

FREE FLIGHT

DOWN UNDER

NEWSLETTER OF THE AUSTRALIAN FREE FLIGHT SOCIETY INC

VOLUME 50 NUMBER 2

WINTER 2018



BUMPER EDITION

70TH NATIONALS AFFS CHAMPS

FINDING THERMALS

WHAT IS KIT SCALE?
CLEANING YOUR BITS
RAMROD 750 STORY
E-36 GOOD BITS



FRONT COVER:

A great launch by Vin Morgan in round 1 of the F1B event at the 70th Nationals, held at West Wyalong in April 2018. In this edition, Vin tells all about the F1Bs flown at Narrandera and West Wyalong in April.

Free Flight Down Under Winter 2018

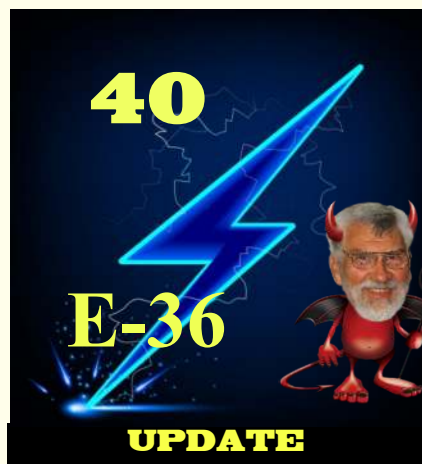
Volume 50, Number 2

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Free Flight Down Under is the newsletter of the Australian Free Flight Society Inc, a Special Interest Group of the Model Aircraft Association of Australia. FFDU welcomes contributions in the form of articles, letters, pictures, etc on any aspect of Free Flight or related topics. Contributions can be sent to the above address or emailed to the editor. Electronically prepared material is preferred. Please keep photos separate and no smaller than 200 kb each.

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**That Sinking Feeling
.... going down**



PRESIDENT'S REPORT



Well, back in the saddle again, I would firstly like to thank outgoing President Graham Maynard for his period in the role over the past two years, as well as the Executive Committee for keeping things ticking over. For their sins, most have agreed to continue on the Executive and for that I am very grateful. Outgoing VP Matt Hannaford has decided to give it a break for a while and I also thank him for his continued efforts.

While I did not go to the 70th Nationals at West Wyalong, by every account they were very successful and Tahn Stowe and his team are to be congratulated for their magnificent effort. Much of the Free Flight activity is reported in this issue. There is a ballot running on the MAAA web site about holding them again at West Wyalong. When I last checked, voting was 74% in favour, so I hope that they have asked if someone has the energy to run it there again!

AFFS business was carried out very efficiently at the last AGM, with

some interesting discussion regarding the distribution of Free Flight Down Under and a Risk Management and Assessment plan. The Plan was formally adopted by the meeting, but the question of possible free distribution of FFDU is to be considered further by the Executive Committee. Roughly speaking, the AFFS derives around \$2500 per year from competition entries and \$1000 from FFDU subscriptions, while incurring a cost of around \$600 for the production and postage of the hard copy versions. Free distribution of the magazine would certainly increase its readership and provide wider promotion for AFFS activities, but this needs to be balanced against the loss of income. There is also the requirement of Incorporation for AFFS members to pay a membership fee, though this could be set lower than the current FFDU subscription. The Executive will continue to canvass the various options.

The Forum following the AGM considered the status of the flying field, dates for the next AFFS Championship, a Jim Fullarton Memorial Trophy and winding up the Western Australian Free Flight Society (WAFFS) due to declining membership and transfer of the WA Free Flight activities to the Western Australian Model Aircraft Club (WAMAC), that would be the official host of the State Championships and Team Trials. Further details of these items will shortly be provided along with the AGM minutes.

The three World Championship events (Tui Cup, Widgiewa Cup and AFFS Championships) were held successfully at Narrandera, just prior to the 70th Nationals at West Wyalong, and we were fortunate to have competitors from China, USA, Mongolia and New Zealand in addition to the Australian contingent. Due to the proximity of the Nationals, the program this year focused mainly on FAI events, with particular interest from those local fliers seeking a place on the Australian Free Flight team for the upcoming world championships in USA. Weather was generally quite kind and the field in good shape, so all events bar the Scramble were completed, the latter postponed to a shootout at Richmond at some later date (to be advised). It is planned at this stage to return to a more comprehensive program next year and hopefully also to continue with the New Zealand World Cup Event, New Zealanders willing.

Finally, I remind those who attended the AGM of the commitment for each one to provide an article for Malcolm Campbell so that he is assisted in his excellent production of FFDU (at least I didn't hear any strong protestations to the contrary!). So he should now feel free to ask where your article is, rather than just solicit for articles in general, and so, if you do get a call from Malcolm jogging your memory, please help out. And by the way, the rest of us get much enjoyment from reading the articles as well!

Paul Rossiter

BREAKING NEWS – 71ST NATIONALS

Roy Summersby reports the MAAA have given the OK for the NSWFFS to run the 71st Nat's at West Wyalong in 2019. The planned dates are 24th April to 1st May 2019.

This gives one day travelling after Easter Monday. Quite a few SIGs hold events over Easter, so these dates are not ideal, and Easter occurs right in the middle of the NSW school holidays. It also clashes with Anzac day. Roy says he thinks it is the best we can do, and the dates are very close to the last Nationals.

KIT SCALE - WHAT, WHY and a FEW HINTS

What is Kit Scale? Well if the Poms have it. Why not us? It was decided at the last NSWFFS scale weekend in July, that we would include this event in our scale program, so let's give it a try.

Why? Well it should be a lot less time consuming than building a full on F4C model from scratch. Hopefully we will get more starters and they might go on to build something better. I have no idea what the rules are or will be, but one must assume that the model has to be built from a kit. Minor changes might have to be made to suit your needs. Maybe the kit you have fallen in love with was designed for rubber and you want to install a small diesel etc. No doubt there would be a minimum flight time, and the documentation would be the plan from the kit, and the box lid to see what it should look like.

There is a huge variety of kits to choose from, both laser cut, as well as the good old printed balsa sheet ones. I know this, as I have sold about 350 kits for our roof fund over the last twelve months.

Wind the clock back some twelve months or more when I was building my 1/8th scale PZL. Gary Goodwin called in and gave me a small PZL kit, which he had found at Hobby Co. Being a gift, I had to build it. The model was laser cut and designed for rubber, so being me I had to change it to a small diesel. The little PZL went together very quickly and has a .3cc DB Mills for power and it flies great, just like a sport model. Up until then, I don't think I had built a free flight scale model from a kit for over sixty years.

With the announcement of Kit Scale at Richmond, I was keeping an eye out for something to build for this event. Goran Milosavljevic arrived with a Stinson Voyager kit, 40" span and laser cut; this he had found at a car boot sale. In the dim dark past I had built, or most likely tried to build, a Stinson Reliance so I might have had

a soft spot for a Stinson. A deal was done and I had a kit to suit me. The kit was designed for very light weight electric R/C so a few changes were necessary.

1. The wing was locked in at the front and a bolted down at the trailing edge, this might suit a good R/C flyer, but for FF the wing needs to be able to move if the ground comes up at a bad angle.
2. It had to have an engine for noise, so the nose needed some changes.
3. The struts were to be 3/8 x 1/8 balsa, not strong enough for the treatment it would get from me, so a change was needed here also.

The model still looks the same as the plan and the photo on the box lid, so I hope this is OK for the rules that we don't have yet.

Hints for the would-be builders, and there should be a lot of you out there.

- Select the kit that suits your needs, that is, will you be flying it a lot or do you want something exotic that is nice, but not so reliable? While you are doing this, keep in mind what you intend to power it with, IC, rubber or electric.
- Laser cut kits can save you heaps of valuable time, which means you get to start your next model sooner. If you were like me, and think, "*I am not bad with a knife*", let me assure you that you are no match for one of these new fancy laser machines, especially when it comes to round fuselage formers. The parts fit so accurately together you don't know where to put the glue, building is just so easy and quick. Now if you have selected a laser cut kit, the first thing to do is to mark all the parts from the sheet provided.

This is not done with laser cut kits and needs doing before you start cutting them loose. This is much easier than chasing around looking for the odd shape bit that might fit. The instructions will give you the code numbers that will match the plan.

- You must now decide what the finish is going to be. If the model is going to be painted, or covered in very dark tissue, there are no problems. Any covering that is not a solid or dark colour, you will need to remove all the blackened edges from the laser cutting as they will show through. Believe me, this is easier to do before than after. I know, I changed from paint to transparent Oracover.
- Now I know you won't do it, but read the instructions before you start. The designer / manufacturer of these products sometimes has a few hints to make things easier, and just maybe, sometimes they know best.

Happy Kit Flying

See you at Richmond 6th-8th July 2018

Roy Summersby



RICHMOND SCALE RALLY
7TH & 8TH JULY 2018

TRANS TASMAN F4A
DAVID HOPE - CROSS TROPHY
REG JUDE RUBBER TROPHY
NEW EVENT; KIT SCALE

SATURDAY:
 SCALE FLYING
 & STATIC JUDGING

SATURDAY NIGHT:
 DINNER AT THE PUB.

SUNDAY:
 8.00 AM HALF HOUR POWER SCRAMBLE
 CONTROL-LINE & FREE FLIGHT FUN FLY
 BBQ LUNCH SPONSORED BY THE AFFS.

COME FLY YOUR FREE FLIGHT SCALE CREATION ON THE BEAUTIFUL RICHMOND TURF.

CONTACTS:
 Roy Summersby 02 4341 0072 <royd132@optusnet.com.au>
 Tahn Stowe 02 9664 6198 <stowes@ozemail.com.au>



THREE WORLD CUPS PLUS MORE AT NARRANDERA

16 - 21 April 2018

report and photos by Malcolm Campbell



THE TUI CUP Narrandera 16 April 2018

Phil Mitchell had set up camp by the creek a couple of days before the rest of us arrived and used this time to check the field and do some house-keeping. It was very windy Phil tells me, and he used it to his advantage to clear a large number of prickly bushes on the flight line. Using a spade to steady the bush, he'd strike the base of the bush with an axe and it would "disappear", propelled by 14 – 15 m/sec winds. So there was no raking up, just move onto the next bush.

TUI CUP Monday 16 April

Day 1 was blown out as the winds had not abated. No one flew, and we

returned the next day and the wind was back down to between 3 and 6 m/sec, with less wind in the afternoon. It was decided to fly A, B and C concurrently, the following morning, with Combined Percentage to be flown in the afternoon.

Tuesday 17 April

Winds were between 3 and 6 m/sec and were to fall back in the afternoon. F1A and F1C flew at the same time, with F1B rounds offset by 30 minutes. This report does not cover F1B or F1C. Separate reports are to be published for these events.

F1A: Mongolian Tumur Sanjaa dropped R1 badly, as did I. Only Brian and Phil maxed R1 and Albert did not get a flight. In R2, I was the only one

not to max, with timer problems that were resolved when I swapped the models. Only Albert dropped R3 and then the horror round – R4 caught us all out with very tricky air. We all launched with confidence to record scores between 2m 14s and 2m 35s. The only exception was Tumur Sanjaa who circled for most of the round and squeaked in a 2m 59s flight that landed not far from the flight line. So at that stage it was Phil, Brian and then Tumur. Only Brian failed to max R5 but it was worse than that. He dropped the line when he couldn't get his model to turn and repeated this with his second launch, elevating Tumur and me into second and third places.



Our first dawn at Narrandera 2018



Gongor Mijidori and Tumur Sanjaa enjoyed Narrandera

Dave Ackery photo



Shayne McDonald - check, check, check



All systems go for Shannon Tolmie

COMBINED % OPEN: Only four contested this delayed event, with one Vintage Power Model versus three F1Hs. M Chris Birch's Eliminator had somewhat of an advantage, with a 15 sec engine run and he maxed all flights only to lose the model OOS in his final flight. It was found 5 – 6 k downwind. I maxed out too, staying in the field of view, and placed second with Phil Mitchell third.

WIDGIEWA CUP

Wednesday 18 April

Better weather was expected but it was not to be, as winds were predicted to be 7 m/sec by 8.30am. The F1C fly-off was run first with Roy Summersby winning from Yuan Gao and Gary Pope. Winds took them over 2 k in 6 mins to near the saltbush paddock. Gary did not find his model until lunch time. The F1B fly-off was a very close finish with Craig Hemsworth just ahead of XinPu Sheng. The F1B and F1C stories appear elsewhere in FFDU.

For the Widgiewa Cup, like the Tui Cup, it was decided to fly offset

rounds in A, B and C with B 30 minutes later.

F1A: The round started in strengthening winds. Albert got a particularly good launch alongside Brian Van Nest with both getting the 4 min R1 time. Others weren't so lucky. Then came the announcement the event would be cancelled and run again on Thursday. Obviously that didn't suit some flyers but the jury convened and it was decided that it would be a fresh start on Thursday. So we all went back to our rooms.

Thursday 19 April

Many were at the field in the dark at 6 am with the comps scheduled to start at 7 am. We saw a few big roos on the road as we scanned both sides of the road on our way out to the field. This was certainly the best day so far but I was having trouble with my early rounds model and had to fall back on my windy weather #3 model because #1 and #2 both had problems. Not to be left out, #3 showed uncooperative tendencies too, but I had to fly with it.

A switch fault caused a poor R1 performance but the real bad luck was with Albert Fathers. After a great R1 flight yesterday, he could only get 2m 14s in R1 today. He wasn't happy. Brian, Phil and Tumur got the 4 mins and Rob Wallace was just short. Albert's day went from bad to worse with only one max. He also broke the boom on his best model when it refused to come around in the breeze, and then his long model (with a SBT full carbon wing) screwed in for a low score. Fortunately, his Stamov short model was showing potential. I fixed my problem before R2 and, along with Phil and Brian, maxed the remaining 4 rounds. Both Brian and Phil had some luck, as one of Phil's DT'ed less than a metre from the ground and Brian's flapper cruised the flight line after a low height launch before thermalling up for an easy max. Tumur had a real up and down day with only 3 maxes but, in the end, he beat me into third place by 1 second. Rob Wallace withdrew after R1 when he failed to max.



Tumur Sanjaa won F1A in the AFFS Champs



Xinpu Sheng focused on F1B at Narrandera



Victorian team meeting?



Shady Liu, a breath of fresh air - check his FB video



Narrandera sunrises are spectacular

In the fly-off the next morning between Brian and Phil, Brian claimed it easily, 43 secs ahead of Phil, with models going 3 k in 6 minutes. I witnessed some carnage in both B and C, livening up those close to the flight line.

AFFS CHAMPS Friday 20 April

The weather was on the improve, with very little wind for the early morning fly-off. A few of us spent some anxious moments trimming and sorting models before R1.

F1A: In a light breeze my #1 model flew for 4 mins, the first time since Hungary. But it was a real surprise that Tumor and I were the only ones to max it. Sadly, Brian Van Nest was

unable to compete, spending 3 – 4 hours finding and retrieving his FO winning model. R2 and R3 were maxes for all, except poor Albert coping a 22 sec R2 flight. Just like the Tui Cup, R4 sorted us all out, and quite a few downwind F1Bs as well. Scores from 1m 30s to 2m 48s affected the whole field. Things came good again in R5 with all maxing except Phil when he duffed his launch, sacrificing 3rd place to Rob Wallace, who maxed with a damaged model. Albert was unable to score in R5, exhausted from a very trying morning, and the knowledge he had to drive home that afternoon..

AFFS CHAMPS Saturday 21 April

Combined Vintage

This was to be 3 Nebula gliders versus one Eliminator power model. With a 15 sec motor run to beat, we expected a battle. I set the pace being the only one to max the first flight but Phil pulled ahead in his second flight although Chris Birch was the only one to max. Kathy retired after her first flight indicated some trimming was needed. I was really happy with my final flight recording a big max, giving me the win by 8 seconds with Chris a long way down.

