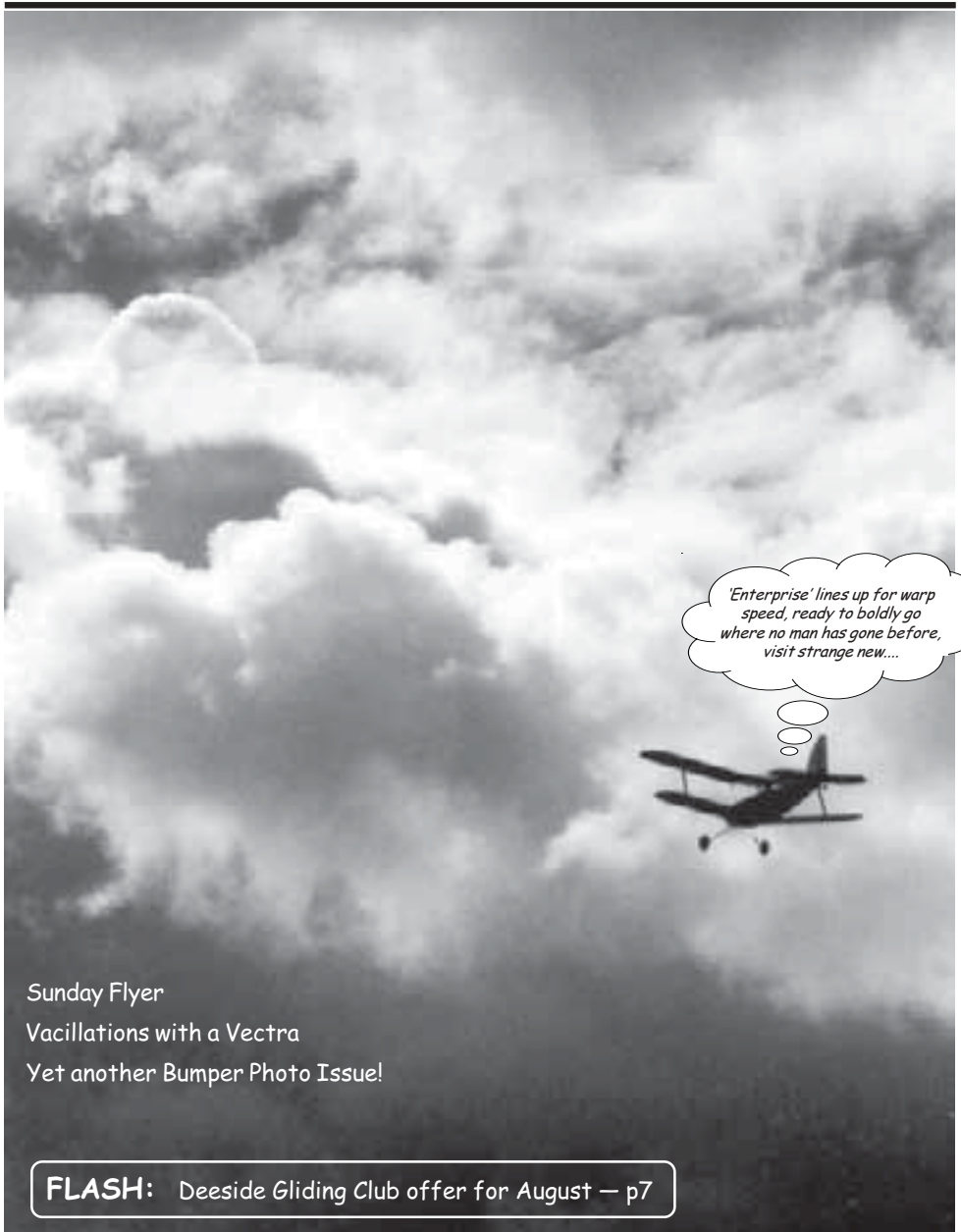




Short Finals



'Enterprise' lines up for warp speed, ready to boldly go where no man has gone before, visit strange new....

