



ScaleNews

February 2025
Issue 13

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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Indoor Free Flight Practice Day

Morrinsville

Sunday May 11, 2025

An opportunity to trim your indoor free flight models in the open space of the Events Centre from

10.00am until 4.00pm

Morrinsville Events Centre, 21 Ron Ladd Place, Morrinsville

Contact Stan Mauger 09 575 7971, stanm09c4@gmail.com for more information



Organised by the Auckland Model Aero Club Inc
in conjunction with the Scale Free Flight & Control Line SIG



Morrinsville Indoor Free Flight

Contest Day Sunday October 5, 2025



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

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Special Interest Group
of Model Flying New Zealand

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Ricky Bould (Secretary)
Brian Howell (Treasurer)
Paul Evans
Martin Evans

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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.

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COVER PHOTO

Antony Koerbin launching his BE2e, in F4A Power Scale

Photo: Gary Mildenhall

Editorial

Once again, albeit with some weather challenges, our scale events were run with success at the January Nationals again this year and the report on these takes a prime place in this issue. It was encouraging to the SIG to see new flyers in both outdoor and indoor classes. The Indoor Open Rubber Scale event is calling out for support, however, so here is a prompt to look out any of these models that you may have, that may not have been flown for a while, or to produce something new for next year's Nationals. Speaking of which, a notice of the 2026 Waipukurau, Nationals is included on p. 24. Much work has already been done on finding fields so here's to a great Nationals there next January. Incidentally, accommodation is filling up so it is time to make arrangements.

A reminder, also of this year's Morrinsville events listed on the previous page. The May practice day is later than last year owing to hall availability, but it will be a great opportunity to work on trimming models for both the main October contest day and also the Nationals. There is also a notice for Drury indoor scale nights for the year. The Auckland Model Aero Club welcomes indoor flyers to join them in these events. Scale contests will be run where numbers are sufficient.

Elsewhere in this issue there are reports on a number of scale projects. My thanks to everyone who has contributed. Your information on these projects and your shared experience is a valuable part of Scale News and judging from the feedback that I have received, an eagerly awaited aspect of the newsletter.

Best wishes for an enjoyable model flying year and to the contingent planning to carry the free flight scale flag at this year's Richmond Trans Tasman where F4A Power Scale and F4D Rubber Scale will be contested, good luck.

STAN MAUGER



New Zealand Model Aeronautical Association Inc

Scale Free Flight and Control Line
Special Interest Group

NOTICE OF ANNUAL GENERAL MEETING.

The 2025 AGM of the Free Flight and Control Line Scale SIG will be held at 7.30pm on April 11 at 96A St Heliers Bay Road, Auckland.

Business

1. Apologies
2. Approval minutes of last AGM
3. Chairman's Report
4. Financial Report
5. Election of Committee
6. Remits
7. General Business

Note: The Chairman's Report, Financial Statement and Proxy Forms will shortly be available by emailing the SIG secretary at unimec1994@gmail.com.

Remits should be sent to the Secretary at least 21 days prior to the meeting.

Ricky Bould
Secretary, Free Flight & Control Line Scale SIG.

Free flight scale at Morrinsville Indoor contest day

Now a well-established fixture for indoor free flight flyers, this year's Morrinsville Indoor Day was once again well supported, with flyers coming from across the North Island to be there. The Morrinsville Events Centre is a large space that allows for longer and higher flights than is often possible at smaller local halls used in other parts of the country. The day is a great opportunity to enjoy meeting up with other flyers or those who have just to come to watch the action. More spectators came this year.

The slightly earlier briefing time allowed more time in the morning for flying. The format from previous years, of free flight events in the morning and scale free flight classes in the afternoon, was used again, but with the numbers attending there was increased pressure to process results in the time available. Some minor refinements will be made in next year's programme to ensure that everything runs smoothly.

Scale events

Peanut scale saw a couple of great new models that look promising. Martin Evans entered his Blackburn Monoplane, a model that did well in static and should get good flying times when further trimmed. Jason Magill's Sorrel Guppy dispelled any ideas that forward staggered models cannot be trimmed to fly well. Paul Squires turned in the top flight time with his Lacey M-10 and this combined with a great static score took top spot. This was a well-supported event. Kit Scale also gained good entries. Static marks reflected the good model building standards in this event. Everyone put in good flights too. Graham Lovejoy just pipped Martin Evans for first, with his very appealing Comet floatplane. Martin's Porterfield is a strong Kit

Scale contender too. Ken Smith was in third spot with his VMC Cessna, a reliable flyer.

Once again F4D Open Rubber Scale just attracted three starters to make a contest. Graham Lovejoy's Stahlwerke was the clear winner with Ricky Bould's Comper Swift in second. Stan Mauger ran out of time to put some flying points on the board with his much-flown Fleet Canuck. It's time for some new models in this class to swell the numbers.

After a promising number of flyers in Memorial Scale last year, it was a surprise to see only a few models flown in this event. Most of us have gifted models so the potential for entries in this class is considerable. Hopefully it will be a stand-out event next year!

Organisation

The contribution of the judging team to assist the CD was essential to the smooth running of the contest.

Special thanks is due to Paul Evans, Rex Bain, Bruce Heasley, Brian Howell who kept timekeeping and judging going in the day, and also to Ken Buckley and Richard McFadden who assisted with scale judging at short notice.

The 2025 contest will be held on Sunday October 5. There will also be a practice day there before this on May 11, which will be of interest to those who would like to trim models or simply enjoy flying in this big open space. Please put the date of next year's contest and also the practice day in your diary.

STAN MAUGER
Contest Director



ABOVE: Rubber Scale models lined up for static judging. They are Ricky Bould's Luscombe Sedan, Stan Mauger's Fleet Canuck and Graham Lovejoy's Stahlwerke.

F4D Indoor Rubber Scale

	Static	Flying	Total	
1. G. Lovejoy	760	577	1337	Stahlwerke
2. R. Bould	729	523	1252	Comper Swift
3. S. Mauger	836	-	836	Fleet Canuck

F4F Peanut Scale

	Static	Flying	Ranking	
1. P. Squires	45	1:40.0	2/1	Lacey M10
2. M. Evans	48.5	19.00	1/5*	Blackburn Monoplane
3. D. Jackson	40	58.25	4/2*	Lacey M10
4. R. Bould	45	16.75	2/6	Fike Model E
5. J. Magill	42.5	33.85	5/4#	Sorrel Guppy
6. G. Lovejoy	37	39.28	6/3#	Lockheed Vega

*#NOTE Ties were broken by taking the best static score.

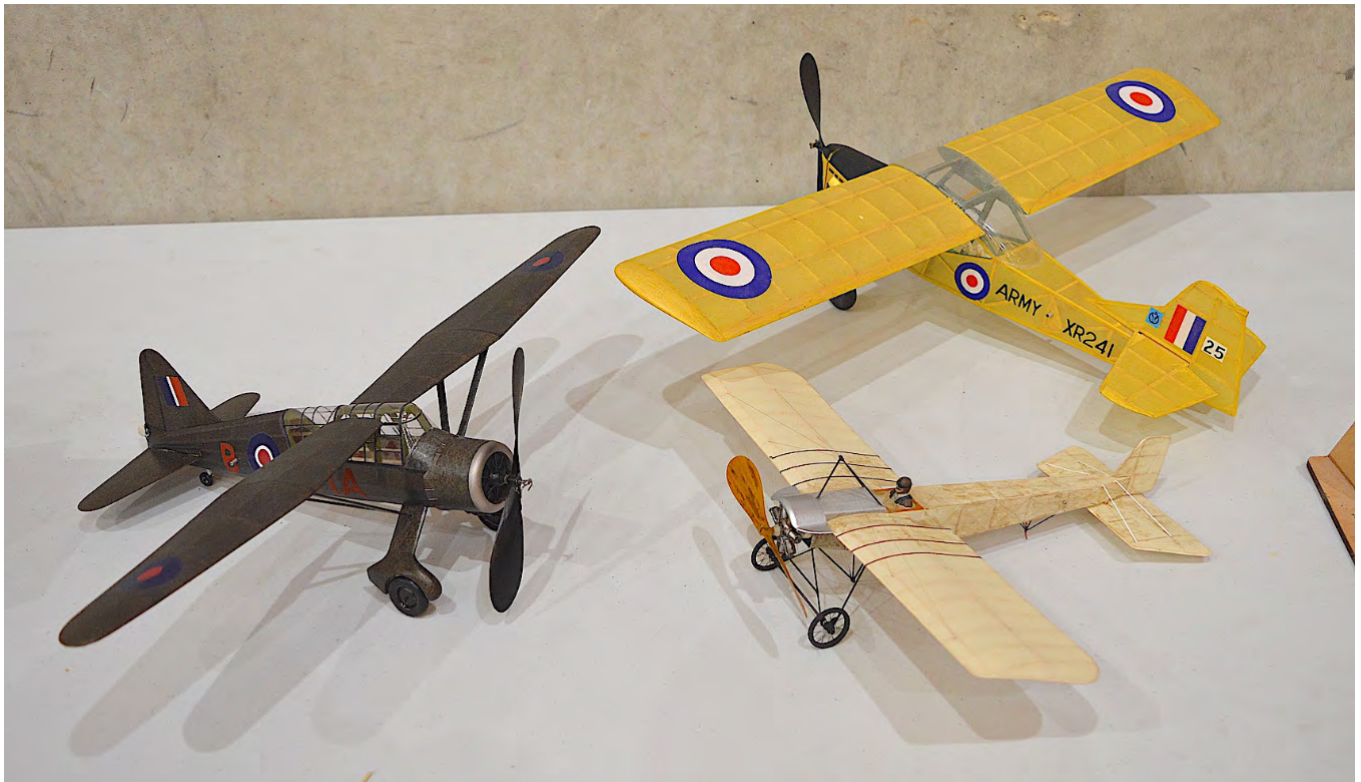
Kit Scale

	Static	Flying	Total	
1. G. Lovejoy	74	41	115	Comet Taylorcraft Floatplane
2. M. Evans	74	40	114	Tern Porterfield Collegiate
3. K. Smith	73	37	110	VMC Cessna 140
4. R. Bould	65	44	109	Veron Comper Swift
5. S. Mauger	67	36	103	Skyleada Curtiss Owl