F1H

Phi and Dave Ackery had no trouble maxing out in the very light breeze although thermals were elusive as the



Craig Hemsworth, supreme in F1B



Neil Pollock enjoyed his time on the east coast



Our Kit Kat man Yuan Gao at work in F1C



Xinpu Sheng launches hard in F1B

day progressed. Brian Van Nest uncharacteristically dropped two rounds and I went fully off the boil badly dropping the final 2 rounds. Kathy and I flew together and we simply ran out of time to put in a 5th flight for Kathy. Rob Wallace also wasn't firing on the day. The fly-off between Phil and Dave was a one horse race with Phil nearly doubling Dave's FO time. Kathy and I then rushed off to the balsa glider pen for CLG – it was a very busy day for us with 3 events each.

F1J

Only Chris Birch and Shannon Tolmie came out to play with newcomer Chris recording an amazing full house with Shannon 75 secs behind. The weather was ideal for Js, but you still had to avoid the sink.

F1G

Two Chinese challenged Gary Goodwin to a duel and Gary was sandwiched between Xiangxue Ji and Xiwen Fan. Little 9 year old Xiangxue ("Emily"), who was the darling of Narrandera and West Wyalong, only dropped 6 secs in one round, whereas the other Chinese junior recorded

zero in R1 and maxed the other four rounds. Gary dropped R2 as did Xiangxue, but his score was 26 secs less. This was unfortunate for Gary because he had a super High Time of 6 mins to use if there was a tie.

Combined HLG/CLG/DLG

Five contested and all flew CLGs, with a small crowd of spectators and timers! Kathy Rossiter, Noels, Kim Jacobsen and Graham Maynard timed and it was a jovial affair. Newcomer to CLG, Chris Birch had to borrow my catapult each time so Roy better get his act together and outfit his protégé correctly in the future.

Kathy Burford put us all on notice with a first flight max and immediately became the crowd favourite. The breeze tended to buffet the little gliders particularly if the launch wasn't good. There were only two maxes scored, one by Kathy and the second by me, in my last flight, that cruelly gave me the win with a 2 sec advantage. I was not popular with the crowd although Kathy took it OK.

So ended the last event of the day and CDs Paul and Kathy Rossiter wrapped it up. We put our gear away

and then went looking for Kathy's F1H that was still out on the field. Noels and Phil were loading the Toyota and trailer with gear for the first of two trips to clear the field. They do a great job organising Narrandera and the field this year looked much better than in previous years as the grass was sparse, thanks to less rain in the lead up.

We left the field late with Gary Pope and Gary Goodwin preparing to find Gary G's F1G lost after a 16 minute flight. It was eventually found near where Chris Birch's Eliminator flew a few days earlier.

The legendary Morundah Pub Dinner was yet again legendary. This meal has always delivered and was enjoyed by all who attended. What a great way to end a great event.

Now it was up to us to tidy our cabin and load the car for West Wyalong. Easier said than done – we had to give one carton of grog to Vin to carry north and the other to Richard Blackam to carry first to Victoria and then back to West Wyalong. The things you ask of friends!

Malcolm Campbell



The sweetheart of Narrandera, Xiangxue Ji, won F1G



Pin-up boy Chris Birch maxed out in F1J



Yuan Gao even found time to relax



Phil and Noels did a good job running the 2018 AFFS Champs

F1Cs IN APRIL, AS SEEN BY THE TAMWORTH BOYS



Shayne McDonald's take on F1C at the Tui Cup, Widgiewa Cup and the AFFS Championships

Another Australian "Awesome April" of Free Flight competitions has again come and gone, competitors were graced with a wonderful fortnight of flying in predominately excellent conditions. The Tui and Widgiewa cup starts were wisely placed on wind hold over a one day period to allow for more favourable conditions which proved to be a well-considered approach with the consecutive days being much more favourable.

This year's entry in F1C was the best seen in many years with the welcome return of our international F1C friends from China and Mongolia. Not to mention our sole Western Australian F1C flyer Neil Pollock making the long journey over. It was nice to see everybody again and make a little noise.

At the risk of making a mistake covering each event round by round



Shayne launches in Nats fly-off

and missing important details, maybe a brief overview of proceedings would be a little more accurate.

The standard of flying in F1C this year was as good as it gets with all competitors running the latest in design folders out of the Ukraine. The Chinese, Mongolian and Roy's models all being Barbenko full carbon machines, us Tamworth lads in the Slava open carbon structure camp with Neil and Gary running a little of both manufacturers but turning those big geared motors up front.

Throughout all of the Narrandera events the 1st, 2nd and 3rd rounds were flown in generally fairly calm and static air conditions with maxes coming thru easily however, by rounds 4 + 5 with the increase in day time temperatures, lift picking became particularly difficult, you were either in good air or on the ground in two minutes. The usual technique of watching thermistor peak temperature indications, wafting mylars and a strong infill puff was in play but unless you had a model overhead or the occasional local eagle thermaling lift picking was tough.

Fly-offs were all held the proceeding morning with a 7am start. The Tui cup fly-off was the pick of the three Narrandera events with five competitors lining up on the flight line. As usual there was the traditional Mexican stand off for a

few minutes until the first flyer got away followed by a flurry of action. Throughout all events there were no dramatic overrun incidents with text book displays of the modern F1C howling skyward and flopping over in bunt into a graceful glide. Slowly the timekeeper watches ticked away but when all was said and done two of the most consistent competitors on the international F1C stage showed us all how it was supposed to be done with Roy Summersby and Yuan Gao swapping between them 1st and 2nd places between the three events.



The Australia versus China "Face Off"

A Big Thank You is well in order to our event organisers for their huge efforts at once again running a wonderful series of World Cup competitions, I think a few special Thank You shout-outs should go to our Kiwi compatriots for kindly running the Tui cup alongside our annual AFFS event season, it was great to have you here. And where would we be without Phil and Noels tireless efforts behind the scenes again, a very big Thank You is also well deserved.

Hope to see all of you folks out on the flying fields sooner than later.

Shayne McDonald

Later on, Shannon has a word to say about F1Cs at the Nationals

RESULTS FOR ALL NARRANDERA COMPETITIONS

TUI CUP

F1A

NAME	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Phil MITCHELL	240	180	180	155	180	935		1
Tumur SANJAA	161	180	180	179	180	880		2
Malcolm CAMPBELL	172	121	180	141	180	794		3
Brian VAN NEST	240	180	180	135	0	735		4
Albert FATHERS	0	180	100	134	180	594		5

F1B

NAME	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Craig HEMSWORTH	240	180	180	180	180	960	310	1
Xinpu SHENG	240	180	180	180	180	960	308	2
Richard BLACKAM	234	180	169	166	180	929		3
David ACKERY	240	180	149	180	180	929		3
Vin MORGAN	240	180	180	141	180	921		5
Gary GOODWIN	240	130	180	180	180	910		6
Bruce HAO	240	180	122	180	180	902		7
Paul ROSSITER	240	180	180	69	27	696		8
Graham MAYNARD	240	180	15	143	86	664		9
Charlie JONES	234	180	0	0	180	594		10
JiaHong LIU	240	64	0	0	0	304		11

F1C

NAME	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Yuan GAO	240	180	180	180	180	960	405	1
Roy SUMMERSBY	240	180	180	180	180	960	360	2
Gary POPE	240	180	180	180	180	960	352	3
Wei Ji	240	180	180	180	180	960	341	4
Shane McDONALD	240	180	180	180	180	960	310	5
Gongor MIJIDDORJ	223	180	180	180	180	943		6
Shannon TOLMIE	177	180	117	122	111	707		7
Neil POLLOCK	132	0	0	0	0	132		8

WIDGIEWA CUP 2018

F1A

NAME	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Brian VAN NEST	240	180	180	180	180	960	389	1
Phil MITCHELL	240	180	180	180	180	960	346	2
Tumur SANJAA	240	180	164	180	133	897		3
Malcolm CAMPBELL	176	180	180	180	180	896		4
Albert FATHERS	114	155	156	180	158	763		5
Rob WALLACE	234	0	0	0	0	234		6

F1B

NAME	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Gongor MIJIDDORJ	240	180	180	180	180	960	411	1
Charlie JONES	240	180	180	180	180	960	371	2
Xinpu SHENG	240	180	180	180	180	960	360	3
Craig HEMSWORTH	240	180	180	180	180	960	349	4
Bruce HAO	240	180	180	180	180	960	307	5
Gary GOODWIN	240	180	180	180	180	960	289	6
JiaHong LIU	240	180	180	180	180	960	250	7
Richard BLACKAM	240	180	180	177	180	957		8
David ACKERY	235	180	180	180	180	955		9
Paul ROSSITER	240	180	180	128	180	908		10
Vin MORGAN	240	180	180	125	180	905		11

F1C

NAME	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Roy SUMMERSBY	240	180	180	180	180	960	456	1
Yuan GAO	240	180	180	180	180	960	378	2
Wei Ji	240	180	180	180	180	960	246	3
Gary POPE	240	180	171	180	143	914		4
Shane McDONALD	240	180	180	180	117	897		5
Shannon TOLMIE	240	180	180	102	131	833		6
Neil POLLOCK	240	180	96	107	136	759		7
Gongor MIJIDDORJ	240	109				349		8

AFFS CHAMPIONSHIPS 2018**F1A**

NAME	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Tumur SANJAA	240	180	180	168	180	948		1
Malcolm CAMPBELL	240	180	180	90	180	870		2
Rob WALLACE	175	180	180	107	180	822		3
Phil MITCHELL	230	180	180	98	122	810		4
Albert FATHERS	181	22	180	145	0	528		5

F1B

	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Gongor MIJIDORJ	240	180	180	180	180	960	358	1
Charlie JONES	240	180	180	180	180	960	347	2
Richard BLACKAM	240	180	180	180	180	960	207	3
Yun Sheng WU	240	180	180	180	180	960	16	4
Craig HEMSWORTH	240	180	180	180	180	960	DNF	5
Graham MAYNARD	240	180	180	172	180	952		6
Vin MORGAN	240	151	180	180	180	931		7
Rob WALLACE	204	180	180	159	180	903		8
Xinpu SHENG	240	180	155	180	124	879		9
Bruce HAO	210	180	165	144	180	879		10
David ACKERY	204	180	180	132	180	876		11
Paul ROSSITER	240	180	180	76	180	856		12
Gary GOODWIN	26	180	180	180	176	742		13
J H LIU	155	5	180	146	111	597		14

F1C

	R1	R2	R3	R4	R5	TOTAL	FO1	PLACE
Roy SUMMERSBY	240	180	180	180	180	960	445	1
Yuan GAO	240	180	180	180	180	960	364	2
Gongor MIJIDORJ	240	180	180	180	180	960	325	3
Shannon TOLMIE	240	180	180	173	180	953		4
Shane McDONALD	240	180	180	180	162	942		5
Wei JI	240	180	180	142	180	922		6
Neil POLLOCK	240	122	180	180	127	849		7
Gary POPE	13	180	38	149	180	560		8

COMBINED % OPEN

	F1 %	F2 %	F3 %	TOTAL %	FO Model	FO %	PLACE	MODEL FLOWN
Chris BIRCH	100	100	100	100.0		146	1	Vintage Power
Malcolm CAMPBELL	100	100	100	100.0		73	2	F1H
Phil MITCHELL	100	75	100	91.6			3	F1H
Kathy BURFORD	3	100	54	52.0			4	F1H

F1H

	R1	R2	R3	R4	R5	TOTAL	R1 HIGH	PLACE
Phil MITCHELL	120	120	120	120	120	600	360	1
Dave ACKERY	120	120	120	120	120	600	190	2
Brian VAN NEST	118	120	72	120	120	550		3
Rob WALLACE	97	103	82	120	48	450		4
Malcolm CAMPBELL	120	120	120	40	24	424		5
Kathy BURFORD	62	120	120	120	0	422		6

F1G

	R1	R2	R3	R4	R5	TOTAL	R1 HIGH	PLACE
Xiangxue JI	120	114	120	120	120	594	147	1
Gary GOODWIN	120	88	120	120	120	568	360	2
J H LIU		120	120	120	120	480	0	3

F1J

	R1	R2	R3	R4	R5	TOTAL	R1 HIGH	PLACE
Chris BIRCH	120	120	120	120	120	600	263	1
Shannon TOLMIE	120	120	105	120	60	525	147	2

HLG/DLG/CLG

	Best three flights		Best 3 Total		PLACE
Mal CAMPBELL	38	34	60	132	1
Kathy BURFORD	60	23	47	130	2
Phil MITCHELL	30	36	31	97	3
Dave ACKERY	26	14	20	60	4
Chris BIRCH	5	5	4	14	5

IVOR F MEMORIAL & RUSS HAMMOND SCRAMBLE

Not flown, postponed until Richmond

Chris BIRCH
Phil MITCHELL

COMBINED VINTAGE

	R1	R2	R3	TOTAL	R1 HIGH	PLACE	MODEL
Mal CAMPBELL	180	118	180	478	321	1	Nebula 1954
Phil MITCHELL	143	178	149	470	143	2	Nebula 1954
Chris BIRCH	47	180	106	333	47	3	Eliminator 1952
Kathy BURFORD	68	0	0	68	68	4	Nebula 1954

AFFS CHAMPION 2018

Malcolm CAMPBELL

BEST JUNIOR 2018

Chris BIRCH

Photos from Narrandera can be found on the following click-able link:

JUNIOR ENCOURAGEMENT AWAR! Xiangxue Ji [URL: https://www.flickr.com/photos/motor-racing-photography/albums/72157693474912932](https://www.flickr.com/photos/motor-racing-photography/albums/72157693474912932)



Australian Free Flight Society Inc

Annual General Meeting

19 April 2018 Narrandera

Meeting opened: 7.05pm
Members Present: 14 Guests: 1

1. Minutes of Previous Meeting

The minutes as published in Free Flight Down Under (FFDU) were proposed for acceptance Paul Rossiter 2nd Malcolm Campbell. Accepted.

2. Business Arising From Minutes

Nil

3. President's Report

Graham detailed his President's Report to the MAAA as published in FFDU. Graham thanked the AFFS Committee members for their input during the year.

A summary of the topics follows:

- Upcoming World Championships in Lost Hills USA
- Encouragement to Juniors
- Responses sent to CIAM on Rule Change Proposals.
- MAAA Rules – Vintage, CLG and E36
- Future direction

4. Treasurer's Report

The Treasurer tabled the AFFS Accounts for the past financial year to
31 December 2017 for the members' consideration:

Total Income	\$4,135.00
Expenditure	\$3,282.11
Profit	\$ 852.89
Current Assets	\$6,701.32
Value of Assets (Non current)	\$ 479.83

Proposed acceptance of the Treasurers Report by Albert Fathers 2nd Graham Maynard. Accepted.

5. Formal Agenda Items:-

i) FFDU Distribution.

The meeting considered the written submission (tabled) from President Graham Maynard and indicated general support.

Whilst free distribution of the magazine would certainly increase its readership and provide wider promotion for AFFS activities, this needs to be balanced against the loss of income. There is also the requirement of Incorporation for AFFS members to pay a membership fee, though this could be set lower than the current FFDU subscription. *Action: Committee to follow up on most appropriate action.*

ii) **Risk Management and Assessment Plan.**

The meeting considered and adopted the Plan and Recommendations as tabled by Secretary Phil Mitchell. *Action: Secretary to Implement Plan and Recommendations.*

6. **Election of Office Bearers**

Nominations were received in writing as per the Model Rules for Incorporation Associations NSW. No positions were contested. The meeting unanimously accepted Office bearers' election as follows:-

PresidentPaul Rossiter
Vice President.....Graham Maynard
Secretary.....Phil Mitchell
Treasurer.....Albert Fathers
Editor FFDU.....Malcolm Campbell

7. **Formal Meeting Closed at 7.45pm.**

AFFS Forum – Items Discussed

Field Status

The Secretary indicated that Wayne Durnan is happy for us to continue with use of the field at "North Oak". Status Quo remains for AFFS use of the field.

AFFS 2019

Committee to determine dates. Possibly revert to "Normal" Program of events at a similar time next year. Committee to investigate invitation of full time CD.

