

AVANZ



NEWS

Fostering Vintage and Traditional Aeromodelling in New Zealand #195





Committee Notices



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Minutes of the MFNZ Vintage SIG AGM 9th March 2023 at 7.30 pm

Meeting held using Zoom. All MFNZ addrees on the AVANZ list were invited to attend

Attending were: Wayne Cartwright, Allan Knox, Bernard Scott, Dave Wilkins, Dave Thornley, Des Richards, Ross Gray and Bryan Treloar.

Apologies: Stew Cox, Peter Townsend, Barrie Russell, Don Mossop.

Minutes of previous AGM: These had been circulated. They were accepted as a true record. Moved by Bernard and seconded by Bryan. Both had attended the 2022 AGM.

Actions from the 2022 Minutes

--- Dave Wilkins was to be approached to join the committee to represent Auckland area which was showing some vintage interest in the North Shore club (AKL). Dave was approached and joined the committee. Completed

--- Stew Cox has provided a valuable point of view on vintage matters and was to be approached about joining committee. Stew declined. Completed.

Acting Chairman's Report from Allan Knox:

Allan stepped in as temporary Chair after Don's resignation late in 2022. Don had signalled for some time that he would be stepping down and was not going to the Nats so no surprises. Allan's prime concern was to see that The Nats Vintage RC events were run and everything was in place. Also to be sure Vintage FF would be looked after at the Nats, in this case by the FF SIG CDs.

The Nats were supported by locals in the South North Island area mainly. Traditional Vintage IC classes for which we have trophies were all flown and trophies were awarded. Electric and classical events were not supported. Something to consider perhaps.

Overall Vintage at the Nats went well despite the weather and was enjoyed by all.

There is a complete report on the Nats in February's MFW. Results are on MFNZ's Website.

Treasurers Report from Wayne Cartwright:

No formal Treasure's report and balance sheet are available at this time as Wayne has no access to our accounts or records. He is working with Paul Clegg to have Paul operate our accounts and to provide bank data. We have just over \$4000 is in our accounts by Wayne's estimate. We have no outstandings and don't plan expenditure in the coming year at this stage.

The SIG now has assets stored at Carterton showground's HQ lock up off the main hall floor for Nats use. These include a new Gazebo and folding table and a carton containing score cards, score card box and 2 landing tapes. There is also a loud hailer stored with Allan Knox.

Wayne will produce a formal Cash flow sheet when he has data. This is a continuation of past practice using a common spread sht. Action Wayne.

The situation regarding any transfer of profits from the Nats to SIG accounts is unknown. MFNZ Council to be asked about this. Action Wayne.

Dave Thornley moved both reports be accepted. And seconded by Bryan. Meeting confirmed.

Elections of committee:

The following SIG Committee members were nominated, seconded and confirmed by the meeting.

Allan Knox (Chairman and Secretary), Wayne Cartwright (Treasurer), Bernard Scott (AVANZ Editor), Bryan Treloar, Ross Gray, Barrie Russell, Dave Wilkins, Peter Townsend (confirmed after the meeting)

General Business:

Vote of Thanks: Allan proposed a vote of thanks to past Chair, Don Mossop, who is standing down as committee member and Chairman. Don has done an invaluable job in the last few years guiding us through some difficult debates and also making sure the vintage side of the Nationals was prepared and ran properly. Thank you Don from all of us. We hope to see lots more of you on the flying field.

North North Island Rallies: Wayne explained the SIGs involvement in these rallies as organisers and CDing. Recently Don Mossop has taken up this role which is appreciated. Wayne volunteered to discuss this with Don with the aim of having him do this on behalf of the SIG. Action Wayne

Survey of members: Allan suggested the committee look at an appropriate survey of active vintage fliers to gauge there current feelings about development of vintage flying in NZ and the direction they would like it to take. This could be done by using Goggle Forms. The results can be used to inform a strategy for the future. Action Allan.

AVANZ and the MFW Column: We need to assign content and scribes for the MFW column for this year. Content needs to hold hands with AVANZ. Action Allan and Bernard with committee members.

The meeting closed with some general discussion about activity in the regions.

Closed at 8.30 pm

Issue 195 Contributors

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LETTERS / ERRATA

The model shown with Wayne Lightfoot on Page 14 of Avanz News 194 is the John Malkin designed *Miser*.

This particular example, beautifully restored by Wayne, was built by John's buddy Brian Roots, who flew it at a World championships. Wayne has even managed to restore the original processing sticker, which is the patch just in front of the wing.

Plans, drafted by Brian, are available from Mike Woodhouse. I have one which only needs the fin and tips glued on before covering.

One disadvantage of the design, which Wayne has also found, is that the fuselage is so long it won't fit in existing model boxes!

Miser otherwise is a simple, good looking, model and for me has the advantage of being a 50g Wakefield, like my XL 59 from the previous age group, so I can use the same motors and winding tube for both.

Lincoln Vincent

Thanks for AVANZ News, always an interesting read. A couple of model identification issues. On Page 14, Issue 194, the model on the right hand end of the top row is not a *Dixielander* - it does look a little like one but the pylon is completely wrong and the wing tips look a little too long compared with the inner panels. I attach a picture of a 'real' *Dixielander* for comparison - although this one is scaled up to 550 sq in.

On page 23 (a 10 yr old newsletter cover) the topmost picture is not of a *Torontonian* - the *Torontonian* has twin fins and does not have tapered outer wing panels, though it does have elliptical wing tips.

Keep up the good work.

Roy E. Smith

Kingston, Ontario, Canada

Roy, well-spotted. Paul Lagan flew Vintage Rubber and Nostalgia Rubber at the 2013 Nationals. When I quoted from the AN issue that reported that event, I mixed the two events. Paul flew a Torontonian in Nostalgia Rubber, but the photo shows his Vintage Rubber entry, a Lanzo Championship Stick.

Another confusion over Bryce's model which I called a Dixielander, assuming it was the ex-Lagan Dixielander that Bryce uses in open power. It is in fact Bryce's Kiwi Power model which has some rather Dixielander-like components.
Editor

The 75th Nats have come and gone. The most disappointing aspect was not being able to be there. Fortunately the conditions there were a trifle better than those at Tuakau. Our Mini-Nats was a complete blowout. Don Mossop made two attempts at precision at about 9.45 on Monday with less than satisfactory results due to strong breezes from the east generating major turbulence - and that was our best day. Once again it seems that Vintage entries at the Nationals were own even further. I sincerely hope some of the team Tuakau flyers can make it next year.

Once again it appears a duration event was won by spot landings! Had vintage models been allowed in

classic events then there would have been more classes with three or more competitors. We could at least try it. If all else fails, we may do as Barry suggests and combine Vintage with Classical. I think it would work okay without any age bonuses - keeping it simple, however this would be open to discussion.

Another way to increase participation would be to allow more than one person to fly the same model. This has been suggested by one of our members and it could certainly work for Leader Board and NDC. It would give interested sport fliers a chance to have a go on a club day when we are flying precision or duration events.

The rally at JR Airsail was a pleasant and relaxed event with about seven fliers competing. Conditions were very good in the morning with a little more breeze in the afternoon but still but very good. Thanks to Sharon and John for their hospitality, plus the scones of course.

Tuakau plans to run a 2 day event on the 8/9th April. A couple of special contests will be run in conjunction with duration and precision. The precision event will be run to classical rules and the duration IC and E classes will be combined and run to classical E rules. We also hope to run a spot landing competition on a separate spot for anyone interested and there will be some vouchers as prizes. The winner of the spot landing competition may be rewarded with a comprehensive repair kit. A more specific notice will be sent out nearer the dates.

PS. Anybody wanting to try flying a new class I will be happy to bring a model along for them. I would really like to see some of my models in the air again.

John Butcher



IRREGULAR COMMENTS

from the Editor

(Irregular: occasional, improper, unofficial, rough)

AVANZ News serves as a bulletin board for Vintage activities in NZ, with occasional mention of overseas activities when they may be of interest. Attempts are made to bolster this rather limited function with readers' models and articles, plans, and anything remotely related to model flying on which the editor can rustle up a few words.

It has been noted that AVANZ News "seems to be evolving into Vintage and Free Flight these days". The free flight referred to includes the non-vintage events that are administered by the FF SIG. This is a fair comment, worth explaining.

The emphasis of AN has gradually changed since I started editing in January 2015. My first issue coincided with the loss of the free flight community's informative bulletin, FFoNZ News. FN was the essential glue holding the FF group and its activities together. It's loss was a blow to local flying and, as attempts to find a new editor had failed, the offer of appending free flight material to AN was made to the FF SIG. This was taken up for a few issues until submitted items dried up altogether and the initiative was ended. Independently, I have continued to add free flight content to AN. Later, to provide a basic notice board, a FFoNZ Facebook page was started by David Ackery and this continues, serving mainly for notification of events to those who use this medium.

Rather than allow AN to lapse into a thin calendar of events, items from areas in which I have interest and

some knowledge are often included. Those areas are mostly to do with free flight, which explains some of the recent content.

The Editor's favourite barrow also gets a bit of a push - the belief that we should include in our brief traditional building sometimes described as "stick and tissue", no matter how old the design. This style of building is truly "vintage" these days, being all-inclusive with newcomers not needing deep pockets or the flashiest transmitter. Those who enter aeromodelling through the buy-and-fly route come and go, but those who are patient (and lucky) enough to learn the skills of DIY building seem more likely to develop the deep appreciation that will keep their interest alive through a progression of building projects.

