occurrence that caused loss of control resulting in a crash.

As can be seen in the picture, the servo tray is no longer bonded to the airframe

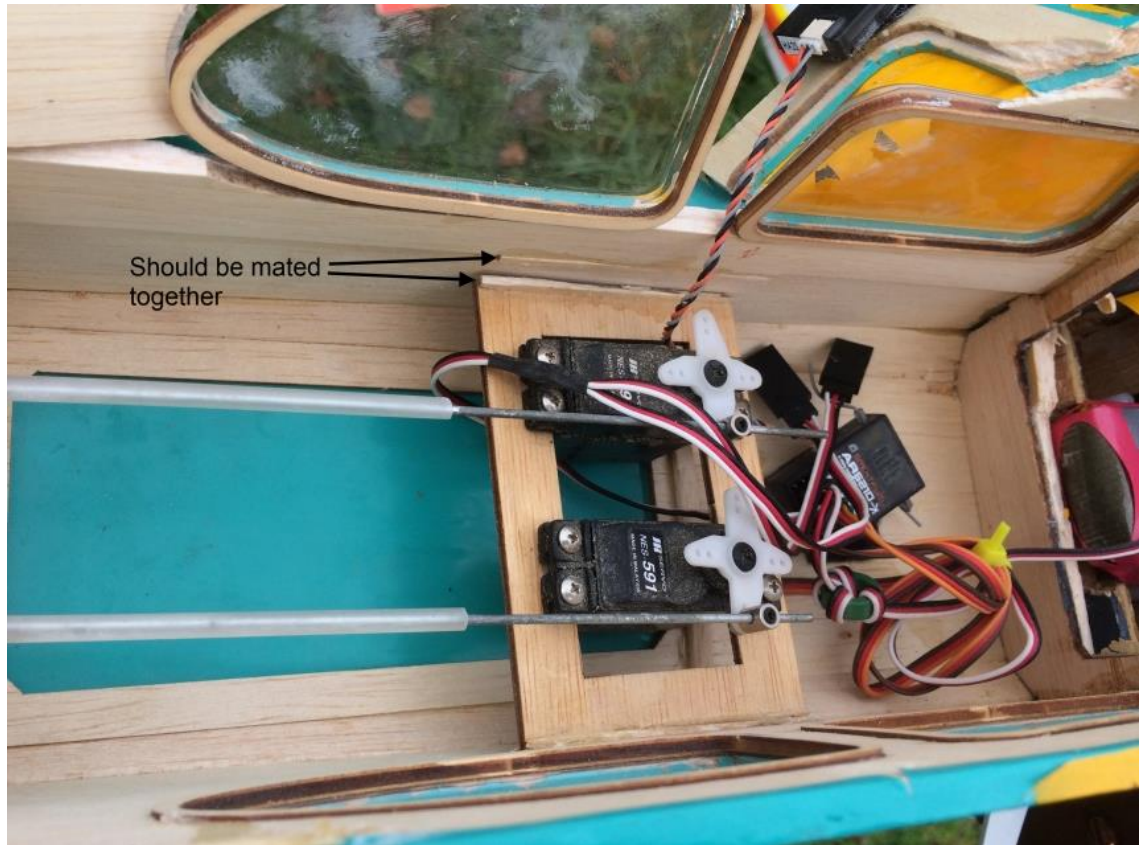
As soon as the plane took to the air, the elevator servo

was moving the tray more than it was moving the elevator.

After the incident, I tried to move the servo tray by hand and it was quite a tight fit so didn't move easily. It's entirely possible that all the control surfaces appeared to move correctly during the pre-flight checks because the tray didn't move much.

Once take-off had occurred, the servos would not be able to move the control surfaces as easily as they would at zero airspeed, so then the tray started to move.

To be honest this just looks very unlucky. Still, if you have a plane that may have either taken a knock or has fuel/oil soaked into the woodwork, then something like this is a risk so all I can say is check such airframes carefully.



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Fly Past

I thought I would do this month's Fly Past on my own recent acquisition, a HobbyKing Zlin Z50L. Buying an airframe from HobbyKing can be real hit and miss affair so I thought it worth writing about my experience.



