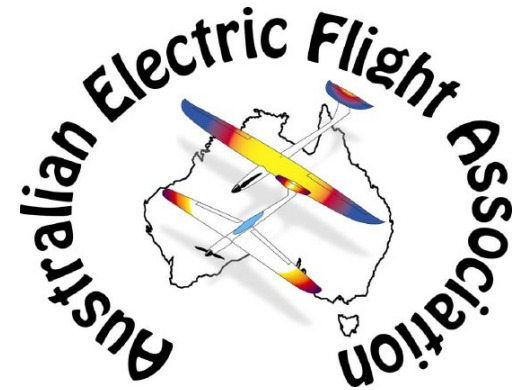


Electric & Glider **FLIGHT** *Australia*



Edition Number 11

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Basic models win the F5J Trophy event - Prego 3.2m on left 1st in the hands of Marcus Stent, Avatar on the right 2nd in the hands of Phil Bird

Editorial by Peter Pine

Welcome to 2018! I wish you many happy electric and glider flights this year.

I am rushing this edition out before the F5J Trophy news is old history, and just before the Sailplane Expo in Armidale.

You will be interested in the ground breaking information that came out of the F5J Trophy event, with special thanks to Marcus Stent for sharing his expertise. The seminar on F5J in Slovakia may also interest you, and the great video by Peter Baumgartner - see the Trophy article for information on where you can find these items.

The fact that simpler models held sway at the F5J Trophy is very revealing, and many thanks to Phil Bird for giving us a write up on his model and its assembly process.

2018 holds many interesting events, including the beginning of the Team Selection Trials for the first F5J World Championships, and inclusion of electric flying in the Master Games scheduled for October in Alice Springs.

Join in these great developments, and watch for new AEFA initiatives in 2018!

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President's Message by Trevor Smith

Welcome to the new year,

It seems like I only just finished the last event in 2017 and now there is a growing list of events to consider for 2018. I know I cannot get to them all but one that does spark interest is the Electric Millennium Cup. The trusty Radian stands at the ready and in the spirit of the Millennium Cup I've started practicing with my converted bungy launch Prophet IV from 1983.

With NEFR 2018 rapidly approaching the committee are busily dotting the I's and crossing the T's to ensure this signature event provides maximum fun and maximum flying. But of course your help is needed, and all you need to do is come along. A sneak look at the entries to date suggests that vintage electric glider will be a goer this year. The pressure is now on for me to finish the Thermalist vintage glider I started to build for last years NEFR.

While many of us fly a wide variety of aircraft, all eyes will no doubt be on F5J this year with World Championship selection trials commencing at Milang in March. While the Armidale Sailplane Expo this year is not a selection trial event, I'm



sure that the participants will be representative of who will be serious aspirants when the trials start at Milang.

At the upcoming AEFA AGM to be held during the NEFR in Canberra, all AEFA committee positions will be declared vacant with the 2018/2019 committee to be elected from nominations received. So if you have considered being on the AEFA committee, or wish to nominate someone you would like to see on the committee, then contact the AEFA secretary Ralph Dephoff (randmdephoff@gmail.com) for a nomination form.

The Stork glider didn't arrive at Christmas but a flying wing did, perhaps a contender for foamy pylon at NEFR. It's built, with a more powerful motor of course, and ready to maiden. So if you live in the northern suburbs of Sydney keep your head low for the next couple of weeks. I hope I don't get a new nickname...dangerous Trev!

Until next time.....Trevor Smith

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Check pages 15/16 for information on the NEFR that is only 9 weeks away - and consult the AEFA web site for an entry form. Place your entry and book your accommodation!

2nd Annual F5J Trophy Event

The F5J Trophy event held at the NAAS field just outside Canberra on the first weekend in November 2017 proved to be a great success, run to overseas protocols learned in Slovakia; 6m safety corridor, ready box strategy, and a continuous sound file.

The safety corridor allowed easy access to and from the field. Fliers were banned from flying over the safety corridor lower than 10m, and prohibited from landing in the corridor. Fliers launched from the upwind side of the safety corridor on the hooter, and then moved back to their spot 21m behind them. As the corridor was cleared fairly early in each heat, the fliers for the next heat could access the corridor and prepare for the next flight even before that heat had finished.

Fliers gathered in the ready box at the pits end of the safety corridor while the heat before them was flying, so they were ready to proceed to their marked take-off spot (the draw allocated take off location as well as group to be flown) as the previous group was finishing up. They needed to do this as there was no waiting between groups flying. As soon as one group finished, 5-minutes' preparation time started for the next group as indicated in the rules. Thanks to Trevor Smith's skill with computer files, he was able to modify the Gliderscore file to provide this continuous,

repeated calling of preparation and flight time. Several warnings were given during the countdown of preparation time (2 minutes to go, 30 seconds to go), and the horn sounded to start the next heat right at the end of the prep. time. This made for a very smooth running event with no delays.

The whole process was aided by the new AEFA sandwich board that displayed "round" and "group" in large, 40mm high numerals, double sided so that it could be read from the pits or from way out on the field; there was no confusion about which group was flying.



Marcus Stent, gracious winner of the F5J Trophy 2017. His name goes on the perpetual trophy, and he picked up a serious power supply unit courtesy of sponsor Dave's Toys for Big Boys - support the guys who support our sport!



Above: Alan Mayhew from Melbourne prepares to launch his Xplorer.

Right: Col May came all the way from Bundaberg to fly his Pike Perfection. Phil Stevenson timing.



Consequently, 9 rounds were flown in 1.5 days with 32 fliers (8 or 9 per group). Fliers came from all eastern mainland states to give a good interstate representation.