Memorial Trophy

In memory of Jim Fullarton – Provision of Trophy for F1B 2019.

FFDU

Special mention and thank you to Malcolm Campbell for his continued efforts in production of FFDU. All members asked to provide articles to assist Malcolm.

FAI Numbers

MAAA advice to be sought on issue of new FAI ID Numbers.

WAFFS

Paul Rossiter advised that due to declining member numbers the WAFFS members are now Incorporated/affiliated within the WAMAC.

Sponsorship of NSWFFS Trans Tasman Scale Rally 2018

The Secretary sought AFFS Sponsorship of a nominal amount of funds (say up to \$200) for provision of a BBQ lunch at the NSWFFS Trans Tasman Scale Rally at Richmond in July this year so as to promote AFFS support of general Free Flight activities. (Secretary to arrange this).

Membership

All current AFFS members are encouraged to seek renewal of membership from past members who may have overlooked their membership status.



**FOR SALE - FORA F1C MOTOR INCLUDING
PAN & FUEL SYSTEM - \$250 AUD**



CONTACT SHAYNE MCDONALD AT
shayne7@live.com.au

SOME OF THE WINNERS AT NARRANDERA 2018



TUI CUP - F1A



TUI CUP - F1B



TUI CUP - F1C



WIDGIEWA CUP - F1A



WIDGIEWA CUP - F1B



WIDGIEWA CUP - F1C



AFFS CHAMPS - F1A



AFFS CHAMPS - F1B



AFFS CHAMPS - F1C



AFFS CHAMPS - Combined Open %



AFFS CHAMPS - F1H



AFFS CHAMPS - F1J



AFFS CHAMPS - F1G



AFFS CHAMPS - HLG/CLG/DLG



Xiangxue Ji picks up Encouragement award



Unexpected Champ of Champs



THE 70th NATIONALS

West Wyalong 23 – 30 April 2018

Reports and photos by Malcolm Campbell

Special F1B and F1C reports elsewhere in FFDU



I may have only been to four Nationals before this one but I can say that this was the best, when core values are taken into account. Where it won in spades for me was the proximity of every field to the town centre. We stayed in the centre of town so we could even walk to some venues!

- 2 minutes to the Indoor events and Registration at the West Wyalong Stadium
- 2 minutes to C/L Aerobatics and F4B Scale at McAlister Oval
- 5 minutes to C/L Speed, Rat Race, Team Race, Pylon Racing, RC Pattern and Scale, plus F3D and F5D spread over 3 venues at the WW Airport
- 7 minutes to Combat and older style Team Race at Redman Oval
- 8 minutes to F3C Helicopter
- 15 minutes to all Free Flight events and R/C Old Timer

So I was hooked even before I started flying! The town really welcomed us, no doubt due to the groundwork done in the 12 months leading up to the event. Tahn Stowe and a group of hard-working New South Wales Free Flight Society members and WW Council heavyweights made sure that the event would be successful.

Many free flight flyers came up from Narrandera, as the AFFS Championships finished a couple of days before the Nats events started. Kathy and I booked an apartment in the centre of town and ended up entertaining most nights either for

drinks and nibbles, or meals with friends. After a hectic six days at Narrandera, the pace was much more relaxed. Having the two events back to back was excellent for those who travelled long distances.

The weather for the week looked good and it was. Only one day needed to be postponed when the wind go up, but all other days were perfect.

Sunday 22 April We departed from Narrandera Caravan Park at 10 am and had an early lunch under the Dakota in a park near the southern caravan park. In the van park, we saw combat flyers offloading their six-packs of wings, set for battle with motors and streamers attached. After booking into our accommodation we went to the IGA to stock up for the week. Wine was cheaper in Narrandera and we knew that, so we were well stocked on arrival.

Monday 23 April We registered bright and early after opening time and then drove around the various venues for orientation purposes. We made a brief visit to the Adrian Bryant field to see the club house dwellers and to watch some trimming sessions. I tested my E-36 and made some changes although the wind was getting up, perhaps too much for trimming. The camp sites were filling up under the trees and there would be little room left a day or so later. The Opening Ceremony at the

West Wyalong Stadium at 6pm was attended by a reasonably sized crowd and we were greeted by the mayor of the Bland Shire Council. Adrian Bryant received his Hall of Fame award from Neil Tank and I also received a Service Medallion. Later, with people spread all around the stadium chatting, it was fortunate that only one Indoor RC model flew.

Tuesday 24 April - F1A, F1C, OPEN RUBBER and INDOOR

F1A

A soft launch by me robbed me of the 14 secs I needed for a 4 min max in R1 but Vin Morgan fell harder, a duffed launch inducing a stall that wouldn't go away, seeing the model down in just over 2 mins. Van Richards-Smith waited, launching later for a 2½ min flight. Although 9 had entered F1A, disappointingly only 3 actually flew. This was a theme that was repeated for almost all events, and not unusual for Nationals.

We all maxed R2 and Vin and I did the same in R3, with Van having a shocker. By then A and C flyers were landing close or amongst the trees just near the club house so the flight



Adrian Bryant receives his Hall of Fame award

line was moved further north-east, up near the property border. The air wasn't much good up there, or so it seemed, for F1A with R4 providing low scores to all flyers. Only Vin was circling, usually well away from the others, and it didn't help him either.

By R5, there were long life-less periods of calm and I waited for about 20 minutes for a decent patch to come through. When it did, I went up closely followed by Van. My model bunted and went right, Van's came off softly, straight into a waiting thermal and a max. Mine being on the edge started much higher but fell like a stone in sink, for an 86 sec flight!

Vin then walked out to the line, circling for a long time before he collapsed with a leg cramp, dropping the line. Recovered, he virtually went

straight up into the best thermal of the day, maxing from extreme height. But he missed first place by 9 seconds thanks to his misdemeanour in R1.

F1C

A report of F1C flying from the Tamworth boys appears elsewhere in this edition of FFDU although I did see a very relieved Yuan Gao turn a woeful flight into a max from a low height thermal found over the adjoining northern paddock in one of the later rounds. F1C didn't appear to be affected as much as F1A on this tricky day – perhaps the Cs just get so much higher under power, and they do have a lovely glide. It's a pity they all look the same! The next day, we were to witness the best F1C fly-off ever seen in Australia.

OPEN RUBBER

Only half who entered flew but it was a talented bunch of seven who made this event very entertaining. Vin was kept busy helping Leigh in between F1A rounds and she put up some great flights with what is one of the best Open Rubber models in Australia. Gary Odgers barely missed the fly-off, just 7 secs short and Des Slattery started well with a max but then loaded a soft motor for his final flights. That was fortunate because his timer didn't start in his third flight and he glided in near the clubhouse. His son Peter did a wonderful job supporting him and accompanying him on all retrieves.

The F1Bs of Gary Goodwin and Rob Wallace maxed out to join the Waif of Michael Glaister and the model of



Tahn Stowe speaks at the Opening Ceremony



Part of the crowd who attended the Opening Ceremony



Leigh Morgan dominated Open Rubber



The Chinese team was very strong this year

Leigh Morgan although Rob elected not to fly – he was busy at the control line fields. But the fly-off wasn't as exciting as it could have been. Mike Glaister offered the excuse of "so-so" rubber and a mismatched prop for a lack lustre performance but I also noticed that the wing was skewed badly. Gary Goodwin broke a DT line and then the DPR failed to start in his second launch, and then the hooter went signalling a sad end to his gallant charge. So it was a dominant win to Leigh Morgan with a flight of over 5 minutes, retrieved from the western end of the field, not too far away.

Kathy and I went back to our apartment early as we had guests to entertain – Vin and Leigh and Des and Peter enjoyed drinks on the deck followed by roast lamb and baked veggies, followed by ice cream, malt and caramel sauce. It was a great night. So great I forgot to get to the WW Stadium to watch **Indoor Peanut Scale** and **Open Rubber**, but Phil Warren used a Piper Cub J3 to win Peanut from Reeve Marsh's Polish and Van Richard-Smith's Lacey M10. Phil Warren was the only one to fly Open Rubber using the same little Piper Cub to do the job.

Wednesday 25 April - VINTAGE POWER, OPEN POWER and INDOOR

Open Power

Today produced a flurry of activity, as Y Bars, Stompers, Dixielanders, Zoot Suits and F1Js filled the sky. I knew it was going to be an exciting day when an elderly model self-destructed vertically, 10 m of the road

I was driving in on. Actually I really enjoyed the morning as there were lots of model flying and everyone was happy. With minimal drift and plenty of lift, everyone was having a good time. Well, almost everyone. Roy Summersby fired up the late Stafford Screen's Open Power model (Screen 24) and his admiring audience swooned as it "came on pipe" and picked up another 10,000 rpm. The launch was good and soon it was evident that the 10 sec engine run had been exceeded. At 20 secs the motor changed tune as it unloaded, its trajectory turning downward. Then silence. I didn't see Roy's face but he may have been upset. It took Mile Pettigrew and me about 15 mins zig-zagging the field in his AMG Merc SUV to locate the crash scene. There was quite a hole where the spinner dug in and the wing and stab were destroyed but the fuse was well and truly intact, protected by the alloy pan and super strong construction. The motor will need a bit of a clean but Roy's comment when we returned the bits and he saw the fully intact fuse was priceless – *"Looks like I'll have to rebuild it then"*. Roy has since confirmed, *"It will fly again"*.

Roy wasn't the only one to dig in. A few Stompers and a Dixie landed rather hard and some models may not fly again but everyone had fun and that's what old

time aeromodelling is all about. Ten contested Open Power and Roy's protégé Chris Birch cleaned up with his Eliminator, 11 secs clear of Wally Boliger with oldie Des Slattery happily in 3rd place. Chris's mentor was uncharacteristically mid-field. Some F1Js were harmed during this event.

Vintage Power

Nine flew in this and Roy cleaned up with his Swiss Miss with a full house from Peter Lloyd who dropped 13 secs in his second flight. Harry Sokol's little yellow Y Bar joyously looped its way into 3rd place just a scant 2 secs ahead of Des Slattery's Stomper. Robert Marshall and Danny Maslowicz left some balsa on the field but there were smiles all round on a truly perfect day for old power models and their mostly old flyers.

No time to wait around, I dashed off to Redman Oval for the ½ A Combat only to find two people there. Not too sure why the low numbers but I did meet the Deputy Mayor there. So I then rushed off to McAlister Oval for F2D aerobatics. I think every aeromodeller started in control line



Roy Summersby bids farewell to Screen 24 in OP



Chris Birch wins Open Power with his Eliminator



Des Slattery gets the Stomper away in Vintage Power



So beautiful, I had to include one C/L photo



Big R/C models have a certain appeal



Sean O'Connor and Max Newman entertain the crowd



A cut in ½ A Combat

and it always gives me a thrill to walk out onto the field to see these graceful models strutting their stuff. Three circles were operating and the field was covered in short green healthy grass. The council did a wonderful job preparing the grounds and there were a number of people in the covered stand watching the best in Australia fly their patterns. Barry Frederickson showed me his two electric stunt models in a rack in his vehicle and I saw others fly but there is something magnificent in seeing and hearing a 4 stroking model slowly executing manoeuvres trailing a pungent cloud of burnt glow fuel. The electric variants will assert their presence in time but for me glow is currently the way to go.

From there it was off to the airport to watch some team racing. Some other free fliers were also there, amazed at how quickly pit stops are performed. A quick dash down along the bitumen strip's dirt road followed to where large RC scale models were being flown. Beautifully built and decorated these models were great

to watch. It was a pity that a gas turbine-powered Sabre jet did not spool up to the owner's satisfaction and, after two attempts, he put it away.

Now this is Wednesday and it's not even lunch time and I've seen all this flying, such is the compact layout of the 70th Nationals. It's going to be a fantastic week. After lunch I went back to Redman Oval for ½ A Combat and elected later not to go back to AB field for RC Duration as it was then 4 pm.

We had drinks on the deck with Kim and Richard Blackam and then went up to watch the Indoor events.

Indoor

Max Newcombe and Sean O'Connor entertained quite a good crowd of onlookers with their flights of F1D and F1L models. More like demonstration flights than competitions, Sean O'Connor picked up both wins – another great day over.

Thursday 26 April - F4A SCALE, F1B, IHLG, ICLG, HANGAR RAT and HANGAR RAT SCRAMBLE

F1B and SCALE

Today was windy so I went first to the F1B flight line, set up well down in the south western end of the paddock with a clear run down the length of the field, but it was windy early and most had a long retrieve for the 4 min max set for R1. So I motored on down to near the club house where Scale was being flown on the large flat control line area south east of the house.

Roy was already sporting a nasty set of cuts by the time I got there and Maris Dislers had bisected the fuse of his beautiful EAC monoplane. Roy's Sopwith Swallow took a tumble over the dirt lip of the C/L field and it was time for him to retire it with wing damage. Phil Warren elected to fly his rubber-powered Comper Swift and he had wisely flown it early. I



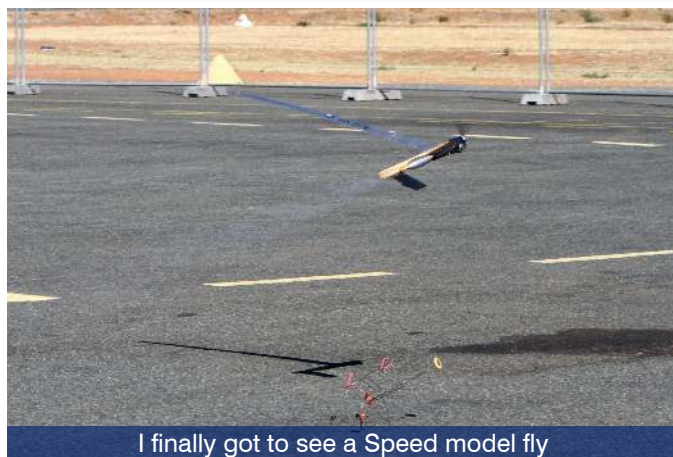
It's not often rubber wins in F4A Scale



Vin Morgan gets away in R1 of F1B



Spot landings were the order of the day in R/C Scramble



I finally got to see a Speed model fly

missed its flight but I saw it ROG and fly well at Richmond 2 years ago. He deserved the win.

So it was back to F1B for me to see the end of R2. Vin understandably wasn't at all happy to drop R2 in this very hotly contested class. The winds were up by the end of R2 and it had swung south west, pushing the models towards the trees so the comp was abandoned, to be continued the next morning.

I went to the adjacent RC field to watch an entertaining RC Scramble, an event dreamed up by Peter Scott.

They have a 3 minute flight time and they have to do a spot landing in a designated area, and this proved quite exciting in 6 – 7 m/sec winds.

A quick rush back to Redman Oval for Vintage A team racing only to learn it had already finished. 5 of the 8 competing models had been damaged in the heats and only 3 contested the final race. Maybe I'd have better luck at the airport? No, although I did see my first speed model flight, and then they too elected to postpone flying until tomorrow. So Thursday afternoon

became R & R for me – Rest and Repair.

Later in the afternoon, Roy and Di and Graham Maynard came up for drinks and nibbles on the deck before we all went up to the Council Chambers for more drinks and nibbles with the Mayor and his Councillors. From there we walked off to watch the Indoor.

Indoor

Our late arrival in the WW Stadium meant we would only see the Hangar Rat Scramble but it was entertaining with 8 Rats competing in both events.



