FREE FLIGHT DOWN UNDER

NEWSLETTER OF THE AUSTRALIAN FREE FLIGHT SOCIETY INC

VOLUME 43 NUMBER 4

SUMMER 2011

BIG SCALE JUST GOT BIGGER!

COMPETITION REPORTS

GREAT NEW TECHNICAL ARTICLES

HOW TO PREPARE FOR THE WORLD CHAMPS IN 2013

ROY'S TRAVEL STORY

AUSTRALIAN FREE FLIGHT SOCIETY Inc.

FRONT COVER: Jim Christie's Open Rubber model claws skyward on a beautiful Narrandera day, in pursuit of Albert Fathers's Waif (Phil Ball design). Jim Christie won the fly-off, but only just.

Free Flight Down Under

Summer 2011

Volume 43, Number 4

This edition of Free Flight Down Under is edited by Malcolm Campbell, 1 Rex Street, Aspley 4034 Australia actrain@ozemail.com.au

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.

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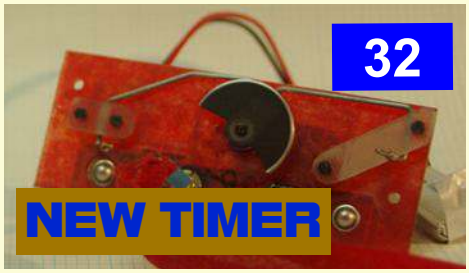
WITH SPECIAL REPORTS ON

YOUR MOTOR SUCKS!

WORLD CHAMPS PREP'N

BIG SCALE

WHICH ONE DO YOU OWN?



PRESIDENT'S REPORT:

Greetings all and welcome to the final edition of FFDU for 2011. As ever the year seems to have rushed by too quickly. Malcolm Campbell is again editor for this edition of FFDU so I am expecting a great read for all.

This year has felt a little different to others due to a number of factors. Being a World Champs year gave us the excitement of Australians competing with the best on the world stage with fly-off results being achieved by Australian team members in the lead up World Cup event, and an excellent result by Paul Rossiter in the World Champs F1B fly offs, well done to all team members. With the focus on the World Champs we didn't see the number of international competitors visiting Narrandera as last year, and the change of date for Narrandera due to the clash with the World Champs probably also saw less competitors at Narrandera, not to say that the level of competition was any lower.

The other issue for us was the loss of the last two days of flying due to rain, which while cancelling a number of events at Narrandera, allowed introduction of the concept of running the events as decentralised competitions and by the end of the 2011 flying year, all events had results. This more flexible approach has been carried forward to next year's AFFS champs with the scheduling of a couple of the events being able to be flown at any time up during the AFFS champs up until the end of Saturday, leaving Sunday morning available for fly offs if required.

Considerable discussion has gone into the development of next year's AFFS schedule, with several evolutions being explored before the current version was settled upon. Hopefully the schedule will provide flexibility for everyone to fly the events they wish to, and not load up days to the point where everyone on the field is competing. This year we had a number of days where that situation did occur, and finding people to CD was problematic. My preference is that the CD for a day is not involved with the flying for the day, so as to allow the CD to manage the day without being in a rush, and keep the result sheets etc up to date. With that in mind if you do have a day next year where you are not competing it would be appreciated if you would nominate to CD for the day or part of if we get more than one person available for the day. I will put out another call for CD's in the next edition of FFDU as well, so check the schedule and contemplate the opportunity to sit in the shade of a tent for the day. *President's Report continues on page 27*

FOR SALE

F1B, C, J Parts for sale by order

During the next SCC and AFFS we will have two Ukrainian modellers attending our competitions. They are Igor Vivchar (F1B) and Viacheslav Aleksandrov (Slava F1C). They have been sponsored by the MAAA and the NSWFFS to arrive in Australia to teach and assist our team at the next world champs in France in 2013.

Some orders for parts and models have already been sent to these flyers so if you want to order parts or models please advise Terry Bond (karenand007@ozemail.com.au) or Roy Summersby (roydi132@optusnet.com.au)
If you already know the phone numbers just call and we will forward the request.

FROM THE EDITOR:

For the competitors among us, 2012 shapes up to be a very big year for free flight. And it's pretty much all in the first half! Perhaps the French World Champs in 2013 has had some influence? Once again, I have been overwhelmed with the many contributions I've received to make this edition of FFDU more readable. The different writing styles and topics really help to make our newsletter that much better. Thank you all - Stan Hinds, Terry Bond, Roy Summersby, Jon Fletcher, Maris Dislers, Paul Lagan, John Lewis, Gary Odgers, Vin Morgan, Harry Sokol, Howard Gostelow and Mike Glaister.

If we keep this up, FFDU will continue to improve. A Merry Christmas to you all, and a Happy, Healthy and Winning New Year!

Malcolm Campbell

Narrandera 2012

Australian Free Flight Society and Southern Cross Cup
Program

SOUTHERN CROSS CUP

Monday, April 2	F1B	7 x 1 hour rounds	0800 - 1500
	Open Power	3 flights	0800 - 1300
Tuesday, April 3	Fly-offs from Monday		0730 - 0800
	F1A	7 x 1 hour rounds	0800 - 1500
	F1C	7 x 1 hour rounds	0800 - 1500
	Open Rubber	3 flights	0800 - 1300
Wednesday, April 4	Fly offs from Tuesday	0700 – 0800	

AFFS CHAMPIONSHIPS

Wednesday, April 4	F1B	7 x 1 hour rounds	0800 - 1500
	Oz Diesel	5 flights, 120 max	0800 - 1300
	F1H	5 x 1 hour rounds	0800 - 1300
	*****AFFS AGM	For time and venue see CDs notice board	
Thursday, April 5	Spare day. Training, Option to fly Comb. % Open, Comb. Vintage		
Friday, April 6	Fly offs from Wednesday	competitions	0730
	F1A	7 x 1 hour rounds	0800 – 1500
	F1C	7 x 1 hour rounds	0800 - 1500
	Open Rubber	3 flights	0800 - 1300
Saturday, April 7	Fly offs from Friday competition		0730
	F1G	5 x 1 hour rounds	0800 - 1300
	F1J	5 x 1 hour rounds	0800 - 1300
Sunday, April 8	Fly offs from Saturday competition		0730
	Scale		
	Scramble		
	P-30	3 flights, 120s max	0800 - 1300
	Open Power	3 flights	0800 - 1300
	HLG/CLG		0900 - 1300
	Evening. Presentation Dinner for SCC& AFFS		7 for 7:30
Anytime*	Combined % open	3 flights	0800 - 1300
	Combined Vintage	3 flights	0800 - 1300

** May be flown on any AFFS competition day before Sunday (including Thursday April 5). Fly offs Sunday morning.*

Additional Information:

1. WORLD CUP EVENTS - are flown from a flight line in seven one hour rounds. Please assist by volunteering to time keep.
2. The first round flight duration for F1A, F1B and F1C will be 180 seconds.
3. Flyoffs will be organized after the event (start time, CD and timekeepers) but held the following morning. Durations for F1A, B & C will be 10 minutes (conditions permitting). For other events unlimited.
4. OPEN EVENTS - are 3 flights to a 3 min. max with no rounds and one unlimited flyoff the next day.
5. Gliders otherwise conforming to the F1H/A1 rules will be allowed in F1H at any weight provided they are fitted with a non-latchable towhook.
6. Old style F1J/Class 1 Power models – restricted to a plain bearing motors less than 1 cc and no moving surfaces except DT – will be allowed an 8 second motor run in F1J (bring out your Mini Weavers and ½ A Vikings)
7. P-30 is 3 flights to a 120 sec. max. No rounds. One unlimited fly-off.
8. COMBINED % OPEN – is 3 flights (no rounds). Score is the percentage of the max for that class. HLG and CLG are allowed but are only allowed 3 flights i.e. no discards. Two attempts are permitted for each flight (the 20 second attempt rule applies).

   The 3 flights can be taken on any AFFS Competition day before Sunday (including the "spare day").
9. VINTAGE Glider, Rubber and Power will be flown as a combined event. You may enter more than one class. Champ of champ points will include all entries. Note new vintage cutoff date of 1956.
   The 3 flights can be taken on any AFFS Competition day before Sunday (including the "spare day").
10. VINTAGE classes get bonus points (2 per year pre 1956) as per MAAA rules 2009
11. HLG/CLG - all flights from the box marked by 4 cones.
12. Oz Diesel – (1.5cc plain bearing diesel, no VIT, AR etc, see FFDU2002/3), 10 sec motor run, 5 x 2 min flights
13. PLACEGETTERS - in AFFS events may be processed. There will be spot checks and check timekeeping on the field.
14. All Competitors must be in possession of a current MAAA/FAI licence.
15. AFFS Annual General Meeting. See notice at CDs table for venue and time. Please forward agenda items, nominations etc. to the secretary, Phil Mitchell by March 15.
16. The Presentation Dinner will be on the evening of Sunday, April 8 at the Racecourse. Cost is $40.00 for a three course meal of Riverina Specialities. Cost is subsidized by the AFFS. We need to know numbers in advance so please make your bookings for the dinner and pay with your entry.
17. We need people to CD events. This is not too arduous a task – a jury will be convened for any difficult decisions. People who CD an event will receive a $10 reduction on their dinner ticket.
18. Motorized retrieval is not allowed (pedal and electric bicycle retrieval is). We are not permitted motorized retrieval on the Department of Defence land (Field 1) and for Field 2, although motorized retrieval has been allowed in the past, we have had problems with the dust raised by cars obscuring models and blanketing the flight line.
19. April 6, Narrandera Airport. First light 06:04, sunrise 06:30, sunset 18:01, last light 18:28

The following pages contain entry forms for the AFFS and Southern Cross Cup events. Please print them out, or photo copy/tear out pages if you get hard copy, fill them in and send to the AFFS and SCC treasurers, preferably with payment, cheque or direct deposit information.

ENTRY FORM

35th Annual Australian Free Flight Society Championships
and
World Cup - Open International
for
F1A, F1B and F1C

Narrandera, NSW **April 2-8, 2012**

Name: ……FAI No:……
Address: ……..……Age (if Junior)……
……..……..……..…
……..……..……..…
Tel: ……E-mail ……

Events entered

Event	Tick
1. F1A World Cup Event	
2. F1B World Cup Event	
3. F1C World Cup Event	
4. Combined % Open	
5. Open Rubber	
6. Open Power	
7. Scramble (Russ Hammond Perpetual Trophy)	
8. P-30	
9. Scale	

Event	Tick
10. F1G (Coupe d'Hiver)	
11. F1H (A1 Glider)	
12. F1J (see note 6 in Program)	
13. HLG	
14. CLG	
15. Combined Vintage. (entry in more than one class allowed)	
16. Oz Diesel	
Dinner	
AFFS sub for 2012/13	

Fees:

Registration for AFFS members	$10
Registration (non AFFS members only)	$20 World
Cup events F1A, F1B and F1C	$30
Any number of other AFFS events	$20
Any number of WC and AFFS events	$50
Presentation Dinner (Monday Night)	$40/person
AFFS membership for 2012/13	$30
There are no fees for juniors	

Fee calculator

Individual category	**Fee** AFFS	
member entering World Cup events only	$40 AFFS	
member entering AFFS events only	$30 AFFS	
member entering World Cup and one or more AFFS events	$60	
Non-member entering World Cup events only	$50	
Non-member entering AFFS events only	$40	
Non-member entering World Cup and one or more AFFS events	$70 Dinner	
	$40/person	
AFFS membership for 2009/10 (includes FFDU)	$30	
Total fee		

TO HELP THE ORGANISATION, PLEASE SEND PRE-ENTRY BY MARCH 15, 2012.
Send completed entry form with money (cheques payable to Australian Free Flight Society **not** FFDU) to: Vin Morgan, Treasurer AFFS
644 Canning Street, Carlton North, Vic 3054 Australia
Or by bank transfer to: BSB 033 174
Account No. 331732
Name: Australian Free Flight Society

Overseas people can pay on arrival but it would help organization if entries are returned so we know numbers – especially for the dinner. Forms or entry details can be e-mailed to: vin.morgan@utas.edu.au.

ENTRY FORM

Southern Cross Cup 2012

World Cup - Open International for F1A, F1B and F1C
also Open Power and Open Rubber

Information
Entry Fees - (There are no entry fees for Juniors). Registration Fee $10.00.
World Cup Events (F1A, F1B & F1C) $20.00 each.
Open Power & Open Rubber $10.00 each.

Send entries to: Tahn
Stowe
3/152 Brook Street
Coogee 2034 AUSTRALIA
Please make cheques payable to NSWFFS Inc in $A

Late entries will be accepted on the field prior to the event. Payment will also be accepted immediately prior to the event however it would assist the organization however if entry forms could be sent back by 15th March 2012.

Events F1A, F1B & F1C are world Cup Events. We need timekeepers for each pole, and we need your help. Please indicate if you can assist with timekeeping any events.

Enquiries: stowes@ozemail.com.au

Name: ……FAI number: ……
Address: ……
……
……
……
Tel: ……E-mail ……

Event	Fee	Amount
	Registration	**$10**
F1A	**$20**	
F1B	**$20**	
F1C	**$20**	
Open Power	**$10**	
Open Rubber	**$10**	
	Total	

Schedule of Trials for Team Places at the F1A, F1B and F1C World Championships to be held in France, 3-10 August 2013

At the 2011 AGM of the AFFS it was agreed that the team selection process for team places at the next World Championships to be held in France from the 3rd to 7th August 2013 should follow the established practice of a multi - event format, subject to MAAA approval. The trial period is to run from 1 Dec 2011 to 30 Nov 2012 and eligible events shall include those agreed and widely publicised in MAAA, AFFS and State newsletters.

