Newsletter

August 2014

LMA or BMFA a Decision to be Made

Dear members
At our AGM in December you will be asked to decide the future insurance option the Society should adopt to cover our model flying activities.

We can opt to change to the Large Model Association insurance or remain with the BMFA insurance – the following bullet points should be taken into consideration when you are deciding what to do with your vote.

- *Both Insurances are essentially the same with regard to Model Flying cover in the event of an accident or incident.*
- *The LMA option will be cheaper – BMFA insurance currently costs £32 per annum whereas LMA costs £30 for the first year but only £20 for subsequent years if the premium is paid before 31st of January.*
- *The LMA option will enable you to participate in LMA events throughout the year (Cosford, Elvington etc). However you will not be able to participate in BMFA events (BMFA North west area fly-in etc).*
- *Most, but not all, club events around the country accept both LMA and BMFA insurance.*
- *If the Society changes to LMA insurance we will no longer be a BMFA affiliated club since BMFA forces any affiliated club to enrol all members into the BMFA insurance scheme.*
- *If we opt for LMA insurance you can still join BMFA as a country member.*
- *If we opt to stay with the BMFA you can still join the LMA as an individual.*

The choice is yours- make sure you attend the AGM on December 3rd at the Tennis Club so that you can have an input to the debate.

Regards
Phil Leech

Scott and Arran

Any of you ladies/gentlemen who have visited the various model aircraft shows will have seen these two guys showing off their flying skills. I am referring to Scott Westgate and Arran Turner. They are of course valued members of our club.

The way these guys fly their electric 3D helicopters has to be seen to be believed. I have managed to get pictures of the helicopters in flight but the flight pattern is so 'way out' that it is quite impossible to predict just what direction the model is going to take moment to moment.

Very obviously, these gentlemen possess incredibly high skill levels. The amazing thing to me is that Arran is only 16 years old. He has been flying for just one year! It was Scott who taught him - Arran Turner came to work for Scott at his model shop in Kirkham. Sadly, that business was not a success and he had to close. Nevertheless they are very good friends and are still working together in landscaping.

Scott and Arran

Scott also flies 3D aerobatic fixed wing and I took a few pictures of the model he was using at the Cosford show a couple of weeks back. All I can say is that they are two amazing pilots. I first saw them fly in a blustery high wind at the Cleveleys Classic car Show. In view of the high wind I expressed my worry to Arran that it would perhaps be unsafe to fly and a risk to their valuable models. He looked up at the sky and said 'it'll be reet'.

The display they gave was spectacular and almost unbelievable and really popular with the crowd who watched. So good was it that many members of the public were asking what time the next performance would be! Well deserved accolade indeed. I think they flew 3 displays at that show.

Since then I've watched them display at the LMA events - Cosford and Elvington. Their enthusiasm for flying doesn't stop with display stuff - they come down to the indoor and fly humble 'Depron' stuff. Two great guys and a pleasure to know them.

Scott and Arran

Here is Scott's 3D Hobby Shop AJ Slick 540, I I took this photo during his display at Elvington. Power comes from a 120cc Desert Aircraft motor turning a Mejzlik 27" x 12" prop. The radio gear is all JR - Scott is sponsored by McGregors'. He uses the JR XG14 transmitter. The servos are Hitec 7955TG and the model uses JR's Xbus system.

The business end - nice carbon fibre prop

I asked Arran to let me have technical details of the helicopters, so here goes:- Arran's model is the Align Trex 700E DFC Pro. He uses Spectrum radio - the DX9. His servos are Spectrum H6200 cyclic servos and an H6210 tail servo, Castle Creations 120HV ESC. The motor is the Align 800MX 520kv brushless outunner with a Microbeast flybarless gyro.

Scott as already mentioned uses JR radio - his heli is the Gaui X7. He uses the same motor as Arran and Align 700H cyclic servos and 750H tail servo.

Scott and Arran

He has fitted the Kontronik 120 Heli Jive ESC and Mikado V bar flybarless gyro. Scott has now swapped to the same heli as Arran's. They do 2200rpm headspeed and each blade is 700mm, an Align heli ready to fly apart from batteries and receiver is about £1,100 - they take 2 6s 5000mah batteries wired in series to make 12s.

Scott and Arran fly for RCheliGURU and Giant Power batteries.

