FREE FLIGHT DOWN UNDER

NEWSLETTER OF THE AUSTRALIAN FREE FLIGHT SOCIETY INC

VOLUME 48 NUMBER 3

SPRING 2016

RICHMOND SCALE RALLY

MUSINGS ON OZ DIESEL

TWO DECADES OF AEROMODELLER

FINDING A FLYAWAY

2016 F1D WORLD CHAMPS

CONSTRUCTION CORNER BIG GUNS

AUSTRALIAN FREE FLIGHT SOCIETY Inc.

FRONT COVER: Phil Mitchell's magnificent Sopwith 1½ Strutter really performed at Richmond. Its only failing was not being set up for ROG. This won't happen again. Phil has an arsenal of quality scale models with another big one underway.

Free Flight Down Under

September 2016

Volume 48, Number 3

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

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PRESIDENT'S REPORT

We are now approaching the end of the selection period for the team to attend the World Championships next year in Hungary . Vin Morgan has been keeping a tally of the scores and the most hotly contested positions seem to be for a place in the F1B team. There are few selection events left with results in the event at Dalby in September probably playing an important part in the team's composition.

The CIAM rules and MAAA rules are up for review early in the new year. There has been some discussion on CIAM rules with agitation to return contests to seven flights and revisiting the fly-off procedures. When I receive the final proposals from Ian Kaynes I shall seek comment from our flyers. Please send in any proposals for additions or changes to MAAA rules to me by December for discussion and submission to the MAAA Council rules Conference.

Finally age and infirmity are playing havoc with AFFS membership and a number of long-term members have not renewed membership. I would ask that if you know someone who was a member but has dropped out, please find out if they have just forgotten to renew or have not renewed for some other reason. Matt Hannaford has been very successful in this regard. Free- flight may face a difficult future if the decline in numbers continues. The decline in F1A flyers numbers may be an important indicator of where we are heading.

Best of luck in the final selection events for team aspirants.

Happy flying

Graham Maynard
President, AFFS

FROM THE EDITOR

Not many competition reports received this month. "*That's great*", I hear some say. Well, my mailbox has been swamped by a steady flow of free flight articles, and there is a great variety this time. Something to suit everyone. It makes the job of editor so much easier and allows me to try and be creative. I hope you like the content. Many thanks to my contributors - Roy Summersby, Vin and Leigh Morgan, Tim Haywood-Brown, Martin Williams, Paul Rossiter, Phil Mitchell, Tahn Stowe, John Corby, Jackie Wang (China), Ricky Bould, Xin Pu Sheng (China), John Campbell, Harry Sokol and Glenn Crouch (photographer).

Kathy and I took the long drive to Richmond for a weekend to see and compete in the Scale Rally and the Sunday Scramble. It was a fun weekend and very sociable, with stupendously perfect weather.

On my home front, we've had some good weather locally at Coominya for our smaller BFFS events and continue to get a reasonable number of entrants. We are hopeful for a successful team trial at Dalby in mid-September. There are no crops. All we have to do is organise some good weather. We'll have every active F1C flyer in Australia (6) and the four best F1B flyers competing! Should be a good few days.

Cheers, Malcolm Campbell

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Scale Rally Richmond

2 – 3 July 2016

report by Malcolm Campbell
photos by Glenn Crouch and Malcolm Campbell

It was a long drive for us from Brisbane but not as long as the trip made by six Kiwis who flew from Auckland New Zealand. Hopeful of good weather, we could not have imagined what was to greet us on arrival. Two absolutely perfect days with blue skies and a barely detectable breeze; this was perfect weather for Scale flying on Saturday and the Sunday Scramble.

This was the first serious Scale event that Kathy or I have attended and it was great to see the detail put into the models. Some were battle scarred indicating a long life on the flying field and many looked surprisingly sturdy. I would understand why as the day progressed.

The Richmond field is used by the NSWFFS for many of their competitions and each Friday for social flying and trimming. They are very lucky to have such a great little field so close to Australia's largest capital city. Of course, if the winds get up or blow towards the river it's a different story. But then there are plenty of little coffee shops to ease the pain. We stayed at the Sebel Hawkesbury Resort in Windsor, less than 10 minutes from the field, and we would quickly recommend it to others.

For us Queenslanders, 1.5 degrees on the field at 7.30 am Saturday was a little chilly but the day did warm up to about 15 degrees. Being a turf farm, the grass was very short and there was a large patch of bare earth, ideal for ROGs. Initial hand launch flights were made from the grass but ROGs were attempted from the dirt patch. Many were unsuccessful, with models ground looping. Those that did ROG greatly improved their chances of placing.

Rubber flyers, with their light and nimble models, were best at ROG with both Phil Warren (Comper Swift) and Don Spray (DH Puss Moth) easily negotiating the smooth dirt runway. Mike Mulholland's beautifully built DH Tiger Moth may not have ROG'ed but the build quality and paintwork easily compensated and he was a clear winner in the Reg Jude Rubber Trophy.

In F4A, Gary Sunderland proved hard to beat with his superb RAF BE 12B although he was seriously challenged

Gary Sunderland's RAF BE 12B

Phil Mitchell's magnificent Sopwith 1½ Strutter

Phil Warrens' rubber Comper Swift


Mike Mulholland's Mills powered Tiger Moth


Sopwith Tabloid flown by Garry Sunderland


Stan Auger's Auster C4


Mike Mulholland's diminutive rubber Tiger Moth

Phil Warren's rubber powered Auster B4 Ambulance

for the lead by Kiwi Stan Mauger's Auster C4, also a joy in the sky, who trailed into 2nd place by a mere 0.2 points! Gary was lucky to avoid damage to not one but three of his models when the BE12B ground-looped on one abortive take-off attempt, with one large circuit causing it to trip over a black irrigation pipe and nose over on top of his other two models!

Phil Mitchell had his brand new Southern Cross replica on display but he didn't fly it due to minor damage during Friday testing. His Sopwith 1½ Strutter was a more than adequate replacement exhibiting wonderful flight manners, the big wheels providing great landings. However, attempts at ROG were not as successful. He still managed 3rd place just six point from the winner. A wheel alignment and/or less power at take-off (he will have electronic controls fitted to vary power) and Phil's model will be hard to beat next year.

Mike Mulholland (NZ) filled 4th place, over 200 points clear of my 5th place. Mike had built two faithful replicas of a New Zealand Tiger Moth, both with exceptional detail, one for F4A and another for the Rubber event. Both looked and flew magnificently. My own 16 year old yellow Piper Cub J3 may not have risen from the earth but it did look wonderful in the air flying as Cubs do, slowly executing a couple of low circuits before touching down for a smooth and successful landing

Flight manners of most models on the day were exceptional and it was great to see free flight scale models


Malcolm Campbell's Piper Cub J3


Ricky Bould's Auster AOP 9


Don Spray's parasol-winged HE 46


Bob Craine's's P40 Kittyhawk


Phil Mitchell's brand new Southern Cross


George Fay's Bell 9-39 Aircobra

flying so well. A couple of models tested their knock off bits but, as I said, they are tough and came back for more. Bob Crane's P40 Kittyhawk looked great ROG'ing via a fall away dolly although he did experience a few major crashes – another tough model.

Tahn Stowe didn't field his Hurricane as it was not quite ready. A pity really – I would have driven down just to see it fly! Tahn of course was very busy with the arduous task of Static Scale judge alongside John Pennells. John Corby and Walter Bolliger were kept busy as Flight judges.

It was a pity that Ricky Bould's Auster AOP 9 did not qualify as it looked ready for the task and certainly appeared to have been in service for some time. The ever cheerful Peter Jackson entertained the spectators with his micro Scale models on a day that really suited them. His SE5 "Schweinehund" was the People's Choice and the unlucky George Fay picked up the Spectacular Arrival award with his Max Holste M H 1521 "Broussard".

George had a number of interesting models. His Bell 9-39 Aircobra looked great but refused to fly well, as did his twin rubber-powered FW187 Falke. His Folkerts SK3 rubber -powered pylon racer was very pretty and once trimmed should do well in future scale events.

Don Spray's parasol winged HE 46 joined the list of those who did not qualify but his DH Puss Moth flew very well in rubber to gain 3rd place. Mark Godfrey's SE5 didn't qualify in F4A and received the Next Time award.

As the points were tallied, it was Australia who had won the David Hope-Cross trophy from New Zealand. As Ricky Bould said during the


Gary Sunderland's RAF BE 12B attempts a take-off


Don Spray's HE 46 successfully ROGs


George Fay's Max Holste MH 1521 Broussard


George Fay's rubber powered FW 187 Falke


Bob Craine's Kittyhawk dolly take-off

George Fay's Folkerts SK3

presentation, in ten years of coming to Richmond for this event there had been just one day of bad weather, and 2016 marked the best weekend of flying weather he had ever experienced, anywhere.

That evening, two long tables of happy modellers assembled at the Royal Hotel to enjoy a generous country meal amidst a rowdy bunch of keen NSW football fans. Food and company were excellent, and Barry Lee ensured his popularity and the success of the Sunday BBQ by winning a rather large meat raffle.


Yolanda, Noels, Kathy and Phil chat about planes


F4A winners, a very close contest


Reg Jude Trophy rubber winners


The David Hope-Cross Trophy winners for 2016


The boys talk models after the event


Peter Jackson's SE5 "Schweinehund"


George Fay's spectacular arrival

Results: F4A

Gary Sunderland	AUS	RAF BE 12 B	1593.5
Stan Mauger	NZ	Auster C4	1593.3
Phil Mitchell	AUS	Sopwith 1½ Strutter	1497.5
Mike Mulholland	NZ	Tiger Moth DA 82A	1407.1
Malcolm Campbell	AUS	Piper J3 Cub	1186.8
Robert Craine	AUS	Curtiss Kittyhawk P40E	1154.2
George Fay	NZ	Max Holste Broussard	1054.6
Mark Godfrey	AUS	SE5	NQF
Ricky Bould	NZ	Auster AOP 9	NQF
Don Spray	NZ	HE 46	NQF

David Hope-Cross Trophy

Australia.....4245.2 New Zealand.....4055.0

RUBBER SCALE Reg Jude Trophy

Mike Mulholland	NZ	Tiger Moth DA 82A	1446.4
Phil Warren	AUS	Comper Swift	1399.7
Don Spray	AUS	DH Puss Moth	1366.6
George Fay	NZ	Folkerts SK3	NQF

People's Choice: Peter Jackson SE5 "Schweinehund"

Spectacular Arrival: George Fay M H "Broussard"

Next Time: Mark Godfrey SE5


A great roll up on both days

Richmond Scale - Parting Shots


The Auster struts its stuff ……


…… and then falls over its strut!


Another spectacular arrival

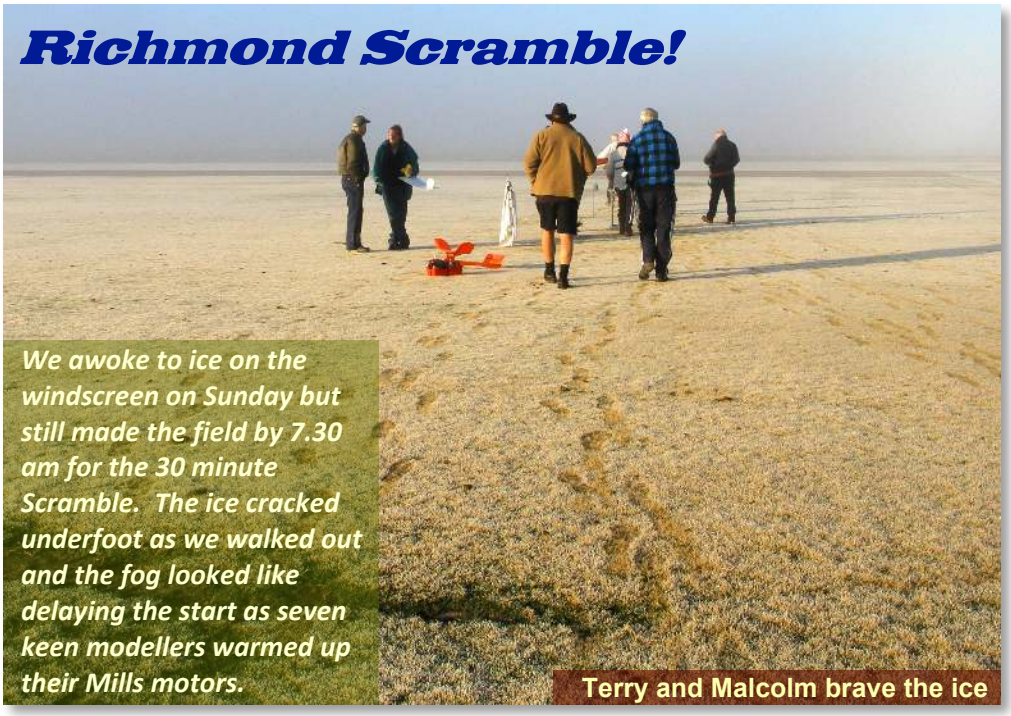

The Aircobra goes to pieces

Malcolm Campbell https://www.flickr.com/photos/motor-racing-photography/albums/72157667838646753

Glenn Crouch photos: https://www.flickr.com/photos/crouchy69/albums/72157670542204

Thank you Glenn Crouch for your photos on Saturday

Richmond Scramble!


We awoke to ice on the windscreen on Sunday but still made the field by 7.30 am for the 30 minute Scramble. The ice cracked underfoot as we walked out and the fog looked like delaying the start as seven keen modellers warmed up their Mills motors.

Terry and Malcolm brave the ice

SCRAMBLE RESULTS

1.	Tahn Stowe	1378
2.	Michael Towell	1286
3.	James Price	1234
4.	Phil Mitchell	1146
5.	Matt Hannaford	1121
6.	Malcolm Campbell	1104
7.	Peter Scott	1017
8.	Bruce Hao	575
9.	Aaron Booth	465

Matt Hannaford's Cranky Carpet with high revving Mills (how uncouth) quickly sussed out Phil Mitchell's dog Chucky during warm-up testing. Chucky started chasing Matt's Carpet as it noisily careered around about a metre off the ground until Chucky suddenly realised it was chasing him. He never went near it again!

By modern day standards nine entrants was a good roll-up although two experienced motor troubles during the event. The weather was perfect and all opted for 2 minute flights some flying low and others high. There was no drift and my last flight DT'ed and landed right at my fuel bottle, engine still running. There were two collisions I know of; one Tomboy being taken out of the game and my Scooter colliding with the body of Peter Scott who brushed it off and kept walking. It certainly wasn't an energetic Scramble and it was great to see at least 6 models overhead at any time, exhaust trails tracing their path.

With no breeze, the models stayed in close. Here, models of Malcolm Campbell, Peter Scott, Tahn Stowe and Phil Mitchell circle close to each other

Scramble Master Tahn Stowe won this one , well clear of the other place getters. The drought for Tahn has finally broken.