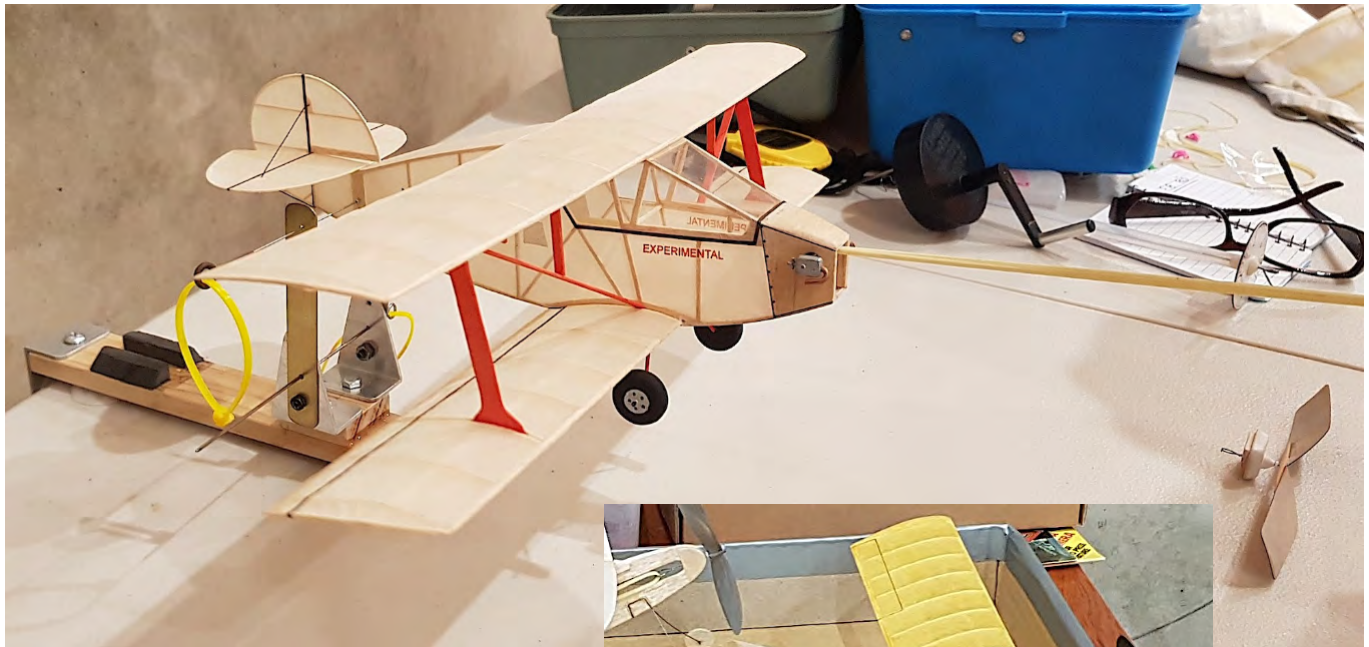
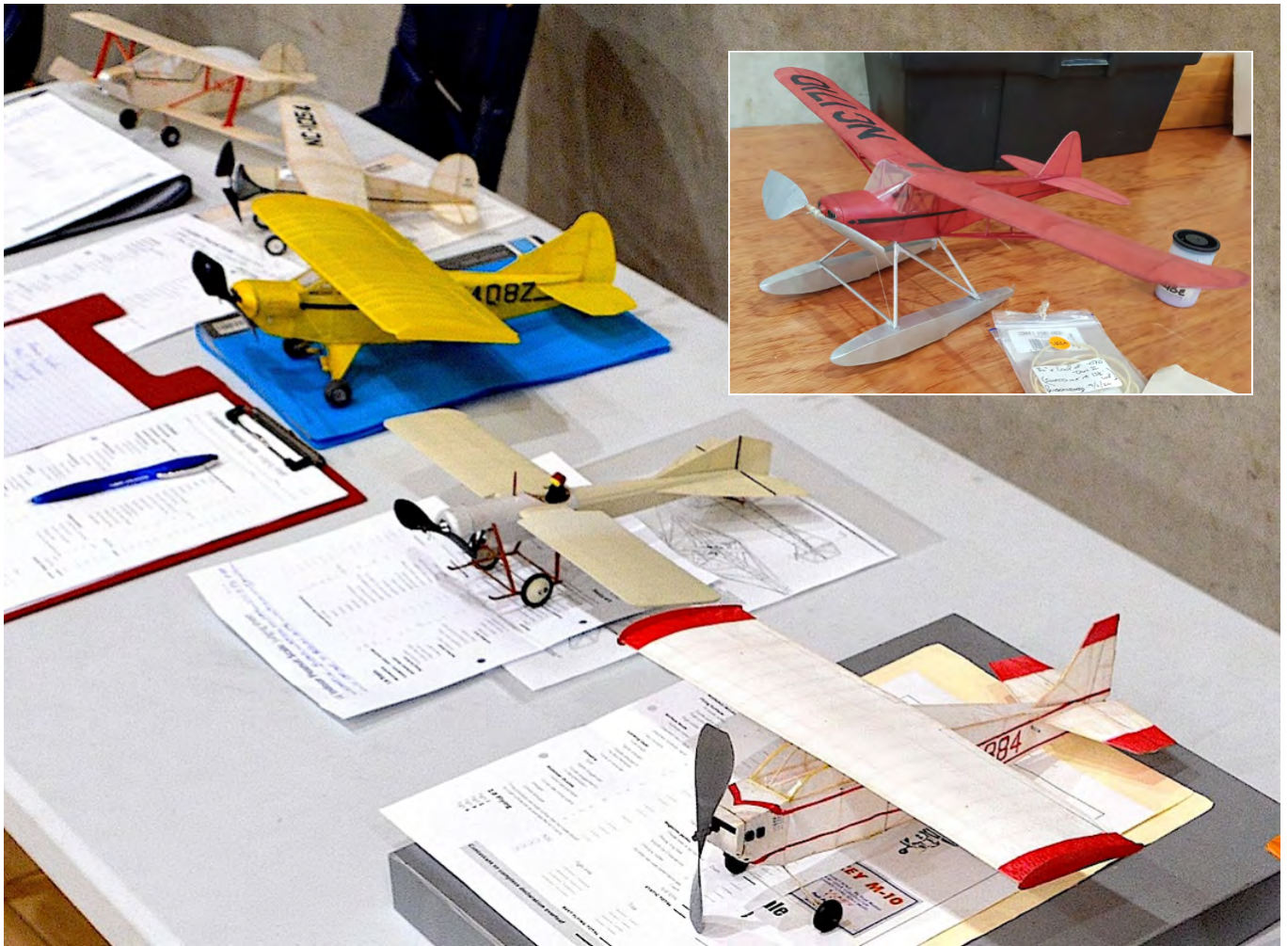
Memorial Scale

Judged on flying performance

Flyer	Flying points	Subject	Builder
1. G. Lovejoy	52	Lacey M10	B. Keegan
2. A. Fuller	40	Nesmith Cougar	D. Baunton
3. K. Smith	DNQ	Fike Model E	K. Trillo



ABOVE: Mike Mulholland brought his KK Westland Lysander, Avetek Auster AOP9 and Somer Monoplane.



TOP: Peanut Scale models on the judging table.
 UPPER: Jason Magill's Peanut Sorel Guppy being wound for flying.
 RIGHT: Wayne Lightfoot's Curtiss Robin flown in Memorial Scale.

NZ Nationals Free Flight Indoor Scale

Once again there was a good turn-out in all classes except Open Rubber which was not flown because there were insufficient entries to make it an official class. It would be great to see better support of this class next year, to keep it alive. It was great to see some new flyers in various indoor scale events this year.

Peanut Scale

The highlight of the evening for all of us was Antony Koerbin's beautifully built and finely detailed Voisin Hydro Canard which was soon making slow graceful circuits of the hall. It brought hushed admiration. Making top score in flying and top points in static it was the obvious winner of the event. Also nicely built and a great performer, was Daniel Walker's Lacey M-10, in second place. Martin Evans achieved a great take-off and flight time with his Blackburn Monoplane, which was an exercise in perseverance. Pete Williams gradually improved the performance of his new Ganagobie to obtain a great flight time. Ricky Bould's Fike, an 'old faithful', was not up to

its usual good form on the night. Pete Glassey squeezed some great flying out of his Peck Gypsy Moth, achieving a respectable flight time for this model.

Indoor Kit Scale

Stan Mauger had his Keil Kraft Cessna flying well, closely followed by Daniel Walker with his Modelair Auster which rose off ground rather gracefully. Martin Evans made third with his Porterfield Collegiate followed by Ricky Bould with his Comper Swift. Most flew and many did their full number of flights. We were pleased to welcome newcomers Max Wimmer and Otto Wimmer who undoubtedly took away ideas of how to improve their models for next time.

Andy Green from the UK took the load of judging Kit Scale static and flying and Stan Mauger judged Peanut static. Thanks also to the many timekeepers who assisted the judges in keeping everything on track and also to Alec Fuller for photos of models.

F4F Peanut Scale

	Static	Flying	Ranking	Subject
1. A. Koerbin	72	115	1/1	Voisin Hydro Canard
2. D. Walker	51	72	2/3	Lacey M10
3. M. Evans	50.5	65	3/4	Blackburn Monoplane
4. P. Williams	40	72	6/2	Ganagobie
5. R. Bould	40.5	21	5/6*	Fike
6. P. Glassey	40	21	6/5*	Gypsy Moth
7. S. Warner	47	-	4/7*	Fokker Dr1
8. K. Botherway	DNF			

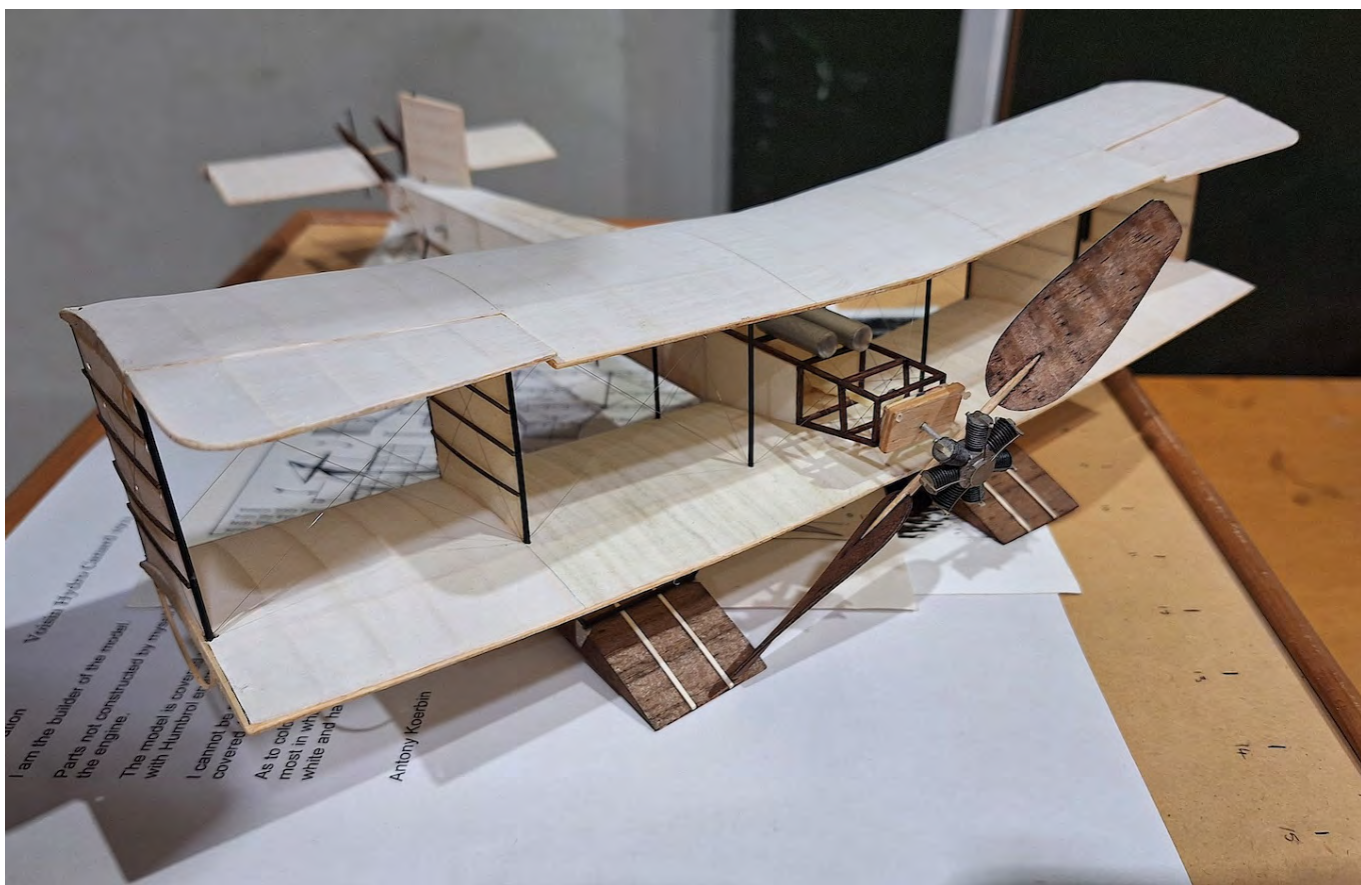
*NOTE Tie was broken by taking the best static score.

