



# ScaleNews

Issue 6

Official Newsletter for Free Flight and Control Line Scale flying in New Zealand  
produced by the Free Flight & Control Line Scale SIG

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### Mercer

Control Line Sport Scale

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Fearnley Luton Minor  
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### An Aladdin's Cave

Models by Bill Brown  
for ATC

### Calendar 2021

Scale events



# Free Flight Scale classes at North Island Free Flight Championships, Carterton

Scale will be on Friday 16 at 8am, with rain dates of  
Saturday 17, Sunday 18 April

- F4A Power Scale
- F4D Outdoor Rubber Scale
- Kit Scale
- Memorial Flight

Refer to Free Flight & Control Line SIG  
link on MFNZ website for rules for these  
classes or phone  
Stan Mauger 09 5757971

## Free flight indoor contest day

# Indoor Scale at Morrinsville

**Sunday October 17, 2021**

- F4D Rubber Scale • F4F Peanut Scale

Flown to FAI rules. Refer to link on MFNZ website under Scale FF & CL SIG

- Kit Scale

Flown to rules on MFNZ website under Scale FF & CL SIG

- Hangar Rat • HL Glider • Modelair Hornet, will also be flown

## Free Flight & Control Line SIG AGM

This will be held on **9 April 2021 at 7.30pm at 96A St Heliers Bay Road, Auckland**

Contact the Secretary, Ricky Bould, for an agenda or proxy form on 09 478 8949 or email [unimec1994@gmail.com](mailto:unimec1994@gmail.com)

A periodic publication with news of interest to free flight and control line scale modellers in New Zealand and beyond.

Free Flight & Control Line Scale  
Special Interest Group  
of Model Flying New Zealand

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The opinions expressed in this newsletter are not necessarily those of the editor or the Free Flight & Control Line Scale SIG or of Model Flying New Zealand.

Photos are by authors unless otherwise credited

#### COVER PHOTOGRAPH

David Thornley putting his PT-26 through its paces in the Control Line Sport Scale event at a Clareville A&P Showgrounds circle during the recent New Zealand Nationals held in the Carterton area.

Photo: John Carrodus

## Editorial

Reporting on the January Nationals features prominently in this issue of Scale News. There were a number of positives coming out of the event this year. Perhaps the most visible was the strong support in both indoor and outdoor Kit Scale, which resulted in two very enjoyable flying classes. It was great to welcome new flyers joining the regulars in these events. Another success was the launch of the provisional Memorial Flight class. There was obvious enjoyment in flying this class by all who took part and this bodes well for the future of the event, which is in the process of becoming an official Nationals event. Free flight scale flyers also enjoyed flying with free flight flyers on the free flight field and it is hoped that this may lead to more interest by both disciplines in flying in the other's events. The newly renamed Control Line Sport Scale class was once again well supported and as the Waikato Control Line Champs report attests, the SIG is keen to support this event.

There are a number of notices as well as those listed on the page 24 calendar advising of events coming up. The SIG AGM, down to be held at the Nationals was postponed because of the difficulty in finding a quorum. This will be held in Auckland on April 9. More details are to be found on page 2. Please attend if you can or apply for a proxy voting form from the FF&CL Scale SIG Secretary.

A week later in April, free flight scale flyers will be joining free flight flyers at Carterton in the North Island Free Flight Champs, to fly free flight scale classes there.

The Morrinsville Indoor Day will be run again this year. Please join us if you can. The feedback each year has been enthusiastic, so enjoyable flying is assured. All above events are subject to Covid levels.

Once again, a heartfelt thank you to all who have provided contributions for this issue. Your time in putting together information on your projects is of interest to readership and an important part of Scale News. Please send progress reports on projects, opinion, reports on scale flying events or other contributions.

Have a good scale flying year.

Stan Mauger



Ricky Bould brought his much-flown Heinkel He100 in the Open Rubber Scale event.  
Photo: Lloyd Dickens.

# Indoor Free Flight Scale at Morrinsville

Taking the afternoon slot at the 2020 Morrinsville Indoor Day, all three indoor free flight scale classes were flown off in a busy few hours between midday and 3.30pm. Free flight scale attracted enough flyers for all classes to be run as official events, although only just! This year saw a few new models in indoor free flight scale classes. Stan Mauger had rebuilt his much flown Keil Kraft Cessna for Kit Scale, finishing it the colours of a New Zealand aircraft. After some trimming it distinguished itself. Ricky Bould had his Ol' Ironsides for Peanut Scale, but was having less luck with it. The stand-out new model, however, was Anthony Hope-Cross's A.V. Roe Triplane.