Max Newcombe won Hangar Rat



Mickey Towell cleaned up in Hangar Rat Scramble

A number of good flights were put in by Max Newcombe and after his strong win in the main Hangar Rat event I thought he'd be up there in the Scramble. Something must have happened because his final score was low. Lovable rascal Mickey Towell cleaned up, well clear of Phil Warren with Queenslander Van Richards-Smith in 3rd place. Rats are a transport problem and, as much as I like them, I couldn't fit mine in. Maybe next time I'll make one with a removable wing and U/C

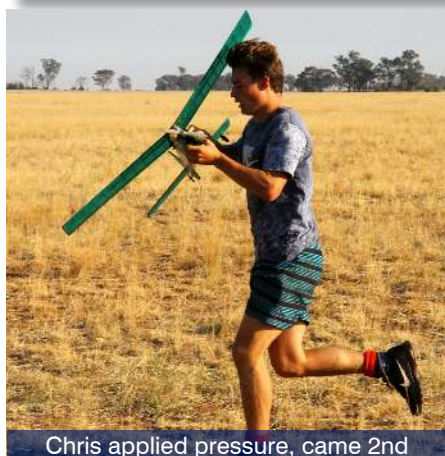
Friday 27 April - SCRAMBLE, HLG, CLG, DLG and E-36

Scramble

15 flew in Scramble and it was the usual spectacle with flyers and spectators having a good time.



Tahn was on a mission



Chris applied pressure, came 2nd

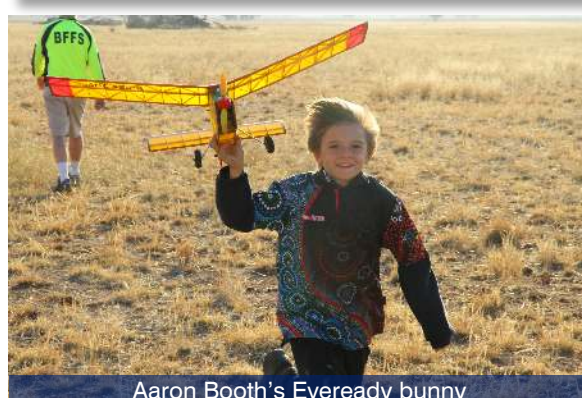
Unfortunately some of the models dropped in on the F1B flight line 200 metres further east but the breeze abated and no blood was spilt. Well not on the F1B flight line anyway. Over the hour most models stayed close to the fight line and some were close to the ground so "Heads!" was often called. It was good to see Gary Odgers flying an old Mam'selle. The two Carpets buzzed the line with regular monotony – one being that of Tahn Stowe, and he was on a mission. In league with Andrew Heath as runner, Tahn had the perfect team and strategy to successfully chase the title, 30 years after he'd last won it. The visiting American AMA President Rich Hanson and his wife Anne, escorted by MAAA President Neil Tank, were fascinated by the event.



Warren Leadbeater came in 16 secs behind Chris



Maris Dislers almost got on the podium



Aaron Booth's Eveready bunny

HLG, CLG, DLG

These three events were flown concurrently, from 9.30 to 11.30 am (E-36 was flown from 9.30 am until 2.30 pm) and this kept me very busy as Kathy and I both flew CLG and were also to fly E-36 after we finished CLG.

Five flew in **HLG** but there were no maxes although Mickey Towell (the eventual winner) got close and Peter Lloyd put in consistent times to place second, although he looked to have thrown it all away on his last two flights.

Seven flew in **CLG** and Kathy Burford led the way with two straight maxes. I started with a max but it wasn't until my 4th flight that I recorded another. I got a 3rd max in my final flight, as did Kathy but she couldn't get back in time for her 6th flight. I won on a count back and we both finished well clear of all the others.

Peter Lloyd won the one-horse race in **DLG** and then sold his model to Shady Liu, the forever happy Chinese flyer who indelibly promoted both Narrandera and West Wyalong with his Facebook postings. **Click on this link with volume up:** <https://www.facebook.com/shady.liu.73/videos/1013589735454822/>

It was then off to the **E-36** flight line for Kathy and I only to learn that all 7 contestants had flown and Leigh Morgan was the only one to max out. Des Slattery, Graham Maynard and Roy Summersby had each recorded 2 maxes but Graham had the highest third score, 2 secs ahead of Roy, so he was trailing Leigh in second place. Kathy and I started flying at 11.30 am to hear that Leigh had since flown 2 FO maxes, off the reduced 5 sec engine run.

I maxed my first flight but Kathy was struggling with an untrimmed model (I did offer to help a couple of days earlier but was told "*Don't bother*"). Kathy only maxed her final flight but I maxed all three, and then I learnt Leigh had put up a third FO max. These Victorians play for keeps! So the bottom line is I put up three FO maxes during a time when Leigh's 4th FO flight returned a score of 1m 43s. I really just squeaked in my 3rd FO max but the fourth one was at great height when I RDT'ed it.

It was a really exciting event and everyone who flew in it liked it. It was a pity that David Shackelford who sponsored it couldn't attend and compete, due to work commitments. I am sure there will be a bumper entry next year.

The **Swap Meet** at the WW Stadium appeared hugely successful with lots of cash changing hands and modellers leaving the stadium with boxes of stuff and big grins. Like me there were also a lot who simply came to watch and chat.

Saturday 28 April - P-30, F1J, VINTAGE RUBBER, VINTAGE GLIDER AND NIGHT SCRAMBLE

The **F1B Fly-Off** was in light winds and, of the five who flew, many were clocked off when their models went behind the trees. The F1B story appears elsewhere in FFDU. After the fly-off, the flight line was re-located to a more central and suitable spot before the day's events started.

P-30

I didn't see this one but the 2 Victorians had it in the bag, maxing all three rounds. The next day, with very light winds, the flight line was set up about 500 metres from the club house and Leigh Morgan beat Sean O'Connor by a mere 9 seconds.

F1J

Strangely, only two old fellas flew in F1J and it was the older one who gleefully took the prize. Amazingly, 15 entered! What happened to

them? F1J is a very popular class and it came down to two old vintage balsa models battling it out when it could have been a nail biter. Still Des did well with his reliable old Limey to beat Harry Sokol, even though Harry clocked up two maxes to Des's one.

VINTAGE RUBBER

A close finish once again won by Des Slattery with Mike Glaister finishing 3 seconds behind although they each only recorded one max. Adrian Bryant uncharacteristically put in two flights to finish third out of 5 flyers.

VINTAGE GLIDER

More should have flown, 5 entered by only Kathy and I flew. The wind was light but still Kathy and I both landed in the neighbouring paddock on one of our flights. My Nebula performed faultlessly to rack up three great maxes. The model is so slow and steady in flight, it's a joy to tow up and watch. Kathy was unlucky in her first flight to miss by 29 secs but made up for it by maxing F2 and then really overdid it in F3. Kathy's final flight saw her towline fail to drop away. By the time it did, the plane was 400 metres downwind and a speck, a big thermal drawing it and the 100 metre line upwards. After it DT'ed, it hadn't had enough and gyrated in the sky for a further 15 minutes. Its successful retrieval from 3 km away in another farm was only surpassed by later finding the towline when we only had a rough idea where it disconnected. And my reward for finding the towline - I had a bee sting me on the chin - it hurt, a lot!

Then it was back home to prepare photos and get them to Jeff Stien of the Council to load onto his computer for projection at the Celebration Dinner. This was done at the airport and as a



Des Slattery cleaned up in V Rubber

bonus I got to see the F2C Team Race final that included the current world champion.

NIGHT SCRAMBLE

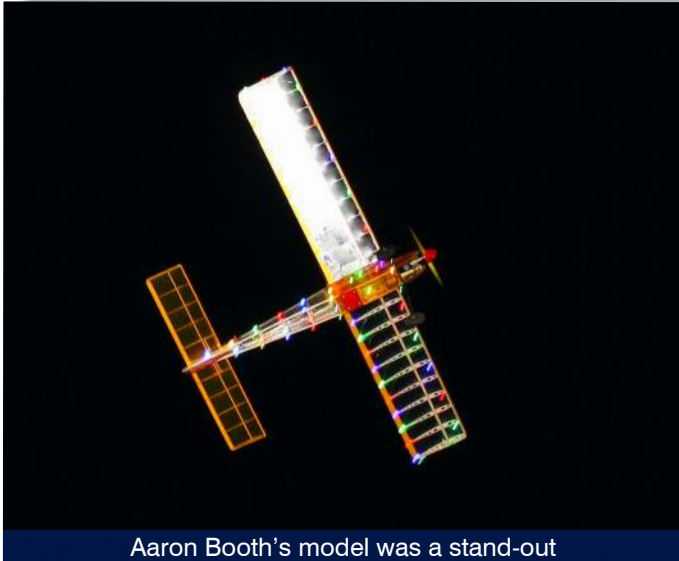
Thirteen flew in the Scramble and the large crowd that assembled thoroughly enjoyed it. Most models had a good lighting system and some had the bare minimum in the way of illumination. I often wonder how the timers accurately record the scores. Early on the models were flying towards the cars and the spectators but fortunately the wind changed. I took a lot of photos but it was quite risky being out on the flight line with some poorly lit models buzzing low overhead. I guess that's part of the charm of Night Scramble. Tahn ran onto the field 15 minutes late with his Carpet saying he was caught in traffic. True to form he competed without help and without a timer. He didn't care, he just wanted to be there!



The NSWFFS made sure everyone was cosy at the BBQ



If you build it, they will come. A constant stream of cars drove in on dusk in time for the Night Scramble



Aaron Booth's model was a stand-out



Is this the Scramble version of the Delta Dart?

After an hour, the hooter went and it was all over, with young Chris Birch a clear winner from Robert Fitzgerald and Aaron Booth.

The BBQ was a corker, with over 200 attending. Chris Birch and helpers did a wonderful job serving all in one hour and even offering seconds to the very few who still had room left for seconds. A roaring fire greeted us when we arrived and the embers still kept us warm as last drinks were called. The Nats have been a credit

to Tahn Stowe and have gone without a hitch.

Sunday 29 April - F1H, F1G and OZ DIESEL

F1H

Only a two horse race, my R1 max was nearly my last as the timer didn't start and it took 4 mins to finally land. Kathy and I picked up plenty of maxes in F1H although I treed my model in R4. It was recovered undamaged. It was a difficult day in the first 3 rounds, with long periods of dead

calm and occasional 2 m/sec winds to help us straight towers. It was of course great for the power flyers. Kathy's final flight was started at half line height, whipped off by a thermal that took it way way up, so she finished on a high.

F1G

It was wonderful to see the whole Chinese team and supporters get behind their two juniors, and it paid off. Xiwen Fan won with 4 maxes and little Xiangxue Ji, the sweetheart of



A small portion of the BBQ line-up; served 200 in an hour!



Xiangxue Ji watches Yuan Gao prepare some tasty food



A nice background for Kathy Burford retrieving our F1Hs

OzD 1st: Peter LloydOzD 2nd: Gary OdgersOzD 3rd: Martin WilliamsOzD winners: 3rd Martin Williams 1st Peter Lloyd 2nd Gary Odgers

the Nats, placed 3rd. Graham Maynard, who continued to trim his model during the comp, placed 2nd, 5 seconds off the leader. Sean O'Connor only flew one round and Gary Goodwin broke a wing joiner to finish his challenge early. He spent the afternoon repairing and re-trimming his model. This was another class that promised excitement on paper, with 13 entries.

OZ DIESEL

This class had a healthy entry list with most of Australia's best Oz Diesel flyers competing - 8 in fact - making it one of the bigger Nats FF events.

Five flyers maxed their first two flights but it was down to two after the third flight. West Wyalong's dreaded late morning air claimed 5 victims in their fourth flights and then it was anyone's guess who would win. Gary Odgers was 2 seconds clear of Peter Lloyd and Noel MacMillan had crept up into third place after a disastrous flight by Martin Williams, with his model falling out of the air for 77 seconds. Wally Bolliger's charge also ended on that flight but he was down in 55 seconds. Martin and Peter came up with a max each and Gary dropped his final flight, to give Peter Lloyd the win from Gary Odgers with Martin

Williams just 3 seconds in arrears. It was a very entertaining and well fought event – a great one to end the Nats on.

We left the field at 1.30 pm hoping to see some Open Combat at Redman Oval but all we saw were broken models. Grabbing a pie we drove off to see Vintage Stunt at the McAlister Oval but that too was over. So was RC Helicopter – we missed all days of that.

That night, we had Tahn and Liz Stowe up for drinks that extended into an impromptu lazy dinner. It was



The Chinese flyers prepare for a round of F1G

3rd Xiangxue Ji 1st Xiwen Fan 2nd Graham Maynard

great to see them both relax a bit after a very big week.

On Monday, I really enjoyed some Vintage Combat at Redman Oval, it was in full swing and I witnessed some good battles. I also managed to catch the final flights in F4B Scale at McAlister Oval, and then it was all over. So it was time to go back to the apartment and start the big job of packing up. A few of us went up to the Car Wash to clean off the copious quantities of dust we'd collected over 2 great weeks of flying (Narrandera and West Wyalong).

Around 5 pm, Gary Goodwin and Gary Pope joined us for drinks on the deck before we walked up to the Services and Citizens Club for The Celebration Dinner. Speeches were short, conversations were good and everyone seemed happy. The variety of Chinese foods was well received by a reasonably sized group of modellers and the 70th Nationals came to a close.

Overall the weather was excellent and all venues were managed so well.

It was a real pleasure to be able to see all venues in action at the 70th Nationals, the first fully integrated Nats for many years.

Jan and Dave Thomas did a wonderful job of CD'ing many events and all events went well. So a big Thank You must go to all CDs and those who helped with the smooth running of the Nats Free Flight events. Tahn Stowe had "*The Dream*" and was the front man who put in a massive 12 months effort to ensure its success. He has laid a solid framework for future Nats at West Wyalong by working closely with and gaining the support of the WW Council and ensuring that businesses in WW would benefit from the influx of over 260 competitors and support people that attended.

But it wasn't only Tahn, ably assisted by his wife Liz, who made this Nats wonderful. Other members of the NSWFFS also worked tirelessly to cover all bases included – Roy Summersby, Gary Pope, Garry

Goodwin and Terry Bond (who really wanted to be there but medical issues took priority) were essential parts of the puzzle that came together so perfectly. Roy's long term project manager role at the AB field had the place looking picture perfect in time for the Nats and I've never seen so many happy campers under the trees

Would I go again to a Nats at West Wyalong? Well, I've already booked my accommodation!