Indoor Kit Scale

	Static	Flying	Total	Subject
1. S. Mauger	68	45	113	KK Cessna
2. D. Walker	63	43	106	Modelair Auster
3. M. Evans	61	40	101	Porterfield Collegiate
4. R. Bould	60	35	95	Comper Swift



ABOVE: Daniel Walker's nicely built Modelair Auster flew well in Kit Scale. Photo: Alec Fuller



UPPER LEFT: Steve Warner's Fokker Dr1 entered in Peanut Scale.

UPPER RIGHT: Antony Koerbin's Avro Avian Monoplane brought for the Indoor Open Rubber event.

CENTRE: Antony Koerbin brought this amazing Peanut Scale Voisin Hydro Canard that flew slowly and very stably for long flights.

Photos: Alec Fuller

LEFT: Another view of Antony's impressive Voisin Hydro Canard. Photo: Anthony Hope-Cross

NZ Nationals Free Flight Scale Outdoor

In this year's events, weather conditions played a part in both contest organisation and opportunities for flying. The move to having an early 6.30am start that goes back some years, paid off once again. Day One events were flown with the advantage of this early start, but by mid-morning the day was becoming too breezy for further flying. Day Two was a write-off with strong winds and rain and Day Three was not much better. A later start on Day Four encouraged some intensive flying to beat the wind that once again arrived mid-morning. The grass surface of the field was fine for free flight scale and if anything, better than last year's field.

F4A Power Scale

Antony Koerbin was soon getting great flights from his BE2e. It was great to see this model in the air again. It flew at a sedate pace and has great presence, all of which, along with a splendid static score afforded him an easy well-deserved win in this contest. Paul Evans had his last year's winner, his DH Humming Bird making a most realistic flight to make second. The Auster entries were having less luck, both models being grounded before being able to achieve qualifying flights.

Kit Scale

Martin Evans flew his PT-19 with two good flights. The best of which got him the first position. Ricky Bould was second with his VMC Bird Dog, which although challenged with the wind, handled it reasonably well. Third was Antony Koerbin with an over-detailed model which was penalised for going to town on the details. He got three good flights, particularly the second two. The model climbed into the wind particularly well. Fourth was Stan Mauger whose KK Cessna made a stable flight, but needed to turn better to create a better flight pattern. Paul Evans was

next but suffered from a lower static score. Don Spray did not enter the contest but had a great flight with his Puss Moth.

F4D Rubber Scale

Don Spray was also seen launching his Grumman Tigercat for a low-level sortie, but did not enter the event.

Ricky Bould chose to withdraw his Aeronca because it was not behaving. Paul Evans flew his small Piper Super Cruiser from a Keil Kraft plan but it was battling the conditions because of lack of power. Martin Evans had the event to himself achieving a very pleasant flight, considering the conditions, with his Fairchild PT-19.

Memorial Scale

Anthony Hope-Cross had a wonderful long stable flight with his APS Puss Moth that went on forever as judge Andy Green commented, "the only scale flight I have ever judged that required binoculars!" Once again it was wonderful to see this model flying. Having been built by David Hope-Cross, it brought back memories of yesteryears at NZ Nationals evening power scale events. Ceinwen Evans flew her Lacey to second place with two good flights just pipping Stan Mauger flying Jack Godfrey's Stahl Stinson once again. Paul Evans had entered Michael Taylor's Stahl Cessna 195 but was having trouble coaxing it to fly

Our thanks to flight judges Lloyd Dickens and Andy Green (UK). Andy bore the main load of both Static and flying judging and along with Martin Evans who had revamped spreadsheets, put in the hours to provide flying scores. A big thank you also to Gary Mildenhall who took the excellent photographs.

STAN MAUGER

Results

F4A Power Scale

	Subject	Static	Flying	Total
1. A. Koerbin	RAF BE2e	779	605	1384
2. P. Evans.	DH Humming Bird	646	515	1161
3. S. Mauger.	Antarctic Auster C4	661	--	661
3. R. Bould	Auster AOP9	-	--	-

F4D Free Flight Rubber Scale

1. M. Evans	Fairchild PT-19	670	595	1265
2. A. Koerbin	Pilatus Turbo Porter	744		774
3. R. Bould	Aeronca Chief	661	-	661
4. P. Evans	Piper Super Cruiser	656	-	656

Kit Scale

1. M. Evans	Easy Built Fairchild PT-19	59	39	98
2. R. Bould	VMC Cessna Bird Dog	57	35	92
3. A. Koerbin	VMC Bird Dog	51	38	89
4. S. Mauger	Keil Kraft Cessna	55	33	88
5. P. Evans	KK Piper Super Cruiser	38	33	71
6. D. Spray	Aerographics Puss Moth	-		-

Memorial Scale

1. A. Hope-Cross	DH Puss Moth	62	Built by D. Hope-Cross
2. C. Evans	Lacey M-10	61	J. Godfrey
3. S. Mauger	Stinson Voyager	59	J. Godfrey
4. P. Evans	Cessna 195	-	M. Taylor



*TOP: Antony Koerbin's BE2e making lazy circuits of the field.
CENTRE: The model being set up.
ABOVE LEFT: Stan Mauger about to launch his Antarctic Auster in Power Scale.
UPPER RIGHT: Paul Evans flew his DH Humming Bird in the same event.
Photos: Gary Mildenhall*



TOP: Martin Evans had his Fairchild PT-19 flying very nicely.

CENTRE: (clockwise) Stan Mauger getting his Cessna away in Kit Scale. Ricky Bould's Kit Scale Bird Dog on fly by. Antony Koerbin's Bird Dog flew beautifully. Ricky Bould looking for a calm patch in which to launch his Aeronca Chief (Photo by Stan Mauger).

LEFT: Martin Evans took the opportunity to trim out his Veron Sopwith Triplane.

Except where noted, photos are by Gary Mildenhall

NZ Nationals **Control line Sport Scale**

Sport Control Line Scale

Despite the wind and rain we went ahead with Sports Scale and most of us got in two or three flights. Adrian Hamilton had the winning score with his NA Mustang. Otto Wimmer was second with his Douglas Skyraider and Max Wimmer third with his Curtiss P-40. John Carrodus did well under the conditions flying his Republic P-47 from his chair but took his rudder off at one point. Gerald and Otto Wimmer both had bad luck with throttle set ups on their models and suffered from lack of pre-testing and practice, while Adrian Hamilton did well with his sorted model. Thanks to Alina Wimmer for Judging and all those that helped to make the contest work under trying circumstances.

GERALD WIMMER

Results

1. A. Hamilton 888
2. O. Wimmer 840
3. M. Wimmer 760
4. G. Wimmer 738
5. J. Carrodus 674

Model

- NA Mustang
- Douglas Skyraider
- Curtiss P-40
- Bell P-39 Airacobra
- Republic P-47 Thunderbolt



TOP LEFT: Adrian Hamilton put in some great flying to win the event in difficult flying conditions with his Mustang.

CENTRE LEFT: Gerald Wimmer had throttle problems with his Airacobra.

LOWER LEFT: Max Wimmer's Curtiss P-40.

LEFT: Otto Wimmer flew his Skyraider.

ABOVE: Adrian Hamilton giving John Carrodus a helping hand with his P-47.

Photos: Gerald Wimmer

Mitsubishi A6M3 Zero

Perhaps because low winged aircraft have their own trimming challenges, there has been a perception that as J. Fleming states in the building notes for his article accompanying the APS power scale Zero he designed, particular care is needed to set up free flight models of this subject. Against this we can be reassured that the Zero can be trimmed to fly well as models from the Peck plan, for example, show. The large rubber version by Ivan Taylor on p.16 demonstrates what a great free flight flyer this subject can be. Or if you favour control line, there are several suitable plans to be found on Outerzone for example.

The Auckland Museum's preserved aircraft is beautifully restored and well worth the Museum visit to view it. Even though it is located in its own space, it is possible to view it easily and for anyone wanting a reference aircraft for a Zero model project, the aircraft is very accessible to view. Space here, does not permit a detailed account of the aircraft. If you wish to model it, a good starting point, after viewing the aircraft, would be to read either the definitive account by Peter Lewis published in the NZAHS Journal (1985) or the J-Aircraft account which draws on the research presented in the Journal article. The 3 views published in the May 1963 Aeromodeller and those in other scale model aircraft magazines are also invaluable to get things right.

STAN MAUGER

References:

- Lewis, P. (1985, June). *New Zealand military aircraft 44. Mitsubishi A6M3 Model 22. Aviation Historical Society New Zealand Journal*. Wellington.
- Montgomery, R. (2002) Auckland War Memorial Museum A6M3 Model 22. www.J-Aircraft.com

Plans

The plans listed below are for various versions of the Zero aircraft many may be found by going to www.outerzone.co.uk

- Bruning, P. (1991). *FAC 17" Rubber*.
- Fleming J, (1973, September). *Aero Modeller 36" span power*.
- Galloway, B. (1993). *FSI (M-4) 27" span rubber*
- Houle, T. (1984, March). *Flying Models 39.25" span Rubber*.
- Peck, B. (1974). *Flying Scale Models of WWII. Model Builder, 18" Rubber*.

Documentation and 3 views

- Cooksey, D. (1963, July). *Mitsubishi Zero-sen. Aeromodeller, 340-343*
- Nohara, S. (1983). *A6M Zero in action*. Profile Publications.

Photos: Philip Mauger





ABOVE: The museum display space allows access to the aircraft and the ability to see details. The distorted view of the undercarriage in these photos is a result of slight wide-angle camera distortion.



*UPPER: This view shows good undercarriage and under wing detail.
ABOVE: A good view of engine cowling and forward fuselage panels.*

Mitsubishi Zero Ivan Taylor

The model was built a few years ago and won the rubber class at the last proper Nats at Barkston. We no longer have use of this wonderful venue for any aeromodelling activities.

The Zero also won other competitions. It is one of 6 low wing rubber models I have built for scale. The first was a Mustang and remains the lightest at 210g plus motor, with a span of 40" this model has the highest duration potential of around 80 seconds in still air.

The others are bigger and heavier, the Zero is 300g with a span of 45" and a one minute flight would be a good one.

The Zero motor is 40g, 23" long made from 20 strands of 1/8th and then a small amount of pretension. The models including details of construction techniques have been well illustrated in the *Aeromodeller* over recent years^{1, 2}. Some of these articles include

the use of lightweight filler to replicate metal skinned aeroplanes and Strimmer cord to offer flexibility to avoid propeller damage.

For a video of the model in flight refer to the You Tube reference below³.