Anthony deserves much praise for both selecting such a challenging subject, but also for his perseverance during the day with trying to set it up to fly. There was a round of applause when it gained some altitude from a launch and completed several tentative circuits of the hall. All we can do is to encourage Anthony to keep working at getting it trimmed and set up. Having organised Morrinsville days since their inception, following the discovery of the hall when it was needed for indoor events at the first Matamata Nationals, I am pleased that the Stadium continues as a venue to bring indoor free flight flyers together from all over the North Island. There is always excitement when the cars



roll up and flyers appear at the start of the morning. You, the contestants make the success of these annual get-togethers and the feedback continues to be encouraging enough to see the day continue. I recommend Morrinsville to anyone interested in indoor free flight flying, if you are able to make the journey. The day is made possible both by the Free Flight & Control Line Scale SIG who organise it and by the Auckland Model Aero Club and of course by the support of all judges on the day. Thank you to all who assisted. Please come and join us on October 17.

STAN MAUGER



**OPPOSITE PAGE**

TOP: Graham Lovejoy's Stahlwerk III, winner of Open Rubber scale.

LOWER: His Lockheed Vega made the best flying time in Peanut Scale.

**THIS PAGE**

LEFT: Anthony Hope-Cross with his ambitious A.V. Roe Triplane.

LOWER: Ricky Bould's Luscombe Sedan, a regular in Kit Scale.



**RESULTS**

**F4D Indoor Rubber Scale**

	Static	Flying	Total	
1. G. Lovejoy	773	463	1236	Stahlwerk III
2. S. Mauger	660	357	1017	Fleet Canuck
3. R. Bould	291.5	-	291.5	Comper Swift

**Kit Scale**

	Static	Flying	Total	
1. S. Mauger	55	41	96	Keil Kraft Cessna
2. G. Lovejoy	55	32	87	Megows Taylorcraft Floatplane
3. R. Bould	47	DNQ	47	Veron Luscombe Sedan

**F4F Peanut Scale**

	Static	Flying	Ranking	
1. A. Reed	40	29	1/2	Eastbourne Monoplane
2. G. Lovejoy	36	54	1/3	Lockheed Vega
3. R. Bould	38	DNQ	3/2	Ol' Ironsides

# Free Flight Scale at the New Zealand Nationals

For the Contest Director and flyers alike, all concerns about having flyable weather for the scheduled free flight scale events at the Nationals soon evaporated once we arrived on the flying field. The wisdom of early starts became clear once again. Having the alarm clock set early is not a great problem in warm sunny summer weather anyway! Whilst the traditional open events like F4A Power Scale, F4D Outdoor Open Rubber and F4D Indoor Open Rubber struggled to get the numbers to make them official events, Kit Scale once again blossomed both outdoor and indoor. Clearly, if you have free flight scale models that can be flown in the usual open scale events, please enter them, we can do with your company!

The Day One events, Open Power Scale and Outdoor Kit Scale on RC1 were a mixture of disappointment and success! Paul Evans entered his Henderson Longster usually a great performer, but had some model damage before it could be flown. Success also eluded Ricky Bould's long time Auster AOP9. Stan Mauger was smiling from ear to ear as his Vickers Vildebeest flew some circuits after a few trimming flights to sort it out. Outdoor Kit Scale was a lively affair with a good number of models flown. With a few non-starters it got down to four putting in qualifying flights. Peter Williams had his nicely built VMC Cessna trimmed out well, as did Ricky Bould with his orange VMC Cessna Bird Dog. With just a point between them, Daniel Warner's VMC took the top spot ahead

## **THIS PAGE**

*Outdoor Kit Scale action*

*RIGHT: Daniel Warner with his nicely finished VMC Cessna Bird Dog, winner of the event.*

*LOWER: Ricky Bould's VMC Cessna Bird Dog getting away nicely.*

## **OPPOSITE PAGE**

*TOP: Stan Mauger chose UK registration for his Keil Kraft Cessna entered in Outdoor Kit Scale.*

*LOWER: Alan Reed's Baby Ace seen climbing away in Open Rubber Scale.*

Photos: Lloyd Dickens



of Stan Mauger's Keil Kraft Cessna. Day Two was held on the free flight field and proved a great opportunity to take in the free flight action and in some cases concurrently fly these events as well as the scheduled scale classes. It was also great to be able to show off some good free flight scale models too. Alan Reed put in some good flights with his Baby Ace in the almost calm morning conditions. Graham Lovejoy's Taylorcraft Seaplane flew well outdoors for such a small subject and is always great to watch. Stan Mauger's much flown Helio Courier once again stooged around was the eventual winner. All agreed, the morning flying alongside free flight flyers was a good format for next year.

These events could not be run without the contribution of judges who assisted on each day. Thank you to Paul and Martin Evans, and Des Richards who judged the flying and Gwyn Avenell and Neil Schraeder for static judging.

