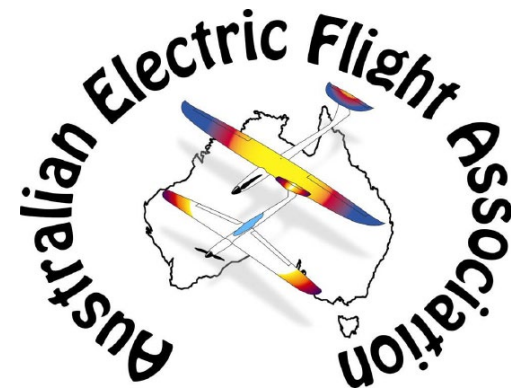


Electric & Glider **FLIGHT** *Australia*



Edition Number 13

June 2018



Mass launch of nineteen Radians at once at the NEFR at Easter - see report p. 3

Editorial by Peter Pine

Here is a slightly early edition of the EGFA E-magazine - published before a bevy of F5J events commence (see calendar), which will fill the next few issues.

Many thanks to contributors who help keep this publication going - Charles Powell and Luke Hoard for images from the NEFR, and articles and images by Ken Woodward, Gus Fox, Frank Murphy and Byam Wight.

The team selection trials for the Aussie F5J team to go to the World Championships next year are well under way with the second trial to be held at Jerilderie within the next two weeks. It is all very exciting.

The AEFA has launched a new fund raiser to help the F5J team make the trip to Slovakia - see the flier on page 20. The fund raiser is active now and you can buy tickets straight away - and the prize is very good and unique. Help us market this fund raiser as it will appeal to anyone, not just to model fliers.

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President's Message by Trevor Smith

At the AGM held during NEFR 2018 the new AEFA committee was elected for the next 12 months. Two committee members, David Lucas (Treasurer) and Bob Hickman (Committee Member, VIC), did not stand for re-election and we thank David and Bob for their contributions to AEFA over the past years. David however has stayed on webmaster. We also welcome two new members to the committee, Charles Powell (Secretary) and Marcus Stent (Committee Member VIC).

The new committee for 2018/19 is:

President - Trevor Smith
Secretary - Charles Powell
Treasurer - Ralph Dephoff
Events Coordinator - Peter Pine
Committee Member QLD - Terry Scolari
Committee Member VIC - Marcus Stent
Committee Member SA - Mal Pring

The location for the National Electric Flight Rally (NEFR) 2019 is locked in:

The selection process (by voting online) for the location of NEFR 2019, to be held over Easter



2019, has now been completed. Thank you to those members who initially nominated locations and all those who voted. From the initial location nominations, three locations closely matching the selection criteria were shortlisted to be put to a member vote. In total 49 votes were received with the breakdown of votes as follows:

- NAAS Willie Emmett Airfield, ACT - 24 votes
- Adrian Bryant Free Flight Fields, West Wyalong NSW - 16 votes
- Aeromodellers NSW State Field, Cootamundra~NSW- 9 votes

The NAAS Willie Emmett Airfield south of Tharwa in the ACT is now confirmed as the location for NEFR 2019 and this has been locked in with the NAAS club.

As mentioned on page 5 we are revising the NEFR program for 2019 and will include dedicated free flying time. However, if you would like a fun event to replace one of the free flying time slots please send us your suggestions. How about foamy pusher all up last down with a 30 second motor run, but please, no F5B motors in your Bixler!

Until next time.....

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NEFR 2018 Canberra

The 2018 National Electric Flight Rally, held at the NAAS field outside Canberra on three days of the Easter weekend, is now history. 33 electric flying friends gathered for a jamboree of different events and enjoyed the time together -some even voted it the best yet.

It was a little windy at times, but did not stop the flying except for the Electric Scramble, which is usually held late Friday, but was postponed because of the wind. Over the rest of the weekend it was hard to find time to fit it in, so in the end it did not happen.

It is probably fair to say that electric glider events and electric old timer events are the main part of the weekend, with a smattering of other types of events woven in to the program to make it interesting.

Electric Glider events attract the biggest entry, and in fact 30 of the 33 attendees entered F5J, and 29 flew. Because of the relatively large numbers in F5J, it was decided to run four groups per round so that it would not be difficult to find timers, and that meant groups of 7 or 8 in each heat. All seven rounds on the program were flown, but used up more time than allocated and put pressure on the rest of the program. Discussion is already under way on how to ease the program pressure next year!

Bob Wilson, commensurate F5J flier, took out the event. Alan Mayhew came second and Mel Gillott saved NSW face by placing third with his new Electra2 model. The scores are shown on the next page for your interest.

Limited Electric Glider is a remnant from years gone by when it replaced 7-cell glider with the advent of LiPos. It has been dropping in numbers in recent years, but now seems to be going through a resurgence. Nine fliers considered that they had models hot enough the fly the cut and thrust of LEG where a 5 minute flight is required with as little motor run as possible. Some fliers achieve this with as little as 3 second or 4 second motor runs!

Bob Wilson dominated again, Bob Hickman (who regularly performs well in this event) came second and Phil Stevenson came third.

Radian is the low-key event for all fliers. A mass launch with a 15 second climb is the start of a 5-minute flight, landing to be on the strip right on the five minutes. This year 19 Radians entered and up to 16 fliers launched at once in the biggest heat; it is like a flock of birds fleeing in to the air.

Two classes are run together to give new fliers a chance against experienced fliers; Open for the experienced, and Sportsman for the new fliers. First person down gets 1 point, second person down 2 points, etc. You can see the scores in page 6.

In Open Alan Mayhew was the winner, Bob Wilson second and Bob Hickman third - all commensurate fliers! Funny how the same names keep coming up amongst the winners! They say that those who practise a lot seem to have the best luck! In Sportsman, James Johnson took out the class, Marciuk Rucinski second (both these fliers from the NAAS Club), and Jim Wilks came third.



Bob Wilson scored so many bottles of wine he had to commandeer a wine box to carry them all home.

Bob won or placed in F5J, Radian and Electric Old Timer events.