The timetable for events is as below:

Victoria	State Championships	F1A, F1B, F1C	10-12 Mar.	Springhurst
Queensland	State Championships	F1C	10 March	Dalby
Queensland	State Championships	F1A, F1B	21-22 April	Dalby
New South Wales	Southern Cross Cup	F1A, F1B, F1C	2-3 April as programmed	Narrandera
New South Wales	AFFS Championships	F1A, F1B, F1C	4-8 April as programmed	Narrandera
Western Australia	65th Nationals	F1A, F1B, F1C	12-20 April	Meckering
Western Australia	Special WA Trial	F1A, F1B, F1C	21-22 April	Meckering
Western Australia	State Championships	F1A, F1B, F1C	2-4 June	Meckering
New South Wales	State Championships	F1A, F1B, F1C	9-11 June	Springhurst/Narrandera?
Queensland	Special QLD Trial	F1A, F1B, F1C	20-21 September	Dalby

Notes

- Contestants may include the results of one overseas open contest in their best three scores to establish their position in the order of merit for a team place.
- If there is a need to separate contestants tied for team places, fourth best scores will be used to establish final order of merit.
- The dates for the Nationals, the AFFS Championships and the Southern Cross Cup events are given as a block to allow minor changes to the program if adverse weather conditions occur.
- The clash between Qld F1C and Victorian State championships is unfortunate but attempts to resolve the clash have been unsuccessful.
- The special trial in Queensland in September is yet to be ratified by the FFTC and MAAA.

FFDU contains all the entry forms for the major Australian events in the first part of 2012

2011 TEAM TRIALS RESULTS

Name	AUS Nats	Max Men	Zeri	Embalse	SCC	AFFS	Poitou	Vic St Ch	QLD St Ch	NSW St Ch	WA St Ch	WA Trial	Sum of best three
F1A													
Phil Mitchell		x900	1260	x1260	1260	1260			F1A, F1C,			Not	3780
Vin Morgan		x900	1260	x1222	1123	1249		1040		in AFFS		Flown	3632
Tahn Stowe		x877	x1173	x724	1176	1033	1233	1100		F1B not			3509
Malcolm Campbell	958	x848			913	1008			1228	flown			3194
Albert Fathers	1072				616	1006			939				3017
Ted Burfein	905							312	1176				2393
John Lewis	1170								1221				2391
Neil Murray					1247						1060		2307
Des Slattery	724								565				1289
Ben Lewis									900				900
Van Richards-Smith									832				832
Mike Thomas					800								800
Gary Odgers								727					727
Martin Williams						718							718
Paul Rossiter											563		563
Ryan Sherburn											459		459
David Brawn	245												245
Colin Crowley											202		202
Ron Munden									175				175
Chris Behr											86		86
F1B													
Richard Blackam					1260	1256		1260					3776
Terry Bond		x900	1260	x416	1253	1260		1204					3773
Leigh Morgan		x900	1209		1138	1257		1260					3726
Paul Rossiter		x900	1208	x540	1260	1224					1231	180	3715
Vin Morgan		x863	1222		939	1232		1197					3651
Gary Pope		x864	1066	x475	1259	1190		1170					3619
Bryan Oliver					1260	1153		1137					3550
Ted Burfein	960				1190			1036	1198				3424
Albert Fathers	345				1156	835			34				2336
John Lewis	868								1127				1995
Neil Murray											1188		1188
Percy Wright						1041							1041
George Baynes									1013				1013
Ben Lewis									1001				1001
Mark Armour	960												960
Rod McDonald										749			749
Van Richards-Smith									676				676
Adrian Bryant	333				317								650
William Jones	472												472
Ron Munden									225				225
Graham Maynard	156					40							196
F1C													
Roy Summersby		x900	1290	x540	1161	1260		767					3711
Terry Bond				360	1247	1260		828					3335
Colin Crowley											1260		1260
Bill East				180				551					731
Ted Burfein					553								553
Peter Nash	134												134
John Lewis	127												127
Under the trials rules only one overseas event can be counted. An x is placed before overseas scores not used													

TRANS TASMAN 2012

NARRANDERA 2 - 8 April

Plan to keep the Rose Bowl in Australia!

Victorian State Championships 2012

Program

Saturday March 10

Combined Vintage	3x180	0800-1400
F1B	7 rounds	0700-1400
Open power	3 Flights	0800-1400

Sunday March 11

Flyoffs if required		
F1A	7 rounds	0700-1400
F1C	7 rounds	0700-1400
Open rubber (Shaw Cup)	3x180	0800-1500
Scale		0700-1200

Monday March 12

Flyoffs if required		
P-30	3x120	0800-1300
Oz diesel	5x120	0800-1300
CLG/HLG		0800-1100

F1A, F1B and F1C are team trial events for the 2013 World Championships.

Entry

The entry fee for any number of events is a $30 flat fee.
You can pay on the field but please let us know if you plan to come.

Trophies

Trophy plaques, provided by VMAA, will be awarded for first, second and third places.
In addition there are perpetual trophies for;
F1A - The Central Aircraft Trophy first awarded in 1951
F1B – The Victorian Wakefield Trophy
Open Rubber – The Shaw Cup, possibly the oldest Australian aeromodelling trophy still awarded. It was first awarded in 1929

Location

Events will be held at McMahon's, Springhurst

NOTES

1. Timekeepers are not provided. Please assist by volunteering to time keep.
2. The first round flight duration for F1A, F1B and F1C will be 180 seconds.
3. OPEN EVENTS - are 3 flights to a 3 min. max with no rounds and one unlimited flyoff.
4. P-30 is 3 flights to a 120 sec. max, no rounds. One unlimited flyoff.
5. VINTAGE Glider, Rubber and Power will be flown as a combined event. You may enter more than one class.
6. All VINTAGE classes get bonus points (2 per year pre 1956) as per MAAA rules
7. HLG/CLG - all flights from the box marked by 4 cones.
8. Oz Diesel – (no VIT, AR etc, see Nats Notes in FFDU2002/3), 10 sec motor run, 5 x 2 min flights
9. All Competitors must be in possession of a current MAAA/FAI licence.

Entry Form

Victorian State Championships 2012

Location: Springhurst (McMahons)

Name: …… FAI

No: …… Age (if Junior)……

Address: ……

……

…… Tel:

…… E-mail ……

Event	Entering?
Combined Vintage	
Open Power	
Open Rubber	
F1A	
F1B	
F1C	
Scale	
P-30	
Oz Diesel	
HLG	
CLG	

Please fill in the form and mail or email back so we have an idea or numbers.

Return to: Leigh Morgan
644 Canning Street, Carlton Nth 3054

Or email to: vin.morgan@utas.edu.au

Entry can be paid on the field or by cheque to: Werribee Wanderers Free Flight Group

or by money transfer to: Wanderers Free Flight Group
BSB 013 915 a/c number 2601 32237

Amount: $30

COMPETITION RESULTS

2011 AUSTRALIAN FREE FLIGHT CHAMPIONSHIPS

Yes, the 2011 AFFS is finally over. The last events, F1A and F1C were flown on an exceptionally good day at Narrandera last Saturday. Amazing really, considering the weather on adjacent days and the early forecast. The day started very calm, almost embarrassingly calm for some of the glider flyers, and overcast. There was a small breeze for the middle rounds and a stronger wind for the last 3 rounds. Good variety and a good test for the flyers.

Only Phil maxed out in glider but both Terry and Roy reeled off max after max with the F1C folders. They declined to flyoff in the 6-8 m/s wind on Sunday.

The decentralized comps worked pretty well. There were entries from all States and the results were well spread over the country. For instance Open Rubber had 1st from NSW, 2nd from Vic, 3rd from WA and 4th from QLD. OzD had 1st from Vic, 2nd from NSW and 3rd from QLD.

Vin Morgan

AFFS Decentralized. Events flow between August and October 2011

Only flyers who attended Narrandera were eligible

	Open Rubber						**Total**	**Fly-Off**	**Grand total**	**Date**	
1	Jim Christie	180	180	180			540	327	867	7/10/2011	
2	Colin Collyer	180	180	180			540	142	682	17/09/2011	
3	Paul Rossiter	180	180	180			540		540	Pre 10/09/2011	No flyoff taken
4	Albert Fathers	163	180	180			523		523	Qld State Champs	
5	Des Slattery	163	175	180			518		518	Qld State Champs	
6	Malcolm Campbell	116	180	180			476		476	Qld State Champs	
7	Vin Morgan	180	69	180			429		429	17/09/2011	
8	Leigh Morgan	180	98	134			412		412	17/09/2011	
9	Adrian Bryant	133					133		133	Qld State Champs	

	Oz Diesel						**Total**	**Fly-Off**		
1	Martin Williams	120	120	120	120	120	600	100	700	17/09/2011
2	Roy Summersby	120	120	120	117	115	592		592	21/10/2011
3	Des Slattery	106	113	120	82	120	541		541	24/09/2011
4	Peter Lloyd	93	120	96	120	24	453		453	17/09/2011

	P-30						**Total**	**Fly-Off**		
1	Terry Bond	120	120	120			360	296	656	7/10/2011
2	Vin Morgan	120	120	120			360	257	617	17/09/2011
3	Jim Christie	120	120	120			360	106	466	7/10/2011
4	Leigh Morgan	120	120	114			354		354	17/09/2011
5	Percy Wright	115	93	100			308		308	17/09/2011
6	Paul Rossiter	90	90	0			180		180	Pre 10/09/2011

AFFS F1A 2011. Flown in conjunction with NSWFFS St Ch at Narrandera on 29/10/11

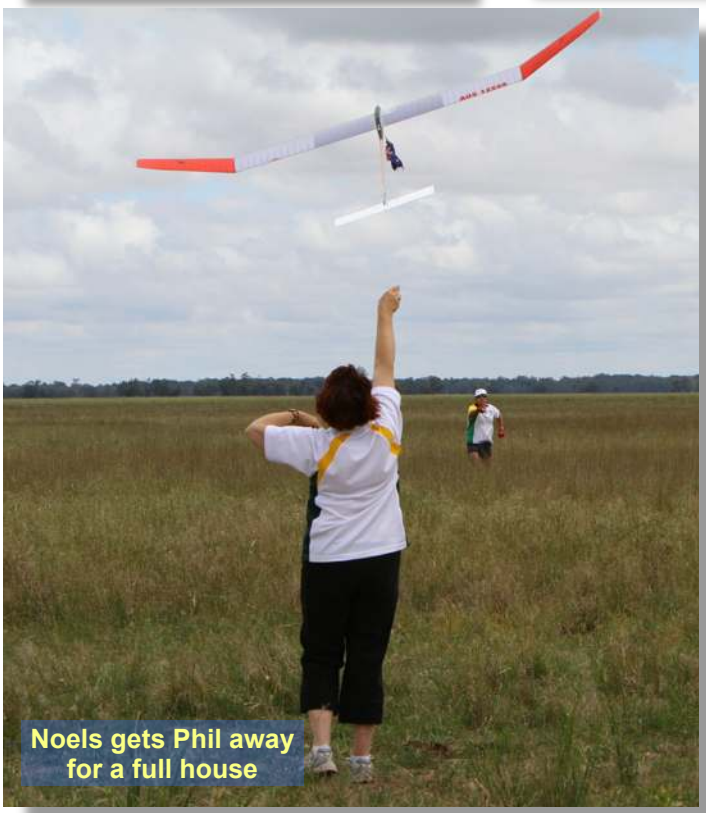
1	Phil Mitchell	AUS12594	180	180	180	180	180	180	180	1260
2	Vin Morgan	AUS19046	180	180	180	180	169	180	180	1249
3	Tahn Stowe	AUS3184	180	180	180	136	130	105	122	1033
4	Malcolm Campbell	AUS52060	0	180	180	180	130	180	158	1008
5	Albert Fathers	AUS65586	168	157	166	180	128	166	41	1006
6	Martin Williams	AUS20702	180	165	124	69	180			718

AFFS F1C 2011. Flown in conjunction with NSWFFS St Ch at Narrandera on 29/10/11

1	Terry Bond	AUS3107	180	180	180	180	180	180	180	1260
1	Roy Summersby	AUS2153	180	180	180	180	180	180	180	1260

Once a year competitor Martin Williams unlucky in the end

How often would you see an "A" formation of birds flying above an F1A comp?



Noels gets Phil away for a full house

Des Slattery launches for Albert Fathers. R7 was his downfall

Could almost be the "podium". They were watching the birds.

George Fuller Fly In

report by Roy Summersby

This year I had to change the date, as I was only just getting home from an overseas diving and flying trip. I realised that we would loose some flyers, but putting it on with the NSW state champs at Narrandera we might gain a few Queenslanders, which we did. The weather on the maps for two weeks had looked like a stay at home weekend, but then there was this little window between the weather systems that looked promising for at least the Saturday. The field at Narrandera on Saturday morning was just magic, no wind, nice grass, light cloud perfect for flying. In total we had four Queenslanders, six Victorians and nine New South Welsh persons enjoying each others company, and catching up on the past gossip.

As most of the flyers were involved flying F1A, and F1C there wasn't much activity with the Fuller models on Saturday, and they were trusting/hoping that Sunday would be just as good. Once again all those that entered received a bottle of Fullers Merry Merlot (Red or White) and this was given the nod of approval at the B-B-Q on Saturday night.

Sunday dawned with our worst fears, the wind was up before us and pushing eight meters / sec, which made a three minute flight a very long walk. It also was the cause for some carnage, so a few of us have some repairs to do. By the time flyers had put in three flights they had had enough wear on their legs and called it a day.

To sum up we all had a good time, and the flying on Saturday made up for Sunday. There were prizes for everyone, it might happen again next year, date and place to be advised later.

