

# Newsletter

August 2020

As I sit here, I can hear rain coming down heavily and the wind is howling in the gutters. Not the best month for weather - we seem to have jumped from hot and sunny to windy, wet and cool. Not exactly flying weather. It is however a time for getting out those half built models which were put aside last year just waiting to be completed.

Steve has kindly sent me some pictures from his trusty iPhone 6s of you guys enjoying yourselves at the field.

It has amazed me that you can get such detailed pictures out of a camera phone so I took my iPhone SE with me when I was taking Judy around Fleetwood in her wheelchair. There were some flowers which took my eye and since there is a competition currently running for camera phone pictures, I poked my tiny phone at one of the blooms and got this:-



The result really surprised me. The depth of field is enormous and the tone range excellent. In future I shall treat that phone with some respect and use it for pictures.

And so here are some of Steve's pictures.



*Jason just setting up the Excalibur  
on a beautiful summers day*



# Steve's Pics

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# Steve's Pics



These are just a few of the many pictures Steve sent me - excellent quality.



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



It is a well-known fact in this hedge that I am a sound sleeper. Little disturbs my nightly slumber once I lay my feathered head to rest. The other night, however, a mighty crash and a sound like rolling thunder tore me from the arms of Morpheus. I was not alone either. The hedge was soon alive with the twittering of freshly-roused sparrows. As far as we could make out, a horse had escaped from the stables at the top of the track. The beast, going by the name of Champion, someone said, had freaked out in the depths of night and had decided to "do a runner". Not for this horse the subtlety of a carefully constructed tunnel or the more traditional leap over the fence (The Great Escape?), no, this 400 Kg equine twerp crashed straight through a tough, wooden, post and plank fence, which was also electrified, and proceeded to gallop around in the farmer's crop and all over the hallowed turf of your flying field! Champion was eventually recaptured and returned to base.

By all accounts, the horse only sustained a few minor cuts and scratches. The farmer's field, on the other hand, had lots of new crop circles! (The WOO told me that the corn was still in a green state and would soon pick itself up and would have no lasting ill effect – how he knows these things is a mystery to me). First thing the following morning I flew over to examine the damage to your strip. Because of the recent rains, the ground was soft and Champion had left six inch deep holes down the west side of the pits area and, more importantly, many more deep holes on the flying field itself. If a model were to hit one of these on take-off or landing the under carriage would be ripped off: serious damage would be the result. I was, understandably, concerned.

The following afternoon was blessed with decent model flying conditions and the damage was noticed by the few modellers who turned up to take advantage of the conditions. One of their number contacted your chairman and, in the blink of an eye, a repair squad had been organised and your membership notified of the peril. The following day, my morning inspection revealed that the damage had been expertly repaired. You lot are certainly fortunate in having pro-active members and a responsive committee.



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In our hedge resides one Frank Sparrow; an odd sort of cove, often seen wearing a dreamy look coupled with eyes that seem unfocused. This sparrow is seen, by the hedge dwellers, as a sort of hedge bard – he often composes poetry and comes up with little rhymes and ditties. Following the recent events he unleashed his talents...

*Campion the blunder horse  
Campion the blunder horse  
Like a streak of lightning flashing across the sky  
Like the swiftest arrow whizzing from a bow  
Like a mighty cannonball he seems to fly  
You'll hear about him everywhere you go  
The time will come when everyone will know the name of  
Campion the blunder horse  
Campion the blunder horse...*

Yes, the hedge has talent! Traumatic happening aside, I have also had lots of interesting things to view from my favourite viewing twig. Recently, one of your members was practising a series of touch-and-goes when he got a bit too low and brushed the crop which surrounds the flying field. The wheat managed to puncture the covering film in a number of places and, as it withdrew, left the inside of the wing full of wheat seeds. The covering film was the sort that is sticky on the inside. I know that I shouldn't laugh, but I couldn't help myself! I did overhear the modeller vowing to re-cover his wing.

