Electric & Glider FLIGHT Australia

Edition Number 7 February 2017

Ladislav Safarik snapped at the Sailplane Expo F5J event with a fully moulded Stork - you can win one of these - see pp.22-23

Editorial

by Peter Pine

We have now reached No.7 in this E-magazine and I thank you for the positive feedback that you have given me. I trust that you continue to find it interesting, but I need your support. Please send in any information on models and events that could be featured on these pages to spread the news about electric flight and gliding in Australia.

Having said that, I would like to move a big vote of thanks to David Leitch, Ladislav Safarik who supplied most of the photos from the Sailplane Expo, Mike Adams, Bob Young, Dean Williams and David Lucas. All of these guys provided content that you see in these pages, and it could not be done without their contributions. Thanks guys!

It is shaping up to be a big year in gliding in 2017 with several major events in the offing, including the F3J/F5J International at Milang, the National Rally in Canberra at Easter, the LSF Tournament in June, and the 2nd Annual F5J Trophy event in November. As well as that, we plan to send a team to the F5J World Cup in Slovakia in August. Watch for reports on these significant events - and enjoy your gliding!

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David Pratley, winner of F5J at the Sailplane Expo, and 2nd place in Open Thermal winch launch - here assisted by Gerry Carter of Gliderscore fame - both Melbourne fliers.

Michael Lewis, President of NEMAC, the host club for the Sailplane Expo, here assisting his son Daniel fly in F5J. See comment in text. NEMAC regularly support the Sailplane Expo by providing all the catering - thanks to NEMAC.

Colin Woodward launching for Jack Murphy in winch launch glider at the Sailplane Expo in Armidale.

Evan Bengtson from Brisbane, here being assisted at the Expo by David Spain (centre) and Graham Hardy (left)

Getting High in Coota

by David Leitch

What's more addictive than drugs and more fun than anything outside of relationships?

The answer turns out to be F5B. For those that don't know, and that seems to be most modellers, F5B is electric glider racing. The contest is basically to see how many legs of a 150 metre course you can glide within 200 seconds. You are allowed 10 "power on" climbs outside the "course" in that time. Then, without landing you have to do a 10 minute thermal task and a spot landing. All this has to be done within an overall energy budget measured in watt minutes. In the early days of F5B there was also a limbo task where you had to fly your model under a bar at the start of thermal task. To the spectators' regret that's been dropped.

F5B is a world championship event and the world championship is held in a different country every two years. In recent years Europeans have dominated the world championship despite the best efforts of the Japanese, Americans, occasional Canadian and the Australians. The world championship has been held once in Australia at Wangaratta and I have been told that was regarded as one of the blue ribbon events. The 2018 event is likely to be in Tokyo, the last one was in Italy. My introduction to F5B was years ago when on business in the UK I took the weekend out to visit York where the world champs were being held. I hired a push bike from York train station after dropping off the suitcase and frantically pedaled out to York Racecourse. Little did I realise it, but I'd lost my passport on the bike ride. Still, that's another story. On arrival at York I watched Wolf Fickensher flying what was then an 18 D cell NiMh model, and, from the moment I saw this model flying the course like it was an object on a robotically controlled imaginary conveyor belt, I was hooked. So smooth, so fast, so elegant! I left York with the bug and it has only grown.

The F5B team at Cootamundra for the Dave Hines' Memorial Trophy

So, you're only gliding. How hard can that be?

Well, it turns out that top level world competitors, and Australia has two of those, get up to about 250-280 kph in the motor on part of the course, and average gliding speed is probably around 160 kph. Not only that, the standing still to 250 kph time is about 2.5 seconds, and that's just for the first climb! Subsequent ones are faster. Your motor is pulling 200 amps and, say, 34 volts from the 10s, 1800 mah pack to produce around 6.5 kw. Your model is a 2 metre, fully moulded glider (no rudder) made in Russia, or Bulgaria, or Japan. Your prop is, say, 18x23. You can launch the model yourself when practicing. However at the average club field

if you ask the average club member (ie. glow flyer) to throw the model, he will normally stain his pants when you turn the power on and just stand there in shock.

And that's why it's like a drug. To start with, it's incredibly scary just to hear the motor go and the model start to buck and twist in your hand. Then, you get the model in the air and realise you have to make a 180 degree turn every 4 seconds and fly as tight a course as possible, starting at say 80 metres. Then, 16 seconds and 600 metres later, ending at least 2 metres off the ground, you are looking for those last few KPH as you go past gate A.

Then you put the power on and the model accelerates really hard into a precisely aimed left or right vertically ascending sweeper. You turn the power off just before the "line" and do it again. There is pleasure in making the model turn in a tight groove as the snap flap kicks in, getting off the elevator at just the right time. Ok, I've got a second to straighten the wings, time to roll again, wait for the buzzer, pull on the elevator, whoosh as the model goes through base A, intersecting that imaginary line in the sky, not a metre longer than necessary, another leg done, 20 metres height lost, let's go again. After a while you realise you are getting high. This is so exciting that you are going to lie awake every night waiting for the next flight. And just like a drug, you are going to want to go just a bit faster every time.

You know that the most of the guys flying F5J don't have the time or the inclination to do this, and you actually start to feel a bit for them. They are just never going to realise what they are missing out on. Both of Australia's leading F5B pilots, Keith Flatt and Mike Beatty, were well known in the old 7 cell 5 -minute thermal glider task, but you won't see them back there in a hurry. I'll turn up at some F5J contests when I have time, and I'll enjoy it. They are fun and you meet a great class of people. But nowhere near as much fun as F5B! Not even close.

Getting beaten by an 8-year-old!

You have to be a good pilot to fly F5B and be prepared to practice. But maybe it's not that hard. After all, Owen Solanov is only 8 years old and he's doing it, even if its only on 4x rather than 10x lipo. Not only that, I get the feeling he's enjoying it just as much as I am. In fact probably anyone that can fly a foam Funjet accurately can probably fly F5B. You start with less power, learn the rhythm and build up. A reasonable flyer will be doing 40 legs with only a bit of practice, but from there

Mike Beatty receives his trophy from Denise Hines

Placegetters in F5B; Brett Solanov, Mike Beatty, Keith Flatt.

it gets harder. 50 legs takes years and most pilots will never do it.