Sunday Flyer

Vacillations with a Vectra

Yet another Bumper Photo Issue!

FLASH: Deeside Gliding Club offer for August – p7

Can you believe it? First the slope fly-in at the end of April, then our much awaited weekend bash at Hazlehead, and now the 30th June slope event have all fallen victim to the current spate of unpredictable weather. We had hoped to feature a photo of men & machines in action at Hazlehead on the front cover of this issue (displaying the very cutting edge of technology!), but it was not to be so you'll have to make do instead with some old geezer's even older vintage bi-plane!

In previous years at Hazlehead, we've always been fortunate enough to land up with at least one of the days being flyable. This time around, Saturday morning's fun-fly started with low cloud and heavy rain, which persisted well past mid-day, conditions only improving later in the afternoon when a few enthusiastic bodies turned up, but as far as I'm aware did not fly. By this stage in the day, my wife had diverted me onto "essential domestic duties", so as far as sneaking up to Hazlehead was concerned, my goose (which, by chance, I had spent the early part of the afternoon stuffing) was well and truly cooked! Even worse news ... the weather forecast for the following day was bloody awful!

Sunday morning and 3 or 4 members show up, more in hope than anything else. It's low cloud and a bit breezy, but Brian Ord's keen to give it a go. However, it's not long before a rain shower passes through, followed by the haar ... his thermal soarer never made it past the tail-gate of the car. Unbeknown to us, and largely as a result of the forecast, the organising committee and CD had decided to cancel the competition on Saturday night, saving a number of guys from the central belt from making a pointless 300 mile round trip (they promise to let the rest of us know next time!). However, there is word that the 100S/OPEN comp. may now be rescheduled for later in the season.

"Trouble at Mill?" ... well, Maryculter actually! Problems with the new flying site already. It appears that the farmer has done the dirty on us by taking the money and reneging on his promises to cut the grass, fill the ruts at the preferred access point and erect a mirror for safe exit from the site. Anyone who's been to

the site recently can't fail to be amazed at the speed with which the grass and thistles have grown. With the committee harbouring little hope of a change of heart on the farmer's part, a couple of work parties have already made a start clearing a suitable take-off/landing area.



With the landing area immediately behind, and gentle words of encouragement from Brian Ord — "Move yer arse, Shergar..." — George Whelan starts cutting a lane for the winch line using his newly acquired petrol-driven strimmer.

An encouraging turnout at Maryculter on Tuesday 9th July proved that minimal work at the site was sufficient for electric gliders and thermal soarers to land without any problems. Thanks in particular go to Jim Ruxton and George Whelan who not only provided the cutting equipment, but also did much of the donkey work involved in clearing a suitable landing area. Maybe the winch turn-around or bungee stake should be marked with a flag on a pole ... a line break could lead to hours of fun trying to find the stake in the long grass! In view of the current situation, the newsletter production team are considering introducing a pull-out gardening section for the next edition.

On a more personal note, I appear to be going through one of those periods where every outing with a model results in a post flying repair session something I've observed happening to a number of other club

Cover Pic: *An atmospheric shot of Mike Pirie's recently electrified vintage 'Sunday Flyer', featured in more detail a few pages on. (photo Mike Pirie)*

members, notably Graham Donaldson, who's gone through more than his fair share of mishaps. [Adventurousness = (>risk)+(>rewards)! JB] In my case, it's usually pilot error, but my last unplanned arrival turned out to be an entirely different problem (but still my fault!).

An hour into the Tuesday evening session, and my Fantasia 100" soarer again "pings" off the winch line a little dab of down to level off, and away she goes, thinks I! With mouth wide open and my brain in neutral, I watch my oldest friend dive vertically into the ground. That dab of down elevator was the last command that the Rx delivered. Yup...a dead flight pack! These nicads were over four years old, and worse still I had taped them into one of those cheapie plastic, spring-loaded battery boxes. I was suitably chastised for installing a Heath Robinson power pack by some of those present! As for the plane itself, the fuz and tail surfaces survived a vertical dive into the ground completely undamaged, with only modest repairs to the wing roots and tip joints being required. Had the elastic bands that retain the wings actually snapped, I'm sure there would have been very little damage at all. However, if I keep this up, buying epoxy in 5 litre containers may prove to be more economical.

