ScaleNews

August 2024
Issue 12

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

In this issue

Morrinsville Indoor Free Flight Day
Sunday October 13* 2024
10.00am until 4.00pm (briefing at 9.45am)

*Highlight the date in your diary!

- **Hangar Rat** • **HL Glider**
  Flown to MFNZ free flight rules
- **Modelair Hornet**
  Flown to AMAC rules.
- **F4F Peanut Scale** • **F4D Rubber Scale**
  Flown to MFNZ rules. Refer to the link on the MFNZ website under FF&CL SIG
- **Memorial Scale** • **Kit Scale**
  Flown to MFNZ rules. Refer to the link on the MFNZ website under FF&CL SIG

Programme:

9.45	Briefing before flying starts
10.00	Hangar Rat, Hand Launched Glider and Modelair Hornet. Scale static judging until 12.30pm.
12.30	F4F Peanut, F4D Indoor Open Rubber Scale, Kit Scale and Memorial Scale all run concurrently. Scale flying ceases at 3.15pm.
3.45	Placegetters announced and certificates awarded. Please stay for this.

Flyer's entry fee $20.00

Morrinsville Events Centre. Photo: Ken Smith

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

modelFLYING NEW ZEALAND FREE FLIGHT & CONTROL LINE scaleSIG

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August 2024
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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

Committee
Stan Mauger (Chairman)
Ricky Bould (Secretary)
Brian Howell (Treasurer)
Paul Evans
Martin Evans

Area Representatives

Whangarei
Daniel Walker

Fielding
Graham Lovejoy

Wellington
Antony Koerbin
Chris Murphy

South Island
John Dowling

Editor and Newsletter Publisher
Stan Mauger
96A St Heliers Bay Road
St Heliers
Auckland 1071
New Zealand
Phone +64 9 575 7971
Email stanm09c4@gmail.com

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 PHOTOGRAPH
Mike Mulholland had his finely detailed Somer Monoplane out for flying at the Morrinsville Practice Day.
Photo: Stan Mauger

Editorial

There are a number of free flight scale contests coming up. Immediately on the horizon is the Morrinsville Indoor Free Flight Day. This has been run for a number of years and is now well-established as a great venue and occasion for indoor free flight scale flying. Last year we moved to a briefing before start time to give more flying time in the hall. Note the time in the notice on p.2. The contest day is well positioned to provide opportunities to fly your models competitively prior to Nationals indoor scale competition in January, while still leaving some time to adjust models to get the best out of them at the Nationals. Whilst there is a full schedule of free flight events in the morning and free flight scale in the afternoon and not much time for trimming flights, the large stadium area affords least possible damage if models are out of trim.

There are not too many months left before the Nationals so now is a good time to go through models, plan completing them where this is needed and look for calm weather for outdoor testing. Your support of all free flight classes would serve to make this a better than ever Nationals. To help with this, a provisional programme is to be found on p.28. A finalized programme should be available for the next Scale News which I am hoping to have out shortly.

Further off, but definitely worth thinking about, the next Richmond Scale weekend is scheduled for the weekend of July 5-6 with static judging on Friday July 4. This is an excellent venue and a great weekend of free flight scale flying. It is a great occasion to mingle with Australian free flight scale flyers and an opportunity to see expert scale flyers in action. Next year's event will be for two challenges, the Hope-Cross Trophy for F4A Power Scale and the Reg Jude Trophy for F4D Open Rubber Scale. Kit Scale is also contested. The team for next year's event will be selected at the coming Nationals. Please contact the SIG if you would like to take part. Once again my thanks to all contributors to this issue both locally and from Australia.

STAN MAUGER

CONTROL LINE (SEMI) SCALE ON THE TABLE
John Poletti built this diminutive semi-scale control-liner for Mills .75cc power. Seen at an Auckland MAC meeting, it is fourth in a series of WWII lookalikes that started with a Japanese Tony, followed by German and Russian subjects. The model, named Simone after a French actress Simone Simon, star of the movie Cat People, was based on the French Bloch 152 fighter. Photo: Stan Mauger

Free flight scale at Morrinsville Practice Day

The March indoor flying day was down as a practice day following several requests for an opportunity to use the hall outside our annual October indoor free flight scale contest days. Everyone enjoyed the relaxed flying day for testing both free flight and free flight scale models without the pressures of getting in flights for contest events. There is no attempt to record everyone's flights or models in this report, and the accompanying photographs show just some of the models flown. It was difficult to trim models while also recording the event, so photographs of some models are not included.

As on previous Morrinsville days, Ricky Bould had a tableful of models to test. His Rubber Scale Miles M18 from the Nutz plan from Flying Models was stalling and needed some rudder and sidethrust adjustments to improve the turn. His Walt Mooney Miles Sparrowhawk Peanut still needed some taming to get it to fly better. It seemed to be sensitive to propellor choice. It was test flown and then put away. As he reflected, perhaps it was time for introspection. His Messerschmitt Me109 looked to need more elevation. It was also put away after a test flight. However, his Ol' Ironside, was flying nicely after some elevator adjustment and a change to a larger sized rubber motor.

Jason Magill had a new model to test, a Peanut Scale Sorrell Guppy, designed by Hoby Clay and published in the September 1982 Model Builder. He managed to get it flying several circuits before putting it away. It still needed further trimming. All of which suggests that models with a stagger-wing layout may be trimmed to fly well.
Paul Squires brought his Peanut Lacey to trim, but after it sustained some minor damage he put it away. He was also seen testing a Nesmith Cougar for Memorial Scale but after testing these scale models he decided to concentrate on flying the free flight models he had also brought.

Paul Evans gave his Fairchild PT-19 a test flight, but the model flew too straight for even the large space of the hall so he decided that further trimming would be best accomplished outdoors. Martin Evans had some flights with his ever reliable Kit Scale Tern Porterfield Collegiate, before turning his attention to his Veron Sopwith Triplane.

Stan Mauger brought his Kit Scale Keil Kraft Cessna with the objective of curing a tight left hand turn and also to get it to ROG without ground looping. Mike Mulholland lent a hand to change the washout and thrustline settings, which eventually resulted in some wide but stable circuits of the hall, achieved from a hand launch.

There were also a number of models flown without the need for much trimming. Graham Lovejoy had his lo-cal Shinden flying well. It seems to be a reliable flyer. His Bostabria with fairly obvious derivation was making shortish flights. It featured an impressive Jim Clem-style moulded propellor. Also flown was his very reliable foamy Me109, a present from Brian Conroy, some years back. It gained plenty of altitude in the space of the hall. Also on his table were a Fike and Lacey probably built by Bruce Keegan. Bernard Scott's Peanut Blackburn Monoplane was flying well and his Farman Carte Postale was seen spiralling up for height. This was quite an accomplishment with this subject.