And yes, its relatively expensive for model planes, cheaper than F3A, but you will spend $2,500 getting in the air at full competition standard, and you will probably crash a model

or two over the course of a few years. In the old days you could count on some equipment overheating but actually that doesn't happen so much any more. And there are more model choices around now, and that is helping prices. Eventually, you need someone 150 metres away in the cow paddock to tell you via walkie-talkie when you pass Base B.

You know its going to be long hours, often in the hot sun, probably only flying once ever 40 minutes or so. And no, you won't be flying F5B at the local cricket oval. The ten-minute thermal task is going to tax the eyesight a bit, as the model is just 2 metres, with a thin wing and often up high because, guess what, they do thermal pretty darn well with some camber and elevator trim.

The Dave Hines Memorial Championship and Australian F5B Nats 2016

We set up the course on the Friday afternoon at the State field at Cootamundra and got a couple of practice rounds in. The weather was warm, but far from too hot, and even at 6:00 pm conditions were good. My first comp. in about three-four years due to work pressures and I was nervous, but needn't have been. Saturday morning was warm, and was a typical summer day in the inland. Hot, dusty with huge afternoon thermals and sink.

The thermals produced strong winds, even at ground level, blowing you around in the course and knocking the models around in the thermal task. At one stage the recently cut grass lifted off the ground near Base A in a perfect Willy Willy, spiraling upwards like new year's eve fireworks.

From the outset it was, as expected, a race in two for the winner's medal between Keith Flatt and Mike Beatty. Mike and Keith fly different styles. Mike has the classic European style of climbing down the first leg and then using the height to keep speed up, Keith has the alternative fast entry approach with a higher kv motor and smaller prop. Keith flies an extremely fast eponymous (look it up) entry to the course, and is probably never more than 60-70 metres high in the four leg sections. To get more than 40 legs (and world standard is 48-50), you have to fly some climbs that lead to six legs gliding. Keith often seems to do his last two legs at about 10 metre height with his Base B turn (150 metres away) at about 3-5 metres off the ground and maybe 120 kph. So much fun to watch!

Following closely in Keith and Mike's footsteps are Brett Solanov and Bill Hamilton. Then there is Owen Solanov and me holding up the rear.

Young Owen Solanov; up and coming F5B flier!

We flew 4 rounds on Saturday and 2 on Sunday. Despite the modest numbers, the F5B standard in Australia has clearly lifted in the years I was away from the sport. Mike and Keith fly at a good international level. Keith finished 15th on 97% and Mike 24th on 96% at the last world championship. The course beeping is now done wirelessly; the equipment is more reliable. We have little boxes that talk to us and tell us whether to climb for 4 or 6 legs. Our Base A and Base B helpers sit in shade rather than the sun.

After two rounds on the Sunday, final results were in with Michael Beatty in 1st, Keith Flatt 2nd and Brett Solanov 3rd. Owen Solanov came 4th overall and also won best junior. Owen needs some competition in the junior

class, otherwise his trophy cabinet is going to be very full by the time he moves into seniors in another 10 years or so.

Special thanks to our catering team lead by Alan Roberts at the State Field. Cootamundra itself may or may not be going ahead but the hotel food had definitely lifted since I was last there. In fact I had a Brazilian fish stew on the Saturday night that was perfectly acceptable. The State field now has an upstairs viewing platform and just needs a few solar panels on the roof.

Try F5B; you might fall in love with it like I did!

The Cootamundra catering team that served the needs of those flying in the Dave Hine's Memorial Cup.

Breaking news:

F5J became an official FAI event January 2017!

No longer provisional - World Championships scheduled for 2019 at Trvana in Slovakia

The F5J World Cup is to be held at the same site in August this year. The AEFA is campaigning to send an Aussie team to this event. See pages 23-24 for details of a fundraiser to assist the team. Give this initiative your support!

Wing damage incurred at the Sailplane Expo when two models tried to use the same thermal! Hutton Oddy's wing to left, Peter Pine's Pulsar to right. Both models are now under repair, and it is never as bad as if first looks!

Model Flight Midway Cup Horsham, Victoria

The RCGA site says, "If you weren't in Horsham for the weekend of the 3rd and 4th of December, 2016 then you missed out!! 21 pilots, 12 rounds, 1.5 days of great flying."

The Midway Cup was the Victorian State Thermal Glider Championships for 2016 and No.2 in the Austour Leaderboard. As an interstate challenge, SA came out winners for the first time. For a full report, consult http://www.rcga.org.au

37th Sailplane Expo - Armidale, January 2017

The Expo has been running for many years and has finally morphed in to a two event program - F5J Electric Glider and Open Thermal winch launch glider. DLG was on the program, but did not attract enough entries.

In 2017, F5J was flown as a stand alone event on Thursday 26 January (Australia Day holiday) and Friday 27 January. The event was cut short by rain on the Thursday, and finished early on Friday by the organisers decision, but 10 rounds had been completed with 20 fliers.

David Pratley flew a special production Maxa in to first place. David is now a very experienced flier and it shows, as he also placed in Open Thermal. Second place Evan Bengtson flew his trusty 3.6m Pulsar PRO and also placed in Open Thermal. It is strange how the good fliers keep taking the placings! David Spain placed third also flying a Maxa. So it was one to Victoria and two to Queensland.

There were 20 fliers in F5J (22 entrants with two dropping out). The full results appear on p.10 and you will see many familiar names of regular F5J fliers. You have to read Jack Murphy for El Zorro, and John Arnold for Mark Linwood (who did not turn up).Tic Tac Toe was another space for a late entry. If you count by states, there were 14 entrants from NSW, 5 from Queensland and David was the only Victorian representative. David also won the landing results with five 1 metre spots and only one miss. Colin Woodward was second and Peter Pine third.

Special mention must be made of Daniel Lewis, who flew a small, balsa model in F5J for the second year, and did quite well, even scoring 921 in one heat. His Dad, Michael Lewis, President of the local club, assisted him and he gained 16th place overall. Great to see you competing, Daniel. Thank you for your support and we hope to see you flying again in the future.

The Expo F5J results have already been added to the Australian F5J Leaderboard, and that puts Jack Murphy at No.1 because of the criteria used in this leaderboard.

