

# Newsletter

## The Triplet Scale Competition.

The Triplet Scale event was held this year at the Bickershawe MFC flying site. John Higgins had let me know that he would be competing so I just had to take my camera. It was a really nasty blustery wind and very changeable weather. John would be flying his Corby Starlet. There was a nice Spitfire, a Stampe, an Avro 621 Tutor and as couple of 'out of the box' modern aerobatic models. Then was the Starlet and in my opinion, it was by far the best model there.

When I arrived, the Stampe was already airborne - he kept it really high but even at that altitude, he was being bumped around by that wind. He had difficulty carrying out the scheduled manoeuvres. When he landed, he vowed that he would never risk the model again that day.



Next it was turn of the Spitfire Mk Vc - his flight was good but he finished up in the long grass - he didn't fly again that day.



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# The Triplet Scale Competition

And then it was John's turn. He carefully taxied out, turned it onto his intended take off point and it was just text book stuff all the way. John was in absolute control - notice how he allows the model to realistically gain height. It was as though he was flying in still air. It was all so controlled and flown with such authority. This



*The take off*

is of course an electric powered and that motor, when he wound it up sounded like a really nice turbine. I've no idea what marks he will have scored for that first flight but it just had to be good.



*Climbing out*

Next it was the turn of the Avro Tutor which took off - it wasn't at all scale like, he simply tried to pull the thing up to get as much altitude in the shortest possible time. Regrettably, the motor died and he stalled straight back into the ground doing significant damage to one of the lower wings. Shame because it was a lovely model but just couldn't perform in such a nasty wind.





# The Traplet Scale Competition

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Finally before lunch, we had the 2 aerobatic models - the biggest petrol one first - even he tipped a wing on landing. John Higgins had by this time outperformed them all. The Bickershawe MFC had a BBQ - all free of charge so I enjoyed a very nice burger. So after lunch,



John flew again and quite frankly it was better than his first flight. He had trounced the opposition so convincingly.

When it came to the prize giving, they awarded to John all the normal prizes but then added a further bonus prize because he was so far ahead of the rest. To put it in a nutshell John YOU WERE IMPRESSIVE!

*Peter Maw from the host club presenting John with his prizes.*



LOTTERY FUNDED

July 2014



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# Burned Fingers

*Photos and article by Chris Vernon*

I just thought I would share my experience of my visit to the flying field on Saturday 26th July. As some of you know last year I assembled a 75" span Yak aircraft. This particular aircraft was one I had for a while and was designed for a 26cc petrol engine. Having seen some of the ARTF aircraft with petrols in I decided to convert this aircraft to electric power as the airframe was very light I thought a petrol engine thumping around up front might not be a pleasant experience. A few chats with John Higgins and trip to his trusty kitchen scales we came up with a power train of a Hyperion motor and a 8 cell lipo set up. I flew the model late last season after spending a lot of time correcting things on the so called ARTF aircraft. The model flies very well.

As the set up was 8 cell this means connecting 2 off 4 cell lipo's together in series. I carefully marked up the connectors to ensure that no accidents could happen or so I thought !!! Wind forward to this season and I have flown the aircraft a couple of times to sort the trimming out and make a decision as to invest in more batteries for it or not.

Saturday arrived I drove to the field upon unpacking the car I realised I had forgot the carbon wing tube !!! so back home to get it. I assembled the model and installed the batteries which are held together with trusted velcro. I then commenced the battery connection sequence which starts with connecting my colour coded plugs together, of course this is one negative lead from one pack to a positive to the other pack. This leaves a positive lead and a negative lead to connect to the speed controller. At this point I was half looking what I was doing and talking as well. Instead of connecting the leads to the speed controller I connected them together. The result of this action was an extremely loud bang (people on the flight line heard this), a cloud of sparks and molten metal (the bullet connectors exploding ) and more seriously a pair of burnt and blistered fingers.

After the initial shock of it my fingers began to blister badly and the pain was pretty bad, thankfully John Higgins had brought a bottle of drinking water with him which provided some relief.

The post incident chat began and John Higgins had worked out that there was in excess

# Burned Fingers

of 350 amps being passed around with what I had done.