Des Slattery, enjoying the carnage

Percy Wright hung his Stomper safely on his brolly

No, the grass wasn't that long. Peter Greenhill kneels to pray for less wind

Terry stops Roy's hat from blowing off as Malcolm Campbell gets his prize

Not bad for a little 1.5 powered Dixielander, Roy!

1. Malcolm Campbell	467
2. Roy Summersby	433
3. Des Slattery	180
4. Vin Morgan	180
5. Percy Wright	175
6. Brian Hammond	88
7. Terry Bond	82

NSW State Champs Narrandera – 29 and 30 October2011


Liz gets hubby Tahn away in F1A

Normally we would program our champs earlier in the year at Richmond but model performance is getting better and better especially with F1C. I know that F1A and B are also very good performers but Richmond has been getting smaller and smaller each year for these big circling monsters. Whether you like it or not the field at Narrandera is probably the best flying field in the world. Even Lost Hills, as good as it is, pales in comparison to Narrandera.

I arrived on Friday afternoon and dropped some gear at the Camelia motel then to the field with Jim Christie and Roy Summersby. We dropped the shade tents and the 'ELECTRIC' bike. The wind was a bit strong but going in the right direction. The grass looked very healthy and unfortunately quite high. There was a significant amount of fresh cow drops around and they looked like they might stick very well to a boot or shoe. I think Malcolm Campbell managed to prove that just before departure on Sunday.

Saturday was F1A and C, with Jim Christie as the NSWFFS CD. A special thanks to Jim for coming down and keeping us in line. The weather was really good with consistent wind patterns from the SW. Wind speeds varied from almost zero to 4m/sec depending on the thermal. Phil Mitchell managed to get a full house followed by the rest. The results below;

Phil Mitchell	1260	Malcolm Campbell	1008
Vin Morgan	1249	Albert Fathers	1006
Tahn Stowe	1033	Martin Williams	718

It is interesting to see Malcolm climb the ratings with his new model, smashing Albert by 2 seconds. His zero in R1 was the result of the wrong program finding its way into his BM timer. Do not really know what happened to Tahn with all the practise he has had lately in Europe. Phil kept rolling along with his standard winged models, but it will be interesting to see him fly his new 'Shagalot' wings.


Terry Bond ponders the weather. Forecasters Graham Maynard and Roy Summersby discuss umbrellas.

F1C seemed as though the models were on rails; Roy and Terry putting up one max after another. Roy the master, was showing Terry the way with Roy climbing not quite as high. (This could be a slightly biased opinion; like I can pee further than you!) Both maxed out and decided on a seven minute fly off but thought that early Sunday would be better as the wind was gusting fairly solidly. The wind on the Sunday was gusting from 6 to 8m/sec so we declared a draw to be settled later in the war.

Sunday was F1B day but the initial field of seven or so fliers was reduced to a small challenge between Terry and Albert. It was agreed that a three minute flight by each of us launched at the same time would be a bit of fun and would also test our models in turbulent air. Both wound and ready to go, Terry away in a flash with Albert launching off wind and immediately rolled downhill into a tripod. Without the slightest hesitation Albert exclaimed; "*I only set mine for two minutes anyway!*" I cunningly produced my radio DT and DT'd. It was still 500 metres away.

There was still a very competitive AFFS OZ diesel comp running and some Fuller models flying in the gusty conditions but never say die, they flew on and on. The AFFS and Fuller day will be covered by others. It was a good weekend and fun I hope, was had by all.

Reporter: Terry Bond .

OPEN RUBBER STATE CHAMPS DALBY 17-09-2011

report by John Lewis

Albert Fathers' Waif angles for the heavens, and an extended holiday. The model was found, several months later, and will be rebuilt.

The event began just before 10am with competitors keen to take advantage of the good conditions while they lasted as a light breeze had sprung up. Having a mid morning start meant there was up and down air to contend with and many soon discovered that launching in the wrong air would ensure a sub max score. George was away first to score a convincing max but the model disappeared into the smoke haze around 4 minutes.

This year we had a smooth flat surface of dry black soil for a kilometre with a very light covering of cotton plant remains after that so finding models on the flat landscape was relatively simple and George returned a while later model in hand. We had nine entries in Open Rubber this year taking advantage of the good weather and flying venue. Surprisingly though only George and Mark (who seemed to work as a team picking the air) were able to max the first round in what appeared good conditions. Graham had a nice looking model that crashed after launch breaking a prop blade, but everyone else seemed to get away OK.

In some cases it was lack of practice/trimming but mainly tricky air or impatience. Flight two also produced only two maxes with Albert and Malcolm being the recipients. George suffered from an incorrectly set timer to spoil his chances after getting away in convincing style. Adrian only recorded one flight score so I assume he lost or damaged his model on that flight. By the third and final flight of the event those remaining had either sorted out their trimming or worked out the conditions with everyone maxing this flight except John who remained maxless for the day.

After a long winter it was obvious summer had arrived with the temperature around 28 degrees so it was a welcome relief to sit down in the shade of the Dalby clubhouse with a hot lunch provided by the wives of some of the Dalby members. After his first round sub max Albert maxed out to win the event again this year, Des flying his Lsq model was second and George was left in 3rd place lamenting his timer setting mistake in round 2.

Name	Flight 1	Flight 2	Flight 3	Total
Albert Fathers	163	180	180	523
Des Slattery	163	175	180	518
George Baynes	180	126	180	486
Mark Armour	180	123	180	483
Malcolm Campbell	116	180	180	476
John Lewis	121	158	154	433
Ron Munden	141	63	180	384
Adrian Bryant	133	-	-	133
Graham Maynard	-	-	-	-

I'm sure the timer was working? It wasn't!

Dalby offers a pleasant setup for F/F modellers

Autumn in Argentina

by Paul Lagan … written 25 Jun 2011

With a big year ahead, this is sound advice. Ed

Introduction. As most FFONZ Newz readers will already know, there was a very small NZ team at the 2011 FF World Champs. Roger Morrell, presently residing in California, qualified in F1B by virtue of being a NZ citizen and recording some excellent 2010 World Cup (and Omarama) scores and Chris Murphy and I were the only two resident NZers who had qualified and who wanted to go. My decision was helped by having won $1500 of travel in a School raffle! I flew both F1A and F1B but, as previously stated, I put most of my efforts into F1B. Chris flew F1A and had a wide range of models to choose from, including three electronic timer equipped which he had recently acquired. We were very ably managed by Roger's wife Lindy who as "Queen Manager" impressed me and many others with her consistency and application.

I won't go into a blow-by-blow account of who did what as it is easy nowadays to access result data on line, and both Roger and I sent regular "Letters from Argentina" back by email to all those FFers in NZ (and elsewhere) who might have been interested. Similarly, I won't comment or criticise the organisation and conduct of the event save to record that a FFWC is a huge undertaking and that I personally was very impressed with the dedication and cooperation of those in control. Since several weeks have passed since the Champs, what I will do here is to convey some of my lasting impressions of the event and of the current state of the art in an attempt to give readers who may aspire to fly at future World Champs some clues toward getting into the "Possibles" group.

Probables and Possibles... It is now apparent to me that there are four groupings of flyers who go to a World Champs and that the top three groupings really have about as much to do with the hardware (models) they use, as do champion golfer's clubs or Tour d'France rider's bikes. The top group ("Probables") are those who have the skills, experience and practice to regularly make it through to the final fly-off rounds and who have as much chance as others in their group of making a winning flight. This group generally are confident of the models they use and tend not to follow whims or trends – they have a lot of experience with what they have and usually see little need to change or experiment. Notwithstanding this "confidence" these flyers are still very perceptive and should there be a dramatic and obvious development they can adapt quickly – evidence the huge swing to LDA models in F1A. It is rare for a NZer to get into that Probables group – mainly because we simply don't fly often enough competition at top level but also because of a mistaken belief that to get up to top level we need to buy or build the "latest" and subsequently are forever chasing an elusive dream. This is compounded by not really knowing just what sort of performance is required from our models to be near the top but more so by not being on field and comparing ourselves with "Probables".

However, Free Flight is a great sport because the Probables don't always win. There is always a chance that the aces will collapse/get bad air/be at the wrong end of the line/etc. and that someone who is having the day of his life will rise to the top – a "Possible". It is this zone that NZers could reasonably hope to achieve. To be there, again, does not require the very latest hardware but it does firstly require ability to string together 7 maxes in normal FF contest air. And I don't mean calm frosty air – big contests are never flown in those conditions. One needs to get out and fly/practice in early, late and midday summer air and know how to max in wide ranging conditions. One needs to develop the ability to see other models in good air and/or to use sensing devices to pick good air – particularly in "doldrum" periods. Secondarily, one needs at least one model that one can confidently fly in a summer evening/morning fly-off. The "rounds" model(s) and the fly-off model(s) can be the sane basic shape etc but how they are trimmed and how they are flown need two very different approaches. If one cannot achieve those critetria then one slips down into Category 3 - the "Unlikelys". And there, I'm afraid, is where many NZers linger.

However, it could be worse ! There is another small group called the "Nevers" who really don't fly FAI FF much at all and who may fluke qualification on a team and/or who really know that they have no chance but who just go along for the ride. With our "qualification" scores here in NZ it is relatively easy

for a "Never" to qualify – after all if a flyer can only achieve 1000 secs in a 7-round contest in a given year then he is certainly way, way below the standard of 95% of flyers at a World Champs. What is unfortunate is that many of the "Nevers" and most of the "Unlikelys" think that if they qualify then all they need to do is buy the latest offering from a Ukranian "factory" and they will bridge the performance gap. Dream on!

Back to Argentina... Enough soap boxing! Some positive thoughts from the WC that may help more NZers get into the "zone". There were many windy periods at Embalse in practice days and at the World Cup warm-up event. I was very impressed at how well many flyers (and their models) handled the wind – particularly in glider. The lesson here is that as we don't get to fly many contests in the wind, we need to practice and trim for such conditions. With short DTs (or RDT) it is possible to fly in the wind on quite small fields. We were often flying in conditions that in NZ would have caused most to pack up. Fortunately for us it was only windy for a few rounds of F1A and F1B in the World Champs proper as we were retrieving our own models on foot.

Thermal detection systems were mostly secondary to careful observation of what everyone else was doing and in all events there were some really nasty periods in the afternoon when models launched at the same time went into widely different air. However, in rubber (and power) one does need to have some form of temperature/drift measuring device to look at if only to relieve the boredom when waiting for that thermal!

It is now apparent that, in all three classes, the climb bench mark is around 100 metres. There may only be a few who could get that sort of altitude in glider (though there were several who could get over 90 metres) but in power and rubber it is commonplace amongst the "Probables" (and some "Possibles"). There are several ways of measuring climb altitude – the best being one of the tiny on-board altimeters. Some of these can be easily interchanged between models so if you want to know what altitude you are reaching borrow an altimeter fro a friend.

In Wakefield, most models flown nowadays are up around 1.7m span – wind and calm. In glider, very few are extreme span, even in that calm. The high AR gliders are harder to set up for a really hard launch and it seems that with LDA sections the middle-size gliders of old are about the limit in span now for a really good fast launch. In power, the jury is still out on the folder vs. flapper debate though the folders do get higher. Many are using fixed wing models in power to good effect.

Fine trim is very important at the top. Most of the aces are tweaking their models all the time and in still conditions (we didn't get a lot of this) a very wide glide circle is preferred – something about 90 secs a circle is not unusual in rubber and power and 60 secs in glider. Again, the aces know from experience how to dial in (literally) trim changes to suit conditions. Just how many turns of that screw or just how many grams of weight to shift to convert a model from optimum still to optimum rough air trim have been learned and recorded or memorised.

Finally, it is apparent that those who do best at the ultimate fly-offs are those who still have some "gas in the tank" after a long hard day in the field. With a big, supportive team and motorised retrieval it is possible for a normal person to remain reasonably fit and alert from dawn to dusk but in most NZ teams at a World Champs these days it's really hard to keep "up" for a whole day. Not only does one need to know how to pace oneself. One also must be physically fit and rested. The fit bit can only be achieved by training well before the event (running, walking, biking) and the rested bit requires that plenty of time is allowed between arrival in the overseas venue and the World Champs themselves. It is also very important to have good domestic arrangements at the event (good sleeping, eating and opportunity for time out) or else extreme tiredness can creep up on one.

ED: Excellent advice from one who knows.

MAXMEN 2012

Fab Feb Flash

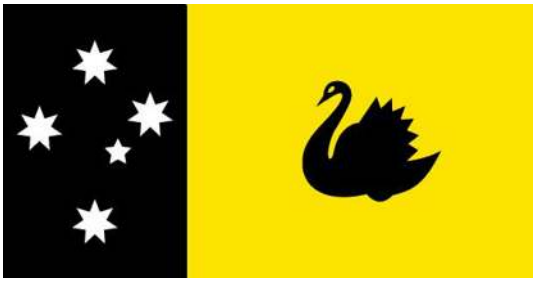
We have already had questions about the February dates for Lost Hills. Sounds like we are going to experience a Viking invasion. While not processed by the FAI yet the intent is all 3 events will have World Cup Status.

Sat	Feb 11	Ike - Kiwi WCup F1ABCP
Sun	Feb 12	Ike-Kiwi WCUp F1Q and Minis
Mon	Feb 13	Ike Kiwi WCup F1E
Tue	Feb 14	Pan Am Canada Wcup
Wed	Feb 15	Pan Am reserve
Thur	Feb 16	CalCup F1E. MaxMen registration
Fri	Feb 17	MaxMen F1A
Sat	Feb 18	MaxMen F1BCP- AmCup Banquet
Sun	Feb 19	MaxMen Minis
Mon	Feb 20	MaxMen reserve

AFFS ACCOMMODATION

Please Note

Those wishing to stay at the Camellia Motel Narrandera during the Southern Cross Cup and the Australian Free Flight champs April 2nd to April 8th 2012. To avoid the confusion that happened last year we have booked out the entire motel. This booking will stay in place till 10th January. If you wish to stay there you must book in saying that you are with the model flyers as well as mentioning the name Roy Summersby. After the 10th January the Motel will let rooms out to the general public. And the Country Roads Motel will also fill fast. Act soon to ensure your accommodation.