F5J Winners at the Expo - David Pratley 1st (centre), Evan Bengtson 2nd (left), David Spain 3rd (right). Event organiser, Hutton Oddy from the Armidale NEMAC club on the far right.

Trevor Smith (l.) assists Steve Weatherstone (r.) fly a Radian XL and Scorpion in F5J.

Colin Woodward hams it up (r.) as he assists Mel Gillott fly his Maxa in F5J at the Expo

Clive Warman, winner if winch launch glider (centre), David Pratley 2nd (right) and Evan Bengtson 3rd (left).

Congratulations Jack! Check the current Aussie leaderboard on the **AEFA web site**. The results have also been added to the Slovakian Leaderboard, which only takes two results, so David Pratley's second place in the F5J Trophy event last October, and his win at the Expo, put him at No.9 in the world from 280 entrants. Congratulations, David; you are now the top placed Australian with Mark Locock at No.11, Colin Woodward at No.13, Peter Pine at No.14 and Phil Stevenson at No.16. Check the full list by clicking on **this link** and see all the Aussies dominating in this leaderboard.

21 fliers registered scores for Open Thermal winch launch glider, and 10 of those fliers also flew F5J (they had a busy four days). The winch launch event started at lunch time of Friday and finished

Kevin Smeaton and wife Betty put in a long weekend running and scoring both events at the Expo - our thanks to them for the hard work

Evan Bengtson (right) showing fine form at the Expo placing in both events - assisted here by David Spain (centre) and Graham Hardy (left).

at lunch time Sunday. The weather was idyllic and 15 rounds were completed. Clive Warman from Newcastle won the event, David Pratley came second and Evan Bengtson came third, so it was an interstate affair this time with one each from NSW, Victoria and Queensland. Full results appear on p.11. The event was managed in teams in the Jerilderie style. The winning team contained both Clive Warman and David Pratley, along with Gerry Carter, so they did well. Second place was an Armidale/Katoomba team made up of Ben Christian, Hutton Oddy and Klaus Metzger. Third was a Queensland team of Evan Bengtson, David Spain and Ken Fox. Other teams were one Lismore team (fourth), a Sydney/Wollongong team (fifth) and a Lismore/Coffs Harbour team (sixth).

Winner of the landing results in Open Thermal winch launch was Ben Christian of Armidale, with Clive Warman (outright winner) second, and Scott Johnson of Lismore third.

Watch for details of the 38th Sailplane Expo scheduled for January 2018; it will be interesting to see how the mix of F5J and winch launch can be handled in a three-day long weekend. One suggestion is to try FXJ, where winch and electric are launched together. Whatever happens, it will be an interesting event as we push through to 40 years of the Sailplane Expo, which was started in 1980 as a jamboree of gliding events. Long may it live!

Sailplane Expo F5J - Overall Results

[Armidale 26/01/2017]

www.GliderScore.com

Rank	Name	Score	Pcnt	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	Rnd7	Rnd8	Rnd9	Rnd10
1	PRATLEY, David	8779.6	*100.00*	863.3	993.5	997.3	780.4	1000.0	978.5	1000.0	994.8	1000.0	952.2
2	BENGSTON, Evan	8634.1	*98.34*	911.0	926.5	1000.0	903.7	955.7	937.2	601.1	1000.0	1000.0	1000.0
3	SPAIN, David	8432.6	*96.05*	960.8	1000.0	967.8	931.8	982.9	702.0	1000.0	646.9	919.8	967.5
4	ODDY, Hutton	8263.2	*94.12*	1000.0	1000.0	1000.0	761.4	518.7	996.4	621.4	1000.0	923.7	960.3
5	PINE, Peter	8132.5	*92.63*	675.2	560.5	981.3	930.0	946.7	1000.0	677.6	921.7	1000.0	1000.0
6	ZORRO, El	8111.3	*92.39*	814.3	658.1	958.3	904.7	993.7	921.1	1000.0	900.8	960.3	431.9
7	WOODWARD, Colin	8022.8	*91.38*	906.7	1000.0	1000.0	694.4	1000.0	1000.0	974.7	461.4	939.8	507.2
8	LOCOCK, Mark	7972.8	*90.81*	1000.0	614.7	988.6	957.1	946.7	911.2	865.5	1000.0	689.0	405.3
9	LADISLAY, Safarik	7970.8	*90.79*	994.5	949.8	907.0	848.6	794.5	925.6	751.7	942.4	856.7	593.7
10	FARRAR, Don	7808.8	*88.94*	936.8	956.2	718.4	989.1	455.6	1000.0	856.0	731.6	976.2	644.5
11	JAMES, Cole	7643.9	*87.06*	1000.0	976.3	946.1	524.6	936.9	984.7	904.8	523.1	711.9	658.6
12	FOX, Ken	7230.7	*82.36*	710.0	913.9	973.3	719.6	1000.0	928.2	750.3	603.6	631.8	587.6
13	GILLOTT, Melvyn	7145.3	*81.39*	927.1	490.6	951.3	828.8	438.4	682.2	720.2	957.4	725.0	862.7
14	SMITH, Trevor	6996.1	*79.69*	731.3	855.6	866.3	878.4	897.6	803.6	786.0	470.3	707.0	252.5
15	METZGER, Klaus	6652.4	*75.77*	505.9	412.9	902.9	1000.0	882.2	685.8	442.1	639.4	594.1	1000.0
16	LEWIS, Daniel	5394.8	*61.45*	423.0	350.2	549.4	777.8	921.2	241.5	370.4	896.5	640.2	466.1
17	WORKMAN, Stephen	4997.1	*56.92*	343.1	417.8	583.7	952.6	185.7	662.8	308.4	941.7	386.8	400.2
18	GIBSON, Paul	4863.1	*55.39*	876.3	473.4	878.3	850.5	501.8	736.1	546.7	0.0	0.0	0.0
19	MAY, Colin	4255.2	*48.47*	365.5	775.1	757.6	1000.0	525.8	831.2	0.0	0.0	0.0	0.0
20	LINWOOD, Mark	3685.4	*41.98*	334.9	682.0	642.6	1000.0	291.6	734.3	0.0	0.0	0.0	0.0
21	TOE, TIC TAC	0.0	*0.00*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Sailplane Expo Open Thermal - Overall Results