With this in mind, the subtitle on the AN cover was changed some time ago from the lengthy "Newsletter of the Vintage Special Interest Group of Model Flying New Zealand" to "Fostering Vintage and Traditional Aeromodelling in New Zealand" which, if nothing else, saves a bit of pencil.

There has been a decrease in reader contributions to AVANZ News although there are stalwarts who can be counted on and this issue is exceptional with reader contributions including single channel RC and indoor flying - there is even the return of engine maestro Chris Murphy. The on-going puzzle is always why many modellers are reluctant to share their current project or aspects of their aeromodelling activities.



While catering for the interests of local modellers is of prime importance, it is gratifying when the rest of the world pays attention. The free flight organisation of the USA produces the globally distributed *National Free Flight Society Digest* onto which US aeromodelling bulletins are sometimes appended. AVANZ News has been added to the Digest on six occasions, the latest being the February 2023 issue.

NATIONAL DECENTRALISED PROGRAMME

Vintage and Free Flight

April, May 2023



April/23	119	VINT	FF Nostalgia 1/2A/ Min Replica
April/23	120	VINT	FF Classic Power Duration
April/23	121	VINT	RC Vintage 1/2E Texaco
April/23	122	VINT	RC Vintage A Texaco
April/23	123	VINT	RC Vintage E Texaco
April/23	221	FF	1/2 A Power
April/23	222	FF	Open Rubber
April/23	223	FF	Open Power
April/23	224	FF	Coupe d'Hiver
April/23	225	FF	P30
April/23	226	FF	A1 Glider
April/23	227	FF	Kiwi Power
April/23	228	FF	Open Glider
April/23	229	FF	Catapult Launched Glider
April/23	230	FF	Hand Launched Glider
April/23	231	FF	E36
April/23	232	FF	FAI F1L Indoor Rubber

May/23	124	VINT	FF Vintage Precision
May/23	125	VINT	FF Vintage Power Duration
May/23	126	VINT	FF Nostalgia Rubber Duration
May/23	127	VINT	RC Vintage and Classical Scale Texaco
May/23	128	VINT	RC Vintage Precision
May/23	129	VINT	RC Classical Precision
May/23	130	VINT	RC Vintage Open Texaco
May/23	233	FF	Open Rubber
May/23	234	FF	1/2A Power
May/23	235	FF	Kiwi Power
May/23	236	FF	Open Glider
May/23	237	FF	FAI F1L Indoor Rubber
May/23	238	FF	Coupe d'Hiver

Future Events : Northern North Island

Northern North Island Vintage RC Rally dates 2023

The following dates have been set for Vintage Rallies for the first part of 2023. The format is to be a one-day event on a Saturday in which all or any classes may be flown.

NDC events for that month are in italics. NDC events for 2023 are based on this year's schedule.

In the event of unfavourable flying conditions on the first date, a decision will be made on the Thursday evening before and an email notice of postponement to the alternate date will be sent out.

Flying from 9am – 3:30pm. Registration fee of \$5.00



April 8th Tuakau MAC Alternate April 15th

NDC Events for April: *Vint. ½ E Texaco, Vint. A Texaco, Vint. E Texaco.*

Tuakau Model Aero Club invites fliers to a Rally on Saturday 8th April and Sunday 9th April. The format is the usual competition classes (see below) with an additional fun fly competition.

All entries for the Tuakau competition will be flown to Classical rules:

Precision - No age bonus

Duration events - No age bonus, No spot landing, all have five (5) minute maximums.

PLUS ... Fun fly competition. A spot landing competition with 30 second maximum motor run and minimum 90 second flight time. Two qualifying rounds using a 30 meter circle. Those achieving two spots go to two rounds using a 20 metre circle. Survivors go to a 10 metre circle. Landings are measured to the prop or spinner. If it looks like finding a winner is going to take too much time, a 5 meter circle may be used.

Please - no standing in the circle to fly and land. This applies to all flights and classes.

9.00am start both days with a free BBQ lunch.

Any queries to John Butcher jjbutcher@xtra.conz
092369722

May 6th NSMAC, Green Rd Dairy Flat Alternate date May 13th

NDC Events for May: *Scale Texaco, Vint. Open Texaco, Vintage Precision, Classical Precision*

Views of the North Shore Club's field below.

Contacts: Don Mossop (274940854) or Wayne Cartwright (0221534679)

Views of NSMAC field left and below.



Future Events : Levin

Bob Burling Memorial

Saturday 13 May
Wind date Saturday 27 May

John Selby Memorial

Saturday 16 September
Wind date Saturday 30 Sept.

Details for all events Levin MAC flying site, Tararua Road. 9.30am start. Any RC Vintage or Classical Classes may be flown. Precision is normally the most popular event. We can help you if unsure of the basic rules – just sing out as this is all about having fun. Sport flying of Vintage models and small field Vintage Free Flight also welcome.

No entry fees or prizes. This is a low key fun get together of like-minded Vintage fliers.

BBQ The Levin MAC normally runs a sausage sizzle at lunchtime at nominal cost so bring a few coins.

Postponement decisions will be advised on the Levin Club website *Levin Model Aeroplane Club - Home (sporty.co.nz)* and via the Vintage Email List which Stew Cox uses to provide

reminders and updates concerning these events. If you aren't on the Vintage Email List and want to be added, send Stew your email address Flierstew@gmail.com

Weather Consult the Levin MAC weather station at <https://holfuy.com/en/weather/1073> rather than making a call based on your local weather as Levin has a much better microclimate for model flying than anywhere else in the lower North Island west of the main divide. Feel free to ring Stew if unsure.

Further details Contact joint organisers Stew Cox– 027 548 1894 Flierstew@gmail.com or Bryan Treloar 0204 147 6917 bryn_treloar@hotmail.com

Hope to see you there,
Stew Cox

L'AQUI LONE SAM 2001
TOMBOY RALLY INTERNATIONAL POSTAL CONTEST
01/07/2022 – 30/06/2023

International Tomboy Rally

We wish to present this competition to all the lovers of this nice model with the only aim of having fun in a postal contest which is organized to provide some fun flying together or at the same time as are all postal contests. The Tomboy Rally wants to prove the performance of this model along with the ability of the builder and pilot, without reaching the peak agonism of usual contests and only wishing to fly the model having fun in a relaxed manner. After having carried out some tests we have decided to admit the use of i.c. engines and electric motors trying to reduce the gap between them.

Model

- The **36" or 44"** wing span (as per plan Aeromodeller) and **48"** (as per Boddington plan or 36 " scaled up) models are admitted;

- Models may be fitted with floats as per plan (scaled-up for 48" version);
- no minimum weight;
- reinforcement or lightening of the structure with respect of the basic outline of the original model are admitted;
- materials to be used are those found on the plan;
- plastic covering in place of tissue, silk or other is admitted.
- More than one person can use same model;
- Same model can flight in L.G. or float version;
- Lone fliers can self launch at time

Engine/motors

I.c. engines and electric motors are admitted within the following limits:

36"-44" WINGSPAN

I.C. Engines:

- Any engine with 1 cc. maximum displacement;
- Fuel tank : 3 cc.
- R/C carburettor is admitted.

Electric Motors:

- Any electric motor is admitted with direct drive
- The engine cannot be stopped and started again: the motor must run continually without interruptions till the end of the battery charge or competitor's decision;
- no folding prop is admitted; if a folding prop is used the blades must be held open with a rubber band;
- freely assembled admitted batteries:
- 450 Mah 2 cell LiPo**
- separated batteries pack for Rx alimentation is allowed

48" WINGSPAN

I.C. Engines:

- **Any engine with 2, 5 cc. maximum displacement;**
- **Fuel tank : 6 cc.**
- R/C carburettor is admitted.

Electric Motors:

- Any electric motor is admitted with direct drive

- The engine cannot be stopped and started again: the motor must run continually without interruptions till the end of the battery charge or competitor's decision;
- no folding prop is admitted; if a folding prop is used the blades must be held open with a rubber band;
- freely assembled admitted batteries:
- **-500 Mah 3 cell LiPo**
- separated batteries pack for Rx alimentation is allowed

Flights and results

- Each competitor may fly as many flights as wished during the admitted period but only the best flight will be considered for the final result.

- Hand launches are admitted.

- The flight time starts when the model is released or takes off. The flight time ends when the model lands or hits a fixed obstacle. In case the model flies out of sight the timekeeper will time for 10 seconds after losing sight of the model. Timing will continue if model is seen again or stopped after 10" deducting this time from the total time of the flight.

Awards :

A diploma for all competitors and prizes for the first three in each version rank. Special prize for best flight in float version.

Results

Results, address, photos and technical specification about model must be forwarded to the Organization within the 15th July 2023 to Curzio Santoni (cusanton@tin.it) or to Gianfranco Lusso (gfl@orange.fr). Many pleasant flights and happy landings to ALL !!!!

SPECIAL PRIZE VIC SMEED

SAM 2001 have scheduled an extra Diploma that will be awarded to the best flight in Tomboy floatplane version (36", 44" or 48") taking off from water. The Editor will send to the winner a Diploma signed by SAM 2001 President and a bottle of special Italian Wine to drink to Vic Smeed! Good ROW and flight!