In the image above Bob has just received his certificate and bottle of wine for first place in F5J.

Bob is one of the team going to Slovakia this year.

NEFR 2018 - Overall Results [NAAS Canberra 30/03/2018]

www.GliderScore.com

Rank	Name	Score	Pcnt	Raw Score	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	Rnd7	Drop1
1	WILSON, Bob	5493	100	6081.4	788.2	1000	1000	940.3	588.4	1000	764.5	588.4
2	MAYHEW, Alan	5426.8	98.79	5556.8	1000	931.5	1000	130	495.3	1000	1000	130
3	GILLOTT, Mel	5281.5	96.15	5858.6	577.1	907	1000	788.1	1000	949.5	636.9	577.1
4	FARRAR, Don	5237.4	95.35	5579.6	1000	342.2	751.8	1000	1000	1000	485.6	342.2
5	RUCINSKI, Marciak	5151.4	93.78	5771.6	853.3	620.2	712.8	996.7	674	914.6	1000	620.2
6	SAFARIK, Ladislav	5096.3	92.78	5325.7	563.9	940.2	1000	592.2	1000	1000	229.4	229.4
7	METZGER, Klaus	4719.6	85.92	4719.6	0	1000	961.2	1000	1000	758.4	0	0
8	STEVENSON, Phil	4322.6	78.69	4665.3	536.4	1000	342.7	460.4	797.4	650.9	877.5	342.7
9	SMITH, Trevor	4243.4	77.25	4479.8	236.4	707.4	301.9	561.3	789.8	883	1000	236.4
10	ANDREWS, Gary	3907	71.13	3907	956.8	449.5	615.5	508.3	471.7	905.2	0	0
11	WATSON, Robert	3773.2	68.69	3773.2	0	0	620.3	1000	561	613.3	978.6	0
12	ARNOLD, John	3703.2	67.42	3703.2	0	873.7	577.5	516.4	0	735.6	1000	0
13	MALPAS, Keir	3333.9	60.69	3418.4	721.8	311.9	84.5	460.3	548.8	792	499.1	84.5
14	RYAN, Gary	3259.1	59.33	3259.1	518.8	1000	413.6	653.2	673.5	0	0	0
15	PINE, Peter	3221.9	58.65	3221.9	0	248.9	751.5	295.6	243.8	696	986.1	0
16	BAUMGARTNER, Peter	3164.8	57.62	3164.8	448.3	0	451.3	0	657.1	948.6	659.5	0
17	ROSS-CLIFT, Geoff	3095.1	56.35	3405.2	602.9	398.9	417	502.9	856.2	317.2	310.1	310.1
18	MURRAY, Ray	3035.5	55.26	3035.5	0	220.6	157.6	1000	134.9	683.7	838.7	0
19	GODFREY, Ross	2735	49.79	2735	0	493.8	406.8	578.4	431.5	0	824.5	0
20	JOHNSON, James	2714.8	49.42	2714.8	0	0	521.8	738.6	730.1	536	188.3	0
21	HUNTER, Bruce	2652.2	48.28	2652.2	0	833	281.7	707	127	567.7	135.8	0
22	DEPHOFF, Ralph	2384.6	43.41	2384.6	0	229.4	520.8	637.3	0	892.6	104.5	0
23	WOODWARD, Ken	2338.8	42.58	2496	157.2	326.6	474.8	326.8	445.7	252.5	512.4	157.2
24	BAUMGARTNER, Marius	2297.1	41.82	2365	480	67.9	381.5	199.5	138.3	805.3	292.5	67.9
=25	PRING, Mal	1935.5	35.24	1935.5	1000	0	935.5	0	0	0	0	0
=25	LOVETT, Terry	1935.5	35.24	1935.5	428.1	146.3	626	735.1	0	0	0	0
27	RUCINSKI, Stan	1000	18.2	1000	1000	0	0	0	0	0	0	0
28	YOUNG-WRIGHT, Chris	710.2	12.93	710.2	0	0	134	576.2	0	0	0	0
29	HICKMAN, Bob	542.9	9.88	542.9	542.9	0	0	0	0	0	0	0



Two F5J launch shots - note the mix of models - everything from Radians, to open structure Pulsars, to moulded models like the Stork and Xplorer.

Bob Hickman continues to run a very efficient Foamy Pylon event at the NEFR. He has it down to a fine art and runs heats on Friday just after lunch and on Saturday morning. Five people scorched up and down the course to put in as many laps as they could in the time limit. Brian Locket is always the man to beat when he can make it to the NEFR, and this year was no exception. He took the event out in great style. Even our erstwhile President had a go at this event this time; give it a go yourself. It is a real buzz!

The Electric Scramble event did not happen this time. It was scheduled for late Friday, but it was windy and was postponed. Unfortunately, it was not able to be squeezed in to the packed program and just did not happen.

There is discussion at the moment about strategies to render the NEFR less rushed and less packed, especially with the growing interest in F5J that

takes a lot of time. Plans are under way to start the program late on Friday morning next year, and to stretch the events in to Monday to provide more free flying time and make it all less rushed. If you have ideas about this, let one of the executive know your thoughts and your ideas will be included in the discussion.

