

ScaleNews

September 2025
Issue 14

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

Contest notices

- Morrinsville 2025 Indoor Contest Day
- 2026 NZ Nationals, Waipukurau

- **Richmond Trans Tasman**
2025 Free Flight Scale report

- **Scale subject**
Avro Avian Sports

• Kit Review

Berkeley Stinson Sentinel

• Scale model project

Fokker DVIII

• Free Flight Scale Judging Guide

F4A, F4D and F4E classes

Morrinsville Indoor Free Flight Day

Sunday **October 5** 2025

10.00am until 4.00pm (briefing at 9.45am)

- **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



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

Editorial

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.

Photos are by authors unless otherwise credited

COVER PHOTO

Paul Squires seen with his outdoor Rubber Scale Nesmith Cougar, at the Richmond free flight scale weekend in July

Photo: Stan Mauger

It is pleasing to be able to report on another enjoyable Trans-Tasman scale weekend again in this issue. Whilst it may seem passé to dwell on the importance of weather conditions in reporting flying events, the timing of the Richmond event has, over the years, resulted in amongst the best flying conditions that scale free flight flyers could wish for. As the report that follows in this newsletter relates, this year the New Zealand contingent made the most of these conditions with some great flying and success in various events. Richmond provides a wonderful weekend for enjoying expert scale flying. I was particularly pleased to receive Roy Summersby's write up on his power scale Fokker DVIII that he flew there (refer page 14). Richmond weekends are always scheduled for the first weekend in July so the 2026 the date is already known. Apart from Kit Scale, all other events are flown to FAI rules.

This issue includes a pictorial accompaniment to the FAI Judging Guide for free flight scale events. The SIG committee have long since been aware of the need to re-present this written guide in a form that should be more comprehensible, particularly for fledgling judges not well experienced in the nuances of objective judgements required for assessing model flying in the respective events. Hopefully, the pictorial guide will also be useful to flyers as well, in demystify the criteria for assessing flying performance of their models. As the author, I have been reticent to offer this aid to understanding the FAI Flying Guide, as it may initially also seem daunting and cause newcomers to free flight scale flying to see these events as unnecessarily complicated. However, when you look at the way pictographs are used, they actually provide easy access to the information and should be helpful rather than the reverse.

Walk around photos of full-size aircraft as scale subjects for modellers have become a regular part of Scale News. This time, the aircraft described strikes a personal chord as it was owned by Keith Trillo, an expert modeller and Auckland Club member who often reflected on the pleasure that he had had with restoring and flying the aircraft. I will be gratified if someone finds the subject sufficiently fascinating to build.

There are two contest opportunities on the horizon. The annual Morrinsville indoor free flight day is under a month away, on October 5 and the Nationals are feeling close in January. See notices for each of these opposite and below.

Happy flying . . .

STAN MAUGER

78th Nationals Hawkes Bay
The 2026 Nationals will be held in Waipukurau
Registration Jan 3, 2026
Events run from Jan 4-8

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

Free Flight **Scale Rally** Richmond

Besides having the most amazing free flight scale venue, Richmond once again put on the best possible weather. Over the three days, there were calm conditions almost all of the time. We have enjoyed the short-cut surface of the turf farm over the years and this year the farm had expanded to an even larger area.

These annual scale days at Richmond are very inclusive, which has undoubtedly done much to encourage participation. The contest had thirty-two free flight scale entries across Power Scale, Rubber Scale and Kit Scale. Judges were kept busy as contestants could enter as many models as they liked in each class, but scores for determining the first three places in each allowed taking only the top scoring model from each entrant.



TOP: Antony Koerbin's BE2e made some great flights. Photo: Angela Mahony.

CENTRE: Stan Mauger getting his Antarctic Auster away. Photo: Ricky Bould

ABOVE: Ricky Bould's new Max Holste Broussard on the judging table .Photo: Angela Mahony.



Trans-Tasman F4A Free Flight Power Scale Challenge for the Hope-Cross Trophy

Free flight scale contests between Kiwis and Aussies have been going strong now for over twenty years, usually alternating between a rally, still run with contests for the respective classes, and on alternate years, a challenge for the Hope Cross Trophy as well.