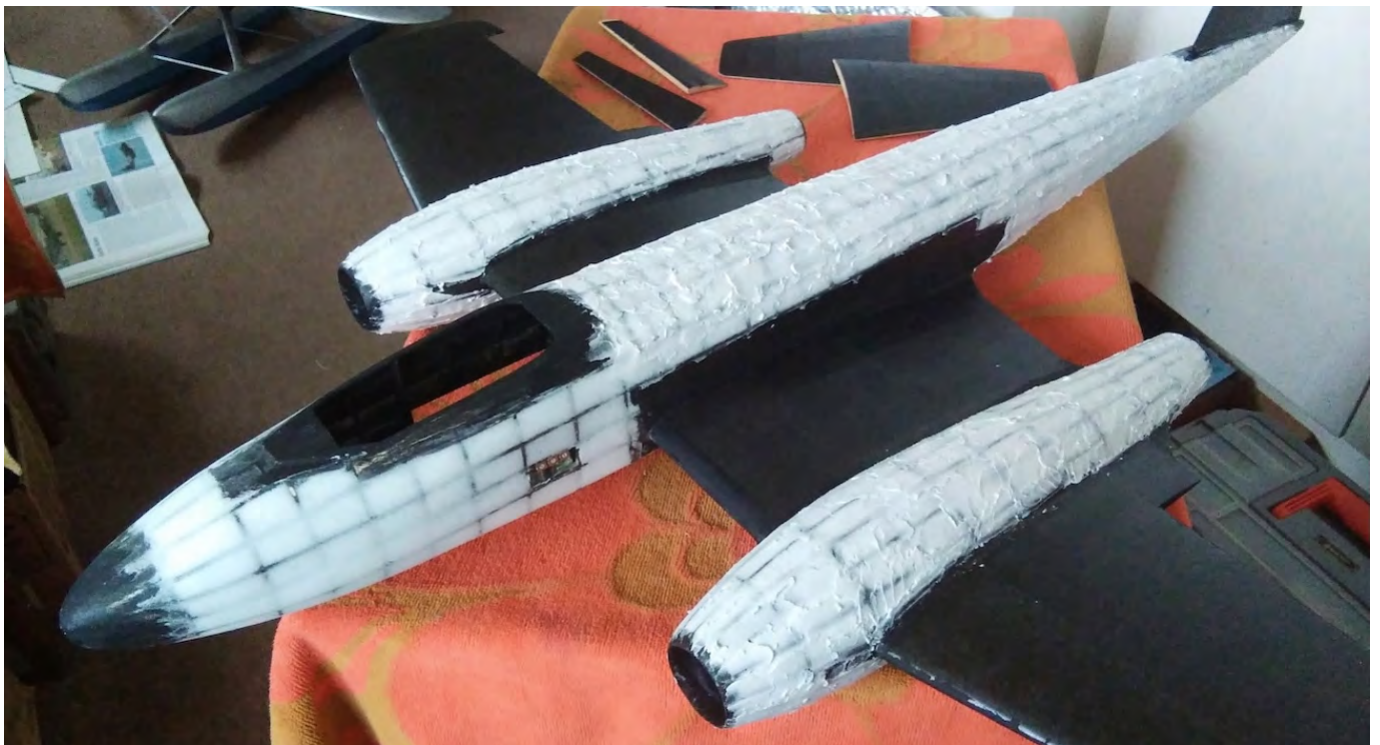
IVAN TAYLOR

References

¹ Taylor, I. (2018, November). Vought F8 Crusader. *Aeromodeller* 978, 29-31.

² Taylor, I. (2020, December). Supermarine S5. *Aeromodeller* 1003, 409-42

³ Horne, T. (2019). Ivan Taylor's Zero. Into the sun! Available www.youtube.com



ABOVE: Filler was troweled on to the covering of the Zero as shown in this DF Meteor, to create the appearance of the metal surface of the full size aircraft. Note that the surface of the forward fuselage area has been sanded.

LEFT: The Zero, providing a good view of the filled surface technique shown in the photo above.

Photos: Ivan Taylor



UPPER: The Zero seen on the judging table at the BMFA Nationals 2019. Photo: Stan Mauger.
ABOVE: Another view of the model showing the convincing surface using the filling technique shown on the previous page. Photo: Ivan Taylor.

Kit Review

Astral Republic P-47 Thunderbolt



This vintage kit was given to me for review, by John Macdonald who not only has a collection older kit designs, but also enjoys building them. It is unusual to come across a model kit as old as this is.

It was probably produced shortly after 1945 by Astral, when the Republic P-47 design was added to their range. Astral was something of a pioneer in early flying scale model kits, producing a number of the early scale designs by Harold Towner. Whilst Outerzone and other online plan libraries hold collections of Astral designs, it is unusual to see the kits relating to some of these early plans.

About Astral

The history of Astral's early kit production is well described in an article by Alex Imrie in the June 1993 issue of *Aero Modeller*. He cites Doug McHard's challenges with building some of the war time Astral kits that were made with hardwoods and difficult to work and quotes him stating that the Cadet series of kits both from the point of view of material and design were "the worst kits ever sold". This criticism should not be levelled at the kit under review, however as balsa is used rather than heavier wood.

The kit.

In contrast to the wartime kits supplied with hardwood strip and parts, this kit from the Ace range shows a change to balsa for these. This is a great improvement making the model much easier to build. Everything is nicely laid out in the kit box with separating cardboard sections, no doubt helping to minimise breakage of balsa strip and other delicate parts. Surprisingly, the kit includes a moulded cockpit

canopy which is supplied in two sections. There are craft cardboard die-cut cowlings but no propellor. Instead, there is a 'Finished Prop. Voucher' which nevertheless carried a price of 3/6D. There are waterslide transfers, wire and some quite opaque but not excessively heavy white tissue. The wooden wheels included in the kit are hardwood rather than balsa and as can be expected, are on the heavy side. The balsa strip is nice and light.

Model design

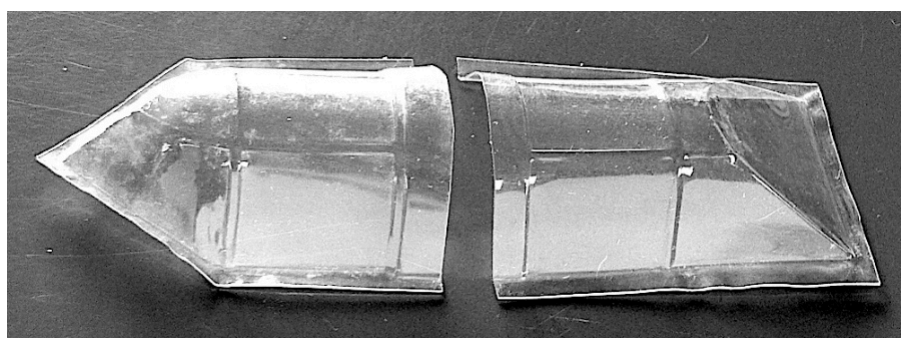
At 25 inch span the model is a good size for a rubber powered flying scale model. Interestingly, the built up formers and ribs, whilst not for the faint hearted constructor, make the model very light and aid great flying as Flying Aces model designers have discovered with scale models up to the present. The built up structure for ribs and formers was undoubtedly a measure to aid lightness, but with the switch from heavier woods to balsa, the model becomes even lighter.

The P-47 is an early H. J. Towner design in what was to become a great range of models both for Astral, but also for plan publishers. Many of us discovered Harold Towner designs in the pages of *Aeromodeller* and for diesel power rather than for rubber.

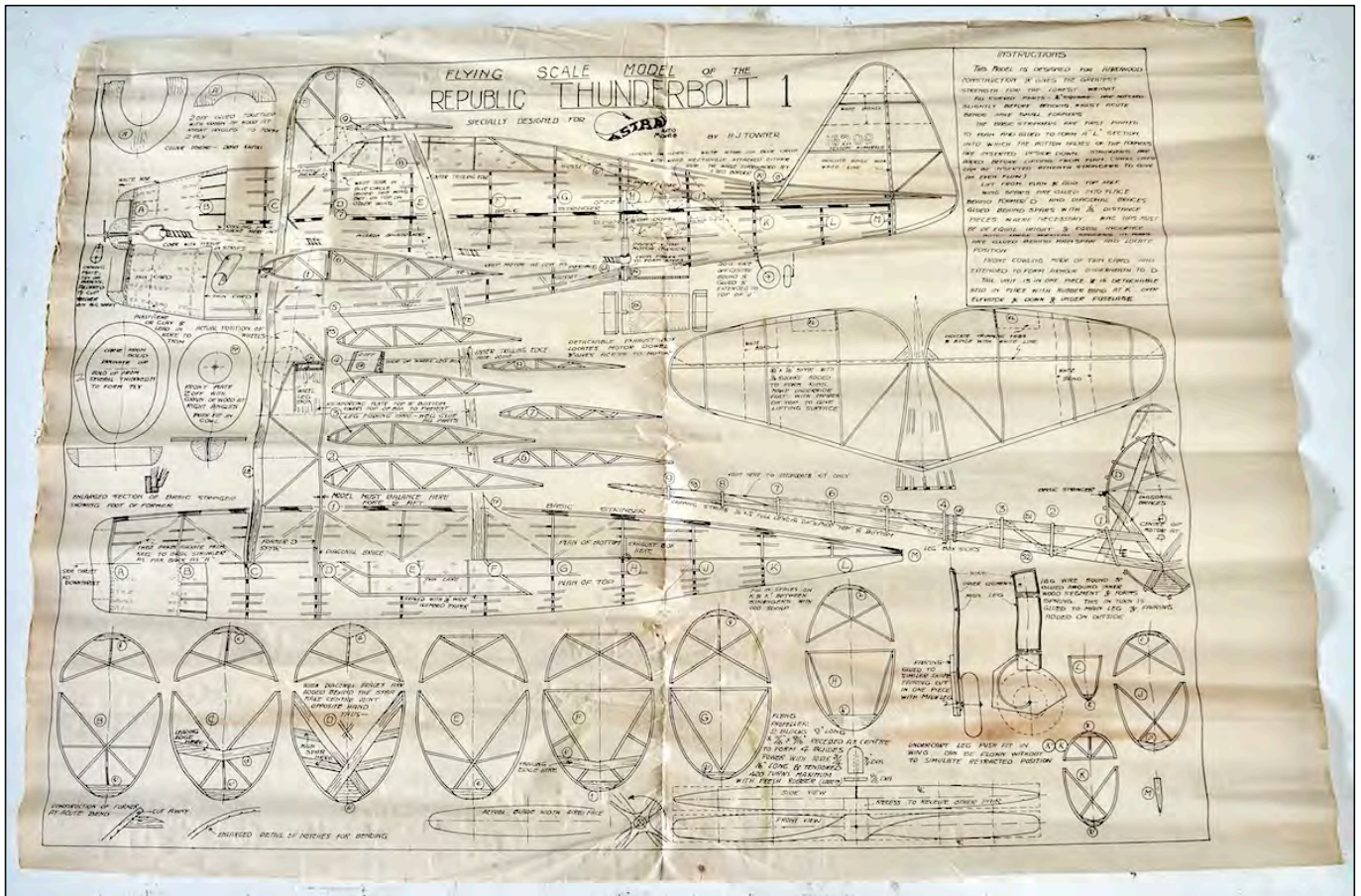
P-47 in service colour schemes

The P-47 was never used by the RNZAF, but plenty of colour schemes are available elsewhere in the Profile series, other pictorial publications on World War II aircraft and online.

STAN MAUGER



LEFT: A remarkably good canopy moulding for a kit dating back to 1945..



UPPER: The plan showing unusual lightweight rib and fuselage construction.
 ABOVE: Kit contents. Note the use of die-cut card in place of balsa sheeting.