The other major component of the NEFR is the regime of Electric Old Timer events. The class with the biggest entry was 1/2A Texaco where delightful little models powered by a 450-2S LiPo battle it out to see who can use the least amount of battery to fly for 10 minutes (and 15 in the fly-off). Nine people flew in the event and all made it to the Fly-off. Results were:

1st - Bob Wilson - 88% left in battery
2nd - Mal Pring - 44% left
3rd - Peter Pine - 34% left

Now to Open Texaco for bigger models - the results after a 15 minute fly-off were:

1st-Bob Wilson-51% left in battery
2nd-Mal Pring-43% left in battery
3rd-Phil Stevenson-30% left in battery

Duration is the high performance event where old timers scream in to the sky and attempt to fly for 10 minutes using as little cumulative motor run as as possible (motor can be restarted). There was a tie in this event and it was decided on motor run time:

1st- Phil Stevenson- 1260 points (47 seconds motor run);
2nd-Mike Colston -1260 points (60 seconds motor run);
3rd-Rob Watson - 1047 points (67 seconds motor run)

Height Limited Old Timer is an event with one climb only where the motor is stopped by a device at 200m or 30 seconds, whichever comes first. It is the only class that never requires a fly-off; the results are usually very clear. The placegetters were:

1st-Bob Wilson- 1260 points;
2nd-Mal Pring-1207 points;
3rd- Ken Woodward- 1188 points

Vintage Electric Glider was featured in the last edition of EGFA and looks like it will become very popular. Early free flight glider designs (pre-1956) have electric power and two channels added and compete in a height limited event like the previous one reported - 30 second or 200m climb, fly for 7 minutes. Six people flew in this first, successful Vintage Glider event at the NEFR and the results were:

1st-Phil Stevenson-1201 points;
2nd-Mike Colston-1145 points;
3rd-Ken Woodward-984 points

Scale always adds interest to the Saturday events; static judging is in the morning and flying takes place to everyone's interest around lunch time. Several models presented this year, but unfortunately I do not have details. Suffice to say that the event was dominated by Byam Wight's large scale ducted fan jet model of a Panther

But all is not lost! You can see all the scale models

(and many more of the NEFR events) featured. on a very good video produced again by dedicated film maker, Peter Baumgartner. Peter's video can be viewed on Youtube by clicking this link:

https://youtu.be/Clvp_DC0jyk

You will notice a lot of Radians in the video - you can have great fun at the NEFR with a Radian, and enter several events - and they take out prizes like Limited F5J!

You will also see quite a few masked robbers in the video - the face-covering masks from stretch material available at outdoors stores are becoming very popular to save faces from sun damage! It could be said that you can save face at the NEFR with a mask!!

Finally, I must mention the co-operation and support of the NAAS club in staging this Easter event. The very enthusiastic club members cater for us very well with food, shelter, charging facilities, equipment, storage space, 240V power, etc. Some even join in the events! And take videos and photos, and serve us an amazing Spit Roast on the Sunday evening after flying has finished. Where else will you receive a hot meal of roast lamb, hot vegetables and gravy, followed by freshly baked upside down pineapple cake and custard? Mark your diary for Easter 2019 and do not miss out on the next NEFR!



Above - Byam with his scale Panther ducted fan.

Below - Byam receives his award from CD Bob Hickman



NEFR 2018 Radian Competition

Name	Level	Overall Score	Heat 1	Heat 2	Heat 3	Heat 4	Heat 5	Heat 6	Heat 7	Heat 8	Heat 9	Heat 10	Heat 11
Alan Mayhew	Open	119	13	9	15	6	14	8	12	9	14	12	7
Bob Wilson	Open	116	12	12	13	16	9	8	6	11	7	12	10
Bob Hickman	Open	105	14	16	14	15	11	4	11	8	3	8	1
Robert Watson	Open	80	-2	15	17	7	1	3	8	4	14	3	10
Marius Baumgartner	Open	68	1	2	9	5	7	6	1	10	12	5	10
Trevor Smith	Open	64	5	11	12	11	2	0	9	6	5	1	2
Ken Woodward	Open	51	3	8	5	10	8	1	3	3	1	4	5
Byam Wight	Open	16	-2	-2	16	12	4	-2	-2	-2	-2	-2	-2
Brian Lockett	Open	11	9	10	3	-2	3	-2	-2	-2	-2	-2	-2
James Johnson	Sportsman	92	10	14	11	8	10	5	5	5	8	6	10
Maciek Rusinski	Sportsman	75	11	5	7	13	5	8	7	1	4	10	4
Jim Wilks	Sportsman	52	2	4	2	2	12	2	2	7	9	2	8
Keir Malpas	Sportsman	45	7	7	1	14	4	-2	-2	-2	6	9	3
Geoff Ross-Cliff	Sportsman	43	4	13	10	1	6	-2	10	-2	-2	7	-2
Ralph Dephoff	Sportsman	41	-2	1	4	3	-2	2	4	2	11	12	6
Luke Hoad	Sportsman	38	6	6	8	4	6	4	-2	-2	2	8	-2
Ross Godfrey	Sportsman	7	-2	-2	6	9	8	-2	-2	-2	-2	-2	-2
Chris Young-Wright	Sportsman	-7	8	3	-2	-2	-2	-2	-2	-2	-2	-2	-2
Ray Murray	Sportsman	-10	-2	-2	-2	-2	10	-2	-2	-2	-2	-2	-2

Note: A negative heat score indicates you did not fly in that heat.

LEG Scores NEFR 2108													
Name	Rd 1	Rd2	Rd3	Rd4	Rd5	Rd6	Rd7	Rd8	Rd9	Total	Dropper	Final Score	Placing
Bob Wilson	314	316	320	315	320	319	303	308	0	2515	0	2515	1
Bob Hickman	293	315	321	303	318	318	309	311	315	2803	293	2510	2
Phil Stevenson	310	310	311	316	314	300	313	316	304	2794	300	2494	3
Don Farrar	304	290	313	303	311	288	304	296	296	2705	288	2417	4
Mel Gillot	0	0	0	0	310	304	301	312	291	1518	0	1518	5
Brian Lockett	319	314	318	292	0	0	0	0	0	1243	0	1243	6
Alan Mayhew	317	286	318	0	0	0	0	0	0	921	0	921	7



Alan Mayhew, 2nd in F5J, receives his certificate from CD Peter Pine. Alan also won Radian!



Mel Gillott came third in F5J flying his new Electra 2



A bevy of beautiful ladies helped run the events - Dale & Chris with Radian, Julie and Marg F5J



Rob Watson never ceases to be amazed at how he regularly wins Limited F5J with a Radian!



Keir Malpas came second in Limited F5J, also flying a Radian. They do well, these Radians!



Peter Baumgartner came third in Limited F5J - another Radian.