[Armidale 27/01/2017]

www.GliderScore.com

Rank	Name	Score	Pcnt	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	Rnd7	Rnd8	Rnd9	Rnd10	Rnd11	Rnd12	Rnd13	Rnd14	Rnd15
1	WARMAN, Clive	14664.1	*100.00*	1000.0	1000.0	1000.0	759.0	994.3	935.3	984.1	995.7	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	995.7
2	PRATLEY, David	14382.3	*98.08*	1000.0	997.1	992.8	676.3	1000.0	1000.0	730.4	1000.0	994.3	997.1	995.7	998.6	1000.0	1000.0	1000.0
3	BENGSTON, Evan	14315.4	*97.62*	853.4	568.6	1000.0	1000.0	1000.0	1000.0	994.2	1000.0	1000.0	1000.0	1000.0	1000.0	992.8	998.6	907.8
4	CHRISTIAN, Ben	14220.1	*96.97*	701.2	1000.0	922.1	1000.0	1000.0	606.9	1000.0	1000.0	998.6	997.1	997.1	1000.0	1000.0	1000.0	997.1
5	WOODWARD, Colin	13955.5	*95.17*	1000.0	451.3	994.2	899.9	810.3	1000.0	1000.0	992.8	989.9	989.8	998.6	994.2	1000.0	837.4	997.1
6	JOHNSON, Scott	13907.7	*94.84*	872.5	862.1	1000.0	590.2	994.3	888.4	997.1	757.6	998.6	997.1	998.6	955.5	995.7	1000.0	1000.0
7	CARTER, Gerry	13526.1	*92.24*	1000.0	1000.0	1000.0	1000.0	789.2	583.7	1000.0	741.7	1000.0	1000.0	1000.0	1000.0	705.9	705.6	1000.0
8	CRANDON, Phil	13473.0	*91.88*	995.7	857.8	988.5	698.3	969.5	1000.0	998.6	991.4	1000.0	992.8	774.0	995.7	1000.0	704.2	506.5
9	METZGER, Klaus	13320.1	*90.83*	961.0	780.8	968.2	1000.0	991.4	972.6	677.3	474.7	989.9	680.6	992.8	992.8	845.2	1000.0	992.8
10	VIRTUE, Nigel	13311.2	*90.77*	942.6	756.3	723.7	684.2	879.3	880.4	965.4	973.9	922.7	985.6	1000.0	1000.0	946.8	667.6	982.7
11	ODDY, Hutton	13299.0	*90.69*	988.5	772.1	996.7	582.0	852.4	988.6	875.4	973.9	990.0	745.3	826.3	994.3	987.1	765.5	960.9
12	FOX, Ken	12588.1	*85.84*	680.8	1000.0	781.5	638.6	974.1	774.0	1000.0	591.3	984.2	565.5	994.2	621.2	995.7	988.5	998.5
13	SPAIN, David	12252.7	*83.56*	784.8	611.3	974.0	633.7	896.6	979.8	988.5	855.1	1000.0	872.1	708.0	979.9	650.0	660.4	658.5
14	FOSTER, Graeme	12196.8	*83.17*	666.7	529.4	621.0	851.4	697.7	678.2	815.9	994.2	962.5	981.3	550.7	967.0	949.8	966.9	964.1
15	MURPHY, Jack	11144.1	*76.00*	479.7	346.9	598.3	606.3	995.6	979.8	991.4	992.8	791.1	804.3	975.4	1000.0	687.2	895.3	0.0
16	CRANDON, David	10570.9	*72.09*	493.5	480.6	585.6	601.7	946.2	582.4	744.9	515.9	860.2	670.0	621.7	915.4	981.4	703.0	868.4
17	FARRAR, Don	10458.4	*71.32*	677.8	482.3	782.4	525.4	997.1	1000.0	978.3	976.8	437.8	961.3	582.3	674.3	635.1	439.3	308.2
18	HARDY, Graham	10301.7	*70.25*	564.1	506.5	710.7	534.1	685.3	988.5	748.2	924.0	974.0	699.4	916.2	589.9	627.0	422.8	411.0
19	KIMGDOM, Des	9772.8	*66.64*	495.6	779.8	601.7	254.0	511.5	664.7	479.2	1000.0	501.4	627.0	544.8	959.8	367.7	985.6	1000.0
20	ZAMBELLI, Jamie	9069.8	*61.85*	673.5	990.0	792.8	585.3	1000.0	459.2	526.1	959.6	977.1	1000.0	381.0	725.2	0.0	0.0	0.0
21	BRAND, Guy	7367.8	*50.24*	0.0	0.0	0.0	0.0	0.0	747.1	968.4	747.8	851.4	975.4	0.0	769.0	703.2	773.4	832.1
=22	GIBSON, Paul	0.0	*0.00*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
=22	ZORRO, El	0.0	*0.00*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
=22	TOE, TIC TAC	0.0	*0.00*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Some Vintage Electric Glider experiences

by Mike Adams, South Australia

Here are photos of various electrified vintage glider I have built over the years. My first "electrocution" was of an APS (Aeromodeller Plans Service) Lulu, originally built as a Free Flight model, subsequently modified with rudder and elevator controls. I had redrawn the original plan to 1.33 scale. When converted to power, it had an early outrunner motor and nicad batteries. It still flies very well, would make a good beginners model for Electric Vintage Glider, although the performance is not competitive. The circular arc wing section could do with updating if the rules permit. A modern motor and batteries, I suspect, would make a huge difference. As it is, the rate of climb is quite respectable, (like a rat up a drain pipe, I believe is the expression). It must be around 20 years old by now and still airworthy, which says a lot for the original design. I recall that, as 16 year old, a school chum built one. It caught a thermal and we timed it at 20 minutes Out Of Sight (OOS). It was eventually recovered from a back garden some 2 miles away.

Another model of that vintage I built and converted was a 1948 Mick Farthing Lightweight. I do not have a pic of it, which is just as well, as when converted it became a Mick Farthing Heavyweight and the less said the better. I built three of the original Free Flight glider versions and they were all stolen from me by thermals and presumably delivered to glider heaven?