#### STAN MAUGER



#### Results

Power Scale	Static	Flying	Total	Model
1. S. Mauger	802	368	1170	Vickers Vildebeest
2. R. Bould	744	--	744	Auster AOP9
3. P. Evans	398.5	-	398.5	Henderson Longster

Outdoor Kit Scale	Static	Flying	Total	Model
1. D. Warner	60	39	99	VMC Bird Dog
2. S. Mauger	62	36	98	KK Cessna
3. R. Bould	60	33.4	93.4	VMC Bird Dog
4. P. Williams	35	36.5	71.5	VMC Cessna

Open Rubber Scale	Static	Flying	Total	Model
1. S. Mauger	849.6	352	1201.6	Helio Courier
2. G. Lovejoy	755.5	422	1137	Taylorcraft
3. A. Reed	687	372	1059	Baby Ace





Photos: Lloyd Dickens

UPPER: Paul Evans with his beautifully restored APS Zaunkonig built by Brian Crocker.

LOWER: Des Richards enjoyed getting his Earl Stahl Blackburn Skua, built by Ivan Treen, back flying again.



# Memorial Flight at the New Zealand Nationals

After a tentative start at the 2020 Nationals, this new provisional class was officially launched with four flyers putting in flights on the free flight field at the 2021 Nationals. Besides the obvious pleasure in flying well proven models that all flew well, there was the added satisfaction of enjoying other modellers' projects and seeing these models in the air again, in some instances, after over a decade of inactivity. The success of the class is now proven and it is proposed that Memorial Flight will be offered as an official event at the next Nationals. So if you have inherited free flight scale models, consider bringing them to the Nationals and enjoying them in this class. Flying rules are simple being the flying section of kit scale, and are on the SIG's link on the MFNZ website, so

that is where to look to find them. Please come and join in the fun in 2022. Memorial Flight will also be flown at the North Island Free Flight Championships. A notice appears on page 24.

Stahl rubber scale designs predominated at the last Nationals and we were reminded of how easy these models are to trim and fly. Paul Evans's Zaunkonig from the Aero Modeller plans service was also a reminder that the class is not only for rubber powered free flight scale models. All models in the event flew well as the results show. Many thanks to Martin Evans for judging of this event.

STAN MAUGER

## Results

Builder	Flyer	Score	Model
1. B. Conroy	G. Lovejoy	40	Miles Magister
2. I. Treen	D. Richards	37	Blackburn Skua
3. B. Crocker	P. Evans	35	Stinson Voyager
4. J. Godfrey	S. Mauger	32.5	Stinson Voyager

*LEFT: Stan Mauger setting up his Jack Godfrey-built Stahl Stinson Voyager.*

*LOWER: Graham Lovejoy had great flights with his restored Stahl Miles Magister built by Brian Conroy.*



# Indoor Free Flight Scale at The Nationals

Following the Spit Roast Dinner, indoor free flight scale events were assured of a gallery of flyers to support them. Kit Scale had the best entry yet with plenty of new faces and much potential helped by the boost given with the supply of VMC Bird Dogs and Cessnas via Ricky Bould. Our thanks to those who supported this event, please fly in it again next year! Most managed qualifying flights, ensuring a hectic evening for Paul Evans who kindly judged both this event and Indoor Open Rubber Scale.

Martin Evans was justifiably pleased to make third with his new Tern Porterfield Collegiate on its first outing at the Nationals. It was trimmed out and flew well. Graham Lovejoy's Lockheed Vega is now a seasoned flyer and once again did not disappoint. It always looks great in the air. Ricky Bould has a long track record of getting Comper Swifts to fly, so it was not surprising to see him at the top of the leader board with his Veron kit design.

After a few late entries rolled in, Peanut Scale had a large enough field for some varied models. Anthony Hope-Cross spent some time sorting out his A.V. Roe Triplane which easily topped the others in static points, so it is well worth persevering with this model. Also challenging was Graham Lovejoy's Peyret Taupin flown some years ago and brought out again to make a very respectable second place, just behind Ricky Bould's reliable Fike. Chris Murphy and Alan Reed followed closely again with nice flying from their Eastbourne Monoplane and Bede BD4 respectively. Thanks are due to John Dowling for taking care of Peanut Scale judging.

Thanks to some really nice flying with his Baby Ace, Alan Reed made first in Open Rubber Scale, with Graham Lovejoy's nicely detailed Stahlwerk RIII not far behind. Stan Mauger's Fleet Canuck was not performing well, having to be content with third place.

