

Leek & Moorland Model Gliding Association

Web Sites: - <http://lmmga.org>
<http://www.lmmga.co.uk/>



Dec. 2008



In This Months Issue

Page 3. AGM Report Plus a Post Script compiled from the emails/phone calls
I received the next day re electric power models

Page 7. The Down Side with some Polystyrene Models

Page 10. Rain Rain go Away (More ramblings from an Ancient Aeromodeller)

Page 12. Septembers F3F Comp and Augusts Scale Event

Page 16. Letters

Page 18. Aerofoil Heresy By Derek Illsley

Many thanks to Mark Ollier for doing such a sterling job as Competition Sec over the last few years. (Mark is taking a sabbatical from office next year) I am sure all those who have taken part in one of Mark's comps would like me to thank him for all his efforts. They were extremely enjoyable and we always had a barrelful of laughs mostly at our own expense.....Thanks Mark

Another Reminder

With club subs almost due this is another reminder to restrict your envelope size to A5 or less when you correspond with Keith Rathbone our Sec/Treasurer (A5 is the size of our newsletter) ~ If your envelope exceed this size by only a few millimetres Keith has to collect it from the post office and pay a surcharge plus a one pound handling fee. (They wont deliver it with the wrong value stamp on it)
This year, it has cost the club over £32 to collect these larger than A5 envelopes with second class stamps on them. ~ If you do send larger envelopes please put the appropriate stamp on it.

Front Cover

This is Steve Davis launching Chris Claytons Pilatus B4 a scale of 1/3,3 giving a wingspan of 4.5m, produced by KV Models with a price tag of £1,400. This particular model is the one Chris bought off Simon Cocker 2 years ago

2008 AGM Report

32 members present

Apologies :-> Mark Ollier, Keith Hooker, Barry Gilman, Sid Sherriff, Anthony Jervis, Rob Faulkner, Simon Faulkner,

The meeting was opened by Ivan Bradbury thanking everyone for attending; especially those who had travelled a long distance on such an awful day.

As a result of questions asked at last years AGM re-paragliding on Edgetop, Keith has made inquires and it appears that they now pay a similar rent to us which means they can share the slope. In the case of a shared slope, one person should be appointed as spotter and a separation flying zone should be agreed.

Chris Hunt has looked into creating a forum on the L&MMGA web site but says that with the lack of support shown on our other web site (www.lmmga.co.uk/) he feels it would be pointless setting up another forum

Officers Reports

Sec/Treasurer Keith Rathbone handed out comprehensive details of this year's accounts to members. He said that the club membership had gone up this year from 107 to 122 seniors plus 4 junior members.

We have paid out more on site rents for 2008; this was on top of the £100 for Christmas presents for all our site farmers including Mrs Wilkinson at Roach End and the Winkle Minn farmer

He asked members to make sure their envelopes were no more than A5 size. It had cost the club over £32 for excess surcharges this year

He also thanked Ray Sutton and Ivan Bradbury who along with himself had renewed the gate hinges and placed a ton of lime chippings in the threshold.

Competition Sec Mark Ollier's report was read out by Ivan. He said there had been problems with the weather again this year with winds varying from nothing to over 40 mph for the fly for fun event. The scale event was also affected with Sunday's flying being cancelled due to low cloud.

He wished to give Simon Cocker a big thanks for running the scale event.

The new method of giving out prizes caused much merriment. Disguised prizes were drawn out of a bag with the lowest scoring competitor having the first go (reverse order) He said he was a bit miffed with having won two events he drew the booby prize on both occasions

It was pleasing to see some newer member taking part in the comps and really enjoying them

Safety Office Ian Webb said he was concerned that some high speed models were flying too close to the flightline. He was aware that there had been a minor accident this year involving two fliers but this had not been reported. .He

appealed to fliers to leave landing space on both sides of the flightline when flying at the gate. He also wished that some of the pilots of foam models would take more care where and how they landed. Because their models are almost indestructible some of the landings were being just dumped in very close to the flightline.

Newsletter Editor. Ivan Bradbury thanked all those members who had sent copy in, it was much appreciated. The total cost of printing and sending out newsletters had gone down from a high of £308-97 in 2006 to just under £100 this year; this despite a rise in the price of stamps and printing costs. It was all due to an increase in the numbers of members now receiving their newsletters by email. 90 email and 49 printed copies were sent out on the last issue. (Some long standing x-members are still sent electronic newsletters because they now live at the far flung corners of the country.)