On a happier note, I've now completed a number of successful flights with my electric powered Hurricane across at Calder Park. It needs a really good heave to get it airborne, but performs well, with a surprising flight duration of 10+ minutes, tearing around on two-thirds to full throttle. Also potentially quite aerobatic with a good inverted performance. Lurvly!

Tempted fate with this one, didn't I? After a dozen hassle-free solo launches with the Hurricane, the last chuck resulted in a tip stall before I could get my right hand back onto the Tx, leaving fuz 'n' wings cartwheeling down the park. Oh, bugger! I hate repairing models! Taking advantage of being all on my own, I spent the next 10 minutes swearing loudly whilst dancing around the wreckage, alternating between shaking my fists skywards and throttling an invisible friend! Had anyone else been present, I would have slipped on the mask of maturity, and been a lot more

philosophical about what, after all, is the fate of every model ... it's just a question of time, isn't it? But it's still a bastard when it happens!

Here's what's on offer this time round. First time contributor Graham Irvine has put fingers to keyboard to give us an account of sex, lust and greed (oooops ...sorry, wrong magazine!) ... it's actually an article on his prolonged trials and tribulations with the Robbe Vectra 100 inch glider. Makes a nice change from the electric bias of previous issues. (How about something glider orientated for the next issue, from some of you publication shy individuals?)

Newsletter regular Mike Pirie has been busy converting an ancient IC-powered Sunday Flyer biplane to electric ... I've seen this one in the air and by gum, it don't half fly great! An attractive machine with a generous wing area and low wing loading, it actually thermals very well too. Lots of photos of this one, chaps — cloud conditions were irresistible — sorry!

Also, Jim Ruxton brings us exciting news of an opportunity to participate in an event at the Deeside Gliding Club's airfield on the west side of Aboyne. But you don't have to take my word for any of this ... read on, dear modeller.