SPECIAL PRIZE DAVID BECKER

The 2012 was the 5th edition of SAM 2001 Tomboy Rally and we have scheduled a special prize for the three best flights obtained with 36" Tomboy F/F. Only engines diesel max 0.75 c.c. shall be used. The other rules are the same for 36" or 44" wingspan type. It is possible to use a R/C Tomboy, however, being this a free-flight contest, the time must be stopped when transmitter is used, since the aircraft model should fly freely from any control from the ground.

Good thermals

Last Chance !!

Nationals Photographs by Ross Gray 1



Nationals Photographs by Ross Gray 2



Nationals Photographs by Ross Gray 3



VINTAGE RALLY AIRSAIL

4th March 2023

Push-button *HUMMINGBIRD*



John's account on the making of his single channel transmitter using modern electronic components follows the Airsail Rally Report

CRUISER



CORONET



STARDUST SPECIAL



PLAYBOY



Lake Cyclone



VINTAGE RALLY

AIRSAIL

4th March 2023



Vintage E Texaco

B Scott	Stardust Sp.	1907
J Butcher	RC1	1779
W Cartwright	Cruiser	1375

Vintage Precision

T Gribble	Miss FX	580
J Ryan	Coronet	575
D Little	Simplex	560

IC Duration

J Ryan	Coronet	432
D Little	Simplex	389

Classical 1/2E Texaco

T Gribble	1/2A Train	1405
W Cartwright	Astro Streak	1274

Classical E Duration

B Scott	Frisco Kid	699
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Vintage E Duration

D Mossop	Playboy	920
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Classical E Texaco

D Mossop	Dixielander	1999
T Gribble	Gloworm	1368

Vintage 1/2A Texaco

J Ryan	Coronet	1021
D Little	Simplex	720



“May Your ineffable hand take this *Miss Fortune X* through tumultuous airs to a gentle thermal and return her safely to the ground. For such blessing we each solemnly promise to eat but two (or maybe three) of John’s delicious scones”.

Editor’s *E-Tomboy* flown for the International Tomboy Rally. Flights of 30:16 and 25:26 seem quite good until you remember that a 2-cell LiPo of up to 450mA is allowed. For this event, the motor must run continuously, unlike in NZ E-*Texaco* events.

Report and photographs by Stew Cox

The weather was a significant player in this year's Gareth Newton Memorial event. Early in the week leading up to the planned date, the weather was idyllic but the forecast at that stage was for a nasty front to come through on Friday, not clearing the Levin area until late afternoon on the Saturday of the event. The organisers consulted midday Friday while the front was lashing the area with strong winds and heavy rain resulting in some road closures due to flooding. However, the updated MetService forecast and weather models were clear that while the weather overnight would still be rough, the front was now expected to be through Levin by 8.00am on the day of the event followed by fine weather with light winds. So given the good forecast weather and the good drainage of the Levin Club field, the decision to go ahead was made.

We arrived at the field to see clear blue skies to the south where the weather was coming from. There were however ugly storm clouds still departing to the north and some residual low cloud around Levin. By the 9.30am start time, the cloud was clearing and the wind had dropped to be very light. Conditions were then superb for the rest of the day with just a sea breeze to contend with in the afternoon.

Unfortunately the preceding weather put some off and attendance was down on recent events. Two regular attendees were also unable to attend due to Covid while another unfortunately had recently had a bereavement of a close member of their family. We had seven fliers record times across three classes and a couple of attendees with models who didn't record competition times. There was a number of spectators from both the Levin club and further afield. One of the spectators has a Miss America under construction and we hope to see that flying at a future Levin event. At the time of the excellent Levin Club sausage sizzle there were eighteen present, enjoying the comradery and lovely weather.

One new model at this event, a Kerswap flown by John Miller and originally built by Kapiti clubmate, the late Ron Nichols. The model flew very well in John's capable hands and Ron would have been looking down with a broad smile on his face watching the model fly so well.

Ian Munro put in quite a few flights with his T-D Coupe powered by a Brown Junior 60 sparky, a recent replacement for another Brown Junior 60 in this model. The new old motor handled well with Ian being something of an expert modeller with these older engines.

Stew Cox had his New Ruler back in the air after Allan Knox had kindly helped with maintenance on its Saito 65. The engine handled much better and Stew was the only one to make a perfect score in Precision. His fly-off flight missed a perfect score by just one second. Precision place-getter from the last Levin event, Levin President Kevin Daly continued his good flying, missing the flyoff by only one second. Kapiti fliers Ian Crosland and John Miller had a close tussle with Bryan Treloar from Ashhurst for third in Precision. In the end Ian took third pipping Bryan by just one second with John close behind.

Thermal activity was better in the afternoon but thermals were few and far between in the often clear cloudless sky. In IC Duration, Stew Cox's Saito gave his New Ruler a strong climb, but it was still challenging to make the four minute max with one flight barely saved by milking a thermal very low down to just squeak in. Stew struggled to find lift with his fly-off flight. Kevin Daly and John Miller both made some thermal assisted flights in Duration but their lower climbs made it hard to achieve consistently long flights given the conditions. Kevin was making noises after the event that a re-engine of his Buzzard Bombshell may be needed for a better climb.

While numbers were low, those that attended had a great day in perfect flying conditions. There was a lot of flying done with much sport/fun flying in addition to competition flights. Several fliers gave multiple models an airing. A particular highlight was Trevor Glogau's Earl Stahl Hurricane eRubber model which had huge character and looked stunning against the clear blue sky above.

Results

Vintage Precision

1. Stew Cox	Wellington	New Ruler	1940	600 + 199
2. Kevin Daly	Levin	Bombshell	1940	599
3. Ian Crosland	Kapiti	Mercury	1939	561
4. Bryan Treloar	Ashhurst	Red Zephyr	1936	560
5. John Miller	Kapiti	Kerswap	1941	555
6. Terry Beaumont	Kapiti	Southerner	1947	466

Vintage IC Duration

1. Stew Cox	Wellington	New Ruler	1940	780 + 285
2. Kevin Daly	Levin	Bombshell	1940	484
3. John Miller	Kapiti	Tomboy	1950	482

Vintage Open Texaco

1. Ian Munro	Wellington	T-D Coupe	1936	947
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Next Levin Vintage Events

Bob Burling Memorial

Saturday 13 May (Wind date Saturday 27 May)

John Selby Memorial

Saturday 16 September (Wind date Saturday 30 September)

Gareth Newton Memorial

Levin, 18th March 2023

KERSWAP
John Miller



TD COUPE
Ian Munroe



NEW RULER
Stew Cox



Gareth Newton Memorial

Levin, 18th March 2023



Gareth Newton Memorial

Levin, 18th March 2023

1939 HURRICANE
designed by
Earl Stahl

Built and flown by
Trevor Glogau



Reproduction Old School Transmitter

John Ryan

A few years ago I came across an Aeromodeller article about fliers in the UK reviving old radio gear. There was a link to the mode zero web site *mode-zero.uk*. This is a forum with all sorts of projects on just about anything to do with restoring old radio gear using modern technology. I flew single channel as a lad last century after building some Mc Gregor kits and later with a slightly more reliable RCS Guidance system my interest was aroused.

One of the guys on the forum, Phil Green, produces a PIC-based single channel emulator which plugs into an RF module. This allows the use of your old 40Mhz and 2.4 Ghz transmitter modules and receivers to drive a servo to do what an old single channel escapement used to do. The difference is that it is reliable and works all the time. Lots of guys have posted pictures of their old transmitters with the original gear removed and replaced with an RF module and emulator.

[Right] Inside the transmitter showing the PIC emulator on the back of a 40Mhz RF module

During the covid lockdown I purchased an Arduino beginners kit. What is an Arduino? It's a programmable processor. The kit came with a bunch of sensors, a bread board for making up experimental circuits and jumper leads. Free software is available off the net and the affair is easily programmed using your PC. After following a course of tutorials on the net I managed to make a meter to show the servo output pulse length and frame rate outputs from a receiver and an optical tachometer.



Another guy on the forum detailed another emulator using an Arduino. This had to be made and after making a printed circuit board that the Arduino and an old 36Mhz RF module plugged into we had another working S/C transmitter. The code was downloaded from the forum site and worked first pop without any sorting out required. A feature of this set is a two position centre off switch which allows the model to be flown like an old reed set as well as the standard single channel button.

[Right] The Arduino based S/C transmitter Note the switch to the right of the aerial base

[Below] Inside the box. The Arduino encoder is at the bottom left driving an old 36 Mhz Futaba Gold box Tx module



ENTER THE NRF24

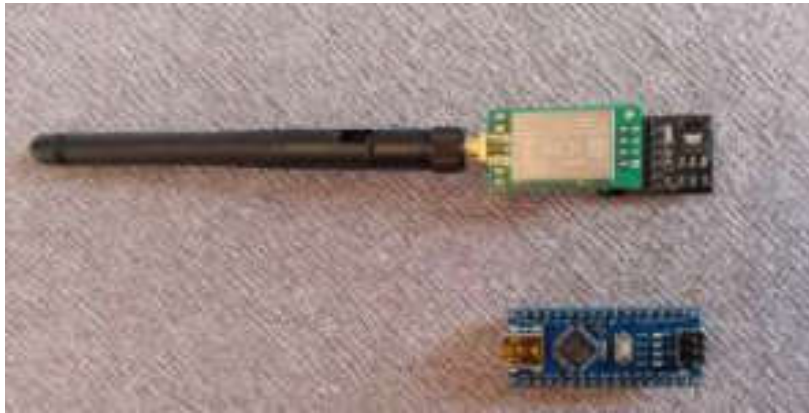
The NRF24 is a series of cheap 2.4Ghz transceiver modules readily available along with Arduino bits from the usual Chinese shops. There is of course some brands to avoid but the good stuff works well. If I didn't already have enough S/C gear I just had to have a go with these modules.