A new model has also recently made its way to the field – okay, I know that it was brought in a car, but allow me some literary licence. The model in question was made up of a fully-moulded slope-soarer wing mated to a new, wooden fuselage and tail. An electric drive system had been fitted to make the far-off slopes superfluous to requirements. If the modeller ever feels the urge to venture to the slopes, all he has to do is bolt the wing back on the original slope-soarer fuselage. I have heard of models being adapted to new uses and away from their original roles before – not always successfully. In this case I need not have worried; the model flew beautifully. Not only is this 2 metre model fully aerobatic, it is also excellent at holding thermal lift, with one subsequent flight exceeding 45 minutes. Value for money, or what?



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Regular readers (who does he think he's kidding? – Jim Sparrow) will remember the tale of the large-scale electric aerobatic model fitted with the smoke system (that turned out to be incinerated electrics) I reported some time ago. Well, the model re-emerged, having been fitted with a replacement motor and esc. We all watched, from the hedge, expecting to see more of the smoke system. I'm glad to say that we saw nothing of the sort – just graceful aerobatics. I love to watch these quiet, wonders-of-the-age perform. Also back from the dead was that lovely carbon and transparent winged glider that came to grief a week or two back. This time the range was more than two feet and the model flew well but seemed to get into pitch difficulty at low level. Luckily the model was landed with no damage, but no cause could be found for its bad behaviour. It is always worrying if things happen and no cause can be established: a sure way of undermining a modeller's self-confidence in his equipment. However, I know you modellers to be a resourceful bunch and always triumph in the end.

Back in the hedge, Frank-the-bard has been giving fresh vent to his imagination...

*Campion the blunder horse  
Campion the blunder horse  
If you hear a clap of thunder and there is no sign of rain  
The you know it must be Campion  
Trampling all over your 'planes...*

I really hope that Frank Sparrow is merely a bard and not a prophet!  
WS



# Modelling Matters

August 2020

*Article by Brian Holdsworth*

Foam plastic has become a popular material for manufacturing model aircraft, particularly for the smaller items though some larger examples are appearing needing extensive use of reinforcement in the form of carbon rods etc. A significant investment is required for the production machinery and the moulds which are specific to each design, but little manual input is required in the factory. This means that such items may be manufactured in Europe and USA while the more traditional film-covered structures built-up from wood will generally come from Asia etc with their lower man-power costs. Both can have their issues.

Foam is a soft material and vulnerable to damage, dents etc in handling. It can also quickly become dirty with cleaning difficult. Storage needs to be at stable temperatures with care taken not to apply any twisting or bending forces since these can permanently deform the structure. Even leaning a wing against the wall can produce warps!

Plastic presents considerable difficulties in joining, with foam being even worse since the material is very weak in tension and poor in shear. Sometimes cyano is used though care is needed that it does not attack the foam - testing on a hidden area or any packaging is recommended. Even if a good bond could be achieved to the surface, the underlying material can easily tear away under stress. For many purposes, a water-based contact adhesive is sufficient since its flexibility can absorb some foam flexing.

Early examples often needed considerable assembly work with multiple reinforcing rods needing to be fitted to various areas with the manufacturer's own cyano brand recommended which was effective but expensive. Due to the quantity of glue needed, the fumes could be a problem and the instructions called for good ventilation - outdoors is usually best! Most current examples have such reinforcement fitted in the factory and need little more than a screwdriver for assembly.

Typically, wings are supplied in two pieces joined by a tube (usually fibreglass, often dyed black to look like carbon) extending over most of the span to spread the loads via compression into the structure. The hole in the wing should be slightly under-size so that the foam grips the tube to achieve good distribution of the loads.





# Modelling Matters Cont/d....

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*Article by Brian Holdsworth*

There is usually some form of a clip to avoid the wing sliding off the tube. The tube can be difficult to fit, especially for the first few times until the foam becomes slightly compressed. Care is needed since it is easy to damage the foam by excess pressure to its surface. Rounding the ends of the tube with a bit of sandpaper etc, and rotating the tube while inserting, may be helpful to avoid the ends digging into the foam. For simplicity, some leave such parts permanently assembled where size permits.