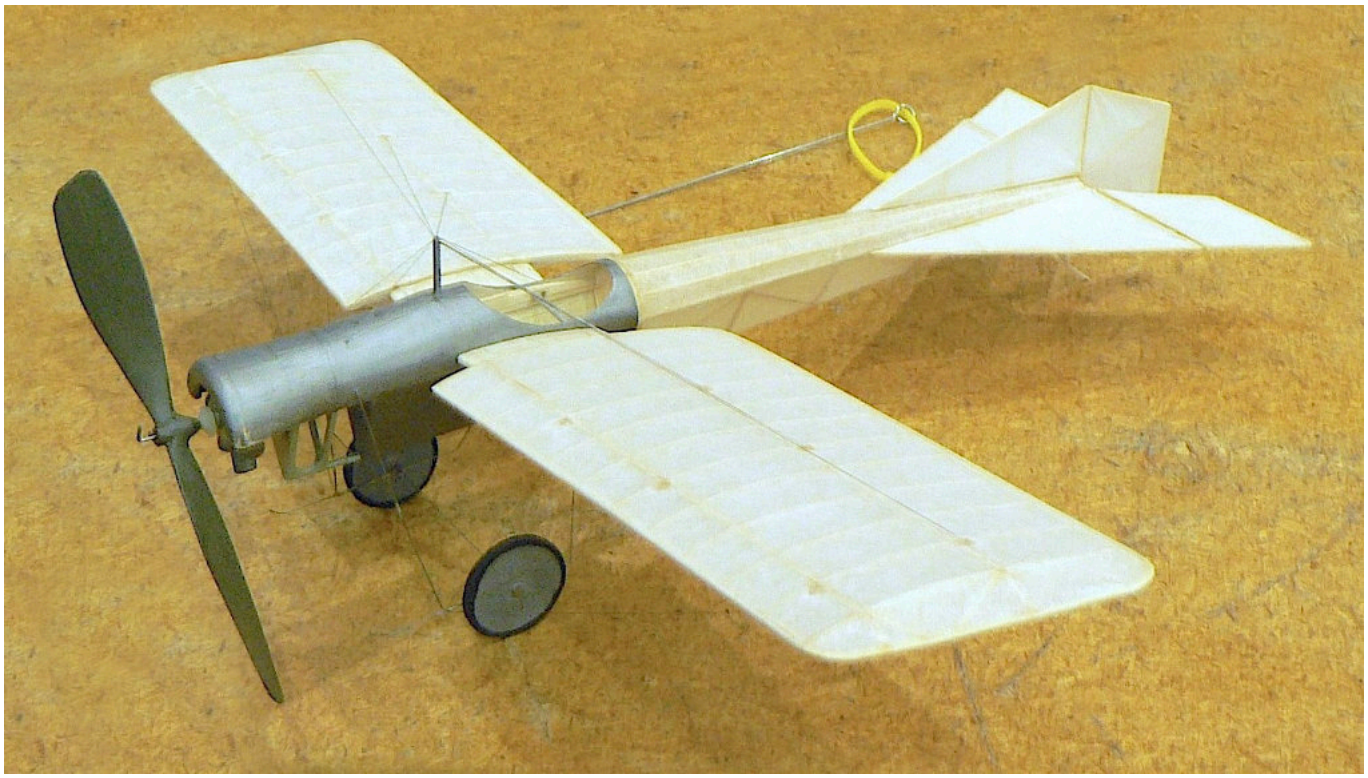
Some models stood out, however, like Mike Mulholland's Kit Scale Keil Kraft Westland Lysander. This 3/6D series kit had been flown outdoors with great success, particularly at a Richmond Scale Day some years back. It was flying slow stable 'textbook' circuits of the hall and an absolute joy to watch. He also had his nicely detailed Somer Monoplane flying slow circuits of the hall.

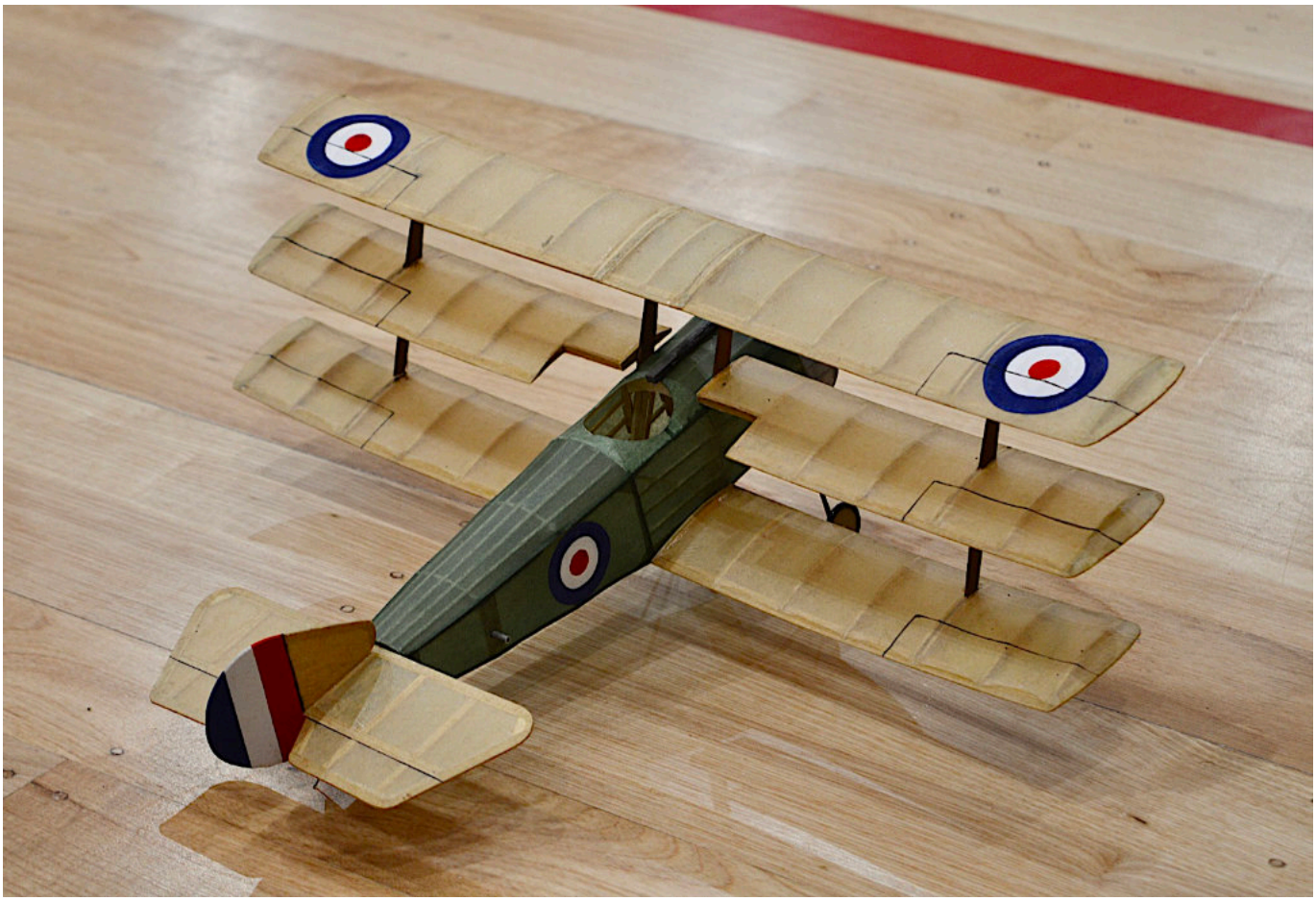
The practice day was an experiment to see what support there was for this kind of indoor flying day. The consensus was "please let us have another practice day next year!"

STAN MAUGER

OPPOSITE TOP:
Bernard Scott's Peanut Scale Blackburn Monoplane flew well without the need for trimming flights.

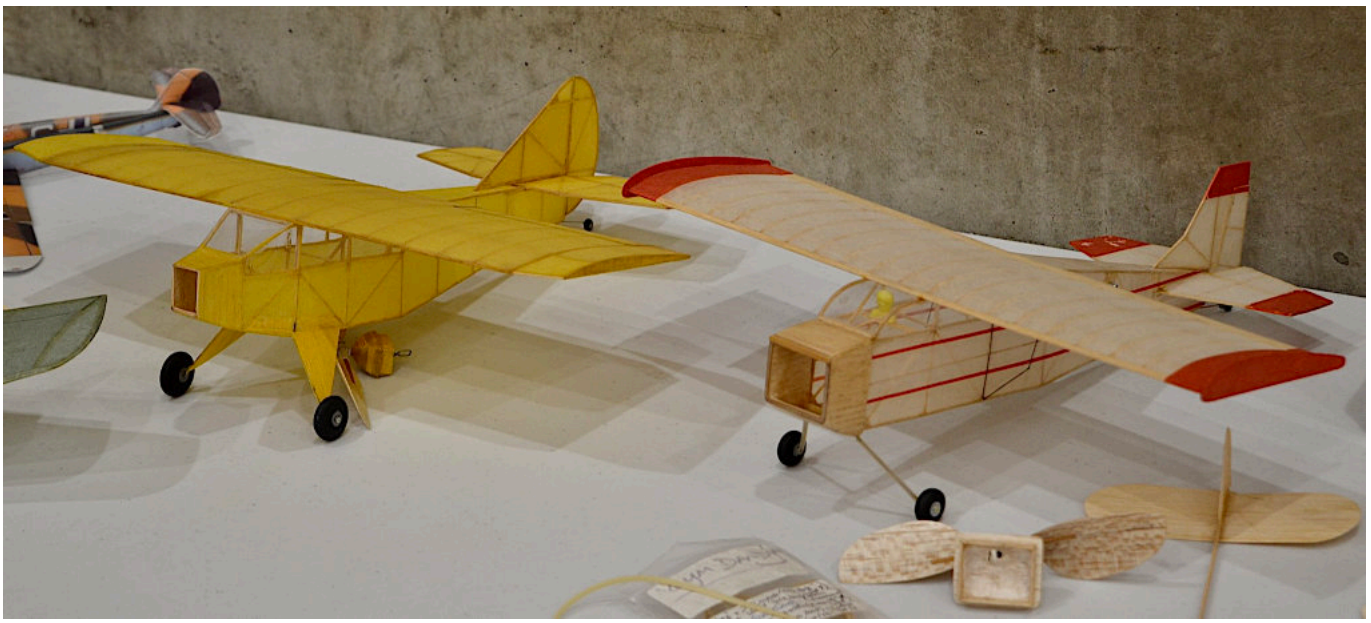
OPPOSITE LOWER:
Martin Evans took the opportunity to test his Veron Sopwith Triplane.