Scale projects

Mike Mulholland Curtiss Sparrowhawk

Curtiss Sparrowhawk

First a brief word about kitsets. If you have ever been involved in the production of flying scale kitsets you'll know that they are a much easier thing to criticise than they are to design, test, manufacture, market and hopefully make some money from. Apart from the design considerations, the vagaries of wood availability and suitable hardware, the commercial compromises that must be made and the impossibility of explaining how to actually make balsa sticks and tissue look like a scale aeroplane, there is the discouraging reality that maybe less than 10% of what you produce will ever feel air beneath its wings.

With this in mind I salute Dumas and any other manufacturer who puts themselves out there to support the hobby. The changes I am about to describe are the result of my own OCD and in no way a criticism of a very fine commercial product.

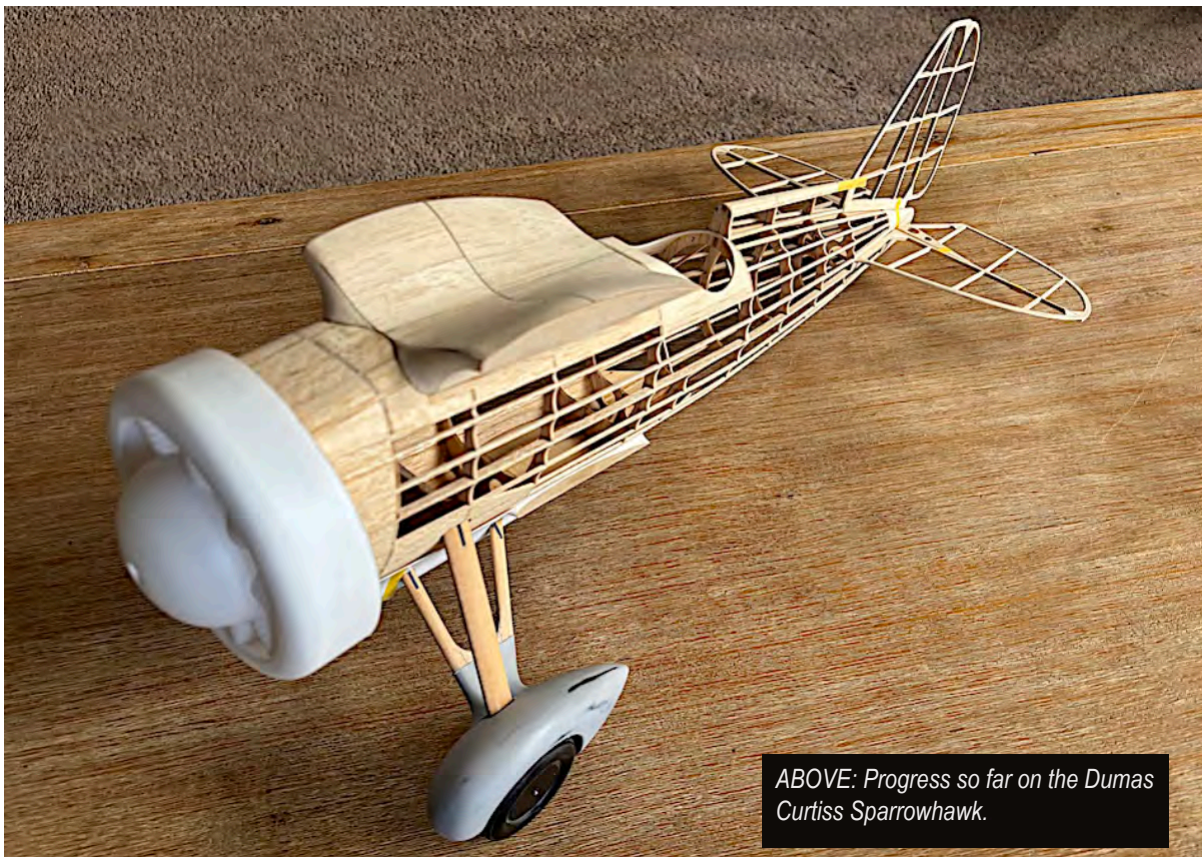
The kit

I don't usually buy kits these days, but this one was being sold at the right price and it appealed to me as being an interesting subject that

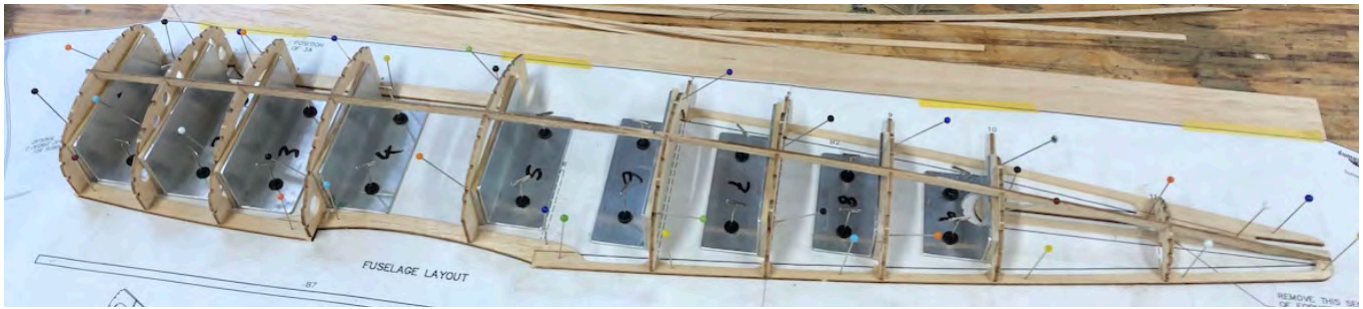
was a good size for rubber scale at 30" and with plenty of potential for detailing. The Sparrowhawk was designed for Dumas by Pat Tritle and as you would expect it is well engineered. Dumas have supported Pat's design with a nice plan, some good laser cutting, well executed vac formed parts and overall, pretty good balsa.

The changes I have made are the result of 2 factors. The first is weight – it's a big model and it needs to be light to get the performance I want. Secondly, the model is being built for F4D which meant that the simplifications that have been made for practical reasons in the kit would need to be re-engineered back to scale. These included the gull-wing centre section, the undercarriage and the wheel pants.

There were also some areas where the kit shapes differed from my 3-view, and as my 3-view agreed with photos of the NASM example the deviations from scale shape would have to be corrected. This included the tailplane, rudder and wingtip outlines, and the big undercarriage keel fairing.



ABOVE: Progress so far on the Dumas Curtiss Sparrowhawk.



Fuselage.

Some of the kit balsa was too heavy. There were two sheets for the fuselage formers. One side was good but the other sheet was oak. Enter Gwyn Avenell with his laser cutter and we re-cut all of the formers in my best Sig 4-6lb quarter grain. All of the Dumas / Tritle notches were in the right place and the stringers went in straight. I took the opportunity to lighten all of the keels and scalloped between the stringers. Once the fuselage was completed and strengthened with infill between the stringers, I also removed any unnecessary sections of keel altogether. Every little bit helps!

Top wing centre section

For practical reasons the kit design comprises a sharply angled unit which is strong and gives the correct impression from a distance, but which does not attempt to replicate the scale gull-wing curves. I took the correct profiles from Mike Stuart's 16" version which is available as a download and constructed a basic frame of 1/64" ply. I then infilled each section with block and once the exterior of each block was shaped, I then carved the back side so that each section became a 1/16" shell. Result – strong light hollow centre section. Two degrees of positive incidence was incorporated rather than the 0 degrees as designed



TOP: The formers set up on the keels using angle templates to ensure accurate positioning.

LEFT: The assembled half fuselage on a supporting jig..

BELOW: The stronger sheeted centre section replacing the lighter construction on the plan.

RIGHT: Hollowed block tail cone to achieve stronger construction at this end of the fuselage.



The undercarriage

As designed this is a traditional 1.6mm wire affair with non-structural balsa V-struts and compression leg. As well as being heavy, it is not well mounted or sprung. As such it would be guaranteed to rip out and take a lot of fuselage with it in any kind of landing! There was a complete re-design to allow for a scale sprung undercarriage. The first step was understanding how it was meant to work and where the springing was. The Smithsonian National Air and Space Museum replied to my query in a few days, providing photos of their example with the fairings and wheel pants removed for restoration work. In the end I have replicated the full-size system. An 1/8" balsa keel is mounted

under the fuselage, and this is the attachment point for the V-struts that carry the wheel assemblies. The keel is reinforced with 1/64 ply patches where the hinge points are epoxied in. The V-struts are basswood. All attachment and hinge points are clear fibre-reinforced circuit board material 1/16 thick. I think it gives you cancer if you even look at it, but it is very strong and easy to work. The compression struts have a Biro spring at the lower end hidden inside the wheel pants as per the original. The upper attachment point is inside the fuselage and comprises a 1mm wire pin through an 1/8 former reinforced with 1/64 ply on either side.



ABOVE: Undercarriage showing leg connection points and also the Compression strut.

LEFT: The assembled leg and compression strut.

Wheel pants.

The Dumas solution comprises a flat 1/8 profile that the wheel sits in and the wheel pant moulding inboard. In a commercial kit this is a fair and practical approach to a complex problem, but it would not withstand the eagle-eyed scrutiny of static judges.

My solution was to carve new moulds and vacuum form complete wheel pants in two halves, taking the opportunity to align the shape to my 3 views. The Sparrowhawk wheel pants are unusual in that the

wheel is exposed, and the bulk of the pant is inboard covering the suspension and brakes. I was able to use the Dumas 1/8" profile idea but in a different way. This provides a strong point for the 1/16" wire stub axles and a convenient joining point for the pant halves. The real aircraft also has some complex filleted fairings that streamline the join between the V-strut and wheel pants. This was also replicated on the vacuum former.



ABOVE: Plugs for spat vacuum forming.



Vacuum formed under section from leg to spat.



Spats assembled showing undercarriage transition.

Lower Keel fairing

Dumas provided a vac-formed item representing the lower fuselage undercarriage keel fairing. Once again it was a very nicely produced item but unfortunately it did not match my 3-view or the NASM photos. Enter my carving knife and Vacuum former again! All of my vac forming was done on my simple home-made box with 'Er indoors' vacuum stuck in the side and a Black and Decker heat gun.



ABOVE: A view of the lower fuselage undercarriage attachment keel.

LEFT: The revised under keel fairing (above) and the fairing supplied in the kit (lower).