Moving on, the next conversion was of a Fillon's Champion. This is a beautiful looking glider and I made two conversions (see image next page). The first one was with a pylon mounted motor and was a disaster. It had one flight only and I spent several minutes fighting it round the circuit and back to Terra Firma, the glider surviving the re-union with no damage. It was rather like a bucking bronco, clearly resenting this contraption strapped to it's back, and doing all it could to dislodge it. Needless to say, the pylon was removed and later replaced by a motor mounted in the nose. Subsequent flights were quite successful, though nothing outstanding. Things came to an abrupt end one day when I forgot that structurally it was still a Free Flight model, and my attempt at a loop resulted in the wing tips having a love affair after the wing spar roots surrendered to the G forces. I still have remains, lacking the enthusiasm to repair it and too reluctant to bin it.

Next comes a Bird of Time, another thoroughbred. It was fitted with a Hyperion GS 3020-08. I would point out here, that this continuous pursuit of motorising gliders stems from the fact that our club operates from a sort of flat field where winch/tow launching is not practical. Back to the BoT, As far as I know,

Lulu converted to electric above - old outrunner

Bird-of-Time classic design with a very slippery wing - won the first F3B event I saw in 1980!

several people have successfully converted them to electric power. Initially, mine did not perform to expectations until I woke up to the fact that I was not sealing the wing transportation breaks. Once this was remedied, things changed for the better. However, this was my first model with a large wing-span and no ailerons, which brought about landing problems; more anon as they say.

Next comes a Keil Kraft Elmira. I came across an old plan and so liked the rudder that I built one. I fancied the model, but the huge wing with all the ribs was an off-putter. However, what's the use of a pretty rudder with nothing to hang it on? I subsequently found that short kits were available from UK, PayPal was activated and the rudder was transformed into a beautiful sailplane. During the build, another Hyperion motor found a new home in the nose, and spoilers were built into the wing resulting from my experiences with the BoT. I built in ailerons as well. More of this anon! Launching is a bit tricky until it has built up some airspeed, the climb is better than it would appear from the ground, and once up to cruise height is an eager thermal hunter, darting hither & thither in search of it's prey. However, once found, thermals are a different kettle of fish. Pulling up into a turn to reel the thermal in, and if the model is allowed to lose too much airspeed, it will drop into a spiral dive. Initially I thought that it was tip stalling, despite considerable wing washout, but it never goes into a spin in normal flight, so I am still trying to work this one out.

Maybe it's my flying technique? I was going to disconnect and lock up the ailerons suspecting that they might be the root of the problem. However a web search found an article where another Elmira builder installed ailerons on his model, and after flying it indicated that the wing would not work with just the rudder, so they stay for the time being.

Now, what is all this "anon" business. In the last few years I have been flying various electric powered gliders in a non-competitive way; the Bird of Time, a Phoenix Liberty and the Elmira. None have ailerons, (they are not standard on the Elmira). Both the BoT and the Liberty have suffered landing accidents in gusty weather when, in the last moments of the approach, a gust has picked a wing up and rolled the model over and into the ground inverted. Both suffered cracked wings at the centre. Because the model is (or should be) flying slowly, there is insufficient rudder power to swing the wing and generate lift to combat the roll due to the gust. My experiences with the two aforementioned gliders have resulted in the incorporation of ailerons on the Elmira. Modellers intending to build Vintage Electric Gliders will probably not be allowed to incorporate ailerons under the rules. Because of this, when one is choosing a subject model, one may be well advised to avoid models with

Mike with his Fillon's Champion - lovely wing!

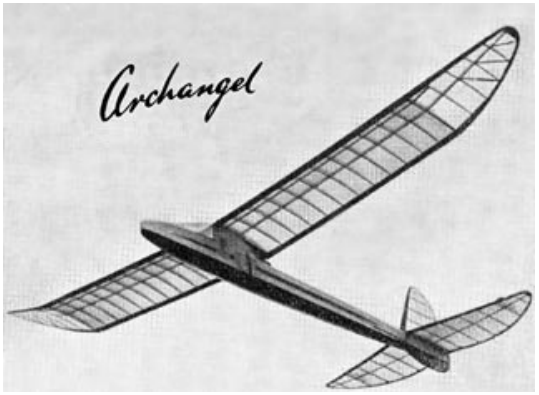
very long spans and high aspect ratios. Gliders with polyhedral wings or flat centre-sections and tip dihedral would appear to be a good choice. When converting the fin & trim tab to a fin and rudder, it would appear sensible to design in a large rudder to give adequate yaw control at low speeds. Unlike Vintage Power Models, gliders by their very nature tend towards long spans which need powerful rudders to manoeuvre them in the yawing plane. In another life I was a gliding Instructor with the Air Training Corps in the UK, teaching young lads on the Slingsby T21b Sedberg. One of the lessons was the secondary effect of controls. When aileron was applied, there was considerable drag, causing the glider to initially yaw in the wrong direction which was countered by a large boot full of rudder and this had to be applied before the aileron was applied in order to get the whole wing (& glider) swinging in the correct direction. I find that I have to use this technique with the Elmira, leading the model into the turn with rudder, then feeding in aileron.

An earlier vintage model glider I converted to power was a Halifax Tern (several plans available on the internet. Ed.). This was a very pretty design by Ron Gosling, a model glider expert of the time. It looked very rakish with a circular cross section nose on the fuselage, changing to a diamond cross section aft of the wing, tapering to a T tail. As a Free Flight glider, I recall it flew very well. I built a twice-sized powered version about 12 years ago. To stiffen the rear fuselage I sheeted it in, (the original was just tissue covered, but did not have any rudder loads). My bigger version was not a success, coming out too heavy. However there is a similar APS design called "Archangel" by L. Gabriels, (he had a sense of humour), which looks as though it might be competitive, so I am going to give it a try. If one wants to try a real floater, an enlarged ATO 36 might turn out to be interesting choice!