Peter also produced a great video of the events - see him filming in the image on the cover - and see the link on page 6.



Plus by Alan Mayhew in flight



Left - early morning shot of part of the vast NAAS field!

Right - EOT launch time

Images this page by Luke Hoad



Left and below - Vintage Glider was competed for the first time - Rob Watson launches Thermalist for Trevor Smith, Phil Stevenson's Sunspot overhead.



EOT Landing under way. See the list of the range of EOT events flown at the NEFR in the article pp. 5-6



RCGA is the Victorian gliding organisation that runs a series of events in that state, and manage a leaderboard amongst their members.

F5J is one of the events, and it is growing in support. On this page you see the results for two F5J events held this year, one at Diggers Rest (the state field) and the other at VARMS (leading glider club in Melbourne).

Even though they are few in number, this group contains some of the top F5J fliers (and glider fliers) in the country. Marcus Stent, winner of the F5J Trophy last year, is one such member. Also David Pratley won events at the Sailplane Expo and is highly placed on Austour 2018 Leaderboard. Jim Houdalakis frequently places at events. Alan Mayhew came 2nd in F5J at the NEFR. Bob Wilson won F5J at the NEFR and is frequently in the top fliers. So, you can see that there are some accomplished fliers in Victoria.

Check out all the action at: <http://www.rcga.org.au>

F5J Diggers 25022018 - Overall Results

[Diggers 25/02/2018]

www.GliderScore.com

Rank	Name	Score	Pcnt	Raw Score	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	Rnd7
1	BLACKBURN, Hugh	5687.2	100.00	6201.2	945.9	768.6	1000.0	*514.0	1000.0	1000.0	972.7
2	MAYHEW, Alan	5529.8	97.23	5529.8	1000.0	1000.0	574.5	955.3	*0.0	1000.0	1000.0
3	PRATLEY, David	5259.5	92.48	5598.0	1000.0	1000.0	510.6	961.7	787.2	*338.5	1000.0
4	MILWARD, David	5121.0	90.04	5121.0	790.5	*0.0	986.7	1000.0	549.3	1000.0	794.5
5	STENT, Marcus	3696.0	64.99	3696.0	0.0	696.0	1000.0	1000.0	1000.0	0.0	*0.0

F5J - Overall Results

[VARMS 6/05/2018]

www.GliderScore.com

Rank	Name	Score	Pcnt	Raw Score	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6
1	STENT, Marcus	4929.4	100.00	5893.3	964.7	996.4	1000.0	*963.9	968.3	1000.0
2	BLACKBURN, Hugh	4912.2	99.65	5569.3	1000.0	*657.1	1000.0	1000.0	1000.0	912.2
3	WILSON, Bob	4813.6	97.65	5635.9	942.6	*822.3	1000.0	945.5	930.0	995.5
4	MAYHEW, Alan	4791.0	97.19	5544.1	1000.0	1000.0	969.5	821.5	1000.0	*753.1
5	HOUDALAKIS, Jim	4654.5	94.42	5502.9	868.9	1000.0	*848.4	936.0	862.3	987.3
6	ARVANITAKIS, Theo	4624.5	93.81	5296.6	*672.1	706.9	963.8	1000.0	953.8	1000.0
7	PRATLEY, David	4342.4	88.09	4801.8	740.5	*459.4	945.1	858.2	823.7	974.9
8	MILWARD, Dave	4043.4	82.03	4471.5	*428.1	439.6	834.8	992.1	834.4	942.5
9	RYAN, Gary	3578.0	72.58	3890.6	787.3	449.5	536.2	*312.6	894.6	910.4
10	CLAPPERTON, Bruce	3195.0	64.82	3493.0	389.2	*298.0	472.6	956.9	905.0	471.3

MAAA 70th Nats - F5J - Overall Results

[West Wyalong 26/04/2018]

www.GliderScore.com

Rank	Name	Score	Pcnt	Raw Score	Rnd1	Rnd2	Rnd3	Rnd4	Rnd5	Rnd6	Rnd7	Rnd8	Rnd9	Rnd10	Rnd11
1	LENNON, Scott	9673.3	100.00	10193.7	1000.0	730.5	1000.0	1000.0	1000.0	1000.0	957.1	985.7	*520.4	1000.0	1000.0
2	STEVENSON, Phil	9041.5	93.47	9255.4	752.9	881.6	862.7	958.1	970.4	949.1	1000.0	*213.9	668.7	1000.0	998.0
3	WILSON, Bob	8983.7	92.87	9343.3	*359.6	1000.0	1000.0	949.4	970.4	868.6	1000.0	1000.0	515.7	679.6	1000.0
4	FARRAR, Don	8540.0	88.28	8540.0	1000.0	562.6	1000.0	*0.0	923.4	868.6	928.2	305.7	1000.0	1000.0	951.5
5	SCOLARI, Terry	8416.4	87.01	8880.2	720.5	981.6	542.0	654.4	1000.0	*463.8	1000.0	1000.0	532.1	985.8	1000.0
6	GILLOTT, Mel	8135.0	84.10	8135.0	759.6	1000.0	428.9	1000.0	*0.0	821.4	888.1	303.0	1000.0	977.9	956.1
7	LEITCH, Dave	8100.7	83.74	8100.7	1000.0	492.2	209.4	1000.0	*0.0	1000.0	890.7	989.4	578.3	940.7	1000.0
8	METZGER, Klaus	7278.4	75.24	7278.4	767.1	588.2	*0.0	49.9	911.6	986.4	788.0	1000.0	770.1	942.5	474.6
9	SAFARIK, Ladislav	6863.4	70.95	6863.4	0.0	983.5	*0.0	422.8	1000.0	1000.0	493.7	986.7	898.6	264.9	813.2
10	RYAN, Gary	6179.5	63.88	6179.5	701.9	1000.0	0.0	481.0	311.1	627.8	895.4	846.6	403.6	912.1	*0.0
11	PRING, Mal	5640.9	58.31	5640.9	483.6	420.8	0.0	810.7	913.8	602.4	825.5	302.0	1000.0	282.1	*0.0
12	QUIGLEY, John	5184.9	53.60	5184.9	611.5	0.0	0.0	*0.0	380.6	863.3	935.0	378.8	425.2	842.8	747.7
13	PAYNE, Brian	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