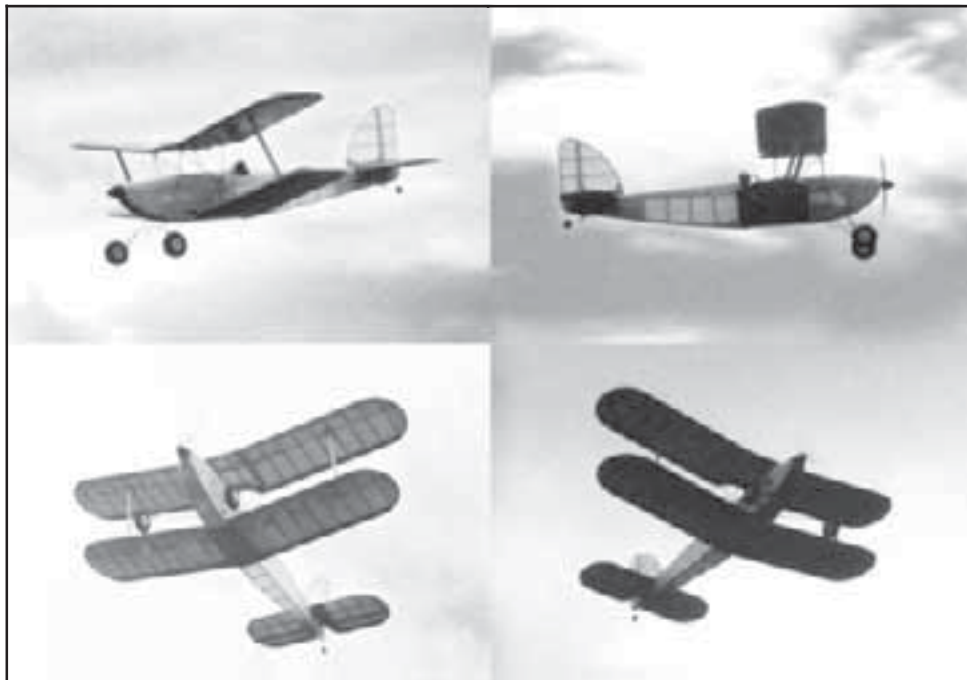


The ADS thermal fly-in at Calder Park on 19th May. Once the mist had cleared, a few flights were squeezed in before the wind picked up sufficiently to ensure we could only talk about flying. Ratz! (Mike Pirie supports John Barnes after JB's exciting — for the rest of us — winch launch straight into low cloud!)

Electrifying the Sunday Flyer - *Mike P.*

A well-known law of aeromodelling states that when you have a new model to fly, the weather turns against you. The awful weather of late May/early June certainly put paid to any thoughts of possible 'Blenheim' flying, and frustration levels were building up. I couldn't just keep pacing the house like a bear with a sore head for ever, so I had to find a fill-in project to tide me over.

A word with Gordon Tarling established the desired current levels for this motor. 25 amps is the normal max but can be pushed to 30 or 35 amps at the expense of motor life. So for my 180 watts, I was looking at 25 to 30 amps and 6 or 7 cells. A session with MotoCalc told me the motor would turn a 10 x 6 prop with 3:1 gearing and would draw 25 amps on 6 cells. This seemed too good to be true, as the Vega engine turned a similar sized prop with this model. The MotoCalc 'in-flight' results



My Sunday Flyer had been stripped of its Vega 25 four-stroke engine last year, with a view to an electric conversion, so this seemed to fit the bill. The motor I had in mind was the AP-29L which was now spare since purchasing a Plettenberg for the Kyosho T33 (still on the building board). Having estimated the flying weight of the electric Sunday Flyer at about 1600g, I was reckoning on a power input of about 180 watts for a successful ROG (using the 50 watts/lb rule of thumb), but with a wing loading of about 12oz/sqft I suspected that this figure was probably more than enough.

showed that the plane would fly very well, and this was confirmed by ElectriCalc (although this was a little optimistic). So, satisfied that I had found a suitable power train, I immediately sent off to Gordon Tarling for a Modelair-Tech Belt Drive, and set about the modifications to the model.

The first thing to do was to strip the fuselage of its oil-soaked tissue. After this, I set about stripping out the redundant items such as the fuel tank and throttle servo, and stripping the nose back to the first bulkhead (except for the top planking). Eighty per cent of the ply bulkhead was removed and a lite-ply

former installed further forward as a support for the belt-drive. The wheels were replaced with 75mm sponge wheels from Graham McAllister. A lite-ply battery tray was designed and fitted, the nose built up again with soft balsa and the fuselage covered in polyester tissue from Mike Woodhouse.

It was at this point that I made the happy discovery that an ounce of lead had been used at the tail end of the model to achieve the plan C of G – this was promptly removed. I was very impressed with the polyester tissue. At 25 g/sqm, it is not much heavier than doped tissue, much tougher, and best of all it only needs one coat of 50/50 dope. At the end of it all, the model was weighed and found to be 1440g – 30g lighter than the i.c. version!

As luck would have it, and in complete defiance of the aforementioned weather law, the completion of the model happily coincided

with a calm sunny morning, so I was off to Hazlehead with my plane and a brand new 6-pack of the new Sanyo RC-3000HV's.

Nose into the wind and full throttle applied, the Sunday Flyer performed a perfect ground loop – oops – wrong stick – it's rudder/elevator only! On the second attempt, this time using the aileron stick to steer rather than the rudder stick, a successful take-off was achieved. Climbing smartly into the breeze it was soon at about 100 feet, so I throttled back gradually, until, at quarter throttle, it eventually stopped climbing. After eleven minutes of pleasant flying, gentle aerobatics and general stooing around, I was back on the ground - a great first flight.