Election of new Officers Ivan said that if anyone wanted to stand for any office, as far as he and the existing officers were concerned, they would be welcomed with open arms. However, only Scott Ravenscroft said he would be Comp Sec. Mark Ollier had previously said that he would stand down if someone else put their name forward.

Ian Webb proposed that Simon Cocker became joint Safety Officer so that midweek flying could be better covered. These changes were agreed.

AOB

Keith Rathbone said that the level of noise from some electric models was a cause for concern in view of the promises made to the land owners particularly the current situation with Peak Parks, English Nature and MoD. Several other members also thought that if there wasn't some restriction put on noise, it was only a matter of time before the Peak Parks intervened. The noise issue has been brought up several times in past meetings but it has always been left to members to use their discretion and common sense. This called for a subjective judgement which hasn't worked.

After a long discussion with several ideas toing and froing it was finally agreed that we had to formulate some fixed rule in an attempt to keep noise to a minimum. It was decided that only gliders (models capable of soaring in a range of lift conditions without the aid of power) could use an electric motor in order to gain height or to avoid landing out in marginal lift. The powered glider must also have a folding propeller. None folding props and pushers would not be allowed neither would PSS type models with ducted fans.

Roger Lombard pointed out that some gliders that met the criteria, such as the Multiplex Blizzard, made quite a noise if it was put in a high speed dive under power. It was hoped that members would use, dare I say it, common sense and refrain from such practice

There were no other points brought up for discussion

Meeting ended

Ed::: Electric powered models on the slope certainly aroused much interest among members. Several have phoned and written to me after the AGM expressing their concerns and opinions regarding electric power models on our slopes.

~ Many of those who contacted me had similar thoughts and solutions.

In the following addenda to the AGM I have tried to put most of those view and suggestions plus the thoughts of past and present club official who have actually been in face to face talks with PP EN and MoD officials.

Post Script to the AGM

The Leek and Mooland Model Gliding Association is, as the name implies, a gliding club. Over the last 50 years we have built up a good relationship with the land owners of our sites; this hasn't always been so, and, there is still an ongoing debate with Peak Parks and English Nature.

We are aware that all our moorland flying sites are designated Sites of Special Scientific Interest and that we are extremely fortunate to have some of the best soaring sites in the country that are so accessible and in an area of such outstanding beauty. As a club or as individual fliers, we not only have to show respect and concern for the flora and fauna on these sites, we have to be seen to do so

Club representatives in those early days had to address the main concerns of the farmers/landowners

1. We must only fly gliders (No noise) { this was when there was only IC engines }
2. We must cause No damage to fences, stone walls and crops, we must also keep gates shut.
3. We must leave No litter behind. This is not just because it is unsightly but because it can be a danger to animals. Some animals will eat plastic bags, rubber bands and the like, leading to expensive vet bills

These were and still are the main concerns of farmers. An example of this was shown by how angry the Edgetop farmer got when he found the gate closed but not latched while people were flying. Not surprising when there are thousands of pounds worth of rare animals in the field. (This happened a couple of years ago)

Past and present club officials who have had to meet/correspond with Peak Parks England Nature and the MoD have had an uphill struggle to retain our moorland sites for a full 365 days of possible flying. They (PP EN) see us as a possible threat to the development of wild life in the area (mainly birds) and want to put

several restrictions on when and how we fly.

Some of the main counter arguments we have put to the PP EN and MoD are::

1. We have been flying on these moorland sites for over 50 years, long before they acquired the land, and, without incident or complaint from farmers or the general public. In fact, most show a keen interest and ask many questions.
2. The type of models we fly are Gliders, they are very environmentally friendly and are quiet in flight.
3. The Average age of our model fliers, according to the BMFA, is 55 years. We are made up of mainly professional people many of whom are retired. Hardly the type to act irresponsibly.
4. All our flyers are members of the British Model Flying Association (BMFA) and as such have third party insurance cover of up to £5,000,000.
5. Over the years, the LMMGA has liaised between models fliers and farmers/landowners and has also done its level best to police all our flying sites so that all model fliers, including many visiting modellers, fly safely, abide by the club and the countryside code of good practice.

The LMMGA have allowed eclectic powered gliders to use our slopes for several years now because they are considered extremely quiet. However, due to the rapid development of motors and batteries, the improved power weight ratio has meant that some electric powered models have been able to move away from the assisted glider type to a much wider range of models. This has meant that certain types of aircraft have moved outside of the accepted noise level for our slopes. For this reason, it was decided at this year's AGM to impose the following restrictions on electric powered models in an attempt to keep noise to a minimum .