Nose cowling

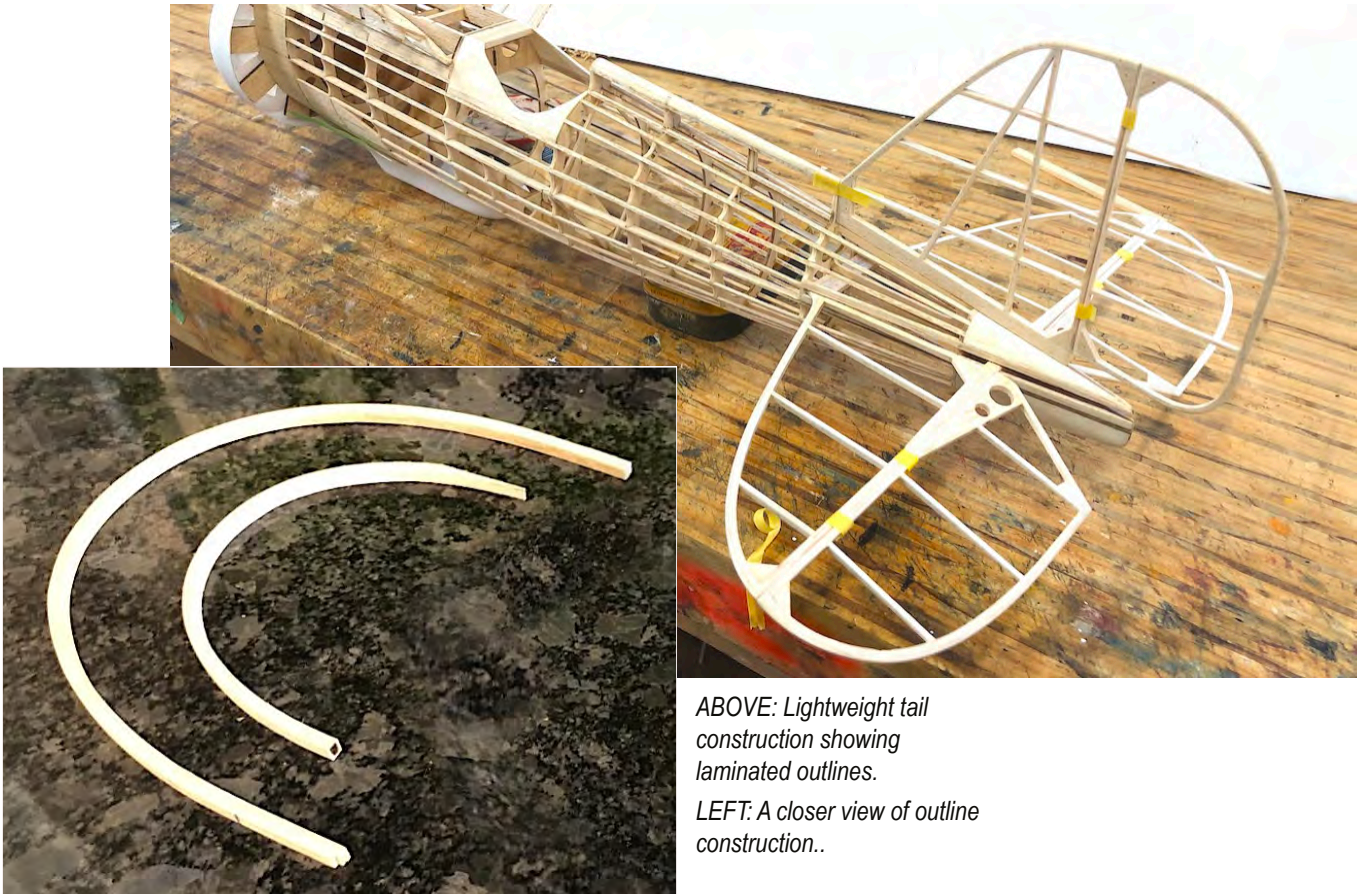
Dumas provide a convenient nose cowling which incorporates a dummy engine and nose. Unfortunately, the shapes don't match my 3-view so that will be another job for the vac former, and the engine will need a lot more detail for F4D.

Tailplane, fin and wingtips

Laminated outlines have been substituted for the kit parts and the outlines corrected.

What next?

After two months of recovering from shoulder surgery and not being able to do any modelling I am now back in the saddle. The only major work now is the wings and then covering and painting. Covering will be tissue over mylar and finish will be airbrushed Tamiya acrylics. The wings feature an awful lot of 1/4x 1/8 which I am allergic to, so some re-design there is likely. The wings may yet be demountable so that this can go to Richmond, Australia later this year.



ABOVE: Lightweight tail construction showing laminated outlines.

LEFT: A closer view of outline construction..



78th Nationals Hawkes Bay

The 2026 Nationals will be held in Waipukurau,
Hawkes Bay

Registration Jan 3, 2026
Events run from Jan 4-8

Refer to the Nationals link on the MFNZ website for more details

Ricky Bould

VMC Westland Lysander

This model was built from a VMC pre-production kit. One can only offer praise for the ease with which the model almost 'flew together'. The laser cutting is excellent and the undercarriage, unlike many scale rubber kits, was nicely engineered for its purpose.

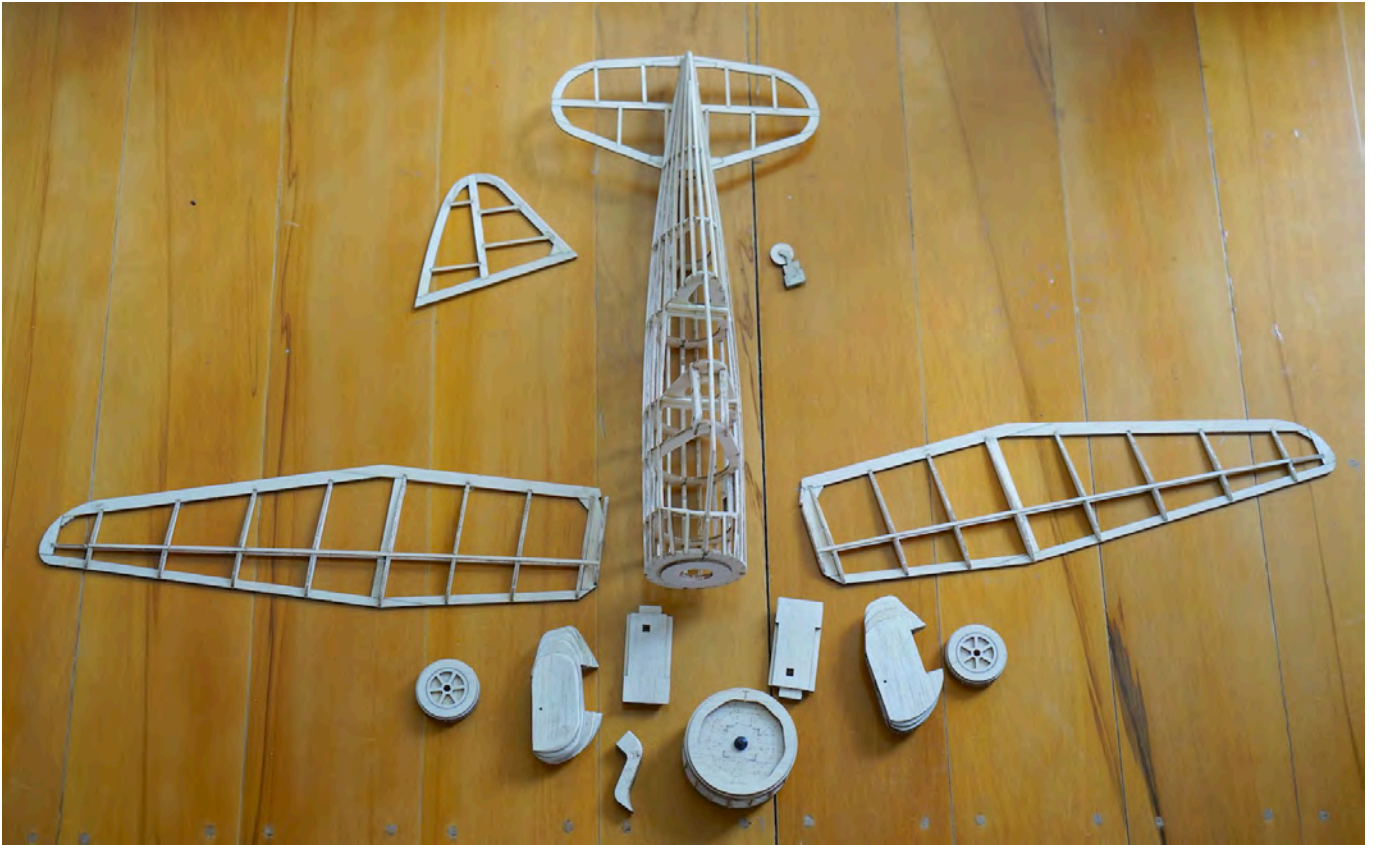
A few modifications have, however, been made to the kit. The wings have been made plug-in to make transport easier. For now, the model has a standard VMC 4 1/2" plastic propeller, but this may be changed

for an Icara 6" prop for more pitch, depending on how trimming flights go. The engine has been changed to a 3D printed version made by Richard Fallas and photo reference has been used for a guide to the colour of this. The Canadian colour scheme from an RCAF target tug was a little more work, but worth the effort. There is not much left to do other than completing serials and other markings and then it's off to do some trimming.



ABOVE: The dis-assembled model showing the distinctive RCAF target towing colour scheme.

LEFT: The cockpit area before attaching the framing.



TOP: The framework prior to covering, showing the laminated undercarriage legs and wheel spats.

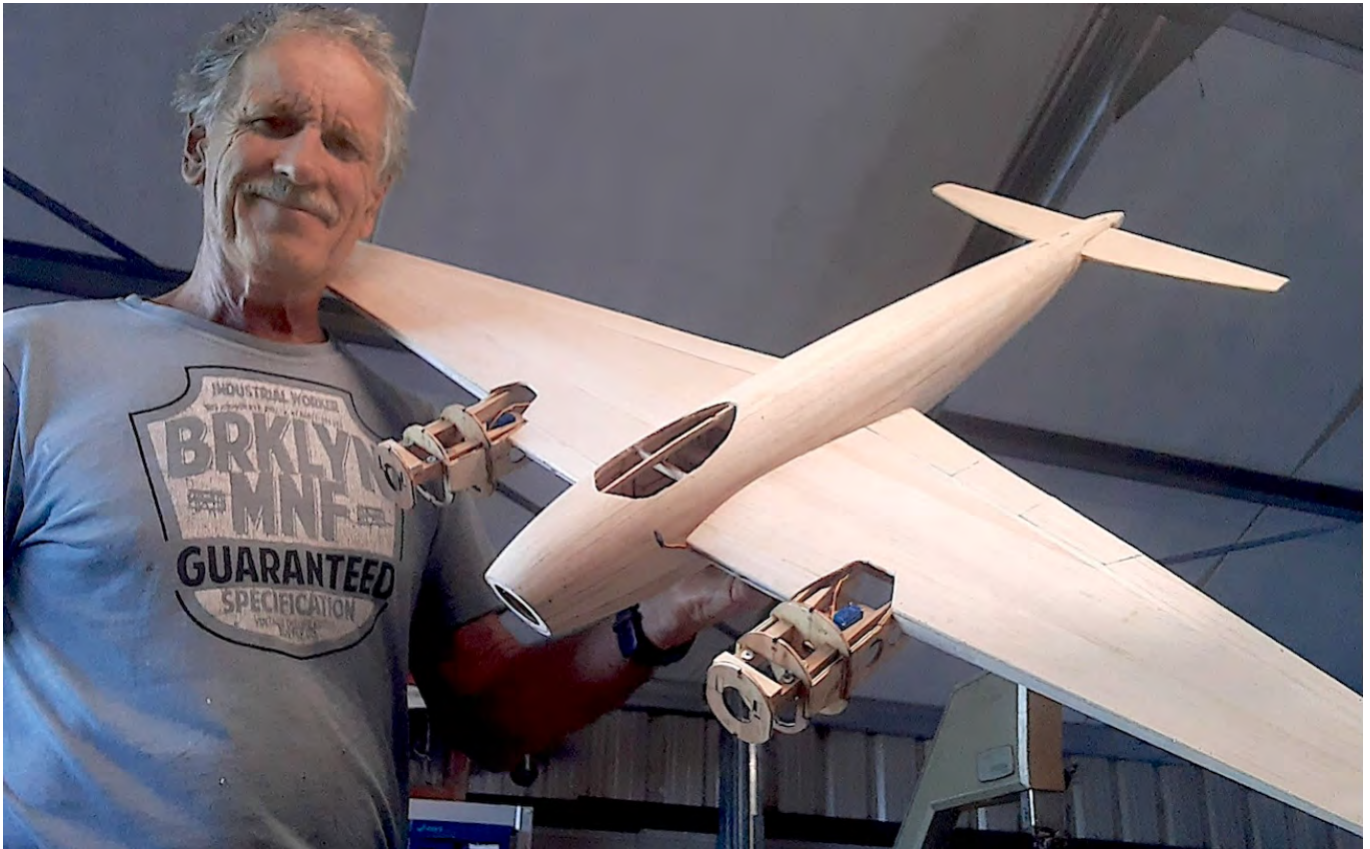
LEFT: Cockpit glazing and pre-cut framing. Engine and cowl arrangement is also shown.