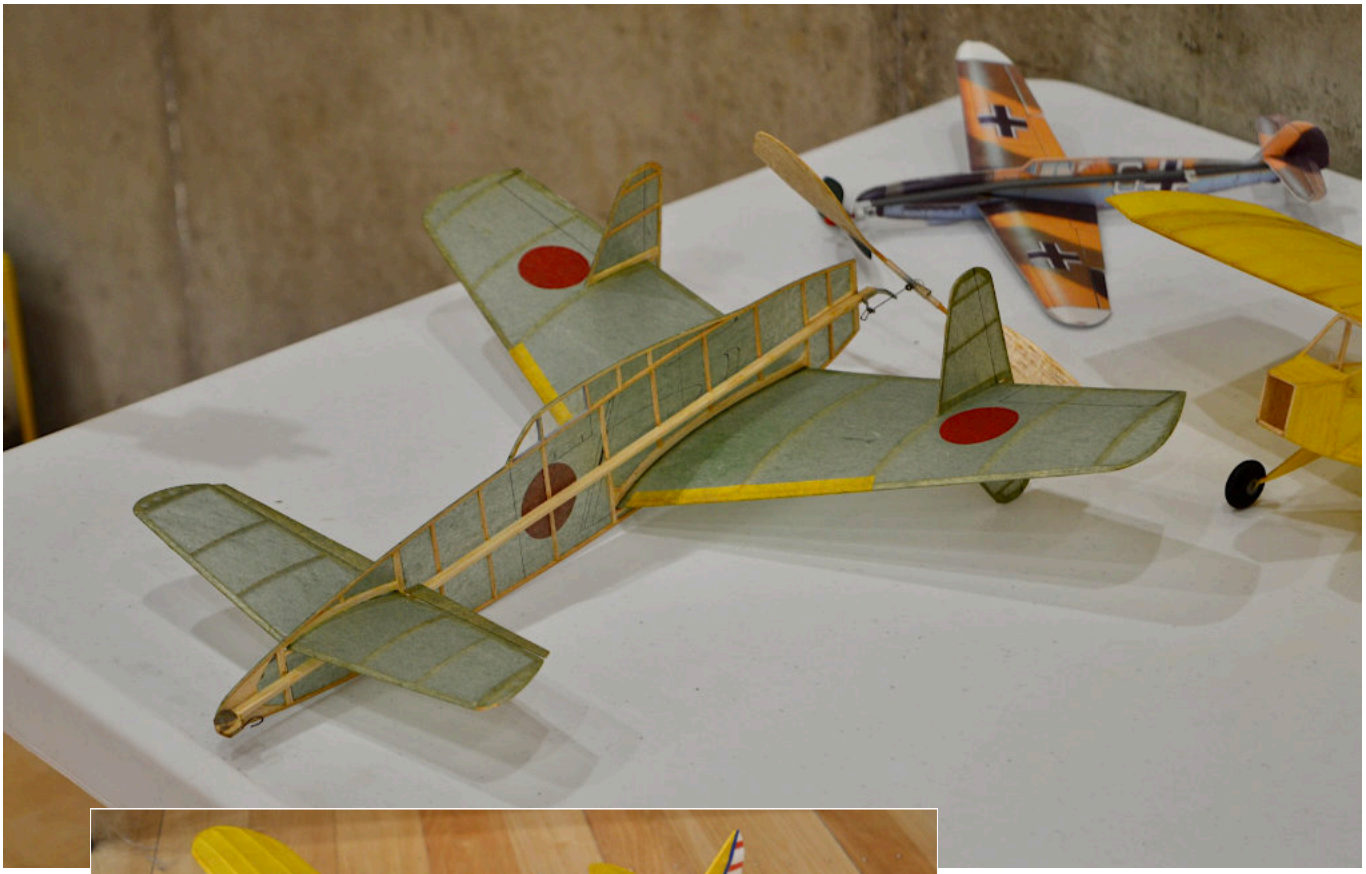




TOP: Equally at home flying indoors or outdoors, Mike Mulholland's Kit Scale Westland Lysander was great to watch as it flew circuits of the stadium.

ABOVE: Lots of fine detail to observe in his Somer Monoplane.





TOP: Graham Lovejoy brought two 'handed on' Peanut models, a Fike and a Lacey. Both had been fitted with Jim Clem style propellors.

CENTRE : He also had his No-Cal Shinden which was nicely trimmed. His foam Me109 was an amazingly good flyer too.

LEFT: Paul Evans brought his largish PT-19 which was still at trimming stage.

RIGHT: Ricky Bould's Messerschmitt Me109 in Swiss colours, before a test flight.

ABOVE: Ricky's models out for testing, including (Clockwise from top) his Hadland Peanut Bucker Jungmann, his Miles Rubber Scale M18 from the Nutz plan from Flying Models, and his Walt Mooney designed Miles Sparrowhawk Peanut.

Free Flight Scale Rally Richmond

The New South Wales Free Flight Society hosts a free flight scale weekend every year alternating between Trans Tasman Trophy challenges or Rally Days. This year it followed a rally format. Contests were still run for the events reported below, but for many it was a great time for some relaxed free flight scale flying as well. As those familiar with the venue will attest, the Richmond field just by the Richmond RAAF Base if perfect for scale models. Whilst not quite of the Keil Kraft variety, the grass is springy and this year the earth was soft after some recent rain. Importantly, the weather conditions, as on practically every previous year over the fifteen or so years that these weekends have been held, was excellent for all trimmed models and still forgiving for those who had run out of time and opportunity to trim models prior to arriving there.

As the rally was over three days there was plenty of time to enjoy flying models there. The Friday was set aside for static judging on the field and trimming, and some flyers took advantage of this until later in the day when rain clouds rolled in. The remaining static judging and flying judging followed on the Saturday, under calm conditions for most of the morning, certainly long enough to get in contest entries if models were properly trimmed. Sunday morning started with a Scramble event (Aggie to NZ readers) lasting half an hour, followed by relaxed rally flying and later in the morning, control line scale in an adjacent field. There was a sausage sizzle after the prizegiving around lunchtime. Hopefully, this description is enough to tempt others to make the journey from various parts of Australia or to cross the Tasman to enjoy the splendid flying site and hospitality.

Rubber Scale

Tim Hayward-Brown swept the board with high static points and good flying with his models. His Sundancer flew particularly well and with a table-top take-off made first in this event. His beautifully built Bristol Scout gained the best static points. Phil Warren, never one to avoid unusual and potentially difficult subjects, took a creditable second with his Peyret Taupin which also managed an ROG. After a number of trimming flights, Natalie Beckett had her Citabria flying well enough to make third.

Power Scale.

There should have been a special award for prolific scale builder Roy Summersby who at the start of the morning laid out an impressive squadron of models to fly. Several of these caused disappointment, owing to trimming and other problems. His largish ABC Robin, however, with a 1cc engine, flew beautifully on test flights at the start of the day, but unfortunately was damaged when it flew into a table on the field, before it to put in an official flight. Michael Towell entered that most challenging of free flight scale low-wingers, the Dart Kitten and made some creditable flights to be second in the event. Stan Mauger had decided to bring his Antarctic Auster C4 that had regularly been at Richmond scale events over the years. It flew so well he nearly lost it when it flew outside the field and headed for the Hawkesbury River. Taking advantage of the bald earth takeoff strip in front of the carpark he was able to get the model to ROG nicely and make the top spot.