Luckily, Phil Green has done the hard work and has detailed the construction of his 2.4 FHSS S/C system on the Mode Zero Forum. Below are a couple of pictures of an Arduino Nano, an NRF24 transmitter module and an Arduino Nano RF.



Reproduction Old School Transmitter

John Ryan



Here is the NRF Tx module and Arduino Nano which is loaded with the code. These two items are the basis of a transmitter. The Nano is connected to a push button switch for S/C operation or stick assembly pots if building a multi channel proportional set then loaded with the appropriate code.

The basic NRF 2.4 Nano RF. It consists of an Arduino Nano complete with a built in NRF24 transceiver module. All that is required to make a receiver is to attach a servo connector block and load the code.



2.4 FHSS S/C transmitter:



Inside the box:



Lots of fun for those that like to tinker, but be aware if playing with these NRF modules they are programmable from 2.400 to 2.525Ghz (126 channels) Don't programme anything higher than channel 83 (2.483Ghz) for use in New Zealand. **JOHN RYAN**

EDITOR : In 2016, several British clubs published the application of modern electronics to the free flight task of dethermalising a model. I built one using a Phil Green encoder board and a 2.4 Orange module from Hobby King (back then HK actually stocked useful items!) These were made into a 1-channel transmitter with a single button, the pushing of which released the tailplane to DT position via a servo. That was it - push a button to activate the Remote DT. Range was similar to a Tx using the Orange module. Basic, but it worked every time and was an economical way to get into remote dethermalisation.

For several years, Remote DT was opposed by some who feared the tarnishing of their Holy Grail of compulsory suffering for their art. Disciples of *The Order of Ineffable Suffering* might have kept themselves pure of this evil, but such was their selfless concern for others that they worked to prevented less virtuous fliers from using RDT and so falling from grace. Many of these former zealots now happily use RDT, their change of heart motivated by the passing years that have stretched distances, heightened fences, and widened ditches. Thankfully, RDT is now accepted by everyone except for three elderly aeromodellers living in cave on Mount Sacbut.



“Safety is No Accident”

1930's Style

When, in 1936, the Couston School Board authorised a new playground climbing frame, safety was firmly in mind. Risk-free use of the frame was ensured by limiting its height and by grassing beneath the frame.

Despite of this rigorous diligence, the Board received a complaint from Mrs Janie Spindle who, in a somewhat ill-humoured letter, called the Board's attention to the deaths of her five year old daughter, Sissy, and seven year old son, Leroy.

While launching a model airplane from the top bar, the children had fallen onto a bicycle parked under the frame, severely damaging the machine.

The School Board reacted with commendable alacrity and pacified Mrs Spinks' with a stern new ruling:

“Model airplanes are not permitted to be launched from the frame”.



THE ENGINE ROOM

CHRIS MURPHY

Common or Garden Type NZ diesels - not ones manufactured here, which are uncommon and very much not garden, but ones you may well own, have owned in younger days, or encountered during your modelling career. To keep things simple, I'll keep to an upper limit of a nominal 1cc as this is the sort of size commonly used in Aggregate models, FF scale, general FF sport and small vintage models, and for many of us, was the size with which we started power modelling.

The choices these days are few and far between but it was not always so. Right up until the 1980s, there was a plethora of makes to be found locally. Some were available in the shops, others having found their way here by various means from overseas. Makes such as Mills, Davies Charlton, ED, Frog, ME, Allen Mercury, plus the occasional rarer sighting of a German Taifun, Webra or Jaguar offering in the 1cc or smaller range.

In terms of sheer numbers though, it's hard to beat Mills, ED and Davies Charlton for models and numbers, though for different reasons - Mills for their 75, Davies Charlton for their range of different models and longevity in production, and ED for the sheer scale of their production. The other makes we will look at in due course.

MILLS

The Mills 75 of course has the advantage of being effectively 'first in the game' as far as widespread export throughout the Commonwealth and also from being much replicated over the years, a situation that has only just finished very recently. I believe the brand and tooling is currently up for sale by the current Indian owners.

The Mills diesel appeared immediately post WW2 in 1946, the first model of the 1.3, which was followed two years later by the Mills 75 Mk1 and the Mills 2.4, neither of which lasted long in production. The Mills 75 Mk1 (Fig 1) is identifiable by its machined case and 'acorn' type fuel tank and in styling is far more akin to the 1.3 than the beloved 'Mills 75' that most of us know - the Mills 75 Mk2. The 75 was available in two models, the 'standard' S.75 equipped with a cutout in the tank assembly, and the 'popular' P.75 (Fig. 2) which lacked the cutout. The standard model was about five shillings more expensive to purchase retail. Production continued unabated until ca 1964 when Mills Brothers became a subsidiary of Ayling Industries who promptly ceased production, whereupon a great wailing and gnashing of teeth arose from the modelling community. Indian businessman Suresh Kumar negotiated and purchased both the rights to the Mills designs and the original tooling used in their manufacture. This led to the production of Mills engines in India in the original sizes plus some non-original sizes (0.3cc, 1cc, 1.5cc, 3.5cc, and 5cc) under the 'Aurora' brand. For some time, these engines were confined to the domestic Indian market until export started in the mid -1970s.



BURFORD

In the meantime, the late Ivor F in Australia had embarked on his own replica manufacture, strictly by pre order with a deposit to raise the start-up capital. The components were made by Gordon Burford the Taipan engine manufacturer in South Australia but assembly, testing and sales were all undertaken by Ivor from his Doonside home in NW Sydney, hence the 'Doonside Mills' appellation. 1000 in total were produced, 250 exact replicas of the British Mills P.75 model and 750 replicas of the slightly improved Mk2 model which had cosmetic-coloured heads, beveled mounting lugs, and strengthening webs on the main bearing housing. (Fig.3) Both versions had some minor improvements over the original British and later Indian versions. The liner was pinned and the fuel tank retained by a wire circlip, both areas where the originals could give trouble.

INDIAN

The Indian engines which appeared from the mid 70s onwards initially had cast alloy cases (Fig 4.) but later ones had a black coating applied to the case to more closely resemble the UK originals. The earlier ones left a lot to be desired in terms of fits and quality and were renowned for breaking crankshafts. As experience was gained, quality improved.

IRVINE

Next in chronological order was Irvine engines who introduced their replica version (Fig 5) in the late 1980s. This was a very well made but premium priced replica that was well received both in the UK and abroad. It was made to largely metric dimensions with the outcome that few parts interchange with the original design, only the complete intake and tank assembly. They did however introduce an optional extended range tank which screwed into the tank top to replace the original tank, allowing longer runs for R/C use (fig 5a insert)

Somewhat later Irvine introduced a Mk 2 Mills 75 which confusingly looked much like the original Mills Mk 1 75, with a machined case and the cylinder mounted by a square flange much like the 1.3. This engine was fitted with a single rear ball race. They proved expensive to manufacture and are extremely rare to find. (Fig 6)

Jump forward another decade, give or take, and the redoubtable David Boddington contracted with CS in China to produce Mills replicas which he sold in the UK and on Ebay as 'Boddo Mills'. The first of these bore very little resemblance to a Mills (Fig 7) and as with the early Indian ones were a bit hit and miss in the quality department. Later they appeared as fairly close replicas of the classic P75 model. (Fig 8). CS sold them willy-nilly anywhere they could, regardless of contractual arrangements and this resulted in Aurora taking legal action against both Boddo and CS to cease using the Mills name. Boddo complied while CS simply renamed theirs 'Navo' and continued on their merry way.



HAINSWORTH

This Mills inventory would not be complete if it didn't mention the NZ Mills 75, a replica produced by Steve Hainsworth in Lower Hutt, from a combination of own produced and outsourced components. Unfortunately the project stalled and only 7 were completed, making it the rarest Mills of them all.

ED

Next into the fray was ED, Electronic Developments based in Surrey UK who in 1947 were quick to follow Mills Bros into the model engine market with their 2cc ED Mk II. Just for the record, ED engines used 'Mk' as a size designator rather than a sub-model designator, so the ED Mk I was 1cc, the Mk II was a 2cc unit, the Mk III a 2.5cc, and the Mk IV a 3.5cc. The ED Mk I 1cc 'Bee' (Fig 9) appeared in its first version in 1949 and sold widely and on a large scale with about 150,000 manufactured. It was replaced by a quite different Mk II version in 1955 (Fig 10) which itself went through a number of subtypes. This Mk II Bee also provided the basis for a side-port version, the ED Cadet (Fig 11) which appeared late in 1962 and had the distinction of being the first muffler-equipped UK engine. Also appearing around the same time was the 0.8cc ED 'Pep', in a range of colour options - red, blue, green (Fig 12) - but too late to make much impact on the market which was already sewn up by the Mills, DC Merlin and Frog 80 - of which more anon. ED did however set some records and according to their figures some 300,000 Bees of all types were manufactured, arguably making it the most prolific model engine ever produced in the UK. ED were proud of their export drive and often made use of overseas competition success achieved by ED engines in their advertising, including the occasional NZ mention. Of equal merit to the Bee was the smallest ED, the 0.46cc Baby, introduced in 1952 to compete with the already successful Allbon Dart, and which went through two models (Fig 13) and remained in production till ED folded around 1963.