BELOW: Cockpit framing applied to the glazing. .



Richard Fallas

DH Mosquito



Of all the De Havilland designs, this must surely be one of the most elegant. My interest in the Mosquito goes right back to my apprentice days doing voluntary restoration work on the original prototype aircraft (W4050) at Salisbury Hall near De Havilland's works at Hatfield, in 1971. I also found an original fuselage support frame in a dark corner in the factory. The prototype was designed and made at Salisbury Hall in 1940, away from the risk of bombing, and which is now a fine museum covering most DH types, including W4050, to this day.

Becoming the owner of a couple of OS Max 15s passed on to me, prompted me to build a control line version, and I looked for a suitable plan. After comparison with the Aeromodeller plan (40.5" for two ED Racers) I decided to convert the Tony Nijhuis RC version which I had previously captured in CAD and cut parts for but got stuck on retract details. I reckoned this could be reduced to 45" or 5/8 scale of the larger 72" model.

The conversion of this plan for a control line model was straightforward enough, except for changes to house the controls within a smaller model. My version has maintained the demountable wings employed on the larger model, which will help with storage and transport.

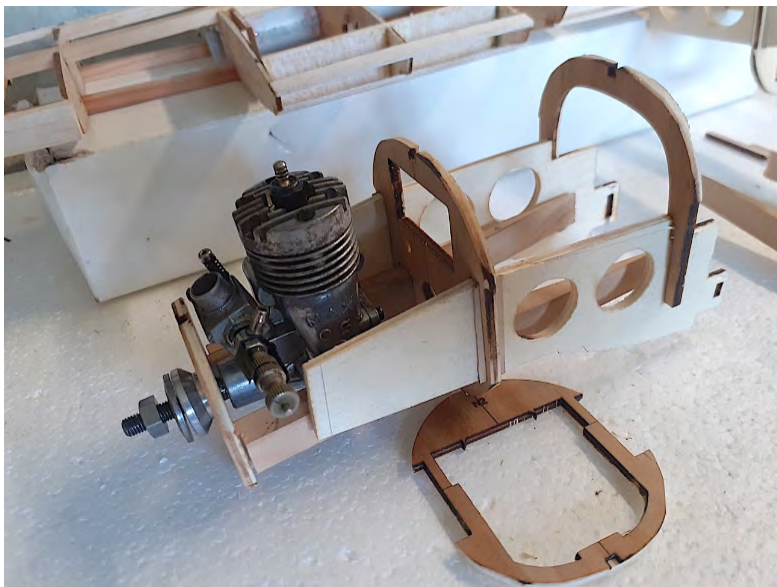
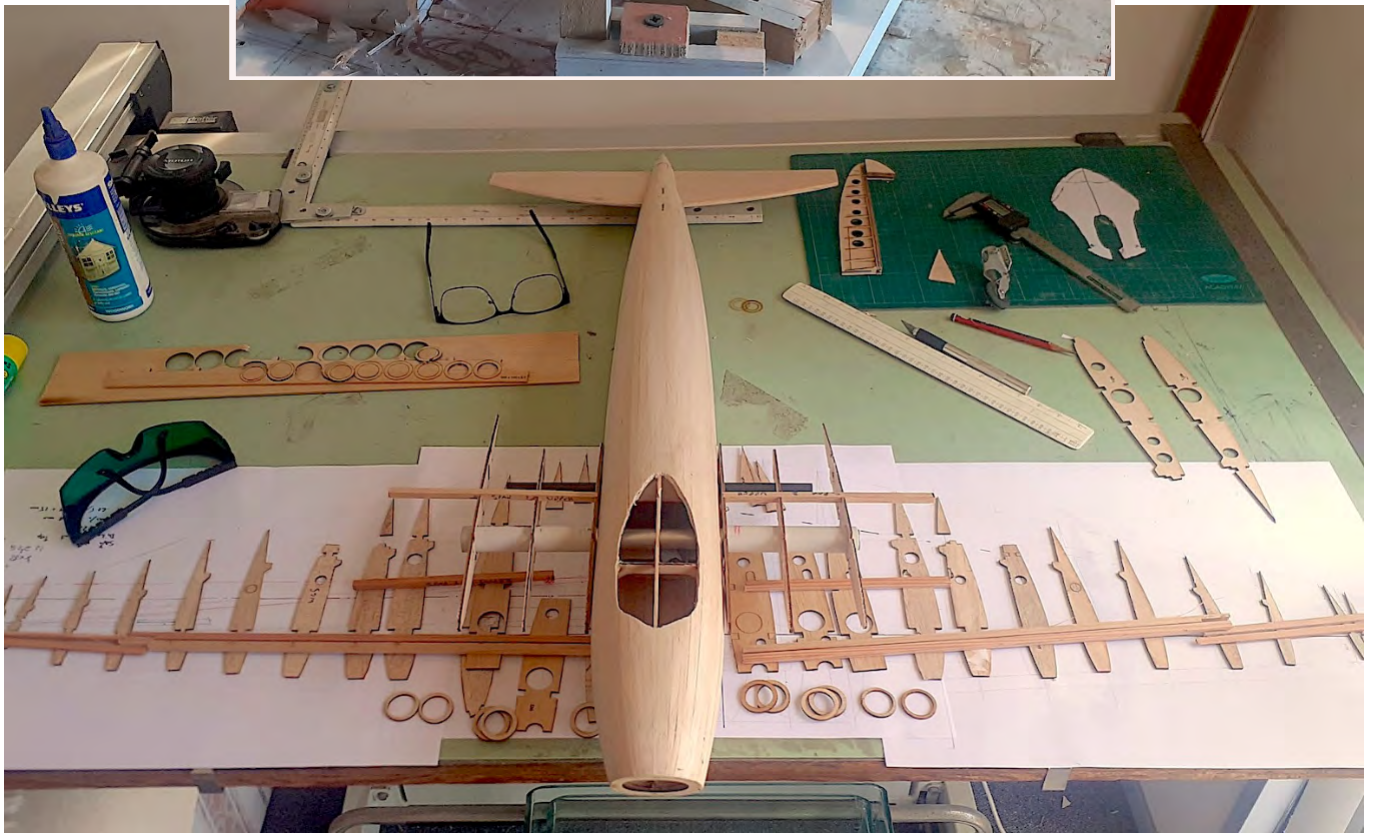
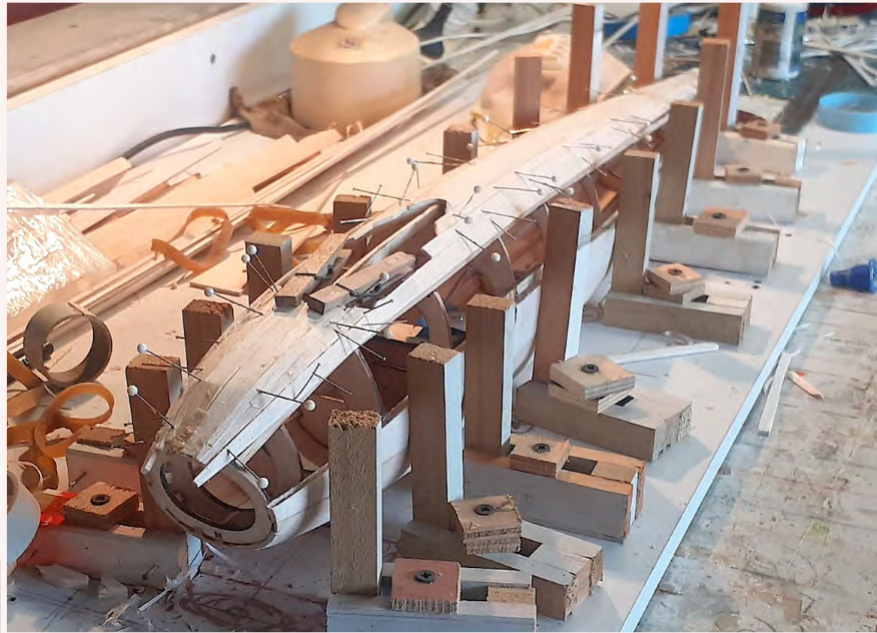
The fuselage construction went smoothly, but would have been much more difficult without the use of a building jig. For this I utilised the jig made for the larger model. Building the bomber version had the unforeseen benefit of providing line of sight through the front frame, down the centre-line to see that everything was staying straight.

The larger model will be a FB type so I will need to get clever there. The fuselage (so far uncovered but mostly complete as a structure) is gratifyingly light. Light models fly better and there will be lots of unlooked for weight penalties in all the finishing and assembly.

Like most scale projects, there are the inevitable details that slow down the pace to completion. In the case of this model (as with the larger version), the problem is designing and housing the retracts. This will be the first time I have used direct powered retracts. Custom built subframes have been built to take these and I am currently working on the sprung legs and hope to finish those in a day or two. The model will also have flaps and throttle control, all of which will be controlled via RC. I suspect I will need a copilot to help with that!

Even at the smaller scale, the shape of the model commands attention. It has presence! I know that will diminish when I take it outdoors but let's hope it retains some of that when I get it to Green Road for its maiden flight. Lots of options exist for colour scheme and finishing, but I have currently been favouring a Mk B-IV, serial DZ360 with 105 Squadron markings of GBA when it was stationed at Marham in late 1942.