Kit Scale

This was the best supported event with twelve entries. There was only a couple of points between Phil Warren's very reliable Taylor Cub that had been flown at a number of championships and Roy Summersby's much newer electric powered Grumman USCG J4F-1 (Widgeon). Roy also impressed us with his electric powered Veron Lavochkin 176 which was beautifully trimmed and spectacular to watch. Terry Bond's smartly finished Lockheed P-38 Lightning, in night flying scheme was a nice flyer and took third. Terry also had a number of other kit scale models that he flew over the weekend.

Rally flying

Apart from some great flying in the organized events, scale modellers also enjoyed the venue and put in good flights. Tim Hayward-Brown continued to fly the rubber powered scale models already entered in scale events, throughout the weekend. Peter Jackson flew his SE5a as well as small non-scale sport models, on both days. Maris Dislers's Stinson Reliant was great to watch.

The weekend ran smoothly thanks to the contributions of the team. Special thanks to Phil Warren for overall organisation of the event, Michael Towell for Contest Directing and to all static and flying judges Thanks also to the photographers who recorded the flying.

STAN MAUGER

TOP: Many, but not all of the flyers at the rally, captured in this group photograph. Some are holding Scramble models Photo: Dino Riebolge.

ABOVE LEFT: Tim Hayward-Brown's Mitsubishi Zero was a good flyer.

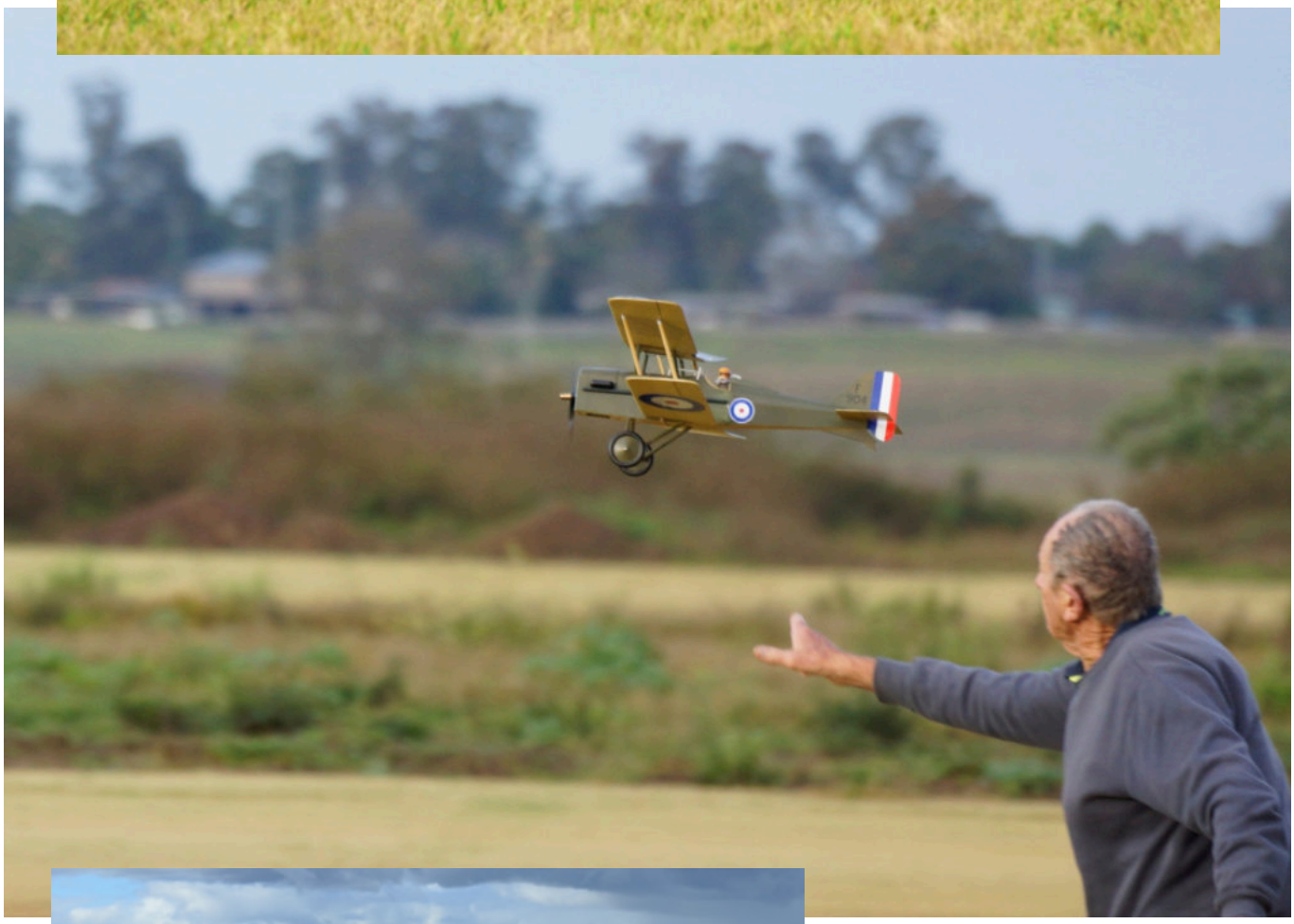
ABOVE RIGHT: After some initial trimming flights, Natalie Beckett's Citabria was flying nicely in Kit Scale.

Results

Rubber Scale	Subject	Static	Flying	Total
1. T. Hayward-Brown	Sundancer	936.6	592	1528.6
2. P. Warren	Peyret Taupin	895.3	609.5	1504.8
T. Hayward-Brown	Bristol Scout	1003.7	493.5	1497.2
T. Hayward-Brown	Potez 29	882.8	612.5	1495.3
T. Hayward-Brown	Junkers J1	930.5	479.9	1410.4
3. N. Beckett	Citabria	892.2	433	1325.2
P. Warren	Focke Wulf A16	936.7	298	1234.7
P. Warren	Pou du Ciel	910.9		910.9
S. Mauger	Helio Courier	810.4		810.4
R. Bould	DH82 Tiger Moth	481		481

Power Scale	Subject	Static	Flying	Total
1. S. Mauger	Antarctic Auster	963.3	618.3	1581.6
2. M. Towell	Dart Kitten	825.9	478.8	1304.7
3 R. Summersby	Fokker DVIII	940.1		940.1
R. Summersby	FE8	938.5		938.5
R. Summersby	ABC Robin	936.1		936.1
R. Summersby	Sopwith Swallow	875.7		875.7
R. Bould	Piper Cub	400.8	460	860.8
R. Bould	Auster AOP9	509.9		509.9
R. Bould	Comper Swift	491.7		491.7

Kit Scale	Subject	Static	Flying	Total
1. P. Warren	Taylor Cub	90	44	134
2 R. Summersby	Grumman J4F	90	42	132
R. Summersby	Lavochkin 176	69	47	116
3 T. Bond	Lockheed P-38	71	44	115
R. Summersby	SE5a	60	44	104
S. Mauger	Auster III	95.2		95.2
T. Hayward-Brown	Zero	79		79
T. Bond	Pilatus	79		79
P. Warren	Fokker DVII	79		79
T. Bond	Piper Cub	48		48
T. Bond	Beaver	41		41
P. Scott	SE5a	33		33



UPPER: Ricky Bould's Power Scale Auster AOP9 was left earth-bound while he concentrated on trimming other scale models.

CENTRE: Roy Summersby getting his Guillows SE5a away in Kit Scale. Photo: Angela Mahony

LEFT: Roy's splendid ABC Robin at the start of the day.

UPPER: Stan Mauger had a number of flights in Power Scale with his Antarctic Auster C4. Photo: Ricky Bould.

ABOVE: Ricky Bould had chosen an unusual colour scheme for his CO2 powered Piper Cub, built from a Hacker kit. Photo: Angela Mahony

LEFT: Michael Towell showed that the Dart Kitten can be trimmed to fly well as a free flight model.

TOP LEFT: Tim Hayward-Brown with his unusual Junkers J1.

TOP RIGHT: Phil Warren's Lemberger LD20B off on another great flight. Photo: Dino Riebolge

CENTRE: Roy Summersby entered his electric Grumman J4F twin in Kit Scale.

ABOVE LEFT: Tahn Stowe's handsome Power Scale Magni Vale between flights.