FIG. 9



FIG. 10



FIG. 11



FIG. 12



FIG. 13

Photograph Credits:

FIG 1 : Derek Butler

FIGS 6 and 8 : Internet photographs

All other photographs are by Chris Murphy and are of engines in his collection.

DC / ALLBON

Hefin Davies started his own company in the late 40s after leaving Rolls Royce, and initially offered engine kits for the DIY assembler, starting with the 5cc Wildcat before going into full manufacture with the later model Wildcat, and then the 3.5cc DC 350. Meanwhile Allan Allbon, unable to meet demand for his excellent Allbon Dart 0.5cc engine introduced late in 1950, (Fig 14) entered into manufacture arrangements with Davies Charlton to produce both the Dart and the other top selling Allbon product, the 1.5cc Javelin which was a derivative of the lackluster Allbon Arrow 1.5cc glow engine of 1949. Allbon also entered into an arrangement with DC as their main designer. Along with the Dart which was now described as a 'MkII', sporting a red rather than a green head (Fig 15), a 1cc derivative of the Javelin, designated the 'Spitfire' appeared in 1953 (Fig 16). A year later came a totally new design, the 0.76cc Merlin (Fig 17). The Merlin took the UK and Commonwealth market by storm, not just on account of its handling but also its price which undercut the Mills 75.

The market success of the Merlin resulted in the remainder of the range being redesigned to the same style with the result that the 1.5cc Sabre replaced the Javelin in 1955, and a 1cc version of the Sabre, designated the Spitfire II, replaced the earlier Javelin based Spitfire model. Initially this Spitfire II came with a green anodised head but this soon changed to blue (Fig 18) and remained so until the end of production ca 1984. All these engines were sold as the 'Allbon XYZ' until the late 1950s when Alan Allbon left DC, and DC renamed the range as 'DC' around 1959-60. With the introduction of spring starters, as in the DC Quickstart range, they continued until production ceased around 1984. The only anomaly was the tiny DC Bambi (Fig 19) which appeared in 1954 and was primarily a prestige product for DC. It was marketed as a DC Bambi (though it bears an unmistakable design resemblance to the larger Dart) but is often referred to as the 'Allbon Bambi'. Sadly its fits and handling left quite a lot to be desired and though cute was not an easy engine to operate, and with poor sales, was withdrawal from production in 1960.

It's unfortunate no one seems to have any idea of actual numbers manufactured by DC as they were in business for nearly 40 years and for the latter half of that were the major manufacturer in the UK. This goes a long way to explaining why their products are so common here. ED had fallen by the wayside around 1963 and Frog around the same time, although DC manufactured Frog engines under contract up till around 1974.

**In Part 2 we will look at the 'Johnny-come-lately' brands on the NZ engine scene.
Chris Murphy, 2023**



FIG. 14



FIG. 15



FIG. 16



FIG. 17



FIG. 18



FIG. 19

Heron

R.G. Chastel
Model News Aug 1963

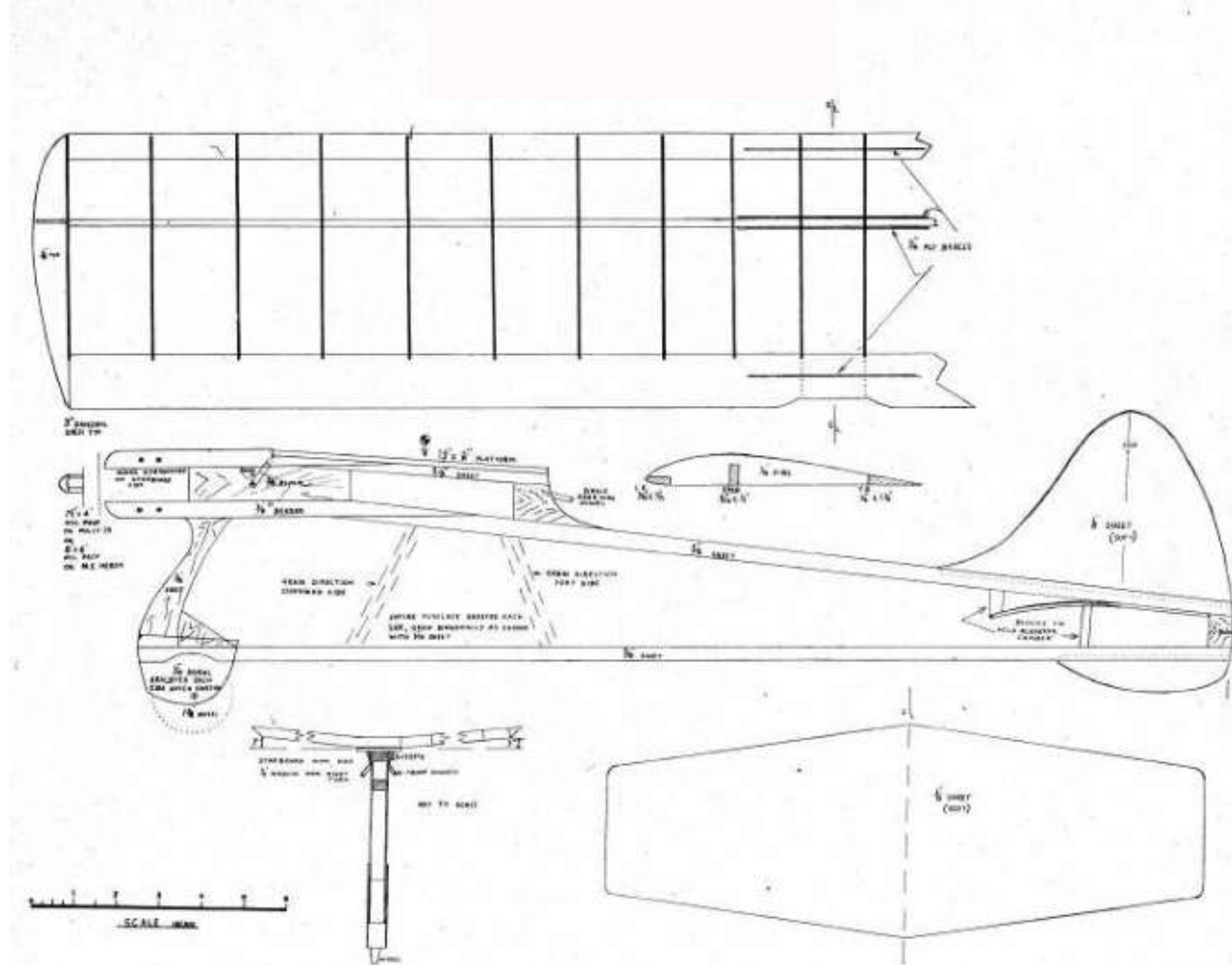
A simple design for the Australian Scramble event. Hard to imagine anything more functional. The seldom seen trim technique described below eliminates the need for a trim tab on the fin.

"The fin has no trim tab. Any adjustment of the flight circle being made by "slewing" the wing a few degrees. I find this a more accurate way of obtaining a consistent turn.

With the wash-in as shown on the plan and the motor set without any sidethrust adjust the wing to give a slight right turn on the glide. Under power the turn should be rather wide with a tendency to tighten up after the motor cuts.

In thermal weather, simply slew the wing a little more to tighten the power flight and the glide will automatically tighten up almost to a spiral which will guarantee a quick return to earth.

With this setup always launch the model with the wind on your right side, so that on the first turn the model makes its run into the wind and gains height. A launch into the wind will result in the model dropping as soon as it turns".



