

# Leek & Moorland Model Gliding Association

<http://www.lmmga.co.uk/>

*December 2015*



## In This Months Issue

Page 3. This U2 is getting on a bit

Page 4. The weekend Scale Event

Page 11. Letters:

Page. 12. Back to our normal flying

Page. 13. This Centre of Gravity is Often Forgotten

Page.16. AGM Report for 2015

Page. 18. Nigel Brewer's 4.74 meter Fox.

I made a resolution in January 2015 not to swear this year  
which means I can't say a word about the weather we've been getting.



*Wishing you and  
your family the very  
best for Christmas*

*And may your 2016  
'winds be warm and  
up-lifting:*

*Happy New Year' To  
You All*

### Front Cover

Paul Jubb having his Flair K8 launched

Paul is a regular visitor to our slopes particularly at our Scale Fly-in

This is Nigel Brewer launching  
Graham Gibbons U2;

The U2 was one of America's  
early manned high altitude spy  
planes.

Of all the PSS models I've seen  
up to press, the U2 is the  
closest looking one to a real  
glider I've seen (It looks as  
though it really will soar) .

The U2 was a Micromolds  
models product costing about  
£120. Graham says his is  
about 27 years old now and it  
still has the original Futaba 148  
servos for rudder and elevator  
control There's something  
smaller in the wing.



He says he's surprised there's no info on the web about the model, like the  
fact that it will stall if you fly it slow, similar to the tip stall he did the last  
time out. However, it's ready to go again and it's only the weather that's  
stopping him from giving it another whirl.

## Edgetop

This is for those who don't look at our Website very often!!  
Those who do will have seen our Webmaster's (Peter Garsden)  
article in the 'News Section' about an accident that happened at  
Edgetop.

In July there was a fatal accident; one of the Paragliders had a

partial wing collapse which resulted in a spiral spin in.. Despite the efforts of fellow paragliders. Paramedic and the Derby air ambulance team, the gentleman never regained consciousness.

As a mark of respect, Roy, the farmer, closed the site for Para and Hanggliders. He put a notice on the gate to this affect, This closure does not apply to LMMGA Members.

Billy Griffiths went up to Edgetop a week or so ago and the notice was still on the gate. I have heard that Roy and his son, who witnessed the accident were so upset about it that the temporary ban may become permanent. We will have to see....

### Make sure you keep the Edgtop gate latched at all times



Pat Kennelly with his "Cliffwacker". It's a 60 inch span sport acrobatic model designed by Alex Whittake

Please Please take you litter and rubbish home with you!!

I noticed a white bucket with empty drink tins in it the last time I was up by the gate . There are no council trucks that collect the rubbish from our sites. It is either the farmer or a fellow modeller that has to take it away.

One of the farmers once told me that plastic food rappers were deadly for some animals because they eat them resulting in severe stomach problems. So, please take broken models, and food wrappers and containers home with you. Thank you



## 2015 Weekend's Scale Fly-In

Unfortunately, this year's weather wasn't quite as kind as last year's. Saturday started off with a cold North West wind; ideal direction for the gate but the problem for these large scale planes flying at the gate is landing particularly with most of the pilots not being familiar with the site. The other problem is the restricted parking space.

After a bit of a chin-wag, Ant Jervis (event's organiser) decided to fly from the pool site because the forecast said that the wind would eventually swing round to a more south westerly direction towards dinner time

Flying started at the pool about 11 ish with a non-scale model testing for lift. Shortly after that the big scale guys ventured out and although the lift at the time wasn't brilliant, there were no land-outs and true to the forecast the lift got better and was quite good from dinnertime onwards.

At the pilots briefing, Ant said that the Sunday's weather forecast was dire with a wind forecast of 4 mph at max. Therefore Sunday's flying looked like being a compete washout.

He decided that the main days flying would be brought forward to Saturday with models being judged for Best Static - Best Landing and the most Realistic Flight of the day today (Saturday) This proved a good decision on Ant's part because on Sunday the wind sock limped round the pole a complete 360 deg. several times and the only planes capable of



flying had got a prop at the front

On the Saturday, Ant restricted the number of aircraft flying at the same time to 5 because of the possibility of mid-airs.