General sport flying then took place leading up to trophy presentation and for us the day finished after a very pleasant BBQ lunch. We were then off to another appointment at Lake Macquarie and were unable to confirm if all Barry Lee's raffle prize meat had been totally consumed.

The organisers of the weekend must be very pleased with the result and no one could complain about the field or the flying conditions. Everything was just perfect.

Chucky was determined to catch the Carpet

Phil, Matt and Mal watch their models in perfect conditions

Scramble winners

Wise words from Scale judge Tahn

As with all competitions it pays to read and understand the implications of the official rules .

Free Flight Scale, whether F4A or Rubber Scale is no different, and some simple facts and requirements, that will improve a competitors score, are immediately evident by just reading the rules.

In the flying section all scores (out of 100) for each aspect judged (there are 7 judged aspects) are divided by 10 then multiplied by a "K" factor.

This "K" factor varies from 6-13 depending on the importance placed on that particular aspect of the flight. With Take-off and Descent and

Landing Approach both being multiplied by a factor of 13, and Transition to Descent being multiplied by a factor of 6.

Obviously a model that takes -off is at a huge advantage (up to 130 points) and one that flies "realistically" will also score well (stable, not too steep or too fast).

The rules also provide an immediate "10% reduction" to the overall flying score, if no Pilot is visible. Again why not put a Pilot in your model and avoid being penalised?

Similarly **in the Static section** of the judging "K" factors are used for all aspects judged.

These are all judged by comparing the subject model to the documentation supplied.

Obviously if the model accords with the documentation (outline in 3 views, colour, markings etc) it will score more highly than one that does not "match" the documentation.

It also makes the judges job a lot easier if the documentation is presented in a clear and ordered fashion and is narrowed down to the particular subject modelled.

An example of this at the 2016 event was Gary Sunderland's RAF BE 12 B. Initial inspection of the model, without reference to the supplied documentation, would have tended to place it in an inferior position in comparison to some of the other models presented. (It has been well campaigned)

However this is not how the static points are arrived at.

The subjects are compared only to the documentation supplied, and in this case the BE 12B was judged highly as the model matched the photographs and 3 views almost perfectly.

This result was matched by Stan Mauger's Auster C4, and several other entrants, who had very good documentation.

Thank you to all the judges who officiated on the day, Flight- John Corby and Walter Bolliger, Static- John Pennells and Tahn Stowe.

Tahn Stowe

John Corby flies again!

March 2016 is one of my memorable modeller's months when I ventured again to fly one of my most treasured, and my oldest, model - a 1954 winner of the 'Anthony Hordens' Wakefield trophy. It was quite a decision to decide to fly this model again after 62 years. After a fair amount of replacement of the original Jap tissue which was very brittle, a reassuring inspection of the structure, and provision for a Vin Morgan tracker beacon (unheard of in '54) it was very satisfying to watch it fly as it last did in 1954.

An interesting example of Rules of the time, no limits on rubber weight, (16 strands of 1/4"), fuselage min cross section- length squared/100, retractable single leg plus twin fins for support and ROG rise off ground take-off, single blade folding propeller. This original design was very representative of the best practices of the time.

No warps evident and the model flew beautifully - as well as it did on one flight from Barton Park Rockdale, close to KS airport, across Botany Bay to land just offshore the Kurnell Oil Refinery. Fortunately seen to land in the water and retrieved by a local fisherman who was keen to make that important phone call from the 'finder of this model'.

Regards

John Corby

Trans-Tasman at Richmond NSW July 2016

Report by Ricky Bould, photos by Glenn Crouch and Ricky Bould

Ricky Bould launches his Auster AOP 9

The preparation for the annual trip to Sydney started as soon as I arrived home from an overseas trip. This included finishing off a rubber powered Miles Magister that is 32" span, preparing an Auster AOP9 that needed some test flying, and an Avetek Tiger Moth that was almost trimmed.

This turned into the usual race against time and included the obtaining of the permissions to carry model aircraft on a scheduled flight. This is a simple protocol that Air New Zealand and QANTAS use to ensure IC powered aircraft are safe to fly and is the result of some overzealous dangerous goods bureaucrats some years ago.

Don Spray, George Fay, and I departed on the 30 June ahead of Stan Mauger and Mike and Yolande Mulholland who followed the day after.

Our intention was to do some trimming on the Friday but the breeze was too much so it was down to the wire on Saturday. There had already been one set back as one of the Tiger Moth wings had been crushed between the box and lid of the model box possibly due to curious handlers taking a peek as all items had been carefully packed. Scratch one model that has now been repaired.

Saturday dawned fine, cold and misty with an early start to the glorious turf of the farm. The usual catching up with old friends and acquaintances opened proceedings then it was down to flying. This included meeting Malcolm and Kathy for the first time.

Impressions in the following four hours are coloured because I was engrossed in trying to sort out two uncooperative models and I have used other people's accounts of some of the flights. I did observe Gary Sunderland's BE12 make a well controlled take off followed by a realistic climb to a significant height before arriving back on the field for a nice landing. The Taipan powering it was really on song (ED: The BE 12 flew with an OT 2.5 at West Wyalong). The Bleriot was not as cooperative treating us to high speed taxing and showing no sign of taking off. Bob Crane was persevering with his P40 but I missed the Sopwith 1½ strutter of Phil Mitchell flying. Don Spray and I paid the price for not being able to get any trimming in before leaving New Zealand, but the bonus was that with the excellent conditions we were able to get a good look at what the models were doing. The Auster AOP9 now has a new set of wings and the warp that crept back into the old wing has been corrected as well as making the aileron movable.

The rubber event was absolute magic with the Mike Mulholland's DH Tiger Moth looking most realistic in the air, Phil Warren's Comper Swift floating around in the still air and Don Spray's big DH Puss Moth delighting us all with its steady flying.

At the end of the morning or was it early afternoon we all agreed it had been a magic day with perfect weather and a flying site that is worth travelling the Tasman for, and there was another day to come.

Sunday was a spectator day for us and a chance to watch Scramble. The early morning mist soon dispersed and another glorious day started. The scramble was soon underway with a wide variety of models ranging from flying carpets with steep glides to Tomboys and de-tuned power models

Stan Mauger launches his Auster C4

Mike Mulholland prepares his powered Tiger Moth

using DT to descend. The calm conditions made retrieval a breeze and all the top fliers had well-organised refuelling stations. The engines used were the usual mix of Mills and MP Jets. The well-trimmed state of all the models stood out as a very positive and it was nice to be able to wander around during the course of the flying and not be herded behind a crowd control line. I observed no near misses.

At the end of the day the NZ contingent agreed it had been a worthwhile weekend and it was great to catch up with our fellow modellers for what is about the 10th time for some of us. We really enjoyed both the field and weather and the company at the Saturday night dinner. What is encouraging is that the level of support for this event has increased over the years as has the standard of models and also the improvement in the judging process that has resulted from the use of the FAI F4A rules. The top two models in F4A were separated by just .3 of a point in 1593.5 points total.

We know if our weather is poor in the weeks before the Richmond event it is likely the weekend is going to be a good one.

See you all next year.

Ricky Bould

A gift for the turf farm family

Don Spray's big rubber Puss Moth glints in the sunlight

Thanks so much for the copy (of FFDU). And it's great to keep all the best memories in such way. I will share the newsletter with the Chinese team. Please pass my best greetings to all the AUS members.

I will go to XinJiang province to join the China Free Flight Society National Tournament. I am flying F1B & F1C for this time.

Hope to see you guys on the World Tournament if I am lucky.

Xin Pu Sheng

THE EYES HAVE IT

That methanol accident was sobering advice - but all volatile liquids are a worry.

Epoxy is very dangerous and should never be used without goggles. Lots of accidents with Supaglue. Goggles are cheaper. Always use them. No short cuts. You can rapidly become desensitized for worse reactions in the future. Water is generally the best first aid and then an eye drop such as the soothing Systane helps.

John Campbell

New blood for trip to Transylvania

2016 F1D World Championships

A chilling report from Tim Haywood-Brown

Last time as you remember, local flyer Alex Secara qualified to represent Australia at the 2016 F1D World Championships. Well, there's a back story to all this that is worth knowing about.

Alex contacted me less than 2 years ago. It seems as a lad he had flown microfilm models in the salt mines of Romania, under the tutelage of Romanian indoor flying pioneer Otto Hints.

Fast forward about 40 years and we find Alex has for many years been living and working here in SA as Australian citizen. He decides to contact an old Romanian friend (F1D stalwart Aurel Popa) to ask about how he could get involved in F1D flying and if anyone flies these models in Australia. Popa Aurel replies: '*Why don't you talk to Tim Hayward-Brown, also from South Australia, who was here at the last World Champs?*'

Well, one thing led to another and before long Alex was starting to build

F1Ds here in SA and attending some of our indoor flying sessions. He made great progress in a short time and eventually qualified at the Team Trial and was on his way back to the Salt Mines.

How exciting it was for us back here in Oz to hear that Alex had not only arrived with his models intact (a feat in itself) but ended up finishing 17th at the World Champs. In doing so he beat the whole of the German, Czech, Japan and Lithuanian teams.

Alex Secara AUS

Congratulations Alex on a very impressive debut at a World Champs. And OK, the Slanic Salt Mines are not in Transylvania. ***It's just a jump to the left.***

Tim Haywood-Brown

Kang Lee 2016 W/Champ USA, Zoltan Sukosd 2016 EU Champ HUN and Alex Secara AUS

Alex Secara AUS

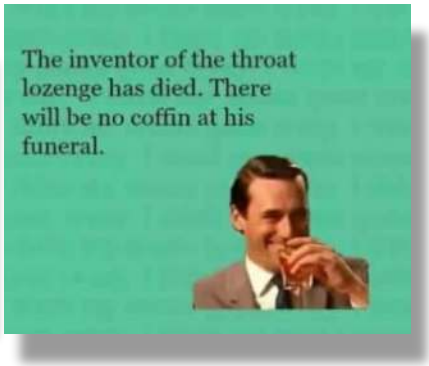
Contest Number	Name	Country	FAI ID	R 1	O 2	U 3	N 4	D 5	S 6	Final Result	Place
37	Yuan Kang Lee	2014 RWC	80024	7:05	17:53	22:33	23:20	27:59	26:55	54:54	1
19	Zoltan Sukosd	Hungary	81187	5:07	23:29	25:00	21:10	26:37	27:57	54:34	2
32	John Kagan	USA	68213	25:43	24:52	23:07	23:32	25:18	26:56	52:39	3
30	Dmytro Sednev	Ukraine	91939	0:00	19:47	25:23	0:00	24:40	25:45	51:08	4
11	Anthony Hebb	Great Britain	29371	24:07	22:00	22:34	9:17	21:26	26:42	50:49	5
34	Corneliu Mangalea	Romania	79374	21:06	23:36	24:10	21:18	25:56	21:18	50:06	6
7	Ivan Treger	Slovakia	24516	21:54	21:40	22:01	18:16	24:43	24:13	48:56	7
31	Brett Sanborn	USA	68233	24:02	22:51	21:06	24:36	24:11	23:12	48:47	8
18	Dezso Orsovai	Hungary	81185	23:32	19:40	24:03	21:22	20:32	21:42	47:35	9
12	Mark Benns	Great Britain	66790	21:46	22:44	7:30	22:24	4:30	22:21	45:08	10
9	Didier Barberis	France	60355	22:45	22:20	22:11	18:27	4:11	21:36	45:05	11
13	Hans Staartjes	Great Britain	78657	4:32	13:56	23:29	21:14	18:31	6:20	44:43	12
36	Vasile Nicoara	Romania	79133	17:51	22:21	22:00	15:50	1:09	21:05	44:21	13
17	Istvan Botos	Hungary	81184	20:18	20:23	20:53	22:23	12:11	21:48	44:11	14
35	Aurel Popa	Romania	79132	19:59	21:15	21:45	20:25	20:55	20:49	43:00	15
28	Vasilii Tkachenco	Russia	90911	15:42	19:53	0:00	9:57	22:47	12:21	42:40	16
1	Calin Alexandru Secara	Australia	91141	21:30	20:26	21:03	0:00	20:29	20:22	42:33	17
33	Joshua Finn	USA	86397	20:48	20:14	20:20	21:43	18:22	0:00	42:31	18
15	Thomas Merkt	Germany	65955	20:10	20:50	19:03	17:54	15:52	21:36	42:26	19
14	Uwe Bundesen	Germany	29774	19:28	17:52	19:05	21:40	19:57	20:46	42:26	20
16	Marian Krause	Germany	81288	12:07	14:30	17:27	21:59	0:00	20:14	42:13	21
26	Vladimir Komarov	Russia	86092	6:00	17:43	20:41	18:49	0:00	20:43	41:24	22
8	Robert Champion	France	60142	20:17	18:24	7:38	13:45	20:51	18:30	41:08	23
24	Dambrauskas Ernestas	Lithuania	85919	16:12	16:57	18:03	21:32	6:44	14:47	39:35	24
10	Thierry Marilier	France	60381	19:40	19:24	19:19	19:34	12:26	19:35	39:15	25
4	Mikita Kaplan	Czech Republik	16854	17:14	18:20	17:23	16:16	18:51	19:35	38:26	26
21	Kazumasa Kihara	Japan	65191	19:03	16:32	18:09	14:32	18:40	0:08	37:43	27
3	Vladimir Linardic	Croatia	26784	18:02	12:32	14:40	18:17	14:17	19:09	37:26	28
27	Sergei Panihin	Russia	90912	14:28	14:53	17:37	11:52	18:48	14:42	36:25	29
22	Tokuhiro Yaginuma	Japan	89216	17:02	18:40	0:00	17:42	2:14	13:26	36:22	30
6	Ondrej Krucky	Czech Republik	65644	11:48	16:56	4:46	16:08	18:35	17:45	36:20	31
20	Hideyo Enomoto	Japan	20831	13:39	12:05	15:54	15:38	17:19	18:43	36:02	32
2	Dmytro Silin	Canada	89152	15:06	15:57	15:45	15:34	16:05	18:30	34:35	33
5	Jaroslav Straka	Czech Republik	17056	0:00	0:00	16:12	14:57	15:32	13:50	31:44	34
25	Laurikenas Simas	Lithuania	91018	10:02	9:40	9:36	13:34	10:38	13:21	26:55	35
23	Steponenas Rimas	Lithuania	79776	10:41	8:50	13:13	0:47	1:45	7:53	23:54	36
29	Mykhailo Serebryakov	Ukraine	91817	0:00	23:46	0:00	0:00	0:00	0:00	23:46	37

SEN

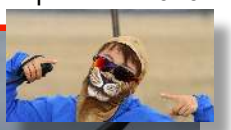
Place	Country	Result
1	Hungary	146:20
2	USA	143:57
3	Great Britain	140:40
4	Romania	137:27
5	Germany	127:05
6	France	125:28
7	Russia	120:29
8	Japan	110:07
9	Czech Republik	106:30
10	Lithuania	90:24
11	Ukraine	74:54
12	Slovakia	48:56
13	Australia	42:33
14	Croatia	37:26
15	Canada	34:35

JUN

Place	Country	Result
1	Ukraine	139:31
2	Romania	134:07
3	France	118:32
4	USA	104:53



2016 Nationals in China photos from Jackie Wang



WINGS OVER WEST WYALONG

NSW FREE FLIGHT SOCIETY

Last Weekend in OCTOBER

A fun flying weekend for all, Saturday 29th / Sunday 30th October 2016

Come and fly Friday afternoon if you want!