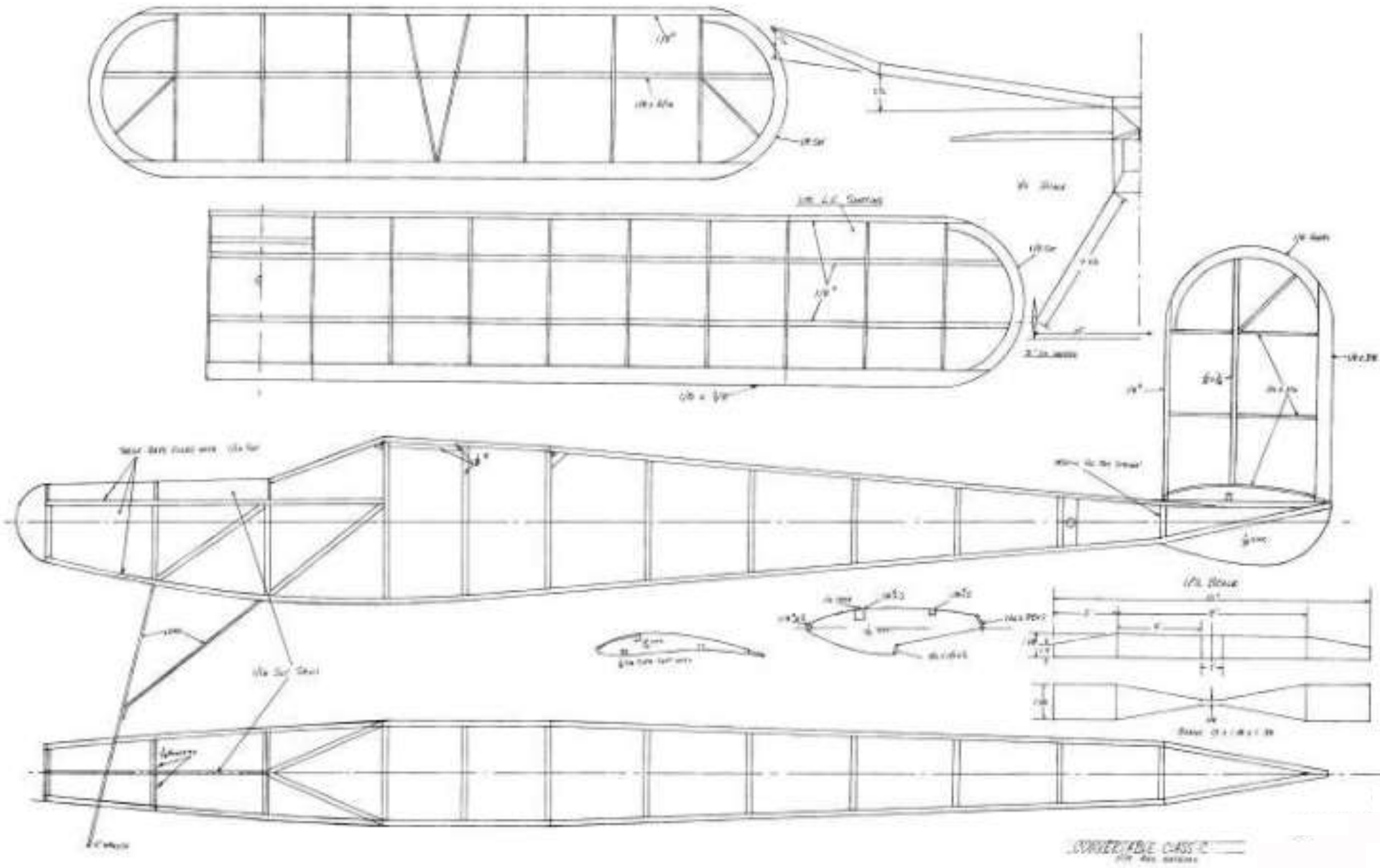
Convertible

36"

1934

Tad Dietrich

The design on the cover. Below are the two personalities, ROG and ROW, of the "convert-able" as built by Mike Mulholland.



Reader's Model: Sans Egal 80" 1959 Reino Hyvarinen

Model restored by Mike Holland

Built by Bruce Keegan, probably in the early 60's. It was passed on in poor condition and needed a major restoration including a new tailplane.

When the fuselage was stripped it became apparent that Bruce had experimented with several dethermalizer setups.

Mike would like to hear from anyone who may know exactly when it was built or have reports on how the model flew when Bruce was flying it.



Reader's Model:

X-AC-5

1957

O.W.F. Fisher

Model by Bernard Scott

The recent Covid-induced unorthodoxy made the building of unorthodox models seem appropriate. First up was the flat plate job below from American Modeller July 1967. I built one of these many years ago for use in Aggregate where it did rather well, flying just as the designer glowingly claimed it would. Having acquired another twenty years of building skills, this second one should have been a cracker. Sadly, not so.

Without a tailplane to tip up, dethermalising the X-AC-5 is achieved by allowing the lead ball used as noseweight to drop. It is attached by nylon fishing line to the left wingtip so that when dropped it will cause a rapidly descending left hand spiral. DT efficiency has not been tested as although the gentle, safe climbs and the slow bobbing glides that I remembered from my first X-AC-5 do sometimes happen, they

alternate with flights that have gyrations of a truly unorthodox nature - none of which have required a DT. Ocean William Francis Fisher had many designs published. Some were quite ordinary but most were a bit different, perhaps quirky might be a better description. The Urban Dictionary gives one meaning of OWFF as "Something you can't believe". Appropriate in this instance!

Mr Fisher and his designs deserve more air-time than they get, so a future issue will feature the designer and his models. I know of one FF Kiwi who corresponded with Mr Fisher for many years. Comments from readers with any OWFF experience are invited.



Reader's Model

Pipistrelle

Model by **Bernard Scott**

A second dose of pandemic madness resulted in this rubber-powered tailless model, a modern rendition of George Woolls' 1953 *Pipistrelle*.

Test flights of this one have also been rather trying with the last arrival removing one of the folding propeller blades. There is a plethora of trimming articles for models of standard layout, but little meaningful advice for tailless designs. What there is often resorts to escape clauses like "*Adjust for a slow glide*".

Tailless designs have never been popular in New Zealand - or indeed anywhere else. Except, that is, for in England where devotees of tailless rubber models vie for the Lady Shelley Cup.



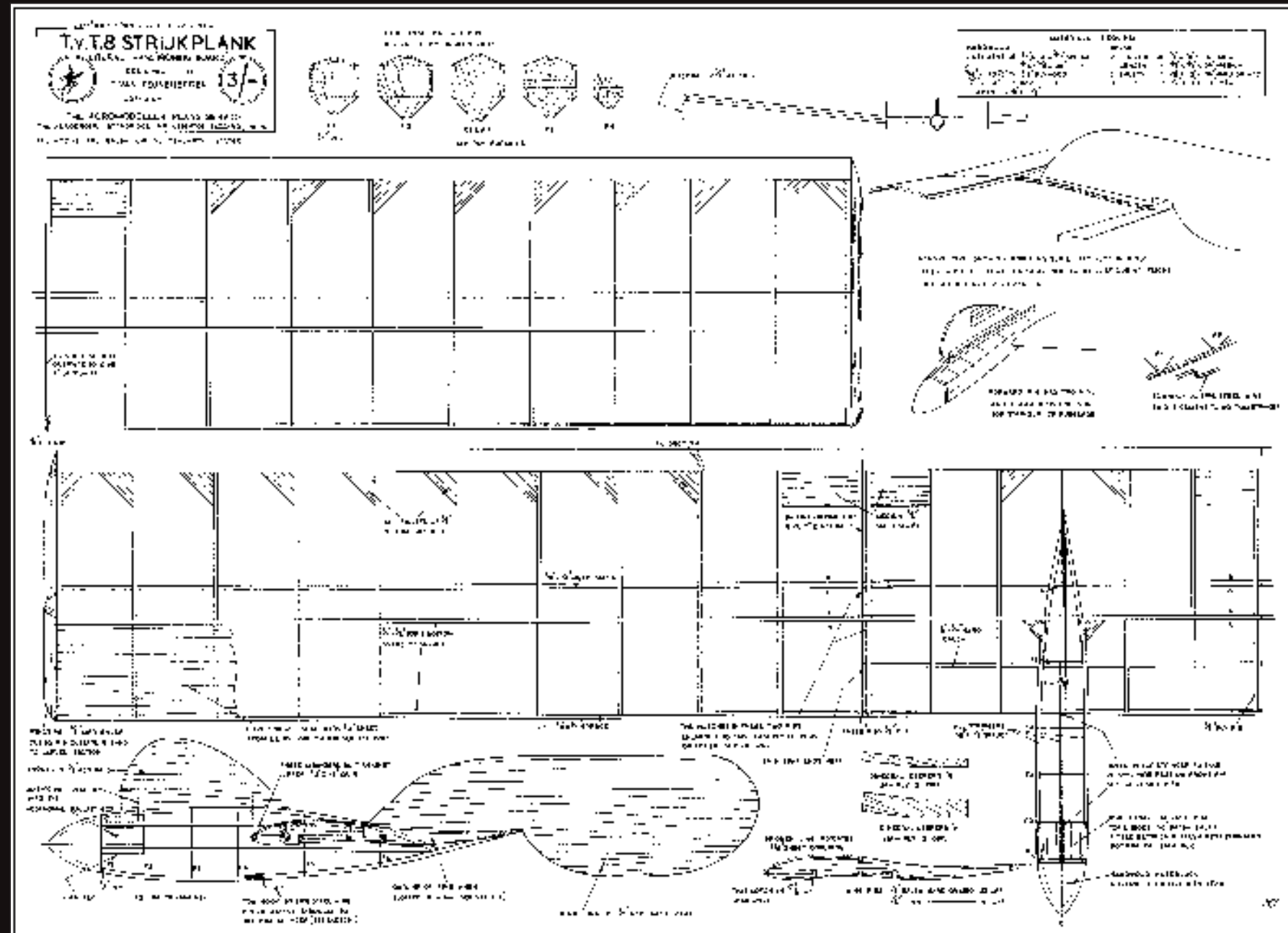
Model by Bernard Scott

Lacking success with the unorthodox Power and Rubber models thoughts turned, as they will, to unorthodoxy of the Glider variety.

Old *Aeromodeller* magazines feature many apparently successful tailless gliders by Scandenavian designers so they were the source of my choice.

Luckily, to build a model one does not have to be able to pronounce its name or that of its designer.

Progress:



We had an indoor meeting at our smaller venue on Friday. Six flying Hanger Rat and three flying Hornet. I have included my report on proceedings with my usual sprinkling of trimming advice.

Star Gym is smaller than the TSB Stadium and at 8 metres at the apex it's a Category 1 hall.

Out of curiosity I checked out the New Zealand Junior Record for Category 1 Hanger Rat. It's held by Nathan Walker, son of **Danny Walker**, from Whangarei. He's the guy that won Hanger Rat at the recent Nationals beating my time by two seconds with a score of 278 seconds for two flights.