F5J at the MAAA Nats

The AEFA agreed to run F5J at the MAAA Nats at West Wyalong, thanks to Terry Scolari who ran the event, and Mal Pring who carted all the gear along to West Wyalong. The event was held on the local air strip and was pretty dusty by all reports. It was conducted over two days. The first day was windy and flying was curtailed. The second day was good weather, so 11 rounds were completed with 12 fliers. The event was won in style by accomplished thermal seeker, Scott Lennon, flying an old design glider weighing well over 2kg. That just supports the principle that it is the flier that counts the most, not the model (previously resoundingly indicated at the F5J Trophy last year by Marcus Stent and Phil Bird). Second and third were also accomplished fliers, Phil Stevenson and Bob Wilson.

What is a Vector?

By Ken Woodward

Those of us at the F5J Trophy event last November held at the NAAS Field, near Tharwa, were privileged to watch a brilliant hands-on demonstration of thermal spotting by Marcus Stent who had won the F5J competition.

The key to chasing thermals down wind is observation of a long streamer (mylar tape tethered high on a pole). Watching changes in the tape direction is the key to the location of a thermal. Not only did Marcus explain this- but he flew his Prego winning model to demonstrate.

Since then, I have been asked about the term vector used by Marcus. Here is an explanation of vectors and vector triangles/addition of vectors.

Nothing new here - see any decent Senior School Physics text where examples given are typically either aircraft and crosswinds or boats/swimmers moving across a stream or tidal current.

But first: **Scalars** - quantities with magnitude but no direction. Distance, Speed, and Mass are all scalars.

Vectors - quantities with magnitude AND direction .

Displacement - distance in a set direction; as the crow flies!)

Velocity - speed in a set direction.

To illustrate : you may take 10 hours to travel the 1000 km road distance between Sydney and Melbourne - average speed 100 km/h – but velocity would be much less as it is measured in a direct line Sydney to Melbourne - say 700 Km in the 10 hours or 70 Km/h.

Force - a push or pull, or more verbosely - a force is that which changes or tends to change the state of rest or uniform straight-line motion of a body.

Gravity/weight - electrical and magnetic attractions & repulsions - thrust from a propeller or jet exhaust are familiar examples of forces.

When describing a wind you can think in terms of wind velocity or wind force. Keep it simple - think here of straight lines (exclude willy-willies please!).

Triangle of vectors.

See the extract from a very old & long out of print Physics text book - Smith & Smith : A General School Physics - on the next page.

The example given is of an aircraft in a cross wind. It is easy to take the step from there to the Triangle of Vectors as described by Marcus.

To adapt this example to the Vector Triangle used by Marcus:

AB represents the wind speed before a thermal appears (in magnitude & direction).

BC represents airflow generated by the thermal (in magnitude & direction).

The RESULTANT of the two vectors is represented by AC.

So before a thermal appears the mylar streamer is extended in the line AB.

The thermal appears and swings the mylar to extend in the line AC.

So where is the thermal?

Visualise an extension of BC- the thermal is rising out there some where. So send your aircraft out there looking in that direction.

“Reading” the thermal location will need the pilot to gauge the strength of the thermal flow relative to the “steady “ wind before the thermal appeared; i.e. how strongly is the mylar being drawn by the wind - how strong is that warm air around your ears? How long does the change of direction last – if it is a short time, the thermal is weak. If it lasts for some time, the thermal is strong!

The above should be read in conjunction with what Marcus wrote earlier in the AEFA E-magazine.

ADDITION OF VELOCITIES

It frequently happens that a body possesses two motions simultaneously, one superimposed on the other. Common examples of this combination of two motions include the case of a man walking across the deck of a moving barge, a boy rowing a boat across a swiftly flowing river, and an aeroplane flying in a cross wind. The actual velocity which the body acquires under these circumstances is known as the **resultant velocity**, and is obtained by finding the **vector sum** of the two separate velocities.

Consider, for example, an aircraft which is steered in the direction PAB (see fig. 4.2) when there is a cross wind blowing.

Suppose that during each second the airscrew moves the aircraft through the air a distance represented by the length of the line AB. Since the air which actually supports the aircraft is also moving, then during this time the wind moves the aircraft a distance represented by the length of the line BC in the direction shown. The aircraft therefore appears to move in the direction AC, and in 1 second travels over the ground a distance represented by the length of AC.

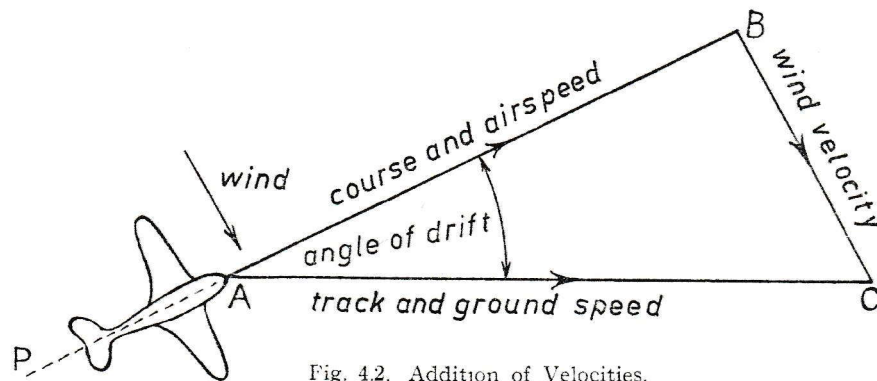


Fig. 4.2. Addition of Velocities.