By now you will have probably seen the proposed Program of Events for the **Nationals** being held in WA from 12 – 20 April, 2012.

I am writing to let you know that we have also scheduled a F1A/B/C Team Trials for the weekend immediately following the Nationals, i.e. 21-22 April. While this has still to be ratified by the MAAA as part of the 2012 Team Trials process, we hope that it might be appealing to those considering the cost of travel to and from the West, with the opportunity to fly in two team selection events.

For those not familiar with the location of the free flight field at Meckering, it is about 2 hours drive roughly east of Perth. There is accommodation available in the nearby towns of Northam and York (both about 20 minutes from the field) and some farm stay accommodation nearer to the field, though the Homestead Red Farm adjacent to the field is now fully booked. There will hopefully be more information regarding accommodation in the Nationals entry form when it comes out, but I would be happy to try to help with any queries and suggest that you let me know as soon as possible if you intend coming over.

VALE William Laurence Palmer

During August the ultimate thermal lifted Jim off to the great flying field in the sky. Jim, a life member of the famous old Lismore Eagles was one of the dwindling number of Australia's pre war aeromodellers.

Jim was apprenticed to the Motor trade. He studied the electric and refrigeration engineering by correspondence from the Melbourne technical college and passed both subjects in 1946. Xmas 1936, the Habib brothers (who had a model shop in Lismore) were flying a couple of T- D coupes powered by Baby Cyclone engines, gifts from an aunty in the USA. Jim reckoned that power was the in thing. In the 1930's money was scares with the depression and all that.

By the time enough money was hoarded to buy an engine, war was declared and model flying was banned in Australia. For reasons unknown. After the war Jim became so wrapped up in aeromodelling he went into it full time, taking over The North Coast Hobby centre from Bob Fowler in 1952 .The early post years saw great changes and improvements in the modeling trade.

Jim was early into Radio. He produced and marketed his own line of radio gear. Jim competed at contests through N.S.W and Queensland. At the N.S.W. champs in 1956 his power model was said to be the fasted climbing model seen in N.SW, at that time. His success with FU- Bar's and Civy Boy's was acknowledged by his fellow competitors. After a bout with cancer Jim went over to radio as he could fly from his own property, over their herd of Murray Grey cattle.

Jim's interest in prewar petrol engines kept him in touch with like modelers worldwide. Just before Gordon Buford died we spent a VINTAGE day in Jim's shed running pre war Sparkies. When Jim retired he passed The North Coast Hobby Centre onto his son Brian and it is now owned by another son Dallas.

Jim's retirement was spent with his wife Veronica at Shoppe one 17, Lismore. "A man in his life plays many parts. " Jim's keen insight of world and local affairs kept him well primed for robust discussions on any problem. Jim was a hungry reader, at home with all the great thinkers and doers from the past. Amongst all this highbrow outpourings Jim always found a spot and could quote from Rudyard Kipling's "F" and "A message to Garcia".

Just before Jim died he said, "The earth provides you with a living, it sustains you and in the end claims you." "Such is life"

Adrian Bryant

ED: *Jim's son Dallas passed away on 19 November 2011.*

From the Free Flight Technical Committee (FFTC)

Graham Maynard

It is hoped to prepare a column on a semi regular basis for FFDU to inform members of what is going on within the FFTC.

The FFTC is an MAAA subcommittee with members nominated by each state body to represent the views of free flight fliers. It deals with FF rules within the MAAA rulebook, World Championship and TransTasman team selection, conducted in association with the AFFS, the free flight Special Interest Group (SIG). The FFTC also acts as a conduit between Australian freeflighters and the MAAA. The Chairman of the FFTC has membership of the equivalent CIAM committee.

Present members are:

Graham Maynard	*QLD (Chairman)*
Phil Mitchell	*NSW*
Vin Morgan	*VIC*
Paul Rossiter	*WA*

There are vacancies for members from Tasmania and South Australia. It is desirable that members from those states are represented and nominations through state bodies to the MAAA are most welcome.

An attempt to have the President of AFFS an ex officio member of the FFTC to ensure good communications has been rejected by the MAAA Executive. We will ensure that good communications between FFTC and AFFS are maintained. There are no formal meetings of the FFTC but there is regular phone and email contact to discuss issues. The FFTC publishes an annual report in the MAAA AGM minutes.

Recent Issues

CONTEST JURY

The importance of event organisers appointing a jury for FAI team selection events is emphasised. The jury, composed where possible of experienced fliers, not flying in that particular category, are able to offer guidance to CDs on matters, such as, contest suspension because of weather conditions, interpretation of rules and settlement of disputes or protests which may rarely happen in free flight events.

RESOLUTION ON TIES FOR WC TEAM PLACES

The format of the team selection process has been described in the past in FFDU and following that format it is possible for there to be ties at the top of the order of merit for team places. At the most recent AFFS AGM a method of tie resolution was adopted. A flier's best three scores determine their place in the order of merit. Ties are resolved by comparing flier's fourth best score obtained in a selection event in Australia or at an open overseas event.

RULE CHANGE FOR VINTAGE EVENTS UNDER CONSIDERATION

The FFTC is considering an alteration to the model's proof of age rule for Vintage events.

"Proof of Age

Proof of age must be provided by the contestant, for example, date on a published plan, construction article, three view, or advertisement in the case of a kit, **or by a plan or a three view which gives the date of a model and was published within two years of that date.**

Proof of construction must also be provided by the contestants, that is, a published plan, three view or kit plan showing constructional details."

The bold section is the proposed change.
The preferred option for contest eligibility would be a list of approved models with specific dates. Unfortunately previous attempts to produce such a list have not achieved the aim.

TEAM SELECTION PERIOD FOR 2013 WC in FRANCE

The team selection process for the next World Championships to be held in France in 2013 extends from the first of Dec this year till the end of Nov 2012 Events that count are the State Championship as programmed, the WA Nationals and the Southern Cross and AFFS events at Easter 2012. Western Australia has an additional Team Trial event following the Nationals. Queensland will apply for an additional Team Trial event in October 2012. The Free Flight Event Program for 2012 should appear elsewhere in this Newsletter. Team aspirants may also include a score from a single open international event in their total of scores from three events.

TEAM SELECTION EVENT FOR 2012 F1D WORLD CHAMPIONSHIPS in SERBIA

A one off trial to select a team for the F1D World Championships to be held in Serbia in 2012 will be held in conjunction with the Victorian State indoor Championships on Dec 18, 2011 at Manningham Indoor Sports Centre, Springvale Rd, Donvale, Victoria. The aim is to select a team of three members.
For further information contact Darien Cassidy 0398990322 or email< joybdes1@bigpond.com>

MAAA RULES

In 2013 MAAA will hold its Rules conference, an event that occurs every three years.
All proposed rule changes need time for wide consultation so it is appropriate that should anyone like to propose changes to the current MAAA Rulebook they should start the process within the next three to six months. I would suggest that as a first step discuss your proposal with your local FFTC member. It is helpful if the reason for the rule change is clearly identified and how the proposed change addresses the issue. Any collateral issues should be identified.

If you would like to comment on anything in this column please contact your FFTC member as listed above or if you wish contact Graham Maynard at maynag@optusnet.com.au

Gary Odgers' Phoenix looks magnificent, and quite rugged too.

Gary flew it at the pommie nats – which were something of a fiasco because it was very windy and the line was set up upwind of parked cars. Of 11 entries only 2 qualified. Gary didn't get a 20 second flight because although the Phoenix flew well Gary used very little fuel in order to avoid the cars. As a result he had flights of 15 or 18. The guy who won put in plenty of fuel for a qualifying flight and hit and damaged car and model. Gary had a good time regardless.

NOT JUST AN ILLUSION

A build by Roy Summersby

BIG SCALE

It's not an illusion. It's real and it's big. Roy likes building big scale models.

About 12 months ago I found a plan of a small scale rubber model; it was of a 32" span Russian ground attack aircraft, the Ilyushin IL-2, commonly called Stormovic, The Flying Tank, or The Flying Infantryman. The model looked an easy build, a bit like my ME109F, as the fuselage is just a box with formers added top and bottom and a few stringers down the sides. It also has a nice tapered wing and stab which I like, as well as a generous moment arm. I have two rubber WW2 scale jobs in the stable; I thought I would go electric with this model, as it can be a mate for my WW1 FE8 pusher. It had to be brought up to 1/8 scale to fit in with the Richmond WW2 clique so it was off to the copy shop once again. Naturally I had given them the percentage the plan had to be enlarged but when I unrolled my new proposed toy plane on the floor I was stunned by the size. The wing span is only 1.8 meters and my F1Cs are around 2.7. So really the Il-2 is not that big. But what I was forgetting was that the chord of an F1C is only 140mm, the chord of the Il-2, I was about to build is 450mm at the wing root, and it has a fuselage that you can put your arm inside. This was going to be a big model.

What the heck, Confucius says that, "The man who dies with the most balsa hasn't been building fast enough" so I sharpened up my knife, and started into my balsa stock. The model is coming along very nicely with all the timber work completed. No doubt from here on many problems will arise like the canopy, undercarriage etc, etc. I needed more details on this simple model, so once again I went to the specialist book shop in Parramatta. Yes sir I have an excellent book on the Il-2. It's hard cover and printed on very good quality paper, 35mm thick and it's only $110. Who said F1C was expensive? This scale modelling is right up there. Again what the heck, my body is starting to wear, and bearing in mind what Confucius said, I might as well spend some of the kid's inheritance.

A few notes on the construction so far. After experiencing increasing dihedral problems with the ME109, I have changed that to tongue and box knock off system. This is much more positive so I have carried it through to the Il-2. The wing spars are made from American Bass Venetian blind slats, which were heading for the tip. This timber is lovely straight grained and better than any spruce I could find. Just a little sawing and sanding and I had perfect spars. With the stabilizer being in the centre of the fuselage, and wanting it to be removable for transport, I adopted what I have called, the three tube system. Tube one is glued in the fuselage, this is the largest. Tube two is virtually a spar in the port stab which fits into the tube the full width of the fuse. Tube three is in the starboard stab and fits into the

Knock off wings should cure the dihedral problem Roy had with recent scale biggies

Plug in tailplane and adjustable incidence helps with transport and trimming

port tube. So now I had a full flying stab held in one place, a rear fixing and adjustment for incidence was required. This was achieved with a wire joiner in the trailing edge passing from one stab to the other, through a small piece of brass tube soldered to the head of a bolt. The bolt screws through a nut, soldered into a brass tube which goes into the fuse. This now gave me a stab I could change the incidence, on as well as keeping it in place. The fin is full flying also, and is held in the fuse with more aluminium tube (friction fit) and fixed to the fuse at the rear making it adjustable also.

To make the undercarriage look something like the real thing, I made up the wire frame then placed aluminium tube over the legs. The result was quite good and using foam wheels with ply hubs kept the weight down and gave a realistic look. The rest

The wheels look great on this model, and they're 100 mm (4 inches) in diameter!

of the models construction is fairly basic. I have made the underside of the nose removable for access to the motor, timer and battery.

The history of the Il-2 is quite fascinating and I will copy some parts from the papers I have collected for my simple little project.

The Ilyushin Il-2 was a ground attack aircraft in the Second World War produced by the Soviet Union in very large numbers. In combination with its successor, the Il-10, a total of 42,330 were built making it the single most produced military aircraft design in all aviation history. It is regarded as the best ground attack aircraft of WW2. It was a

prominent aircraft for tank killing with its accuracy in dive bombing and its 37mm guns penetrating the thin back armour of the German Tanks. Only 249 had been built by the time Nazi Germany invaded the Soviet Union on 22nd June 1941. The aircraft factories had to be moved from Moscow to east of the Ural Mountains before major production could get under way. The production aircraft passed State Acceptance Trials in March 1941 and deliveries to operational units commenced in May 1941.

General characteristics:

Crew:	Two, pilot and rear gunner		
Length:	11.6 m (38ft 1")	Wing span:	14.6 m (47ft 1")
Height:	4.4 m (13ft 9")	Wing area:	38.5 m2 (414 sq ft)
Power plant:	1 x Mikulin AM-38F	Liquid cooled V12	1720hp

Roy has a large model room. Not any more if he keeps blowing up plans!

Floor tiles are 300 mm (12 inch)!

VINTAGE

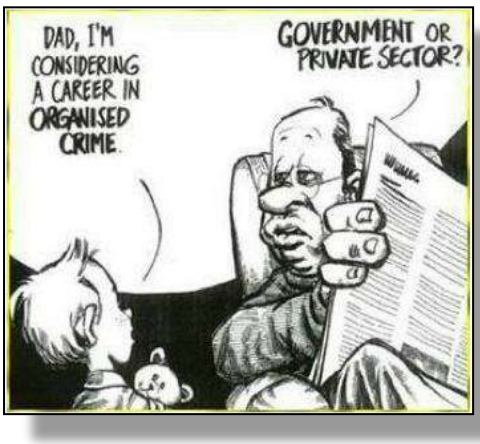
Dave Posner's *DREAM WEAVER* is published in the April 1957 Aeromodeller magazine. If you carefully study the plan and the photo of the model they are the same in the article.

In August 1956 Aeromodeller magazine on page 405 at the team trials in June 1956 for a place in the British team the very same model is being held by Dave with J.O'D looking on.

Dave states in the April '57 article the model he built and used for the trails in 1956 was V1, the one pictured in Aug.'56, that he later numbered 1X. As will be seen 1X is the number on the plan shown in April '57, and the model pictured in 1956 is as per the plan and photo in 1957, so should this model be legal for our now pre 1957 Vintage Power?