Subsequent flights have been no less successful, the best duration to date being twelve and a half minutes. Now where's that Mannock!

Elektra 7 — George Whelan.

Terry Stuckey still has copies of his Elektra 7 electric glider plan pack. You get 2 wing options in the pack, a 90" polyhedral rudder/elevator wing and a 100" aileron wing. Although designed in 1990, apart from the ageing drive train it can still give a good account of itself and is quite modern looking.

Anything from a geared 600 motor upwards should give a good performance. The fuselage is a fairly simple built-up box, with plenty of rounded

corners. The battery pack is changed through a side mounted door in the fuz. The wing has a modern multi-tapered planform and standard built-up D box structure. All this for a paltry £8.00. The address is:-

Terry Stuckey
31 Dysart Ave.
Kingston on Thames
Surrey
KT2 5QZ



Now, this is more like it! Club get-together on Brimmond in mid May ... early arrivals scored as the wind speed gradually dropped from 15 mph to zero over the space of one hour!

A tale of a Robbe 'VECTRA'

Graham Irvine

In the far flung past (1989), a new model shop opened in Aberdeen. GTI Models. Everyone in the club was wide-eyed at the selection of Robbe kits GTI then had on sale. One of these kits was of a model resembling a glass full-size glider, similar to an ASW19. This was the Robbe 'Vectra', a 100" span beauty I just had to have.

Jim Masson bought one and I bought the second. Jim Masson built his as an electric glider, with polyhedral wings and a Keller electric motor powering it. This flew, but Jim said it had a funny porpoising action in flight, so he put his one "in the hanger". There it has stayed for a good number of years.

Knowing that Jim had this problem with his Vectra, and as I had also bought mine for the purpose of electric flight — which in those days was somewhat in its infancy — I never opened the kit to build it. I had also bought a Robbe 'Starmax' motor (which I still have and is for sale), but was told that it may not be powerful enough for the model. Also the Fleet speed controller (which I sold at a later date) might be the wrong combination with the size of prop advised by Robbe. I therefore became disheartened with electrics and gave up the idea of electrifying the Vectra.

In 1997, with the Vectra kit having lain untouched for 8 years or so, and myself having more time on my hands after been made redundant from my employment as a Licensed Aircraft Maintenance Engineer in 1992— also going through a long period of illness — I started to build the Vectra. I decided I would make it a straight wing with ailerons, rudder and elevator controls, but NON-ELECTRIC POWERED, just a straight glider.

The kit went together fairly easily with no real problems occurring. Dougie Bain, on Cairn 'o' Mount, carried out the original maiden flight on a very windy day. Far too windy for a maiden flight as it turned out. When I got the model home, stress cracks had appeared along the fuselage under the wing. However, as

Dougie had rolled it after experiencing the greatest of difficulty in landing—due to it's high flying speed—this may have contributed the cracks appearing in the first place!

After thinking about what to do next, and contemplating the fact that the landing speed was high—far too high for me to handle—I decided to see (as I had not fitted airbrakes to it) how I could reduce the airspeed during the landing phase of the flight.

After a long think, consultations and looking at books, etc, there seemed to be a way that the landing approach could be flown at a slower speed. After discussing it with other club members, the two methods mentioned to me were: -

- 1) Both ailerons slightly to fully up, thus acting as airbrakes/aileron, or...
- 2) Both ailerons slightly down, acting as flapperons.

As my model glider flying experience had been limited to rudder/elevator type models, and the Vectra was a good deal more responsive, I had hoped that a more experienced person would be around when the next test flights took place. However, it seemed that no one was brave enough to chance it on my behalf, to test my theories out and carry out these flights for me [*That's one of the benefits of experience, Graham! JB*]. As John McConville was abroad and I was unable to get in touch at that time with Jim Masson, I put the model aside, "in the hanger", for safety reasons for the time being.