Malcolm Campbell



The Chinese team had a wonderful time at both Narrandera and West Wyalong



Part of the crowd at the Celebration Dinner



Neil Tank, Rich Hanson & Tahn Stowe at the dinner

70th NATIONALS FREE FLIGHT RESULTS**F1A** 9 entered, 3 flew

Place	First Name	Surname	R1	R2	R3	R4	R5	Total
1	Malcolm	Campbell	226	180	180	149	86	821
2	Vin	Morgan	127	180	180	145	180	812
3	Van	Richards-Smith	148	180	54	91	180	653

F1B 17 entered, 9 flew

Place	First Name	Surname	R1	R2	R3	R4	R5	Total	Fly-Off	Score
1	Xinpu	Sheng	240	180	180	180	180	960	305	1265
2	Richard	Blackam	240	180	180	180	180	960	250	1210
3	Yunsheng	Wu	240	180	180	180	180	960	230	1190
4	Bruce	Hao	240	180	180	180	180	960	219	1179
5	Gary	Goodwin	240	180	180	180	180	960	214	1174
6	Vin	Morgan	240	145	180	180	180	925		925
7	Graham	Maynard	134	147				281		281
8	Jiahong	liu	240	20	10			270		270
9	Gary	Odgers	141	123				264		264

F1C 13 entered, 9 flew

Place	First Name	Surname	R1	R2	R3	R4	R5	Total	Fly-Off	Score
1	Roy	Summersby	240	180	180	180	180	960	442	1402
2	Yuan	Gao	240	180	180	180	180	960	407	1367
3	Xinpu	Sheng	240	180	180	180	180	960	379	1339
4	Wei	Ji	240	180	180	180	180	960	365	1325
5	Shayne	McDonald	240	180	180	180	180	960	302	1262
6	Mike	Pettigrew	231	180	180	180	180	951		951
7	Shannon	Tolmie	240	180	180	161	180	941		941
8	Gary	Pope	240	180	138	120	180	858		858
9	Andrew	Linwood	240	39	180	180	180	819		819

F1G 13 entered, 5 flew

Place	First Name	Surname	R1	R2	R3	R4	R5	Total
1	Xiwen	Fan	120	120	120	120	97	577
2	Graham	Maynard	120	94	120	120	118	572
3	Xiangxue	Ji	120	120	80	120	120	560
4	Sean	O'Connor	0	120				120
5	Gary	Goodwin		9	54			63

F1H 4 entered, 2 flew

Place	First Name	Surname	R1	R2	R3	R4	R5	Total
1	Malcolm	Campbell	120	73	120	120	120	553
2	Kathy	Burford	66	41	120	120	120	467

F1J 15 entered, 2 flew

Place	First Name	Surname	R1	R2	R3	R4	R5	Total
1	Des	Slattery	91	81	87	96	120	475
2	Harry	Sokol	120	88	35	120	41	404

OPEN POWER 20 entered, 10 flew

Place	First Name	Surname	R1	R2	R3	Total
1	Christopher	Birch	180	162	180	522
2	Wally	Boliger	180	156	175	511
3	Des	Slattery	80	167	175	422
4	Harry	Sokol	104	151	156	411
5	Noel	McMillan	139	84	180	403
6	Roy	Summersby	180	180	41	401
7	Michael	Towell	120	113	142	375
8	Peter	Scott	144	123	0	267
9	Gary	Goodwin	153	79	0	232
10	Gary	Pope	21	0	0	21

OPEN RUBBER 14 entered, 7 flew

Place	First Name	Surname	F1	F2	F3	Total	Fly-Off	Score
1	Leigh	Morgan	180	180	180	540	312	852
2	Michael	Glaister	180	180	180	540	151	691
3	Gary	Goodwin	180	180	180	540	5	545

OPEN RUBBER continued

4	Rob	Wallace	180	180	180	540	540
5	Gary	Odgers	173	180	180	533	533
6	Des	Slattery	180	170	173	523	523
7	Sean	O'Connor	180	180	140	500	500

E-36

16 entered, 9 flew

Place	First Name	Surname	R1	R2	R3	Total	FO 1	FO 2	FO 3	FO 4	Score
1	Malcolm	Campbell	120	120	120	360	120	120	120	120	840
2	Leigh	Morgan	120	120	120	360	120	120	120	103	823
3	Graham	Maynard	85	120	120	325					325
4	Roy	Summersby	83	120	120	323					323
5	Adrian	Bryant	120	86	104	310					310
6	Michael	Towell	120	65	120	305					305
7	Des	Slattery	47	120	120	287					287
8	William	East	35	101	103	239					239
9	Kathy	Burford	40	70	120	230					230

DAY SCRAMBLE

26 entered, 15 flew

Place	First Name	Surname	Score
1	Tahn	Stowe	2230
2	Christopher	Birch	1975
3	Warren	Leadbeatter	1959
4	Maris	Dislers	1871
5	Michael	Towell	1706
6	Aaron	Booth	1686
7	Bruce	Hoffmann	1525
8	Andrew	Linwood	1443
9	Danny	Maslowicz	1328
10	Wally	Boliger	853
11	Van	Richards-Smith	726
12	Mark	Godfrey	679
13	Gary	Odgers	454
14	Melvyn	Gillott	16
15	Philip	Poole	10

NIGHT SCRAMBLE

29 entered, 13 flew

Place	First Name	Surname	Score
1	Christopher	Birch	2121
2	Robert	Fitzgerald	1963
3	Aaron	Booth	1671
4	Mark	Poschkens	1659
5	Warren	Leadbeatter	1585
6	Andrew	Linwood	1368
7	Danny	Maslowicz	1187
8	Philip	Poole	995
9	Andrew	Heath	885
10	Bruce	Hoffmann	754
11	Van	Richards-Smith	284
12	Michael	Towell	220
13	Maris	Dislers	179

OUTDOOR HLG

12 entered, 5 flew

Place	First Name	Surname	F1	F2	F3	F4	F5	F6	Best of 3
1	Michael	Towell	18	22	54	32	23	31	117
2	Peter	Lloyd	36	40	26	30	4	3	106
3	Van	Richards-Smith	12	12	22	8	32	22	76
4	Geoff	Hungerford	19	13	15	4	13	15	49
5	Goran	Milosavljevic	9	2	10	1	13		32

OUTDOOR CLG

13 entered, 7 flew

Place	First Name	Surname	F1	F2	F3	F4	F5	F6	Best of 3	Countback	Score
1	Malcolm	Campbell	60	44	31	60	35	60	180	44	224
2	Kathy	Burford	60	60	36	35	60		180	36	216
3	Danny	Maslowicz	45	28	41	60	22	14	146		146
4	Goran	Milosavljevic	19	3	15	2	60		94		94
5	Des	Slattery	21	19	5	7	50	18	90		90
6	Adrian	Bryant	11	16	5	3			32		32
7	Aaron	Booth	5	9	6	4	11		26		26

OUTDOOR DLG

6 entered, 1 flew

Place	First Name	Surname	F1	F2	F3	F4	F5	F6	Total
1	Peter	Lloyd	26	60	45	60	24	19	165

P-30

17 entered, 7 flew

Place	First Name	Surname	F1	F2	F3	Total	Fly-Off	Score
1	Leigh	Morgan	120	120	120	360	179	539
2	Sean	O'Connor	120	120	120	360	170	530
3	Danny	Maslowicz	120	66	120	306		306
4	Gary	Goodwin	111	72	120	303		303
5	Van	Richards-Smith	63	71	70	204		204
6	Reeve	Marsh	47	58	55	160		160
7	Goran	Milosavljevic	31			31		31

VINTAGE RUBBER

13 entered, 5 flew

Place	First Name	Surname	F1	F2	F3	Total
1	Des	Slattery	180	137	172	489
2	Michael	Glaister	151	180	155	486
3	Adrian	Bryant	113	132		245
4	Danny	Maslowicz	180			180
5	Van	Richards-Smith	31	42	62	135

VINTAGE POWER

20 entered, 9 flew

Place	First Name	Surname	F1	F2	F3	Total
1	Roy	Summersby	180	180	180	540
2	Peter	Lloyd	180	167	180	527
3	Harry	Sokol	180	180	146	506
4	Des	Slattery	180	144	180	504
5	Wally	Boliger	95	177	180	452
6	Peter	Scott	165	79	172	416
7	Jim	Rae	88	113	80	281
8	Robert	Marshall	57	3		60
9	Danny	Maslowicz	9			9

VINTAGE GLIDER

5 entered, 2 flew

Place	First Name	Surname	F1	F2	F3	Total
1	Malcolm	Campbell	180	180	180	540
2	Kathy	Burford	151	180	180	511

OZ DIESEL

19 entered, 8 flew

Place	First Name	Surname	R1	R2	R3	R4	R5	Total
1	Peter	Lloyd	120	120	120	98	120	578
2	Gary	Odgers	120	120	120	102	80	542
3	Martin	Williams	120	120	102	77	120	539
4	Wally	Boliger	120	120	109	55	120	524
5	Des	Slattery	70	85	120	108	120	503
6	Harry	Sokol	33	120	120	120	109	502
7	Noel	Mcmillan	120	120	63	120	68	491
8	Brian	Hammond	75	38	55	53	120	341

F4A SCALE

6 entered, 4 flew

Place	First Name	Surname	Static	Flying	Complexity	Total	Aircraft
1	Phillip	Warren	792	492.5	0	1284.5	Comper Swift
2	Maris	Dislers	808	0	0	808	E.A.C. Monoplane
3	Roy	Summersby	801.4	0	0	801.4	Sopwith Swallow
4	Phillip	Warren	701.2	0	0	701.2	Peyret Taupin

OPEN RUBBER

4 entered, 1 flew

Place	First Name	Surname	F1	F2	F3	F4	F5	F6	Aircraft
1	Phillip	Warren	37.29	42.34	42.45	41.53	44.46	41.54	Piper Cub

PEANUT SCALE

6 entered, 3 flew

Place	First Name	Surname	F1	F2	F3	F4	F5	F6	Score	Aircraft
1	Phillip	Warren	41.2	54.6	49.8	51.0	54.5		193.2	Piper J3
2	Reeve	Marsh	35.7	32.8	31.5	32.3	31.4	29.5	96.7	Polish
3	Van	Richards-Smith	34.4	41.3	21.1				-	Lacy M10

INDOOR HLG

9 entered, 3 flew

Place	First Name	Surname	F1	F2	F3	F4	F5	F6	Best 2
1	Michael	Towell	4.4	23.1	25.5	19.4	5.1	24.7	50.2
2	Christopher	Birch	14.0	17.9	18.4	15.9	18.5	19.3	37.8
3	Harry	Sokol	15.5	17.0	13.0	8.0	18.0	19.0	37.0

INDOOR HLG

4 entered, 0 flew

F1D MICROFILM

2 entered, 2 flew

Place	First Name	Surname	F1	F2	F3	Best 2
1	Sean	O'Connor	7.24	7.09	9.13	16.37
2	Max	Newcombe	6.52	4.00		10.52

F1L (EZB)

3 entered, 2 flew

Place	First Name	Surname	F1	F2	F3	F4	F5	Best 2
1	Sean	O'Connor	7.00	5.34	1.33	6.50	7.54	14.54
2	Max	Newcombe	4.52	4.08				8.60

HANGAR RAT

15 entered, 8 flew

Place	First Name	Surname	F1	F2	F3	F4	F5	F6	Best 2
1	Max	Newcombe	128	136	92	121	127	140	276
2	Danny	Maslowicz	98	127	120	2	9		247
3	Phillip	Warren	106	108	114	111	112	120	234
4	Michael	Towell	103	92	101	89	66	90	204
5	Van	Richards-Smith	75	37	88	64	47	57	163
6	Keith	McNeil	21	53	50	33	46	62	115
7	Aaron	Booth	54	47	55				109
8	Reeve	Marsh	42	47	46	47	44	33	94

HANGAR RAT SCRAMBLE

15 entered, 8 flew

Place	First Name	Surname	Score
1	Michael	Towell	849
2	Phillip	Warren	745
3	Van	Richards-Smith	698
4	Reeve	Marsh	491
5	Aaron	Booth	396
6	Max	Newcombe	296
7	Danny	Maslowicz	0
8	Keith	McNeil	0

Photos from the 70th Nationals can be found on the following click-able link:

<https://www.flickr.com/photos/motor-racing-photography/albums/72157690842081580>

FROM THE EDITOR**Words from Malcolm Campbell**

I'm now commencing my ninth year as Editor of Free Flight Down Under - I never thought I'd last this long. It is trying at times, fretting over a dwindling source of supply for articles but, for this edition, I received two articles in one day! And the Tamworth

boys, Shannon Tolmie and Shayne McDonald have stepped up to the plate with their words on recent F1C competitions. Thanks to my regular source, Roy Summersby, and great work from Vin Morgan, Paul Rossiter, Mike Pettigrew, David Ackery and Phil Mitchell, we have a decently sized newsletter. But I hear what you're saying "*It's all competition reports*". That's because a few of us stretch ourselves to take notes while competing.

It's easy to dilute the competition reports - by offsetting them with construction articles or other aspects of free flight that would be interesting to the readers. Second time around President Paul Rossiter touched on this in his report on page 3. Another aeromodelling newsletter produced in Australia bristles with articles, but it has contributors from so many model

clubs. We are a small band of flyers but we are all talented. I've seen what we fly at the Nationals - tell us about your models or what you're getting up to in your workshop or on the field.

For those who have not sent articles before, it's simple. Write your article in Microsoft Word and, if you want to add diagrams and photos, send them separately but also suggest where the photos should be placed in your article. Photos should be at least 300 kb each in size. Hand-written articles accompanied by real photos should be a last resort because it makes a lot more work for me.

And finally, a big vote of thanks to Tahn Stowe and the NSWFFS members who put on a magnificent Nationals at West Wyalong and to Phil and Noels for an excellent set of competitions at Narrandera. Full reports from both locations appear in this newsletter.



The 70th Nationals

A very short report by Roy Summersby



Was it the best Nat's ever? As we haven't had a Nat's where every event was offered in close proximity, (15min drive max) numbers in the past have been affected. The Nat's committee were nervous with regards to what numbers they would get. As time grew closer all fears of a low entry were dismissed, as the numbers topped 200, in fact, numbers finished at 267. Registration day was busy, keeping Liz and Tahn run off their feet.

The first day of competition saw F1C, F1A and Open Rubber. Sadly F1A had a very poor entry, but F1C certainly made up for it with nine flyers and five making the fly off. This fly off must be the best Australia has ever seen. All flyers made good flights; all models were seen to the ground, and all landed in our field. F1B had the windy day which had been forecast. Two rounds were flown, then it was decided to postpone until the following day as only light winds were predicted, and

this was the case. Again there were nine flyers and five made the fly off.

Other highlights were both the scrambles. Day scramble had fifteen starters and the night scramble had thirteen. Both enjoyed good conditions, many of the night models had good lighting giving the crowd much entertainment.

Following the night scramble was the social B-B-Q, this turned out to be monstrous, as we had to feed 209 hungry mouths. This was accomplished within the hour, an amazing feat, thanks to the bush tucker man, Chris Bush, who did a superb job in the preparation and the serving of the meals. All this was topped of with a huge bonfire adding to the evening.

The new class E36 needs a mention, as this new class proved popular. Conditions were

excellent for it, and maxes were easy to come by. It is a simple class; the models are small, made of balsa, and not many rules, 36" and no less than 120 g. All you have to do in my case is to learn how to program the electronic timer.

It was great to have the Chinese with us again, they have got to know us and we them over the last few years. They enjoy their flying, as well as having a good time. Our thanks must go to Bruce for looking after them while they are in Australia.



Nats F1C winners - Gao, Summersby and Sheng



We had 5 man F1C fly-offs in Narrandera and WW - the best ever!

Warren Leadbeatter photo



MIKE PETTIGREW'S VIEW OF THE F1B EVENT AT THE 70th NATIONALS

I had the pleasure of being CD for the F1B event at the 2018 Nationals. The down-side of that was the weather gods had decided that I should conduct my contest on the day with the worst predicted weather of the entire Nats. As a result; I managed to make it into a three-day marathon, although to be fair, one of the days was the fly-off.

Here's how it all went.

First Day:

The predicted wind direction and strength for the day suggested we needed to position ourselves down at the south-west end of the site almost up at the back fence and half-way between the two nearby dams.

The wind strength as we set up was encouraging as it was only half of that predicted for that time of day, but it was correct to direction apart from the thermals, which tended to go slightly more to the west. This brought a small line of trees into play, but I don't think they influenced the result. One model landed behind them, but it was visible to the timekeeper.

Round 1 got under way in an increasing wind strength showing gusts of around 4 metres/second which dashed our hope of it being calmer than predicted. All maxed except for Gary Odgers who, in his own words was "cheating" by setting the DT early so he didn't have to walk so far, and Graham Maynard, who dropped a 134, but not on purpose.

By the time round two started we were recording gusts of around 6 metres/second. We had no basis to suspend flying even though it was unpleasant, so away we went with a good collection of maxes other than some notables as follows: Vin



Jiahong Liu (Shady Liu) was caught out by the wind

Morgan made a rare mistake and selected bad air, or launched badly – I can't remember which, but the model didn't go well and failed to max. Vin was seen to be somewhat unhappy with himself. Also, Jiahong Liu of the Chinese team told me he was caught-out by the wind strength and launched badly resulting in the model arriving back on the ground in poor condition 20 seconds later. Gary Odgers continued with his policy of short flights to save a walk and despite picking good air and clearly heading for a max, he DT'd to be down in 123 second and once again, Graham Maynard had bad luck and only managed 147.

As the second round drew to a close we were recording wind gusts of up to 10 metres/second and a meeting of flyers was held to discuss suspension of the contest with the view to completing the remaining three rounds the following day. There was no argument put forward against suspending the contest so we all packed-up and retreated to somewhere safe.



Gary Goodwin finally arrived back after collecting his model from round 2 saying it had travelled around 2.5 km downwind so it was considered a good decision to bring things to a halt and in any event, it wasn't safe to continue, and the wind speed had exceeded to maximum.