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Radio Brands Overview

By Brian Holdsworth

Spektrum DX6

The manual for the new Spektrum DX6 has become available and seems to confirm the assumption that it is a cut-down version of the DX9. The FCC compliance section at the back shows the same dual aerial arrangement as the DX9. However, the diagram identifying the transmitter layout does not identify the second aerial in the handle. It has, apparently, been confirmed by the Spektrum designers that only a single aerial has been implemented. With a single fixed vertical aerial, it will be difficult to avoid pointing the aerial at the model with significant reduction in range and consequent loss of control. It may be that the AR610 receiver, with RF amplifiers, included in the combo has better range characteristics than the older receivers, but it seems incredible that such a decision would be made considering their past record.

The forums are already reporting examples of loss of control, especially with "compatible" third party receivers. It says something about the attitude of some of these users that they are complaining that Spektrum should warn them that such receivers may not work (they already do in their manuals) and that the BMFA should test such receivers for compatibility. For once, the BMFA are correct referencing CAP 658 in stating that the user is responsible for ensuring the R/C equipment is functional and meets EU legislation requirements.

It would seem that only purchasing CE-marked equipment from a UK brand importer via a model shop would satisfy these legal requirements. Some UK-based websites and Hong Kong registered Hobby King admit that some of their offerings are compatible, and so are not genuine. The joke about the CE mark on an item meaning "China Export" has considerable truth for some such items. It is understood that no third party receiver can have a genuine CE mark, since there are no publicly available standards for them to be tested against. DSM and FASST are proprietary to their companies and reverse engineering by others does not make them public!

Usage of such compatible items would seem to be illegal and an incident could leave the user needing to demonstrate to a court that sufficient investigation and testing had been undertaken to meet the requirements - a simple range check would not be sufficient.

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A VIEW FROM THE HEDGE. (By Will Sparrow)

This year, 2014, has seen us blessed with a splendid spring and, just for once, a really good summer. There have been flying days a-plenty; alas, enjoyed by very few of you. Spring was early this year and now, although it is still only the tail end of August, the leaves have developed more than a hint of the autumn to come. Why, only the other day, I overheard a pair of blackbirds boasting of how they had stripped more than one cherry tree of its summer bounty and were now busy making a start on the rowan berries. One of these birds complained that too much time spent at the berry buffet had given him a severe case of avian dysentery and he had been forced, on more than one occasion, to relieve himself, in-flight, over the neighbourhood's cars! The other bird chortled at this remark in a manner that did not meet with my approval (I'm a well-brought-up sort of sparrow).

The weather, and its forecasting, still seems to me to be something of a black art. Okay, we can easily tell what the weather is like at the moment (my feathers are wet – it is raining; my feathers are stiff – it is frosty… etc.), but what it will be like tomorrow or next week seems to be a bit more problematical. The Wise Old Owl once told me that long ago a revered weather forecaster named Michel Poisson (the WOO thought that he was French, but conceded that he may have been wrong) announced, on the TV forecast, that there would definitely not be a hurricane on the morrow (as some lady had suggested), and that we could all sleep soundly in our beds. The following day the hurricane struck! Poor old Poisson never lived it down. (The WOO added that, technically, the now-battered Poisson was correct and that the storm, with 120 mph winds, was in fact an extra-tropical cyclone… You can't help but admire these know-it-all smart ar**s, can you?). In those days, of course, weather forecasting was still, by modern standards, relatively crude. These days, apparently, there are things up in the sky called satellites which soar

A View From the Hedge Continued/.....

much higher than a buzzard and are able to spot in-coming weather a long way in advance. With such technology at his disposal, the modern modeller is able to plan his week's flying programme well in advance… so where have you all been? I woke up this morning and my feathers were all wet and ruffled; I guess the day must be wet and windy!

So, what have I been able to view from the hedge? The early couple of weeks of August saw a welcome outing of the one they call "Prop Guy" (a rugby player?) and a Wednesday evening session brought forth a bevy of modellers determined to get some air time despite the brisk wind. One of this number was observed to give his tailplane an accidental kick: the results of which could be seen when the tailplane developed strange angles as the flight progressed. Nothing that a dab of glue or a strip of sellotape won't cure, eh? A day or so later I spotted a member flying a nice petrol-powered model and doing a bit of practice for his "B" certificate. I must say that I was impressed; my trained avian eye registered the odd rough edge, but he was flying really well and definitely will not need the aid of a "Superman" T-shirt to pull him through his test!