It is the practice in navigation to refer to the direction and magnitude of the velocity of the aircraft through the air as the **course** and **airspeed**, respectively. The direction and magnitude of the velocity of the aircraft over the ground are known as the **track** and **ground speed**, respectively. It is also the practice to give the direction of a velocity as the angle which its direction makes with true north, the angle being measured in a clockwise direction. In giving the direction of the wind, however, it is customary to give the direction **from** which the wind blows. An east wind is one that comes from the east.

Thus in fig. 4.2, the line AB represents in direction and length the course and airspeed of the aircraft. The line BC, drawn from the end of AB, represents in direction and length the direction and magnitude of the wind velocity, i.e. the velocity which the moving air gives to the 'plane. The line AC represents in direction and length the track and ground speed of the 'plane, i.e. AC represents the **resultant velocity** of the aircraft, and is the **vector sum** of its two separate velocities. The angle BAC is called the **angle of drift**.

Consideration of the above example, as well as others like it, suggests the following rule, which has been found to apply in all instances where a body is given two velocities simultaneously—

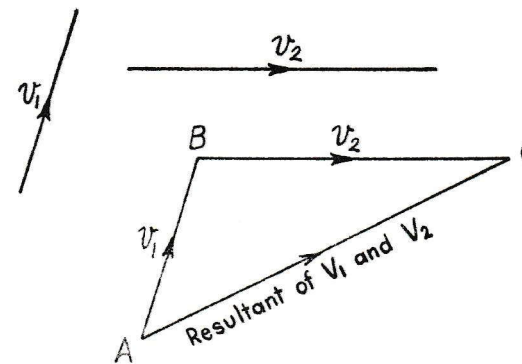


Fig. 4.3. Addition of Velocities.

To add two velocities v_1 and v_2 (i.e. to find the resultant of these velocities), draw a line AB whose direction represents the direction of the velocity v_1 and whose length represents to some convenient scale the magnitude of v_1 . At the end of this line, draw similarly a line BC to represent v_2 . Then the line AC represents by its direction and length the direction and magnitude of the resultant of the two velocities v_1 and v_2 (see fig. 4.3).

“Introduction F5J” Kit

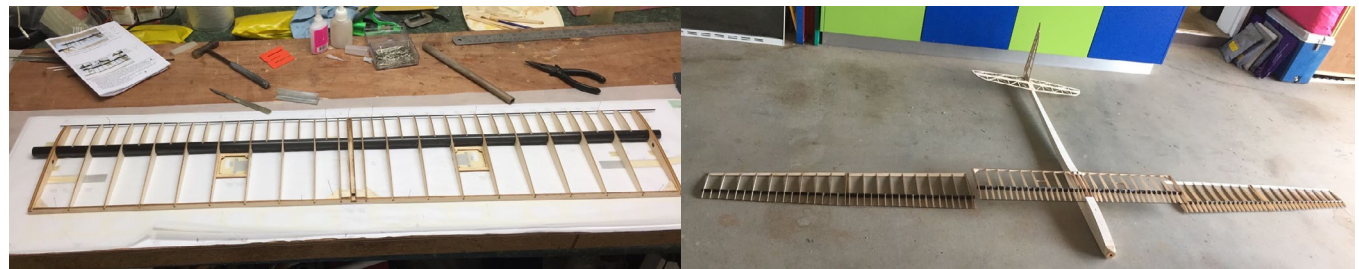
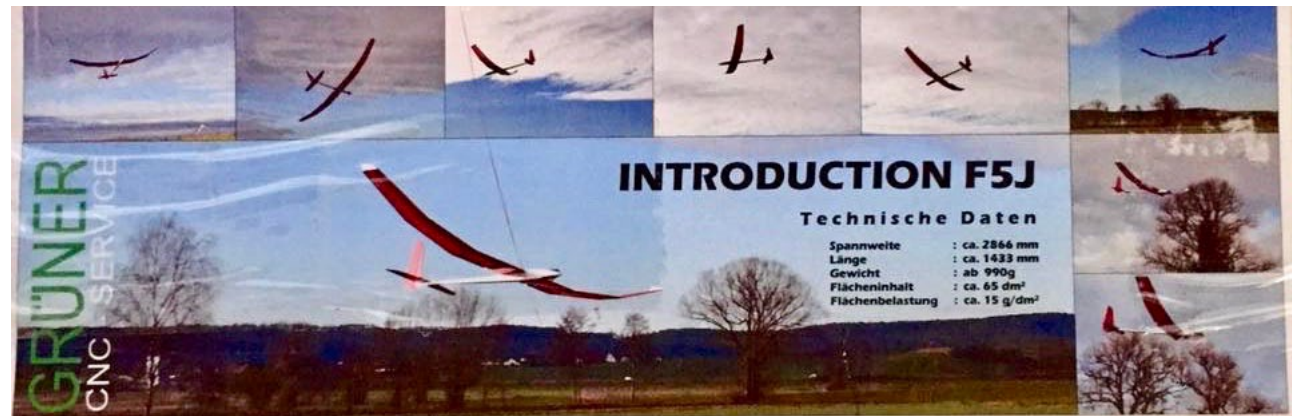
Some of you may have heard of the “Inside” F5J model - a laser cut kit from Europe for an all-built-up F5J model that is full house. Several have been built and are flying in Australia.

Did you know that there is even a simpler version called the “Introduction F5J” that is an REF (rudder-elevator-flap) version. So, it is rudder direction control, but has flaps to aid the landing process. See an image of the box top to the right.

Well, Gus Fox from Cairns, who has contributed before to this E-magazine, has just built one. You can buy this kit from Europe for Euro 159.00 plus postage, and Gus says you could build it in a weekend.

Wingspan is 2680mm and all-up-weight is predicted as 920g - so, great for light weather! It has a tubular carbon spar in the main wing and slots together like Meccano. The leading edge is a fibreglass rod. The fuselage is balsa with light ply reinforcing in the nose. Gus powered his with a Hacker A20 brushless motor and a 20A ESC taking power from a 1400-3S LiPo. His came out at 1100g.

You need a 4 channel radio and four small servos to fit out this aircraft. How about you get out the Super Glue and Epoxy and have a go at one of these yourself.