Later in the afternoon the fingers get worse and I visited the NHS drop in centre where they kindly treated my swollen fingers with some gel and bandages.

Now then this was 100% my fault, not a fault of Lipo batteries. Not paying attention whilst connecting my batteries up was a major contributing element to the incident.

I have attached some photo's of my injured fingers and a photo of the vaporised battery connectors. I have of course changed my sequence for connecting everything up now. The black around my finger nails is burnt nail according to the nurse

PS The battery packs are OK !!!

*I love that last comment Chris - the important thing is always the LiPo packs!!*



*It looks very painful and can happen so easily.  
I just hope it all heals up soon.*



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**A VIEW FROM THE HEDGE.** (By Will Sparrow)



The hen and I (she's called Pauline Sparrow, by the way) have just returned from a short break. You know how it is, one loves doing the things one does in and around one's home hedge, but it is good to get away and have a change as well as a rest. Pauline had set her heart on a recreational hedge a good way off; the location seemed to offer everything a bird could want, plenty of grubs, south-facing twigs to perch on and (a special feature of the place) "an evergreen-rich hedge environment". I was a bit dubious about this latter feature, being used to a deciduous environment myself, but the hen seemed very keen so I was happy to give it a go. The "evergreen-rich" bit referred to spiky green leaves; very nice they were too – as long as one took extra care when reversing onto a twig! Anyway, to cut a long story short, we had a splendid time at The Hollyday Hedge and have returned refreshed and ready to soak up all the model aviation your splendid field I know can deliver.

The field still seems to be under-used, but a recent Sunday brought out a good crop of modellers (sorry, assemblers/decal stickers) and models, jets swooped and roared (a bit too close to the hedge at times for my liking!), beginners practised knowing their lefts from their rights whilst seasoned members showed them what they could aspire to (!). One model really did stand out from the crowd in the pits. Was this the latest squillion pound jet or some 1000 hour masterpiece I hear you ask? No, this was the worst model I'd seen take to the skies in ages! The owner had obtained this model from some secret source – a skip, perhaps – and had fitted it out for flying. The model attracted a good deal of attention in the pits, which is how my eye came to be drawn to it; the way the fuselage had been sawn in half and was now held together with tape was a masterpiece of model aeronautical engineering, the control surface gaps were so wide I swear that I could easily have flown through them. One wing tip was half missing and the other one had been replaced with an old cockpit canopy! I bet you are all dying to know how it flew, aren't you? The answer is much better than you might have thought possible. The model seemed to be able to swoop with the best of them and did a few sort of 3D thingies before it finally landed heavily, reconstituting itself into its component parts. I had a look at the remains in the car park – I was on my own; no one else attended



## A View from the Hedge Continued..

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its wake. The same day saw the first flight of a little sport plane. The owner had made a really good job of the building and covering and the little model looked a picture, resplendent, as it was, in fluorescent green and orange! The first flight was more fright than flight because the model just refused to turn right. Showing great skill, the modeller managed to get it down safely right in the very edge of the bean crop – where it promptly vanished despite the hi-viz colour scheme! Luckily the model's exact location was known and it was recovered straight away. The model was checked over in the pits; there were no warps, all the control surfaces had adequate movement, there was a touch of left-thrust on the motor but not enough to prevent a right turn. The problem was soon identified as an aft CG and was soon rectified by the addition of the traditional "church roof" to the nose. On the model's second flight it performed faultlessly. I once remember, as a young sparrow, taking off with a burr stuck to my tail. The resultant rearward CG caused a sudden flick-roll and gave me a sprained neck!

You all know how addictive this model-flying hobby can be and I must admit that watching you lot from the comparative safety of the hedge can be just as addictive. If I'm honest, I maybe spend a tad too much time just gazing in wonder at your antics. Just the other day my hen had a real go at me for doing too much of what I like doing best. "If you spent as much time working on our bit of the hedge as you do watching those modellers it would be a much nicer place... I spend most of my time looking after chicks and hunting for grubs while you just sit on your twig... How about taking me shopping to that new BerryMart that's just opened on the other side of Kirkham?" On and on she went until what started as a minor gripe developed into a full-blown argument, verging, I'm ashamed to say, on the edge of domestic violence. I had to put my foot down with a firm hand!