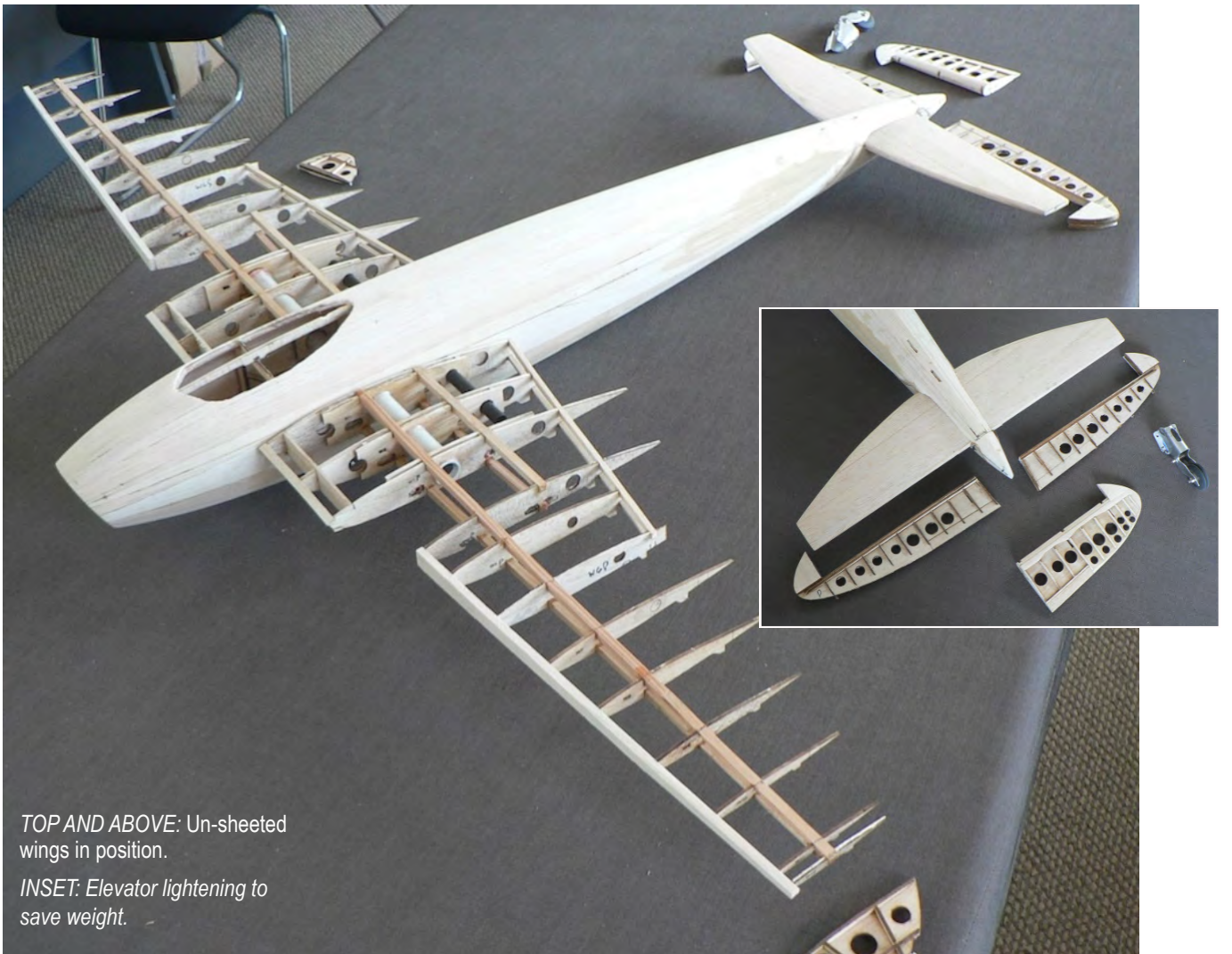
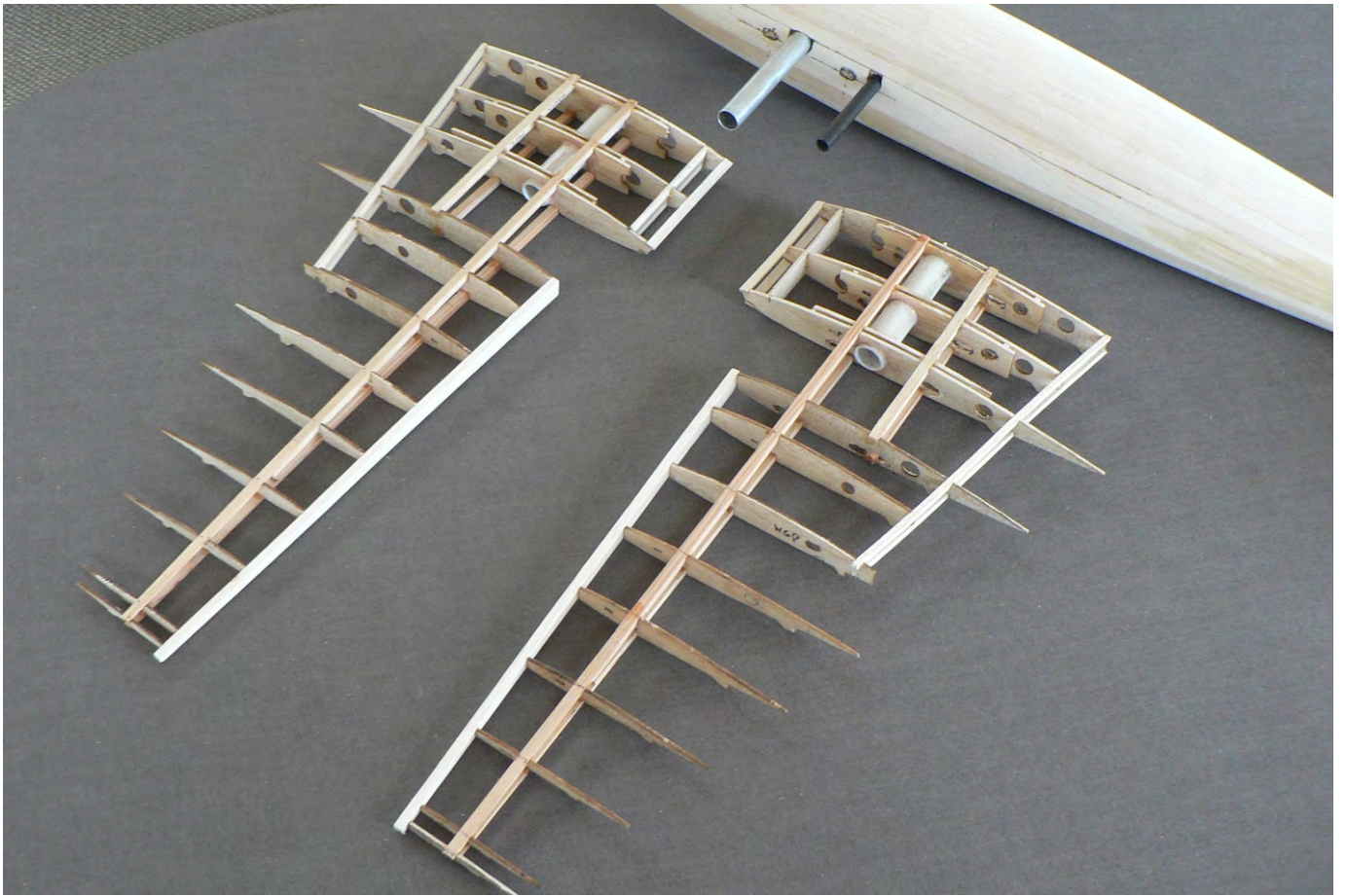
As noted the wings are demountable and this offers the tantalizing option of possibly taking it to the Richmond (NSW) scale event in July. The box will be large but not impossibly so. With luck, it may be finished ready for testing by the end of April.



TOP: The essential jig made fuselage construction much more straightforward.

CENTRE: On to the wings. Laser-cut ribs and tube joiners are clearly visible.

RIGHT: Engine nacelle well under way in this view of it inverted. .



TOP AND ABOVE: Un-sheeted wings in position.
INSET: Elevator lightening to save weight.

Don Spray Grumman Avenger

The Avenger plan for this 750mm span rubber powered model, is by George Fay. It is based on 3 views in the book *Aircraft of the Fighting Powers*. The model has been a largely straightforward build so far, but with the wings located semi mid-fuselage, some tricky engineering was needed to give centre line motor clearance and reasonable strength in the central area. There is quite a lot of sheeting in the model but this does not seem to have pushed the model weight up unduly.

D box and sliced rib wing construction has also been used successfully on my other rubber scale models. It provides strength without much weight penalty.

A rubber motor with 8 strands of 3/16" braided on a 3-blade flexi prop is envisaged, as in many other of my models. The flexi prop design follows Ivan Taylor's design and saves prop breakages otherwise encountered with rigid propellers in rubber models.



André Stark AS.20 - Phil Warren

I came across a photo of the AS.20 by chance and thought it weird enough for me to try to build it. I eventually found a 3 view, as no model plans exist and blew the 3 view up to make it 22.5 inch wing span to base the model on.

The main fuselage is constructed of 2.5 mm balsa with .8mm turtle deck. The wings used 2mm spar with 1.5 mm ribs.

Tailplane and fin have flat ribs and all curved parts were cut from sheet balsa. Wings were made one piece for strength and slid through the fuselage. The centre section of the top wing has been lowered to allow the rubber motor clearance.

The model was covered with tissue doped and airbrushed with a light grey Humbrol enamel. I have only had time for two trimming sessions. It needed trim tabs, as it glided left wing down with about 50 winds I have yet to try it with tabs in place but I think it looks as though it will fly.

The André Starck AS.20

André Starck started the design of the AS.20 in 1938. It employed the so-called Nénadovich biplane configuration with tandem-mounted wings providing a continuous slot effect for exceptional centre of gravity travel and also very low stalling speed. Construction commenced in 1941 with the permission of German occupation authorities. Not being a captured aircraft, it could be flown under the German occupation and was painted with a swastika for flight evaluation only. The first flight with André Starck himself as pilot, took place on 23 October 1942 with the aircraft reaching speeds of more than 200 km/h.

PHIL WARREN



Indoor free flight Scale at Drury School Hall All welcome!

Kit Scale and Modelair Hornet

Monday 17 March
Monday 19 May
Monday 21 July
Monday 18 August
Monday 17 November

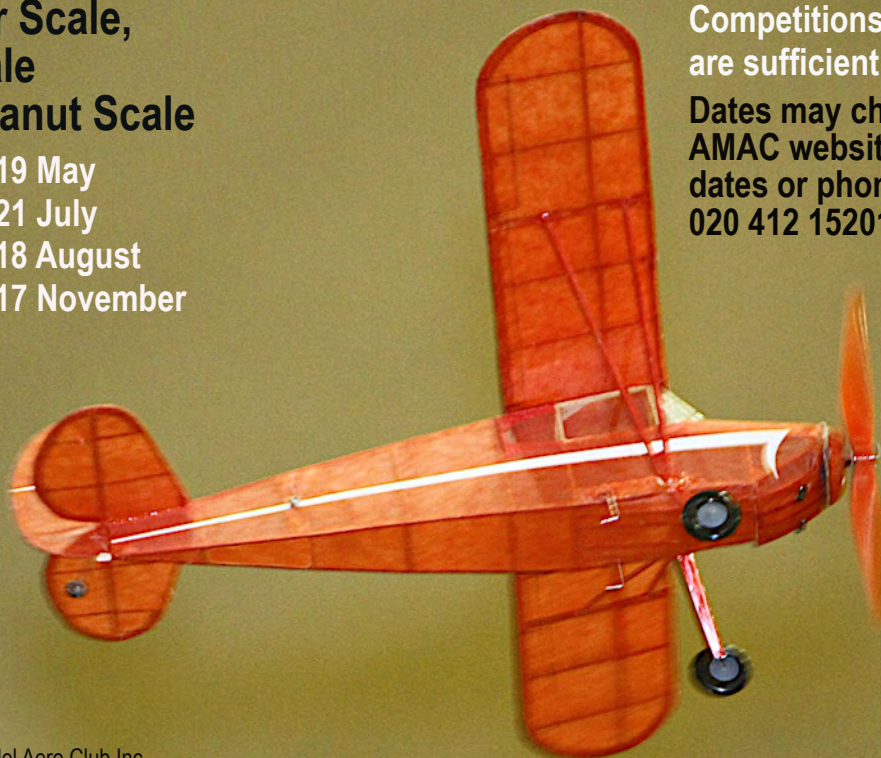


Rubber Scale, Kit Scale and Peanut Scale

Monday 19 May
Monday 21 July
Monday 18 August
Monday 17 November

Competitions will be run if there
are sufficient numbers.

Dates may change. Refer to the
AMAC website below to confirm
dates or phone the hall steward on
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