Images below - click on bold text:

Free RC Plans (click here for Archangel - top)

Outerzone (click here for ATO 36 - bottom)



Elmira above - Tern below

Motor Testing

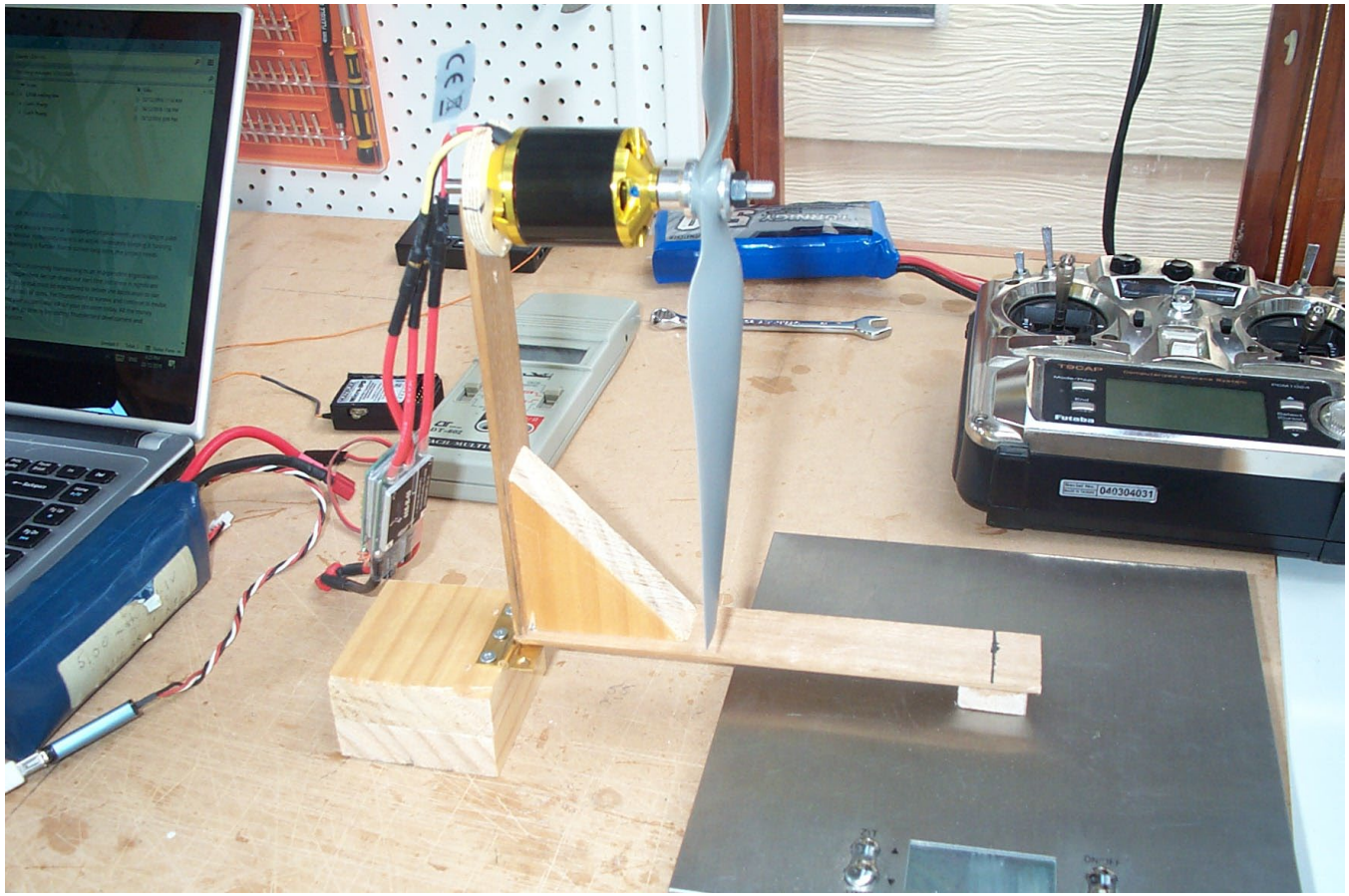
by Bob Young

Many of us choose our motors and set-ups by checking what other fliers have done and recommend - and that is legitimate. But there is no substitute for testing your set-ups, gaining full data and making wise decisions. Taking the trouble to collect data and building up your experience increases understanding and allows you to make wise changes to achieve what you want!

Bob Young, of Silvertone fame, sets a high standard in motor testing; see the image of the rig Bob made up to gain thrust data. He also tracks amp draw, voltage drop and watts out - all of which you can do with a simple Power Meter (the E-Flite version for example). Add a tachometer and you have rev comparisons.

Bob is working on a secret project, but he needs good data to choose motors and props to achieve his aim. His testing has confirmed in stark reality that not all props are equal! Most of us know this from experience, but the difference between props of different brands, even though of the same nominal size, is dramatic! In Bob's testing the difference has been up to 29%!

In the end, though, you have to try it in real flying. All testing is a guide, but there is no substitute for checking the results in the air!



Bob's test rig, checking actual thrust using a set of scales. Testing showed that APC-SF props develop significantly more thrust than standard E-props or Aero-naut folders! Bob has chosen Hifei King Kong ESCs as they record the data he wants and feed the data to a computer. Similar results can be achieved with a Power Meter, or an E-meter designed in Melbourne by Phil and Mark Connolly.

Motor is a Scorpion 3026-710 on a 12x6" APC-SF prop and a 2200-3S LiPo pack. It drew 35A at 11.6V giving 2.01kg of thrust and 6,433rpm at 412W. Other results were APC 13x10E thrust 1.7kg, APC 12x4.5SF thrust 1.5kg,

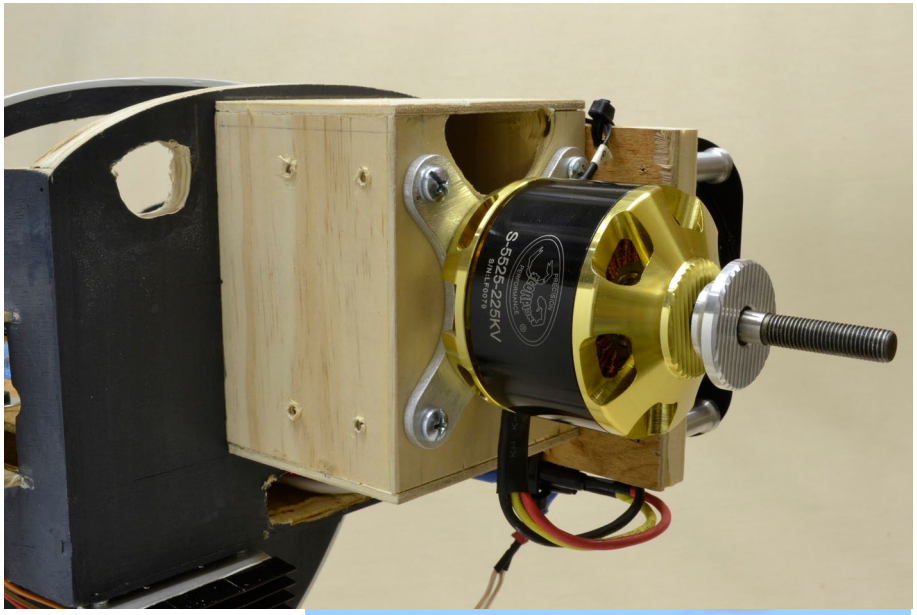
If you try this set-up for motor testing, make sure your structure is strong enough to handle the power you use. The AEFA accepts no responsibility for the use of a test rig as described on this page.