I overheard a good bit of news only the other day; the model, that had decided not to exit from a spin and had finished up in the beans, has been found. By all accounts the search had taken many hours but had finally proved fruitful. Definitely a case of modellers 1, beans 0! A resurrection of a different kind was also apparent when I spotted an Addiction (at least that's what I think it said on the wing), resplendent in transparent blue, that I saw crash comprehensively some little while ago. At first I thought that this was a freshly-bought replacement model but no, this model had been repaired and restored to its former glory! The owner, beaming with health and sporting an all-over sun tan, was obviously enjoying his re-acquaintance with the model. Repairing of models seems to be a dying art – a sign of the times?

WS

Radio Installation

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By Brian Holdsworth

The gaps between control surfaces and the supporting structure need to be minimised for satisfactory performance - ideally no light should be visible anywhere along the hinge line! Any gap results in a substantial loss of effectiveness and the disturbed air increases the possibility of flutter which can be very destructive. This zero gap can be difficult to achieve with pin-type hinges where a recess needs to be made to contain the pin and its support. While tricky to fit, a poor hinge line may be sealed by ironing a narrow folded strip of film into the hinge line.

With all hinges, the slit needs to be a sliding fit; if too tight the glue will not penetrate resulting in failure; if too loose, the glue will not bond the hinge to the structure with failure again. Where "furry" mylar hinges are used, sufficient thin cyano needs to be run into the hinge to saturate the material and its supporting structure; after a few minutes for curing, the hinges should be exercised over their full range to break the bond at the flexible point of the hinge and so permit free movement. Pinning does little since, if the glue does fail, the hinge material is so flexible that significant movement will result. Many foam models use the foam itself as the hinge with the obvious advantage of sealing the hinge line but these are prone to splitting and frequent inspections are needed - repair is difficult.

With some exceptions such as thermal soarer ailerons, it is desirable for control surface throws to be symmetrical about neutral. Asymmetric throws "corrected" by offsetting transmitter settings produce non-linear throws, so that it is best to start with the appropriate mechanical geometry.This may be achieved by positioning servo output arms and control horns so that the clevis holes are at right angles to the servo or surface hinge line. A particular problem is evident where torque rods are used for strip ailerons as with many trainers. The plastic adaptor on the rod generally offsets the clevis hole in front of the rod and if the rod is installed vertically, this offsets the clevis hole and results in differential throws causing considerable adverse yaw and poor flying characteristics. In some cases, the instructions show the rods bent at the appropriate angle but this has not been done...! Another problem seen is torque rods installed without supporting tubes; inevitably, rapid wear will occur of the enclosing balsa with consequent loss of effective throw.

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By Brian Holdsworth

With many ARTF's, the horns are mounted onto soft balsa which can crush under the tension from the mounting screws, loosening the horn. This seems particularly common where the horn consists of a bolt with a plastic adaptor screwed on for the clevis; while supports to spread the load are included, they are rarely sufficient and the hole is often too big for the bolt. Before the damage is done, the area can be reinforced by running PVA or cyano into the holes and surrounding balsa.

Where closed-loop linkages are used, care needs to be taken that the lines run straight from the servo and are not twisted or wrapped round other items. Adequate clearance is needed at full throw where the lines pass through the fuselage sides. The required tension is such the line can be plucked - a "ping" suggests too much!

To minimise linkage slop, the horns should be as long as practicable, so that the outer hole on the control horn should be used with the appropriate hole on the servo arm to give the required throw. The longer servo arm reduces the force applied to the linkage due to its longer lever effect, but the longer surface horn restores the torque. These longer levers reduce the effects of backlash in proportion and provide greater leverage to the aerodynamic loads which may be assumed to act about the centre of the control surface.

In many cases, the holes in the arms or horns are too small and it is obviously easier to enlarge them before fitting. The desired result is a tight fit such that the weight of the clevis is insufficient for movement if held horizontally. An effective technique is to use a round needle file with a fine taper rotated anticlockwise from both sides in turn until the clevis can just be squeezed into place; if the file is used in the normal way, with lateral movements, it is difficult to avoid producing an uneven hole which will wear rapidly.

Most cross-type output arms have different lengths for the arm pairs. As this difference is only about 1 mm, it can be difficult to see unless two arms are superimposed. This difference may be of little significance in most cases, but where dual servos are used for ailerons, elevators or flaps it is obviously important that matching arm lengths be used to provide the required equal throws of the paired surfaces.