Here are the specs as stated by HobbyKing:

Wingspan: 1612mm (Just over 63")

Length: 1403mm

Dry Weight: 1672g

Flying Weight: 2350g (Just over 5lb. Hmmm...really? Realistically 3Kg - 6.5lb)

Price £103.22

It can be powered by a 0.70 glow engine or 50mm Brushless Outrunner Motor.

Full details here:

http://www.hobbyking.com/hobbyking/store/_26002_Zlin_Z_50L_1612mm_0_70_class_Glow_EP_Sport_Scale_ARF_UK_Warehouse_.html?strSearch=zlin

When the kit arrived the overall fit and finish looked great. However, I did quickly notice that the covering lifted easily at quite a few places on the edges. Still, I thought the iron would take care of that.

My original plan was to install an electric setup in this plane. I already had a suitable motor and speed controller. I changed this to IC when I hit a second snag. I'll detail this in a moment, just a few comments on the build first.

Construction is fairly straightforward. The wing has a subtle dihedral and has to be permanently joined into a one-piece wing. The only possible pitfall I can see here is

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getting the dihedral brace the wrong way up.

All control surfaces use the fabric like hinges that soak up the CA. The slots are nicely pre-cut and it all goes together sweetly. There's a ton of movement available on every surface and they are all quite large too.

The aileron servos are mounted on the inside of panels that are then screwed to the wings. I like this arrangement because it is very neat. It did cause me a slight headache because the arms supplied with the standard servos ([these](#)) I was using throughout the plane were too short.

I bought a pair of alloy arms ([these](#)) and then filed down the thickness so that it would fit through the slot. After the first flight, I moved the linkage to the inner one of the two holes in the servo arm. This still gives huge aileron throws and the plane is very lively on full rates.

The fuselage all went together very nicely. All tail parts were nice and square, the canopy, cowl and wing-fuselage fit are all excellent. Rudder is pull-pull and elevator is on a single long pushrod (elevator halves are joined by a 'U' shaped wire). So all servos are up front. The exit holes for all the control linkages are very neat and preserve the lines of the plane.



The problems started when I got to the power plant side of things. I had intended to use my [NTM 42-58](#) motor (another HobbyKing purchase from a while back). I also had suitable batteries - 6s 4000mah.

I temporarily screwed the motor in place and put a battery in to see if the C of G would be OK. It wasn't. It was about 50mm behind the target 118mm from the leading edge.

I put a heavy metal spinner on the nose, then I placed a 6s 2800mah battery on top of the 4000mah one. Now the C of G was about 20mm behind the target position and the all-up-weight was getting high.

At first, I didn't know what to do. How was I going to achieve the correct C of G without ending up with a 4Kg plane? Then I remembered that I had a new ASP 65 four stroke (bought at a Firebirds auction for £35). The reason I hadn't installed it anywhere was because it's not a great motor. It's a 90 sized crankcase effectively under-bored with a 65 piston liner setup. This made the motor heavy for its power output.

I thought maybe this was a good candidate for the Zlin. The advantage (in this case) of I/C power is that all the weight is concentrated right up front in the engine, rather

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than mostly in the battery, which sits further back in the fuel tank area.

So I headed down the ASP 65 route. I mounted the engine horizontally and the room in the cowl was such that the rocker cover only just pokes out the side. The exhaust is fully contained and needed a silicone extension to get the exhaust snot outside the plane. The main needle pokes out the top and needs to be removed to get the cowl off.

Oh yeah, I also mounted the engine and cowl as far forward as possible. Such that the cowl doesn't quite meet the fuselage at the bottom.



Despite the four stroke iron mongery up front, I still needed a lot of extra weight to balance the plane. I discovered that a 2S 4000mah LiPo (sibling of the one that exploded a while back) provided the necessary weight as long as it was fitted within the cowl. I also fitted a nice shiny aluminium spinner because that weighed 125g.

Finally! The C of G was achieved, although lifting the plane into the car was a challenge.

Guess what? The first flight revealed that the plane was nose heavy. The spinner was swapped out for a plastic one, saving about 95g. Still nose heavy. The 4000mah LiPo was swapped for a 2000mah LiPo (saving about 100g), still nose heavy. It's beginning to look like I could have had the setup I originally wanted now. Grrrrrr.....

I currently have the C of G set at 138mm from the leading edge. From the way it handles now, I reckon it could go back another 5mm or so.