This event served to launch the F4A class in this part of the world. After some years F4A teams have settled down to comprising three flyers, which provides plenty of scale flying during the available time. Models in this event must be nominated, unlike the rest of the flying events where more than one model may be entered. Results for the Trophy Challenge were drawn from how well these models did in the main F4A Power Scale event. It was Australia's turn to take the Trophy this year.

Australian team	Total points	Place
Roy Summersby Maris Dislers Phil Mitchell	3759.2	1st
New Zealand team Antony Koerbin Stan Mauger Ricky Bould	3704.6	2nd



UPPER: Maris Dislers's Blackburn Monoplane seen between flights.

ABOVE: Roy Summersby's Fokker DVIII achieving some good circuits of the field. Both Photos: Angela Mahony.

LEFT: Phil Mitchell with his finely detailed electric HP 0.400 twin. Photo: Stan Mauger

F4A Free Flight Power Scale

There were some outstanding flights in this event. Phil Mitchell's DH Tiger Moth had already distinguished itself at previous Richmond contests. It performed several sedate circuits after a most realistic climb away after the launch. Flying with a different attitude but also impressive, his electric powered Catalina showed the potential of electric power in this class. Antony Koerbin's beautifully detailed BE2e flew with pace expected of this subject, winning some good flying points.

Right behind them was Michael Towell's Dart Kitten. All credit is due for setting up this somewhat tricky subject to fly well, which it did over several flights. Roy Summersby's Fokker DIII was also nicely trimmed making some slow sorties. And talking of early aviation subjects, Maris Dislers's Blackburn Model D showed splendid attention to detail and put in a nice flight too.

Results

Contestant	model	Static	Flying	points	Placing	TT Team
Phil Mitchell	DH Tiger Moth	978.5	488.8	1467.3	1st	
Phil Mitchell	Catalina	964.6	459.8	1424.4		
Antony Koerbin	BE2e	947.8	469.6	1417.4	2nd	NZ
Michael Towell	Dart Kitten	940.8	471.8	1412.6	3rd	
Roy Summersby	Fokker DVIII	938.8	468	1406.8		Aus
Stan Mauger	Antarctic Auster C4	956.8	443.8	1400.6		NZ
Roy Summersby	ABC Robin	926.9	435.5	1362.4		
Maris Dislers	1912 Blackburn D	956.9	405.5	1362.4		Aus
Peter Scott	DH Beaver	872.4	384	1256.4		
Stephen Bojec	Sopwith Pup	825.6	421.5	1247.1		
Phil Mitchell	H.P.0400	990		990		Aus
Roy Summersby	Sopwith Swallow	935		935		
Ricky Bould	MH Broussard	886.6		886.6		NZ



TOP: Phil Mitchell's electric Catalina flying slow and low as it makes circuits of the field. ABOVE: Also a great flyer, his winning Tiger Moth climbing away nicely from a hand-launch. ABOVE LEFT: Mike Towell's Dart Kitten was well-trimmed, seen here shortly after a launch. Photos: Angela Mahony. LOWER LEFT: Roy Summersby brought his Sopwith Swallow to fly. Photo: Stan Mauger

Free Flight Rubber Scale for the Reg Jude Trophy

Flown to F4D rules, Rubber Scale also attracted a good number of flyers. Most models flew really well making this a great event to watch. As if taking on a Portsmouth Aerocar twin and Andre Starck AS20 experimental wasn't challenging enough, Phil Warren entered his Lignel 44 and won the event with it. He has concentrated on building these unusual subjects and managed to master trimming them. Terry Bond's Bestetti BN1 twin was also unfamiliar to many of us but he proved that it could be a reliable and smooth flyer. Known better as an indoor favourite, Paul Squires's beautifully built and finished Nesmith Cougar performed graceful flights with real scale accuracy. Showing that he was totally at home trimming low wingers, Michael Towell had his Volksplane flying the way it should. Ricky Bould was enjoying flying his Aeronca Chief in the calm air with some realistic flights. Natalie Beckett was also enjoying herself with her much flown Citabria. Both showing remarkable model quality and attention to detail, Antony Koerbin's Clutton Sherry FRED and Phil Mitchell's Hawk Moth showed much potential.