I hope to be back on my twig in a day or two, just as soon as I've completed a bit of twig-based DIY, gathered a few grubs and returned from that new BerryMart that's just opened on the other side of Kirkham.

WS



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*Will Sparrow puts  
his foot down!*



# Save Us From Ourselves

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By John Higgins

As anyone who has been to the flying field lately will know, the electric model is now the majority model on the flight line. The convenience, cleanliness and efficiency of this method of getting your pride and joy into the air is self-evident. There are some modellers who resolutely stick to the good old glow motor and a few more (me included) who still employ petrol power... but the writing is on the wall, and electric power, with the exception of one or two specialist applications, will soon be almost universal.

Those of us who were brought up to use and operate the model internal combustion engine always had a healthy respect for the beast; we knew that if we stuck our fingers in the rotating propeller it would hurt – so we didn't do it (well, most of us didn't). We also had to start the engine before it had any possibility of doing us any harm. We had total confidence that a non-running engine would not suddenly burst into life of its own accord and attack us. Electrics are not like that; they can suddenly burst into life and, given half a chance, they will attack us! As soon as you plug in that Lipo you, and those around you, are at risk.

To illustrate the point let me give you a few examples to ponder on. The first of these concerns a modeller who was distracted when changing models in the pits. This chap had just had a nice flight with model number one and had returned it to the pits; he then put a fresh Lipo in his number two model and carried it out to the flight line. The model took off and, almost instantly, attacked the planet, reducing itself to a pile of debris... his number one model in the pits, not to be outdone, did exactly the same! You can see how a catalogue of errors quickly combined to produce a catastrophe. Because he had been distracted at a crucial moment, he had failed to unplug his number one model and had also omitted to change his Tx model memory to model two; the number one model in the pits was also unrestrained (at this juncture Spectrum/JR users are permitted a touch of smugness). As with a lot of ludicrous situations, this particular incident raises a smile... until the true implications start to sink in. Let's suppose that the models in question were 3 Kw models (that's 4 hp in old money) and you, your wife, child or expensive model were in the path of the model in the pits...





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## Save us From Ourselves Continued...

*By John Higgins*

I have two more examples of electric folly, these involving our own members. If you saw a headline “Man Attacked by Flying Boat” you might be forgiven for attributing it to the fertile imaginations of Red Top copy writers, along similar lines to “Lord Lucan seen riding Shergar down Blackpool Promenade”, perhaps. Let me elaborate: one of our new, and very keen, members is building a four-engined, electric flying boat. He had this on a table, indoors, being adjusted, when it went to full-power, shot off the table and badly lacerated his thumb before continuing on its way in an attempt to trash his bathroom! The second incident saw a modeller return to the pits with his model, put it on the ground and then turn his back in order to attend to his chair. Somehow the throttle was knocked and the motor burst into life. The model was not restrained but was grabbed by another modeller before any damage could be done.

Now, accidents, by their very definition, are always going to be a fact of life. At some time or other we are all going to make a mistake or suffer distraction at a crucial moment: no one is exempt from this. That said, we can take steps to reduce the probability of an accident occurring. Allow me to share a few thoughts.

Firstly, your model must be restrained in the pits and the Lipo fitted with all your little pink bits out of reach of that very sharp electric prop. Repeat the process when you return to the pits; model restrained, model de-activated.

Secondly, if at all possible, configure a “motor arming” switch on your transmitter and get used to using it. With the switch in the “motor safe” position the Lipo can be plugged in and everything will work – except the motor. With the switch in the “motor armed” position everything will work, including the motor. I know that I’ve mentioned how this can be done before, so please forgive me for repeating myself. There are several ways: if your radio has rate switches that can be assigned to any function, simply assign a switch to “throttle rate” and set the rate to zero – you will have to set “offset” to -100% too, otherwise you will have half throttle on the switch instead of zero! Many recent radios have “flight conditions”; simply copy your settings to a new flight condition and set the throttle to zero. A single switch will now give you safe/armed. A third way is to use a “Programme mix”:



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## Save Us From Ourselves Continued...