ABOVE RIGHT: Tim Hayward-Brown's Bristol Scout was a great flyer. Photo: Angela Mahony..

TOP LEFT: Maris Dislers had a number of good flights with his CO2 Stinson Reliant

ABOVE RIGHT: Terry Bond with his Lockheed P-38 nicely finished in night flying scheme. Photo: Dino Riebolge

CENTRE: Peter Jackson with two SE5a models for small diesels. Photo: Dino Riebolge

LEFT: Phil Warren had success with flying his rubber scale Payen PA-22. Photo: Dino Riebolge.

Stinson 108-3 Station Wagon

It took a number of years before any Stinson 108 variants reached New Zealand, which is a shame because this aircraft is a stylish design. In the post war period, when the 108 models were developed from the smaller Stinson 10A, import restrictions may well have been a deterrent to them arriving here. It was wonderful to finally see a couple of Stinson 108 models – a 108-2 and 108-3 arrive in 1996. The accompanying photographs are of a later arrival, ZK-NCC owned by Grant Wisnewski, who kindly allowed me a walkaround to take detail photographs.

History

Some confusion can easily arise over nomenclature. All three Model 108s were sold as Stinson Voyagers with the flying Station Wagon as an optional version in later models. It is distinguishable by a utility interior with such variations as a reinforced floor to allow increased baggage and timber in the side panels perhaps reminiscent of the wood panelling on early American station wagons. The aircraft shown has a Flying Station Wagon name flash on the nose and Voyager logo on the control wheel. It is painted in the Stinson Red factory colour scheme.

If you would like to model this aircraft and would like other views that are not included here, please get in touch.

STAN MAUGER

Plans (including Stinson Voyager)

There have been many plans and kits of the Stinson 108 in various versions both as Stinson Voyager and Station Wagon.
NOTE: Further plans and some of those listed below may be found by going to www.outerzone.co.uk

Del Gatto P. (1960, May). *Flying Models Magazine*

Dumas. (1996). *Dumas Model Products Inc*

Hatfull, A. (1954). *Keil Kraft.*

Packard, E. (1946). *Cleveland Model Supply Co.*

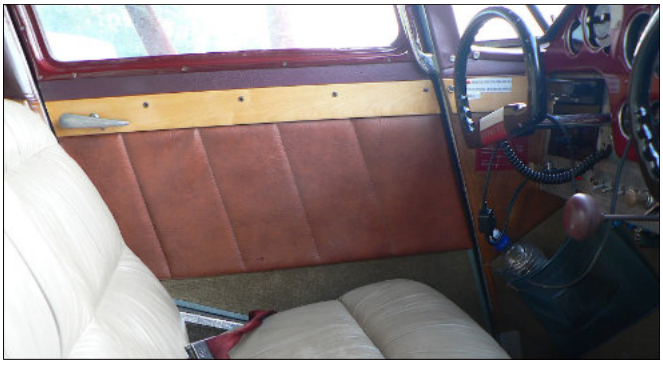
Stahl, E. (1948, June). *Model Airplane News Magazine*
go to:http://www.theplanpage.com

Documentation and 3 views

The Cleveland Supply Co produced large 3 views of the 108 Station Wagon. There are also drawings of 108-2 with smaller rounded fin and 108-3 with taller straighter fin/rudder, in *The Stinsons*.

Reference:

Underwood, J. (1976). *The Stinsons - a pictorial history*.
Heritage Press.



ABOVE: This view shows how the door profile and hinging enable it to clear the wing strut.

RIGHT: Door panelling shows the wooden 'station wagon' style..

TOP: This view shows the high set air intakes. The lower scoop could also be useful on a model as an intake.

CENTRE: A good three-quarter view to show a number of small details useful on a scale model.

ABOVE: This profile view shows the proportions of the windows and also the wheel spat size.

These detail photographs provide good reference for wheel spat outlines, fin and rudder proportions, and engine cowling.

Stinson 108 Model subjects

As a scale model subject, the Stinson 108 Voyager/Stinson Station Wagon has much to recommend it. It has great appearance, and adequate dihedral and tail areas to be a stable flyer. The wheel spats also enhance its appearance.

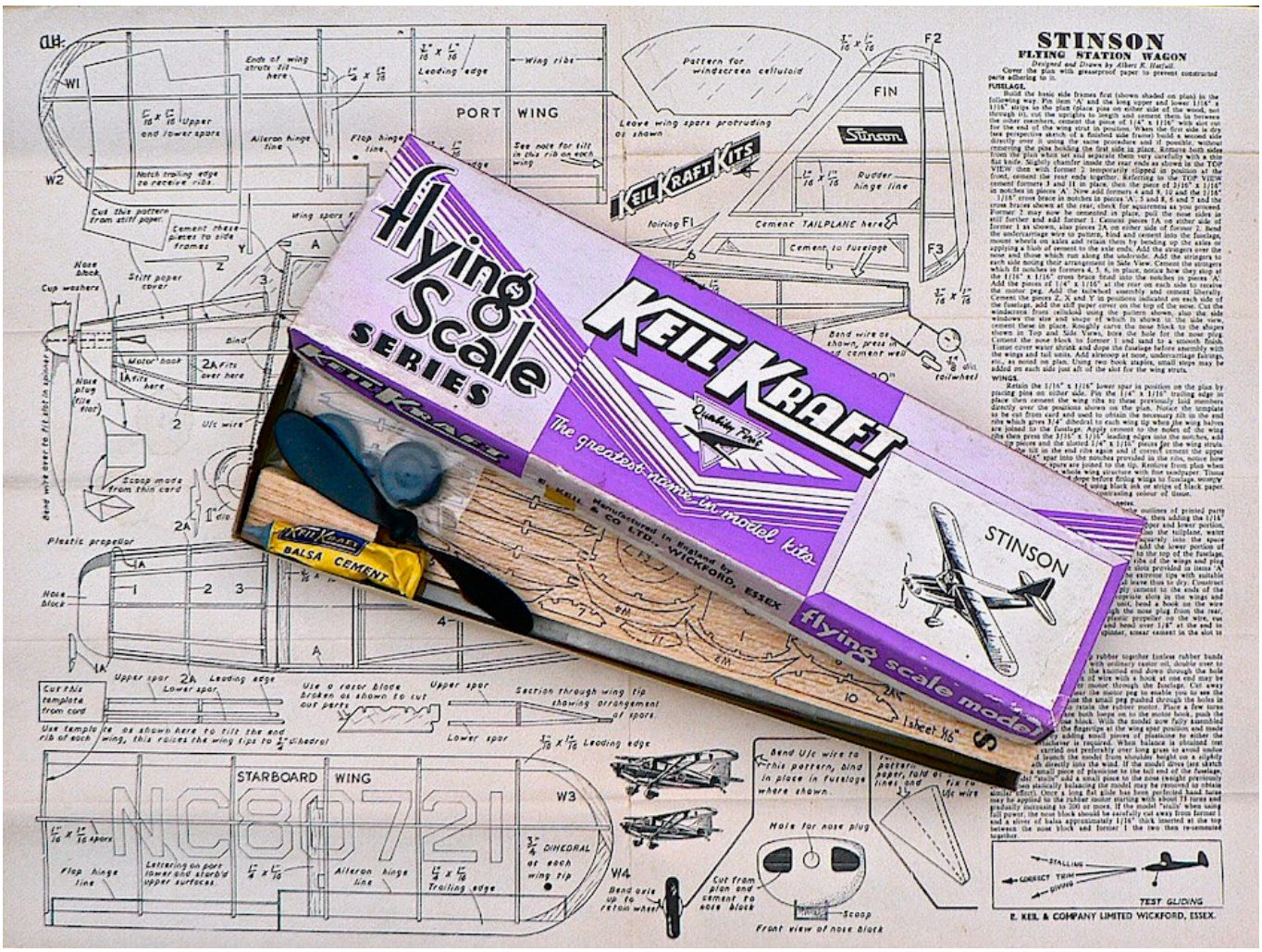
Albert Hatfull's Stinson joined the Keil Kraft range of Flying Scale Models in the early 1950s and it was my introduction to rubber scale. Building the model presented few problems, but the inadequate propellor and the loop of rubber supplied in the kit, spelt doom for achieving flights of much duration. On the other hand, equipped with a better propellor and suitable rubber motor, the model is a very viable choice for indoor kit scale. Compared with other models in the Keil Kraft range, like the Piper Family Cruiser for example, it has only modest wing area, so an eye must be kept on model weight, if good flights are to be expected.