Camp on the field in our camping ground and make use of the camp kitchen, showers and toilets. Cost $10 per head per night. Electricity and water hook up for vans.

Fly anything at all, Pulse Jets; to Cox 010s (noise no problem)
FF, CL, or RC, BIG and SMALL, bring them ALL to
our 700 Acre multi purpose field.

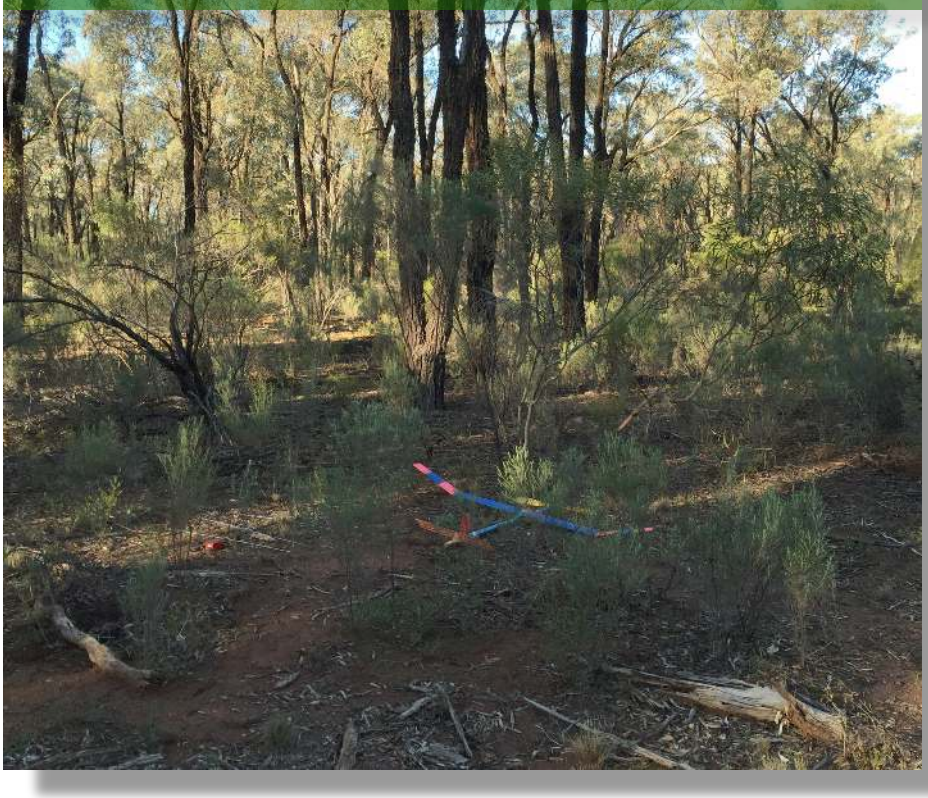
Plenty of room for everyone !

$20 registration fee paid before flying and you MUST have a current MAAA card.*
**Includes ticket in the raffle for a new in box DC Merlin, drawn at dinner*

Organized events
4.00pm Saturday Ebenezer mass launch
Lamb Spit roast Saturday evening $20
8.00am Sunday ½ Hour Campbell Scramble (must walk, no running)
Sausage sandwich, tea, coffee & drinks will be available.

Finding the Flyaway

By Leigh Morgan (and helpers)



We recently attended the Nationals at West Wyalong. Very enjoyable with good weather and the field soft and pleasant to fly on (apart from a few stones….). There was one hiccup. On the Monday I was flying Open Rubber and Vin was flying F1A and by the last round we were running out of time getting back to the flight line. With less than 30 minutes left Vin flew first and after his model had DT'ed down I wound and launched. Early in the afternoon there were massive thermals and after 2 minutes the model was very high. Three minutes came and went with no sign of DT. We wondered if in the somewhat rushed launch the timer band had not been pulled tight (they have to be) and said some bad things about Harry's timer (sorry Harry – not your fault). After some 6 minutes the model was out of sight.

Time to get into recovery routine…….

There are a number of things that you can do to help in the retrieval of a flyaway. Not all will be possible on every occasion, you do what you can.

1. Make sure that the watch timing the model is not stopped. You need the flight time to estimate how far the model has flown. You might need to get the watch from your timekeeper – unless you have a friendly timekeeper who is helping with the retrieve.
2. Try and get a good bearing on the model before it is lost to sight e.g. with compass binoculars.
3. Make sure your tracker receiver is on (and you can hear the model) and leave it on. The signal from the model when it is in the air will be very strong so it is relatively easy to get direction (particularly with a directional antenna such as a yagi). When the model lands the signal will most likely disappear or become very much weaker. If you then stop the watch the flight time will allow an estimate of the likely distance.
4. Follow the model in your car. The ability to do this will of course depend on the field, fences, suitable roads etc. but it is very important to try to be as close to the model as possible when it lands to make it easier to find the radio signal.

   It is helpful to have maps so you can see if there are suitable roads. Google Maps on your phone is ok and there are other applications such as Motion X that show the terrain and your track on a map. http://gps.motionx.com/
5. Stop the car frequently - particularly if the signal is getting weaker - to check the direction. When the model lands and the signal will become very faint or disappears you need to be able to continue in the direction you got when you last heard a signal. Follow on the road if it is in the right direction, otherwise on foot. This is the hard part. You have to hear the signal to find the model! A key to this is finding a point to listen that is higher than the surroundings. Even a few metres are a help.

Back to the Nationals. We drove out along Clear Ridge Road (away from town) noting that the signal was coming more and more from the left side of the road. The map (Motion X) showed a road (Campbell's Lane) heading off to the left about 2km further along Clear Ridge Road. We headed down Campbell's Lane (now followed by Matt, Donna and Chris who had joined the fun) and when we came out on the other side of the forest the signal was now to the south (we had obviously passed the model when we drove north to Campbell's Lane). We turned south on Paton's Lane noting that the signal was still to the west of us. After travelling some 4km south on Paton's Lane we got out of the car to get a better

direction as the signal was getting weaker.

While we were standing at the side of the road listening, a local, Greg Davies pulled up and asked what we were doing. We explained that we were searching for a model aeroplane. Greg said he knew the farmer who owned the land on the W side of Paton's Lane and he would give him a call to let him know that the person trespassing on his fields was not dangerous and did not need to be shot at. While all this talk was going on the signal faded and disappeared. Well it didn't quite disappear; by holding the yagi up a very faint beep could sometimes be heard. So we had a signal and because it was very weak it was most likely the model was on or at least close to the ground.

If the model is high in a tree it's as if the model is still flying and the signal will still be strong. Since the ground range should not be much more than a couple of k at most and there was no nearby road heading west Vin set off on foot. It was a pleasant walk, across a couple of bare fields, through a creek gully, past an abandoned farm and across some beautiful green, sheep/free flight fields that led up to the State Forest. The walk was interrupted by telephone calls from Leigh inquiring on progress and Donna reporting that, back at the field she had picked up my F1A and it was now safe from sheep in the house (thanks Donna).

The local forests are not very dense so I was still hopeful that Leigh's model was on the ground and had not suffered any damage getting there. The going was a bit slower in the forest but after pounding around in circles for a bit (lots of undergrowth) I picked up the unscathed model at the foot of a 30m high eucalyptus. Pretty lucky really. And even better, Motion X showed that I didn't have to walk all the way back to Paton's Lane because the West Wyalong – Wamboyne Road was only about 1km to the south. Greg the farmers mate had told Leigh there was a road to the forest, and that if necessary you could drive into the forest. The pickup was easy.

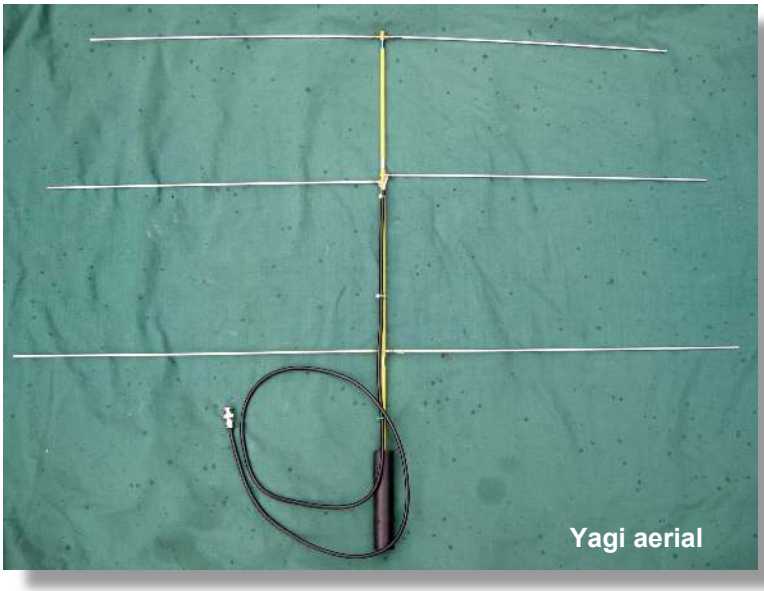
More points

6. If locals appear when you are searching it is worth talking to them. Matt, Donna and Chris also followed us for a while and it was good to have their support. They left when Vin said he had a signal on the ground. Once you have that signal, you will almost certainly retrieve the model (unless it is at the top of a tree @#$%^&*().
7. Phones are useful (if they work out in the country). Vin and I communicated on our mobiles and this saved a lot of walking.
8. A good antenna is a help. A simple yagi will give about twice as much range as the small loop (size is important in antennas!).

It turned out to be a pretty simple retrieve. The model flew for 43 minutes and was only 6 km from the flight line.

The timer was one of Harry's, (D-Tox M type), but the flyaway was not the fault of the timer. The problem was caused by a knot in the DT line which caught and stopped the tail from coming up properly.

It is easy to make a simple yagi antenna and it is useful to have one in the model box or the car. A yagi will give about twice the range of a rubber-duck or small loop antenna. The pictures show how you can make one that dis-assembles down into parts less than ~600 long that will fit most Wakefield boxes. If you have a larger box it is better to keep the front and back elements in one piece.


Yagi aerial


Yagi folded


Yagi centre

Details on building Vin's yagi aerial will be published in the December Free Flight Down Under

Victorian State Championships 2016 – Part 2

Report and photos by Vin Morgan

Gary Odgers accepts the prestigious Shaw Cup from Martin Williams, for winning the 2016 Open Rubber event.

The average weather for the whole of the 2016 Victorian State Championships was quite good. This might be a surprise to those who only attended the first part but the fact is the fairly dismal conditions at the end of April/beginning of May were balanced out by two perfect flying days on the 6th and 7th of August. I have to report that Sunday was T-Shirt temperature and Gary's Open Rubber flyoff flight of 6 minutes 34s didn't leave the field.

We flew the Shaw Cup (Open Rubber) and Oz Diesel on Saturday and on Sunday we had the OR flyoff and flew Combined Vintage.

On Saturday morning we couldn't tell which way the wind was going. A streamer suggested NE so we set up in the middle of the E-W fence that divides the field. It turned out that models tended to drift W (and later SW) so we moved nearer the E end of the fence to avoid the farmhouse and its trees.

Leigh Morgan, Gary Odgers and Vin Morgan all made the 3 Open Rubber flights fairly easily. Ian Haigh flew his 1941 Lamb Climber in OR but dropped the first flight because, contrary to its name it didn't climb. It didn't glide too well either because, as he discovered later, the tail adjustment had been screwed all the way down (Ian blames children).

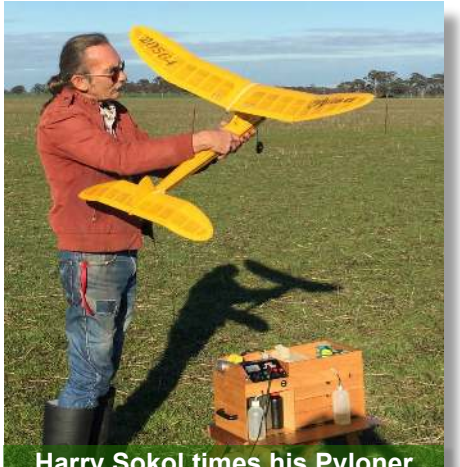
In OzD Harry Sokol boringly put up five easy maxes with the Y-Bar. The D-Tox timer allows highly consistent motor runs, the 9.6s outlier being attributed to the timekeeper being over-eager on the first flight. Gary – I don't like long retrieves – Odgers had quite big day, putting in three flights of Open Rubber and five of OzD. Not sure what he did to get the 61? Martin Williams eventually got a flight – and a max – but he seemed to go through as many engines as the rubber flyers. Those dieselized Cox 09s sound good when they are running well but perhaps are a bit fragile???

Most of us went back to Bridgewater for lunch but Peter Greenhill and Martin stayed on the field for the afternoon. They did join everyone else for dinner in the Bridgewater Hotel. The Hotel is under new management, the meals are still good, and ordering is improved by the addition of a separate meals ordering window adjacent to the kitchen. We chose Waterwheel Cabernet to help the food.

Sunday was warmer than Saturday and sunny (Saturday had had thin overcast). The OR flyoff, CDed by Martin, got under way at 08:10. Gary and Vin went as soon as they had wound and had nice flights landing near the N side of the field. Gary did manage to hit one of the trees that line the fence but he won nevertheless. Leigh had some trouble with the rubber band that holds the fin on and as a result the fin was not properly secured. This meant that under initial high torque the fin was inclined to lie flat and pretend to be another tail. We saw that fins are necessary when the model wasted the best part of the motor run doing aerobatics. She still got over 5 minutes.

Combined Vintage showed the importance of age! Ian's Lamb Climber was helped by the 30 bonus points although he would have scraped in the win even if points were not counted. Peter Greenhill's Stomper was second while Harry Sokol's Pyloner really wanting to be a control line model and shy of height did most of the power run for the first two flights in tight circles just over the flight-line. A bit of packing improved the pattern for the third flight.

A pleasant if sparsely attended weekend. The rather short notice probably did not help but finally deciding to hold the contest just two weeks out did allow the long-range forecast to confirm reasonable weather.