STAN MAUGER

## Results

Peanut Scale	Static	Flying	Ranking	Model
1. R. Bould	45.5	28	2/2	Fike
2. G. Lovejoy	42	35	3/1	Peyret
3. A. Reed	38.5	28	4/2	Eastbourne Monoplane
4. C. Murphy	38	28	4/2	Bede BD4
5. A. Hope-Cross	52.5	0	0	Avro Triplane

Indoor Kit Scale	Static	Flying	Total	Model
1. R. Bould	63	51	114	Veron Comper Swift
2. G. Lovejoy	60	51	111	Comet Lockheed Vega
3. M. Evans	48	51	99	Tern Porterfield Collegiate
4. S. Mauger	47	43	90	KK Cessna
5. C. Murphy	52	35	87	Peck Lacey M10
6. P. Glassey	59	25	84	VMC Cessna Bird Dog
7. P. Williams	35	35	70	VMC Cessna 140
8. D. Warner	66	0	66	VMC Cessna Bird Dog
9. K. Botherway	22	0	22	VMC Cessna Bird Dog

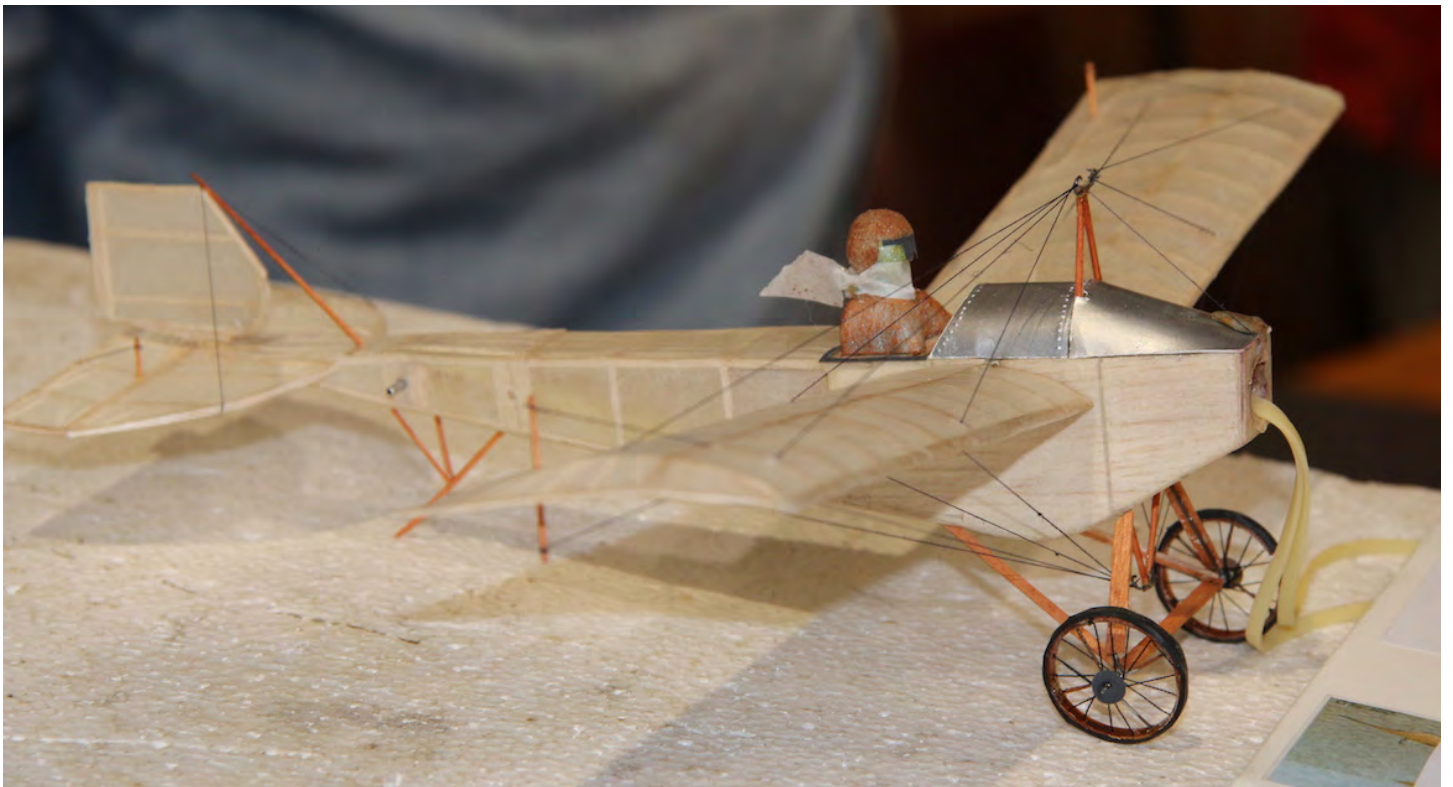
## Indoor Open Rubber Scale

	Static	Flying	Total	Model
1. A. Reed	633.7	332	965.7	Baby Ace
2. G. Lovejoy	654.3	247	901.3	Stahlwerk RIII
3. S. Mauger	730.5	--	730.5	Fleet Canuck



Photos: Lloyd Dickens

ABOVE: Stan Mauger getting his Keil Kraft Cessna away in Kit Scale (left) and Ricky Bould setting his Fike down for an ROG in Peanut Scale (right).