Briefing over there was a steady flow of launches and landings throughout the day with prizes being awarded by Keith Rathbone around 4-30pm.

It was also nice to see so many familiar faces among the visitors with banter flowing quite freely on the flightline between visitors and members.



Robbie Bridson launching Brian Sharp's immaculate Slingsby Dart. Brian got the best approach and landing prize with the Dart



This shows the neat gear installation in Keith Rathbone's Caproni Calif A21.

Note the retractable undercarriage





Ant Jervis launching  
Nigel's ASW 28

I think Nigel came  
all the way from  
Carlisle

Ant Launching Robbie  
Bridson's Weihe.

Robbie's wonderfully  
finished Weihe was  
awarded the best model in



The LMMGA always  
welcomes and encourages  
junior members but I think  
this little guy will have to  
wait a few years yet



Mark Richards Slingsby Swallow



John Watkins and son Paul. John has been coming to our Scale Even from its onset and still does despite his increasing mobility problem.

In recognition of this, John has been made a honorary member of the club for the remaining part of this year and 2016

Long may you enjoy your flying John

Brian Sharp doing a final check on his Slingsby Dart Just before the launch. Brian was awarded best approach and landing with the Dart



Paul Watkins Man-handling his 15 – 6” Salto





John Vaughan coming in on a landing approach



Stephen Wilson's Ash 26 getting away



Phil Clarke giving his 'Rhonsperber' few tweaks before the launch. Assisted by Billy Griffiths under the watchful eye of Keith Rathbone



Brian Sharp being congratulated by Keith Rathbone for the best approach and landing of the day



Stephen Wilson got the prize for the most realistic flying of the day. Stephen's ASH 26 flew quite well throughout the day in varying lift conditions:



Robbie Bridson being congratulate for the best model. (judged statically ) His immaculately built 'Weire' Caused one or two of those present to turn a light shade of green with envy

Letters Below are two letters received by Keith from visitors who flew at our scale event

Keith,

Many thanks for the cheque that arrived today - very much appreciated.

I feel quite guilty walking away from one of your meetings with cash after having had such a great time - as I always do.

A superb day on the Saturday - great flying, great scenery and great company; it doesn't get any better than that.

Looking forward to the next bash.

Very best,

Rob Bridson

Dear Keith,

I really did enjoy flying at the Mermaid the other Saturday & what a sociable crowd they were. It's my intention to keep on Flying as long as is Physically possible with the help of Paul, my son & others who are kind enough to lend a hand. No doubt Simon has shown you photos of me being wheeled across to the west face of the Mynd in a wheel barrow!

Thanks for the honorary membership for 2016,I hope to make good use of it

My Best Regards, John

## Scale Weekend over:: : Back to our normal flying



Mark O'Conner  
with his  
4.2M HW 20  
It is an All moulded  
model  
by Valenta  
It flies quite well in  
Marks capable  
hands



A picture of Phil Clarke's Keil Kraft Falcon Mk2 ( He says) This was taken by Dave Cholerton on Oct.3rd 2015 at Mapperley with the new wing incorporating ailerons and flaps, hence Mk2. Doesn't look much like the original but it flies o.k. and for me is more controllable - flaps work a treat. >>>> *(It looks a real Beaut Phil.. Ed)*