Second Day:

Day two of our event dawned clear and calm and we set-up camp for a new forecast wind direction which had eased and swung more to the



The two cars on Tahn Stowe's left belong to the F1B flight line!

east overnight. Our flight line was north east of the house and some hundreds of metres away. As the time to start again drew near we noticed that the day scramble was being organised a couple of hundred metres upwind of our position. Our cars were parked, stooges were set-up and being reluctant to move, I drove over to talk to Shayne who was in charge of the scramble and after some discussion, we decided to press on and hope the scramblers didn't drop their models onto our flight line.

The wind increased ever so slightly, and yes, they dropped their models onto our flight line.

Round three was conducted while under intermittent attack from assorted scramble devices. Richard Blackam was seen holding his model close to his body to protect it every time the sound of an engine stopped as that was usually accompanied by a descending model. It was all taken in good spirit however, and it was soon all over, compared to our three-hour effort.

The Chinese team appeared to enjoy it all and were seen snapping away happily with phones and cameras as models continued to fly past low and slow or landed in and around the flight line.

We had lost Graham Maynard and Gary Odgers at the end of round 2 as they made no appearance for round 3. Jiahong Liu had more troubles and recorded only 10 seconds for round 3 and decided it was probably time to give it a rest. He flew no more during the Nationals but amused himself the following day by hooking his phone's Bluetooth up to the CD of the day's (Dave Thomas) P.A system and started playing loud music to entertain himself and those present. It became too loud to allow engine runs to be timed in that day's diesel events and was soon shut down but not before a photo opportunity occurred while Jiahong was rocking on with his new-found ghetto blaster in his arms, but that's another story.



Shady Liu and his "ghetto blaster"

So: Round 3 finished with six maxes from the remaining usual suspects comprising Xinpu Sheng and Yunsheng Wu from the Chinese team with our Bruce Hao having a foot in their camp as well, and then we had Richard Blackam, Vin Morgan and Gary Goodwin making up the six flyers that maxed round 3.

Conditions were by now excellent and the scramble models, that had done their best to imitate the V1 bombs of WW2, had now gone and this allowed rounds 4 and 5 to be completed in nice, sunny conditions, with only light winds.

The remaining six flyers all maxed rounds 4 and 5 leaving a field of 5 flyers with full scores so we were destined for a fly-off the following morning.

Third Day:

Day 3 of our marathon F1B contest was almost as nice as day 2 although there was some variability in the wind direction and this caused some discussion about where to set the flight line. The chosen position allowed a reasonably clear downwind fetch but just before the fly-off was due to start a wind shift arrived and models were now likely to head almost due north into country that had lightly scattered trees through it. Deciding it was too late to move, we pressed on.

It was slightly shambolic prior to the fly-off as we had more flyers than timekeepers. Early morning starts aren't always well attended but we

eventually cobbled together the required timekeeping army but after that, and some mutterings that it wasn't as well organised as the AFFS fly-off's, we got it all together and got under way. I offer my thanks to the volunteer timekeepers who helped-out for the fly-off and accept that it took a bit of a flurry to get it all organised.



A spirited launch from "Long Legs"

The fly-off was pretty much a mass launch although Xinpu Sheng (AKA: Long Legs) in the above photo, waited a couple of minutes before launching and as a result found the best air. No models were damaged in the fly-off and all flyers seemed happy.

The fly-off results are listed below, and we congratulate those in the fly-off as well, of course, as the flyers who took out the first three places. I believe we all enjoyed ourselves despite the winds of day one.

The Chinese team were well organised as usual, and the Australian flyers acquitted themselves well, so as I see it, we had a good contest. Full results are in the Nationals report.

Mike Pettigrew



Shannon Tolmie's take on F1C at the 70th Nationals

After a long and often challenging week for some at Narrandera, West Wyalong turned on an awesome day for F1C, with absolutely cracking conditions.

Dave Thomas was the man in charge and first class CD duties were provided, with special thanks to Jan Thomas for keeping us F1C fliers in line and the accurate upkeep of scores.

By the time round 1 was ready to start, we would have attracted 50 or 60 spectators, some of which had never seen or heard an F1C. This resulted in a few aft steps once one

barked into life for its needle setting run!

After a quick line change to address tricky drift, it was apparent that it was going to be a very competitive day, with many flyers maxing easily throughout the rounds. At the end of round 5, five flyers were clear and the rest of the field was separated by only 132 seconds.

F1C Fly-off

With five in the fly-off, starting at 7am the following morning, and in superb conditions, the podium was for anybody! At the end of the fly-off the standings were:

1st Roy Summersby

2nd Yuan Gao

3rd Xinpu Sheng

4th Wei Ji

5th Shayne McDonald

It was refreshing to see that F1C is attracting good numbers including our international guests making for some very competitive flying. The field at West Wyalong is a great asset to the Australian free flight community, and huge credit must go to all involved with the upkeep, continual development and Nats organisation.

Shannon Tolmie



WAKEFIELD AT NARRANDERA AND WEST WYALONG APRIL 2018

From Vin Morgan

I somehow agreed to write something for Malcolm about F1B at Narrandera and West Wyalong. However rather than give a blow by blow description of the events – you can easily identify the blows yourself by looking at the score sheets – I thought it might be interesting to hear from the flyers themselves.

Craig Hemsworth

I used 3 models at Narrandera, all of which were produced by Stepan Stefanchuk in the Ukraine. I also have a couple of Alex Andruikov models - 1800mm 4 panel, CF D-box, built-up wings, and 1 early AA 6 panel built-up wing. The AA models are very good and a popular design.

I flew the SS models earlier this year at Lost Hills in similar conditions and felt confident in their trim.

I flew a CF skinned 6 panel model throughout Tui Cup. It has Tony Mathews - Bernie Eccleston LDA sections that vary across the span. I deformed the CF covering on a wing early in the second competition and then reverted to a similar SS 6 panel built up wing model. I have had this for some time and am quite comfortable with it. I flew this model for the remainder of that competition and throughout the third event. For the flyoff of the third event I flew another SS model. This is a CF 4 panel wing that has the latest Mathews-Eccleston LDA (dolphin nose) section. While it is still new, it has a pretty good climb and glides well in calmer

conditions. It is the same model that Stepan used in the fly off to win 2017 WCs at Hungary.

All models have AA Simplicity timers, AA VP hubs. Two have AA CF blades and 2 SS CF blades. It's hard to compare the two types of CF blades, or to compare these with previous AA and SS balsa blades. Both the AA and SS CF blades are lighter and stiffer than the AA and SS balsa blades. I have tried different pitch settings on each and seem to have found my way back to 29/30° at 200mm. I believe this is what AA sets his blades to(?)

I used several batches of rubber at Narrandera. September 2014, January 2016, April 2016 and Sept 2017. All are 1/16th inch stranded to

340mm, washed (I know that Paul Rossiter's work suggests washing is pointless, but I just can't bring myself to not wash the talc off), lubed with silicon oil (from Terry Bond) and then given a short (3 to 4 min) pre-stretch. I was happy with each rubber batch but felt that the best (entirely subjective - they all felt pretty good to me) was April 16.

Vin and I used the "Warm Lift" thermal detecting system that provides continuous and contiguous graphic read-outs of wind and temperature.

Paul Rossiter

I Flew two 1710 span Stefanchuk models. One with a fixed pitch hub and one with VP (there is no obvious difference). Instant prop release. Own electronic timers.

Motors are from April 2015 and April 2016. The "free" length is 330-340. They take 420 – 430 turns to 110 in-oz torque off the winder and then hand turns (sometimes up to 8-10) to 130 in-oz before launch (checked with AA hand torque meter). Motors are selected by measuring the true extension under a 20Kg load (ideally around 2.22 – 2.26 m) after three 20Kg stretches.

The motor length is a difficult one; I compared one of my motors with one of Richard Blackam's. They were about the same free length on the bench (motors held in single loop with rubber bands), but he rates his at 335 (roughly the free length measurement end to end with no tension) while I rate mine at about 350, this being the distance between the pegs when I make them up under very slight tension. Not quite sure which is most meaningful. The best guide would of course be the extension under a specified load, or max turns.

Flying. Absolutely reliable picking of sink in all round 4's at Narrandera!! Didn't fly at WW (but maxed out in all three comps at Lost Hills!)

Rob Wallace

The model I used at Narrandera was a Vivchar model given to me many moons ago by Albert Fathers. I

understand it had previously belonged to Adrian Bryant. Albert told me it was one of Igor's personal models. I hadn't flown it before Narrandera and when things really turned to custard in the 2nd World Cup event (my other Vivchar model lost its gears, the Spirit model I got from Richard Blackam broke a DT line and my F1A was mislaid for a while as the tracker had failed so I missed the second round) I made use of the day by test flying the Albert model, ably assisted by mentor David Ackery. At first it was a bit stally and the glide circle was too wide. We added a bit of rudder turn and then it then looked pretty good.

The rubber I used was mostly Jan 2018 1/8th inch made up to 26 strands and wound to around 400 + turns. I am new to this rubber game and are trying different ways of winding the rubber etc. The only running-in I did was to stretch it out (a lot) for 1 minute. My best flights were with a motor run of around 45 seconds.

David Ackery

At Narrandera I flew 2 Wakes, one a standard Vivchar 1700 of which there are many examples around. The other was Electrum 16, which is a slightly more interesting model.

This is the story of E16. E16 was built in 2003, which makes it the oldest Wake I have in the box, but still the go-to model. Throughout its life it has undergone continuous rebuilding, upgrading and retrimming. This was not by choice but due to dissatisfaction. The model started out with a home-built 6 panel long wing - which was a complete failure. I resolved to do better and spent a lot of computer time on Profili developing a new airfoil. This started as an obscure 6-digit Benedek and then got modified, and (I thought) improved. The new foil was thin with low camber. I built a new mid-sized wing of carbon and rohacell, but the performance was decidedly average. I worked with turbulators and varied the trim for a few years but I could not get it to fly well. Finally, I bought a new short

wing from Igor Vivchar. Playing around with this I found it worked well, and the harder I pushed the better it got. Pushed all the way the performance became very, very good, but the window at the top end was very narrow so I had to back off somewhat to get a broader sweet spot. I wanted it to be a good rounds/thermal model. It often worked well, but sometimes failed to thermal and came down in the sink like a sack of spanners. I tweaked the reverse warps this way and that, getting it better. I started to understand that what happens after the prop folds is probably the most important part of the flight, our models spend most of their time gliding, and they need to do this well. The handling was not great; sometimes it would get pitchy and upset and stall. The answer was to move the CG back, (not forward). Now it was gliding and thermalling better, and with more consistency. Attention went back to the climb which was only average. The transition needed to be better, and sometimes it was and sometimes it was disappointing. I worked on the trim but got nowhere. Richard Blackam suggested it needed a 3-position rudder. So I bought one of those tiny jewel like rudder adjusters and built a new rudder. For this I needed a new timer with an extra function - I found one in my stuff. The year of 2017 was spent building and testing. The model was noticeably better, which was good, (previous work with 3 position rudders has shown that often there was no difference between position 1 and 2). I knew it was not quite right but I was unable to analyse just what was happening in seconds 5-10, and what fix I needed. Finally, at Narrandera in 2018 I the penny dropped and I tweaked it a little. It is now working the best it has ever gone and I am happy with it. That has been 15 years of trimming, so never give up, you never know what you can learn on the journey.

Graham Maynard

I took four F1B models to Narrandera

and West Wyalong. Two were older Vivchar models - which for some reason have a tendency to fly rapidly downwind if there is much of a breeze – and two were of Andriukov parentage. The only model actually flown was assembled by Richard Blackam with a six-panel built up AA wing and the rest with standard AA parts including a Simplicity timer. I had my best performance ever at the AFFS Champs dropping only 8 seconds in one of the rounds (poor air picking). Of note is that in the third round one of the balsa prop blades fell off as I was in the act of launching before the model left my hand. After a very shaky climb the model easily maxed. Weighing the model after the flight, without motor, it was still six grams over the minimum weight so the CD accepted the flight. The prop pin was replaced and I continued in the contest. I used motors from April 2009 and, I think Dec 2014. The second model I had on standby was assembled by myself from parts I purchased from Alex on his visit to Canowindra many years ago. It has newer four panel wings. The balsa propeller blades are attached to a fixed pitch front end. It has only been flown in practice and seems to perform well.

I had two poor flights in F1B at West Wyalong using my later AA model because it would not climb. Although this is usually caused by flat launches, in this case, upon inspection of the model, the small wooden piece that sets the VIT stop was found to have fallen off so instead of a tail TE height of 7.3 mm, it was just over 5mm. I decided to retire from the contest. The model has now been repaired at home.

Gary Goodwin

Just some details on my models. I have five Igor Vivchar models, four with Black Magic Timers and one older mechanical model. The two latest models are both high aspect ratio "long" models, the only difference is that the newest model has two position VIT, Icarex covering on the wings and no leading edge turbulator.

The other model – the one I flew at the AFFS and the Nats - was an LDA sectioned model with differential wing span and "D-Box" wing construction with a 10mm wide deflected trailing edge. The other two models are standard short models that have been repaired or rebuilt with upgraded parts including new wings and timer on the electronic model.

The new "long" model, the LDA and the electronic short models all suffered broken tail booms either just prior to or during competition flying, so I'm busy repairing!

The "long" and LDA models all use the latest Vivchar front ends with carbon/rohacell blades.

Motors were 26 strand 1/16th from Igor, made up in March 2017 with silicon lube. The energy ratings on the motors ranged from 28500 to 30500 (Igor's figures). Interestingly they all came up to the same torque with the motors below 29000 taking about 440 turns, 29000 to 30000 motors 460 turns, but only 430 to 440 turns on motors over 30000! All motor runs were between 45 and 47s, with the highest energy motors having a noticeable extra punch in the first 20 secs of the climb.

Unfortunately, my new model was damaged on landing in the 4min round of the first comp at Narrandera. My other models were OK, but still needed some extra tweaking to get the climbs just right. Due to further damage to models throughout the two weeks I never did get them quite right, but managed to pick good air with my Jaycar temp & wind meter, plus mylar streamer! The two comps I dropped were due to pilot errors! I still have a lot to learn to be competitive with the more experienced flyers, especially in flyoff situations!

Vin Morgan

I have two Andriukov 4-panel, 1800 span models and two newer AA 6-panel wings. I also reconstituted a short 1520 span model from one of Leigh's models a week before going to Narrandera after I had seen the wind forecast. It had a few flights at

Exford in Victoria before going to Narrandera and seemed to work ok. In the Tui Cup I broke VIT lines in both (!) the 4-panel models. One in round 2 and the other in round 3. By round 4 it was a bit breezy so I flew the short job. A somewhat flat launch into poor air (the infill came about a minute after the launch) resulted in dropping the round.

I have a new "Warmlift" system that displays wind speed and temperature as a chart on a tablet. I'm sure it is an improvement on the simple thermistor reading temperature and it was effective at Lost Hills in February but at the competitions at Narrandera and West Wyalong I think I paid too much attention to the machine and neglected other, previously good thermal picking skills. At WW when the wind came up during round 2 it blew over the Warmlift pole and broke the rotor. The next day I used the short model without any thermal-picking assistance and enjoyed three nice flights. It just shows.....

I used April 16 and January 16 rubber made up into shorter (for me) 340 long motors. I still seem to get ~410 turns to ~120-125 oz in torque (sorry about the units). Hand turns raise torque to ~ 130 oz in for launch. I break a lot of strands!

Xinpu Sheng and Yunsheng Wu

both flew Andriukov models. Sheng's were relatively new with 6-panel wings. Wu had a model with dual hammers for multiple tail positions and wing wigglers on both wings. I'm not sure if he used this model in the competitions or whether it is new??

Both **Charlie Jones** and **Gongor Mijiddorj** flew models from Albert Bulatov. Beautiful moulded elliptical wings of carbon over rohacell (you can see the moulds on Albert's Facebook page). Uses a Favionics timer (with GPS) and 3 servos (tail, L & R wing wiggler). They both went rather well!