Another power model has come to light also. The model on the cover of February 1953 Aeromodeller magazine. Looks interesting, as does the other model there too. More on that later.

Regards, Howard Gostelow



5 rounds of F1G is hard work! (BFFS lady flier)

Ukraine / Crimea 2011

Roy Summersby

I thought I was over my tripping to Ukraine, as I have been there six times, but while in Lost Hills last February, Victor Stamov was telling us how there were to be three world cup events held over a ten day period in the Crimea. This was to be held on a new field that Artem Babenko had found near his new home town. Artem now lives at Berehove which is a holiday town on the Black Sea, where the water is, at least that time of the year clean and warm. Brian Van Nest said he was going, and I must admit I didn't need much pushing to say I would be there also.

So how does one get to Crimea? Having friends in Malta, the Flying Seifert's, I decided to fly Emirates to Dubai, then on to Malta for a short stay, and hopefully get a few dives in on their WW11 wrecks with Phillip and Tristan. For the first time in all of my air travels things went wrong. I boarded one of the new A380 airbuses in Sydney only to sit there for two hours, with the captain saying every now and again that there is a "slight delay," and we should be away in 20 minutes. The plane had only just flown in from New Zealand, so some of the bits must have been working, in the end the captain announced that there was a computer problem with the emergency lighting, and we were going to stay the night in Sydney. A logistics problem for them finding beds in Sydney for 600 passengers, we were unloaded along with all baggage, and sent off to various hotels around Sydney to return at 9.00am the next day.

We left for Dubai about midday instead of 7.00pm, which meant no connection to Malta, so it was to be a night in a Dubai hotel for me, then off to Malta one day late.

Malta is about 37kms long and 12 kms wide, and along with the island of Gozo are the main islands in the Maltese archipelago. Gozo is an island of legends, and it hosts the oldest surviving man made structure in the world the Megalithic Temples of Ggantija. The temples bear witness to the island's habitation for at least 1000 years before the famous Egyptian pyramids of Giza were constructed, so there's plenty of history on what became known as the island fortress in WW11.

Now I won't bore you with diving, but even with Phillip working in a dive shop, and all the plastic cards that I have to say I can swim, as well as having more than 1000 dives,. I still had to have a WOFTAM dive (waste of f--king time and money) on what they call the house reef, lots of ribbon weed and nothing else. Now, in the afternoon I would be allowed to dive the HMS Maori. This ship, a British Destroyer was involved in the shadowing of the Bismark in May 1941. Malta is a very interesting place to visit and its history goes back 1000s of years. Part of the Seiferts home is 300 years old and was used by the British in WW 2 as a radar station, it is situated quite high up and in line with Sicily, where the German attacks were coming from. Enough on diving and Malta you really want to know about model flying in Crimea.

The competitions were the Latvia, Estonia and Lithuania cups, and called 2011 Free Flight Holiday, organised by the Ukrainians. Artem had done all the organising as far as the farmer, catering, presentation nights, toilets etc, etc went. The CD problems were left to Victor, and registration book work was done by the ladies. The flying field is BIG, Artem said six ks in any direction and not a tree or fence to be seen. The grass had been cut and picked up over a large area, which kept the F1A flyers very happy. The main problem with the field is that it is between the Black Sea and the Sea of Azov, both very large areas of water with nothing to stop wind from any direction.

Don't mess with these chicks. Registration at the field.

Flying started late by our standards, 9.00am with the extended max, round time 55 min then a 15min break, which gave those on foot, nearly everyone, plenty of time for the next round. Only five rounds were flown with a seven minute fly off later in the day. The jury was different for the three competitions, and was utilized by the organizers, once for wind speed and some timing issues. Overall excellent organization by those in charge. Hot lunch and all types of drinks were on sale at very low prices in the big tent, along with tables and chairs. The hotels that Artyem/Victor had arranged were also very cheap, something like 12 dollars a night and of good

Field HQ

Lunch on the field

standard, the holiday season had just finished in the tourist town of Berehove.

The actual flying was not as easy as one would think, and a lot of the big names dropped flights as the day warmed and the wind increased, which you would have seen when reading the results in SCAT. My excuses, and I am sticking to them is that the air from the Black Sea hits the cliff face, then rolls along the grass plain much like the air in Omarama New Zealand. You launch when you think the air is going up, only to find that you are on the wrong side of whatever and you are coming down in sink that has you on the ground in 2 min.

Numbers were big in all the competitions for example 1st comp F1A 55, F1B 39, F1C 24, twelve different countries were represented. Will I be back next year, who knows but life is too short to sit at home.

The Big Men of Free Flight

Slava F1C flyer

Andrey Burdov (21) flew an F1B flapper

F1B flapper

Andrey's helper poses with model

***President's Report**, continued from page 3*

Next year is going to be very busy as a World Champs Trials year, with World Cup events in New Zealand and at Narrandera, the Trans Tasman event at Narrandera, the Nationals in WA, the regular state champs across the country, and possible two extra team trial events, plus any number of international World Cup events for those keen to travel. The only downside to all this flying is that the bulk of the F1A, B and C occurs from mid February (MaxMen in the USA) to the end of April (WA Nats, and extra team trial), so busy busy for two and a bit months for those chasing points. Thankfully the flying schedule for non World champs categories is somewhat more spread across the year so plenty of flying to be had by all.

Finally I would like to announce that I will not be nominating for president next year. I have been in the position for three years and it is time to let someone new step into the position. All positions on the committee are open for nominations each year, but we rarely get new nominees for positions. Please think about the opportunity to put your hand up to be involved in the running of the AFFS. We are a small organisation, and with us focused on just the Narrandera event each year the demands on the office bearers (especially the president) are not onerous or excessive.

Well time to sign off for the year, I would like to wish everyone a safe and Merry Christmas, and a Happy New year. Thank you to all who have contributed for the year, either on the field or to FFDU. Malcolm has as ever done a great job at putting together FFDU with the contributions of many during the year, please keep them coming next year.

Till then, happy thermals and regards, Ted Burfein

Friday 16th March	18:00hrs to 20:00hrs registration, processing.
Saturday 17th March	Registration, Processing, possible Trans Tasman Free Flight Scale Competition.
Sunday 18th	March 07:30 to 1400: Kotuku Cup F1G, H, J, P.30, Percentage Combined, HLG, TLG, CLG. 5x1 hour rounds for F1G, H, J. Flyoffs to follow.
Monday 19th March	07:30 start: Kotuku Cup F1A. 1 hour rounds. Flyoffs to follow.
Tuesday 20th March	07:30 start: Kotuku Cup F1B, F1C. 1 hour rounds. Flyoffs to follow.
Wednesday 21st March	Spare Day, rest Day, Tourist day.
Thursday 22nd March	07:30 start Omarama Cup F1A. 1 hour rounds Flyoffs to follow.
Friday 23rd March	07:30 start Omarama Cup F1B, F1C. 1 hour rounds. Flyoffs to follow.
Saturday 24th March	07:30 to 12.30 Mini combined, Kiwi Power, HLG, DLG, CLG unlimited flyoff.
	1930 Dinner and Prizegiving.
Sunday25th March	any unfinished flyoffs and dispersal.

Please Note: Start times may be delayed due to weather or unexpected events

KNOW YOUR MILLS

by Jon Fletcher

REBUILDING MILLS .75s

The Russian sourced Doonside Mills LOOK very good, However they are let down by the wrong internal engineering as indeed the Russian copy of the Elfin 1.49 is. I hear from others that Ivor was very disappointed with the Russian quality and went as far as he could to rectify the ensuing problems. Remember Ivor is not an Engineer but an English School teacher by background so it would be unreasonable to expect him to have the skills of those who have been designing and making model aero engines for years.

Addendum:

The Mills to avoid (at all costs?) are the Aurora Mills made in India, the Russian made Mills and the CS (Chinese made) Boddington Mills.. Also the second series Doonside Mills which were simply the Russian made ones boxed up. You can tell a genuine Doonside Mills as they all have "Taipan Aust" stamped inside the back plate. I know some people have had some success with the inferior copy Mills but a large number have had much heartache with conrods hitting the crankcase, conrods breaking, pistons rapidly wearing out, contra pistons backing off or jammed solid, crankshafts breaking, stripped threads in the spinner nuts, sloppy and leaking mainshaft bearings, port machining wildly out and hence timing and many more faults.

All genuine Mills .75's had dichromated magnesium crankcases. Serial numbers are always stamped on top of the lugs. Read by holding the spinner nut in the right hand and read left to right top to bottom. Always a five digit number starting from around 30,000 running up to about 90,000. Genuine Mills .75's never had anodised aluminium parts which Aurora Mills have and had a pressure diecast magnesium back plate with integrally cast webs. "Mills England' cast into the back plate face. Aurora Mills and Russian Mills back plates are machined natural aluminium and slotted for a rectangular bar style wrench.

Genuine Mills .75's came in two variants. The S version with air bleed cut out and the P version without. The S and P venturi assemblies are quite different though use a common needle and

spring and tank assy. The S venturi body is a single piece extensively machined, the P venturi is made from two pieces through drilled on assy. Mills .75 Mk I's had either a tear drop style tank or thumbnail style. Early ones were threaded into the aluminium tank top so they could be unscrewed for cleaning. Of all the replicas just Irvine chose to adopt this system. All later Mk I's and all Mk II's used a pressed alumnium tank top with two fold over tabs to retain the tank bowl. Early tanks tops were thinner than the later ones.

The pressed sheet aluminium tank top was one weak point of the Mills .75 design. They were retained by a steel fuel entry nipple on the S type venturi, but on the P type by the screw in needle valve housing and fuel pick up piece. Some people try and turn the hex. of this piece to tighten the loose tank top and promptly start to close off the venturi bore.

To rectify a loose P type tank top I start by marking the underside of the venturi slightly as the needle housing can be screwed in from either side, unscrew it using the correct size tube/box spanner (have seen at least two hex. sizes) then machine a suite of thin aluminium spacers of varying thicknesses and try them for fit between the tank top and underside of the venturi. Allow about 60 degrees of rotation to fully tighten the needle body is about right. Next hold the venturi body in a bench vice with wooden jaw protectors and tighten just enough to stop it moving. Get a 3mm (0.118") and a 1/8" drill then using the correct tube/box spanner tighten the needle body to lightly clamp up the tank top and set it in the right position - fuel filler hole on the port side. Then fully tighten the needle body and look down the venturi as you do this.

When the induction hole appears to be approaching the in line position try the 3mm drill shank for fit. As you reach the correct position eventually the 1/8" drill shank will just fit through. To retain the tank bowl do not attempt to turn over the two tabs 90 degrees, just 45 degrees will do. Note that there are two flats machined in the flange of the tank bowl where the tabs fit.

Use a piece of hard wood to bend these tabs.

Jon Fletcher

SOME HINTS FOR SOFT SOLDERING METALS

by Stan Hinds

As the descendant of generations of sheet metal workers – I'm the drop-out - perhaps I could offer George Car a few tips on soft soldering (FFDU, Spring 2011).

He doesn't mention what flux he was using. If it was cored solder I'm not surprised at his problem. Electrical cored solder is fine for electrical work but the other cored solder 'for metals' – usually 'no lead' – is rubbish in my opinion. I tried it once and I see I've written on the pack 'eventually OK with killed spirits'.

Killed spirits is by far the best flux for metals. It is called 'Baker's Fluid' in the hardware shops and is hydrochloric acid 'killed' with zinc, so it is an acidic solution of zinc chloride. Always use eye protection when using it because the hot iron makes it spit.

So the method is to scrape the job thoroughly – nice bright scratches- put on some spirits with a stick, dip the tip of the iron in the spirit to clean it (not always necessary if the iron has been previously tinned with iron), touch the hot iron to the job to heat it, and add solder to the iron and job junction.

If the solder doesn't flow the job is too cold or is dirty. Having a blob of solder on the iron tip (which has previously been well tinned with solder) frequently helps to get heat to conduct into the job. If dirt is the problem, try one drop of spirits on the hot job – the spirits is spat everywhere. If the solder still won't flow – most unlikely – start all over again. It should flow over the fluxed parts and form a f**ille**t. A big, hot well tinned iron helps a lot.

When finished, wash thoroughly in running water. Spirits will corrode anything it's left on, including your fingers etc. I suspect 'Baker's Fluid' could get banned like lead/tin solder – but it's not as dangerous as battery acid. Some years ago I bought a large stock of good old solder when I heard that only lead-free was going to be allowed.

Apart from strength, the type of solder used with spirits flux doesn't make much difference. Even junk cored solder could be used, although I would melt this on the hot iron to get solidified drops of solder free of junk core flux, and then use this with spirits.

For bigger jobs use a flame to heat the job – even for smaller jobs pencel butane torches are good. For hard soldering a flame (propane) torch is essential – but that's another story!

AND WORDS FROM JON FLETCHER

1. Whilst shopping yesterday did a bit of research on tins for harvesting tinplate for tanks. Noticed that as well as "Nescafe 43" 500 grm tins "International Roast" is also supplied in 500 grm ribless sided tins. Half the price too. Both are paper label wrapped so easy to get to the raw tin plate. The labels adhesive patches left on the can can be removed by applying "Desolvit", a citrus based solvent for removing sticky deposits. Even found that after thinning and applying Scctch 77 to my "Peacemaker" frame to apply the Mylar to, I could clean up the brush and jar with "Desolvit" for further use.

2. Lead less solder formulations are going to be very poor mechanically and unsuitable for soldering tanks unless you use "965" – see below. I have always used 50/50 Plumber's solder available in stick form. Bit stronger than 60/40. No resin cored flux to clean up too. If you ever use resin cored solder the resin flux is easily removed with a 50/50 mixture of acetone and methylated spirits.