The only powered models that may be flown on any of the Club's sites are **power assisted gliders**. A power assisted glider is defined as an aircraft which has all the characteristics of a true glider but may be equipped with a motor and **folding propeller** for **intermittent** use in gaining and maintaining altitude when slope lift is insufficient.

If a powered scale model of an aircraft other than a glider is to be flown as a PSS then the pilot must be able to demonstrate that the **power system has been disabled**, by prior removal of the prop or fan or by disconnecting power to the motor(s). **A closed throttle does not count as "power disabled"**.

Because of the tenuous situation between modellers and the Peak Parks, we must keep the Club secure from charges of environmental disturbance through noise. Members or visiting fliers who stretch the definition of quiet or assisted power may spoil the day for others. Even more important, they expose the club to attack from those who may have their own and divergent agendas from our own.

Many Thanks to all those who have written/phoned me regarding this issue

Chris Hunt is an avid designer builder This is one of his latest which I recently saw flying at the Mermaid . It's can certainly scoot about the sky at a pace

Wing Span = 1300mm
 Wing Section = HS522
 Wing Area = 0.243m²
 All up Weight = 1084g
 Wing Loading = 4.47kg/m²
 The Motor is an MVVS 1400 sport that turns a 10 x 7 folding prop and pulls about 35A form a 3S 20c 2200mA LiPo.
 The wing is vac bagged using a Styrofoam core, obechi skins with carbon tipped LE and TE,
 The fuselage is ply and balsa.
 Performance is very quick with this much power and a F5D wing section,



The down side with some Polystyrene Models

Below are three photographs of Mark Olliers 'Flycat', ~ It's one of those polystyrene models that seem to come in all shapes sizes these days. They range from those dinky park fliers to 2m plus gliders. You can't have missed them because they have been breeding like rabbits



In pristine condition before the first flight

over the last two or three years. Probably this is because they are reasonably cheap and in most cases can be bought ready to fly. However, many owners will have noticed that some of these models have a built in weakness, namely their nose ~

Wings like the Zagi are pretty resilient to rough landings but

anything with a longish nose invariably ends up in the intensive care unit or a wheelie bin.

This is particularly true for those small electric models that flit about the sky like a demented bluebottles.

If the motor happens to cut on these model, most of them have a glide angle steeper than a church roof. Even some of the more

graceful gliders like the Multiplex EasyGlide have to be handled with at least one kid-glove on landing, even so, the front end on this type of model can easily be damaged if the landing is not spot on

From what I've gleaned, this material is fairly easy to repair with an array of glues ranging from fast drying epoxy and cyano, to a hot glue gun.

Mark Ollier found that by grafting a block of EPP onto the broken nose and sanding it to shape, (see photo) the model was able to take the pain of rougher landings without incurring too much damage ~ I've heard that reinforcing the repair with a few carbon

tows or even cocktail sticks adds extra strength to the repaired fracture.



Mark Ollier
Top quality foam repairer



Hoops !



Mark's Flycat's repaired
with an EPP

My advice for what it's worth::>

If you've any spare cash left over after Christmas and you're thinking of getting one of these foamy models. ~ Forget about aesthetics and go in for practicalities ~ remember, anything that sticks too far out in front of the leading edge is very vulnerable.



Launching Simon
Cockers 1/2 scale
DG 1000 at
Long Mynd ~ Photos
taken by Bill Maisey

The Mynd is an ideal
slope for one of these
monsters.
Nice curling top to
the slope with acres
of landing space.

Some idea of the size of this
beastie can be gleaned from the
length of the fuselage
Launching is definitely not a
job for us arthritic oldies



Simon Cocker

Stuart Howard doing a final
check on his Minimoa
before Chris Clayton
Launches it
Stuart's Minimoa was one
of the few built up gliders at
our scale event at Elkstone



Rain Rain go Away

(More ramblings from an Ancient Aeromodeller)

I can't let 2008 slide into the history book without commenting on the crrraap weather we've had this year. Mind you; when you come to think about it, it's not just been 2008 that the weather's been rough, I think the last few summers have been getting progressively worse year on year. This is certainly true if the Leek slopes are anything to go by. If it hasn't been rain that's stopped play, it's been the lack of wind or wind in the wrong direction.