UPPER: Peter Glassey had finished his VMC Cessna Bird Dog in US Marines scheme for Kit Scale.

Photos: Gary Mildenhall

ABOVE Alan Reed's detailed Easbourne Monoplane flown in the Peanut Scale event.

# Control line Scale at the New Zealand Nationals

Control Line Sport Scale, the recently re-named flying only control line class, was once again well supported this year. Despite the interest expressed in offering F4B as well last year, only Sport Scale was flown. It was a great event to CD. The standard of flying was high as was the enthusiasm for the event.

Otto and Max Wimmer's experience in stunt flying came through in their confident flying in this event. Gerald Wimmer also put in some great flying with his Curtiss P-40. Adrian Hamilton fitted in several flights in-between other events on the morning, impressing us with smoothly completed manoeuvres. John Carrodus completed some fast, spirited flying after initial engine problems. This year's winner, David Thornley used his RC controls for some realistic flying. Thank you to Alina Wimmer for judging this event.

STAN MAUGER

## Results

### Control Line Sport Scale

1. D. Thornley	840	Fairchild PT-26
2. J. Carrodus	814	Republic P-47 Thunderbolt
3. A. Hamilton	748	NA P-51 Mustang
4. G. Wimmer	734	Curtiss P-40
5. O. Wimmer	708	Douglas Skyshark
6. M. Wimmer	656	Hawker Hurricane



UPPER: Gerald Wimmer sorting out engine problems for John Carrodus, Bob Schofield assisting.

ABOVE: Gerald helping Otto Wimmer to set up his Douglas Skyshark.



ABOVE: David Thornley's Fairchild PT-26 between flights.  
LEFT: Adrian Hamilton's profile NA P-51 Mustang complete with pilot and neatly moulded canopy.  
LOWER: Otto Wimmer assisting Gerald to get his Curtiss P-40 flying under way.



# Control line Sport Scale at Mercer

The Waikato Control Line Champs were held at Mercer on February 6, at the Sports ground there. Control Line Sport Scale was an afternoon event, in calm weather and on a well mown circle, setting the scene for some enjoyable flying, concurrently with other control line events.

All flyers put in good flights. Max Wimmer, flying his Hawker Hurricane, executed his manoeuvres well. David Ackery included successful bomb drops from his Grumman Hellcat in addition to other manoeuvres. Gerald Wimmer flew a good pattern that included some touch and go's. Adrian Hamilton was able to manage smooth take-offs and landings without throttle control. He showed us some crisp flying with good wing-overs and loops. Using throttle control to advantage, however, David Thornley really got into the spirit of the event with very realistic flying.

This was enjoyable afternoon of great flying which bodes well for future events. Special thanks to judges Alina Wimmer and Ricky Bould for Judging the event.  
STAN MAUGER

## Results Control Line Sport Scale

1. D. Thornley	788	Fairchild PT-26
2. A. Hamilton	746	NA P-51 Mustang
3. G. Wimmer	690	Kawasaki Ki 61 Hein
4. M. Wimmer	560	Hawker Hurricane
5. D. Ackery	511	Grumman Hellcat



*UPPER: Otto Wimmer seen holding Gerald Wimmer's Kawasaki Hein. Judges Alina Wimmer and Ricky Bould are beyond with Daniel Walker (right).*

*LEFT: Max Wimmer's Hawker Hurricane awaiting some flying.*



UPPER: Max Wimmer assisting David Thornley with his Fairchild PT-26.

ABOVE: David Ackery being assisted to get his Grumman Hellcat underway, by David Thornley.

LEFT: David Ackery's model showing the under wing dummy bomb.

# The Luton Minor

Aero Modeller featured the Luton Minor LA2 as an 'Aircraft Described' (No 55) by George Cull on page 308 of the May 1953 issue, with good 3 views and a history of the aircraft's development in the UK. The Luton Minor originated in 1936 as an ultralight aircraft for the amateur builder. Several were built before and after World War II. An article entitled 'Building the Luton Minor Light Aeroplane' also appeared in Newnes Practical Mechanics October 1937 issue. It included useful advice on building the aircraft, with accompanying views of components and detailed drawings of parts. But for the lack of dihedral, the subject has obvious appeal to scale modellers.

## New Zealand Luton Minors

My interest in this subject led to an enquiry to Tom Hayes of Rotorua in March of 1991 for photographs of his aircraft, ZK-FSU. In response he sent me prints both of his Aircraft and also of ZK-CCL. Both are reproduced here and will provide useful reference for anyone wishing to model either of these New Zealand registered aircraft.

FSU had been imported from the UK and registered in New Zealand in 1989. CCL was built by Kip Netherclift in Napier in the early 1970s and has often been photographed in the colour scheme shown.