Earl Stahl's Voyager has been much modelled and also copied or redrawn as well. At 30" wingspan it is large enough to fly in calm weather if kept light, as should be expected from a Stahl plan. While the outlines are reasonably accurate, some refinement of details like rear window shape for example, would improve the model.

STAN MAUGER

ABOVE: Patetonga memories! Angus Macdonald's Stinson off for a great flight.

RIGHT: Figures in the cockpit add life to the model. The Stahl design was enhanced with a fibreglass spinner and wheel spats.



TOP LEFT: Jack Godfrey's Voyager from the Stahl plan, being flown by Stan Mauger in the Memorial Scale event at a recent New Zealand Nationals. .

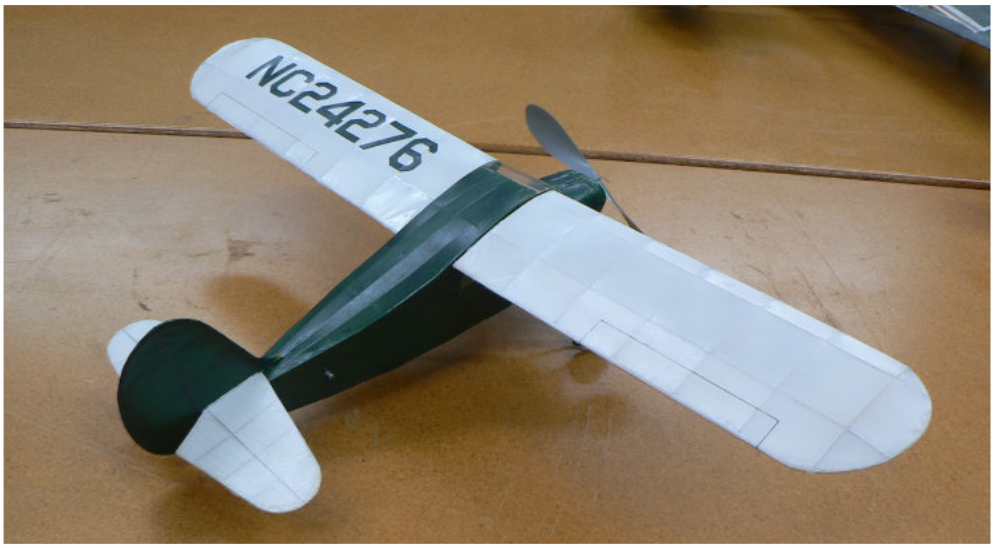
TOP RIGHT: Don Spray's Voyager also from the same plan, seen at Hoteo.

ABOVE: The Albert Hatfull-designed Stinson from the Keil Kraft 3/6D range from the 1950s.

RIGHT: The Model 10A was a Forerunner to the108 Voyagers. This model was built by Dave Jackson and flown at a Morrinsville Indoor Day, a few of years ago.

Ricky Bould's
Aeronca 65 Chief

Some time ago I was given this Aeronca 65 rubber scale model built from the Bill Schmidt plan published in Flying Models Magazine. While it was great to receive the model, it was some years old when handed to me. With it came the decision of whether to leave the aging tissue as it was or to do a complete renovation. It was clear that for me, the only satisfying way to enjoy the model was to do a thorough makeover. The brittle tissue was all easily removed and the model completely re-covered. Having got back to the bare airframe, I was able to make some changes to improve the model further. The flimsy nose section was strengthened to make it better suited to the handling associated with winding rubber models. Cowlings could also be replicated to make the model more scale like. Surface colour was improved with an airbrush finish, and tissue markings from a colour scheme from an article in Vintage Aviation Magazine were added.



Tissue markings

To create the markings, I used a a version of a method shown in Flying Models. It is a technique that I have used for some years.

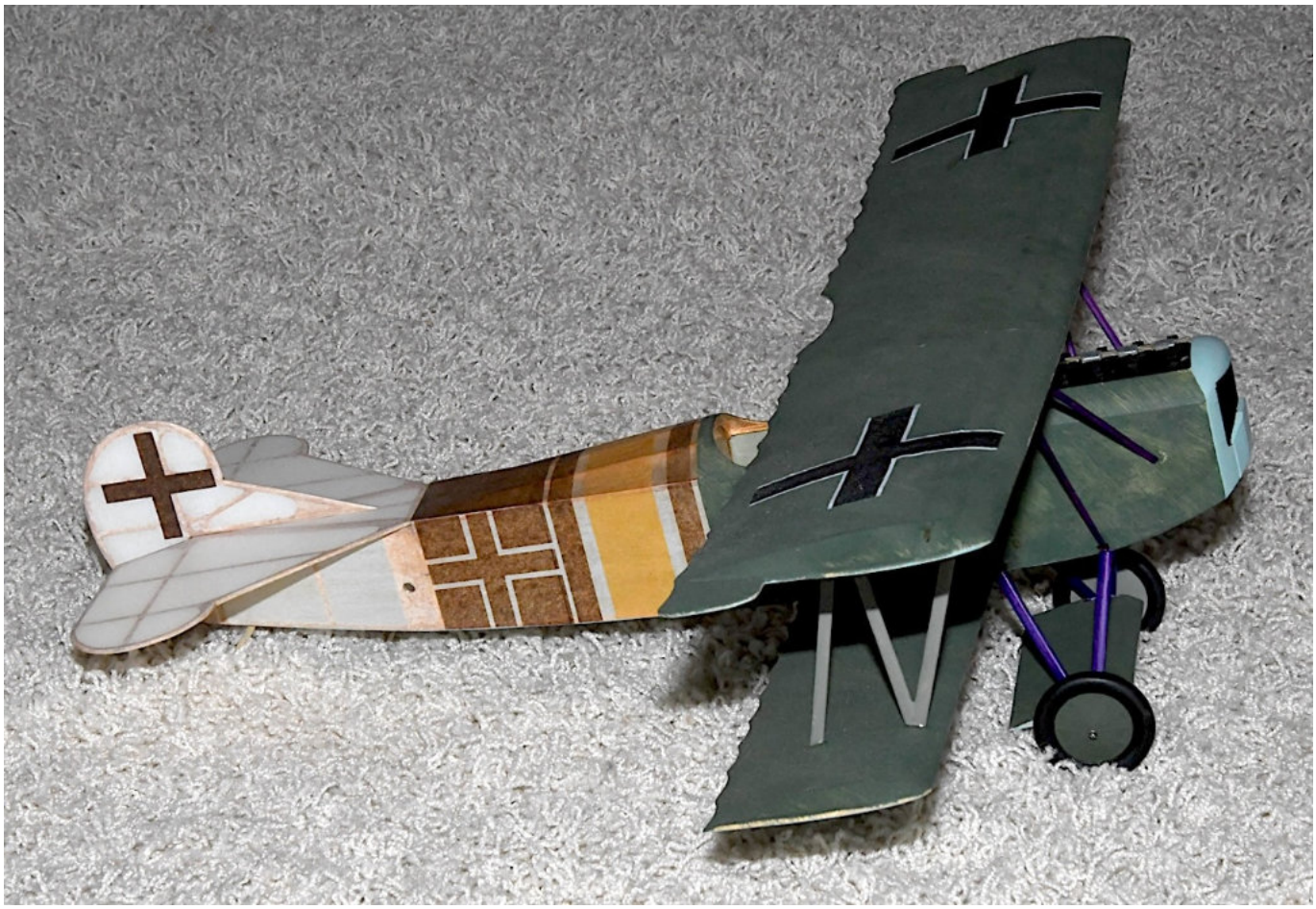
The first stage was to spray silicon tyre spray onto a plate glass base (an old Oven Door) and let it dry overnight.

I then doped a layer of tissue onto the glass followed by another layer of tissue after the first has dried. A final coat of dope was applied to seal the layers before applying the chosen colour with an airbrush. Humbrol enamel was used as it is flexible when dry. It took two coats to give the required density of colour. This was left to dry overnight as this is a minimum and the tissue was then carefully lifted off the glass. The tissue was taped to a cutting mat with a copy the lettering or logo on the top. If multiple copies are required then the tissue is layered. A new knife blade is a must as it ensures a clean cut. The finished items were then placed on the model and fixed using thinned R/C canopy glue.