Saturday flying commenced in idyllic, calm conditions and fliers had to fly gently to eke out a good time in the calm conditions, but the wind built up dramatically during the day. Some were concerned about the wind reaching something

like 25 km/hr, but Marcus Stent encouraged us to keep flying and learn how to cope with wind, or we will always be stopping events as soon as the wind builds up a bit. Apparently the FAI wind limit is something like 36 km/hr! I certainly learned a good lesson, as I followed lift downwind twice in the extreme conditions, and even though

I was flying a slippery model, it was lightly loaded at 1.3kg and could not get back to the spot. I had to start my motor to bring the model home - thank heavens for "emergency motor restart"!

Sunday was much better, and even though the wind did build up somewhat, it was nothing

like Saturday. Flying concluded about 1:30pm with 9 rounds under our belt, and provided for a more relaxed pack up and presentation.

Marcus Stent from Melbourne gave an amazing performance to take out the event with a borrowed model; a 3.2m Prego designed by Alan Mayhew to introduce his club members to an aileron glider. This was the prototype all-balsa model, and Marcus had never flown F5J before (though he has developed considerable thermal-finding skills flying F3K). Marcus' skill at finding thermals was commensurate, and he graciously gave a seminar after the flying concluded and gave away some of his secrets. Many of his ideas are based on Joe Wurts' third vector theory, but I have heard Joe try to explain his theory before and could not fully understand it. Marcus put things in layman's terms and it was quite clear. In fact, Marcus has written up his thoughts on thermal finding and we have published his paper on the AEFA web site. Go to the home page and you will see a link.

Second place in Open F5J went to another home-built model, a 3.6m Avatar assembled by Phil Bird. Phil is a great flier with many years of F3B experience, and it shows. Phil has returned to flying to give

F5J a go, and he is doing amazingly well. He gave all of us a shake up at the Picton Cup event near Sydney flying a home-built "Inside", and now he has taken 2nd at the F5J Trophy! Watch this man!

Third place in Open went to experienced flier from HSL, Jack Murphy. Jack is another flier who has transitioned to F5J from winch-launch glider, and now that he has practised the new class is also becoming a force to be reckoned with. Well done Jack!

Limited F5J is always interesting and it was a great surprise to Rob Watson that he took out the class with his Radian (though not to most of us watching). Rob is much practised with his Radian and usually does very well flying a model that will not reach 200m in 30 seconds, and has no landing aids to help gain a spot landing bonus. The wind plays havoc with Radians, but it was the same for all other Limited F5J fliers who struggled in the wind. Some of Rob's flights were times like 2:14 and 2:46, and most were under 5:00 minutes, but so were lots of others flying in the wind. It is all about doing better than others in the conditions!

Second place in Limited F5J went to Marius Baumgartner, also flying a Radian,



Ladislav Safarik launches his Stork with Stan Rucinski timing



Ray Murray launches his Radian in Limited F5J - note safety corridor

and this was Marius' first ever F5J event flying a borrowed model (must be a trend to borrow a model and take a place in an event - I must try it!!).

Third place in Limited went to Ken Woodward flying another home-built model. Ken campaigns very well with his balsa models and enjoys it!

Note the prevalence of smaller and home-built models in the results, and foam ready-to-fly Radians. Do I need to make this point again? **It is not all about having the best model** - it is all about being able to find thermals and land well! This accounts for the rapid growth of F5J that does not require high-tech equipment or great expenditure to be able to compete. Give it a try yourself.

A report on the F5J Trophy event is not complete without giving credit to the NAAS club for providing a great site and great hospitality. The field is one of the best on which I have ever flown. The site is vast and caters for superb camping; the club has invested in buying their own toilets and setting them up on stands, and they have charging stations and 240V power available. A hot shower facility was added and is exceptional - we call it the Taj Mahal with wrought iron decoration and mirror provided! How many other clubs would go to this trouble to cater for visitors?

And there is more; one of the on-site containers can be set up as a theatre and it was in there that we held a seminar on the Slovakian experience and were able to screen a Power Point presentation on the Saturday evening. If you have not already seen it, a link to a summary of the slides from the presentation are on the home page of the AEFA web site.

Peter Baumgartner, Marius's father, has produced a great video of the F5J Trophy event and there is also a link to that on the home page of the AEFA web site - what a great source of information the web site is, all managed proficiently by David Lucas.

Now, the third Annual F5J Trophy event is already scheduled for 3/4 November, 2018. Mark that in your diary and do not miss the top F5J event in the country. And this year's event will also act as one of the team selection trials to select the Aussie team to compete in the first ever F5J World Championship, scheduled for Slovakia in September 2019. That is only relevant to fliers who have already nominated that they are in contention for a place on the team; aspirants must nominate and pay a fee before competing in their first team selection trial, and there will already have been two such events (Milang and Jerilderie). The event will not be any different because it is a team selection trial, and those of you not interested in team selection can continue with impunity!



Hutton Oddy is flying a state-of-the-art light model from the Netherlands called the El Nino.



Don Farrar launches his Stork at Canberra



Top left: Marius Baumgartner placed second in Limited F5J in his first event - seen here with father, Peter.

Top right: Gary Ryan made the trip from Melbourne for the event.

Left: Stan Rucinski launches his Stork

Right: Paul Gibson with his Stork.

There were Storks everywhere. Must be a baby boom in Canberra!



Review of Art Hobby

Avatar

by Phil Bird

Let me tell you how I built and flew the Avatar, but first I will tell you how I got to build one.

A few months back I attended the funeral of my best mate, Peter Abell. At the funeral I met up with friends, some I hadn't seen in 17 years. I had given up competition flying and most model flying back then to concentrate on building and flying full size. I was talking with one of my friends there, Peter Pine. Peter told me about a soaring competition I might be interested in called F5J. That got the gears turning in my head, so shortly after I did some research to find what models were available at a reasonable price. I did not want to convert one of my F3B models; they were just too heavy, and I did not want to get back into moulding wings, so I purchased a "Inside" F5J kit (I like building), dusted the cobwebs off the Graupner MC20 and converted it to 2.4 GHz.