Results

Phil Warren	Lignel 44	941.5	469	1410.5	1st
Paul Squires	Nesmith Cougar	895.8	502.5	1398.3	2nd
Terry Bond	Bestetti BN1	869.7	519.2	1388.9	3rd
Michael Towell	Volksplane	914.1	466	1380.1	
Phil Warren	Portsmouth Aerocar	918.4	457.05	1375.45	
Ricky Bould	Aeronca Chief	887	480	1367	
Natalie Beckett	Citabria	872.9	487.5	1360	
Antony Koerbin	Clutton Sherry FRED	947	403.5	1350.5	
Phil Warren	Andre Starck AS20	952.2	306	1258.2	
Phil Mitchell	Hawk Moth	947.1		947.1	
Peter Scott	Aeronca Champ	877.3		877.3	



TOP LEFT: Making a nice turn from the launch, Ricky Bould's Aeronca Chief off on a good flight.

TOP RIGHT: Terry Bond's Bestetti was a smooth flying twin.

LEFT: Phil Warren's Lignel 44 had been well trimmed and put in stable flights.

Photos: Angela Mahony.



TOP: On its first contest outing, Paul Squires's Nesmith Cougar proved itself a stable flyer.

CENTRE: Phil Mitchell's DH Hawk Moth was immaculately built.

RIGHT: Antony Koerbin's FRED was finely detailed and even with zero dihedral flew well.

Photos: Stan Mauger

Kit Scale

It would have been surprising to see an EDF powered Veron Lavochkin making some great fly-bys before slow-powered descents, in a kit scale event, but as contest rules in this event did not restrict power to rubber, it was possible to enter an EDF model. Also non-rubber powered were Maris Dislers's CO2 powered Cessna Bird Dog and Roy Summersby's diesel powered SE5a, both of which were good flyers. The remaining models in the event were all rubber powered. The best flying of them were Phil Warren's much flown Taylor Cub, which won the event and his Peck Baby Ace. Most of the remainder put in good qualifying flights. Static points were closely grouped for all the models flown.

Results

Phil Warren	Scientific Taylor Cub	95	43	138	1st
Maris Dislers	Herr Cessna Bird Dog	95.6	39	134.6	2nd
Phil Warren	Peck Baby Ace	95	34	129	
Roy Summersby	Veron Lavochkin 17	90	37.5	127.5	3rd
Phil Mitchell	Dumas Mr Mulligan	98	24	122	
Stephen Bojec	Veron Nieuport 27	90.4	29	119.4	
Stan Mauger	WIPA Auster	95.8	23	118.8	
Roy Summersby	Aerographics SE5a	87.2	30	117.2	
Warren Leadbetter	Guillows PC 6	91		91	
Warren Leadbetter	Guillows DHC Beaver	89.4		89.4	
Warren Leadbetter	Guillows Cessna 172	88		88	
Terry Bond	Dumas Pilatus Porter	59.4		59.4	

Other events

Control line scale was also flown (flying only points), but is not covered in this report. Here are the results.

F4B Control Line Scale

Tony Bonello	B25	1321.5	1st
Maris Dislers	Great Lakes Trainer	1269	2nd
Don Keysecker	F-W 190	1104.7	3rd
Roy Summersby	Ryan ST	907.5	
Peter Scott	Bristol M1C	450.3	
Michael Towell	Corby Starlet	447.2	
Tahn Stowe	DC3	--	Not flown



ABOVE: Roy Summersby's Veron Lavochkin 17 made impressive fly-bys. Photo: Angela Mahony



TOP LEFT: Stan Mauger's Auster was built from a Czech WIPA kit.

TOP RIGHT: A Veron Sabre built by John Coby.

CENTRE: Stephen Bojec with a Guillows Sopwith Camel.

RIGHT: Phil Mitchell's beautifully built Mr Mulligan was from a Dumas kit.