Vin Morgan



That Sinking Feeling: Round 4 at Narrandera 2018

Paul Rossiter



There was a quite unusual occurrence at the recent Tui Cup, AFFS Championships and Widgiewa Cup events held at Narrandera in Feb this year: the unusually high number of F1A and F1B fliers who dropped rounds in the mid-morning around when rounds 3 and 4 were held, as shown in the following Tables (the number of fliers who completed all rounds shown in brackets):

F1A	Round 1	Round 2	Round 3	Round 4	Round 5
Tui Cup (5)	3	1	1	5	1
Widgiewa Cup (5)	3	1	2	0	2
AFFS Championships (5)	3	1	0	5	2

F1B	Round 1	Round 2	Round 3	Round 4	Round 5
Tui Cup (9)	1	2	4	4	2
Widgiewa Cup (11)	1	0	0	3	0
AFFS Championships (14)	5	2	2	6	3

	Round 1	Round 2	Round 3	Round 4	Round 5
Total (all classes)	16	7	9	23	10

With the exception of round 4 of the F1A Widgiewa Cup, round 4 was generally a killer for most fliers in both classes, the most drastic being the Tui Cup and AFFS Championships rounds 4 in which **all** F1A fliers and many F1B fliers dropped. The F1C fliers seemed to be immune to this effect, possibly due to their ability to reach good heights whatever the conditions.

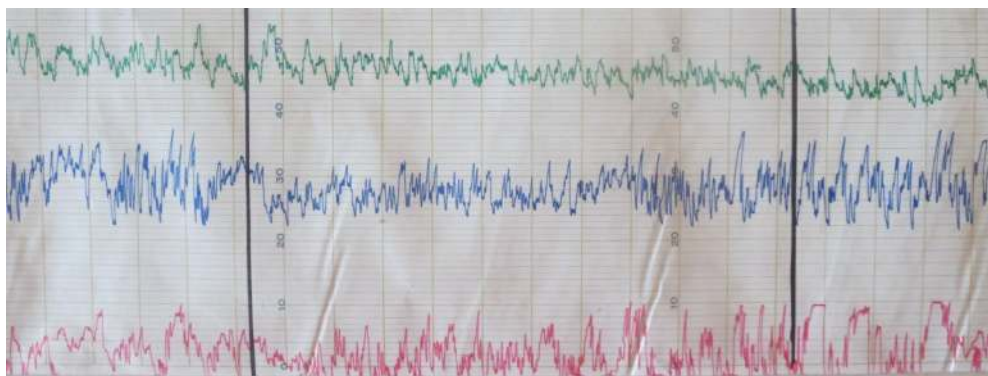
Having competed in F1B in these three events, I managed to drop all three round 4 flights (a perfect record!) partly due to piggybacking off the upwind F1A fliers where available (bad choice!) and despite using a weather station to indicate lift. Thinking back, there were usually 3 or 4 F1B fliers waiting to launch, observing a drop in wind strength

accompanied by a rise in temperature then launching as soon as the infill arrived, as was normal procedure. F1A fliers were similarly waiting to feel some lift for a circle or two then launching. While the conditions clearly indicated the passing of a thermal, most of us simply found the accompanying sink with a high degree of accuracy.

Now back home, after the pain has worn off and suitably lubricated by a glass of Red, I went over the charts to try better to understand what went wrong and learn how it might be avoided in the future.

In all three cases, Rounds 1 and 2 exhibited typical early morning behaviour with the temperature slowly rising and the wind fluctuating

up and down somewhat. By round 3, there were early indications of thermals coming through roughly every 5-10 minutes. However by around 11 o'clock, (round 3-4 Tui (90 minute rounds from round 3) and round 4 Widgiewa and AFFS) all three charts revealed a change in conditions with roughly an hour where the temperature and wind simply fluctuated more rapidly up and down every few minutes, with no real indications of strong thermals. After that, more normal thermal indications returned, as shown in the figure below. The region between the two black lines corresponds roughly to the hazardous period around 50 minutes long (each vertical division corresponds to 5 minutes):



Top trace: wind speed, middle trace: temperature variation (upwind),
bottom trace: temperature variation (at pole); all increasing upwards.

This prompted me to re-read the article I wrote on picking thermals for the 2016 NFFS Symposium, particularly in relation to the mid – morning round 4 fiasco (from my original manuscript, somewhat abbreviated in the final published version):

2.2 Mid morning

As the moisture is driven off, the ground starts to heat up from the solar radiation and the air is heated by conduction and convection from the ground. Small thermals start to form and rise until they reach the inversion layer where they dissipate. However, as the thermal strength increases they will start to penetrate the inversion and the thermal air starts to rise to higher levels. These thermals cause mixing of the air and any winds from above are mixed in with the ground layer leading to increased turbulence, lift and sink. If the air is sufficiently warm it will lead to a destruction of the inversion.

The increasing temperature leads to a lower air density and, for the reasons discussed above, this in turn leads to a loss of model gliding performance, though the overall flight times will also be affected by changes in climb height resulting from improvements in rubber energy (F1B) or reduction in volumetric efficiency (F1C) as well as decreased drag during any vertical climb (F1A in the zoom, F1B in the burst and F1C).

This can be a hazardous period for max-hunters since model performance is dropping and yet the regions of lift are only starting to develop.

Traditionally one might have used the feeling on the face, neck or back of bare legs to detect changes in temperature and wind, and a few skilled fliers still manage to do quite well this way. Other aids like bubble machines or cattail/bulrush seeds can give a direct indication

of what is going on and shouldn't be discounted either (see for example Stoy and Stoy (1981)). However, they both tend to go up in light lift that may be too weak to support a model and they can also give false indications in turbulent air.

I was discussing this further with Neil Murray (now resident in Durban, SA), and he recalled that RC soaring guru Joe Wurts once gave an interesting talk on the effects of inversion layers on thermals. He claimed that the size and spacing of thermal lift was dependent on the height of the inversion. The lower the inversion the smaller and closer together thermals would be. So in early morning there would be many small light thermals rising to the inversion height, and building up against the main inversion. This height would lower as the air collected under it, and slowly kill off lift until sufficient buoyancy was created to break the inversion up and penetrate the layer. Then big but widely spaced thermals would begin.

Wurts' observation was that thermals typically pull air in towards them, so any model near a thermal will usually be pulled in - except near the top of a thermal encountering an obstructing inversion where the thermal after climbing is stifled by the layer of warm air above, and spreads out horizontally under it before sinking back to earth - he had a sketch showing a classic mushroom pattern with air rising in the stem, and then spreading across the top and sinking back along the perimeter of the mushroom head. According to him a model will typically climb well up to the layer, then be pushed out into sink. So presumably if there is an inversion at say 120 metres, and an F1A or F1B climbs in a thermal to 110 metres, it is then in the dispersion zone under the inversion and will be actively pushed out into sink. As the thermals build in strength, they finally break through the inversion layer and normal lift conditions resume. This would seem to provide an explanation for the round 4 dilemma:

prior to that the thermals are weak and so there is no strong dispersion at the bottom of the inversion layer. A max results simply from model performance. As they build in strength the dispersion layer grows and throws the models out into the surrounding sink. Then by round 5 the thermals are strong enough to break through the inversion layer and good lift is found.

With this in mind and looking over the charts with the benefit of hindsight, it is clear that the lift we (F1B) and the F1A fliers were trying to pick around round 4 was actually quite weak and narrow and not building, as might be expected from the Wurts "mushroom cloud" explanation. However, if the build-up of warm air below the inversion layer was sufficient to reduce the effective height of the layer, that could make the thermals quite narrow (as Wurts also suggests). It is then possible that as the inversion starts to break down due to the build-up of that warm air (possibly localised where the weak thermals were), the cold air above the layer descends producing the observed sink.

Under those conditions, a better strategy for F1B fliers, at least, was probably as I observed used more successfully by some of the Chinese fliers and others: wait for a relatively **stable** period of wind and temperature and rely on model performance for a max in generally neutral conditions. This avoids picking the sink around scant thermals, as so many of us did. Otherwise, wait until there are clear indications of a large thermal, but that might not occur for some time (like 40 – 50 minutes at the Narrandera competition!).

For the chart-watchers, be very alert to changes in the pattern of lift coming through and, when this occurs, maybe hold off to see what happens to the other fliers.

A bit late now but might be useful in the future.

Paul Rossiter

Use of a jewellery cleaner for Free Flight

Notes by David Ackery



I have a jewellery cleaner that I use regularly, it is useful for cleaning clockwork timers, engines, or any precision items like tow hooks or F1B hubs.

You can buy them from mail-order places, or your favourite internet store, (eg eBay, AliExpress, etc) for a big selection just Google "jewellery cleaner". Usually they will have a stainless steel tray that is big enough for a pair of spectacles or any jewellery. This is more than adequate for model aeroplane parts. Sometimes they are called ultrasonic cleaner or sonic cleaner. Ultrasonic means that the vibrations are at a frequency that is beyond the audible range (about 20 kHz), whereas a sonic cleaner works at a lower frequency that is audible. Sometimes they get it mixed up, (ie tell little fibs) and will label an item as ultrasonic when it actually just sonic. The one I have is sonic (ie you can hear it buzzing) and it works fine. Maybe ultrasonic would be better, I don't know.

How to use it

You will need some sort of solvent to help wash the dirt out. I use meths as it is always handy in the workshop. Put some solvent in the tray, add your item, turn it on for few minutes, and let to shake all the dirt out. When finished dump the solvent on some weeds in the garden.

I don't do it that way. I prefer to put the item in a white coffee mug with the solvent, and then put the mug in the tray which has 1-2cm of water to transfer the vibrations. If you use a white mug it is easy to see the dirt that

comes out, and it is easy to lift out the mug, check, replace with clean solvents and go again until you are happy. If it is a timer I will have on the side and turn it over a few times to get all the angles. And I run the timer. If it is an engine I will strip it as far as I think necessary, and swirl and slosh it around, and change the angles. When you are happy take it out, dry the item with a paper towel and shake and blow it dry. Inspect carefully under good light, check the feel, fit, and smoothness.

Timers get a small amount of light oil applied with a syringe and needle. A tiny drop on all pivots and the same on the small gears to run and transfer to the big gears. All moving parts need oil but too much oil will just attract dirt so be sparing. I don't use aerosol sprays such as CRC etc.

Engines parts are kept very clean and reassembled with a slight skim of your favourite oil, (I use Air tool oil).

Extra thoughts

It is probably best if the coffee mug you use belongs to you, other people may object if they find out what you are doing. And of course you can get extra brownie points by doing actual jewellery cleaning with it!

I don't know of any other modellers who have one of these, but it is such a useful item for the workshop everyone should have one.

2018 Team Selection Trial Dates

DATE	EVENT	CLASSES	LOCATION	CONTACT	EMAIL
June 9-10	NSW State Champs	F1A, B and C	West Wyalong	Roy Summersby	roydi123@optusnet.com.au
June 11-12	Vic State Champs	F1A, B and C	West Wyalong	Vin Morgan	vinmorgan2@gmail.com
June 16-17	Q'ld State Champs	F1A and B	Dalby	Malcolm Campbell	actrain@ozemail.com.au
Aug 18-19	WA State Champs & Team Trial	F1A, B and C	Meckering	Paul Rossiter	paul.rossiter@ozemail.com.au
Sept 15-16	Q'ld Team Trials	F1A, B and C	Dalby	Malcolm Campbell	actrain@ozemail.com.au

THE RAMROD 750



A story by Lee Hines

The Ramrod was one of my first, and certainly my most successful gassie. So please let me tell a little-known Ramrod story from my perspective.

This is the true story of the first known drawing of one of the greatest free flight designs of all time, Ron St. Jean's famous Ramrod.

I have told this story to many of our free flight friends, and once I wrote about it in the NFFS Digest a couple of years ago. To check on it, I called Ron, who recalled and verified this tale, when asked about Ramrod background.

To set the historical perspective, I moved to California in 1953 from Omaha, NE. A raw neophyte, I was trying my hand at free flight building and flying with some 1/2A kits, glider and rubber jobs.

I entered some contests with limited success, but kept trying, getting help from many, especially Sal Taibi, Hal Cover, F.L. Swaney, Dick Petersen and others.

The 1954 SanValeers Annual was held on November 6 & 7 at El

Mirage Dry Lake. It was a big contest and as I took it all in I saw the most unusual and exciting airplane of my short life. It had a BIG Kiwi-shaped stab, 5-panel wing with TIP PLATES, (!!), a K&B .35 with 10 degrees of DOWNTHRUST (!), VTO pegs and was covered in purple silk with 'RAMROD' in big letters on the wing!

The flier started the motor, VTO'ed it from those pegs, and as I watched it rocket up in awe, I said, "I want one of those and I want it NOW!" I quickly went up to the man to introduce myself and ask for plans, etc. That was how I met Ron, who had come from Wyoming a few years prior to work for Lockheed. He said he had designed and built this model some months before [which I believe was the first Ramrod ever], but no drawing existed yet, just rough notes and bench markings!

I begged him for a drawing, since the 1955 Nats were 7 months away, and I wanted to build a Ramrod fleet. He said OK, he would make a drawing, then we exchanged phone numbers and addresses and went back to flying. In the course of events at that SV Annual I won the

Senior Sweepstakes prize, which I traded for a Torp to power my future Ramrod. Ron unfortunately lost his 750 Ramrod that night during night flying when the light went out.

Well, I went home and cleared off my work bench, anxious to start my first Ramrod, which I knew would be the plane of my dreams! December passed, then in January I called Ron to inquire. He said he was very busy at Lockheed and, I think, forgot, but he would do the drawing and send it soon. February came and went, I am getting as impatient as any 16 year-old could, so I called Ron again, pleading for the drawing. He is a very nice man, getting bombarded by a request for a drawing while having little extra time to do so, which I, a callow youth, of course cannot fathom why it is not done yet!? Things must have been very busy for him at this time, because April went and May came with still no drawing yet! I AM PANICKED! And he could tell when I called, probably by my squeaking, high-pitched voice begging him! Well, about the time of my birthday in early June, there came an envelope from Ron. Boy, was I relieved! In it was an 8.5x11 brown print copy for Ramrod 750, which I still have to this day.

I immediately drew full size plans and built one by July 6th with only 5 degrees of downthrust ('That should be enough', thought I), which meant I had to ROG it initially. The extra 5 degrees were added later on, so then I too could VTO it.

Still, it trimmed out easily, after my cautious first flights with the prop on backwards, then I turned it around...which produced barrel rolls to the left! Not crashing it allowed me to get it right in seven more flights and I was in heaven, as it was by far the best performer I had ever had.

In fact, that test day, Merrill Combs, a fellow club member, saw it



I cannot recall what Ron or Merrill did at the Nats, but I was fortunate to take 2nd place in Class B and 5th

After returning home I drew plans scaled from that first Ramrod drawing, building various sizes with equal success to my 750. In fact, several of our group found that the 250 size from MAN plans gave them trouble which I had never had on my

So my suggestion to those who want to build a Ramrod, in the future: use the 750 drawing as your basis. It should give you more flying ability and pleasure. Mine sure did!



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An E-36 Update: A Power Race to the Top!

Paul Rossiter

I was wondering how the extra weight due to more powerful motor/ESC/battery combinations might affect the total flight time of an E-36 and found the answer interesting.

My reasoning is this: the potential energy gained (i.e. work done) in reaching a height h is $m \times g \times h$, where m is the mass and g the gravitational constant. The rate at which this work is done is the power, and as the work has to be done in a fixed time interval (5 or 10 seconds) the height achieved will be linearly dependent upon power (increases in drag etc. aside). Stated another way, a higher power means a higher rate of doing work and so, over a fixed time interval, a higher amount of work done (potential energy) and hence greater height. Of course, drag cannot be neglected and so the model cannot reach that theoretical height and, since the work done against drag increases as the square of the velocity, the higher climb rate will result in proportionally higher energy

dissipation. Consequently, the height climbed will fall somewhat below the linear proportionality upon power.