By-the-way, I use the Paul Adams method for C of G checking. It goes like this:

- Balance the plane before first flight as per manufacturer's instructions.
- Fly the plane and trim the elevator to give level flight at about half throttle.
- Keep that throttle setting and flip the plane upside-down, hands off the elevator.
- One of these things will happen to a greater or lesser degree.
 1. If the plane was nose heavy you will have put 'up' trim to make it fly level when it was the right way up. So when you invert the plane it will nose towards the ground. It will require you to hold down elevator to prevent losing height.
 2. If the plane was tail heavy you will have put 'down' trim to make it fly level when it was the right way up. So when you invert the plane it will nose

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towards the sky. It will require you to hold up elevator to prevent gaining height. If this situation is severe, it will also require a change of underwear and a new airframe.

3. If the plane is neutrally balanced, it will barely change between right way up and inverted. Ideal for a 3D aerobatic plane.

For most planes you want to be in the number 1 scenario but not too much, otherwise the plane is not very responsive.



Currently, loops, rolls, stall turns are fine. The knife edge requires a bit of work though. I have to hold a lot of up elevator and in one direction, I have to fight the plane's desire to roll to inverted. I cannot get it to spin at all on rudder/elevator only.

At 3Kg, the all up weight is substantially higher than the advertised flying weight. However, 3Kg is a very reasonable weight for a plane this size and the low

speed handling is superb, 'floaty' in fact.

In conclusion, I'm fairly happy with the Zlin. With it's £3 servos, £35 engine and £103 airframe, it has been a cheap plane to build and flies well enough to keep me amused. I guess I should put an Orange RX in it too, just to complete the cheapness factor.

External Events

This section details events in Hampshire (or further afield if they are significant events) that might be of interest to club members.

Well there don't seem to be many local events left on the calendar for this year, so this section will be a bit bare for a while.

Club Information

This section gives a summary of club services and contact details. Apart from the "Future Club Night Programme" most of the info here is fairly static.

Future Club Night Programme

21st November 2014

Balsa brain quiz night. Note that this will be on Friday instead of the usual club meeting on Thursday. There will be a free supper too.

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11th December 2014

Christmas buffet, annual raffle prize draw and trophy awards. We have £600 worth of prizes for the raffle so buy some tickets and win some of that booty.

January 2015

Annual General Meeting.

Cheap Glow Fuel

Fuel is available through the club and supplies are held by the club. All grades of fuel are available to order. Terry holds many other useful items: glo-plugs, propellers, glue, fuel tubing, wing bolts etc.

Contact: Terry Jacobson on 023 8040 2080 or see him at the field.

Club Clothing

A number of items of club branded clothing are available from a local supplier. The current prices are:

Sweatshirts	£14.25
Polo shirts	£12.50
T shirt	£ 8.50
Caps	£ 7.95

All shirts are Fruit of the Loom and available in all sizes up to XXL & most colours. There is also a huge range of quality outdoor wear that can be embroidered with the club logo.

Contact Justin on 07572 613190, email windgyber@hotmail.com or see him at the field.

Our meeting venue is the Hamble Club at this address:

Beaulieu Road
Hamble
Southampton
Hampshire
SO31 4JL

The entrance to the club is on Hamble Lane, only a short distance from a pub called The Harrier. The club looks like this:

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Firebirds Club Committee

The following are the contact details for the Committee. Each has given permission for their phone number and email addresses to be included in this Newsletter.

Chairman	Pat Parsons	023 8056 2611	patrickparsons.parsons3@googlemail.com
Vice Chair	Russell Lewis	023 8056 1397	russell@pilot1.co.uk
Treasurer	Paul Adams	023 8069 2729	paul.adams10@tiscali.co.uk
Secretary	Roger Stanton	01489 784152	roger-stanton@sky.com
PRO	Peter Clark	01489 692881	psclark911@hotmail.com
Flying Site Rep.	Dave Hoppe	07704 826343	davehoppehome@gmail.com
Safety Officer	Geoff Griffiths	023 9265 5931	gcgriffiths@hotmail.com
Membership Sec.	Geoff Scott	023 8039 0013	geoffrey.scott100@ntlworld.com



Remember...
Safe flying is no accident.