Converted to Electric - Seagull Ercoupe

More and more glow powered models are being converted to electric power - no more grease, noise and vibration!

Dean Williams, who hails from Hobart in the fair isle to the south of Melbourne, has made a special effort to convert some really large models and to report on the results.

First example is a huge Ercoupe, low-wing, cabin model of 2.5m wingspan and 10.5kg of all-up-weight. The model is conventionally constructed from balsa and plywood, and meant for a 33-40cc fuel-driven motor. Dean substituted a Scorpion 5525-225Kv electric motor swinging a a 20x8" APC-E prop, pulling 59 amps on a 5,000-10S LiPo pack. This set-up draws 59A through a Castle Edge 80A HV ESC and flies the model with authority; so that is 2.15Kw of power from an electric set-up, equal to about 3 horse-power. That is delivering 205W/kg or 92W/lb. Who said you can't obtain good power from an electric set-up?



Bottom right: Dean with the huge Ercoupe.

Left: Ercoupe in the air.

Above: The giant Scorpion 5525-225 electric motor.

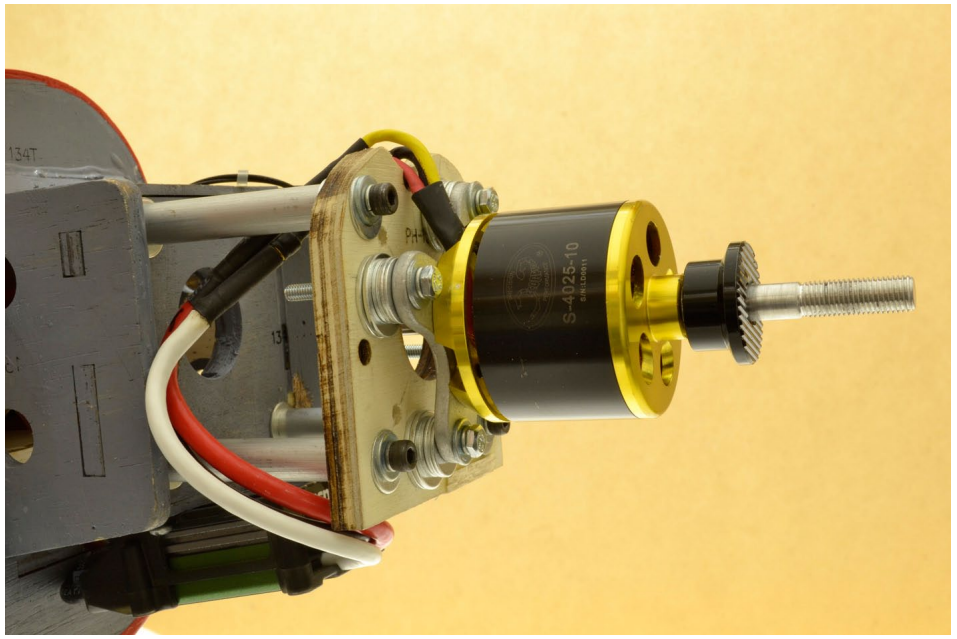
For a full report on this model, check the 2014 Issue 124 of the Aussie RCM News magazine.

Converted to Electric - Phoenix Models PC-21

Second example from Dean Williams is the conversion of the Phoenix PC-21 that was meant for a 15-20cc fuel motor. The PC-21 spans 1.45m. Dean powered his model with a Scorpion 4025-10 electric motor swinging a 14x7" APC-E prop and powered by a 5000-6S LiPo pack. Like the Ercoupe, this is a ply and balsa model with plastic film covering.

The images show the PC-21 at rest and in the air - a pretty sight. You can see that the Scorpion 4025-10 was mounted on stand-offs to bring it to the correct position and to aid with balance. The ESC was a Castle Creations Edge 100A with BEC.

You can see a full write-up by Dean of this model in Issue 137 of the Australian RCM News magazine. Send in your details of conversions you have made to inform us all!



Main Events Coming Up

FXJ at Milang

SSL are starting the swing towards combined electric and winch launch events with the title FXJ! See it all happen at Milang on 10-12 March. Results from this event count towards several leader boards; the Austour chart run by LSF, the RCGA leaderboard for Victoria, and the Aussie F5J Leaderboard. Send in your entries now!

RCGA Events

Open Thermal on 12 February and the F5J State Champs on 26 March. Check the **RCGA web site** for details.

Nowra EOT & F5J

Mel Gillott is planning a successful weekend for the 1-2 April and has ordered good weather. EOT will be held on Saturday, and F5J on the Sunday. This F5J event will be the second last one that contributes to the Aussie F5J Leaderboard, so make sure you are there.

NEFR

Send in entries now! F5J looks being expanded at this event and it is the last one to count towards the 2016/17 F5J Aussie Leaderboard. Check all details on the **AEFA web site**.

Please send information on your glider, electric glider and EOT events so that they can be featured in this publication!