RICKY BOULD

The model displayed to show lettering cut from tissue. Photos are from a recent Auckland MAC club meeting.

Herr Fokker D7 - John French



I was scratching around for something I could carry on with while other models that are taking turns on my bench had something or other drying. Amongst my almost completed but slightly neglected airframes was a Herr Fokker D7 kit that I started about fifteen years ago. The model has now progressed to the stage where most details have been built and finished. Rather than relate how I made the model from start to finish, I have instead described my approach to making some details that may be of particular interest.

Undercarriage

The wheel construction is quite detailed. I have cut several tiny triangles from very thin balsa to form the wheel spokes. They were then mounted on a 0.25 mm thick circle of styrene, and covered with fabric stretched over it. This is a separate unit. By simply gluing it in place, I removed the risk of tyre paint getting onto it, as the tyres were already painted. I have used this method before, and found that it always works well. I experimented with making a separate cap on each wheel. The photo on the next page, with the black nylon stretched over a form which I turned on the lathe from a broom handle, shows an aborted attempt at pre-moulding the nylon into the wheel cover by adding glue once I'd stretched it over the pattern. Incidentally, I had also covered the pattern with polyethylene to avoid it sticking. It worked perfectly for what it was, but there was absolutely no strength or integrity in it so that was a bit of time wasted, but at least I know what not to do.

It was hard to find a violet paint to match the scale colour on the undercarriage legs and the cabane struts shown in the 'Walk Around' book. The Sharpie® markers provided a colour match that looks just right, so keep a look out for these coloured markers, they work on small models better than paint does sometimes.

Tailskid

A tailskid has been re-made from ply and bits, to replace the one included in the kit. Although the kit one is lovely, it belongs to something else entirely so I made one from ply and bits.

Propellor

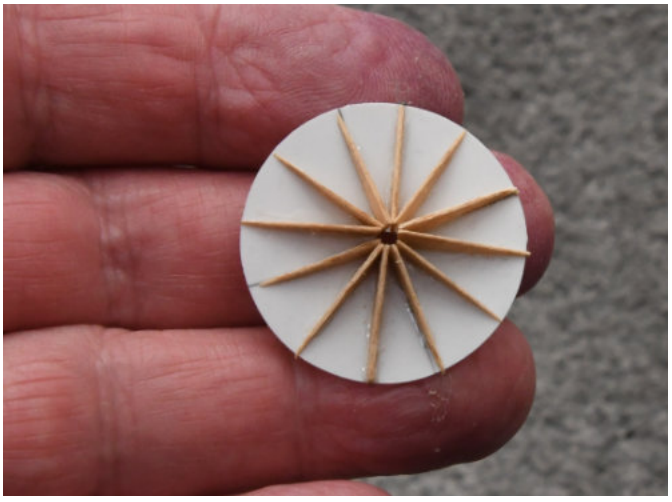
I have also carved a balsa propeller for the D-VII, to replace the

ABOVE: The nylon wheel cover moulded over a broom handle. Not a good approach!

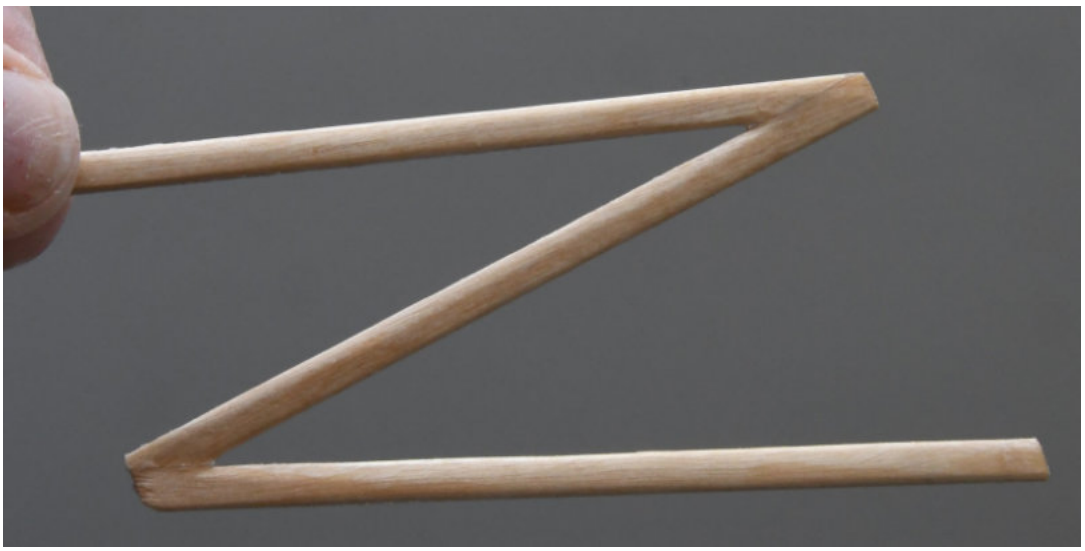
RIGHT: The completed wheel axle and undercarriage legs assembly..

BELOW LEFT: A pre-painted tyre. This saved masking problems when completing the centre spokes and cover shown

BELOW RIGHT: Balsa spokes adhered to the wheel circle of styrene.



ABOVE: The substituted carved wooden propellor.



TOP: The Herr Fokker D7 prior to assembly

CENTRE: The German cross applied as a Litespan® sandwich of black and white.

RIGHT: A view of the substituted hardwood wing struts.

plastic one supplied. It follows the basic principles outlined in a very early Model Aircraft Magazine from the 1950s. I like to carve the blank as accurately as I can, then remove everything that doesn't look like a propeller!

Machine gun

The machine guns incorporate perforated thin paper for the cooling shrouds which is not all that strong but I have strengthened them immensely with a thin coat of metallic paint! The paper cooling 'wrappers' were already laser etched from paper, and I must have followed the instructions because they worked out alright. So far I have not painted the insides of the very fragile paper tubes made mostly of holes as it will be hard to accomplish this without distorting their circular shape. They were made by rolling them around a wooden dowel, slowly bringing in the roundness until the edges met, then using white glue to join them up. The pair weight next to nothing according to my 0.5 gram scales.

Insignia

Re the German Crosses, it is always a difficult task getting the narrow white background without making it look like you did it with garden shears. The black is Litespan®, cut out first using a paper pattern taped to two pieces, then cut right through with a brand new scalpel blade. I use a 300 mm steel rule with sandpaper glued to the back of it and this prevents any movement of recalcitrant materials. So, with that done I glued (using heat activated glue, probably SIG Stixit®) onto white Litespan® with my covering iron.

Then cut the outline of the white by careful measurement with my digital calipers (Vernier) to cut precisely because if not done perfectly, a small fraction of a millimeter wider or narrower looks like garden work. Then more Stixit® on the back of the white and ironed it onto the wing surfaces. Not too much glue as we are not holding up a bridge. For flimsy jobs such as this I usually thin it about 40% with acetone just before I want to use it, stirring it madly to really break down the glue. It worked fine.

Fitting flying and landing wires once the model is covered

The rigging has yet to be installed. Here is my usual method for fitting non-metallic wires, such as cotton or nylon etc. Stranded steel wire might possibly work but I have not tried that. Using a pin or needle, I feel for the rib under the covering, then push it into the 'wire' location to make a tiny hole in the correct place. Cut off the head and some of the stem from a pin to act as a solid piece to which the 'wire' can be adhered to. Put a drop of slow cyano on the point and shove it in. Then, I use slow cyano, holding the 'wire' at the correct angle, usually positioning it as if you were gluing both ends at once. Finally glue the other end, but keeping the length until it's stuck then cut it off. This is really simple to do and looks neat. Scale paper 'plates' painted (usually black for WW I) can be made and anything used to stick them over the joint. Balsa cement works well. Of course, you should have remembered to glue a suitable bracket-like object onto the wing structure first. Covering with solid obstructions sticking out does not make for an easy covering job. At least you don't have to rip the covering off using the pin and cyano trick.

Weight and finish

The model has enamel painted wings over doped cream Airspan®. Despite all these details, the model is still quite light, especially for a biplane, but it wouldn't last long in a storm! I weighed the model as it is with no propeller, machine guns, windshield, pilot or rubber motor and it surprised me at being 2.7 ounces. It's quite a large model at 24" span, and being a biplane I think it will fly really well.