*By John Higgins*

set an unused Aux channel as the master and throttle as the slave (some radios permit a throttle-to-throttle mix by which the same end can be reached). By playing about with the values and offset you should be able to achieve the right result. All radios are different in their programming so, if you find yourself tearing your hair out, have a word with a fellow brand user – after all, sharing experience is what good model clubs are all about. If all else fails, email your radio brand distributor and ask them to suggest a solution!

At the field, nothing could be simpler. Tx on, arming switch set to “safe”, plug in the Lipo (assuming you are using a bec) and check the controls. Wheel or carry the model to the take-off position, arm the motor and enjoy your flight. After landing switch to “safe” – check with a movement of the throttle stick - and wheel or carry your model back to the pits.

I reckon that it is only a matter of time before motor arming switches are a standard feature on all radios (how hard can it be?). In the meantime we have to do our best with what we have.

To digress slightly (!). In America they have a problem with guns. The problem, as they see it, is that guns are stolen or children take their parents’ guns to school and all of a sudden their A&E departments can become very busy. Their solution is “The Smart Gun”. The gun is fitted with a chip and the rightful user wears a bracelet which transmits, via Bluetooth, a unique digital code to the gun. Only then does the gun become armed. The rightful user is thus the only one allowed to kill people with that gun! You can see the application of this technology to our hobby, can’t you? Our smart Tx has a chip, the “bracelet” is embedded in the pilots’ box and, as the pilot positions himself to fly, his motor automatically arms itself. If the pilot strays away from the pilots’ box, however, he will suffer that rare affliction, an electric dead stick!

John Higgins





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# Radio Brands - Overview

*By Brian Holdsworth*

Only computer sets are considered worthwhile for serious usage; in particular, the very basic transmitters included with RTF models are so primitive as to be only toys. Not surprisingly, the various brands claim superior performance and functionality over their rivals; analysis of the manuals and advertising together with background knowledge of the technologies involved can give an insight into the merits of some of these claims. Most inhibit fail safe operation as the default although, in many countries including UK, fail safe usage is a legal requirement when implemented. Each brand is incompatible with the others, but some compatible receivers are available, as are counterfeits; these have ambiguous legal status in the event of an incident. If used for another model memory, all brands except Futaba require the receiver to be re-bound to the transmitter, so that the stored parameters such as fail-safe are updated.

Increasingly, transmitters may be updated via the brand website and this is often necessary since the purchased items lack the claimed functionality! The initial problems with registration and upgrading seem to have been overcome but there have been some incompatible updates leading to intermittent operation, including loss of control, which does not inspire confidence.

The manuals range from poor to awful with the 6 channel sets generally better than the higher specifications; they seem to be getting worse! Many have translation errors requiring guesswork of the intent. Some are extended versions of previous offerings and omit mention of new features or include references to superseded items, while others are cut-down versions of higher specified offerings and suffer from the resultant confusion. The user interfaces are considered poor and cumbersome showing little understanding of practical usage and the interactions between the various functions, so that the user struggles to achieve the required results; some are so poor that it is easy to change parameters inadvertently in flight with obvious safety implications. In many cases, the displays waste space with a large glyph of an aircraft or helicopter suggesting the user needs help to recognise the difference, and some seem to think it reasonable for setting up a new model to take several hours! Generally, the 6 channel sets offer all the functionality that most will use; the higher-specification sets are significantly more complex to setup, even for the basic functions, and most users will struggle.



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# Radio Brands Continued....

*By Brian Holdsworth*

Spektrum/JR was the first on the market and claimed (dubiously) that their DSM2 was superior to the others, but a series of design errors nearly destroyed the brand. Occasional lockups requiring re-binding and receiver brownouts are still a concern; after-sales service response is rapid, generally without charge, but needed far too often though this seems to be improving. The user interface via rolling and pressing a scroll wheel can be difficult to use without generating unwanted inputs. The manuals are somewhat sparse but seem to cover most of the functionality, though that for the DX8 seems obscure. Emphasis was made of Model Match, where a receiver would only operate if the appropriate model memory was selected in the transmitter, but this seems to have been dropped from the latest transmitters.