Harry Sokol times his Pyloner

Open Rubber Shaw Cup

		1	2	3	Total	FO
1	Gary Odgers	180	180	180	540	394
2	Vin Morgan	180	180	180	540	368
3	Leigh Morgan	180	180	180	540	304
4	Ian Haigh	147	175	180	502	

Oz Diesel

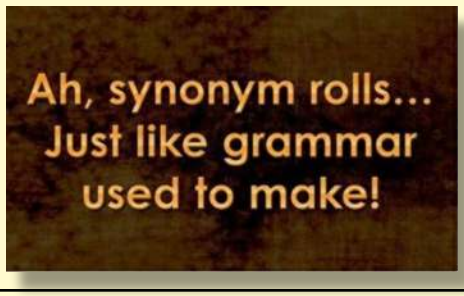
		1	2	3	4	5	Total
1	Harry Sokol	120	120	120	120	120	600
2	Gary Odgers	61	115	120	120	120	536
3	Martin Williams	120					120

Combined Vintage

		Model	Year	1	2	3	Total
1	Ian Haigh	Lamb Climber	1941	180	180	172	532
2	Peter Greenhill	Stomper	1953	153	180	133	466
3	Harry Sokol	Pyloner	1947	81	110	150	341

P-30

		1	2	3	Total	FO
1	Vin Morgan	120	120	120	360	157
2	Sean O'Connor	120	120	120	360	144
3	Leigh Morgan	104	117	120	341	
4	Ian Haigh	106	83	26	215	



NSW State Champs F1A, B and C

Programme of events

1 - 3 October 2016

Adrian Bryant Field, West Wyalong

Saturday 1st October	F1B, Open Power	7.00 am start
Sunday 2nd October	F1A, F1C & Open Rubber	7.00 am start
Monday 3rd October	½ hour Scramble, F1G, H, &, J	7.00 am start
	Combined Vintage	7.30 am start

NOTES:

Vintage will be combined depending on numbers

Fly Offs will be in the evenings if practical, CD's discretion. If held the next morning they will start at 6.45 am

Vintage and Open events 3 flights, other events 5 x 1 hour rounds

CDs NEEDED! If you can be CD for one of the days please tell Terry Bond

NB: Daylight saving starts on Saturday night

40th Australian Free Flight Society Championships & Dave Anderson Memorial Narrandera 2017

Questions or Comments?

Please direct to:
Phil Mitchell: (02) 4384 3217
filnoels@bigpond.net.au

Dave Anderson Memorial (DAM) (World Cup Event)

Thursday 04 May	F1A# & F1C #	5 x 1 hour rounds	0800 - 1300
Friday 05 May	F1A & F1C Fly-offs from Thursday		0700 - 0730
	F1B #	5 x 1 hour rounds	0800 – 1300

AFFS Championships 2017 (World Cup Event)

Saturday 06 May	DAM F1B Fly-off from Friday		0700 – 0730
	Start AFFS		
	Combined % open	3 flights	0730 - 1200
	F1G*	5 x 1 hour rounds*	0800 - 1300
	F1H*	5 x 1 hour rounds*	0800 - 1300
	F1J*	5 x 1 hour rounds*	0800 - 1300
	Evening AFFS AGM (Narrandera Club)		1930
Sunday 07 May	Rest Day/Reserve Weather Day (No Flyoffs)		
Monday 08 May	% Open Fly off from Saturday		0700 - 0710
	F1A #	5 x 1 hour rounds	0800 - 1300
	F1C #	5 x 1 hour rounds	0800 - 1300
	P30	3 flights, 120s max	0800 - 1300
	Open Rubber (P.Twiss Memorial)	3 flights	0800 - 1300
Tuesday 09 May	F1A, F1C, P30 Fly off from Monday		0700 - 0730
	F1B #	5 x 1 hour rounds	0800 - 1300
	Open Power	3 flights	0800 - 1300
	Combined/HLG/CLG/TLG		0800 - 1200
Wednesday 10 May	Fly offs from Monday: Open Rubber		0700 - 0730
	Fly offs from Tuesday F1B & Open Power		0700 - 0730
	Combined Vintage	3 flights	0730 - 1200
	Scramble		0830 - 0930
Wednesday 10 May	Evening. Presentation Dinner for AFFS & DAM		1900 for 1930
	Venue: Morundah Hotel Bus from Narrandera provided.		

CONSTRUCTION CORNER

Getting "Roundtoit" (continued)
Which "Southern"????

Which "Southern"?

On New Year's Day 1930 Australian National Airways Ltd (ANA) inaugurated it's Brisbane –Service from both Capitals simultaneously. The Southern Cloud with "Smithy" up front left Mascot for Eagle Farm and the Southern Sky with Shepard in command and Ulm as Co-pilot left Eagle Farm for Mascot.

ANA's fleet at this time included:- the Southern Cross, a Fokker FVIIb3m, the Southern Cloud, the Southern Sky, the Southern Moon, the Southern Star and the Southern Sun, all of which were Avro Ten Trimotors. Interestingly the Fokker Aircraft company sold its FVIIb3m design to the English Avro Aircraft Company who manufactured the Avro Ten. From research and in my opinion the Fokker FVIIb3m was a slightly better finished subject and a swag of detail is still available on this aircraft.

As mentioned in my previous "Roundtoit" article my uncle Bruce Mitchell was a very keen scale modeller. He was also very well aware of the history of early aviation in Australia and the tragedy suffered by the fledgling airline ANA when the Southern Cloud after departing Mascot at 0815hrs on 21 March 1931 hit extremely bad weather conditions over the Snowy Mountains and crashed later that afternoon with no survivors. The location of the wreck remained a mystery for nearly 30 years until discovered by a Snowy Scheme worker on 26 October 1958.

My uncle's great interest in the discovery of the wreckage of the Southern Cloud led him to build a scale model of this aircraft which he presented to the Cooma Visitors Centre in 1963. The model is still hanging in this facility today.

My original intention was to build a scale model of the Southern Cloud. However, as I progressed with research to construct the model, it became clear to me that much more detail was available on the Fokker FVIIb3m Southern Cross than the Avro Ten Trimotor Southern Cloud. So with "Smithy's" historic Trans Pacific flight in mind I decided to scale "the old bus" in its Pacific crossing format.

Planning

Stan Mauger of NZ kindly sent me a copy of Lloyd Ackroyd's very accurate Aeromodeller March 1958 Southern Cross 50" control line model plan which I enlarged to 60". Being a multi engine aircraft I eventually settled on the need for it to be all electric (some would say going to the "dark side"!) so as to allow the fans to work on all 3 engines. With excellent advice from Paul Rossiter and Roger Morrell re suitable brushless motors and Black Magic programming respectively, the power plants were sorted.

Construction

Building was fairly straight forward however sequencing construction required quite a bit of "cogitating" along the way!! I've included some scale/construction pictures with this article…….and yes even the great aviator "Smithy" and crew had to use the "can" !!

Once again Matt Hannaford came to the rescue with superbly machined wheel covers and engine trim rings. The wing used all of my stock of light ¼ grain 1.5mm sheet…..9 x 100mm sheets! I included carbon fibre spars

for strength/lightness. Fabrication of the 27 cylinder heads was a bit tedious, I actually used lengths of ½" balsa dowel and wound string around to replicate the cylinder fins. I then coated this with laminating epoxy to smooth out the finish and added silver paint. I then docked of each section of cylinder head to complete the dummy radial engine layout.

I also sourced some "King Billy" pine slabs from Tasmania and cut all the fuselage ¼" square longerons & 3/32 square fuselage stringers on my trusty table saw (adapted from a Tile saw purchased for $70 from Aldi!).

Flying

The model has been test glided and has had a sort power run. A flimsy (engine manufacturer supplied) plywood front engine mount breaking caused some angst and did not allow the model to fly at the Richmond Scale day this year. With a new engine mount fabricated from 2mm circuit board I now need to find a suitable paddock with long grass to get the flight trim on "the old bus"sorted.

The next "Roundtoit" project is now well underway……more to come later…….

Phil Mitchell

What? Another vintage power model from Roy?

Dave Posner's "*Dream Weaver*", the model that was placed 2nd in the world champs in 1955, has always been on my "to build list". It is a nice looking model which should go well in open power with no gadgets, just like the good old Dixielander. "

The Dream Weaver plan, was published in 1956 so has not been eligible for vintage until now. After some researching information, proof came to light that the MK IX plan published, is the model that Dave used in the 1955 championships. The information was passed on to the AFFS vintage committee for ratification, and to be accepted into the AFFS list of vintage models.

With this plan now accepted, the model could be used for open, as well as vintage events, which gives a much bigger incentive to build one. The original was powered by no other, than the good old Oliver Tiger Mk3, I will use the same. It's nice to have a diesel powered model, walk out to the flight line with just a squeeze bottle and a rag, much quicker to use.

Now it was time to sharpen up the knife, select the very best of my balsa, (no point in keeping it much longer,) and get started. I already had a full size plan from Mike Glaister, this plan turned out to be one of the best that I have ever used, everything was just right about it, thanks Mike.

I have kept to the plan, even though the choice of spars and their placement is not what I would have liked, but if you want to use it in vintage, you can only strengthen the model not re design it. The wing and stab are geodetic. Multi spared, under cambered, sheeted leading edge, and of course elliptical tips that I like. Fuselage is of a simple box construction, with a built up pylon and rear fin.

I haven't found what colours Dave used in the 1955 world champs, but the wing and tail were silk covered. I will use silk, as I did on the Swiss Miss. Always a problem for me selecting colours, but I am thinking red silk for the wing and stab, along with a white fuselage.

Roy Summersby

And now, a FFDU First! *For those reading this on a PC with sound speakers, turn them on and click on the link. This song may have been what inspired Roy?*

URL: https://youtu.be/xZKuzwPOefs?list=SRgary%20wright%20dream%20weaver

What Broke?

Apart from me ripping the wings off F1As, there has been only structural failure I can recall of any airframe of mine under more or less normal conditions. A 1/2A Viking I built many moons ago disappointed me by jettisoning its tailplane, fin and the last six inches of the fuselage when it landed under D/T, the whole assembly left flapping sadly on the end of the D/T line. (But I had been naïve enough to build the model with the balsa supplied with the kit.) All manner of designs seem to survive dud launches, unintended aerobatics, ripsnorter thermals, hard landings and various other abuses without snapping. So might they be too strong – and too heavy?

As well as resistance to outright structural failure, model structures need to be strong enough to resist excessive deflection under load, be stable enough not to warp in service and be torsionally stiff enough to minimise flutter. I have observed an old-fashioned balsa F1A's wing (built ounces underweight) flutter itself to death on launch and have seen modern F1A tailplanes explode when the models are flying at 100+ km/h on launch. Jon Fletcher has told me a tale of the fuselage on a Zoot Suit rotating 90 degrees on launch. All this is to be avoided, but for the minimum possible weight. So I thought I'd give structure a thought. Or two.

I have tried to get the most out of a fairly simple balsa structure, juggling weights of material in various parts of it to come up with a model that is strong enough to withstand the stresses of flight as well as the hazards of the hangar. The results are as you see in the photographs: my Free Flight Fancy, Ozalisque.

In designing Ozalisque some of my erstwhile friends have accused me of doing nothing more than stretching a Mini Weaver. And yes, I know what Mini Weaver looks like (I still have mine): it has geodetic construction and elliptical tips and tail. So does Ozalisque. So how is Ozalisque different? Let me count the ways:

WING: Elliptical tips yes, but higher aspect ratio with thinner section. Different geodetic geometry. Less dihedral. Different spar design. Different distribution of material to ribs, spars, etc.

FUSELAGE: Much lower pylon. Longer moment arm. Fin smaller and in front of the tailplane.

TAILPLANE: OK, it's not much different. Changed geodetic layout. Slightly smaller percentage of wing area. Slightly thicker section.

So there are as many differences as similarities. In fact after I had built Ozalisque I came upon a plan of George French's Night Train. Had I copied anyone's design, it could have been that one.

Evolution of Model Design

On the subject of earlier designs, it is interesting to observe how quickly power model design developed during the 1950s. From the Slicker of 1947, designs jumped to the Stomper in 1953; Creep and Mike Gaster's Gastove in 1955, Posner's Dream Weaver in 1956 and in 1958 Norman Marcus's Eureka and Bond Baker's beautiful F1C, which would have won the World Championship that year had its second flight not ended on the roof of the highest hangar at Cranfield. (Baker, who won Wakefield that year, must be regarded as one of Australia's most intelligent aeromodelling designers and most meticulous builders.) There followed the "classic" period of F1C design in the 1960s which gave rise to Night Train, FAItal and similar designs. Then came foil wings, Rossis, bunts, carbon fibre, engine brakes, geared props, folding wings and all that other stuff which Oz Diesel has been created to avoid.

Three-views of Gastove, Baker's model and Night Train VII are reproduced below.

There are about a dozen design variables to consider when designing a model even before structural reality dawns. My current list is:

1. Overall model size
2. Aspect ratio
3. Wing loading
4. Dihedral
5. Wing section
6. Tailplane proportion of wing area
7. Tailplane section
8. Pylon height
9. Moment arm
10. Fin position
11. Fin area
12. Thrust line

There is a cosy spot somewhere in this twelve-dimensional space where all the really successful designs must lie. As I can't calculate it, I can only find out by experiment whether Ozalisque has joined them there.

I am still tinkering with variable 1. Dihedral is less than standard. Variable 6 is currently at 33%, which is on the low side of the historical average. Fin position I am persevering with at mostly forward of the tailplane and fin area has just been eyeballed but seems OK with no Dutch roll or spinning. The fin has been designed to match the shallow dihedral. Thrust line is the usual: parallel with the centre line of the fuselage. This leaves the fun bits: aspect ratio, wing loading, pylon height, moment arm and wing and tail sections.

I am going over just the same ground that all designers right back to the 1950s and before have done. Dave Hipperson, in his very interesting 1999 articles on trimming Slow Open Power (SLOP) models, gives his relatively modern recipe for

a successful model design to be: aspect ratio 7 to 8, moment arm three times chord, tailplane 35-40% of wing area and pylon high enough to place the wing above the propeller disc. He illustrated his preferred wing sections and showed a flat-bottomed tail section to match. Another 1999 British design for Brit Diesel, Big Brit, is very close to this recipe too. Its wing planform is almost identical to Stomper's.

ASPECT RATIO

The improvement in rate of sink to be gained from increasing aspect ratio is considerable, yet most "open" power models even today remain at about 7:1. George Fuller started there with Stomper, ventured out to 9:1 with Zoot Suit then retreated to 7 again with Dixielander. Gastove has an aspect ratio of 6.9, Dream Weaver Mk. IX and Baker's 1958 model have about 7.5. Aspect ratio does not increase until the mid-1960s when engine power was higher but engine run time was down to 10 seconds and wing loading was up to 20 gram/square decimetre. Models climbed faster but sank faster too, so the hunt was on for better glide. George French's Night Train Mk. II of 1961 had an aspect ratio of 7.5 and by the time Mk VII was built in 1967, aspect ratio had increased to 8.8. French came second to Hans Seelig (flying a model with a fully sheeted wing) in 1967 and third placegetter Savini's model FAItal was very similar to French's in layout, with an aspect ratio of 9.3. The model of the third member of the victorious British team, Ray Monks, was a close relative to the other two. Even in 1971 the NFFS nominated Night Train as the best F1C design of the year.