Radio Installation

By Brian Holdsworth

Unused parts of the servo arm may need to be removed to avoid fouling and the arm should always be removed from the servo before cutting. If left on the servo, considerable forces will be applied to the gears with potential for damage. An indication of the energy involved will be seen if side cutters are used and the arm fragment observed as it bounces off the wall!

Some ARTF's include clevises with nylon pins, which are generally weak and prone to shearing; replacement should be considered, except possibly for the smallest models. Metal clevises are more robust but are generally a loose fit on the rod; a locknut does little to hold and some are loose enough to jump the threads when loaded. The clevis shank can be squeezed with side cutters or similar until tight enough not to rotate on the rod without effort; care is needed not to overdo this as it will be difficult to undo. Nylon clevises with metal pins are often used and need a retainer to stop the arms of the clevis splaying apart, disconnecting the linkage.

Plastic snakes are widely used as linkages but can be very spongy in operation; the outers need to be adequately supported at both ends and roughened to provide a key for the glue. Particular problems may be evident with a long unsupported run to the control horn which can buckle under compression so that a suitable support will be needed between the snake outer and the structure. A common variation uses a rigid metal wire in a plastic sleeve which can be very stiff, frequently resulting in servo buzzing and poor centering - surgery may be needed to straighten the run.

Extension leads should be used from the receiver to the aileron servos so that they can be disconnected easily when the wing is removed; extracting plugs from the receiver is difficult and it is very easy to damage the leads or the receiver - NEVER remove plugs by pulling on the wires!. Where an extension lead is permanently fixed, some means of securing the plug/socket is required so that the effects of vibration do not loosen it with resultant disconnection. Sticky tape is not recommended since it is prone to peeling off. Heat shrink tubing is often suggested and is effective (though expensive) provided it is long enough to shrink beyond the ends of the plug/socket. An effective method is to use sewing cotton threaded between the wires and tied with a little PVA securing the knot; if pulled in a crash it can break and avoid damage to the receiver.

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Radio Installation

By Brian Holdsworth

At last, the radio brands have recognised that the advice inherited from 35 MHz sets to wrap 2.4 GHz receivers in foam is inappropriate since it is likely to cause overheating with consequent erratic operation or failure; the manuals have generally not been updated though some have addendum sheets. Velcro applied over the base area of the receiver seems adequate and convenient, mounting onto a suitable support, away from other items. A strap, as sometimes used, is likely to couple vibration into the receiver with potential for failure.

Receiver aerials should be kept straight and positioned about 90 degrees to each other at least 4 cm apart and away from wiring and other equipment, otherwise a very considerable reduction in range may result. The active part is the last section of bare wire (~3 cm) with the remainder being screened cable. Sticky tape is not recommended to secure them since it tends to come loose. A convenient method is to use lengths of thin plastic tubing, blocked at one end with a little glue and a little longer than the aerial length, fixed onto opposite fuselage sides at suitable angles; the aerials are slipped into the tubes and will be held by their natural springiness. Some Spektrum receivers use short springy aerials which have been seen resonating in large petrol models; this will cause fracture with consequent intermittent loss of range and some padding is needed to restrict their movement. Other Spektrum receivers use short rigid aerials which must be kept straight - any kinks will significantly reduce the range.

Elvington Snippets 2014

Article by John Higgins
Pictures by Peter Cathrow

Cosford was crossed off our calendar this year; a victim of the weather, so we were hoping that those vengeful Weather Gods might be in a more benign frame of mind when the Elvington week-end drew near. Having followed the weather forecasts all week prior to the event, it looked as if the Saturday might be a possibility. Possibility turned to reality and Saturday morning saw us make the 114 mile trip to a sunny/cloudy but windy Elvington. (Incidentally, who would have thought that a two ton, two litre estate car would average 53 mpg?)

Initial impressions were a bit disappointing; there were certainly a lot of cars on the parking area but the trade presence seemed a little muted and the flight-line a little depleted.

Our brave boys were there of course, up at the far end of the flight-line fondling their jets, huddling against the wind and testing glow plugs for Dave Johnson! Steve, the Prop Guy, seemed to be very busy all day and it wasn't until the afternoon that I spotted a lull in the business at his stand and was able to go over for a chat.

There was little to see that was new but the models were as impressive as ever. The windy conditions grounded many of the slower flying types, with one exception. Gerhard Reich had come over from Germany and had brought a large Fokker E111 Eindecker with him. This model was, for me, the star of the show. I would guess at it being about 1/3 scale and it was fitted with a twin-cylinder 4-stroke petrol engine. The model just oozed quality and had true-scale wing warping (as opposed to ailerons).