There is a large range of receivers although several have been withdrawn due to design errors; failsafe capabilities vary but are difficult to identify without searching individual receiver manuals; some have been significantly upgraded with no visible indication, but sometimes resulting in intermittent operation with later transmitters. Omitting RF amplifiers in the receiver required the cumbersome use of multiple units to provide the greater aerial sensitivity needed to achieve adequate range (generally the lowest of the brands with consequent susceptibility to shielding by carbon structures and metal components). After several attempts, single unit receivers with RF amplifiers are becoming available and, with the introduction of DSMX (backwards compatible with DSM2), the implementation is being improved. The DX6i and DX7s are showing their age with limited functionality and, with the DX8, are expected to be replaced by the DX9 (cut-down from the DX18 using a bulky fixed transmitter aerial with the power switch moved away from the elevator and throttle trims), and the forthcoming DX6 which seems to be a cut-down DX9; these reduce the irrelevant information on the screen but use small fonts leaving extensive blank areas (and a large glyph!). The DX18 and DX9 manuals suggest that a warning will be issued on power up until the transmitter has been registered and updated! Competitive pricing and reasonable functionality, together with backwards compatibility allowing the use of existing receivers, suggest they will be popular.

Recently, JR claim separation from Spektrum introducing XG6, XG7 and XG8 up to 28X (!!) using DMSS whose differences from DSMX are subtle. The XG6 manual had





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# Radio Brands Continued...

*By Brian Holdsworth*

the dubious distinction of being the worst seen before the Graupner MZ series; it seems to be cut-down from the XG8 but many contradictions lead to confusion as to the intent; for example, there are only two switches and two push-buttons available but the manual implies that push-buttons can be used as switches!?

Futaba started slowly using FASST and is easier to install and seems more reliable than Spektrum, although several early design and production errors required a recall replacing most 6EX transmitters and TX modules. The original 6EX has limited functionality but one of the better manuals; other sets add more channels and functions but with poorer manuals. FASST (6EX and 7C) is being replaced by incompatible FHSS with the 6J and 8J using a more convenient internal TX aerial and new 10J derived from the 8J, supporting telemetry with an extended but more confusing manual; unfortunately, the 8J and 10J have the power switch very close to the elevator and throttle trims, which is a safety concern. 8FG(S) is effectively renamed as the upgradable 14SG supporting FHSS and FASST with telemetry via FASSTest; it uses a touch sensor which is vulnerable to inadvertent operation, being positioned where the palm would rest in use. 18MZ is by far the most expensive available with a limited manual and complex user interface via a cluttered colour touch-screen requiring the use of a stylus with a lock function to avoid inadvertent operation. This brand seems to be the only one documenting flaperon support throughout the range, although 8J and 10J manuals are somewhat obscure! Increasing prices and incompatibility may reduce their popularity.

Hitec uses AFHSS and claim superior functionality and user interface to the other brands; it was the first to introduce telemetry (largely without documentation) though later receivers do not support it. The manuals are somewhat rambling but seem to describe the operation adequately and suggest good functionality. The user interfaces are considered even poorer than the others; the 6 and 7 channel sets use many more buttons than any other and do not display model names, relying on the model number displayed in the smallest font of any seen; it is hoped that the forthcoming Focus 6 and 7 sets will be better. The 9 channel set has been upgraded with increased functionality; the power switch, between the elevator and throttle trims, is so vulnerable to inadvertent operation that some users have added a protective cover after problems; it uses a cluttered touch-screen interface



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# Radio Brands Continued...

*By Brian Holdsworth*

requiring a lock function to avoid inadvertent operation. Dubious claims of a simpler receiver installation using a single aerial with a bulky RF amplifier were made, but the latest receivers (Maxima) for use with digital servos only, have twin wire aerials which are more effective and easier to install. Any popularity would seem to be due to extensive advertising and competitive prices!