So how could French, Savini and Monks manage an aspect ratio approaching 10:1 with conventional materials and construction when even Baker and Gaster had shied away from it only a few years before? The introduction of VIT may have had something to do with it, but pursuit of better glide performance is a more likely explanation. Higher wing loadings also gave room to beef up wing structures to better withstand the higher bending moments and greater sensitivity to warps that higher aspect ratio brings.

WING LOADING

I initially thought that a wing loading of only 10-11 grams per square decimetre would be a significant point of difference between Ozalisque and earlier designs, but the FAI rules until 1958 allowed a wing loading of 12 gram/square decimetre, which the 1955 winner Gastove, Draper's winning model Crescendo and second placegetter Dream Weaver from 1956 were all built to. So the difference in wing loading and therefore glide speed between these mid-1950s models and Ozalisque is small. It is difficult using engines weighing 85-110 gram to reduce the overall weight of the model to less than 300 gram; is it really worth trying? I might be able to let you know this time next year…

PYLON HEIGHT

Designers of the 1950s took for granted that the height of the pylon had to be sufficient to ensure that none of the wing was hit by prop blast. Designers of the 1960s were not so shy, as can be seen from the Night Train and later F1C designs, although Hipperson persists with a pylon of this height. A high pylon results in a large looping moment under power, which in turn must be neutralised by a lot of lift from the tailplane: Eliminator, with a very tall pylon and a relatively short moment arm, has a huge tailplane (50%!) and a lot of downthrust. This can clearly be made to work (Eliminator won the World Championship in 1952 after all), but it isn't an efficient way to go about things.

MOMENT ARM

The Slicker 50's moment arm is 2.0 times the root wing chord. Eliminator's is 2.4. Gastove's is 2.6. Creep's is 3.2. Night Train Mk VII's is 3.5. Baker's 1958 model's is 3.7. Ozalisque's is 3.8.

WING AND TAIL SECTIONS

Wing: Eliminator has a 10% thick flat-bottomed section. Gastove used a moderately undercambered Goldberg wing section. Dream Weaver has a highly undercambered and quite thin (7%) wing section with undercambered tailplane. Night Train and FAItal have slightly undercambered sections about 10% thick. Baker's wing section is also 10% thick but has more undercamber. Later F1Cs with balsa D-box, foil or carbon wings go back to sections down to as thin as Dream Weaver's. Hipperson's SLOP of 1999 used a quite highly undecambered section about 9% thick (identified as T34 and not far removed from the NACA 6409 of Stomper and Dixielander fame) while Big Brit of the same year goes back to a flat-bottomed 10% thick section.

Ozalisque 1 has a moderately undercambered wing section 8% thick. Ozalisque 2 has similar undercamber but is down to 7% thickness. It's too early to tell (there having been almost no flying days calm enough for trimming since 2 was finished) to compare the performance of the two thoroughly, but my early suspicion is that the thicker section glides better.

Tailplane: There are many true tales and possibly some tall ones in this area. An early version of Savini's FAItal with a flat-bottomed tailplane suffered from poor transition to glide: the Aeromodeller article of May 1965 where the plan was published states that this was cured by substitution of an undercambered tailplane section. Other designers have done the opposite, claiming to have cured stability problems by ditching an undercambered section for a flat-bottomed one. For now, with no problems evident yet, Ozalisque sticks with the crowd and has a flat-bottomed section 8% thick.

OTHER STUFF

What about aerodynamic knowledge, materials and dedication? Disposing of materials first, the main change in the past half century has been the introduction of synthetic coverings – Polyspan, Micafilm, Solafilm, Litespan, Oracover and Icarex to name some of them. Most are too elastic to provide any strength to a structure: the Litespan I initially used contributed virtually no additional torsional stiffness to the Ozalisque wing. I expected this and had built the structure to suit, but I doubt that the advantages of Litespan are sufficient to compensate for the lack of strength for the inner panels of wings. On tips it's fine. Icarex is everywhere in FAI, but in association with carbon structures. I haven't used it so far as it is relatively heavy and requires fuel

proofing. I have however used the lightest version of Micafilm on the undersides of the inner panels of Oz 2's wing. There are three weights of Micafilm: natural (no layer of colour); translucent (thin colour layer) and opaque (heavy colour layer for metallic finishes, scale colours, etc.) The natural version weighs about 23 gram per square decimetre. It adds some stiffness and is very tough. It has also been out of production for years, so I'm trying not to get too excited.

Knowledge. When Mike Gaster won the world championship in 1955, he was a Ph.D. candidate in aeronautical engineering. Even today at 84 he is a professor of aeronautical engineering at the City University London. There wouldn't have been much relevant technical knowledge in 1955 that he didn't know about and wouldn't have used; and (though I stand to be corrected) there doesn't seem to have been much added since. Moving flying surfaces (A/R, VIT, flaps, wigglers…) were around in 1955 but I have seen no evidence that they were used at the world championship that year. In 1956 Posner didn't use them but the winner Draper used auto rudder. Baker used VIT in 1958. All academic for Oz Diesel of course, except that these gadgets contributed to experiments in airframe design.

Dedication. The model that Gaster flew in 1955 was Gastove Mk.XVI. Next year Posner flew Dream Weaver Mk. IX. By 1967 French was flying Night Train Mk. VII. Savini only needed to reach Mk. V before Aeromodeller published his plan. By the time Posner gave the game away in the mid-1960s, he was flying Dream Weaver Mk XXVIII. The amount of thought, construction and flying effort was immense - and all of these flyers were immersed in an atmosphere of intense activity where entries in power events in Britain could number in the hundreds. Many of the models would have been designed by the flier. The performance of most must have been forgettable, but the ferment about identifying what did and didn't work together with all the on-field experimentation led to empirically refined design solutions. Yet still tiny variations between succeeding versions of successful designs made substantial differences in performance.

SO DOES OZALISQUE FLY?

After a long drought of trimming weather, the Victorian State Championships Stage 2 were held in perfect conditions on 6/7 August. I flew Ozalisque Mk II 20 times to trim it and hadn't got very far when the end of the Oz Diesel contest loomed. I dialled up 8 seconds on Harry Sokol's timer instead of 4, cranked up the engine, launched and watched with astonishment as the model hooked a thermal and maxed with one minute left in the contest. It was turning much too tightly and stalling like crazy, with the happy result that it was doing stall turns in the lift. Another 25 trimming flights later I still wasn't getting far! The roll rate was too slow, the engine wasn't run in and wouldn't hold revs and despite my taking out a large amount of decalage, the model was still stalling. The stall was phugoid too, i.e. each stall was worse than the last. On D/T, the model sometimes began to spin. I once had an F1A which was similar but more extreme, where the slow spiral developed into a rapid flat spin followed by wild gyrations which ended in a broken model. No amount of trim change would fix this until I moved the CG forward, which I will do with Ozalisque even though it is now exactly where I intended at 83% of chord.

It will probably take me another 50 flights to trim this model and as many again to trim Mk 1, but I can report that:

- The climb pattern can be trimmed to the ideal of about two turns of a helix in 10 seconds with no sign of instability.
- The rate of climb when properly trimmed should be 12-15 metres/second, using data from the altimeter facility in Harry's timer. (On several flights, the highest rate of climb was recorded *after* the engine cut-out had actuated!)
- The model is quite stable in glide except for the stall behaviour – and the rate of sink promises to be excellent once on trim.

Conclusion

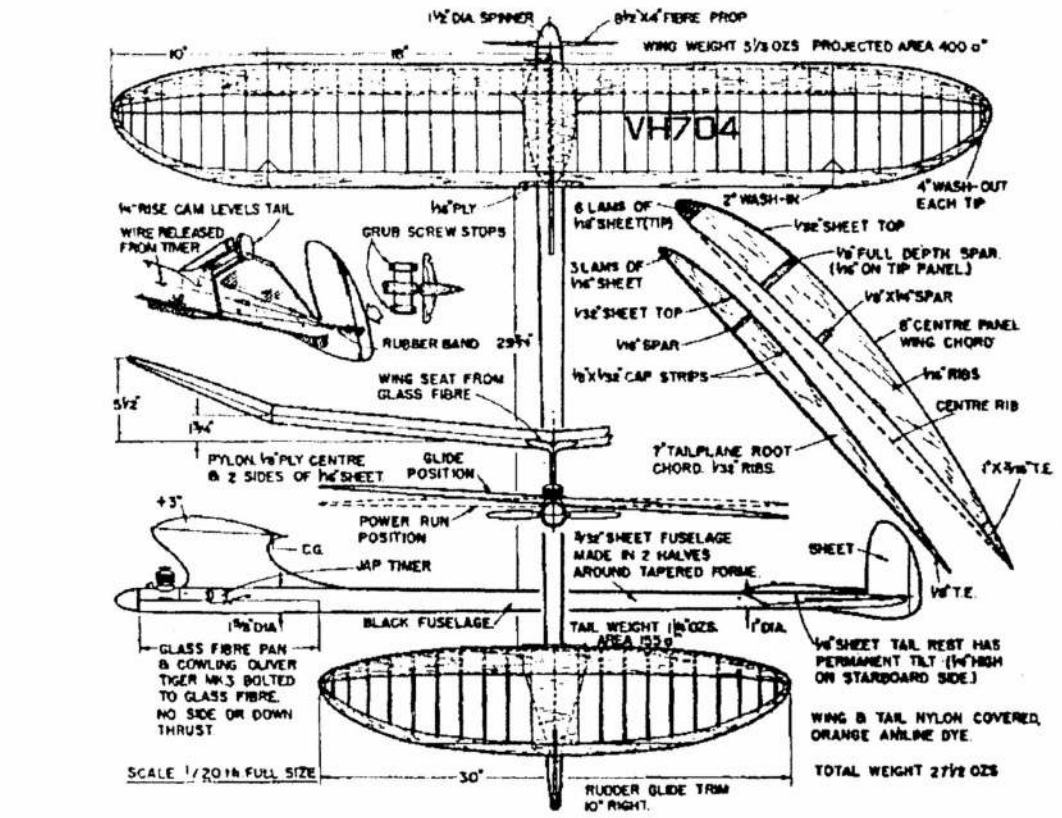
So after all the research, analysis and agonising, what have I come up with? A model that looks like it came from an F1C contest in about 1967 with a wing section from pre-1955 and a plain bearing one and a half in the nose. And the design's probably half a dozen variants away from being bug-free. Just for fun, below is a photograph of my somewhat battered Dream Weaver (designed in 1956, built in 1986) next to Ozalisque II (designed and built in 2015). Whatever has been learned in 60 years is pretty subtle! The main changes are aspect ratio, fin position, pylon height and (where permitted) wing loading. My Dream Weaver with an Oliver Tiger weighs 535 gram for an area of flying surface of 37.5 dm²: a wing loading of 14.3 gram/dm². Ozalisque weighs 300 gram for a flying surface of 30 dm²: a loading of 10 gram/dm².

Dream Weaver of 1956 and Ozalisque of 2015. Spot the difference!

Am I any better off than I would have been if I *had* just multiplied a Mini Weaver by 1.2? After a few more calm trimming days, I might dare to let you know….