Photos: Stan Mauger

Avro Avian Sports MkIVM

The Avian MkIVM was the last in a line of Avian biplanes designed for touring and trainers from the 1920s. ZK-ACM, shown in the accompanying photographs, was a model MkIVM Sports, signifying largely metal rather than the wooden construction of the Avians before it and it had a colourful history. This aircraft is of particular significance to those of us who knew its owner, the late Keith Trillo, who acquired it after it had been owned by a number of well-known early New Zealand pioneer aviators including Stan Blackmore, Ron Kirkup and Edgar (Ted) Harvie. The latter's account of flying it to Motiti Island for a swim provides an enchanting snapshot of early flying as well as of the early life of this particular aircraft. To Keith Trillo the aircraft held a special place. He rebuilt it at Rongotai in the sixties, whilst a pilot with NAC and flew it often in the following decade. Sadly, the aircraft was destroyed in an out-of-control crop burn-off at the Kaikokopu farm where it was in storage in 1974. As a much-loved aircraft, the Avian was a huge loss to Keith but in the ensuing years it was also a great loss to New Zealand aviation as well. Whilst no other MkIV Avians may longer be found in this country several exist in Australia.

Here then is a scale subject that combines not only ideal proportions for a great free flight model, but also the significance to make it a worthy nostalgic subject as well. Apart from several versions for RC, the IVM Sports has not been modelled much for free flight, except for the well-known APS design by Ray Booth, who work worked at Avro. Compared with factory drawings, the plan is basically sound.

He has added deduced incidence, to the bottom wing, which is unnecessary. His inclusion of a pendulum also seems unnecessary as the layout of this subject should make it stable enough to fly well without such a stability aid.

The undercarriage on MKIVMs is well back and close to the CG, which made takeoffs a delight on the full-size aircraft but something that may need to be re-thought on a model.

The photos here are all via Keith and he supplied me many factory drawings, so I can help with documentation if the subject appeals.

STAN MAUGER

References:

Harvie, E. (1960) *Plane with a past*, in BP Magazine

cited Homewood, D. Downloaded 25-8-25 from

<http://www.cambridgeairforce.org.nz/Edgar%20Harvie.htm>

Jackson, A. (1959). *British Civil Aircraft* Vol 1. London: Putnam

Plans

Ray Booth's plan and article may be found by using the search entry 'Avro Avian Sports' and going to www.outerzone.co.uk

Documentation and 3 views

Green, P. (1996, April/May). Aircraft Described. *Radio Control Scale Aircraft*.

Jackson, A. (1959). *British Civil Aircraft* Vol 1. London: Putnam





UPPER: This view gives a good idea of the egg-shell blue scheme for fuselage/vertical tail and also the silver flying surfaces.

ABOVE: Although faint, the upper wing light blue registration is just visible in this view taken at Rongotai.

LEFT: The engine and exhaust provide opportunities for some detailing on a model.



UPPER: A view of the fuselage during restoration showing the metal structure and wooden upper decking.

ABOVE: An under view showing the rods under the upper wing at the centre section that were needed to support the wings when they were folded.

RIGHT: Good engine cowling and undercarriage details are shown in this view. Note the balloon tyres and later wheel type not used in earlier Avians.

Kit Review

Berkeley L5 Sentinel

Vintage Berkeley kits like this are not easy to come by unless one resorts to buying on eBay, which is just what I did to purchase this kit. The design was by Henry Struck who drew up a number of other free flight scale plans for them in the late forties to early fifties period. They followed a multi-purpose format where plans showed how one design could be built for free flight rubber and gas ('power' to us) or for control line. This model at 34" span is most suited for free flight rubber scale or now that the class is available, for kit scale. The original design was conceived to suit the endurance bias of US scale contests in two ways. There is plenty of additional dihedral and a different undercambered wing section, both of which were adjustments to suit stability and long flights. The face panel of the kit proudly states that the model was US Nationals winner three times, flown by its designer, Henry Struck, so good flying performance can be expected of it, if well-trimmed.