Decathlon

by Frank Murphy

Frank Murphy from Warrandyte says that he just wanted something small to play with occasionally. He downloaded the plans from "Aerofred" and scratch built the whole model in a tad over 3 weeks.

Wingspan 128cm

Weight 1260 grams

Motor Scorpion 3014-16

Prop APC 9x6E

ESC HiFei 60A SBEC

Battery 3S 2200mAh



Executive Re-shuffle for the AEFA

Executive positions are announced each annual-general meeting, so the annual dinner at Vikings Club in Canberra during the NEFR was the occasion.

David Lucas has retired from the Treasurer's position after doing a great job - thanks David. But he remains very active as the keeper of the AEFA web site and the Leaderboard.

Ralph Dephoff has slipped in to the Treasurer's position - thanks for taking that on, Ralph. And Charles Powell has graciously agreed to take over the Secretary position. Welcome on board Charles.

We are delighted as well to welcome Marcus Stent on board the committee as an executive member for Victoria instead of Bob Hickman. We appreciate Marcus' experience and positive attitude and look forward to working with him.

Otherwise, the executive has not changed - see all the positions on the last page of this E-magazine.



A quick-build Decathlon by Frank Murphy featured above.

Do you have any quickie projects that you have completed to keep the building and flying juices going that you can report to us - share them with others!



Kyosho Dash 8

by Byam Wight

I purchased this 4 engined (4 x speed 400's) Kyosho Dash 7 from Peter Rehwinkel back in 2000. That's 18 years ago, It's been carted from house to house (4 moves) since then.

I hosed it down this morning, connected my new controller, activated the old servos to get the dust off the innards and flew it this arvo using a 2s 8000 pack. It just took off and flew beautifully for 20 minutes.

Do you have any old projects like this that can be revived - even if you have to use a brushed motor speed controller?

Join the F5J Revolution in Queensland

New F5J Event scheduled for Susan River



Funny Story of the Year

Recently I was practising F5J flying on my own with my new Electra2. I dutifully put up my streamer to check the wind, assembled the model, inserted the battery, checked the controls, and powered up the PA to call the timing.

“20 seconds to start” sounded over the PA - trotted on to the field - “5, 4, 3, 2, 1, horn”. Launched the model - good launch - but what is happening? The nose reared up and the model went almost vertical!! Pushed down elevator to control the climb - almost couldn't stop the steep climb, but managed a decent height and switched off.

Now what is happening? The model kept stalling! This has never happened before! Fed in full down trim; still stalling. Activated speed setting (slight negative camber across the wing - both ailerons and flaps - with some down elevator fed in). Ah, that's better! Now it is flying properly!

I had a decent flight for the conditions, even though it was only 5:30, after all the mucking around with the stalling. Scored a spot landing - and then all was revealed! I could not stop laughing!

See the next page for the answer!

See remainder of the Susan River flier on the next page

Susan River F5J flier continued....

Queensland event to be held

Saturday & Sunday 7/8 July • Briefing 9:30am Saturday
Both Open F5J and Limited F5J (2.6m wingspan or less)

Any electric glider can enter (up to 4.0m)- data loggers for loan - \$20 entry fee
Awards for both classes - Even a Radian does well in Limited!

Pre-entry not required - turn up on the day

But registration of intent to come would be appreciated so that catering can be arranged
If numbers are low, you will need to self-cater. Make contact close to the weekend to ascertain

Directions: the field is just west of Hervey Bay and this is the location:
-25.422872, 152.7666905 and you enter from the Eastern leg of Noble Road

Accommodation only 1km away: <http://susanriver.com>
Otherwise search in Hervey Bay - plenty of accommodation there

Respond to Peter Pine • (0407) 732 440 • ppine@northnet.com.au

Send in your funny story for the next edition! I am
prepared to admit to a silly mistake - so should you!



**I had neglected to remove
the cover from the fin!**

Ha, ha, ha - speaks volumes for the model that
the Electra2 could still fly like this! Here is what
David Lucas sent to me after I told him!



LiPo Issue Update

by Peter Pine

I have made a new discovery regarding the LiPos in my F5J models. I have been plagued for nearly 6 months now with my motor cutting out during the climb sometimes. Various strategies seemed to improve the situation, but it never really went away. I'd seem to have it solved, and then it would happen again. That has not done much for my scores in recent F5J events!!

After much experience and testing, and discussing the matter with Gary Ryan, **I have concluded that the problem is voltage drop.** Now that we are using small packs and pulling up to 40A, we are making great demands on the packs. Even the best packs have cut out at times. You will start your climb, and as you load up the pack (by climbing more steeply for example) the voltage will drop below the 3S cut-off level (which is usually 9.0V) and the ESC will cut the motor. Of course, you keep flying because the BEC works just fine!

Now I have solved the problem!

I reset the cut-off voltage in the ESC to 8.4V instead of 3S! That means the pack can dip momentarily below the 3S normal cut-off level, but it will keep going. And it does!!

So - to recap - I am using 870-3S standard 80C LiPos and 850-3S HV 65C batteries and pulling up to 40A out of them. They are good packs, but both types have been affected at times. Here is my advice:

- Only use good quality packs
- Choose packs with a high C rating - they have a lower internal resistance
- Storage charge these packs after every flying session
- Regularly balance the packs - not just a balance charge, but a purposeful balancing process (see EFGA No. 11)
- To get the most out of your packs, warm them up before flying (carry in your pocket for body heat, put them in the sun, or place them on a warm engine in your vehicle).
- Set the cut-off voltage to lower than 3S if your ESC allows this function. You will rarely dip below 9V, but the the motor will not stop.

Please note this last point is outside the recommendations of battery manufacturers - so try this at your own risk.

Marcus Stent advised that he has the same problem with one of his packs - he set the Castle ESC to soft cut-off, and now the motor just slows down if the voltage drops. At least he can keep climbing at a reduced rate.



F5J Model caught in silhouette at the NEFR by Luke Hoad.