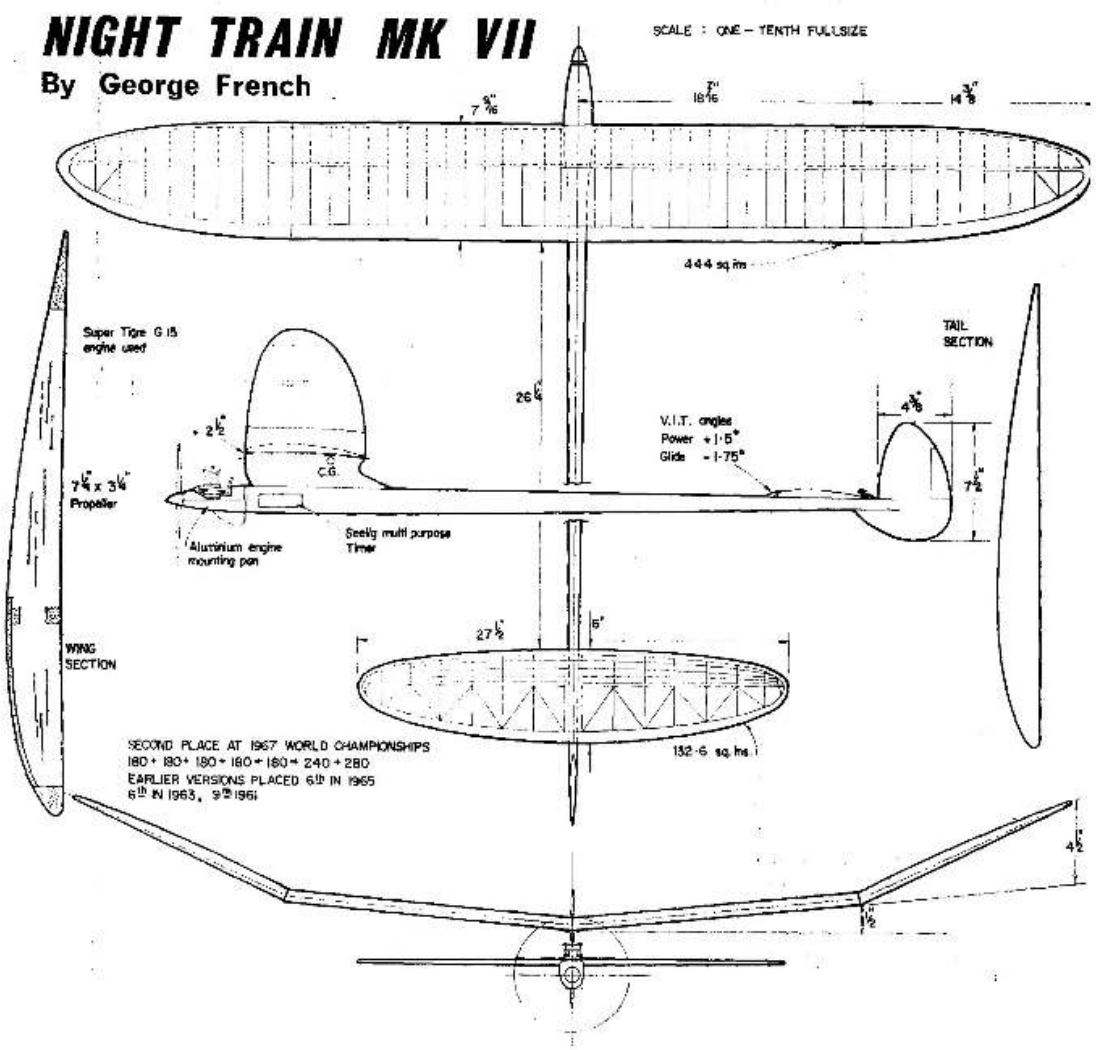
Martin Williams

Bond Baker's Power Model, 1958

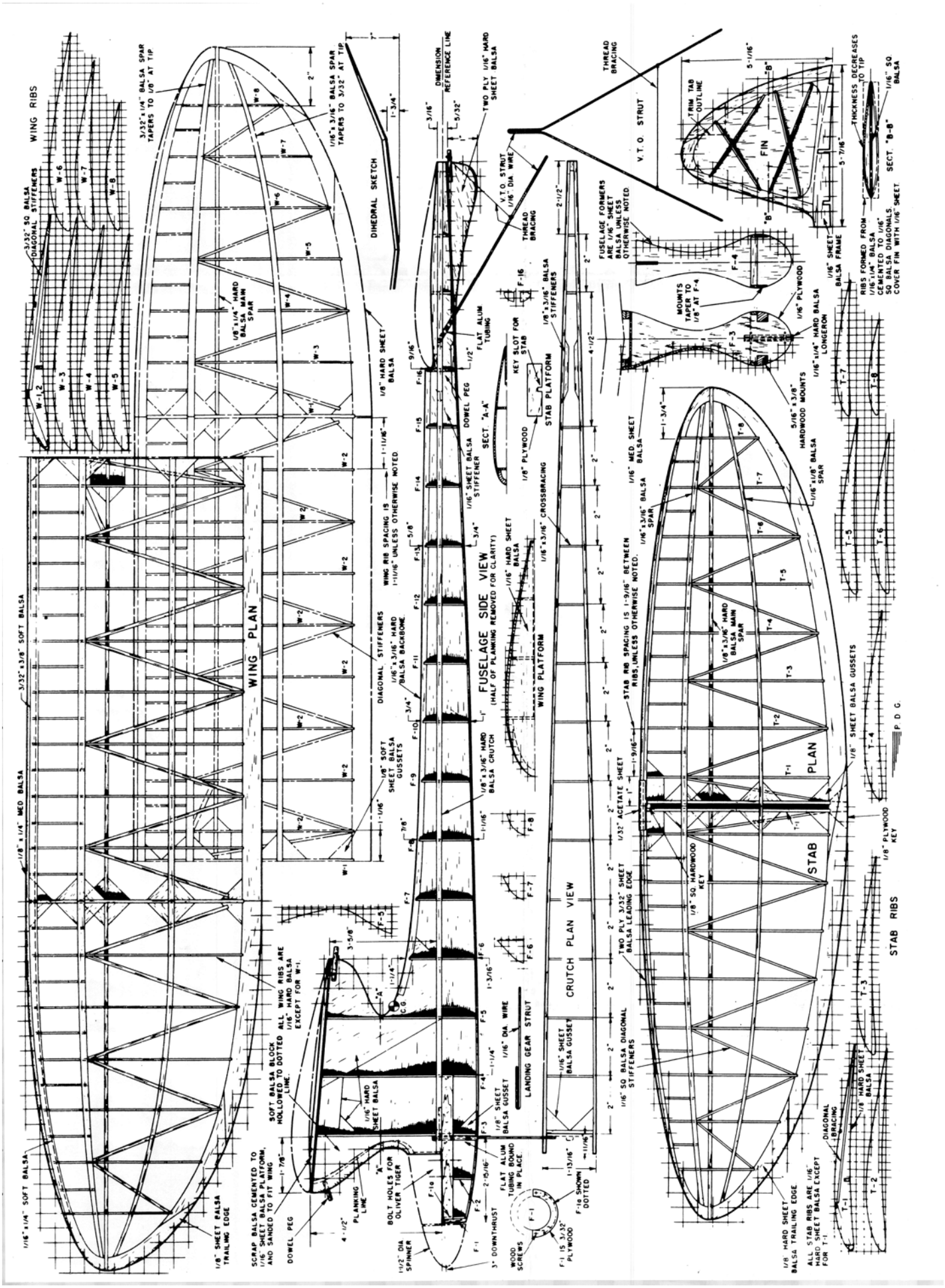


NIGHT TRAIN MK VII

By George French



Mike Gaster's Gastove

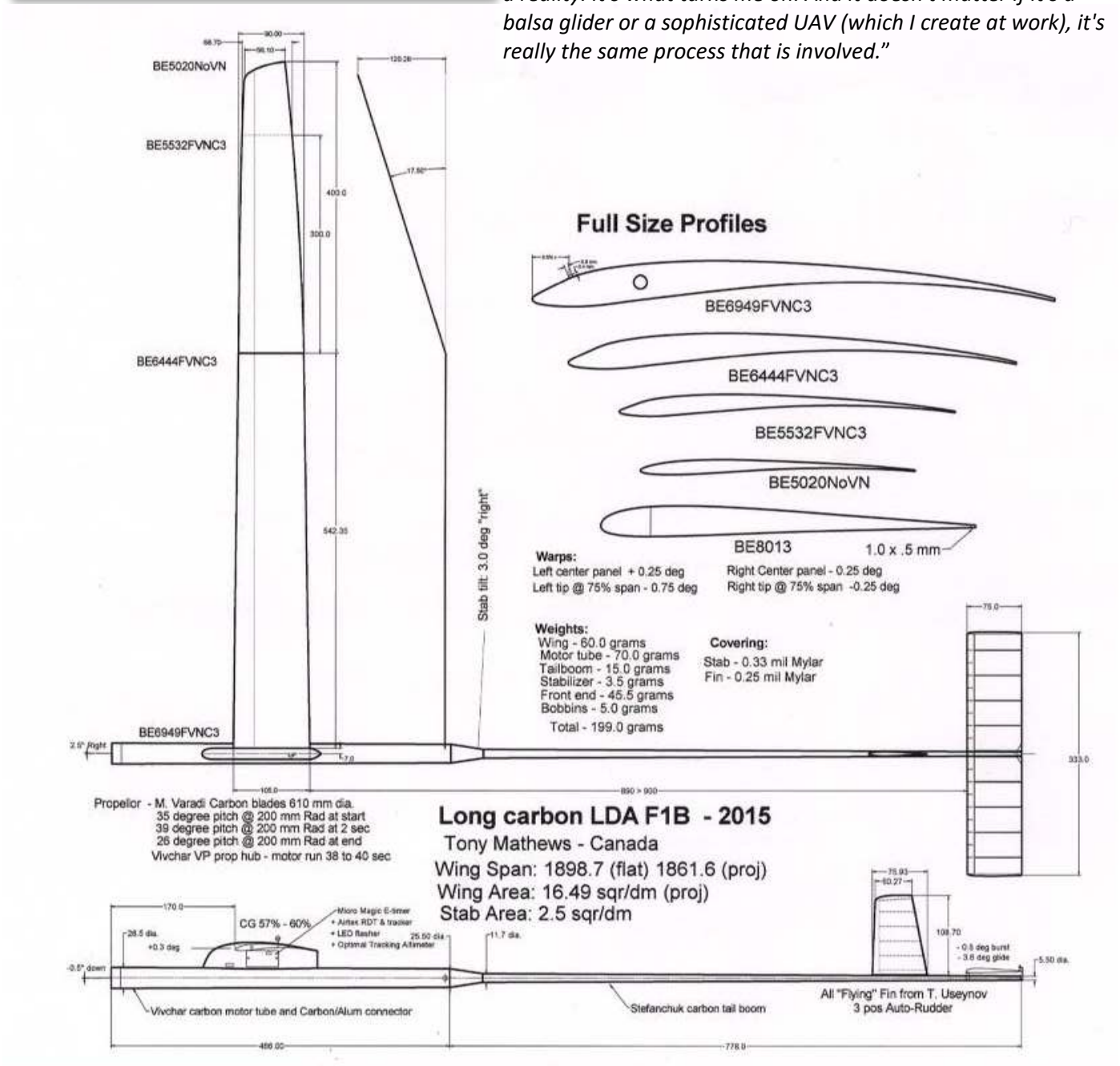


Tony Mathews (F1B Canada)

"You know everybody that does this hobby has their own reasons for why they do the things they do. I quit FAI flying for about a decade back in the late 90's. At that point I was still building all of my own models. When I decided to wade back into it in 2007 I realized that most people were now buying their complete models from a few suppliers and that the standard of flying had gone up considerably. With everyone having access to "good" models, it freed up time for practice and all of a sudden everyone was capable of winning on a given day.

Some people suggested to me that since FAI flying was now a "sport" (which is basically true) that I should buy a few Andriukov models (or Vivchar or Stefanchuk, whatever) and compete with that.

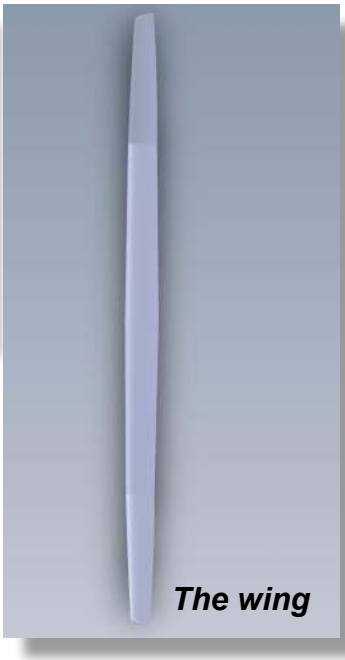
To be honest it really didn't appeal to me. Not really because I wouldn't build the model myself. But mostly I found that I really want to fly "my" model. That is, my design with my ideas. Not because I think I might have better ideas than anyone else, but because I really enjoy the pursuit of new ideas and making them a reality. It's what turns me on. And it doesn't matter if it's a balsa glider or a sophisticated UAV (which I create at work), it's really the same process that is involved."




The wing mold

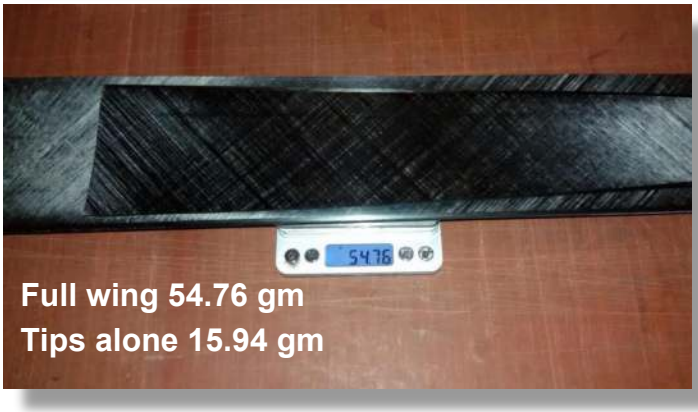

The section


2.2 gm


The wing


3.08 gm

Built light, built strong!


Full wing 54.76 gm
Tips alone 15.94 gm


Canadian Ladi Horak holds the completed model

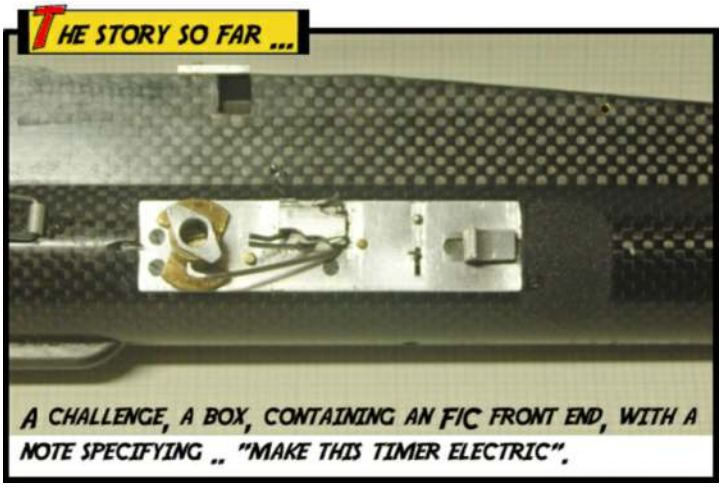
Tony finished his new model (above) just in time because his best model was destroyed when it hit power lines during a recent Canadian competition. This new slinky black creation went on to win both events. Tony says he will still build a replacement for the lost model.


Tony Mathews launches his best model in the July 2015 World Champs in Mongolia. Yury Shvedenkov times and Michael Seifert watches on.


The end of that good model came in August 2016. Carbon is an excellent conductor. Nothing was left of the wings, stab or fin.

ELECTRIFYING FIC

BY DTOX LABORATORIES



.... Seemed straightforward, remove mechanical timer, fit a new type P-type timer and everyone will be happy. Alas, nothing is ever as easy as it seems. Removal of the mechanical timer and trial fit of the P-type showed that not only would some of the precious carbon fuselage have to be removed, but there would remain a rather large void which would have to be filled. Now carbon laminate looks so nice that it would be a shame to fill the gap with something inferior, not to mention the impact on rigidity and strength. A different approach would be required. The obvious path, at the time, was to modify the basic shape of the front panel of the P-type timer and use the normal circuit board and servo.

The trusty 3D design software was fired up and after some work it demonstrated that the existing circuit board wouldn't work and the servo fitting wasn't ideal for this model. After some serious thought a radical proposal was formulated. Make the mounting and arms duplicate the existing set-up and modify the circuit board to fit. A new layout for the circuit board would have been preferable, but time is the enemy here. This new approach had it's own problems, but by locating the activation buttons, charging socket and indicator LEDs of the P-type on separate mountings their positions could be made to replicate the original mechanical controls as close as possible. Then to reduce the strain on the servo, the connection between servo and release cam was modified. The assembly is clamped through a ball race relieving the servo spline of any deflection force.

Further work with the 3D design package resulted in an acceptable base unit (*Fig 1*), then loading that model into Sketchup (*Fig 2*) allowed placement of all the fittings and pieces to be viewed and checked for accuracy and fit. (Sketchup was used because I already had many of the bits n pieces as 3D models) A very handy procedure as it revealed that the unit could not be fitted into the fuselage through the rear opening! Bit more fiddling with the 3D model and all was well..... well enough to start contemplating how I was going to actually make it.