Danny's Record is 294 sec (for 2 flights) - that's two flights with almost 150 seconds average. At the start of the evening with everyone trying frantically to coax their Hanger Rat back into some sort of flying trim that goal seemed very fanciful for our one Junior flying.

Matus Hunt the current Category 2 (TSB size hall) Junior Hanger Rat Record holder was flying tonight and was testing how high he should be aiming for.

Matus wanted to tighten his turning circle so added a bit more right thrust by bending the wire on the prop hanger. It had the desired effect and he was circling at a tight 3 or 4 metre circle, so wasn't going to be hitting any walls now.

Ken Agar made a new prop this week with more pitch on it to try and overcome running out of turns on his rubber while still high in the air. It seems he may have too much pitch now, struggling to get enough thrust to fly. We wanted to swop his prop for something a little better but it was not an option because Ken is using a prop bearing that doesn't allow swopping props under

any circumstances. I must help him change that before the next meeting at the Stadium in March.

Matt Fairey has also been busy with a minor rebuild to shorten the prop hanger to reduce bending forces on the fuselage and help control added downthrust at high turns. He's also made a new prop also with more pitch.

There was a lot going on this evening and there wasn't any spare time to help Matt find a flying trim for his model. Apologies for the lack of support Matt. Matt is still rather new to Hanger Rats and needs a little help in the right places to get him flying well.

It's often hard to decide what should be changed and by how much and so tempting to change two things at once. Keep it simple and just change one thing at a time.

Make sure your model is behaving nicely on a 300 turn glide before thinking about adding more turns. If it stalls on 300 turns, don't be tempted to put more turns on it in the hope that the extra power will sort it out. It won't. You'll just get bigger stalls that may damage something.

If it dives a little bit, you can move the wing forward a millimetre or so or increase the wing incidence a tiny amount, maybe 1/64th inch or 1/4 of a millimetre at a time. If you make changes bigger than this then you can go past the optimum trim and not see any improvement or even the opposite problem. So, only make tiny adjustments, even if you have to do 3 or 4 or 5 trimming 300 turn flights. If these are models that have flown before they should have pen marks for where the wing is positioned on the fuselage. By checking your notebook you will know how much

positive or negative incidence you need on the wing.

Everyone needs a notebook to record all these things plus how many turns and how many to back off for a good flight. For all models there comes a point where with 50 extra turns it will stall out. There's too many things to remember. You really do need a Notebook.

Meanwhile back in my corner of the hall it was bedlam. **Jo** was chafing at the bit wanting to get "Fliss" trimmed and was having a little trouble. I was trying and failing to find trim on my Rat. I noticed that the left wing moved up as soon as the model was in the air. I found a tiny break on the trailing edge at the dihedral break causing it to dive regardless of what I did with trim. A drop of Super Glue was an almost magical fix.

Jo, through good record keeping quickly got to flying trim of 1600 turns then backing off 50 turns to help flatten the torque curve and avoid the dreaded stall on takeoff. Her first official was a cracker at 1m 57 sec at a time when most of us were rejoicing to have broken the 1 minute mark! Another 50 turns and her time improved to 2m 17 sec. But she was close to the limit and 1750 - 50 caused "Fliss" to hit the sloping ceiling whereupon it went into a shallow dive and never recovered, hitting the deck for a measly 1m 26 sec.

This diving behaviour when disturbed is caused by a lack of stability by having the C of G too far back. It would only need to come forward by a millimetre or two at the most to cure this. But that would mean a retrim. And anyway, hitting the ceiling is not a part of normal flying so she carried on with a few less turns next flight to avoid the ceiling for a pretty cool 2m 20 sec best flight of the night by a good margin of nearly 20 seconds. Maybe all that encouragement you were offering Fliss did the job, Jo !

Matus was dialing in a promising trim and did a very respectable first flight of 1m 42 sec and went on to be the only other flyer of the night to break the 2-minute barrier with a 2 m 01 sec flight. A few more turns and it stalled out just after takeoff. Maybe the elevator got twisted or something shifted in later flights but that was his best and good enough for a well deserved 2nd place.

My model was doing its usual underwhelming climb but only to about 1/2 the ceiling height and I never quite made the 2 minute mark.

Alan Reed had serious challenges with a model that seemed to vibrate and jerk around the sky in an uncomfortable manner but still got a couple of flights around the minute and a half mark for 4th place.

Allen Lawrence made two flights of 1m 25 sec exactly and was making use of the full height of the hall meaning there was little room for improvement.

Ken Agar reverted to his second model with less pitch on the prop. Challenging to trim and still a work in progress.

Matt Fairey had a series of troubling issues with prop shafts and wing mounts breaking and didn't post any official time. Maybe next time out Matt will get good times.

Ross Giddy, who built a new Hanger Rat at one of our build workshops, pre-covid, had never flown it and decided it was time it had a new owner that

would trim and fly it. The ideal candidate was Rod Brown who has now cut his teeth on the intricacies of indoor rubber trimming with his Modelair Hornets.

So thanks to Ross's generosity we now have a new recruit for our Hanger Rat brigade. Watch this space.

While all this was going on, Rod Brown was busy trimming his Modelair Hornet for nice smooth flight. And then doing the same for his second Hornet.

We agreed as Contest Director that the target time for this evening, was going to be 20.0 seconds. The person whose flight is closest to 20 seconds is the winner. You get 3 chances.

Rod, Allen and myself were flying. I had trouble with flying too high and too long. Cut back on the turns and it's reluctant to take off, so got flights 16 sec and 17.5 sec. Allen got very close with 19 sec and Rod on his last flight sneaked the lead with a 19.1 sec to win the contest. Might have to record times to a tenth of a second in future.

A great night's flying that bodes well for the next meeting at the TSB Stadium on the Friday night 3rd of March, the 1st day of our 3 day flying festival on Memorial Weekend.

Hanger Rat Best 2 flights

1st	Jo Fuller	4 : 37
2nd	Matus Hunt	3 : 51
3rd	Alec Fuller	3 : 29

4th	Alan Reed	3 : 09
5th	Allen Lawrence	2 : 50
6th	Ken Agar	2 : 06

Modelair Hornet Target 20 sec

1st	Rod Brown	21.9	17.2
2nd	Allen Lawrence	19.0	18.5 25.5
2nd	Alec Fuller	16.0	17.5 21.0

Report and photographs by **Alec Fuller**



More on HANGAR RAT

10th Feb Star Gym Indoor Meeting 3



Previous page: Alec Fuller

Top Left: Ken Agar

Left: Matt Fairey

Above: Jo Fuller

More on HANGAR RAT

Notes on the Hangar Rat, by its designer

"Hangar Rat" owes its existence to the "Sig Parasol," a simple, easy-to-fly, tissue-covered profile model. Having built one of these with a cambered wing, I proceeded to fly it every lunch hour in the hangar, where I worked, until it was so tattered it was retired to a place of honor above my bench.

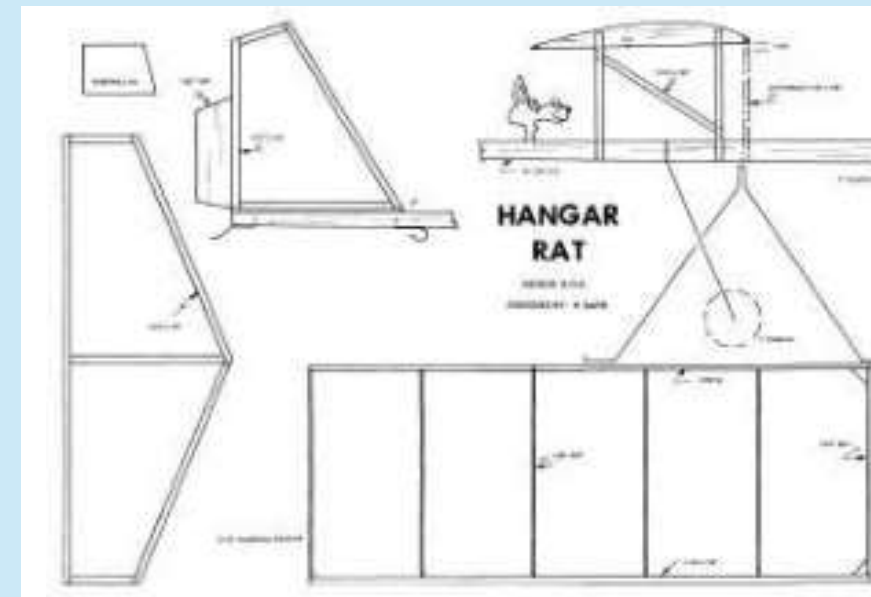
Needing another fun machine that could be built in a hurry, "Hangar Rat" evolved, using the same airfoil I had used on the Parasol. It has been a success right from the first flight, with average flight times under a 20-foot ceiling of 50 seconds with a best flight to date of 1:08 and many flights over a minute. It is easy to adjust and build and will bring pleasure to both the beginner and the jaded R/C nut (like me). It brings back memories of simpler times when modeling was less complex and expensive.

If you are a beginner, follow the plans closely and you will be rewarded with a fun flying machine. If you're an old hand at the game you probably have your own ideas about a lighter airframe, better prop, etc.

Regardless, have fun!
Harry Barr, 1979

For more detail on the evolution of the HR -
https://www.ctie.monash.edu/hargrave/hangar_rat.html

The original, very simple, Hangar Rat plan by Harry Barr.