3. Found by reading the CIG Industrial Products Reference Manual book that the strongest soft solder they offer is called "965". It has 50 % more tensile strength than the 50/50 solder and melts at a slightly lower temp. Being high in tin content (96.5% tin, 3.5% silver) the bad news is a reel costs over $100! Have a tank that I use on my test stand that I soldered together with this, the original persistently leaked at the seams despite being solder with 50/50 stick solder..

Jon Fletcher

When my doctor asked me if I led an active life, I told him about my day: ''Well, yesterday afternoon, I waded across the edge of a deep lake, barely escaped from a wild pig in the heavy brush, marched along a treacherous trail up and down a mountain, stood in a patch of poison ivy, crawled out of quicksand and only just avoided an aggressive brown snake.''

Inspired by my story, the doctor said, ''You must be an awesome outdoors man!''

''No,'' I replied, ''I'm just a free flight flyer with a faulty timer.''

TAILORING ENGINE CHOKE AREA – OR – GETTING THE LITTLE BUGGER TO BEHAVE

by Maris Dislers

Intro

I had one of those "light bulb above the head" moments the other day when seeking to understand and then solve why the D-C Merlin before me was not behaving as it should. At the desired half-speed setting in the scale model that it powers, its response to needle valve adjustment was poor, running speed wandered about and would change markedly with the nose pointed up or down from horizontal. You could say this engine sucks! Except the problem is that it doesn't..

The theory bit

Going back to "suction" fundamentals, fuel feeds into an engine by atmospheric pressure seeking to fill a partial vacuum inside the engine. This has two components. The piston's upstroke in a two-stroke type acts a vacuum pump. It's not really enough for reliable performance. Enter the venturi effect, where air passing a restriction in the carburettor speeds up, giving a pressure drop at that spot. If the fuel supply point is at there, you get better fuel delivery. This restriction can be a spraybar or a narrower part of the carburettor throat, such as the Cox-style peripheral jet carburettor. Was the Merlin's carburettor geometry correct, I wondered?

I measured Merlin's carburettor along with a bunch of other small diesels. There were wild differences in effective choke area across this lot (on a square millimetre area per cc of swept volume basis). For example, the venerable Mills P.75 has exactly the same choke area as its larger 1.3cc sibling. They both can't be right/optimum! That suggests manufacturers have taken great "production" liberties, or do not really appreciate that choke area is an important factor in good running performance. I was left none the wiser by their example, but I'll stick my neck out and say more than a few are outright wrong for the range of running speeds that could reasonably be expected. Especially smaller engines, where good power output has been at a premium and diesels, which offer a wide range of useful running speeds.

he question of what constitutes the right choke area for an engine running on "suction feed" is not exactly straightforward. It depends on whether you're chasing maximum power, utter running consistency in manoeuvres, or somewhere between. You'd think it was treading old ground, but the few published tables of recommended choke area for a given engine size are not that helpful for a Merlin running at half speed. So I turned to the sophisticates who set up F2B aerobatics engines. They approach the problem by considering the desired operating RPM and then arrive at a choke area for the engine capacity under consideration. That struck me as a sensible way to go.

The "eureka" bit for me was understanding that the velocity of air going through the carburettor has to be right for the application and that no carburettor of fixed choke area can deliver this across the range of possible running speeds, or for all possible user applications. We should be tailoring this to suit our particular needs. I said to myself – paraphrasing a well known phrase – "**it's all about the velocity, stupid!**" So how could I progress down that path?

It seems the desired velocity is pretty much the same irrespective of engine size or carburettor design, so a working value derived from engines that behave well for the intended purpose should be transposable to a poor runner. Making the necessary adjustments to optimise choke area for the desired RPM should make the dud engine also run as expected.

I worked through quite a few known "good" performers leading me to condense things into a simple "rule of thumb" equation which tells you what running speed should be with a given engine setup;

Target operating RPM = C × Effective choke area (in sq. mm.) ÷ Engine swept volume (in cc)

"C" is a constant that varies in value depending on what you want. Here are my recommendations; *see Table 1*

Desired characteristic	Constant
Smooth flight path with minimal change of attitude. Minimal loss of power potential. Tolerable change in RPM with nose up or down.	1800
Good all round performer with some loss of power potential. Copes well with mild manoeuvres or pitch up & down.	3600
Very steady and adjustable running speed with significant loss of power potential.	5000-6000

Table 1

Rearranging the equation allows you to calculate the choke area needed for the desired running speed and characteristics of an engine;

Intended operating RPM × Engine swept volume(in cc) ÷ C = Effective choke area(in sq. mm.)

Using my Merlin as an example, I plan to run it at 6000 RPM and want at least decent behaviour in a FF scale model ;

6,000 x 0.75 ÷1,800 = 2.5 sq. mm.

The ex-factory choke area of **5.7 sq. mm**. is clearly way too big. Almost as big as the 2.5cc Oliver Tiger's! I made up a tubular venturi insert from K&S aluminium tubing and fitted a NVA with fatter spraybar, reducing choke area to 1.8 sq. mm. just to be sure. The result was a drop in peak RPM on that prop (as expected), but at the desired RPM it had much better needle adjustment, consistent running and a reduced tendency to flood. In summary, the modification was a vindication of the equation and a significant gain for minimal work. It worked a treat in the air.

Putting theory into practice

If you've stayed with me so far, you can now assess whether your chosen engine will behave itself at the intended RPM. **It could be that it's not so flattering behaviour so far hasn't been your fault!** If needed, you can make the necessary changes so that you emerge on the flying field with a happy engine and looking like you really have these little lickers sucked.

Step 1 is to measure the carburettor bore and if it has a spraybar through the middle, the width (cross section measurement) of the spraybar or needle (if it has one those, like a Mills) where it passes through the carburettor choke. A vernier calliper will do the job.

Then calculate the effective choke area. Easy with a simple, unobstructed circular hole, where you can use the equation **Area = Pi x radius squared**. That's more difficult with a spraybar, as you need to deduct its effective area within the choke from the total. Approximations using a simple "rectangle" with dimensions of spraybar diameter and carburettor bore diameter (being the part of the spraybar in the carburettor throat) can lead to significant errors when the spraybar takes up a generous portion of the total area. You can end up with an apparently minimal or negative choke area! It's much easier to consult a spreadsheet table such as the one given in the Barton forum:

http://controlline.org.uk/phpBB2/viewtopic.php?t=7919

Change spraybar diameter and extend the table in the spreadsheet if needed.

Step 2 is to estimate running RPM, or do a trial run and measure it. You can now apply these numbers to the first equation and see whether your engine is about right. If not, it's time to make a change for the better. Almost invariably, choke size is larger than necessary, possibly enough to harm running characteristics.

The simplest way to alter venturi choke area (spraybar type) is to block half of the choke with a piece of wood - an old remedy. That's a dramatic change and happens to be about right for the D-C Merlin example, but check you're not going too far by calculating the impact first. Or you can fit a fatter spraybar. For example, using a Brodak 049 NVA (3mm diameter spraybar) in a DC Dart (2.5mm standard spraybar) reduces effective choke area dramatically from 3.15 sq. mm. to 1.72 sq. mm. That will put it in a position to run much more reliably from 6000 RPM and up with no appreciable loss in power output potential.

Engines with Cox-style peripheral jet carburettors and those with a needle seating at the carburettor boundary (like an ED Pennyslot) are more difficult. You really need to replace the carburettor with a smaller size, sleeve the existing one, insert a "wick" or change to a "lighter" propeller to produce the same thrust at higher RPM.

Conclusion

Applying this method will not cure a worn out crankshaft bearing, leaking backplate gasket, sloppy NVA fits and other sources of air leaks. You need to get those basics right first. Of course engines will operate sort of all right with different "numbers". However, I reckon that a tailored carburettor size will give you more control of engine running characteristics at your chosen RPM range and make flying all the more enjoyable. Give it a go!

Maris Dislers

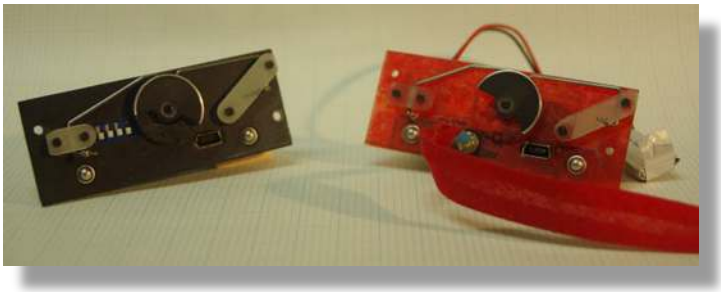
Technical articles. We <u>love</u> technical articles. Please send them in and I will publish them.

DTOX TIMERS - Q SERIES

by Harry Sokol

Yet another electronic timer is available, that in its standard form is an excellent replacement for the ageing and hard to find Seelig style clockwork timers. Its size makes it an almost drop in replacement yet weighing less. Four basic functions are activated by a servo rotating the disk and releasing the arms, and the timer can also control a second servo or ESC.

The Q series is available in two variants as pictured above. Both



units illustrated have only two arms installed, an additional 2 mounting points are provided in the bearing block on the right of the units. The unit on the left incorporates a switch bank which provides the on/off function and selecting a range of pre-programmed DT settings. The unit on the right utilizes a 'pin' as the power switch, a far more obvious indication of its state, but has no provision for switch selectable DT variations.

On field functionality is simple. Turn the unit on, and wait for the red LED to begin flashing its 'hearbeat' once every two seconds. The unit has now initialized and is ready to go. Power is removed from the servo after a few seconds. When ready to launch, depress the right button, the 'trigger', and release the model. As an indication of unit readiness, the heartbeat quickens, flashing twice every second, the servo is powered and the disk moves ready to activate the first function arm. Once the model is released and the timing function has begun, the heartbeat slows to one flash per second … although I really doubt if you'll notice that once the model leaves your hands. Several seconds after the (last) DT function is complete, power is removed from the servo(s) to conserve battery life.

The Q series are fully programmable via the mini socket, which also serves as the charging jack for the single cell LiPo battery. A PalmPilot with the DToxEdit software loaded is required to program the units and all aspects of the timer can be configured via this interface. The latest version of this software is always available for download from the website.

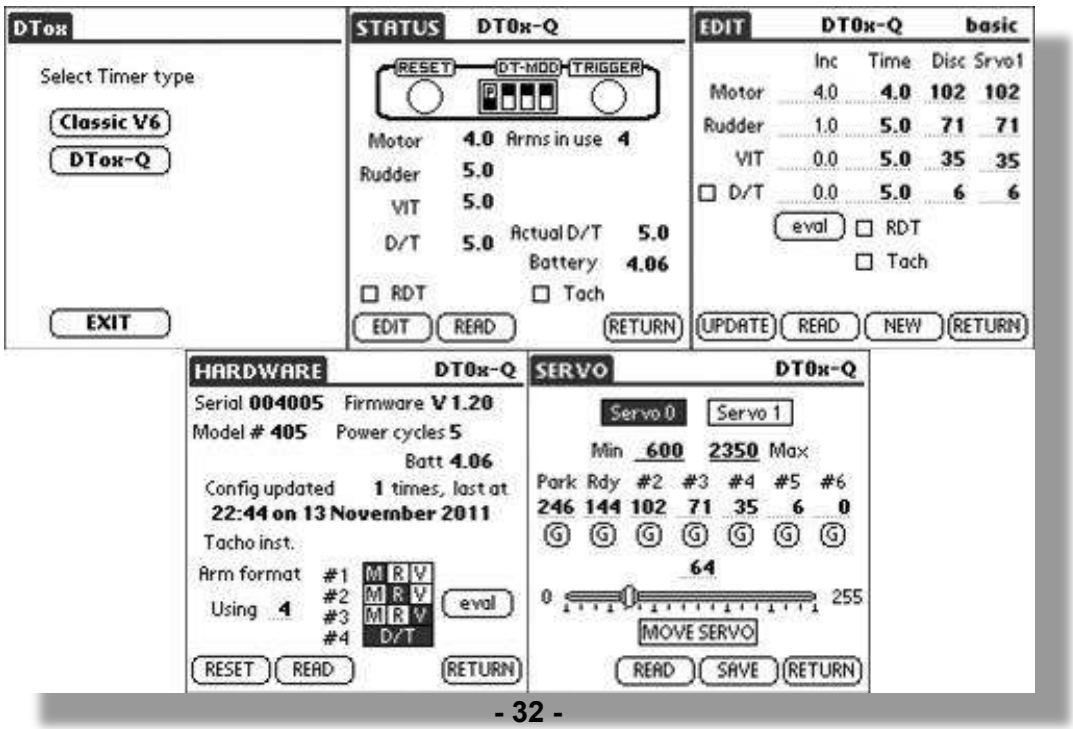
NOTE: Palm pilots up to the M515 and Vx are compatible. Palm devices that don't have RS232 conectivity are NOT suitable. Although the programming and charging plug looks like a mini-USB it does not support USB communications protocols.

Provision for accepting RDT signals is supported and most RDT systems are suitable. The timer examines the RDT input at launch time and if any change is detected during the flight forces the end of the timing cycle and proceeds directly to the DT position on all controlled outputs. It should be noted that when power is removed from the servos it is also removed from the RDT connection.

The Q series of timers also can be built incorporating an onboard optical tachometer and also an altimeter. Data from these additional devices is stored in an onboard EEPROM until recovered via the software.

The altimeter is in limited supply due the manufacturer discontinuing the production of the module and the minimal stockpile maintained. The next revision of the circuit board will incorporate modifications for a more reliably sourced module.