## This Centre of Gravity is Often Forgotten

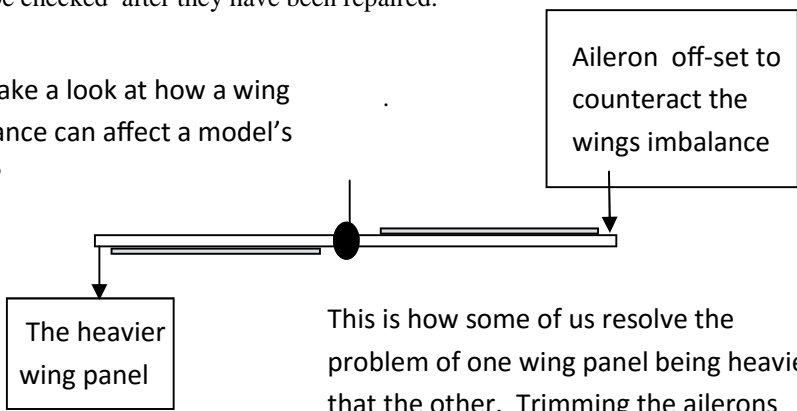
One of the first things I ask a beginner who has asked for my help in checking out control setting or launching their model is :> “Have you checked that the Centre of Gravity is in the right place?” We all know about the CofG; it’s the fulcrum point where the nose and tail balance to form a straight horizontal line (Usually it’s somewhere under the thickest part of the wing section on conventional planes)

It’s always possible to do a rough check on the slope but checking the CofG on two fingers in the sort of winds we usually get on the slopes is not to be recommended particularly if the model is a wing. (Like the Halfpipe) This type of model will be difficult if not impossible to fly if the CofG is only a small amount out of position. And, without the designer’s instructions; where about is the CofG on a wing that has both leading and trailing edges sloping backwards?

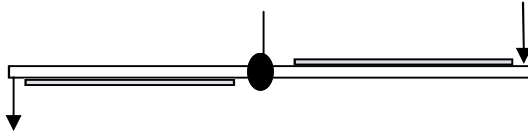
As a result of chatting with many newish members over the years plus a few experienced guys who should know better; I’m surprised at the number of fliers who never think of checking to see if the wing is balanced. ( is one wing heavier than the other) I think the reason for this is that a model will fly with a small wing imbalance because it is easy to correct this with aileron trim. Other than the extra drag the off-set ailerons cause; this set-up works fine as long as the model is doing straight and level figures of eight back and forward across the slope Typical beginners flying.

The problem arises when the model picks up speed or attempts to do manoeuvres such as a loop or stall turn or a fast low fly past and flying inverted. By the way; don’t assume that all these Ready To Fly Models are perfectly balanced because they are not; I’ve come across both foam and glass models that have needed a piece of lead placed at the tip of one wing to balance them. And remember! Wings should always be checked after they have been repaired.

Let’s take a look at how a wing imbalance can affect a model’s flying?



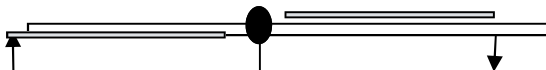
The force that's generated by the off-set ailerons is a dynamic force . It increases and decreases according to the models speed. The faster the model goes the more force they generate



The extra weight of this wing is not affected by speed; it remains a constant force no matter what speed the model flies at. However, the direction of the force changes when the model does a manoeuvre

Imagine the extra weight of the heavier wing is a piece of lead on a string hanging from the tip, (like a plumb-bob) . No matter what angle the plane is flying at, gravity will always want to pull the weight toward the ground. So the force is constantly changing direction to that of the plane

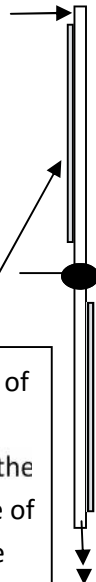
### Inverted Model



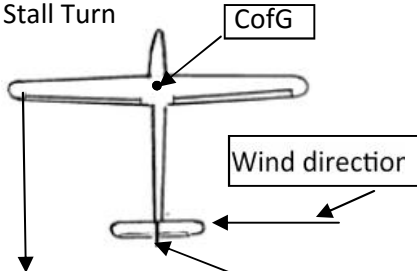
The aileron off-set is now pushing this wing up so instead of counteracting the heavier wing. The ailerons are now assisting the extra weight

The off-set ailerons are now assisting the extra weight instead of neutralising it

When the model does a roll the affect of the extra weight on the wing is constantly changing direction. As the model rotates through 360% the force of the extra weight is always towards the ground



## A Stall Turn



The heavier left wing cancels out some if not all the weather cocking affect

The pressure of the cross wind on the fin/rudder helps the model to weathercock to the right. The heavier left wing is trying to rotate the model to the left

A stall turn is when the model climbs vertical until it is full stalled and then pivots 180% to the left or right about the CofG and completes the manoeuvre when it exits the vertical dive.