TOP: The m*achine gun (1 of 2) from paper and balsa, weighs under a gramme.*

UPPER: A closer view to show the intricacy of the gun construction.

A snapshot in time - Phil Mitchell

Snapshot in time

As any serious scale modeller would appreciate, building a true scale model involves reproducing a 'Snapshot in Time', of a specific full-size aircraft. Most aircraft vary considerably over their individual service life, be it be by colour, modifications, registration or markings.
The following two examples illustrate this view.

An Eagle Eye on a Hawk Moth

It has long been a goal of mine to build a scale free flight model on 'Short'* floats. Having a lifetime passion for De Havilland aircraft, a Google search was initiated to find a suitable subject. After hours of trawling through countless web sites and images I chanced across two images of what appeared to be an early monoplane on Short floats. One was taken on the water, the other on a pier in Rochester UK around the 1930s, however, which specific aircraft was it? A clue came from the pier photo where the tail fin and rudder looked typically De Havilland style and the aircraft registration letters were partly visible under the wing being G-(?)AFX. A subsequent search of the British Aircraft Register confirmed the Aircraft was a DH 75 Hawk Moth, registration G-AAFX, undergoing sea trials! I had struck it lucky finding a photo of Hawk Moth on Short floats.

Subsequent research would reveal that only eight Hawk Moths were ever build by De Havilland. The first had an eight cylinder 200hp DH Ghost Engine which was basically two DH Gipsy engines married together. Following aircraft produced, including G-AAFX, were fitted with a seven cylinder 310hp Armstrong Siddeley Cheetah radial engine and labelled DH75a. The Hawk Moths were basically underpowered and the production run by DH ceased as the aircraft was not considered viable, in fact the last two airframes were not completed.

Ozzie Connection

As aircraft records also show, Hawk Moth G-AAFX was sold and ended up registered in Australia as a land plane VH-UNW. This aircraft was reportedly used by Amy Johnson to fly from Brisbane to Sydney and later to Perth. VH-UNW was withdrawn from service in Alice Springs in 1949. This information sealed the deal for me, G-AFFX on Short floats was the specific aircraft to build.

Construction

For something different (for me) I decided to go for a rubber powered model. As with all my scale models now, spars, longerons and major structural elements such as struts are carbon fibre tubes. The Short floats also have carbon fibre reinforcement. The first stabiliser that I built was a little heavy and drew scorn from rubber scale master, Mike Mullholland, so it was put aside and a new one built with laminated balsa LE and a central, very light, full depth carbon tube spar with balsa ribs. This construction method halved the weight of the stabiliser, is very stiff and gained the seal of approval from Mike. Mike also very kindly came to the rescue assisting me with the propeller and front end. The Hawk Moth has now been test glided and is ready for rubber power trimming.

Tiger Moth Tails

My first true scale model was a Mills 1.3cc powered DH82a Tiger Moth, built from the Aeromodeller plan about 40 years ago and flown very successfully unchanged for over thirty five years! It was scaled on Royal Newcastle Aero Clubs Aircraft VH-RNI which they still own and fly today. Now referring back to a 'Snapshot in Time'. I was fortunate to take many colour photos of RNI for scale reference during the original model construction. RNI at that point in time was fabric covered and painted in regulation Tiger Moth yellow with distinctive purple wing bands. These colours were duly replicated on my scale model. However, fast forward twenty five years and my original scale reference colour photos had faded such that the purple band wing bands appeared silver on the old photos. This made it difficult for scale judges to verify the colours, which were still authentic on the model.

About ten years ago I decided to refurbish the old girl. It was a total rebuild to a plan much more accurate than the Aeromodeller plan. For nostalgia I did retain the original tail feathers. I also took numerous digital photos of RNI's new livery which was then basically all yellow with fabric covering. On a recent visit to Royal Newcastle Aero Club, Maitland, my family gifted me a flight in RNI. I noticed she still currently has the same colouring, however, her wings are now covered in what appeared to be a type of heat shrink plastic! Plastic covering was once considered an absolute no, no on vintage scale models!

Summary

As highlighted in the two examples above, next time you may consider building a scale model, I believe it is worth spending some time to investigate and fully document a specific aircraft as a 'Snapshot in Time' and maybe not just build a Tiger Moth, Sopwith or whatever.

* Short Brothers (known as 'Short' or 'Shorts') was a UK Company that produced early seaplanes, floats and numerous production flying boats in the early to mid-1900s. They are still in production today, trading under their parent company, Spirit AeroSystems.

TOP: The Hawk Moth has now been test glided and is ready for rubber power trimming.

ABOVE: My more recent refurbished DH82a Tiger Moth, scaled on Royal Newcastle Aero Club's Aircraft VH-RNI shown beside it.

Provisional NZ Nationals Programme 2025
Free Flight & Control Line Scale

	Registration		
Day 1	FAI F4A Free Flight Power Scale	RC1 RC field	6.30 - 9.00am
	Outdoor Kit Scale	RC1 RC Field	6.30 - 9.00am
Day 2	CO2 Electric Scale	FF Free flight field	6.30 - 8.30am
	Outdoor Rubber Scale	FF Free flight field	6.30 - 8.30am
	Memorial Scale	FF Free flight field	6.30 - 8.30am
	F4B Control Line Scale	CL Circle	9.30 - 12.30pm
Day 3	Control Line Sport Scale	Grass	9.30 - 12.30pm
	(Indoor) Peanut Scale	Hall	6.30 - 10.00pm
	Indoor Kit Scale	Hall	6.30 - 10.00pm
	Indoor Rubber Scale	Hall	6.30 - 10.00pm

Free Flight & Control Line Scale Events

Sport Control line scale
A no documentation class open to any control line model of scale or semi-scale design including semi-scale aerobatic models, profile scale models or full fuselage more realistic designs. **As models are judged on flying only, there is no requirement for the model entered to be built by the flyer.**

F4B Control line scale
Flown to FAI F4B rules. Models are judged for static and flying points. Documentation is required. **Note that the current F4B rules also allow models not built by the flyer to be entered in this class. Refer to FAI SC4_Vol_F4_Scale_23 page 14.**

FAI F4A Free flight power scale
Free flight power scale is flown to FAI F4A rules. Power can be either i.c. engine or larger than low power class electric motor (refer to rules for motor power limits on our link on the MFNZ website or contact the SIG). Models reflecting varying levels of experience and expertise are typically entered so if you are interested in this class and have a free flight scale model to fly, join us.

Outdoor CO2 Electric scale
This includes CO2, small electric, and Jetex. It is flown to FAI F4E rules. The class was created to allow low powered free flight scale models to be flown with other models of similar size and power source.

Outdoor Rubber scale
This is flown to FAI F4D rules, with no flying mark for landing. Like other FAI F4 classes, emphasis is on flight quality rather than flight duration.

Outdoor Kit Scale
This is flown to the SIG rules available under *Rules* on the Free Flight & Control line Scale link on the MFNZ website.

The objective is to encourage simple stick and tissue models 'built to the kit plan' rather than the elaborate highly decorated and finished models of some other scale classes.

Indoor Peanut scale
Flown to FAI F4F rules, it has a totally different scoring system from other F4 rules. Knowing the static scoring criteria assists in doing well in static. Unlike other scale classes, flying and static scores are ranked to find placings.

Indoor Rubber scale
Indoor rubber scale is flown to the same F4D rules as outdoor free flight scale rubber but includes a flying mark for landing as good landings are much easier on a hall floor!

Indoor Kit Scale
This event uses the same scoring as Outdoor Kit Scale.

Memorial Scale
This official class was introduced in Scale News 2. Already it has brought out some of the gifted or inherited scale models many of us have in our care. It is flown concurrently with other Day 2 events on the Free Flight field.

Documentation
Three views and photographs of the full-size aircraft modelled are needed as documentation for all free flight scale and control line scale classes except Kit Scale, Control Line Sport Scale and Memorial Scale or models not built by the flyer in classes where this is permitted.

The kit plan and also a photograph of the aircraft modelled or the box art, are needed for Kit Scale, to identify the original aircraft modelled.

Control line Sport Scale and Memorial Scale are judged on flying only so do not require any documentation.