Further reference, including good photographs and a brief history of these two aircraft flown in New Zealand, can be found by going to the excellent New Zealand Civil Aircraft website: <http://nzcivair.blogspot.com> and searching for Luton Minor.

## Three View drawings

In addition to the May 1953 drawings, Aero Modeller featured another set of drawings in February 2000. There are also 3 view drawings by Alf Granger in Wingspan and others in Putnam's British Civil Aircraft since 1919.

STAN MAUGER







Photos: Tom Hayes

# Modelling the Fearnley Luton Minor

Even In New Zealand, about as far away from England as one could be, the arrival of the Christmas issues of Aero Modeller in the 1950s and in the years that followed was a delight as it brought free building plans to pore over and dream of building. Of course many models were built here, from those free plans. The Eric Fearnley Luton Minor is a good example. It is quite a large model for a .5cc diesel, although some have been built and successfully flown with a Dart as per the plan and the designer pointed to a model powered with this diesel managing "an ROG in fifteen yards" Apart from the lack of dihedral mentioned previously, the model has ideal proportions as pointed out in the article accompanying the plan, so built without changes and kept light, a nice flying model was assured. Like various other Aero Modeller Christmas Issue free plan designs, many Luton Minors were built from the Fearnley plan in the 1950s as well as in later years. Part of the appeal must be the relatively simple construction manageable by those with relative little experience. However, the wire bending for the parasol wing support does call for accuracy and skill. The rugged construction employing 3/16" square balsa fuselage frame is more than adequate for the job, but the use of rubber bands to allow undercarriage travel in the event of heavy arrivals must have saved damage on models where the builders followed the plan, rather than simplifying construction and using a bound in undercarriage.

## Brian Crocker's Luton Minor built around 2002

The Fearnley Luton Minor below was built by Brian Crocker as a relaxing straightforward project, as light relief from hours spent on the details of his Sopwith Pup based on the Aero Modeller plan. It is very nicely built and flew well at Hoteo on a PAW .55 diesel and was later taken to Patetonga to fly, by George Fay, its present owner.

STAN MAUGER

## Chris Murphy's report on his Luton Minor

My Luton was started midway through 2020 with the intention of having it ready for the Nats (Ha ha! We know how that turned out!). The sole reason for selecting it as opposed to anything else was that I thought I could build it fairly quickly and because one day when pottering in the garage I found some parts I had cut out years ago when living in Christchurch, so that was at least pre 2010! I jumped on the Internet and searched Luton Minors and found G-AMAW which had a very simple white and red scheme. I had painted myself into a bit of a corner engine-wise as I found the only thing that would fit the ply mount was a PAW 80 as the mount was already drilled for it and there was no spare 'meat' to take



anything else. No matter, I have plenty of PAW 80s, though the model will probably end up with the PAW Vintage Classic 80 version. Building went fairly smoothly, but I may need to do a lot of post-build modifications to get it to match the full size details of G-AMAW. The turtle deck has curved sides rather than flat, and a lot of changes are needed around the nose, that can be achieved by adding scrap wood and sanding away anything that does not look like the real thing! The nose has been glassed, and a bit of foam added in the cockpit area with a view to providing pilot support. The fuselage and tailplane are tissue over mylar, but the wings are yet to be covered. Still have to fair in undercarriage wires and cabane struts.

Rear spars are spruce, one set of wing struts has been constructed, but all

the rest are still to be done along with strut fairings and shock absorbers. All tubing is K&S alloy where bands pass through and undercarriage pivot tubes are machined alloy bushings. The pilot is partially painted but there is still some detail to add. The original (G-AMAW) has a small red spinner, at worst I will paint the one fitted to the PAW, or I may be able to do something with a Cox press on type, (smaller and closer to scale) if I make a BA threaded adaptor to replace the Cox 5-40 one. A dummy opposing cylinder fuel tank will be fitted. I can machine up a set of dummy PAW 80 fins, and do a bespoke needle valve that is not quite so intrusive as the standard one. It has been a tedious - but not difficult - build.

CHRIS MURPHY



OPPOSITE: Brian Crocker's Luton Minor seen at Patetonga.

THIS PAGE: Chris Murphy's Luton Minor is progressing well.