What I haven't managed to suss out yet is; having gone up to the slopes on the strength of the BBC's assurance that the weather will be ideal for a good days flying, I find on arrival that the Mermaid is shrouded in low cloud and drizzle the sort that lasts for hours, and, if it isn't low cloud and drizzle, there hasn't been enough wind to disperse the smell off a bluebottle's bowel movement.

What really exasperates me is that on the way back home you always run into glorious sunshine with good westerly wind less than a quarter of a mile from the slope ~ Ain't life a real bitch at times?

There's been no shortage of pundits appearing on the TV pontificating about the possible cause of these unusual weather patterns. Most put it down to the effects of global warming. However, although there's seems to be a unanimous agreement amongst experts that global warming is a factor; there's less agreement about what's actual causing global warming.

Some say it's caused by a combination of chimneys belching out smoke and cars pumping out carbon monoxide by the ton; others blame it on gasses being emitted from the world's population of bovine animals~ Surprisingly, most people when asked didn't know that the offending gases came from both ends of these animals.



Adrian Beal

The latest one I've heard was that the main contributors to global warming are the obnoxious gases from trillions of munching termites. Not sure which orifice the termites expel their gasses from; all I know is that you'd not be out of work if you got the job of corking them up.

I did hear one of these weather forecaster say that our perception of the years weather is very subjective and is usually formed by the kind of weather we had on our fortnights holiday at Bognor Regis.

Well, I've never been to Bognor in my life so I suppose that means my views on the weather count for nothing.

Nevertheless, in my humble opinion; if global warming is man-made I don't think

we need to look any farther than that gang of soothsayers from the BBC. ~ (By the way, I'm not including the very lovely Carroll Kirkwood in this notorious gang because she's got an honest face and in any case I like her.)

I haven't come to this conclusion without a long and careful study of the Beebs forecasting over the years. From my observations, I've noticed that ever since they got rid of Michael Fish, (famous for allowing a gentle breeze to blow down half the trees in the southern counties) accurate weather forecasting has gone to the dogs. And! As for their long term forecasting; I'll back my next doors neighbour's bunion against their multi-million pound computer any day.

I also think that those who are trying to put the blame for all this global warming on to the four legged beasties must be completely loco. To put the blame on our bovine friends is such an obviously load of claptrap it shouldn't warrant a rebuff. However, if cows and the like are the culprits, why didn't the world overheat when all those millions of buffalo were roaming the plains of north America during the time Geronimo was doing a bit of slope soaring?



Ian Buckley:

Around about the same time as Geronimo's buffalos were meandering across the plains of America, millions of Caribou were belching their way across Alaska and hordes of Wilder Beast were venting their bowels on the Masai Mara in Africa. If these animals are the cause of global warming, Geronimo would have been able to fry his Bacon and egg breaky on a paving stone north of the arctic circle.

As I've implied, and maybe you've guest by now; my knowledge of the whys and wherefores of global warming is extremely limited. (Maybe I should have had that fortnight's holiday at Bognor Regis). But if the world is warming up, could one of you knowledgeable weather pundits explain the following :> --

I've been an all season flier since my short trouser days and I've endured quite a wide range of temperature fluctuations on the slopes; however, last year I was taken completely by surprise. On this particular day, I'd been flying on the slope by the gate for barely fifteen minutes, and, despite having the usual multi-layers of winter cloths on plus gloves, balaclava and goggles etc. I succumbed to a near death experience from hypothermia. I was only saved at the last minute by a fast thinking colleague who forced hot coffee heavily laced with whiskey down my throat. Strange as it may seem, this happened in the middle of June. Now if this doesn't convince you that there's a strong smell of fish about all this speculation on global warming, nothing will.

Septembers F3F comp report

Elkstone

The day started off in fairly thick fog but by the start time (11am) it had completely cleared to leave a fluctuating east wind square on the slope

Eight competitors turned out to brave the challenging lift plus a couple of willing helpers to act as flag men.

In total four rounds were held in lift that varied from light to very

These are some of the hardy group who turned out for the F3F comp in spite of the conditions being a bit dodgy first thing



light. Some idea of the varying lift conditions can be got by the time taken to complete the course; they ranged from 1.04 minutes to over 2 minutes. Some competitors tried swapping their model halfway through the comp in an attempt to take advantage of the changing lift conditions. The lift was not quite enough for Steve Walker's foamy and on a couple of occasions he ended up landing out before completing the course.