The "Inside" model is actually very good; the accuracy of the parts is superb. In the right conditions it could beat any of the much more expensive gliders out there. It

is however very light and I would not like to add much ballast to it when the wind speed picks up, so I needed something a little stronger with a higher aspect ratio. (That's what I told the minister of finance anyway).

Again, a kit was more appealing to me and the one that stood out for both looks and price was the Art Hobby's "Avatar." A while back I purchased an AH "Bobolink" DLG, just because I liked the look of it. I was amazed about how good a veneer covered wing could be. With that knowledge, I researched further. The "Avatar" is available in T or V tail variants, 3.4m, with spoilers or flaps. 20-1 aspect ratio, and 7.8-9.5 oz wing loading (according to AH) depending on the tail type.

I think a properly set up T tail glider is the nicest of all gliders to fly; it does however have one major drawback and that is weight. The tail-boom and vertical stabiliser has to be strong enough to support that tailplane sitting up high both flying and landing, plus there is weight added getting controls to the elevator. So I chose a V-tail variant with flaps. Spoilers have a lot going for them, but with flaps you also have camber changing ability.



Above - Phil Bird with his newly assembled Avatar for F5J - and
Below - detail of the wing tip assembly and line-up.



Art Hobby has been around for over 30 years producing kits in Poland, with a staff of eleven people and an office in the USA. Some of the accessories, such as spinners, are made in the USA. I paid my money and within a week I had an "Avatar" kit on the doorstep delivered from the USA.

First impression of the kit was excellent. Plugging the CF wing joiners in showed the outer wing panels lining up perfectly and a nice straight trailing edge which is a good sign. The tail-boom is a tapered carbon tube, and the fuselage pod is nicely moulded in glass with carbon reinforcements. The V-tail is shaped sheet balsa covered with lightweight cloth and the elevators are pre-hinged.. A substantial carbon/balsa/glass main spar goes almost the full length of the centre panels.

So the first job was to weigh all the parts. The published empty weight is 920 grams, Main components out of the box were 917g so straight away the claimed flying weight of 1340 was looking shaky . The instructions that came with the kit are adequate considering this is certainly no beginner's model.

Closer inspection of the wing had me a little disappointed about the uniformity of the wing surface; whilst it is probably fine for some people it wasn't for this fussy bugger. The main problem area was 2-15mm in from the trailing edge on the

top surface where there were concave areas .5-.8mm deep. Other areas not so good were around the aileron and flap sub spars, and areas around where change of taper occurs. The veneer on this wing is only around .5mm so very little sanding could be done to get rid of the high points.

With this in mind I chose to get the wing panel surface close to a finish before joining the centre section and fitting the wing tips. The plans call for lacquer; I chose to use Epoxy laminating resin with a tint added. After a light sand of the veneer(a little heavier at the high points), two coats of epoxy was screeded to seal the wood surface. The excess was immediately taken off with paper towel and lightly sanded after curing. Then, five more coats were screeded on span-wise sanding down with 600 wet after each coat until I was back to a high point, finishing with 1200 wet and then cut and polish. The total weight gain because of the epoxy was 65 grams, not a lot perhaps, but could have been less if the wing had been better. Because the thickness of the epoxy on the wing varies with all the filling, I could not achieve the uniform tint to the finish I was after. Never-the-less, holding up to the light the wing looks like a mirror. I had thought about using epoxy and micro balloons first on the low areas, but that would have shown up under the epoxy.

The next job was to cut out the flaps and ailerons. This wing is a little unusual for a non-moulded wing in that the hinge material is already in place

between the underside of the veneer and the sub spar. Care has to be taken not to cut through the aramid fibre. Fortunately for me, I have done this many times in the past, but it could be daunting for others. The old saying, measure three times, cut once, is very valid here as you are trying to cut through one surface and get the cut to line up as close as possible to the cut in the opposite surface. The instructions say a rounded tip blade is included in the kit; mine was missing so I made one. It worked fine cutting through the veneer and balsa but not the hinge material. Because the hinge is .5mm away from the surface a gap needs to be filed in the hinge line to allow the control surface to move.

Next job was the servo cut outs; care has to be taken cutting the cross grain of the veneer as it will split easily. A razor saw is best for this job. I was planning on putting the flap horn on the bottom surface, not wanting to cut the top surface, but after repeatedly telling myself this was not an F3B model I changed my mind.

Another concern was the recommended way of joining the centre section panels. Basically, after fitting the small wooden support blocks for the wing bolts, the centre section is butt joint glued together, and then a couple of layers of cloth epoxied over the top of the joint. Again I followed the plans. Holding the wing onto the fuselage to mark the position of the hold down bolts prior to joining the wing halves, I also noticed the wing

seat on the fuselage is not a great match to the under side of the wing, that's something else I will have to fix; more weight probably.

The polyhedral tips were then glued onto the outer panels after sanding the ends to get the dihedral required. Lightweight cloth is then applied to the joint. The surface finish of the wing tips is better than the main panel; the curve of the LE is made with layers of veneer and then sanded to match the straight hardwood LE. The veneer sheeting has been glued down over a compound curve - impressive!

Servos were then fitted, control horns, wiring harness and some go fast paint on the wing tips. The V-tail is already made from sheet balsa and covered with lightweight cloth, and the elevons are pre-hinged. All that has to be done is to glue the halves together and cover the joint with lightweight cloth. I had already decided I was going to glue the tailplane on to save weight. I made a lightweight balsa keel to go inside the carbon boom to hold the .8mm wire pushrods, with cross pieces every 150mm to wedge tightly against the sides. The forward part of the keel is simply glued to the servo tray.