When John McConville came home again last year, I asked him if he could sort out the Vectra's flight characteristics. The model was taken to Cairn 'o' Mount once again, after waiting for suitable weather, but the wind dropped before we completed full trimming-out and we were unable to finish test-flying it that day.

Recently, on 21st May, the weather, wind strength and direction became suitable for another attempt, so the model was readied to complete further test flights. This time, hopefully, we would get it sorted out. John McConville took the controls for the first flights that day, with Jim Masson assisting. After trimming it out and making minor

adjustments to the controls, both John and Jim had her trimmed out for me, and I had a good spell on the sticks myself. So, after 12 years, the model has flown successfully and, according to Jim Masson, "Now flies like a pussy cat." But I will need much more time on the sticks before I am able to fly her alone. Which just goes to show that having P-A-T-I-E-N-C-E pays dividends.

After seeing my Vectra at last perform successfully, Jim Masson said he was going home to cut the wings on his model to make a straight-winged aileron version himself.

Pictures of the Vectra in flight and myself should be in this newsletter, these being taken by Jim Masson during the flying session. Happy flying everyone!

[NOTE: pictures of Graham in flight weren't available at publishing time. JB]

Of the landing aid setups mentioned by Graham for non braked or flapped aileron ships, the reflexing of both ailerons upwards is used with great success on competition electric models, where a precision

landing is required 100% of the time to become World Champion! These ships are tiny and have very high wing loadings for their size. The amount of reflex used is typically 60+ degrees, with a small amount of (usually) down elevator compensation mixed in. Note that this heavy aileron reflexing places a substantial load downwards on a wing, so attempting it with 6g wing joiners can result in some very entertaining wing gymnastics as one's normally stable wing dihedral configuration suddenly becomes a much less stable anhedral layout. Fun to discover on a landing approach when tried for the first time! JB

Buffer batteries with BEC

In the last issue, reference was made to using buffer batteries with BEC systems. George W. has correctly pointed out that in any such set-up, there is a requirement for a diode in the circuit to prevent current flowing back into the speed controller from the buffer. The arrangement is very well explained in Jonas Kessler's book 'Scale Electric Flight'.

MAP



Unfortunately, we were unable to get hold of the photos taken during Graham's outing on the 'Cairn', so here's the man himself (R) with a power model at Calder Park. John McConville, in problem solving mode, is also in attendance. Graham's power model has been suffering from interminable radio interference problems. By the time the picture was taken, it looks like John's practicing for a good swing at the model with a No.1 wood. Problem solved!

**FLY IN AT DEESIDE GLIDING CLUB,
DINNET**

ADS have been invited to participate in a fly-in at Deeside Gliding Club on Saturday and Sunday, 17th/18th August 2002. We shall be able to fly 10-15 minute slots during the day, depending on the full size traffic.

There will be an opportunity to fly in DGC gliders at the normal aero tow charges (currently £18.50 to 2000 feet). Membership and glider-time charges will be waived. There will be an ongoing BBQ starting at 1.00 pm. You will likely have to pay for this.

It is not an Open Day, so members of the public are not being encouraged, although they will not be excluded. If you intend to come, can you please contact Jim Ruxton by phone at 01224 316082 or by Email – JADRUXTON@AOL.com.

The details Jim would like are:

- The proposed types of models to be flown
- The frequencies to be used
- The day or days you intend to come and the approximate time of arrival and departure.

This will enable him to work out a flying programme.



Nice planes but outrageous hats! George Whelan with his ARTF Nebula electric glider, during a cold winter's afternoon at Calder Park, and Mike Pirie lugging his fully rigged quarter scale Grunau Baby up Brimmond, late last year. I'm certain that there's a "movie" theme here just wondered if George had recently been to see "Battle for Stalingrad", with no doubts at all that Mike's been watching his "Zulu" video again!





Alan and Mike discuss the electrified 'Flinger' during a break from the grass cutting ... an excellent turnout at Maryculter on Tuesday 9th July, which saw everyone pitch in during the flying & flymo session.