2017 Gliding/F5J Calendar

2017 Glider/F5J Events Calendar

Produced by the AEFA to promote F5J & Gliding **No.7/1-1-17**

Key - green for F5J events, red for NSW school holidays, **HSL** stands for Heathcote Soaring League

Date	Holidays NSW	Flying Events	Notes
January			
15-Jan		Millennium Cup Rnd 1	Appin
22-Jan	RCGA event	**Victorian F5J**	Diggers Rest
26-Jan	Australia Day		Thursday
26-27 Jan	Sailplane Expo	**Stand Alone F5J 1.5 days**	Armidale
27-29 Jan	Sailplane Expo	Open Thermal	Winch launch, DLG
30-Jan	NSW Schools return		
February			
10-12 Feb	In memory of Ray Pike	Mantaray F5B Trophy	Mansfield, Vic.
12-Feb		Millennium Cup Rnd 2	Goulburn
12-Feb	RCGA event	Victorian Open Thermal	Diggers Rest
19-Feb		HSL Club Comp Rnd 1	Maddens Plains
March			
10-12 Mar	FXJ Australia - SSL	F3j & **F5j** International	Milang, SA
11-12 Mar	F3J Open	Milang Thermal	South Australia
12-Mar		HSL Club Comp Rnd 2	
25-26 Mar		Heathcote Cup	Maddens Plains
26-Mar	RCGA event	**F5J VIC State Championships**	Diggers Rest

For details of the Mantaray Cup 10-12 February, contact Bill Hamilton (0407) 929 735

2017 Gliding/F5J Calendar continued

April			
1-2 Apr	Tentative date claim	**Nowra EOT/F5J**	Mel Gillott
7-Apr	NSW Schools break up		
9-Apr	RCGA event	Victorian Open Thermal	Ballarat, Victoria
9-Apr		Millennium Cup Rnd 3	Lake George
14-17 April	Easter	**NEFR at NAAS**	AEFA Rally Canberra
25-Apr	Anzac Day		
26-Apr	NSW schools return		

May			
7-May	RCGA event	**Victorian F5J**	VARMS tbc
7-May		HSL Club Comp Rnd 3	Maddens Plains
21-May		Millennium Cup Rnd 4	Salt Ash
21-May	RCGA event	Victorian Open Thermal	Diggers Rest

June			
10-12 June	Queen's Birthday	**LSF Tournament**	Jerilderie - includes F5J
30-Jun	NSW Schools break up		
July			
2-Jul	First Round	**Picton Cup**	Appin NSW
18-Jul	NSW Schools return		

August			
19-20 Aug	Trvana, Slovakia	**2nd F5J World Challenge**	Aussie team to go!
27-Aug		HSL Club Comp Rnd 4	Maddens Plains

For details and entry form for NEFR, Easter 2017, consult the AEFA website

Gliding/F5J Calendar

Send in your entries for the calendar as soon as your club or organisation decides on dates - let's keep this calendar going to avoid clashes!

Use the 2016 full year calendar to see who ran events and when they ran them last year - try to communicate with those who ran events and negotiate dates. If you need a copy of the 2016 calendar, send me an e-mail and I will forward one to you.

Ladislav (Les) Safarik and Don Farrar caught in a quiet moment at the Sailplane Expo.
See pp. 23-24 for how to win a Stork fully moulded F5J glider of nearly 4.0m wingspan like the one Les is holding, made in Slovakia by Heinrich.
Second prize in a fund-raising raffle is a new E-Flite Radian and third prize is a Scorpion motor.

2017 Gliding/F5J Calendar continued

September

16-17 Sep	2-day F5J event	**F5J Central Queensland**	Bundaberg
17-Sep		**HSL F5J**	Maddens Plains
22-Sep	NSW Schools break up		
23-24 Sep		Millennium Cup Rnd 5	Gloucester

October

9-Oct	NSW Schools return		
22-Oct		Millennium Cup Rnd 6	Maddens Plains
29-Oct		HSL Club Comp Rnd 5	Maddens Plains

November

4-5 Nov	**F5J Perpetual Trophy**	**F5J Annual Tournament**	NAAS Canberra
12-Nov		Shoalhaven Shield - Millennium Cup Rnd 6	Bomaderry
19-Nov	Tentative	**Picton Cup**	Appin
26-Nov		HSL Club Comp Rnd 6	Maddens Plains

December

3-Dec		Ted Swan Cup	Goulburn
15-Dec	NSW Schools break up		

Time to Register for the NEFR in Canberra Scheduled for Easter 2017, Friday to Sunday

See the next two pages for details

And go to the AEFA web site for the full program and an entry form


NEFR 14-16 April 2017
NAAS Club Field, Canberra
Australian Electric Flight Association
Come
Explore
Fly
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.
$25 per head.
It's worth going
just for this!
GPS
coordinates:
-35.583815
149.061196

NEFR 2017 Details

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 April 15th, 2017**
Corner Athllon Drive & Rowland Rees Crescent, Greenway ACT 2900 (20 minutes drive from field)

Moo Baa Room, at back of restaurant. $45 per head
Alternate drop main course and sweets - bar available

Contact Details for AEFA Executive & Event Director

Terry Scolari - President - 0408 646 760 - tscolari@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

Would you like to win a Stork 4.0m Electric Glider?

Announcing a fund raiser to send an Aussie team to the F5J World Cup in Slovakia 2017

The F5J Electric glider event was started in Slovakia and has been growing in popularity all over the world since 2012. In Australia F5J is booming! Last year, in 2016, many F5J events were held in various parts of the country, some with attendance as high as 33 fliers! The AEFA has been foremost in promoting this new class of electric gliding, by supplying equipment, making height devices available for loan so fliers can sample the simple event that does not require a high-tech glider, and by running events for clubs and organisations.

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

In the meantime, the World Cup, run by the Trvnava club each August, continues. In 2017 they are offering three F5J events in close proximity in one week in August to make it worthwhile for overseas teams to attend. They are calling it the Slovak Triangle!! We need to send an Aussie team to check the lie of the land and bring back significant intelligence!

The AEFA has commenced a fund to assist the best F5J fliers (on the Australian Leaderboard) to attend the Slovak Triangle of three events in August 2017, including the World Cup.

continued next page .....

Stork raffle continued

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

1st - Stork fully moulded F5J kit valued at $2,850
2nd - New E-Flite Radian kit valued at $295
3rd - Scorpion 3026 motor valued at $189

Tickets are $10 each or three for $20 - see a sample ticket below. The raffle will be drawn at the presentation at the NEFR at Canberra this coming Easter. Proceeds from this raffle will go to the team for Slovakia!

Buy tickets online. 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

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!

Electric & Glider FLIGHT Australia magazine - produced under the auspices of the Australian Electric Flight Association - contacts:

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Coordinator EOT Focus Group	Mike Colston	NSW	mncolston@hotmail.com

(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