I used silicon to make up for the poor fit of the wing onto the pod, once done I could then glue the tail boom onto the pod, aligning the V-tail at the same time.

I used the recommended ART1800 motor (860 Kv) with a 15x6" prop, and Art Hobby's own 40mm nicely made spinner. Instructions were included on modifications required to keep the prop folded in flight. The motor mount has to be installed 5mm back from the front of the pod.

The first proper assembly and balance at the recommended CofG showed the model nose heavy, so the 40 amp ESC was swapped for a 30 amp ESC. Static amps showed 27 so that should be OK. Weight came out at 1490 grams with a 1000mAh battery pack. Even accounting for the excess epoxy I had to use and 16 gram servos in the wing, I think the claimed 1340gram flying weight is a little optimistic for a basic 917 gram empty weight, especially when you start adding in glue, varnish, resin, glass, wing joiners, wiring, radio gear etc.

The moment of truth came on a perfect day for flying. On the first launch, the model behaved itself; launched flat. That's how the model stayed until I pulled the stick back; not a rocket climb but adequate. I killed the power at perhaps 150' to check the pitch trim on glide, and nothing had to be touched. I immediately found a thermal and climbed out, noticed that the LH roll rate was higher than the RH. Then tried the crow set up and realised I had way too much down elevator coupled in. I landed and checked the throws; somehow I had more up left aileron than right - fixed that. In between answering questions about

the model from onlookers, I changed the elevator-flap mix. The next flight (another thermal found low) and the roll rate was now the same in both directions, but as soon as I pulled on flaps the model went into a near vertical dive. Yep, too busy talking, I had added more down instead of less in the mixer. Landed adjusted the mix correctly this time; another launch, another thermal. The CofG at the recommended position is just about how I like things in a thermal glider; still reasonably stable so at a distance nothing silly is going to happen.

In conclusion, I really like this model. A V-tail is not every one's cup of tea, but the positives outweigh the negatives. I am already thinking about getting another one as a back up. Hopefully Art Hobby can do a better job of checking the wing before it is sent. AH have a newer glider that is worth a look, called "Silent", almost the same wing as the Avatar but with a conventional tail and a slimmer fuselage; that might be worth a look!

Assembly images can be found here:

<https://photos.app.goo.gl/yOfBRBdoqfob2tq83>

Choose a good model, fly F5J, and enjoy it!

Secrets of LiPo Management: Balance your packs!

by Peter Pine

Yes, we all execute balance-charge with our packs, and assume we are doing the best we can. Not so! I have had an issue that has given me an epiphany on how to manage my LiPo packs.

In the past we have used relatively large packs and relatively low amp demands. Take a 1300-3S in a Radian for example - we are probably pulling 18A or something like that. That is not a demanding situation; we have used 25C packs or similar, capable of 32.5A continuous current draw. Sometimes we use Airstrike 60C packs and they are a doddle (and they deliver more power - a pity they are no longer available)!

Now we are screwing down the smallest LiPo packs we can in to narrow F5J fuselages; many have turned to 850-3S packs to save room and weight. And we are generally pulling around 35A out of them, so have needed high-C rated packs. I thought that was the answer and I needed to do nothing more for successful F5J climbs. Do the maths and you will see we are making high demands on these little packs. 850 mAh packs delivering 35A need at least 45C packs to be on the right side of the equation.

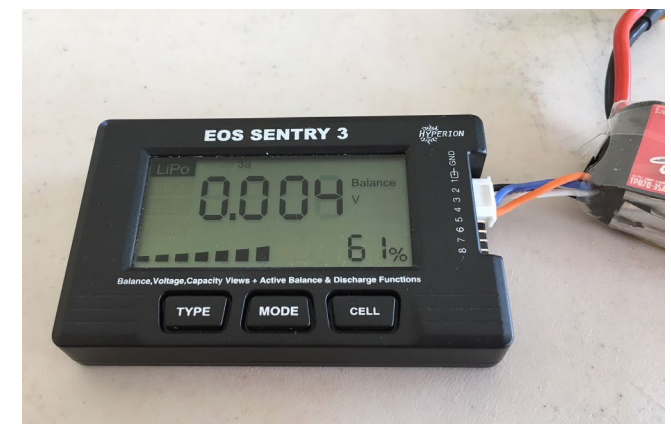
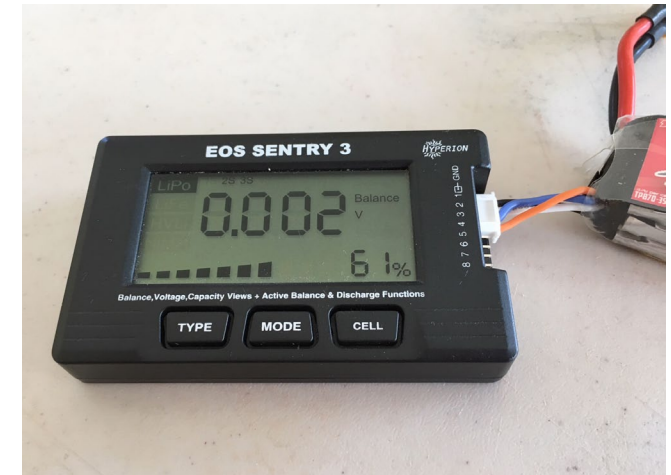
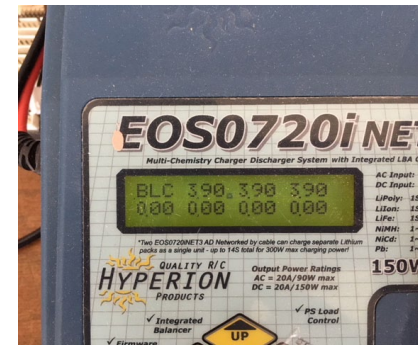
To be specific, I have been using Thunder Power 870-3S packs of 60C rating that I acquired in

Slovakia from Heinrich, courtesy of Ladislav Safarik (thanks Les!). And they are great little packs. I have also used Dave's Toys HV packs of 850-3S and 1000-3S that are 70/140C. These packs have been very reliable for some time.