During the rounds there was the usual banter and bum advice given from the sidelines. Overall a much enjoyed competition with a barrel

full of laughs especially during the prize giving ceremony when the competitors, in reverse order, took a blind grope in a bag of heavily disguised goodies. The biggest laugh of the day came when Mark Ollier found out he'd won the very same booby prize he'd won at the last comp. Then he'd put it back in the goody bag for some other sucker to draw out.

John Day having a dip in the lucky bag



The results were

1st Mark Ollier

2nd Ivan Bradbury

3rd Scott Ravenscroft

4th Ian Webb

5th John Day

6th Julian Bayley

7th Dave Wheeler

8th Steve Walker

Scale Event August 30 & 31st

Considering the luck, or lack of it, we've had with the weather this year, one whole flying day out of a possible two is as much as we could hope for. That's exactly what we got at this year's two day scale event.

When I arrived at Elkstone on the first day (Saturday) there was already a fair number of fliers on the slope and I could see two or three models in the air. There was a touch of south in the light easterly wind but despite the occasional hick-up in the lift there was no land outs throughout the days flying.

The guys I regularly fly with will know I'm not a scale man at heart but this doesn't stop me from going into the drooling mode whenever I see some of these beauts either flying so gracefully or on the ground. No one can fail to be impressed by the standard of finish and the meticulous care to detail that goes into some of these models.

There was continuous flying throughout the day and they were still at it when I left

around 3-30pm

Unfortunately, low cloud prevented any flying on the Sunday
A big thanks to Simon Cocker for once more organising a very successful event .



1. Mike Burn and son Jack with his Simprop ASW28 on their way to the slope

2. Eric Parr with his 1/5th Scale Grunau Baby

3. Ivan Bradbury heading off towards the lift flying Eric's Grunau Baby

4. Chris Clayton chomping on his bap while Terry Simpson shares a joke



Simon Cocker launching Steve Davis's 1/3rd scale DG 800,fully carboned model ~ A real beaut



Brian Lee heaves off his 3metre Pilatus B4



A few of the models and pilots at this years scale event



Simon Cocker's 5 M Thermik xxx licy model manufactures by Valenta

Steve Walker



Letters

Dear Ivan

Sept. 16th 2008

As one of his 'Old Friends' you referred to, I must say what a wonderful tribute you paid to Stan Robinson in the September magazine.

I spent many a day power flying with Stan at Fradley as well as the odd day on the slopes. My lasting Memory of one of those occasions was of Stan sitting at the roadside by the gate sporting a cap and goggles peering over the wall at his model whilst taking maximum shelter from the wind. ~ see enclosed photo ~

I also have a copy of John Matthews video of Stan's last ride on his vintage Indian motor cycle, an opposed valve 650cc

(one side valve and one overhead) which could well be a unique surviving example of that model.



Richard Campbell



Stan's transmitter, is the same as the one in the foreground, They were made by Stan and John Matthews in 1970. John did the electronics and Stan made the stick assembly etc. They were at the leading edge in their day and were in regular use for the next 30 years

Well it's almost AGM again, not been much of a summer for flying models of any sort. I will be on holiday on the 9th November so please record my apologies'. Back to New Zealand again and hopefully Wanaka Warbird Museum again.

Hope to get to the slopes in 2009.

Yours Sincerely — Keith Hooper

Hi Ivan

I just thought I would send you a little something with regards to my memory's of Stan Robinson (saw his obituary in our last mag) I first met Stan at the gate one Sunday in the mid 70's I was with my dad and John Mathews, John was teaching me the black art of slope soaring (or should I



Stan flying his junior 60 at Fradley 2007

Not bad for someone who was 94 yrs at the time

say the very skillful art) I was flying a mini phase one of many that could be seen in the sky's above Leek around that time, Stan was with his brother Joe they had gone up in that little fiat caravanet that I think was Stan's. In those days we used to cross the road to land, I don't remember much more about that day but the next time I saw Stan was up behind the Roaches again he was with Joe and they were both flying K8's of I think the same size and it was a regular thing for one of them to be flying the wrong model as was the case this time. Needless to say I was off up the hill to look for the stray model. I will always remember Stan as a man that was full of very useful information and always ready to help anybody with anything.