Keith Donaldson's Middle Phase copes well with Brimmond's lightish conditions.



Older rock stars don't fade away. They join ADS. So THIS is life in the fast lane! Inhaling balsa dust makes such a relaxing change from fighting off groupies and trying to think up fresh excuses for being home late with someone else's clothes on. And one advantage of having a butler is that you just hold out your hands and a transmitter magically appears!



A calm Tuesday evening in the beginning of May at Calder Park, and sufficient thermal soarers had been dusted down to create a queue for the winch. Very relaxed flying for most, but two models came to grief. One because of a flight battery pack failure, and the other the result of losing a duel with the winch. (the wings foldedno names mentioned!)



Speaking of rock stars, these two fashion icons have also been keen, long-term ADS supporters. Graham Donaldson and Norrie Kerr enjoying sunshine and uncomplicated soaring competition in the 80s, when the rules were simpler and the emphasis on participation and FUN! Norrie the chief head-banger at this event, the photo opposite showing the autopsy on a soarer unfortunate enough to come into contact with his head. Norrie the only one who couldn't respond to "DUCK!" because he was piloting at the time. The head survived, the model didn't!



ADS & SCOTTISH SOARING EVENTS CALENDAR 2002

Month	Date	Event	Venue	Organiser	Tel. No.
MAR	31	International Postal	Mossmorran	Brian Sharp	01738-626589
APR	7	Fun Fly	Fairley	B. Shaw	01294-602686
	14				
	21				
	28	ADS Slope Fly-in	TBA	Mike Pirie	01224-323640
	28	Open/100S	Mossmorran	Dave Bradbury	01592-782906
MAY	5	Open/100S	Warrick	Harry Merrick	01563-526980
	12	Electroslot/Mini Glider	Mossmorran	Dave Bradbury	
	19	ADS Thermal Fly-in	Calder Park	Mike Pirie	
	19	Open/100S	Mossmorran	Dave Bradbury	
	26	Open/100S	Mossmorran	Dave Bradbury	
JUN	1,2,3,4	RadioGlide	Oxford		
	8, 9	ADS Hazlehead - fun-fly 8th - Open/100S 9th	Hazlehead Park	Mike Pirie	
	16	Open/100S	Mossmorran	Dave Bradbury	
	23	Electroslot/Mini Glider	Mossmorran	Dave Bradbury	
	30	ADS Slope Fly-in	TBA	Mike Pirie	
	30	Open/100S	Boldon	Brian Johnson	01915-368178
JUL	7	Test day/Electroslot/Mini Glider	Mossmorran	B. Sharp/D. Bradbury	
	14				
	21	ADS Electric Fly-in	Calder Park	Mike Pirie	
	21	Open/100S	Mossmorran	Dave Bradbury	
	28	Anything goes Fun Day (?)	Mossmorran	Dave Bradbury	
AUG	3,4,5	Scot Nats - Open/100S/E-slot/ScotSlot/Mini Glider	Mossmorran	Dave Bradbury	
	11	ADS BBQ & Fly-in	Calder Park	Mike Pirie	
	11	Open/100S	Mossmorran	Dave Bradbury	
	18	Open/100S	Mossmorran	Dave Bradbury	
	24,25,26	British Nats			
SEP	1	International Postal	Mossmorran	Brian Sharp	
	8	Electroslot/Mini Glider	Mossmorran	Dave Bradbury	
	15	ADS Slope Fly-in	TBA	Mike Pirie	
	15	Fun Day	Fairley	B. Shaw	
	22	Electric Fun Fly	West Calder	Tom Laird	07761-645644
	29	Electroslot/Mini Glider	Mossmorran	Dave Bradbury	
OCT	6	Standby Date			
	13	Standby Date			

Movers & Shakers

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ADS welcomes any material of modelling interest for publication, so a few words (& photos please) about one's latest aeronautical creation/experiences/hints'n'tips will be warmly welcomed. The Ed has fitted an extra large letter box in anticipation of being overwhelmed with information!