Once there, the sink rate during the glide phase will depend upon the square root of the total weight and this in turn can be broken down into the airframe weight plus the weight of the power system (motor/ESC/battery). By comparing data for a number of models, it appears that the airframe weight is typically around 80-90g while the power system weight in grams is roughly $0.6 \times P$, where P is the power in watts (the exact factor is not important). Thus the sink rate will vary as something less than the square root of the power.

Based upon this simple reasoning, the total flight time will thus always increase with power (the near linear dependence of the climb height dominating the weaker near square root dependence of the sink rate on power). This is in fact verified by the observed climb heights and total

durations of current models: both increase with increased power (other things being equal, such as the same airframe).

So if you want to win, go for more power and hope that the field will be big enough for glides starting way over 200 meters high!

In a similar discussion on Hippocketaeronautics, noted E-36 flier Tapio Linkosolo cautioned that the pending EASA (European Aviation Safety Agency) rules for model airplanes (and drones) are about to set the maximum allowed altitude for any model airplanes to 120 meters throughout the Europe. Should such legislation become law most of our free flight categories, including E-36, will be illegal unless fitted with some altitude-limiting device! I have not heard rumblings of anything similar being proposed for Australia, but the drone thing is still under active consideration by the powers that be, so who knows?

In the meantime, anyone for an E-36 with 200, 300, 400,... watts??

TOUR DE FORCE AT THE 2018 ISAACSON, LOST HILLS, CA February 2018

How Ralph Ray was a Show Off at Lost Hills



© Brian Furutani

There were 4 electric events in which an E36 could be flown at the Isaacson:

- AMA E36 on Saturday
- Mass launch to the ground on Sunday Morning using 5 second motor run
- F1S on Sunday (5 rounds with the first round being a 5 min max)
- An International World Challenge on Monday using AMA rules that had to be over by noon

Ralph won ALL OF THEM using his great Apache36 design. Ralph never missed a max, ending clean in all events. That means 20 maxes in a June 2018 Free Flight Down Under

row. I suppose you could say he rubbed it in a bit by ONLY using 5 second motor runs for all flights even though 10 second runs were allowed on many of them. Conditions were not easy. At times there was a lot of wind. Mornings began in the forties and Monday did not get out of the fifties by noon. Ralph lost his best model part way through the first day and had to switch to number two. Luckily his number one was returned that evening and needed just a little repair.

Ralph Ray, 82, the best E36 designer/flier, in the World?

Stan Buddenbohm

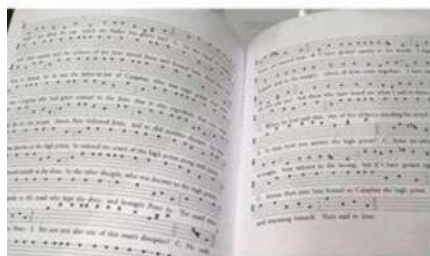


PROGRESSIVE TEAM TRIAL SCORES FOR 2018

Team Trials	Kiwi	North American	Max Men	Tui Cup	Widgiewa Cup	AFFS	Nats	QLD St Ch F1A, F1B	NSW St Ch	Vic St Ch	Sum of best three
	10/2/18	14/2/18	16-17/2/18	16/4/18	18/4/18	12/5/18	24-29/4/18	5-6/5/18	9,10/6/18	11, 12/6/18	
F1A											
Phil Mitchell	x960	x960	960	935	960	810					2855
Malcolm Campbell	x792	x779	937	794	896	870	821				2703
Albert Fathers	x486	918		594	763	528					2275
Tahn Stowe	947	x932	x812								947
Vin Morgan							812				812
Van Richards-Smith							653				653
F1B											
Craig Hemsworth	x785	x867	960	960	960	960					2880
Richard Blackam				929	957	960	960				2877
Gary Goodwin				910	960	742	960				2830
Bruce Hao				902	960	879	960				2822
Vin Morgan	x960	x960	960	921	905	931	925				2816
Paul Rossiter	x960	x960	960	696	908	856					2724
Graham Maynard				664		952	281				1897
Gary Odgers							264				264
F1C											0
Roy Summersby	x960	x960	960	960	960	960	960				2880
Shayne McDonald				960	897	942	960				2862
Gary Pope	x240	912	x789	960	914	380	858				2786
Shannon Tolmie				707	833	953	941				2727
Neil Pollock				132	759	849					1740
Mike Pettigrew							951				951
Andrew Lindwood							819				819
x Under the trials rules one overseas event can be counted. An x before the score indicates an overseas score not used.											
1st round time to 240 counted											

Need a laugh?

I always wanted to be a Gregorian Monk



but I never got the chants



When pressed, the tailor, a material witness in the suit, came apart at the seams. His altered testimony completely unraveled. The tale he had woven had been a complete fabrication.

THIS NEW WRENCH IS AMAZING.
One side is "Standard",



the other side is "Metric".

We truly do live in an age of technological marvels.

BEFORE FACEBOOK,
I JUST ASSUMED
THAT WE
ALL HAD A BASIC
GRASP OF SCIENCE.



BRISBANE FREE FLIGHT SOCIETY

2018 Flying Calendar

Month		Date	Start	Event	Location
January	✂	Sat 27 th	12pm - 4pm	Club general meeting plus "show and tell"	John's place
March	IND	Sun 4 th	3pm - 6pm	Delta Dart State Champs (club sponsored)	BSHS
	CP	Sun 11 th	7am - 3pm	2 min models (3 flights) + CLG (6 flights)	Coominya
		Sun 25 th	7am - 2pm	Dale's Fun Day (general flying and limited RC)	Coominya
April	CP	Sun 8 th	7am - 12pm	All in % - multiple entries (3 flights ea)	Coominya
		Mon 16 th - Tue 21 st		TUI CUP, WIDGIEWA CUP and AFFS CHAMPS	NARRANDERA
		Thu 23 rd - Fri 30 th		70th NATIONALS	WEST WYALONG
	IND	Sat 28 th	3pm - 6pm	HLG/Catapult State Champs	BSHS
	🏆	Sun 29 th	7am - 12pm	F1G State Champs (5 flights), All in % - multiple entries (3 flights ea)	Coominya
May	🏆	Sat 5 th	7am - 12pm	F1C State Champs (2014 rules: 5 flights and 5 secs)	Dalby
	🏆		1pm - 4pm	Open Power State Champs (3 flights)	Dalby
	🏆	Sun 6 th	7am - 12pm	F1J State Champs (5 flights)	Dalby
	IND	Sat 19 th	3pm - 6pm	F1L (EZB) State Champs	BSHS
June	IND	Sat 2 nd	3pm - 6pm	Hanger Rat State Champs	BSHS
	🏆	Sun 3 rd	8am - 1pm	F1H State Champs (5 flights), E36 (3 flights)	Coominya
	🏆	Sat 16 th	8am - 1pm	F1A State Champs (5 rounds - first Rd 4min)	Dalby
	🏆	Sun 17 th	8am - 1pm	F1B State Champs (5 rounds - first Rd 4min)	Dalby
	✂	Sat 23 rd	12pm - 4pm	AGM with BBQ lunch	John's place
	CP	Sun 24 th	8am - 2pm	Club Fun Day KKK, Frog, and ½ Hour Walking Scramble plus Vic Smeed (Prizes, no points for V Smeed)	Coominya
July	IND	Sat 7 th	3pm - 6pm	P18 State Champs (club sponsored)	BSHS
	🏆	Sun 8 th	8am - 2pm	Open Rubber & P30 State Champs (3 flights each)	Coominya
		Sun 22 nd	8am - 2pm	Dale's Fun Day (general flying and limited RC)	Coominya
August	IND	Sun 5 th	3pm - 6pm	Peanut Scale State Champs	BSHS
	CP	Sun 12 th	8am - 2pm	BFFS Mini Power and QDP (3 flights each)	Coominya
		Sun 26 th	8am - 2pm	Club Fun Day Vintage, Sports models and Limited RC (Prizes, no points)	Coominya
September	🏆	Sun 9 th	7am - 2pm	Scale, HLG and CLG State Champs	Coominya
		Sat 15 th	7am - 12pm	F1A & F1C Team Selection Trial (5 rounds)	Dalby
		Sun 16 th	7am - 12pm	F1B Team Selection Trial (5 rounds)	Dalby
	CP	Sun 23 rd	7am - 3pm	Col's Vintage Rally (accumulation of points for each class)	Coominya
October		Sun 14 th	7am - 3 pm	LSq/100 (3 flights), No Frills Wakefield (5 flights)	Coominya
		Sun 21 th	7am - 3 pm	100gm coupe, P20 and E36 (3 flights each)	Coominya
November		Sun 18 th	12pm - 3pm	BFFS Xmas Party and prizes presentation	Malcolm & Kathy's

🏆 Outdoor State Champs IND Indoor State Champs CP Club points apply ✂ Club meetings

CONTACTS:

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NSWFFS Contest & Fixture Calendar 2018



Date	Event	Venue	Time	C/D
Dec 30 Jan 2	New Years Eve BBQ & Fun Fly No Comps, just fun flying	West Wyalong – flying anytime. If you want to stay on the field, book in with Roy Summersby		
Jan 14	New Year Recovery Day	Richmond	7.00am – 1.00pm	
Jan 19	General Meeting	Check Newsletter	7:30pm	
Jan 28	Scramble, Scale Rally, HLG/CG	Richmond	7.00am – 1.00pm	Terry Bond
Feb 10-18	Maxmen, etc USA	Lost Hills		
Feb 11	Combined % + Scale Fun Fly	Richmond	7:00am – 1:00pm	Matt Hannaford
Feb 25	Combined F1G, H, J + P30	Richmond	7.00am – 1.00pm	Gary Pope
Mar 3-4	Hunter Valley Champs	Muswellbrook		
Mar 11	State Champs P30 + Comb Vintage	Richmond	7.00 – 1.00pm	Gary Pope
Mar 16	General Meeting	Check Newsletter	7.30pm	
Mar 18	Gary Goodwin's Hinton Day	Hinton	7.00am---1.00pm	0414 292 050
Mar 25	State Champs Scramble + Combined % Control Line flying, BBQ Lunch	Richmond BYO Food	7.00am-1.00pm	Terry Bond
Apr 8	Big Kev's Abomination Day	Richmond	7.00am – 1.00pm	Peter Jackson
Apr 16-21	AFFS Champs etc	Narrandera	See FFDU	
Apr 23-30	Nationals & Southern Cross Cup	W. Wyalong	Nats' Webpages	MAAA
May 18	General Meeting	Check Newsletter	7.30 pm	
May 19-20	Veteran's Gathering	Muswellbrook		
May 25-28	Vic State Champs F1A,B,C,G,H,J, O/Rubber O/Power, P30, HLG	Bridgewater	For program see FFDU	Vin Morgan 03 9387 2531
June 9-11	NSW State Champs F1A, B, C, O/Power + O/Rubber	W. Wyalong AB Field	8.00am-1.00pm	Dave Thomas
June 17	Scale Practice	Richmond	7.00am-1.00pm	Jim Christie
July 6-8	Scale Rally Weekend. Scale comp Sat 7 th , Sun 8 th ½ Hour scramble, Fun Fly + C/L flying	Richmond 7.00 am till dark Saturday is the Trans Tasman BBQ Lunch, BYO Food		Tahn Stowe
July 15	State Champs F1G,H,J (Combined)	Richmond	7.00am-1.00pm	Matt Hannaford
July 20	General Meeting	Check Newsletter	7.30 pm	
Aug 5	Combined %, Multiple Entries.	Richmond	7.00am- 1.00pm	Bruce Hao
Aug 19	Scale Rally, P 30, Combined Vintage	Richmond	7:00am – 1:00pm	Tahn Stowe
Aug 25-26	Cowra Oily Hand Weekend	Cowra		
Sep 9	½ Hour Scramble +Fun Fly B-B-Q Lunch	Richmond BYO Food	7:00am – 1:00pm	John Corby
Sep 14	Annual General Meeting	Check Newsletter	7:30 pm	
Sep 23	Combined % 5 flights	Richmond	7.00am - 1.00pm	Matt Hannaford
Oct 7	Combined % Multiple Entries	Hinton	7:00am – 1:00pm	Gary Goodwin
Oct 27-28	Wings Over West Wyalong All Disciplines FUN FLY	West Wyalong AB Field	7.00am-till Dark	Plenty of room for ALL
Nov 11	Brian Alcock Bi-plane Day ½ Hour Scramble + Scale Rally	Richmond	7:00am – 1:00pm	Peter Jackson
Nov 16	General Meeting	Check Newsletter	7.30	
Nov 30	Friday Xmas Party	Richmond	7.00am – 1.00pm	Terry & Lyn
Dec 9	½ Hour Scramble, Combined Vintage with SAMS & Fun Fly	Richmond BBQ Xmas	7:00am – 1:00pm Lunch BYO FOOD	Terry Bond

Notes: 1. All scrambles start as close to 8.00 am as possible
 2. Sport FF, CL & RC flying welcome on AB Field at West Wyalong. Plenty of room.
 3. BYO FOOD, DRINK & CHAIR to all BBQs at Richmond



West Australian 2018 Free Flight Contest Calendar



DATE	CONTEST CLASS	LOCATION	TIME	CONTACT
4 March	Combined Open	Meckering	9.00 am	Chris Behr – 9448 9922
18 March	Combined Open	Meckering	9.00 am	Paul Rossiter – 9316 0250
1 April	HLG/CLG State Championships Power Scramble State Championships	TBA	TBA	Greg McLure – 9457 8680
22 April	Combined Open	Meckering	9.00 am	Chris Behr – 9448 9922
13 May	P30 State Champs / Roy Farren Cup Combined Open / Free Flight Cup	Meckering	9.00 am	Paul Rossiter – 9316 0250
3 June	SLOP State Championships Mike Beilby Cup Combined Open / Free Flight Cup	Meckering	9.00 am	Phil Letchford – 9295 2161
17 June	Rubber State Championships Wamac Cup Open Glider	Meckering	9.00 am	Chris Behr – 9448 9922
8 July	Open Power State Championships Combined Open / Free Flight Cup	Meckering	9.00 am	Rod McDonald -9316 2762
29 July	Nostalgia Combined Open / Free Flight Cup	Meckering	9.00 am	Paul Rossiter – 9316 0250
18 – 19 August	F1A, F1B and F1C State Championship (TT) FIA Team trials F1A, F1B and F1C (TT) Combined Open / Free Flight Cup	Meckering	9.00 am	Paul Rossiter – 9316 0250
22 – 24 September	Free Flight Electric F1Q/E36 Old Timer Electric and Limited Height Gliders	Meckering	9:00am	Paul Rossiter – 9316 0250 Chris Behr – 9448 9922

- NOTES:** 1. WAFFS Free flight Cup is a series of events for the following classes:
A/1 glider; Coupe rubber, 1/2A Power; P-30 rubber; E-30 electric; E-36 electric; CO₂; Chuck Glider (including CLG).
- Competitors may fly one or many classes on each day and throughout the year. Your best scores from the nominated set of flights (normally three in number unless otherwise agreed prior to the event) on three different days, adjusted to a percentage of the perfect score using the appropriate K-factor, are combined to determine your total score for the series.
2. Combined Open is for all classes. Competitors may fly one or many classes on each day and throughout the year. Your best scores from the nominated set of flights (normally three in number unless otherwise agreed prior to the event) on three different days, adjusted to a percentage of the perfect score using the appropriate K-factor, are combined to determine your total score for the series.
3. Results from the specific events may be nominated in advance to count toward the combined events.
4. Sport flying is welcome and encouraged on all competition days.
5. E-30 to have 2 minute max.
6. CO₂ to have 2 minute max and 3 cc tank.
7. Chuck glider and CLG to have 3 flights, but 20 sec attempt to apply outside State Champs. CLG may use no more than a 6" loop of 1/4" rubber.
8. All events marked (TT) are events where scores count towards the Australian Free Flight team selection. Interstate participation is encouraged. All events for Team Trials are 5 rounds, with the first round 4 minutes.

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