But then, my motor started cutting out in the climb, especially when I raised the nose to climb steeply. And it was an intermittent problem that stumped me for some time. Believe me, I tried numerous solutions, but in the end found out that it was because my packs were out of balance (despite continuous balance charges and regular storage charges after a flying session).

Now the good chargers have a "balance" function, as distinct from a "balance-charge" function. I found that I can access the "balance" stand-alone function on my Hyperion charger by pressing "Mode" twice. Then I had to go through all the usual steps of commencing an operation (like, confirming the number of cells) and the charger starts a pure balance operation. This seems to bring the highly charged cells down to meet the low ones, so you need to make sure you have a decent charge in the pack, and the operation can take some time.

I can press the "Up" button on my charger and see the level in each cell and watch them come in to line. In the first image, you can see that this 3-cell pack has now balanced at 3.9V per cell - but this only records to two decimal places. When checking the balance on a Hyperion EOS Sentry



3, I find that the balance is not as good as it looks. Now, the Sentry 3 has a balance function that registers to three decimal places, and this seems to be even better than the charger balancing. Again, it takes some time, and often I have to restart the process to keep it going. A good result is a balance of .003V difference between cells. You will actually see on the end of LiPo packs distributed by Dave's Toys that Dave has checked each pack before despatch and written the voltage variation on the pack. I just checked several packs and they all had values like .000, .001, and .002. This is a good service and a guarantee of starting with a well balanced pack.

In the second and third images you can see that I have balanced packs to within .002 and .004V. I have found that packs that have deteriorated, or been out of balance for some time, will not come down to their original balance state. I have had to be satisfied some times with .005 or worse. However, the packs then performed as they should do without causing a motor cut, except that they need constant monitoring and re-balancing. The message is that balancing like this improves performance.

Now here is a shocker - I have monitored several "balance-charges" and found that in some instances the pack is more out of balance after a "balance-charge" than before it started. So much for the benefits of "balance-charge"! Try balancing your packs properly and see if you gain performance - and let us know to confirm. New

Millennium Cup Goes Electric

The Millennium Cup has been an extremely successful, simple, winch launch glider event for two-metre wingspan/two-function control models in NSW that has run for some 18 years. Seven rounds have been scheduled each year at different locations each time, and entrants did not have to attend all meetings - the best scores were taken for the results. The events have been organised each year by the Heathcote Soaring League club that is based at Maddens Plains, just south of Sydney.

Numbers have been dropping slowly as adherents turn to electric gliding, so the organisers decided to change to electric gliders from 2018 on. Here is a letter from Col Woodward, HSL President, announcing the change:

Due to increased interest in electric launch gliders, and to encourage new participants, we are going to use electric assisted launch gliders at the Millennium Cup contests, instead of winch launch models, from the beginning of 2018. Please find attached a set of rules for electric assisted models to be used at future Millennium Cup contests. The electric assisted glider rules have been developed to keep the same simple, cheap and fun theme that the Millennium Cup has always tried to achieve.

The electric model is essentially the same as the winch launch model but is allowed to have



To enter the Millennium Cup, chop the nose off your favourite 2.0m glider and add an outrunner - As in this image showing David Lucas with a Drifter 2 converted to electric with a Scorpion outrunner.



The ubiquitous Radian also suits the Millennium Cup - so dust off your trusty Radian - seen here in the hands of Ralph Dephoff

an extra radio channel to control the electric motor. The model will also require a height limiter to switch the motor off at 150m. To keep an even playing field, the power of the model will be roughly equal to the output of a standard Parkzone/E-Flight radian, 180watts (measured with the models fully charged normal flight pack after 10sec of continuous motor run).

There will be a wattmeter made available in the Millennium Cup equipment box with various battery connectors for people to "self police" their models. Random tests may be conducted if the CD of the day or the Committee notices an obvious breach. The contest director will choose a launching spot which has no equipment or people upwind for safety. As planes are launched, the pilot and timer will reposition onto their landing spot. The contest director will have to "meter" launches depending on available landing spots.

The electric assisted models will require their time keeper to start a watch when the model leaves the launcher's hand. At 30 seconds the time keeper will announce that the motor should be turned off, if the pilot or limiter has not already done so. The pilot will need to fly for a total of 6min 30sec from when the model is released. Once the model has been released, no relaunched are allowed. If the motor is started again then the flight time will stop, there will be a 50 point penalty and no landing points. This is to try to mimic an out landing for a winch launch model and to deter

flying for maximum time points when there is no chance the model will get back to the spot.

A score will be submitted which includes total flying time up to 7minutes (6 minute 30seconds for maximum score), landing distance and motor re-run penalty if required. At no stage will an electric model be launched or motor started pointing towards people or the pits. Landing will be the same format as the winch launch gliders. We welcome any comments as the competition is run to further improve the format. This set of rules will be made available on the Heathcote Soaring League Website: hsl.org.au

Regards, Colin Woodward

The full rules can be viewed on the AEFA web site, so check them out, dust off your 2m electric soarer, and give it a go.

Check the next article for a report on the first Millennium Cup round that was attempted recently at Appin - interesting observations by Ian Avery on the fliers and models that turned up.

Millennium Cup Rnd.1 2018

by Ian Avery

The 1st round of the Electric Millennium Cup at Appin recently (14 January) did not start: it was much too windy to fly and it only got worse as the morning wore on. There was not even any test flying and at 10am the comp was abandoned. The next round will be at Goulburn on 11 February so we have to wait and see how the models go then. Some 30 fliers turned up this time. It will be interesting to see if the same mob show up at Goulburn.