5.9 Hangar Rat

- Models must be built to any of four published plans from the following sources:
 - "Model Builder", August 1979 (USA)
 - L. Kelsall/ M. Starick kit plan (Aust)
 - "Aeromodeller", issue 757, Non/Dec 1998 (UK)
 - "Free Flight Downunder", Vol 34, No 1, Summer 2002 (Aus)
- Models may be made to pull apart for ease of transportation.
- Wooden propellers must be built to plan specifications and must not be cambered or thinned. Commercially made plastic propellers may be used but must not exceed 7 inches in diameter.
- A reinforcement block may be used to strengthen the rear hook.
- Covering must be Model a/c tissue paper as commercially available in NZ.
- Motors are to be a single loop made from a 915mm strip of 1/8 inch maximum width rubber.
- ROG launch.
- The best two of six flights shall determine placings. The third best flight will be used, if required, to break any tie.
- All attempts count as flights.

RC Top 10 Leader Board 2023

Standings at



RC Top 10 Leader Boards 2023

The purpose of the Vintage SIG RC Leader Boards is to increase enjoyment of competition flying by showing fliers how well they are performing relative to others. Scores are posted from the results of the Nationals, regional and club contests, NDC, and independently-timed flying.

The Leader Boards run for each calendar year, and are updated throughout. At the end of each year they are cleared and started afresh.

These are the first Leader Boards for 2023. The number of postings is very healthy in several classes and building up nicely in most of the others.

Please email me if you spot any errors or omissions.

Wayne Cartwright
rwcwright4@gmail.com

Standings at 24 March

Precision Classes

Vintage Precision	
1. S Cox	600+199
2. A Knox	600
3. K. Daly	599
4= T Christianson	580
4= D Thornley	580
4= T Gribble	580
7. J Ryan	575
8. C Erlam	570
9. I. Crossland	561
10= D Little	560
10= B Treloar	560

Classical Precision	
1. A Knox	597
2. B Scott	582
3. B Perriam	486

Duration Classes

Vintage IC Duration	
1. S Cox	780+285
2. A Knox	780
3. B Scott	770
4. D Thornley	740
5. T Christenson	731
6. L Rodway	639
7. R Gray	558
8. T Beaumont	493
9. K Daly	484
10. J Miller	482

Vintage E Duration	
1. A Knox	943
2. D Mossop	920
3. C Erlam	764

Classical IC Duration

Classical E Duration	
1. A Knox	1151
2. P Townsend	835
3. B Scott	735

Texaco Classes

Vintage 1/2A Texaco	
1. A Knox	1500
2. B Scott	1480
3. R Gray	1451
4. D Little	1078
5. J Ryan	1056
6. S Cox	990
7. J Beresford	883
8. S Morse	132

Vintage A Texaco	
1. A Knox	1820
2. B Treloar	600
3. I Munro	269

Vintage Open Texaco	
1. B Treloar	1648
2. T Glogau	1585
3. A Knox	1409
4. I Munro	1131
5. S Cox	1041

Vintage 1/2E Texaco	
1. W Cartwright	1274

Classical 1/2E Texaco	
1. B Scott	1737
2. T Gribble	1405

Vintage E Texaco	
1. B Scott	1907
2. J Butcher	1770
3. W Cartwright	1375

Classical E Texaco	
1. A Knox	3638
2. W Cartwright	2912
3. D Mossop	1999
4. T Gribble	1368

Vintage E Rubber Texaco	
1. P Townsend	3016
2. D Gush	2934
3. W Cartwright	2057
4. A Knox	1201

Sport Cabin Texaco IC	
1. P Townsend	2447

Sport Cabin Texaco E	
1. P Townsend	2575

Vintage and Classical Scale Texaco

FF Top 10 Leader Board 2023

Standings at 1st April 2023



Vintage Power Duration

1. Chris Murphy 125

Vintage Rubber Duration

1. Paul Squires 490
 2. Wayne Lightfoot 489
 3. Chris Murphy 347
 4. Mike Mulholland 335
 5. Graham Lovejoy 321
 6. Loubna Murphy 232
 7. Stew Cox 147

Vintage Precision

1. Bernard Scott 180 +
 2. Chris Murphy 180 +
 3. Ricky Bould 150
 4. Bryce Gibson 14

Nostalgia Power Duration

Small Power Duration

Nostalgia Rubber Duration

1. Chris Murphy 190
 2. Bryce Gibson 90

Nostalgia Glider Duration

1. Bryce Gibson 12

Classic Power Duration

Classic Rubber Duration

Vintage Glider Duration

1. Wayne Lightfoot 96

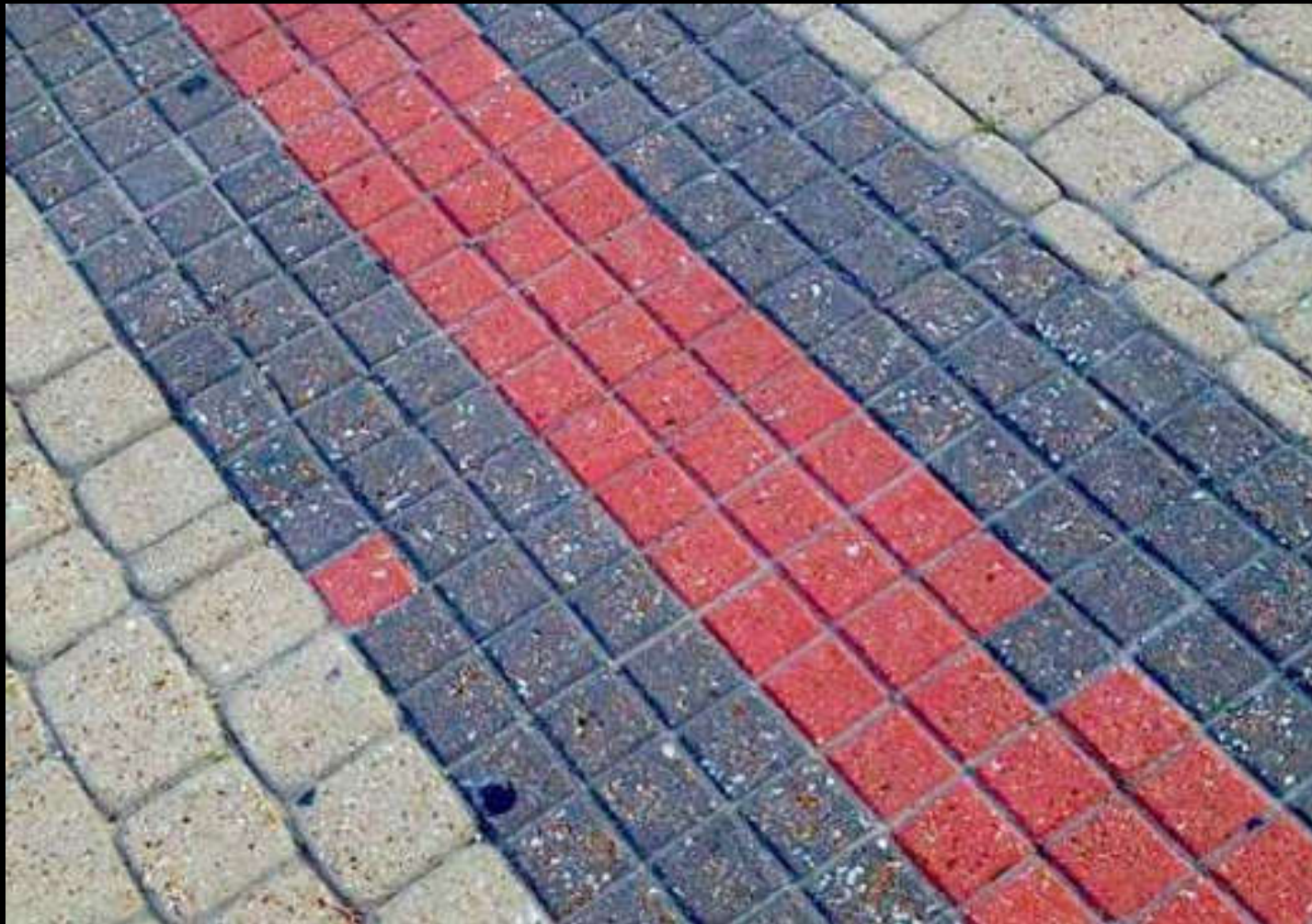
Classic Glider Duration

Vintage Catapult Glider

1. Des Richards 266
 2. Stew Cox 253
 3. Allan Knox 232
 4. Paul Squires 228
 5. Connie Gray 223
 6. Bernard Scott 222
 7. Danny Walker 217
 8. N.Walker 214
 9. Kevin Barnes 211
 10. Alec Fuller 94

NOTE: If you flew **Classical Combined** at the last Nationals, please advise which class of model you used - Power, Rubber or Glider. Your scores may then be added to the appropriate section of the Leader Boards.

THE LAST STRAW



Good things come to those that wait (or read all the bulletin)

For Sale: Lanzo Bomber 56"

In excellent condition, built by Brian Harris. Turnigy 35/42 1000Kv motor and 8.5x6 APC prop which with a 4S Lipo gets it to about 1100 feet in 20 secs (*crikey!*). 40A ESC, Hitec servos. Ideal for Vintage E Duration or Vintage Precision.

Enquiries to Brian Harris 0212560052