The Sentinel was designed in 1947 and judging by the very brittle paper on which the plan was printed the kit was probably manufactured in the 1950-1960 period.

Berkeley was early on the scene in producing flying scale models with quality plans from 1938, if not with the vast range of designs like their competitors such as Comet.

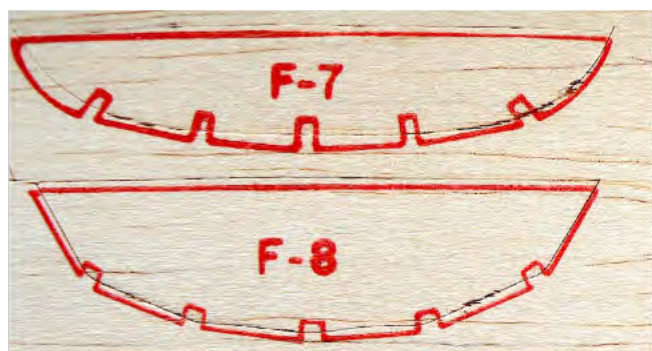
The kit.

Having seen other Berkeley plans, I was expecting an excellent kit to match. It was great to find the original lightweight Silkspan in the kit. Perhaps because this kit was produced early on in the age of moving away from printwood to diecutting, I expected much more precision. As the photo below shows, the dies for this kit were both inaccurately made and also printed out of register. It was good to find pre-formed undercarriage however, a job that I do not enjoy!

The plan

Having acquired what seemed to be a facsimile plan of this design by the American Aircraft Plan Co, labelled as drawn by Henry Struck and traced by Paul Plecan, I was expecting commonality between this and the Berkeley plan as the layouts of both plans are virtually identical. Alas, not so. The Berkeley plan in fact has a $\frac{3}{4}$ " smaller span so formers do not match. Still, I am resolved to eventually build this design for kit scale and in the process realise a dream that dates back to when Berkeley designs like these were only experienced as an advertisement in Model Airplane News. At that time New Zealand's import restrictions prevented one ever acquiring these kits.

STAN MAUGER



ABOVE: The Berkeley Stinson Sentinel Kit looking very much as originally produced.

LEFT: A close up of die-cutting on this kit showing both-out-of register and inaccurate outlines. Note that die paths do not include notches..

Fokker DVIII

Roy Summersby

Why did I decide to build the Fokker DVIII? Well, I did have the Model Aircraft plan by M.F. Hawkins, and it is one of the few WW1 aircraft that does not have two wings and countless wires running every which way. The Hawkins's 1961 plan is 1" to the foot and he used a DC Dart, but this was only 27" span, which was too small for me, so I had the plan enlarged 50% to make it 1/8 scale. I think it is now a nice size at just over 40" span, and should suit the new SAM .75 nicely. The DVII was in fact designed by Reinhold Platz and in his day, he was an extraordinary aircraft designer. In spite of his genius for aircraft design he was content to work in the shadow of Tony Fokker and see his boss claim all the credit for his work. Platz's idea was simplicity. Once he had proved that a satisfactory and safe cantilever wing could be built, it was obvious to him that the ideal aircraft must be a monoplane and thus he made it easier for aero modeller's in the future.

The actual build is very straightforward. I did change the stab and fin to sheet balsa with carbon stiffeners. There was some cursing with the wire bending, but this is quite normal for me as I think that I am the worst wire bender in the country. All the wire struts are covered in

aluminum streamline section and how I did this is was detailed in a past Wingspan*. I covered the whole model using 38-micron film then doped tissue over that. I made the cowl by cutting eight pieces of 1" square balsa to form a circle, then gluing two layers of 1/4" sheet to the front. Inside the front, I again cut eight pieces of triangular balsa as a filler to support the radius that has to be formed to the front. Behind this I epoxied a strip of thin aluminum sheet to give me the depth needed. This turned out far better than I had expected and I would use this system again.