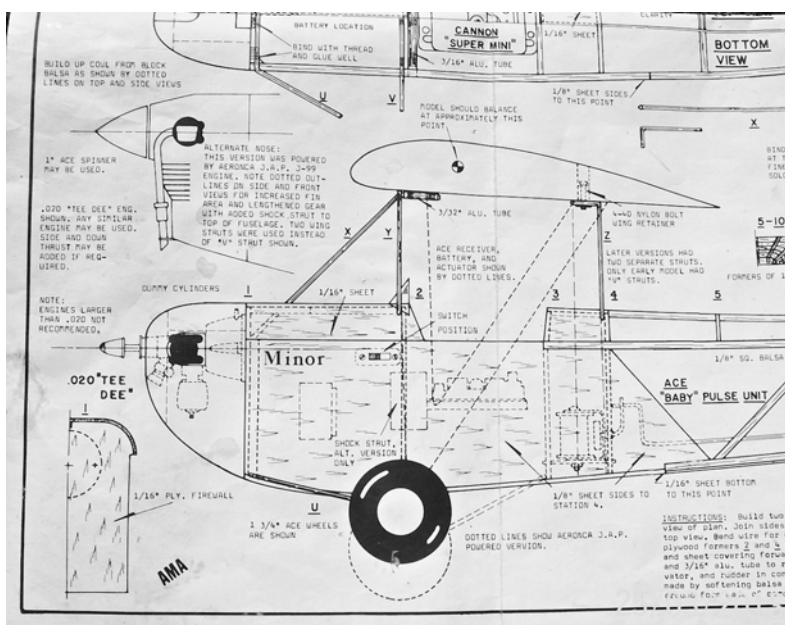
# Modelling the Luton Minor Prototype

Aero Modeller Plans Service offered a 23" span version by Walt Mooney, in June, 1958. Much smaller than the Eric Fearnley design, it is described by the designer as being suitable for the newly introduced Allbon Bambi and the Cox .020 Cu in. glow engines of the time. Like the Fearnley design, this smaller model also uses some dihedral for added stability. Flyline also produced a kit for the prototype Luton Minor, designed by Hurst Bowers in 1987. The model was of 35" span and designed for free flight and RC flying.

Writing in the April 2013 *Slipstream*, Michael Taylor recounted building and flying the Flyline version which they termed 'schoolyard scale'. While his model was built for electric power and single-channel RC, many of his comments will be helpful for building a free flight version. He found it pleasant to build but balked at the engine shown on the plan, which was a Cox Tee Dee 0.02 and put the airframe to one side for a while until he worked out an electric conversion. He cut away the engine bearers and

epoxied on a bulkhead to take a brushless motor. A servo was installed with twin leads for rudder-only control. The fuselage had ample space for an 1100 mA Lipo battery. The receiver went neatly into the cockpit area and was accessible from below where a 2mm ply cover was been fitted. With Litespan covering the model ended up with an all up weight of 14 oz. Set up this way he found that his Luton Minor flew quite slowly and "looked very pretty in the air." It had survived four arrivals by the time of his article, the parasol wing with its twin struts remaining securely in place. Control consisted of only motor speed and rudder, so it was difficult to flare out the approach, but due to the short undercarriage, both 8" and 7" sized propellers were liable to break off on landing.

STAN MAUGER



# Building the Easy built Mig-3

Here are some things that Daniel and I found along the way in building the Bird Dog and Mig-3 that you might find useful. I used a rib jig that I found in a model shop years ago. They make building wings so much easier (Big thumbs up from Daniel). I have not seen any for a long time but if you have a 3d printer, or better yet a friend with a 3d printer, the files can be found at on thingiverse. Go to <https://www.thingiverse.com/thing:4577193> Make a couple and you won't be disappointed.

On the Bird Dog I added some internal structure to guide the rubber stooze into the correct position before inserting the rear motor pin. I wish I had done something similar with the Mig-3 as loading the motor is so much easier on the Bird Dog. So think about motor installation before you begin building.

I have found some 0.5mm carbon rod that I will be experimenting on letting into the leading edge of our next kits to really strengthen up that area. Both Daniel and I have damaged the leading edges of our aircraft.

Daniel and I both covered our aircraft in white tissue because we were worried about things like laser scorching and the plastic parts showing through. Some of those we gave a weak wash of white paint before covering it still showed through. So for our next colour schemes we will try to avoid white.

The Mig-3 was not the easiest to build with the compound curves which then translated to not the easiest covering. I covered it in 10 micron Mylar then tissue. The Mylar went on well and did not need much heat but would try and pull away on some of the bridging areas. On some of those I used light writing paper instead which held its shape better. I am still experimenting with Eze dope which is water based, using a spray gun to apply several thinned coats.