Wayne Haycock



A cracking sunny day at the Roaches in October
Steady north east wind with a few Thermals

From Left
Ivan Bradbury
Ian Webb
Ian Buckley
Graham Gibbons
Dave Gains

AEROFOIL HERESY

By Derek Illsley

Ivan and I were discussing aerofoils following my recent Flights in Mr Boeing's finest. As luck had it on the outward journey, I was sitting in a prime position just aft of the wing's trailing edge and could see the flaps, ailerons and spoilers in operation.

The spoilers were hinged at their leading edge and I was surprised to see that the fit was not perfect. There was a visible gap between their trailing edges and the wing surface and, at 600 mph; I thought that the drag must have been considerable.

On the return flight I could see the wing's leading edge and the landing approach was most interesting. The spoilers were deployed at a considerable altitude to a small degree, probably to act as air breaks. Some minutes later slight flap were given and then the leading edge slots opened. The application of more spoilers (airbrakes) produced a buffeting and the pilot turned onto his finals.

Under the lower wing tip I could see Manchester's suburbs but I couldn't see what was holding three hundred tones or so of Boeing in the sky.

Over the next couple of weeks I reflected upon model aerofoils and what is written about them. More that sixty years ago I won a glider competition at Leicester. The model was a Ron Warring Atalanta that had once landed in a mining flash at Swodlincote. Duck weed had dries on the wings but the glide didn't seem to suffer. Raindrops on model's wings do not seem to lead to disaster and old sagging tissue didn't seem to have too great an effect either.

The pundits go into great detail about laminar flow and sixty years ago there was a Low Speed Research Association or some such. They produced an aerofoil called, I believe, LDC2 (Maybe it was MR) but a glider I built with that section was



This is a full scale Atalanta manufactured around 1935
The only similarity between this and Derek's model is the name

not a patch on the Atalanta.

The real experts on flight at low Reynolds numbers are of course the birds. They do it for a living and have had a hundred million years or so to get it right. Watch a seagull gliding above a promenade wall. The secondary feathers on the upper surface of the wing will lift here and there under the reduced air pressure but this bothers the bird not one bit.



Derek Illsley

Buzzards are probably our best teachers, coming along to show us how it should be done. In strong lift buzzards and models will all go up together but weak lift is another story. From the top of our garden a field slopes away to the northwest at about twenty degrees. I have never yet managed to soar there but the buzzards do it. If a thermal comes along they'll hitch a lift and then hunch their wings and depart at high speed for pastures new.

The experts tell us that the airfoil must be absolutely accurate but to me many of them look just the same. Albatrosses, Condors, Buzzards etc do not have the accuracy of CNC cut wing ribs but they still manage to fly pretty well. Spot landing are not usually a problem. Gannets achieve it with a vertical dive and at a moving target. Eagles and Ospreys again hit a moving target and gale force winds are no problem to Jackdaws. In spite of the turbulence over a roof they never miss the chimney pot landing.

I've never seen a bird fly inverted, loop, bank or roll but why should they? We can at least take some comfort from this avian short coming but I believe a detail study of a bird's aerodynamics would be interesting.

In my book the criterion is to get the wing strong enough, warp free and balanced. The type of model will tend to dictate the class of airfoil. A thin highly cambered section for a floater, symmetrical or nearly so for an aerobatic machine, and, an under cambered section about 9% to 10% thick for your general glider. The latest super duper section with all the usual hyperbole** is probably hardly any difference from a hundred others.



Paul Heathcote

My comments are probably an anathema to aerodynamicist and those professing to be, but they of course know how a bird manages to have a higher speed range and turn without aileron or rudder. I look forward to seeing such an experts glider having wing warp, a tail

system without a permanent vertical rudder, a thin wing and all very light. The model will of course have the versatility of your avian soarers. And pigs might fly!

. ** Ed. I have quite a number of airfoil sections on my PC, and, the difference between some of the sections of similar ilk is sometimes less than half the thickness of a pencil line, and this for only part of the section. It doesn't take a rocket scientist to conclude that the difference in performance that one of these sections makes to another is miniscule when compared to the fast changing vagaries of the weather we get on our slopes soaring sites. (These changes can happen within minutes.) Last years superseded model flying in good conditions will knock spots off the latest this year's, must have, model if it flies in conditions that are a little less favourable

But hey come on Derek!! If it wasn't for all the verbal diarrhoea that flows from some of these so called experts, who would want to buy the latest, must have, creation?



Keith Rathbone
Club Secretary Treasurer

**A Merry Christmas
and
Happy New Year**

*Best Wishes
and Safe Flying
To You All*

Ivan