When the model (Glider) slows down to a stall on the climb; the control surfaces become ineffective and at this point the manoeuvre relies entirely on the weather cocking effect . The heavier wing will add to or subtract against the weather cocking affect of and rudder/ fin depending on the direction of turn

Stall turns should always be attempted when flying across wind to benefit from this weather cocking affect

I hope this article has given food for thought to some of our members. ~ A flying aircraft is an extremely complicated piece of kit. There is much more to think about with the imbalance of a models than what is shown above. For instance; how does centrifugal force affect an imbalanced wing? Some of these F3F models do very tight high-speed turns ~

If you now realise that finding the CofG of a model is a little more involved than putting the right amount of lead in the nose; it as at least made you think...

## **A Brief AGM Report for 2015**

Considering the awful weather conditions on the day, it was great to see such a good turnout. There was a little mix-up at the start; for some reason the Winking Man staff had forgotten to book us the room, but this was soon sorted out.

### Apologies received from

Ian Buckley, Peter Garsden, Richard Hardwick, Robert Armstrong, Keith Hooker, Dave Shipton, Paul Rose, Ian Jones.

### Officers Report

#### Sec Treasurer: Keith Rathbone

Keith handed out copies of this year's accounts and explained all relevant points including the amount of rent paid to our site farmers at Edgetop, Elkstone, the Gate Site and the Winkle Minn site. He also said that he gave Christmas presents to the said farmers including Mrs Wilkinson from Roaches End Cottage (she lets us park the cars down her track when there's too many cars on the road)

Copies of the accounts can be obtained from Keith on request

#### Comp Sec: Mark Ollier

The only competitions held this year were the Scale weekend organised by Ant Jervis and the RAFMAA one organised by Neil Tricker He had not heard anything from Neil and was not sure if it went ahead because of the poor wind/weather on that weekend.. There was a great turnout on the Saturday for the scale event with some excellent flying. Sunday was a complete washout due to the lack of wind

He thanked Ant for his effort.

#### Editor: , Ivan Bradbury:

Ivan said that there had been a few technical problems this year with a



some members not receiving their newsletters He said that this could be due to several things such as exceeding the servers limit on attachments or members not informing the club of a change of address or firewalls rejecting the attachments. An added problem was that he was not sure who had or hadn't received their newsletter making it impossible to resend to those few who hadn't received the newsletter . He thanked all those who had sent articles and pictures in for the publication

#### Safety Officer: Ian Webb

Ian said that he'd had to tell several people this year about flying too close to the flightline particularly those doing high speed low passes. He said, it's a dangerous practice and can be a frightening experience for some of those on the flightline. He asked fliers to be more considerate.

He also said that any discussion on the flight line shouldn't be of such that it distracts people from their flying.

#### Election of new officer.

At this point the committee stood down: Ian Webb Mark Ollier and Stewart Howard said they didn't want to be re-elected..

Ant Jervis was asked to put his name forward for Competition Secretary. Dave Gains and Neil Barnett were proposed for Safety Officers these were seconded and voted in ~ Ivan said he would continue as newsletter Editor and Keith would continue as Sec/ Treasurer.

#### AOB

Most of the AOB was taken up as a result of someone having had his application for membership to the LMMGA for 2015 refused. The reason for the refusal was the use of offensive language to a club official. It appeared that a member and regular flier for many years was asked about his unpaid subs in July. This resulted in abusive language being used ~ The committee was asked for their thoughts and appropriate action to take.

A majority thought this was unacceptable and decided not to accept the persons subscription.

Some questions/answers arising from the above

It was made clear that an apology would be accepted.

What sites do the club pay for?:: See Sec/Treasurers report above.

Open access land (Right to Roam) doesn't give an automatic rights to carry out activities on this land such as bike riding, horse riding, model flying and paragliding etc.etc.