Models varied from a couple of purpose built state of the art, composite models, and modified old style thermal models (floaters), as well as a number of Radians. There were probably around thirty in attendance. No one tried to fly, just too windy. (I believe Rob Watson was brave enough to give it a try, but soon gave it away as he went backwards with this Radian. Ed.)

Klaus Metzger had a converted Serena which looked to be a very nice model. He said he is not sure of what power he is running but the model achieves 150m in around 25 seconds. He's using a 10" prop on three cells with a 45Amp ESC so it will be interesting to see what the power is as he hasn't measured it yet. The model has really tiny metal gear servos that cost around \$60 each, designed for DLG rather than electric, but Klaus says they generate more than enough grunt to

drive the elevator and rudder. (Sounds like the KST DSX08 that is now popular for some uses in F5J to save weight - actually weighs 8g and is all metal with metal gears. Ed. - Yep, checked with Klaus and that is what they are.) The model looks like an oversize DLG model with a big prop on the front and Klaus seems to be very serious about this event. His Serena was probably the best model for the Millennium Cup purpose that I saw at Appin.

I looked up the Art Hobby web page last night and a bare Serena kit would cost around A\$400 or more from Art Hobby in USA so I am going to try and use what I have for the time being.

I have a 'First' electric fuselage that I acquired years ago. It was used in 7 cell glider and has a set of wings given to me by Barry Payne, but the wings won't fit the fuselage - the bolt holes don't line up. The fuse is designed for V-Tail, which will have to be changed to a rudder and elevator, so it will be a bit of mucking around to get it going (Note - V-tail is allowed in the Millennium Cup., with elevon mixing. Ed.)

My old 7cell electric model needs the old JR mini servos but I cannot find them amongst all the junk. I know I put them somewhere safe when I took them out of the fuselage before I repaired it over ten years ago! So not sure what I will do at the moment, but the event is certainly interesting. (We wish Ian well in the Millennium Cup! Ed.)



Launch time at the F5J Trophy event in Canberra - yours truly in front launching a 3.5m Mibo Models Electra2, then Klaus Metzger down the line, timed by Ken Woodward, then Dave Pratley timed by Hutton Oddy - becomes indistinct after that.

Rob Watson received the perpetual trophy for winning Limited F5J at the Australian Trophy event - he keeps it for a year and has his name inscribed on the trophy - he also received a super, duper Ultra Power AC400 Duo Charger courtesy of Model Flight. Support the dealers who support our events!

Time to prepare for the National Electric Flight Rally 2018 - details next page

NEFR 30th March - 1st April 2018
NAAS Club Field, Canberra

Come Explore Fly

Australian Electric Flight Association

Food: All day from 8:30 Sausages Bacon & Eggs Steak Sangas Coffee Tea Soft drinks	Events: Foamy Pylon LEG Radian Old Timer F5J Scramble Scale	NAAS: Legendary Lamb Roast Sunday night. \$30 per head. It's worth going just for this!	GPS coordinates: -35.583815 149.061196
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National Electric Flight Rally now only 9 weeks away! A great event! Entries open - visit the AEFA web site and see a link on the home page Submit your entries - Book your accommodation! See you there!

Bring yourself, bring the family next Easter and come to Canberra.
There's lots to do in Canberra and then there's
the flying which will be great.

Full details including, entry form, accommodation options,
directions, event descriptions, event CDs, nearby places to visit
are all here on the [AEFA website](#).

**Bring your aircraft and skill to the fantastic, unrestricted, safe
Willie Emmett Flying Field south of Tharwa**

Event includes Annual AEFA AGM and Dinner:

Vikings Club - **7:00 for 7:30pm, Saturday March 31st, 2018**
Corner Athllon Drive & Rowland Rees Crescent, Greenway ACT 2900 (20 minutes drive from field)

BaaMoo Room, at back of restaurant. \$50 per head
Alternate drop main course and sweets - bar available

Contact Details for AEFA Executive & Event Director

Trevor Smith - President - 0411 887 350 - trevor_d_smith@bigpond.com
David Lucas - Treasurer and NEFR entries - (02) 6676 4107 - rivercat@mac.com
Peter Pine - Event Director - (02) 6676 1437 - ppine@northnet.com.au

Event rules, including F5J changes, entry form etc visit Australian Electric Flight Association web site

www.aefanet.com

For NAAS website visit www.naas.org.au

F5J at the MAAA Nats West Wyalong Courtesy of the AEFA

The AEFA has put its hand up to run an F5J event at the MAAA Nats being offered at West Wyalong a couple of weeks after Easter next year. Several AEFA fliers are keen on supporting the traditional Nats, so will be attending and helping by running this event.

F5J is being held at the West Wyalong Airport. A practice day has been nominated as Wednesday 25 April, and F5J will then be flown over the next two days on Thursday 26 and Friday 27 April. Terry Scolari is going to act as Contest Director and I am sure he will receive help from Mal Pring and Mel Gillott.

Maybe you might like to schedule coming to the National Electric Flight Rally in Canberra at the NAAS field over Easter (30 March - 1 April), and then move on to the Nats in West Wyalong. For more information and registration, consult the Nats Web site:

<http://www.maaaevents.com.au>

Slovakian Triangle 2018

The three events run in Slovakia in the one week are being held in July in 2018 to avoid the European Championships in Bulgaria. The events are:

July 16-17	Dubnica SK F5J
July 19-20	7th F5J World Cup at Trnava - MAAA approval required
July 21-22	3rd World Challenge open event - Trnava

Slot these in to your diary if you have any interest in attending. The AEFA would like to see another Aussie team attend these events and gain experience - talk to the AEFA on how to register for these events.