Depending upon the layout, the tube may pass through the fuselage joining wing and fuselage, with another smaller tube near the trailing edge, sometimes descriptively referred to as an anti-rotation pin. Alternatively, the wing may be joined separately with fitting to the fuselage achieved by bolts into blind nuts on a plate in the fuselage when the the bolt loads need to be spread into the wing foam, usually by an external plastic plate. If this plate is not secured to the wing, any movement would allow the hole in the foam to become enlarged so that the wing may not be correctly aligned - securing the plate with contact adhesive may be appropriate.

Tail planes are often bolted from below through the fuselage into the fin. Perhaps for cost-saving, some bolts have been reported to be too short to reach adequately - hopefully, complaints to the supplier would produce a replacement!

Attaching control horns to the surfaces presents a problem. Early examples had a flat plate incorporated in the horn relying on glue to connect them to the foam with obvious potential for problems. These need careful checking since it is easy for inadequate adhesion to leave one side of the plate loose against the foam; this would produce a sloppy connection which is likely to quickly detach due to the concentration of forces at the junction. Fortunately, many now use a clamping plate on the opposite side of the surface where a screw squeezes the plate against the horn plate producing a more robust result. Even where fitted at the factory, it would be wise to check that such screws are sufficiently tight - not over-tight so that the foam is crushed.

Elevators need to be linked and this is sometimes achieved by a moulding incorporating the control horn. Alternatively, a separate horn may be used, with





# Modelling Matters Cont/d....

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*Article by Brian Holdsworth*

a bent wire joiner glued into a slot in the elevators. Again, careful inspection is needed since adequate gluing may not have been achieved at the factory. For example, the popular Foam-E Wot had several problems which seem to have been improved for the Mk2.

Control surfaces may be hinged by the foam itself which can be vulnerable to cracking and splitting and repair could be difficult - frequent inspection would be appropriate. Some incorporate separate "furry" mylar hinges. Before first flight, it would be helpful to disconnect linkages and exercise the hinges over their full throw of the surfaces to enable free movement.

In most cases, servos are pre-installed together with the motor. A propeller, spinner and ESC (Electronic Speed Controller) are also included. While clearly budget items, these are generally considerably improved over early examples. However, cost-cutting can still be apparent with under-rated ESC's. Propellers can be poor with excessive flexing or brittle plastic - some include a spare which could be indicative! If replaced, it is essential that an equivalent size is used otherwise the motor/ESC may be overloaded with consequent failure releasing the magic smoke!

A receiver needs to be fitted, together with a suitable LiPo - often a larger capacity item than that recommended would be better if it can be fitted. Some come as a complete package including radio, LiPo and charger, but these should be treated with caution as their quality and capability can be poor, hindering progress for the beginner.

Many are supplied white with self-adhesive decals to be applied by the user, with a picture or diagram in the instructions or box label as reference. A little soapy water can help application. It is essential that these are sufficiently pressed down, especially for forward-facing joints, otherwise they are likely to lift in the airstream. Some are pre-painted with complex colour schemes which can look very effective, though they are prone to chipping in handling since it is difficult to achieve adequate adhesion of the paint to the foam. Repair would not be not easy, especially to achieve a colour match, and water-based products such as acrylics may be appropriate.

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## Club Instructors

Jason Reid, Mark Conlin, John Higgins, Brian Holdsworth, Chris Vernon, Andy Harrison, Jim Sheldon, Paul Cusworth, Justin Goldstone, John Prothero and Kevin Watson.

## In Conclusion

Thanks go to Brian and Will Sparrow for their excellent articles for this month.

I leave you with a picture sent to me by John Higgins. It's his converted slope soarer - now electric which I believe Will Sparrow referred to. Looks nice!