The units are supplied with a single cell 138mAh LiPo battery of the type commonly used in 'parkflier' RTF's . These batteries are readily and cheaply available should it need replacing. A fully charged battery will typically last a whole days flying as the real drain is from the servo, which is only activated when the disk requires rotation. Charging circuitry is included in the units and any power source of 5 volts DC is appropriate and is most easily accomplished with any USB charger fitted with a standard mini-USB plug. The chargers supplied with mobile phones are ideal and easily obtained. Charging from a USB port on a laptop or PC is also suitable.



The battery is protected from both over charging and over discharge. Should the battery be disconnected at any stage the unit may fail to turn on due to the protection circuit activation. It may be necessary to connect a charger for a brief moment to reset the protection circuit.

Below are some of the screens from the configuration utility which indicate most of the configuration options.

DTox 2 here

Full specifications and availability details will appear on the website in the near future. www.4dfx.com.au/Dtox/

AN AUSSIE POEM

The sun was hot already - it was only 8 o'clock
The cocky took off in his Ute, to go and check his stock.
He drove around the paddocks checking wethers, ewes and lambs,
The float valves in the water troughs, the windmills on the dams

He stopped and turned a windmill on to fill a water tank
And saw a ewe down in the dam, a few yards from the bank.
"Typical bloody sheep," he thought, "they've got no common sense,
"They won't go through a gateway but they'll jump a bloody fence."

The ewe was stuck down in the mud, he knew without a doubt
She'd stay there 'til she carked it if he didn't get her out.
But when he reached the water's edge, the startled ewe broke free
And in her haste to get away, began a swimming spree.

He reckoned once her fleece was wet, the weight would drag her down
If he didn't rescue her, the stupid sod would drown.
Her style was unimpressive, her survival chances slim
He saw no other option, he would have to take a swim.

He peeled his shirt and singlet off, his trousers, boots and socks
And as he couldn't stand wet clothes, he also shed his jocks.
He jumped into the water and away that cocky swam
He caught up with her, somewhere near the middle of the dam

The ewe was quite evasive, she kept giving him the slip
He tried to grab her sodden fleece but couldn't get a grip.
At last he got her to the bank and stopped to catch his breath
She showed him little gratitude for saving her from death.

She took off like a Bondi tram around the other side
He swore next time he caught that ewe he'd hang her bloody hide.
Then round and round the dam they ran, although he felt quite puffed
He still thought he could run her down, she must be nearly stuffed.

The local stock rep came along, to pay a call that day.
He knew this bloke was on his own, his wife had gone away,
He didn't really think he'd get fresh scones for morning tea
But neither was he ready for what he was soon to see.

He rubbed his eyes in disbelief at what came into view
For running down the catchment came this frantic-looking ewe.
And on her heels in hot pursuit and wearing not a stitch
The farmer yelling wildly "Come back here, you lousy bitch!"

The stock rep didn't hang around, he took off in his car
The cocky's reputation has been damaged near and far
So bear in mind the Work Safe rule when next you check your flocks
Spot the hazard, assess the risk, and always wear your jocks

For those whose childhood years embraced model aircraft, whether you flew them or simply watched others fly, I am sure you will have warm and fuzzy feelings as you read this childhood yarn about the big boys who flew model planes. It is set in the 1950s, in Queensland. Stafford is a northern suburb of Brisbane and in the 50s it was a real "outer" suburb, with lots of space for fields and cows and planes. This story, written through the eyes of a young boy, is part of a soon to be released book, "*The History of Stafford*", by Dennis Gray. Dennis kindly gave us permission to print this chapter of his book. It's a long chapter, so it will continue over three editions. Sit back, enjoy. Who knows, you may even identify someone in this article. It may even be you!

Malcolm Campbell

The Model Aeroplane Club.

On the weekends, the MAAQ (Model Aeronautical Association of Queensland) came to the horse and cow paddocks to fly their aircraft.

"The Model Aeroplane Club continues on page 33……

Many aircraft had those letters on their wings and some keen blokes had “em embroidered on their shirts or white overalls that a number used to wear to protect their good clothes from fuel stains and glue and dope spills.

The control liners used the horse paddock, because it had the concrete cricket pitch that they used as a runway. The free flighters went next door to Hickey’s cow paddock with its gully which had a nice downhill slope for launching aircraft to get under way without hitting the ground.

Hickeys were dairymen and their huge paddock was most suitable for model aircraft… except for the stumps which damaged a few unfortunate landers. The first settlers had cut down the trees and left the stumps. They were now a bleached, pale grey, deeply cracked shell which could have been easily pushed over by a tractor. Hickeys probably didn’t have a tractor. They had horses which Rodney sometimes walked right over to the dairy to rent for part of a day.

Rodney would ride some hairy, old hack back to my place and we’d climb on the fence to mount it. Off we’d go; steady enough at the start, me clinging with my arms tight about him, but somehow

we’d get the leans and I’d fall off. Rodney, hanging onto the mane for grim death, managed to stay on as I decided to let him go and abandon ship. I’d then refuse to climb on a stump and remount, but would walk along beside them. Occasionally he’d rent Shannon, a mean spirited, bad tempered, untidy, almost black, old man Shetland pony. Shannon; once away from the dairy, would decide to pigroot or buck. Luckily I witnessed the first pigroot and decreed I wasn’t getting on him… ever!

The stock was always in another paddock on the weekends when the planes came. There were a number of specialities in the ranks of free flighters. Solid little, simple balsa gliders, we called chuck gliders, were a bit tame. We small boys were impressed with size, power, noise and complexity. Going up the ladder of desirability in the doped, tissue paper, covered, balsa framework, aircraft were engineless sail planes, then great long elastic band, powered ones called rubber jobs, to the ultimate engine powered ones. Later, in the early to mid fifties, blokes with deep bodied, extra large, free flight aircraft started cramming radio controls in them. They had a couple of C cell batteries and I think a valve or two in the works. Some specialists incorporated Jetex engines in large solid style, chuck gliders. We kids’d hang round all day taking everything in that we heard and saw.

When free flighters were launched and flew away, we’d be off after them. At first, we were told not to touch them when they landed, but as we got known, we were permitted to carry them back to “the man”. I hung round one bloke and became his official retriever and would order any kid off if they tried picking it up before I got to it. “Leave ud alone… that’s “MY man’s” plane!”

We got to recognise one point fives, two point fives and five cc engines and at a glance, we easily differentiated between glo-plugs and standard diesel ones. “Frog engines were the champions!” I would expertly announce.

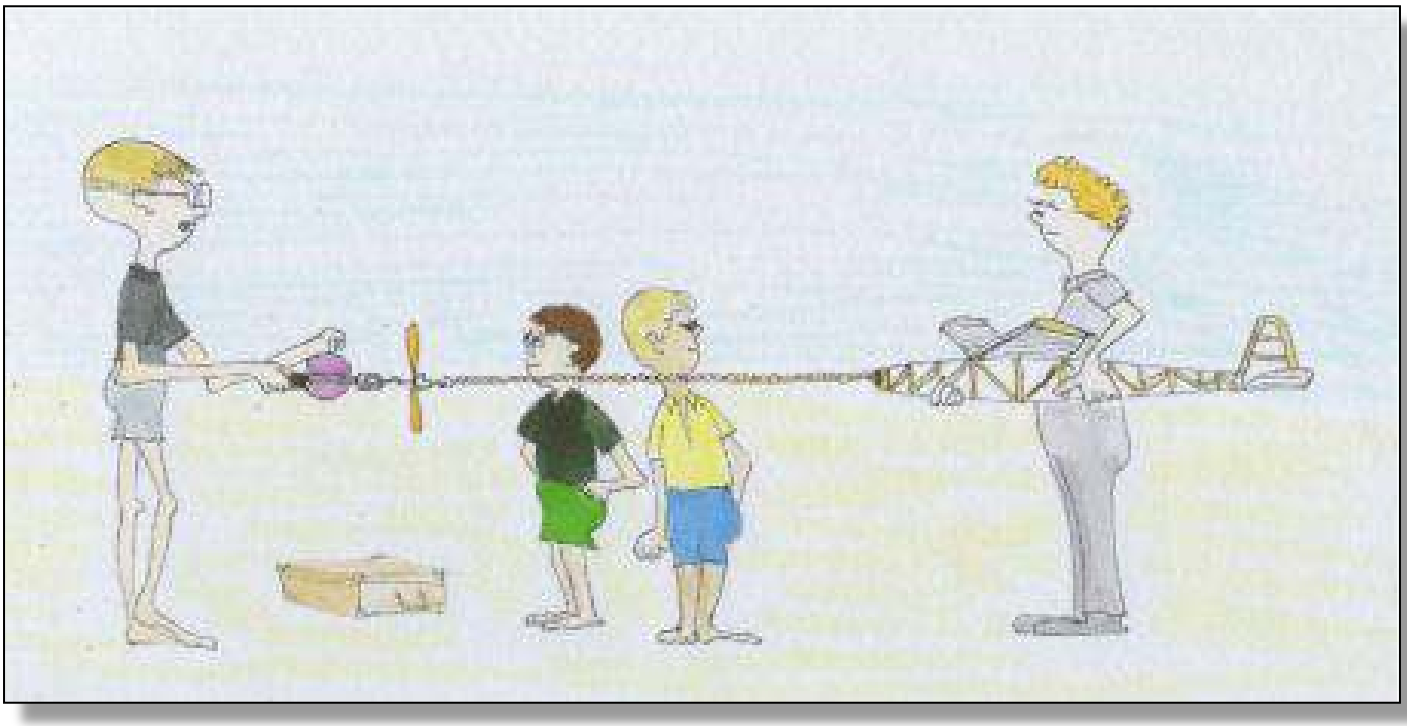
The smell of the exhaust gasses of each also was readily identifiable.

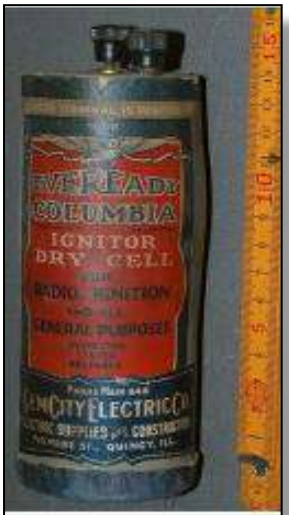
We coveted the specialist tools and equipment the owners brought with them. Batteries, razorblades, long nosed pliers, brown bottles of ingredients for the fuel, jars of dope, a roll of tissue paper, Tarzan s grip… aromatic smells to delight inquisitive kids. "Don't sniff the ether too hard or it'll get up ya nose and y'll faint!" … I'd want to sniff it just below the knock out point to prove I could.

Gem razor blades were regarded as the sharpest. They were single sided blades made of steel two or three times thicker than Gillette ones. They had a folded spine on the other edge that made hard cutting safer than the double-sided opposition. You didn't cut yourself on the back edge of a Gem.

The Gillettes had the advantage of two sides to cut with. This meant more cutting per blade, but… they didn't have the right angled corner for accuracy… although by bending the brittle blade, you could snap them in half and then by carefully twisting that half, you could break it into a nice fine wedge for fiddly cutting.

The plane owners had a selection of spare propellers of different diameters and pitch. Some owners favoured beautifully crafted wooden ones while others liked the newer, brightly coloured, plastic models. Rubber job owners brought along a hand drill that they had a hooked piece of wire in the chuck, to wind the prop's rubber bands with. It beat winding them up by pushing the prop round and round for minutes with a finger.





"The rubber job champ" was a studious, skinny, be-spectacled, sixteen year old who was still wearin" the school pants his mum made for him when he was twelve. HE took his art seriously. He'd use brand new Gem razor blades, set-squares, rulers and sandpaper when tediously constructing the frame-work and wings. He'd diligently count the turns of the drill, as he wound the lubricated, rubber bands up. He started by stretching them way out in front of the aircraft and walking in as the bands wound the twisted, bunching kinks, evenly over their length. That way the band wouldn't get a big isolated knot that could snag the side of the airframe and slow or stop the propeller when she was flying. We regarded rubber jobs as a bit girlie. "Glo-plug engined planes were the best" The operator had a giant, dry cell battery and pretty, plastic covered wire leads with alligator clips on the end. They'd put one clip on the exhaust port and the other on the glo-plug up on top of the engine. He'd get in front and flick the prop a couple of times with a finger and the engine would howl into life. A quick disconnect of the leads… a tweak of the fuel adjuster, to stop the engine spluttering, trim the fuel flow to maximum revs and he was ready to launch.