Alice Springs Masters Games Model Flying with F5J Included

A Masters Games event is scheduled for Alice Springs next year between 13 and 20 October, 2018. People come from all over the world to enjoy this event. For the first time Model Aircraft Flying is included on the program. The three classes being competed are Scale Aerobatics, F5J and Vintage Old Timer! The events are being organised by Aeromodellers Northern Territory (John Adams made us aware of it) and will take place at the Pedder Field. Minimum age for this Masters Games is 35, with two categories being competed - 35 to 49, and 50+.

If you would like a trip to the red centre, and you qualify on age, mark this event in your diary! There is a one-off fee of \$70 for joining the event, and an extra \$70 entry fee for entering events, no matter how many events you compete in. Maybe you would like to try some of the other sports events as well!

For more information, consult the official web site here:

<https://alicespringsmastersgames.com.au/sports/model-aircraft-flying/>

AEFA Web Site Features

In case you missed it, please note that the AEFA has placed some links to interesting material on the home page of the AEFA web site - thanks to David Lucas for all his hard work on this site:

1. The content of a Power Point presentation about the events in Slovakia
 2. A great video of the F5J Trophy event made by Peter Baumgartner
 2. A written version of the "how to find thermals" tutorial given by Marcus Stent at the F5J Trophy event - pure gold!
 3. The list of the currently approved data loggers for F5J.
- Check out these links now!

2018 Glider/F5J Events Calendar

Produced by the AEFA to promote F5J & Gliding

No.6/17-1-18

Key - green for F5J events, HSL stands for Heathcote Soaring League

Date		Flying Events	Notes
January			
14-Jan	2m Electric Glider event	Millennium Cup Rnd 1	Appin
14-Jan	RCGA event	Open Thermal Glider	Diggers Rest
21-Jan	RCGA event	F3K Discus Launch Glider	Diggers Rest
25-26 Jan	Sailplane Expo	Stand Alone F5J 2 days	Armidale
27-28 Jan	Sailplane Expo	Open Thermal	Winch launch
February			
11-Feb	2m Electric Glider event	Millennium Cup Rnd 2	Goulburn
18-Feb		HSL Club Comp Rnd 1 - F3J & F5J	Maddens Plains
23-25 Feb	Ray Pike Memorial Comp	F5B International	Mansfield, VIC
March			
4-Mar		F5J at Hunter Valley Champs	Muswellbrook
4-Mar		HSL Club Comp Rnd 2 - F3J & F5J	
9-10 Mar	FXJ Australia - SSL	F3J & F5J International F5J team selection trial	Milang, SA
10-12 Mar	FXJ Australia - SSL	F3J International	Milang, SA
18-Mar	RCGA event	F3K State Championships	Diggers Rest
25-Mar		Heathcote Cup - Open/ 2m	Maddens Plains
30 March - 1 April	Easter	NEFR at NAAS including F5J	AEFA Rally Canberra

38th Armidale Sailplane Expo

January 25 to 29, 2018

New England Model Aircraft Club and the Sailplane Expo Trust invite you to beautiful Armidale on the New England Tablelands for the 38th Sailplane Expo. Events will be Australian Open Thermal (10 min flight in 12 min working time, 150m lines, FAI landing tape, all rounds count) and F5J (10 min flight envelope, max 30 sec motor run, F5J landing tape).

F5J will be held as a stand-alone event from 1130 -1630 Thursday January 25 and 0900 - 1630 on Friday January 26.

Open Thermal will be held as a stand-alone event from 0900-1630 Saturday January 27 and 0900-1300 Sunday January 28.

The field will be available for practice Wednesday January 24, 2018

The field is on the left of Warrane Rd, Dumaresq, approx 3.5km from Booralong Rd turnoff.

Google Maps Co-ordinates
-30.444252,151.518692

We look forward to seeing you all again. Bring your MAAA membership card with you.
More details :- Hutton Oddy 0425 285 758 or
vhoddy@gmail.com

2018 Calendar continued

April			
8-Apr	RCGA event	F5J VIC State Championships	Ballarat, Victoria
8-Apr	2m Electric Glider event	Millennium Cup Rnd 3	Lake George
25-Apr	Practice Day	F5J West Wyalong	MAAA Nats
26/27-April		F5J West Wyalong	MAAA Nats

May			
6-May	RCGA event	Victorian F5J	VARMS tbc
6-May		HSL Club Comp Rnd 3 - F3J & F5J	Maddens Plains
20-May	2m Electric Glider event	Millennium Cup Rnd 4	Salt Ash
20-May	RCGA event	Open Thermal Glider	Diggers Rest
27-May	RCGA event	F3K Discus Launch Glider	Diggers Rest

June			
7-8 June	F5J Team Selection Trial	F5J LSF Tournament F5J Team Selection Trial	Jerildere
9-11 June	Queen's Birthday	LSF Tournament - DLG, F3J	Jerilderie
24-Jun	RCGA event	F3K Discus Launch Glider	Diggers Rest

July			
8-Jul	First Round - tentative Date	Picton Cup	Appin NSW
16-22 July	Dubnica, Trvana, Slovakia	3rd F5J World Challenge - Slovakian triangle 3 events	Aussie team to go!

August			
4-5 Aug		Monto F5J	Monto, QLD
26-Aug		HSL Club Comp Rnd 4 - F3J & F5J	Maddens Plains

Leaderboard Check

Yes, check out the full list of the AEFA 2017/18 F5J Leaderboard here:

<http://www.aefanet.com/images/stories/F5J/F5J-Leaderboard-2017-18.pdf>

The 2017/18 F5J Leaderboard now includes the F5J Trophy results, and the 2nd round of the Picton Cup.

Klaus Metzger has firmed up his position at the top of the leaderboard by placing in the Picton Cup. Congratulations Klaus. Other contenders who firmed their high positions are Ladislav Safarik, Phil Stevenson and Jack Murphy - well done guys!