Graupner have a dubious history, having introduced and abandoned two offerings before adopting the HoTT system from their Korean owner, emphasising telemetry. For some reason, they retain the numbering convention from the early reed sets where 12 indicates 6 channels, 18 indicates 9 channels etc. The MX series manuals were poor, but the recently introduced MZ series are so bad that only the MZ12 has been examined. Some mixing is undertaken in the receiver rather than the transmitter which can be confusing to the user and is technically suspect. They seem to offer greater functionality than the other brands but practical usage would be a challenge!

Frsky have recently released the Taranis minimising costs by using free Open TX software and are in dispute with the developers over lack of financial contributions. The transmitter seems better made than their previous 9X offering, but poorly laid out with the switches closer together than other brands and the power switch between the elevator and throttle trims with consequent vulnerability to inadvertent switch-off when adjusting the trims; a revised version is promised with unspecified changes. The user interface is at the lowest level of interaction, offering the potential of complex shaping and mixing, though much user effort would be required to implement and use; a PC interface is available which seems easier to use for initial setup, although it currently overwrites all model memories when updating the transmitter! Separately, a four-servo wing glider setup has been seen which shows the complex nature of the standard interface. Several independent user forums are available with setup examples, though the number of second hand units on the market suggests that many are struggling. The main display screens are surprisingly unhelpful, concentrating on the positions of the sticks, switches etc. supporting the view that it is more suitable for the fiddler than the flier!

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# Gobbledegook

*By Brian Holdsworth*

This gem comes from the Futaba 8J manual.

"Throttle cut in the case of ESC use (THR-CUT). Sudden rotation may be carried out when releasing it using THR-CUT in the case of a motor. A setup of which a function is not cancelled unless a throttle stick becomes a slow position, even if it releases."

Presumably, the function allows a switch to be defined to inhibit throttle operation until the switch is moved, with an interlock such that the throttle must be closed, so avoiding problems if the throttle stick is moved inadvertently. The purpose of several parameters in the screen layout is not mentioned, though practical usage may produce enlightenment!

# The LMA Cosford Show



*This Cri Cri was shortly to bounce on landing, bugger up it's undercarriage and finally coming down heavily.*



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# The LMA Cosford Show



*Arron kindly took me out to the flight line which enabled me to get some really good shots of these models. The way this North American Bronco was flown was quire amazing - he was treating it almost like an aerobatic model throwing it around the sky right in front of us..*



*The Hawker Tempest - looked really good.*

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# The LMA Cosford Show





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# In Conclusion

I may be a boring git but I can't stand the really hot weather. When it's hot in this country, it seems much more oppressive than places like the Middle East. Must be the humidity which is so high over here.

I really enjoyed the Cosford show. Mark Conlin was there flying his Viper Jet, Dave Swarbrick/Jason Reid with the Panther and Sabre. Scott and Arran gave a superb performance with their 3D helicopters. Scott also flew a 3D petrol aerobatic model.



I've spent a few days down in Cornwall - my brother is ill. I bought one of his models from him. It's a scratch built military version of the Zulu - I have now flown it twice at the Weeton field and not only does it look good, it flies well. He always builds them light - the Zulu I built weighs in at 3lbs and needs a 350 watt motor and I use a 3000Mah 3S LiPo (because that achieves the correct C of G). His model only needs a 250 watt motor and balances out using a 2100Mah 3S. It took off at about ½

throttle and had bags of power. I have to admit that it flies much better than mine.



I think that's about it for this month. My sincerest thanks to all of you who have contributed this month. Roll on Elvington which is I think my favourite show.

Happy flying.





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# Shows/Events for 2014

## LMA

Elvington - 9<sup>th</sup> - 10<sup>th</sup> August

Much Marcle - 6<sup>th</sup> - 7<sup>th</sup> September

## Other Events/Shows

BMFA North West Area Scale Fly in RAF Shawbury - 9<sup>th</sup> September

## Scale and Aeroshow Event

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

## Bonfire Night at the Field

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

## AGM

The AGM will be held on the evening of 3<sup>rd</sup> 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 17<sup>th</sup> December