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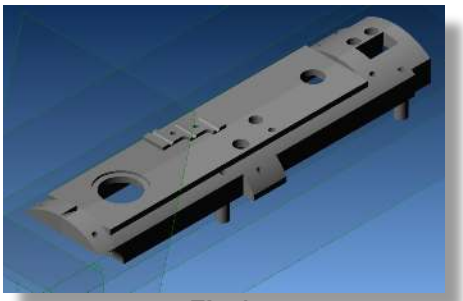


Fig 1

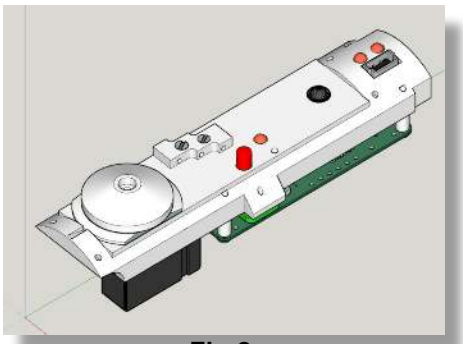
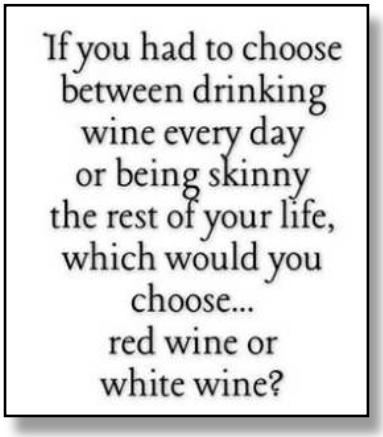
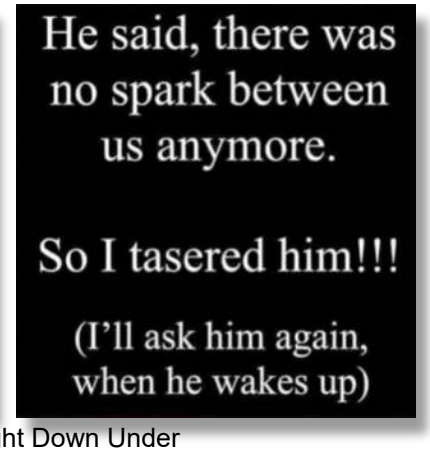


Fig 2





A man with a lathe and vertical mill is a man to be feared!

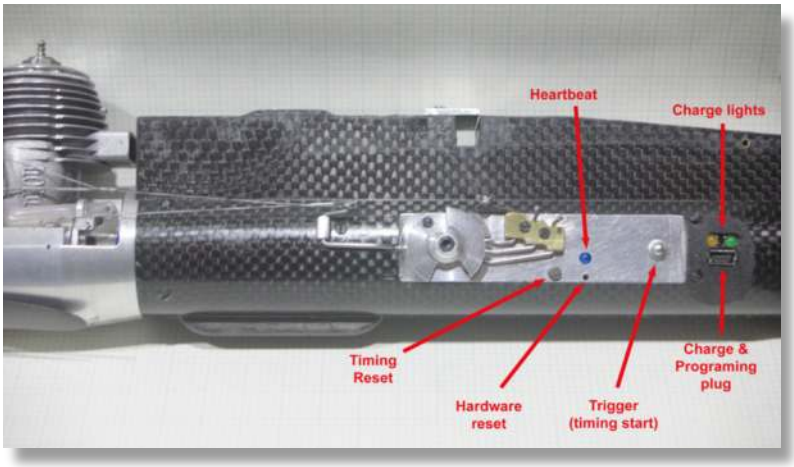
Using an industrial strength 3D package to design the mounting frame made the machining of the aluminium blank quite straight forward, the same methods to 'cut' the 3D model were used to cut the actual blank (almost).

Next, it was assemble the bits, add the circuit boards and discover that the wiring was also not straightforward, rather cramped actually. But perseverance won and the resulting assembly was starting to look respectable. The arms were bent to replicate the originals, this would make transition from old to new less

painful and require little if no alterations to the rest of the model.

Final fitting revealed a slight misalignment of mounting holes, (but hey, it works!)and the only extra cuts to the fuselage were for the charging connector and LEDs.

Oh, you noticed the bearing for the arms is brass? I told you there were a few modifications made on the fly.. didn't I?



Final assembly and programming of timer resulted in a neatly presented unit which weighed in at 38 grams (battery included). This was 7 grams lighter than the original timer plus brass ballast.

Harry Sokol

Dalby Team Trials washed out

Both the road in and the flying field were almost impossible to navigate for the two days of scheduled competition and the day following. More rain was expected. The farmers were loving the conditions while competitors eventually ran out of things to keep themselves amused. Some went home on Friday while others joined the BFFS for a sunny competition at Coominya on Saturday.

The NSW F1C fleet was not unleashed

"*Open wide, come inside, it's J School*". Roy and his mates played with Js while the rain fell outside at Dalby.

Nostalgia: Two Decades of Aeromodeller

By Paul Rossiter

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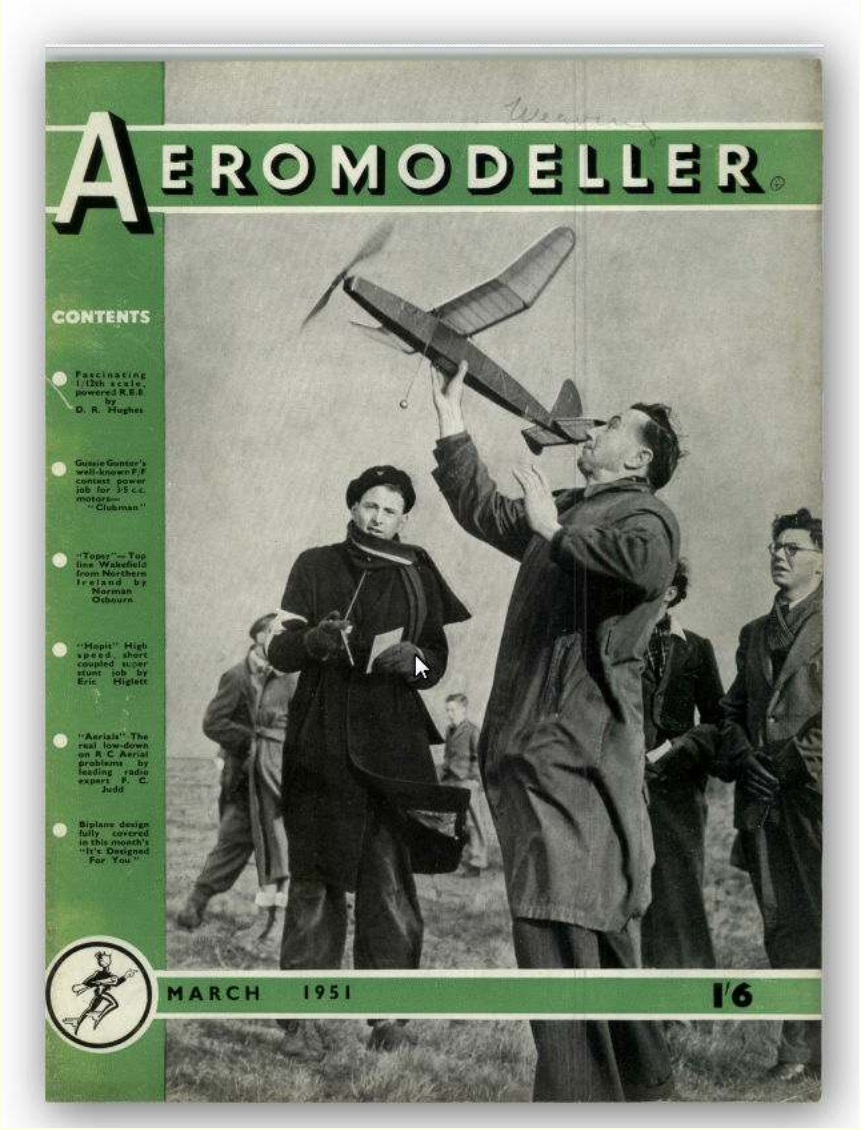


One of the few advantages of reaching Old Fart status is the latitude to indulge in some nostalgia, and so it was when I got my USB compilation of all the Aeromodeller magazines from 1950 to 1969. These have been prepared by Roland Friestad, along with complete runs of some American modelling magazines including Air Trails, Model Builder, Flying Models, Model Airplane News and RC Modeller. With the help of Tahn Stow and Ivor F's collection, he is extending the Aeromodeller series to the earliest magazines. He also runs an on-line magazine called RC Micro Flight and a huge collection of plans are also available. Contact Ronald at cardinal.eng@grics.net or www.digitekbooks.com for more information about the prices and availability of these digital collections. The Aeromodeller collection comes on a credit card size bit of plastic with the actual memory on a small swing-out part that plugs into the USB port of a computer or laptop. How he prepares all these collections will be subject of a paper in the upcoming NFFS Symposium.

However, before starting let me qualify all that follows by saying these are just my impressions from a quick browse through the collection and there is no claim that they represent a detailed summary nor an unbiased view.

Firstly, I was interested to note that the covers of the magazines of the early 50's generally featured the current state of aero-models but shifted more towards the latest whiz bang jet fighters in the late 50's and then by the 1960's they tended to go back to more vintage (often WWII) aircraft or models. Pictures of people at competitions showed them wearing suits, sports jackets and ties in the early days, through sports slacks into more casual ware by the 60's. Notably all of them were quite thin!

Throughout the whole period appeared the ubiquitous advertisements for DC engines, Veron, Keil Kraft, Frog and Mercury model kits. There were the ads for Solarbo balsa and Airfix kits, with RipMax introducing more kits from America in the 60's. The local model shop ads like Henry J Nichols featured tempting listings of all their products with prices. Jetex and Wolf electric drills ads appeared in the early days but were replaced in later times with more specialist R/C shops. Interestingly there were also recruiting ads for the RAF, Royal Navy and Army, aeromodellers clearly being seen as a potential source of recruits. There were also other ads promoting training for other careers (The Bennett College, International Correspondence Schools Ltd.), though all of these faded away in the late 1960's. At the back of each magazine there were the ubiquitous lists of model shops.

Heard at the Hanger Doors runs through the whole series with the latest information about events, rules and other noteworthy happenings, while Topical Twists by "Pylonius", illustrated by "Sherry", presented more tongue in the cheek reading. The Club News section gave brief reports of club activities and there were brief reports of aeromodelling in other countries

Each issue featured plans and construction articles for nearly all

classes of models (power, glider and rubber) and there was also a featured aircraft described with 3-views. Solid models got a run in the early 50's while comprehensive tests of various motors ran through the whole series. Beginners were catered for with excellent articles on how to build, cover and design models. All the early construction was based upon balsa and other woods, while mention of plastic started to appear in the later 60's in the context of foams, covering, though the RTF Challenger (Ugh!), complete with control lines and 1cc ED Bee, was advertised as early as 1950.

Contentious issues over the two decades included the need to join a national association (NGA or SAME) to be covered by insurance. There were major fears about the potential loss of flying sites (1951) and the need for noise reduction. No suitable silencers were available up to 1962 but by 1965 they were made compulsory for all SMAE events (with exemptions for international events and team trials) and manufacturers had to make them available for all engines sold in UK. These edicts were soon followed in the rest of Europe and later in the USA. There were arguments about whether tuned pipes actually led to any increase in performance or decrease in noise (!), but these were soon resolved and ED introduced a series of tuned pipes for sale, probably not doing much for the noise issue. Another threat to the availability of flying sites came from concerns about flying models near active airfields and an Air Navigation Order to ban flying near airfields was mooted in 1969.

There was also much wringing of hands over the introduction of a purchase tax on modelling materials. There was also debate about competition vs sport flying, particularly FAI classes becoming so specialised that it was scaring away "traditional" modellers. How to attract juniors was also an ongoing issue.

A major concern, particularly in power and rubber events, was the increasing number of competitors reaching the then unlimited flyoffs in thermal conditions, the FAI rules at the time stating that flying could only occur between 1 hour after sunrise and 1 hour before sunset. This ultimately led to the rule changes imposing restrictions on model performance, and the shift from 3 x 5 minute rounds to 5 x 3 minute rounds and finally to 7 x 3 minute rounds by 1968, with fly offs being held in the early morning.

Greater recognition of the importance of thermals followed the increasing restrictions on model performance and led to various detection methods, including bubbles and thermistors, with the chart recording system of George Xenakis appearing at the 1967 world champs. Some lamented that picking lift was becoming more important than model design in chasing the elusive max. It also heralded the introduction of piggy-backing and mass launches.

Steps to reduce performance in F1C included the progressive increase in the power loading to 300g per c.c. and a minimum of 20 g per sq. dm. by 1957 (whilst retaining a maximum engine capacity of 2.5c.c.), the restriction to standard methanol/castor oil fuel in 1966, and ultimately the banning of tuned pipes. This brought concerns that the class would just become a test of who had the best motor. In F1B the progressive reduction in allowable rubber weight brought similar concerns that it would simply be won by whoever had the best rubber. In 1957, the Editor huffed indignantly: "We are not happy about the reduction of rubber weight in the Wakefield model to 50 grams. Ever since the Wakefield specification began to be mucked about, interest has fallen off considerably in this interesting and important class, until today the top line rubber-driven model attracts only a specialised few who can cope with the altering requirements". F1Q anyone?

In F1A the length of the towline was progressively reduced. In all cases there were concerns that the FAI classes would become attractive only to the dedicated few, with most modellers turning to sport events or simply leaving the hobby altogether. However, that just one competitor maxed out in F1B at the 1969 world championships (compared to half the field (34) in open rubber at the Nationals in the same year) was held up as proof that such measures were successful.

Major events and rallies attracted huge numbers of participants and spectators in the early 50's with 15,000 people attending the Yorkshire News Model flying festival in 1951 and 18,000 at the All Britain Rally at Radlett in 1954, but attendances then started to drop off somewhat and this was blamed on the rise of specialised competitions (power in particular), which spectators apparently found most boring to watch. However, by 1968 there were still over 5,000 attendees at the 1968 Nats at Yoevilton, though most spectators appeared at the RC and control line events.

Some observations about the different classes:

Rubber

Wakefield (F1B) fuselages got thinner and lost their landing gear under a series of rule changes. Rubber went from virtually unlimited to 80g in 1954 to 50g in 1957 (along with removal of the requirement for ROG) to 40g in 1966. Single blade and fixed and feathering propellers gave way to two blade folders and built up fuselages changed to rolled tubes. Some tried variable pitch propellers and later in the 1960's VIT. The general F1B configuration evident today (e.g. the Hoffhass Espada) emerged in around 1968. There was also much interest in Coupe, particularly throughout the 1960's.

Given my interest in rubber testing, I was somewhat surprised to read that in 1954 the relative unimportance of broken strands after a flight and also of washing the rubber was already recognised, things I have only recently (re-

discovered). Breaking-in motors was however regarded as essential, which I would now dispute based upon actual energy testing.

Glider

By the late 1950s to early 1960's, F1A models had converged fairly rapidly onto blunt noses, high aspect ratio wings and long tail moments Auto rudders allowed zoom launches and circle towing and VIT became more widespread.

Power

While F1C models were also using auto rudder and VIT by 1969, they still looked not a lot different to a tarted up Dixielander! As a pointer of things to come, Gieskieng started to play around with flappers in the late 1960's.