What local sites do the club fly on that are not official LMMGA sites? (We don't pay a rent for). ~ Mermaid pool site (the Butts) This is Peak Park's controlled land. The club has permission to use this site and a few years ago the PP asked us to police it

~ The Roaches ~ This was taken over from the Peak Park by the 'Staffordshire Wild Life Trust' last year ~ At a meeting with SWLT, they gave us permission to fly off the East North East corner ~ by the track that goes down to Roach End Cottage. There is a limited car space on the road by the bend ~ Club members have been given permission by the owner of Roach End Cottage to park on their track providing they don't restrict access

#### The use of the club membership card

It was asked how do we display the card where there is no pegboard??

Keith said that the fixed Peg boards had been damaged at Edgetop (Animals rubbing against them) and the post at Elkstone had been removed. He said that he would make inquiries about either a lanyard or clip device that he'd seen that would be suitable. Similar to the type used in hospitals/schools

Meeting ended



## 2.74 Meter Fox

I took this photograph of Nigel Brewer's Fox a while ago and asked him for a few details > This is his reply

It's made by Topmodel of France and is, as you correctly surmised, a semi scale MDM-1 Fox. The model costs €400 (£280) and has a span of 2.74 meters

which works out to 1/5th scale. The basic kit comprises of a GRP fuselage with a lot of localised carbon reinforcements, pre covered foam veneered wings (again with carbon reinforcements), pre covered balsa rudder with scale like hinge line, bolt on pre covered balsa tailplane and a solid carbon wing joiner.

The accessories are of very good quality with nothing needing replacing which makes a change as most ARTF kits are notorious for supplying rubbish hardware. The colour scheme as supplied is scale, but unfortunately no authentic registration letters are supplied so I still need to make them at some point in the future.

The huge plastic cockpit tub comes with some very basic details and the clear canopy has to be cut to size. The wing is already prepared for airbrakes and I installed some 250mm Hobbyking electric units which work extremely well and are a very powerful aid to allow precise landings. As supplied, the main wheel sits far too low so I've modified it's structure to give a more scale like appearance, and as you can probably see in the photo I've installed full cockpit detail.



The pilot is not one of those very expensive German offerings that Messrs Cocker and Jervis would no doubt buy, but a mishmash of bits I sourced off eBay. We poorer folk have to watch the pennies you know!

I bought the very life like head and hands separately from China, the clothes from various other vendors and the parachute (yes, he has a 'chute!) from somewhere in the Canadian wilds. The seat harnesses are from a model helicopter scale parts supplier in the UK and the seat covers are made from laminations of foam and felt from the local craft shop so they're quite realistic to the touch, not that they can be accessed as the canopy is glued in place!

The pilot is to 1/6 scale and his body is simply a mixture of Depron, pipe cleaners and kapok, and whilst technically he's the wrong scale, he doesn't look too bad in my opinion.

The other cockpit accessories (radios, handles, joy sticks, head rests etc.) are sourced from various scrap bits with the joy sticks being made of 7 different parts each. To make them identical was a real pain in the ar\$e and really is wasted effort as they can't even be seen when the plane's flying!

The 4 control surface servos are all Hitec and work off the ESC's 5A BEC unit which has so far proved to be very reliable. The power train is as follows: ESC Hobbyking 70A BEC, the battery is a Turnigy 30C 3600mAh 4s, and the motor is an XPower XC4226/12LS outrunner. This has an extra long shaft (hence the 'LS' designation) supported by a 3rd bearing and is supplied by Topmodel specifically for glider installation. This is turning a high aspect ratio Freudenthaler 16" x 8.5" folding carbon prop which draws 65.8 Amps for a power output of 973.8 Watts. As the AUW of the Fox is 7Lbs. it equates to a very healthy 139W/Lb power to weight ratio which gives a rapid climb at about 40° elevation. This particular Fox is just like it's full sized counterpart in that it's very aerobatic, yet can still fly very slowly or even thermal if required.

I don't know if Graham took a shot of the underside, but in case he didn't, here's one I prepared earlier, but please note that the rather ghastly German registration on the starboard wing has since been removed.



Note how I've tried to camouflage the servo boxes by adding some orange film over them. Sometimes It's the little details that count. ;)