To be continued (in the March edition)

65th MAAA MODEL AIRCRAFT NATIONALS PERTH WA 12 April 2012 – 20 April 2012: PROGRAM OF EVENTS

DATE	ADMIN HQ – WHITEMAN Lumen Christi - INDOOR	C/L FIELD WHITEMAN (WP) HARD STAND	C/L FIELD SWAN CC (SCC) GRASS	R/C FIELD WHITEMAN (WP)	R/C FIELD KAMS (K) (Oldbury)	R/C FIELD WANNEROO (WA)	R/C FIELD Whitfords (WH)	F/F FIELD WHITEMAN (WFF)	F/F FIELD MECKERING (M)	SOCIAL
Thur 12 Apr	**REGISTRATION**									
FRI 13 Apr		Processing & Practice Day	Practice Day				Practice Day IMAAC		7.30am – 2.30pm F1J Power Open Rubber Slow Open Power	
SAT 14 Apr		9:00am F2C qualifying 12:00 F2F Heats & Final	9:00am Vintage Stunt	9.00pm Electric Old Timer 12:30 pm Electric ½ A Texaco	9:00am Thermal Glider		9:00am IMAAC		7.30am – 2.30pm F1G Rubber Open Power P-30 Rubber	
SUN 15 Apr		9:00am F2C semi's & Final		9.00pm Electric Open Duration	9:00am F3B Glider		9:00am IMAAC		7.30am – 2.30pm F1A Glider 4.30pm Fly Off	
MON 16 Apr		9:00am Goodyear Combined Speed F2A & Jet Speed			9:00am Hand Launch Glider		9:00am IMAAC		7.30am – 2.30pm F1B Rubber 4.30pm Fly Off	F/F BBQ Meal at Farmstay Homestead Meckering
TUE 17 Apr			9:00am F2B Aerobatics 9:00am Classic B F2D Combat		9:00 Limited Electric Glider (Bill Pettigrew)				7.30am – 2.30pm F1C Power 4.30pm Fly Off	
WED 18 Apr			9:00am F2B Aerobatics 9:00am Open Combat		9:00 Open Electric Glider (Bill Pettigrew)	9.00pm – 12.00pm ½ A Texaco 12:30 pm Standard Duration	Pylon?	2.30pm – 4.30pm HLG/ CLG 7.30pm – 8.30pm Night Scramble	Reserve Day For any postponed Meckering events	C/L Social Function Swan Valley
THUR 19 Apr	7.30pm – 10.30pm Hangar Rat Peanut Scale		9:00am Vintage TR Bendix TR		9:00 Large Scale	9.00pm – 12.00pm Burford Duration 12:30 pm 38 Antique		8.30pm – 12.30pm Free Flight Scale 2.30pm – 3.30pm Day Scramble		
FRI 20 Apr			9:00am Vintage Combat		9:00 Stand Off Scale	9.00pm – 12.00pm Duration 12:30 pm Texaco				**Presentation Dinner 7.30pm**

NSW Contest & Fixture Calendar 2012

Date	Event	Venue	Time	C/D
Jan 15	Combined F1G, H & J. HLG/CG	Richmond	7:00am – 1:00pm	Roy Summersby
Jan 20	General Meeting	Harris Park	7:30pm	
Jan 29	Scramble, Combined Vintage and Scale Rally	Richmond	7.00am – 1.00pm	Chris Dudley
Feb 12	State Champs P30+Combined Vintage	Richmond	7:00am – 1:00pm	Gary Pope
Feb 26	State Champs F1G, H & J	Richmond	7:00am – 1:00pm	Terry Bond
Mar 3-4	Hunter Valley Champs	Muswellbrook		
Mar10-12	Victorian State Champs	Springhurst		
Mar 16	General Meeting	Harris Park	7:30 pm	
Mar 18	1 Hour Scramble, Combined Open	Richmond	7:00am – 1:00pm	John Corby
April 2-8th	Southern Cross Cup and AFFS Champs	Narrandera		SCC. T.B.A.
April 12-20	Australian Nationals WA	WA		
April 29	State Champs HLG/CG. Rocket Glider, Plus Combined Vintage	Richmond	7.00am—1.00pm	Jim Christie
May 5- 6	Veterans Gathering	Muswellbrook		
May 13	State Champs Scramble, Combined % , Control Line flying BBQ Lunch	Richmond	7:00am – 1:00pm	Roy Summersby
May 16	General Meeting	Harris Park	7:30 pm	
May 18	P30, Diesel Duration, Combined Open	Richmond	7:00am – 1:00pm	Tahn Stowe
June 9---11	NSW State Champs F1A, B, C	Narrandera	8.00am--3.00pm	
June 17	Combined Vintage, HLG/CG, P30	Richmond	7:00am – 1:00pm	Gary Pope
June 24	Russell Forth Scramble	Illawarra		
July 7& 8	Scale Rally ½ Hour scramble, Fun Flying C/L & FF and BBQ Lunch	Richmond	7.00am	Tahn Stowe
July 20	General Meeting	Harris Park		
July 22	½ Hour Scramble, Combined Open	Richmond	7:00am – 1:00pm	Jim Christie
Aug 12	Combined %, (multiple entries)	Richmond	7.00am- 1.00pm	Terry Bond
Aug 26	½ Hour Scramble + Vic Smeed Mass Launch. Mentor C/L. Fuller Day Stomper, Zoot Suit & Dixielander	Richmond	7:00am – 1:00pm	Roy Summersby
Sep 9	Scale Rally, P30, Vintage Rubber	Richmond	7:00am – 1:00pm	Chris Dudley
Sep 21	Annual General Meeting	Harris Park	7:30 pm	
Sept 30	F1G, H, J	Richmond	7.00am	Terry Bond
Oct 20 & 21	20th State Champs Combined Vintage + Fuller Weekend. 21st ½ Hour Scramble and BBQ Lunch	Richmond	7:00am – 1:00pm	John Corby
Nov 11	Combined % (multiple entries)	Richmond	7.00am- 1.00pm	Tahn Stowe
Nov 16	General Meeting	Harris Park	7:30 pm	
Nov 18	Mills Trophy Scramble	Illawarra		
Dec 2	Combined F1G, H & J, Combined Vintage	Richmond	7:00am – 1:00pm	Gary Pope
Dec 16	½ Hour Scramble, Combined %, Fun Fly. BBQ Xmas Lunch	Richmond	7:00am – 1:00pm	Terry Bond
Note:	*All scrambles start as close to 8.00 am as possible*			

Brisbane Free Flight Society

MONTH	DATE	START	EVENT	LOCATION
FEBRUARY	Saturday 11th	12 noon	Club general meeting plus "show and tell"	John's Place
	Sunday 19th	8am-1pm	Dale's Fun and Friend's Club day (No contests , limited RC)	COOMINYA
MARCH	Saturday 3rd	3pm-6pm	Indoor (practice and trimming)	BSHS
	Saturday 10th	7am-12pm	**F1C State Champs (5 Rounds)**	DALBY
		12 -1.30pm	**LUNCH**	
		2pm – 5pm	**Open Power (3 Rounds)**	DALBY
	Sunday 11th	8am - 1pm	**F1J State Champs (5 rounds)**	DALBY
	Saturday 24th		**DALBY COMBINED DISCIPLINES NOSTALGIC**	DALBY
	Sunday 25th		**FUN FLY** (All categories + Indoor)	
APRIL	Monday 2nd – Sunday 8th		**Southern Cross and AFFS Champs**	NARRANDERA
	Saturday 21st	7am-2pm	**F1A State Champs (7 rounds)**	DALBY
	Sunday 22nd	7am-2pm	**F1B State Champs (7 rounds)**	DALBY
MAY	Sunday 6th	8am-11am	**P30 State Champs**	COOMINYA
	Sunday 20th	8-10am	**Scale**	COOMINYA
		10am-1pm	**HLG and CLG State Champs** (best 3 of 6 flights –each)	
JUNE	Saturday 2nd	3-6pm 8am	Indoor **(Hanger Rat (S/C)**, Hanger Rat	BSHS
	Sunday 10th	- 1pm 8 am	**F1G State Champs (5rounds)**	COOMINYA
	Sunday 24th	- 1pm	2 Minute Class models – "All In" Club Contest (5 flights)	COOMINYA
JULY	Saturday 7th	3pm- 6pm	Indoor (**HLG (S/C**) and 6" HLG)	BSHS
	Sunday 15th	8am – 1pm	1/2A Power (Queensland rules - 5 flights)	COOMINYA
			A1 Sailplane(Queensland rules - 5 flights)	
	Saturday 21st	12 noon	AGM plus "show and tell"	John's Place
	Sunday 29th	8am – 1pm	Dale's Fun and Friends day(no contests, Lim RC)	COOMINYA
AUGUST	Saturday 4th	3pm-6pm	Indoor (Frog Event)	BSHS
	Sunday 19th	8am – 1pm	QDP and F1G (Club Events) (3 flights each)	COOMINYA
SEPTEMBER	Saturday 1st	3pm-6pm	Indoor **(Peanut (S/C)** and No Doc Scale	BSHS
	Sunday 9th	8am – 1pm	**F1H State Champs (5rounds)**	COOMINYA
	Saturday 22nd	7-10am	LSq/100 (3 flights)	DALBY
		10am–1pm	**Open Rubber State Champs**	DALBY
	Sunday 23rd	7am - noon	No Frills Wakefield (5 flights)	DALBY
OCTOBER	Saturday 6th	3pm – 6pm	Indoor (F1L/ Mini Stick, P18)	BSHS
	Sunday 14th	8am – 1pm	Col Somers Vintage rally, Power Ratio Sport event (3 flights)	COOMINYA
	Sunday 21st	8am	Vic Smeed Day & KKK (Reserve day)	COOMINYA
NOVEMBER	Saturday 3rd	3pm-6pm	Indoor (Delta Dart)	BSHS
	Sunday 11th	8am – 1pm	Frog Precision, Combined % (Reserve day) (3 flights)	COOMINYA
	Saturday25th	12 noon	Xmas party and prize presentation	TBA
DECEMBER				

TEAM TRIAL
Thu 20 Sep
F1A and F1C
Fri 21 Sep
F1B DALBY

CONTACTS: * John Lewis 3848 4280 * Malcolm Campbell 3263 9339 * Albert Fathers 0755 343490
We are always in need of CDs! Volunteers welcome!

2012 Flying Calendar

VFFS Draft Calendar for 2012

The outdoor state champs events will be run by the Werribee Wanderers. More information on programs and venues will be available from them in due course.

Due to unfriendly weather, the VFFS outdoor days (At Eynesbury Field) may very well be held on a later weekend or even midweek if the would-be participants agree. So keep in touch with published CDs and/or the VFFS webpage for up-to-date information OR get your email address added to the contest update mail list.

The exact location of the Eynesbury Field is uncertain at this time due to construction activities and stock movements. This should be settled well before the new year.

Jan	29	Combined Vintage. At Eynesbury Field
Feb	19	***indoor DISC*** *S C for HLG, and CLG. Also Sandfly Formula for Arthur Smith Trophy.*
	26	CLG, Scale and Open Rubber. At Eynesbury Field
March	10-12	State Champs –Traditional format at Springhurst- Details to be announced by WWs
	25	Garnham Trophy, first half yearly competition: P30 rules [3 X 120 seconds]. At Eynesbury Field.
April	6-9	Easter. AFFS & SCC champs
	15	***indoor DISC*** *Indoor reduced scale Wakefield. At Manningham DISC.*
	12-20	Nats in WA
	22	Vintage rubber for Hervey Trophy. At Eynesbury Field
May	6	Combined F1G,F1H,F1J. At Eynesbury Field
	13	Mothers day
	20	Combined F1G,F1H,F1J. At Eynesbury Field
June	3	Vintage rubber, power and glider. At Eynesbury Field
	17	***indoor DISC*** *S C for F1L, and F1D*
	24	Combined F1G,F1H,F1J. At Eynesbury Field
July	8	P-30 and Scale. At Eynesbury Field.
	22	Combined F1G,F1H,F1J. At Eynesbury Field
Aug	5	Garnham Trophy, second half yearly competition, P30 rules with no limits on weight, propeller, and rubber, [3 X 180 seconds]. At Eynesbury Field
	19	***indoor DISC*** *State Championships for Bostonian, and Hangar Rat.*
Sept	3	Indoor precision free flight for the Arthur Smith Indoor Free Flight Trophy at Sandringham Athletics Centre.
Oct	7	CLG, Scale and Open Rubber. At Eynesbury Field
	21	***indoor DISC*** *S C for Peanut Scale; also VFFS Champs for Indoor Open Scale.*
Nov	4	Vintage rubber, power and glider. At Eynesbury Field.
Dec	2	OZ diesel and Combined Percentage Open. At Eynesbury Field.
	3	Grand Indoor Scale Day at Sandringham Athletics Centre.
	16	***indoor DISC*** *F1M, Living Room Stick and Open % of hall record. At Manningham DISC*

West Australian 2012 Free Flight Contest Calendar

DATE	CONTEST CLASS	LOCATION	TIME	CONTACT
4th March	Combined Open	Meckering	9.00 am	Chris Behr – 9448 9922
18th March	WAFFS Free Flight Cup	Oakford	9.00 am	
12th to 20th April	MAAA 65th Nationals Perth WA	Meckering	Various	Chris Behr – 9448 9922 21st
& 22nd April	Combined FAI Trials event (TT)	Meckering	9.00 am	Paul Rossiter – 9316 0250
6th May	Open Power State Championships	Meckering	9.00 am	Chris Behr – 9448 9922
6th May	HLG/CLG State Championships	Meckering	12pm	As Above
6th May	Scramble State Championships	Meckering	2.30pm	As above
20th May	Open Rubber State Championships	Meckering	9.00 am	Phil Letchford - 9295 2161
20th May	Slow Open Power State Champion	Meckering	9.00am	As above
2nd to 4th June	F1A, F1B, F1C State Championships (TT)	Meckering	9.00am	Neil Murray – 9457 4063
17th June	P30 State Championships	Oakford	9.00 am	Roy Farren – 9310 - 7992
17th June	F1G Cup	Oakford	9.00 am	As Above
8th July	Escargot Trophy	Meckering	9.00 am	Rod McDonald - 9316 2762
8th July	WAMAC Cup	Meckering	9.00am	As Above
29th July	George Fuller Comp	Meckering	9.00 am	Adrian Dyson -
29th July	Nostalgia Comp	Meckering	9.00 am	As Above
29th July	F1Q Trial Event	Meckering	9.00 am	As Above
12th August	F1B Crowley Cup	Meckering	9.00 am	Colin Crowley – 9534 4022
9th September	WAFFS Free Flight Cup	Oakford	9.00 am	Paul Rossiter – 9316 0250

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; 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, and is flown at all Meckering events. 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. All Flying days listed above count towards either combined open or the Free flight cup.
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 ¼" rubber.
8. Contest Director will be nominated on the day from those that attend.
9. No specific day is listed for the FAI team trial events and all events could be held on one day. This will be decided on the day at the field and be dependant on the number of entrants and weather conditions.
10. 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 7 rounds and will be flown to FAI rules.
11. The George Fuller comp is for all George Fuller designs. The Nostalgia comp on the same day is for any model as per MAAA/SAM nostalgia rules.