Please note that this 2017/18 Leaderboard will conclude with the Sailplane Expo to be held at the end of January, allowing the AEFA to offer funds to the top contenders to travel to Slovakia in July 2018 for the next Slovakian triangle.

Don't forget the Ava raffle (with associated minor prizes) to be drawn at the NEFR supporting the team. Buy tickets on the AEFA web site.

The 2018/19 Leaderboard will commence after that and the first event scheduled so far that will count is the HSL Club competition on 18 February - join in and you will be on the Leaderboard!

2018 Calendar continued

September			
14-Sep	Practice Day	F5J Central Queensland	Bundaberg
15-16 Sep	2-day F5J event	F5J Central Queensland	Bundaberg
16-Sep		HSL F5J	Maddens Plains
22-23 Sep	2m Electric Glider event	Millennium Cup Rnd 5	Gloucester

October			
13-20 Oct	Masters Games	F5J Included	Alice Springs
21-Oct	2m Electric Glider event	Millennium Cup Rnd 6	Maddens Plains
28-Oct		HSL Club Comp Rnd 5 - F3J & F5J	Maddens Plains

November			
3-4 Nov	F5J Perpetual Trophy	F5J Annual Tournament F5J team selection trial	NAAS Canberra
3-4 Nov		F5J Susan River	MRSSA event
11-Nov	2m Electric Glider event	Shoalhaven Shield - Millennium Cup Rnd 7	Bomaderry
18-Nov	Second Round - Tentative Date	Picton Cup	Appin
25-Nov		HSL Club Comp Rnd 6 - F3J & F5J	Maddens Plains

December			
2-Dec	Electric Glider event	Ted Swan Cup	Goulburn

F5J Team Selection Trials for 2019 World Championships

The full details of the F5J Team Selection Trials for the 2019 F5J World Championships in Slovakia were included in EGFA E-magazine on page 20.

In case you missed it, here is a summary:

You need to fly in three events out of:
 Milang Open International 2018
 Jerilderie LSF Tournament 2018
 F5J Trophy Canberra 2018
 Sailplane Expo 2019

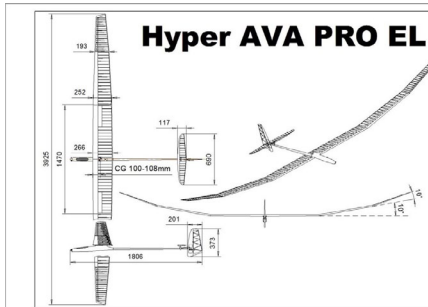
But the LSF Tournament is mandatory - so, any three events but must include Jerilderie (which counts as double loading in the calculation of selection scores).

At the first selection trial event that you enter, you must pay \$50 nomination fee to the organisers to nominate that you are an aspirant for the World Champs team. This must be paid at registration, not during or after the event. The fee will go to the team selected to assist with expenses.

So, select your events, put them on your calendar, and start practising! We wish you well as you try out for this important event.

The window of opportunity to win this AVA is closing rapidly.
 Buy your tickets now so you do not miss out!

Would you like to win an Ava Pro 4.0m Electric Glider?
Join in a fund raiser to send an Aussie team
to the F5J World Challenge in Slovakia 2018



Ava Pro- winner of F5J at the 2017 NEFR in the hands of Bob Wilson

F5J is booming! An Aussie team attended the 2017 World Challenge in Slovakia last year (with 132 competitors) and reported on their experiences and findings at the Australian F5J Trophy event in November.

The FAI has invited the Trnava club in Slovakia to prepare a proposal for the first F5J World Championships to be held in 2019. Australia needs to present an experienced team for this first World Championships!

In the meantime, the World Challenge, run by the Trnava club in August, continues in 2018. We need to send another Aussie team to gain more experience and build the Aussie F5J profile.

The AEFA has commenced another fund to assist the best F5J fliers (on the Australian Leaderboard) to attend the Slovakian events in August 2018. Last year the AEFA ran a Stork raffle to support the 2017 team.

Here is a new offer! You can take part in a raffle now that has as its prizes:



- 1st - Ava Pro F5J kit valued at \$1,500 (above)
- 2nd - Aero-naut Triple Thermic 2.5m F5J kit valued at \$289
- 3rd - Geared F5J motor valued at \$139

Tickets are \$10 each, three for \$20, or five for \$30. The raffle will be drawn at the presentation at the NEFR at Canberra, Easter 2018. Proceeds from this raffle will go to the new team for Slovakia 2018!

Buy tickets online or send a message for paper tickets to ppine@northnet.com.au. A page has been set up on the AEFA web site. You can simply click on a PayPal link and buy the tickets you want. Here is the page you need to go to - this is a live link:

<http://aefanet.com/world-champ-fund-raiser>

Ava kit supplied by Dave's Toys for Big Boys - the AEFA would like to acknowledge Dave's support for this fund raiser. You can see Dave's Toys range at www.hyperionaustralia.com.au
 F5J kit and motor supplied by www.flyelectric.com - Please support those that support the AEFA.

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Electric Glider & EOT Postal Competitions each month

There are electric glider and EOT postal events each month. Trevor Smith is managing glider results in 2017. Mike Colston manages the EOT tasks (see e-mails below). You can practice these events at your own field in your own time, and e-mail the results to Trevor & Mike. Each month they tabulate the results and send them back to you. It is a great way to practice flying these events; you go out flying with a purpose instead of just hacking around the sky! You can even time yourself, and you can repeat the tasks as many times as you want and send in a good score when you get one. The rules can be found on the AEFA web site (active link below) - look them up and join in the fun!

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(links and e-mails are interactive in this document - to send an e-mail from this page, click on the e-mail address)

Web site - www.aefanet.com