Elvington Snippets 2014

Article by John Higgins

Pictures by Peter Cathrow

On the runway the model just sat dead still, sniffing the wind. When the throttle was eased (that's eased, not rammed!) open, the model lifted its tail (which was of the all-flying variety), slowly accelerated and, maintaining heading, climbed smoothly away – you will not see a better take-off on our strip on a calm day! Gerhard then treated us to a delightful performance. Immelman turns cannot be seen in better context than when performed by an Eindecker with wing warping.

The landing was just as impressive, the model slowing to almost a stop before kissing its wheels tenderly on the runway, and lowering its tail. I almost expected the pilot to get out and be whisked away for de-briefing. Do you know, I've always fancied an Eindecker…

Big Dave's Panther was as impressive as ever but he was unfortunate in ripping off the port main undercarriage leg in, what looked to me, a not very hard landing. Concrete is a very unforgiving material on which to land; give me well-mown grass any time.

The commentator at this event does his best, but falls short of the standard one might expect of a professional commentator. A real classic from this year's show came in the WW2 bomber slot; a B17, a Heinkel and a Stuka were doing their stuff. The voice-over went something like this…"British bombers (remember, this was a B17) were much bigger than German bombers, this was because the German bombers were smaller!" In all fairness, he did go on to say that because they were smaller they

Elvington Snippets 2014

Article by John Higgins
Pictures by Peter Cathrow

could be manufactured and deployed in great numbers. Not an easy job, commentating…

All in all, a good day out. The full-size Vulcan and Jet Provost were impressive and the M&S sandwiches, delicious! On Sunday those Weather Gods summoned up extra reserves of spite and bile and the day, I believe, had to be cancelled. Still, there's always next year.

Video links:

http://www.youtube.com/watch?v=OEmgCKm0Fto
http://www.youtube.com/watch?v=qVvuN-q-qIs

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The climb out

The moment the undercarriage leg collapsed on landing. As John says in his text, the landing was perfectly smooth - the model didn't bounce and this was in a high and gusty wind.

Elvington Snippets 2014

Vampire in Canadian colours

The Stuka

Dave Johnson's impressive Vulcan - so beautiful to see

Elvington Snippets 2014

Mark Conlin flew his Viperjet in typical spirited fashion.

DOES ANYONE FANCY A SPITFIRE?

If anyone out there fancies getting their teeth into a good winter scale project, then I might be able to help. I have the plan and the laser-cut wood kit for the Brian Taylor Spitfire Mk. X1V & PR. X1X. The model is to 1:6.4 scale and is 69" wingspan. Although designed for glow power, it would easily convert to electricity. Not for beginners!

John Higgins

NEW MEMBERS

We have two new members to introduce:-

Matthew Harper and Trevor Starkie. Welcome gentlemen -we hope you enjoy your membership of the club.

HAS ANYONE PICKED UP MY DROP TANK

I lost one of my drop tanks from the model I bought from my brother. Jim Sheldon found it and put it in the club house somewhere near the kettles. It is no longer there. If anyone knows where it is, please let me know - I would like to restore it to my model. Thanks.

Peter Cathrow

Shows/Events for 2014

LMA

Much Marcle - 6th - 7th September

Other Events

BMFA North West Area Scale Fly in RAF Shawbury - 9th September

Scale and Aeroshow Event

The date for this event at our field will be either 31 August or 7th September all depending on the prevailing weather conditions.

Bonfire Night at the Field

Our annual Bonfire Night will be held 8th November. Guests will be welcome up to a maximum of four guests per family.

AGM

The AGM will be held on the evening of 3rd December at the South Shore Tennis Club commencing 8pm.

Christmas Quiz

This is to be held at the South Shore Tennis Club on the evening of 17th December

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In Conclusion

I am so very grateful to all of you who have kindly contributed to this newsletter. This month, it was John Higgins, Brian Holdsworth and Scott/Arran for their time and patience in helping me put together their article. It is great when members are willing to give up some of their time and pass on their expertise.

For me it has been a really enjoyable time - Elvington is my favourite show. In my opinion, that show has just got better and better year by year. I so enjoy the photography at these events.

This past weekend had some superb weather - I've been laid low with some horrible bug which I didn't want to pass on so I've had to sit it out here.

I leave you with a picture of the Vulcan which did a short display at Elvington LMA.