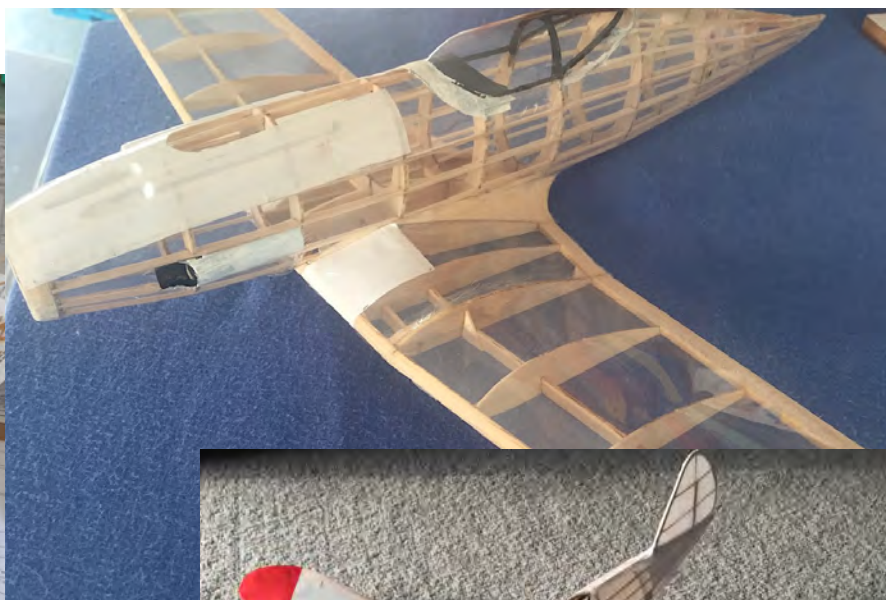
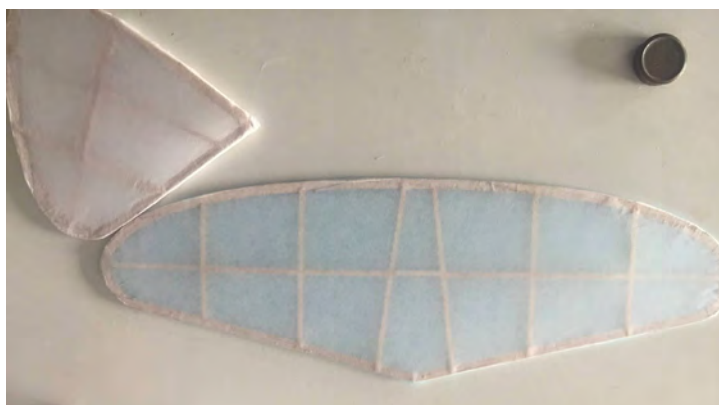
Daniel and I have both discovered that the getting a rubber model to fly is 25% building, 25% covering, 25% trimming, 25% motor selection and 25% luck (125% as it takes longer than you think).

We have already ordered several more Rubber Scale kitsets and will dust the building board off once Daniel has finished a Vic Smeed Popsie for FF Aggy (Aggregate\*) and will incorporate what we have learnt in these aircraft.

We have also purchased a couple of books over the Internet to help fill in the gaps, but we are enjoying trying things out and seeing what works and what doesn't.

STEVE WARNER

\* Scramble to overseas readers!-Ed



# An Aladdin's Cave

These free flight flying scale models were discovered resting on high shelves in the classroom of Rotorua Air Training Corp (ATC) by a local MAC member who has been working with the ATC cadets in building and flying model aircraft.

Although gathering dust, and some now suffering minor damage, they are fine examples of the skills of long time RMAC member Bill Brown. Bill passed away fifteen years or so ago, and through his life was very active promoting aeromodelling with the ATC. He worked tirelessly with the organisation introducing cadets to the joy of aeromodelling. The models are much too delicate for Cadets to fly, but are dusted down occasionally and used to demonstrate aspects of full-size aircraft to cadets.

An initial RMAC project with the cadets was to build the Condor 24" span towline glider from the 1954 "Eagle Book of Model Aircraft". Dies and jigs were made to assist building and twenty-five models were made in groups of four or five cadets working together. They were flown in a local park and most flew well. Although simple, the Condor has an excellent gliding performance.

The RMAC is currently working with the cadets to build original Airsail Satellite HLG's. A box of twelve were discovered in the store room, possibly remaining from Bill Browns days!

DAVID THORNLEY





# Free Flight & Control Line Scale events

## Calendar 2021

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April 16-18	<b>Carterton</b> <b>Raynor's Farm</b> Free flight scale at the North Island Free Flight Champs Scale events start at 8.00am preceded by contestants briefing at 7.45am. on April 16
May 17	<b>Auckland</b> <b>Drury Indoor night</b> Drury School, 7.00pm - 10.00pm All indoor free flight scale classes
September 20	<b>Auckland</b> <b>Drury Indoor night</b> Drury School, 7.00pm - 10.00pm All indoor free flight scale classes
October 17	<b>Morrinsville</b> <b>Westpac Stadium</b> Indoor free flight scale 10.00am - 4.00pm Peanut Scale, Kit Scale, Open Rubber Scale

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Please send details of future free flight scale and control line scale events in your area for inclusion in the next Scale News Calendar



The Carterton venue for the North Island Free Flight Champs is a great place for free flight scale too. Come and join us in April.