F5J Landing approach at the NEFR - a mix of models - Luke Hoad image.

Join in a fund raiser to send an Aussie team
to the F5J World Championship in Slovakia in 2019



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F5J electric glider is booming! Team selection trials for the First F5J World Championships are under way. Four events count in the Australian team selection trials; F5J International Milang, LSF Tournament Jerilderie, the F5J Trophy event in November 2018, and the 2019 Sailplane Expo! We will be sending our best F5J fliers to represent us. Let's support them! The costs are high and this fund will assist them!

The Trnava club in Slovakia will hold the first F5J World Championships in August 2019.

Tickets are \$10 each, three for \$20, or five for \$30. The raffle will be drawn at the presentation at the National Electric Flight Rally at Easter 2019. All proceeds from this raffle will go to the team for Slovakia 2019!

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>



Travel voucher supplied by Flight Centre



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/>

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
July 21-22	3rd World Challenge open event - Trnava

The AEFA is assisting another Aussie team attend these events and gain experience - four fliers already committed (Hutton Oddy, Bob Wilson, Don Farrar and Ladislav Safarik). Don't miss their seminar at the F5J Trophy event!

2018 Glider/F5J Events Calendar

Produced by the AEFA to promote F5J & Gliding

No.10/13-3-18

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

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			
7-8 July	New QLD event	F5J Susan River	Susan River near Hervey Bay - Contact Peter Pine
8-Jul	First Round	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

September			
14-Sep	Practice Day	F5J Central Queensland	Bundaberg, QLD
15-16 Sep	2-day F5J event	F5J Central Queensland	Bundaberg, QLD
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



Raffle Results

You may be aware that the AEFA conducted a raffle in 2017/18 to support the three fliers going to Slovakia this year for the Slovak Triangle F5J, and bring back significant intel! Thank you for your support! The AEFA raised some \$3,000 plus and has given each flier for Slovakia \$900 to offset their costs. The balance has been retained to seed a fund to support the team to the WC in 2019.

First prize this year was an Ava kit graciously supplied by Dave's Toys. Lindsay Dephoff, Ralph's brother, came along to the NEFR to view the proceedings and support Ralph. Lionel bought a stack of tickets on the field on the day - and won the prize! The image above shows a very happy Ralph with the Ava won by his brother, who is not a flier! The ticket was drawn by Dianne Armarego, wife of the President of NAAS.

Second prize was an Aero-naut Triple Thermic electric glider kit and was won by Terry Harrison from Charlestown in Newcastle. Terry bought his ticket online on the AEFA web site.

Third prize was an AXI F5J electric motor, and was won by Israel Linwood from Bundaberg - his Dad Mark sold tickets at the club.

2018 Calendar continued

November			
3-4 Nov	F5J Perpetual Trophy	F5J Annual Tournament F5J team selection trial	NAAS Canberra
11-Nov	2m Electric Glider event	Shoalhaven Shield - Millennium Cup Rnd 7	Bomaderry
18-Nov	Second Round	Picton Cup	Appin
25-Nov		HSL Club Comp Rnd 6 - F3J & F5J	Maddens Plains
December			
2-Dec	Now Southern Region 2018 Fun Electric Glider Event - Round 3	Ted Swan Cup - Round 3 of SRFEG	Goulburn

Three chances to fly F5J in Queensland in 2018

First there was Bundaberg, called the F5J Central Queensland Championship, for the last two years. Then Monto was added courtesy of Ross Ginder. Now an new event has been scheduled at Susan River (Hervey Bay).

So - you can fly F5J in Susan River on 7-8 July
Then you can fly F5J at Monto on 4-5 August
And finally F5J at Bundaberg on 14-16 September
Queensland F5J fliers have never had it so good!

And don't forget to schedule your trip to Canberra for the 3rd Australian F5J Trophy event on 3-4 November. This year the event will be part of the team selection trial program for the 1st F5J World Championships to be held in Slovakia in 2019. But don't let that deter you - only those who nominate themselves as aspirants will be competing for a place on the team. For the remainder of the field it is business as usual with two classes being flown - both Open and Limited F5J. You can fly Limited with your Radian! Radians came first and second in Limited last year!

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-2017-18A.pdf>

The 2018/19 Leaderboard is well under way. There are now five events on the Leaderboard for this year so far.

Don Farrar has hit the top of the chart after these five events, strengthened by placing well at the NEFR at Easter and the MAAA Nats at West Wyalong. Congratulations Don, and we wish you well for your trip to Slovakia.

Bob Wilson is placed second after winning at the NEFR at Easter, and is also making the trip to Slovakia.

Ladislav Safarik has been flying well and is placed 4th on the Leaderboard - another flier going to Slovakia.

Hutton Oddy is the fourth person making the trip to Slovakia. Hutton is not that well placed on the Leaderboard as he has only been able to make one minor event since this chart commenced - but I am sure he will soon rocket up the ranking as he makes it to more events.

We wish these guys well as they travel overseas, and look forward to their report on the excursion at the F5J Trophy event in November. I am sure they will have much to report - so make it to that event! Flier on the next page!

3rd Annual
**Australian
F5J Trophy**



The Australian perpetual F5J trophy 3rd annual event is to be held at the NAAS field near Canberra Presented by the AEFA in conjunction with the NAAS Club and LSF Australia

Two days of flying 3-4 November 2018

Note - This event is part of the team selection trial for the 2019

F5J World Championship - but only those who nominate as aspirants are affected



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Prop adapters Speed Controllers
Servos Spinners

Special Feature: More seminars by the 2nd F5J team that competed in Slovakia.
Learn about their overseas experiences and prepare for the World Championships

Pre-registration required - Entries close 27 October - see the AEFA web site for a registration form:

www.aefanet.com

Prizes for placegetters - and a give-away of products by draw from the hat - \$50 entry fee
Data loggers available for loan - just bring your electric glider. Food available on the field.
Enjoy the great NAAS site - camping permitted \$15 per night - toilets and shower provided.

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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 2018. 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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Web site - www.aefanet.com