Radio Control

The Aeromodeller magazines included content on radio control through the whole period from 1950 to 1969, with single channel still getting a run even at the end. Articles from the early 50's gave practical information on building the then primitive tube transmitters and super regenerative receivers, as well as how to make the latest escapements, the latter involved lots of bending of wire and cutting metal pawls and levers. There were then some ingenious schemes to get more than one control function from a single channel system by various devious means, the introduction of reeds and multi-channel in the later 1950's (typical models being the Uproar and Astro Hog) along with the appearance of some transistors in the equipment, and finally proportional multi-channel equipment in the early 1960's but at huge cost. Kits for simple single channel systems were still being advertised in early 1960's (costing a few pounds) alongside multi-channel reed sets (many 10's of pounds) and, towards the end of the 1960's, proportional systems (hundreds of pounds with servos included). Given the cost of proportional systems, it is no wonder that simple single channel gear was still getting a run! Initially all the systems were of English origin, then some German, Japanese and American products started to appear throughout the 60's. Cutting edge aerobatic models like the Qwick-Fly are clearly recognisable as today's sport R/C models. RC pylon was getting started but true helicopters remained only in the imagination, with a substantial prize being offered by Simprop in 1968 to produce one that was able to fly a specified pattern. None had appeared by the end of 1969.

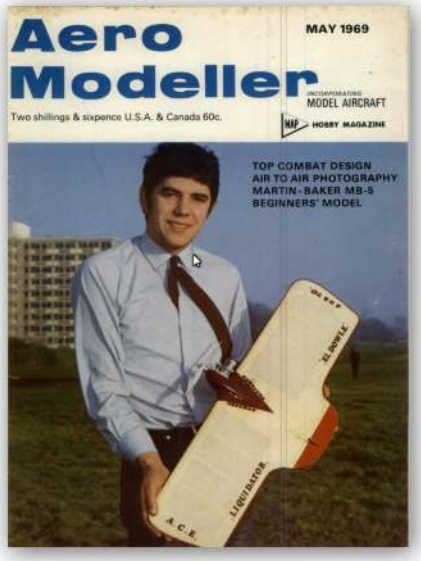
Control Line

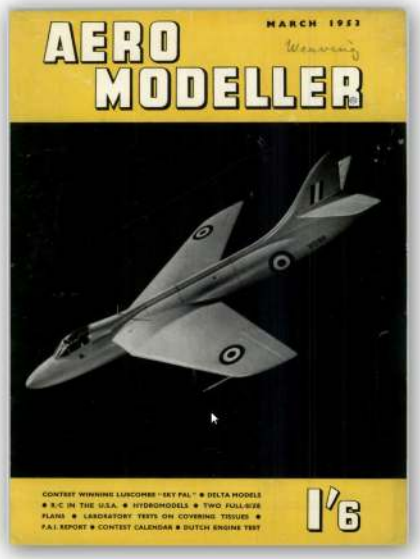
In Control line, the general stunter configuration emerged by early 1960's, team race models still had a gap between the main and tail planes even up to 1969 (through with a now familiar fuselage profile) and asymmetric speed models were thought to be a bit dodgy with the suggestion that they might nose-dive when the engine cut! "These models have one unfortunate vice. When the engine cuts the model dives for the ground" (Nov 1968). Combat models rapidly evolved into the flying wing by the early 1950's.

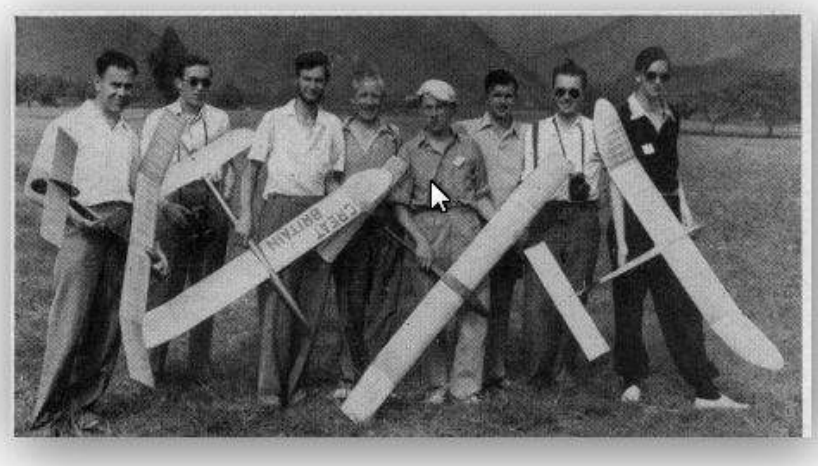
As a general observation, many of the issues concerning the aeromodelling fraternity over the period 1950 – 1969 are still around today, some 50 -60 years later!. Also, by the late 1960's (and in some cases much earlier) the general profiles of the FAI classes, particularly F1A and F1B and most control line classes were well established and differ from their modern counterparts mainly through refinements made possible by modern materials. The differences tend to occur more in stronger yet lighter structures, the detail of aerofoil sections, the possible use of flaps, geared motors, non-extensible towlines and electronic timers and trackers. F1C is possibly the class showing most drastic evolution with the introduction of folders.

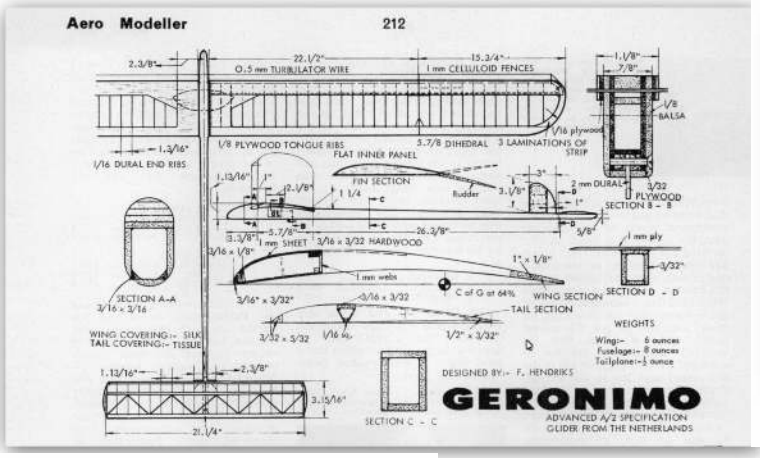
Paul Rossiter

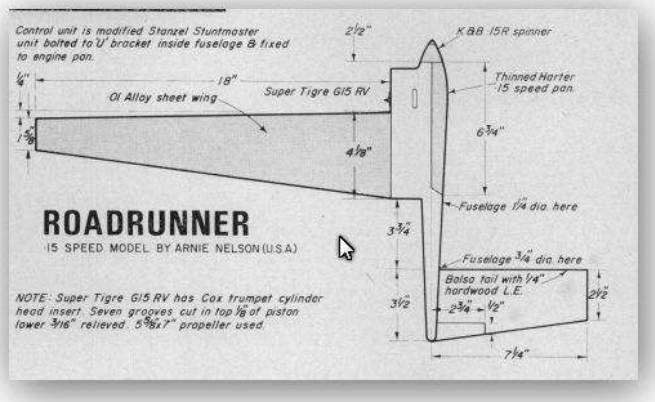
Nostalgic Pictorial

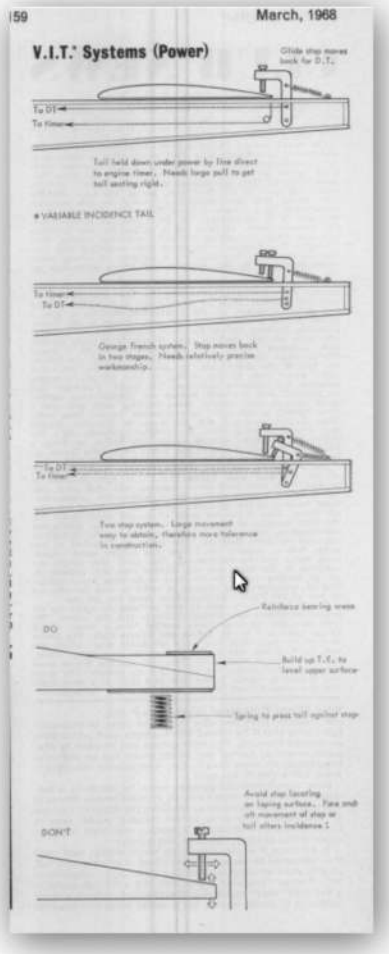


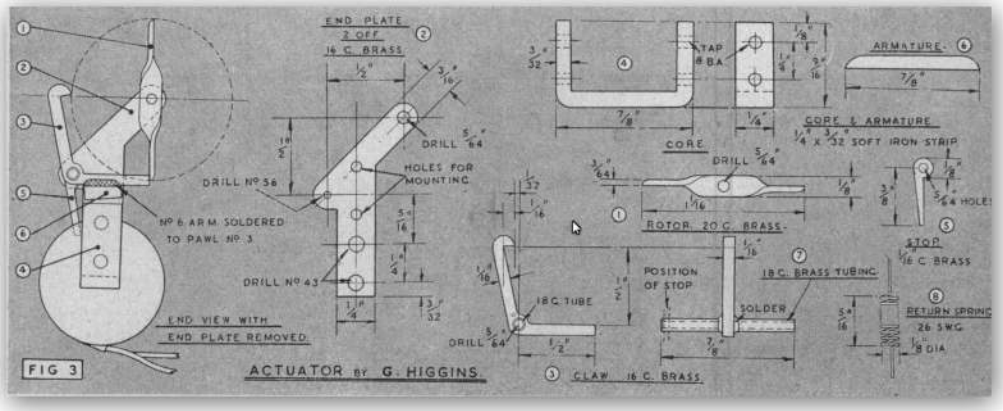












Martin Kitchins and George Xenakis of U.S.A. devised this thermal plotter, Mighty Midget servo actuates ball pen scriber on rotating drum to indicate thermistor readings. Peaks to right are rapid temperature rises. Clever system demands equally cautious field operation.


AEROMODELLER December, 1950
the CHALLENGER is just 'raring' to go!
CHALLENGER FUSELAGE ONLY 39/- INCLUDING 33⅓ P.T.
E.D. "BEE" DIESEL ENGINE 45/- FREE OF P.T.
CASCELLOID LIMITED, ABBEY LANE, LEICESTER


AEROMODELLER August, 1951
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Ideal for LIGHTWEIGHT RADIO CONTROL
VERON IS FIRST IN THE FIELD AGAIN!!!
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RECOMMENDED ENGINE
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VERON
MODEL AIRCRAFT (Bournemouth) Ltd., Norwood Place, BOURNEMOUTH


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FROG POWER PLUS MOTORS
"500" HOT COIL
"250" DIESEL
MANUFACTURED BY
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January, 1956
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Greetings from Henry J. Nicholls
FIRM FAVOURITES FROM THE MERCURY RANGE
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STILL THE BEST!
HENRY J. NICHOLLS, LTD.


Make 1953 KEILKRAFT
4 REASONS WHY MORE MODELLERS THAN EVER BOUGHT KEILKRAFT IN 1951
NEW! Pacer
Class B TEAM RACER
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GLIDERS
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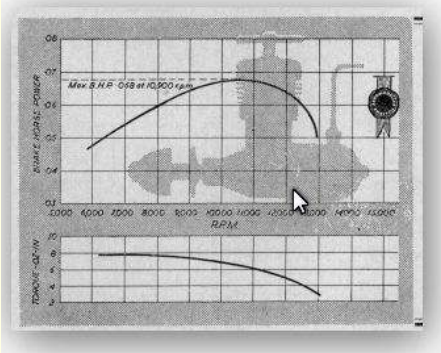
Aeromodeller January, 1952
Sweep the Sky with— VERON
THE IDEAL INTRODUCTION TO POWERED FLIGHT
The "CARDINAL"
The "VERONIC 46"
The "CORONETTE"
The "SKYSKOOTER"
VERON "GOLD SEAL" STUNT TANKS
WHEELS
VERON
MODEL AIRCRAFT (Bournemouth) Ltd. Norwood Place, BOURNEMOUTH



Thank you Paul for a great "Trip Down Memory lane". Aeromodeller was an essential read for many of us in our formative years.

VALE

Brian Alcock
1921 - 2016

I was saddened to hear that Sydney flyer Brian Alcock passed away on 4 Aug 2016. Brian was born in Sydney in 1921 and commenced aeromodelling at age 11. He was actively flying in his 94th year. Our condolences go out to his family.

These photos were taken of Brian at the West Wyalong opening in September 2014, when Brian was 92. On that day he was accompanied by his son Craig, seen behind him in the photo on the left. Not only was Brian flying for hours but running to retrieve his model!

TEAM TRIALS AS AT 4 JUNE 2016

	Kiwi	North American	Max Men	Dave Anderson	AFFS	SCC	Vic St Ch	QLD St Ch F1A, F1B	69th Nationals	NSW St Ch	WA St Ch	WA Trials	QLD Trial	Sum of best three	Sum of best four
	6/2/16	10/2/16	12/2/16	8-9/4/16	11/4/16	16/4/16	29/4/16	14/5/16 15/5/16	28/5/16- 2/6/16	16/7/16 17/7/16	13/8/16- 14/8/16	13/8/16- 14/8/16	15/9/16 16/9/16		
F1A															
Phil Mitchell	x838	x960	960	960	900	960		950						2880	
Malcolm Campbell	868	x814	x866	957	807	867		960	833					2785	
Vin Morgan				885		917			960					2762	
Albert Fathers	x908	x916	917	750	835			689	944					2696	
Tahn Stowe				807	805	960			792					2572	
Matt Hannaford				620	160				668					1448	
Mike Thomas				815	180									995	
Ben Lewis								701						701	
John Lewis								537						537	
Graham Maynard								124						124	
F1B															
Vin Morgan	960	x960	x809	928	960	960	960		960					2880	3840
Craig Hemsworth	960	x960	x960	750	815		960		960					2880	3695
Terry Bond				960	205	927			960					2847	
Gary Goodwin				787		874			906					2567	
Paul Rossiter				551	934	960								2445	
Leigh Morgan				767	116	825	711		829					2421	
Matt Hannaford				858	398	675			634					2167	
Richard Blackam							957		960					1917	
Graham Maynard					701			656						1357	
Ben Lewis								923						923	
John Lewis								883						883	
Gary Odgers					742									742	
Gary Pope				588	147									735	
Ron Munden								713						713	
Mark Armour								600						600	
F1C															
Roy Summersby	960	x960	x960	960	900	957			960					2880	
Terry Bond				959	900	883			722					2742	
Gary Pope				750	614	858	502		960					2568	
Shannon Tolmie				766	900	855								2521	
Mike Pettigrew				960			529		881					2370	
Shayne McDonald						857								857	

x Under the trials rules one overseas event can be counted. An x before the score indicates an overseas score not used.

FINAL EVENTS TO COUNT

DATE	EVENT	CLASSES	LOCATION	CONTACT	EMAIL
Oct 1 - 2	NSW State Champs	F1A, B and C	West Wyalong	Gary Pope	garypope_kw@hotmail.com
Oct 31, Nov 1	Q'ld Team Trials	F1A, B and C	West Wyalong	Malcolm Campbell	actrain@ozemail.com.au

Dates yet to be confirmed for Q'ld TT