Hawkins's plan shows a lozenge patten on the fuselage. It was not so hard, I have done this before, but before it was a hexagonal patten, very simple by comparison, just using one stencil and just repositioning it for the next colour. This pattern was to be entirely different, Good old Jacko (Peter Jackson) sent me a nice colour print which showed a total of six different colours and shapes (he must really hate me). This meant a different stencil for each colour. This in itself is not a problem but getting them to line up and fit together did create a few worrying moments. In fact, the colors on the underneath of the model are different to the sides, why, I have no idea, ask the

*Go to <https://www.maaa.asn.au/newsletters/wingspan>



Germans. I must admit I did have help here, John Pennell's to the rescue. It certainly was a two-man job, one holding the stencil and one using the airbrush. There was plenty of brush touching up to be done the next day, but the end result is very pleasing, Thanks Jacko for giving me such an outrageous colour scheme and to John with his expertise on painting.

Flying the Fokker

The NSW Mini Maxout competitions were held on the last weekend in July, so what could be a better time than that to take the Fokker out to our 700-acre paddock at West Wyalong. There was the chance of some long grass which Aeromodeller always states that first flights should be over, and there is plenty of room to spare. First flights showed it turning much too tightly to the left so right rudder was put on the trim tab. It also required a bit more power. So the cowl was taken off and some more right thrust and a bit more RPM added on the SAM 75. Back out on the field in the late evening the Fokker was climbing into the setting sun in beautiful left turns. I managed to get in three flights with a full tank before the sun had set. I am very happy with it under power, but I do have to sort out the glide a bit more, as it is too steep.

The Taming of the Fokker

The Fokker DVIII is now tamed, but it has taken some time and some repairs. On the first flight out at Richmond it was not looking too bad until it turned right and came straight back to find a table. The result was a badly damaged undercarriage and a broken crankshaft. Not a good start for the brand new SAMS 75. After some more attempts at West Wyalong it wasn't much better, turning very tight to the left before finding the ground in a very undignified

manner. With a few more repairs and some right rudder, it was now going straight. This was not good as it started to power stall and did not stop until it found the ground once again. I was not going to be beaten on what is really just a parasol fancy sport model. So it was back to the repair shop and some serious thought.

I will add here that making repairs to the bottom of the fuselage is not a simple matter. Having a lozenge pattern involving five colors, and all of different shapes is a little time consuming and this has now been done three times, one from new and two from repairs. Other repairs have been on the undercarriage and the wing between the wheels.

The wing was made flat on the top, the only dihedral being where the underside tapers from the root to the tips. I decided to give it some dihedral which meant bending the wing. This was done by force and was achieved by placing the wing on the ground with the tips packed up and weights placed in the centre. Left in the sun and on the hot concrete for some days, the wing succumbed to the pressure and gave in. It now has 40mm on each tip.

Next flights at West Wyalong were still going hard left, but the beast was taming and nowhere near as savage as it was. Back at the house some more right thrust and a bit more right on the trim tab were added. maybe this would work. Back out in the late evening and there was success. The model was still turning too tight with the left wing down too much for my liking, but at least I had it flying. Four flights with a full tank and it was a joy to watch after so much frustration. Back home and some more thinking, I wondered how I could make it better. My answer came to me at some ungodly hour in the night. Why not upgrade the engine to the SAM 100? This would let me use a 9 X 4 prop which would be better on the huge



frontal area of the Fokker. Flying was improving now with each outing but the model was still flying with the left wing down. To correct this, I did the old chuck glider trick of adding weight to the other wing, adding 8 grams of lead let into the tip. Result was much better, and I was getting there. I also added a throttle, controlled by a KSB timer, fitted on the bottom of the fuselage. The 100 has a separate tank, as it doesn't come with one, so I made one from the bottom of a 20ml syringe and fitted it to the firewall.

Next outing the model was flying beautifully, with the timer letting the throttle go to idle and the model was going on and on and on. It was a perfect day and I just slowly walked after it for six or seven minutes. Three more flights of six or seven minutes and it was time not to press my luck. The plan is to have it to land under power, not keep flying at thirty feet. Back home a smaller tank was fitted and I hope I have the throttle just a bit more closed. So next time perhaps it will land under power and it will be there.

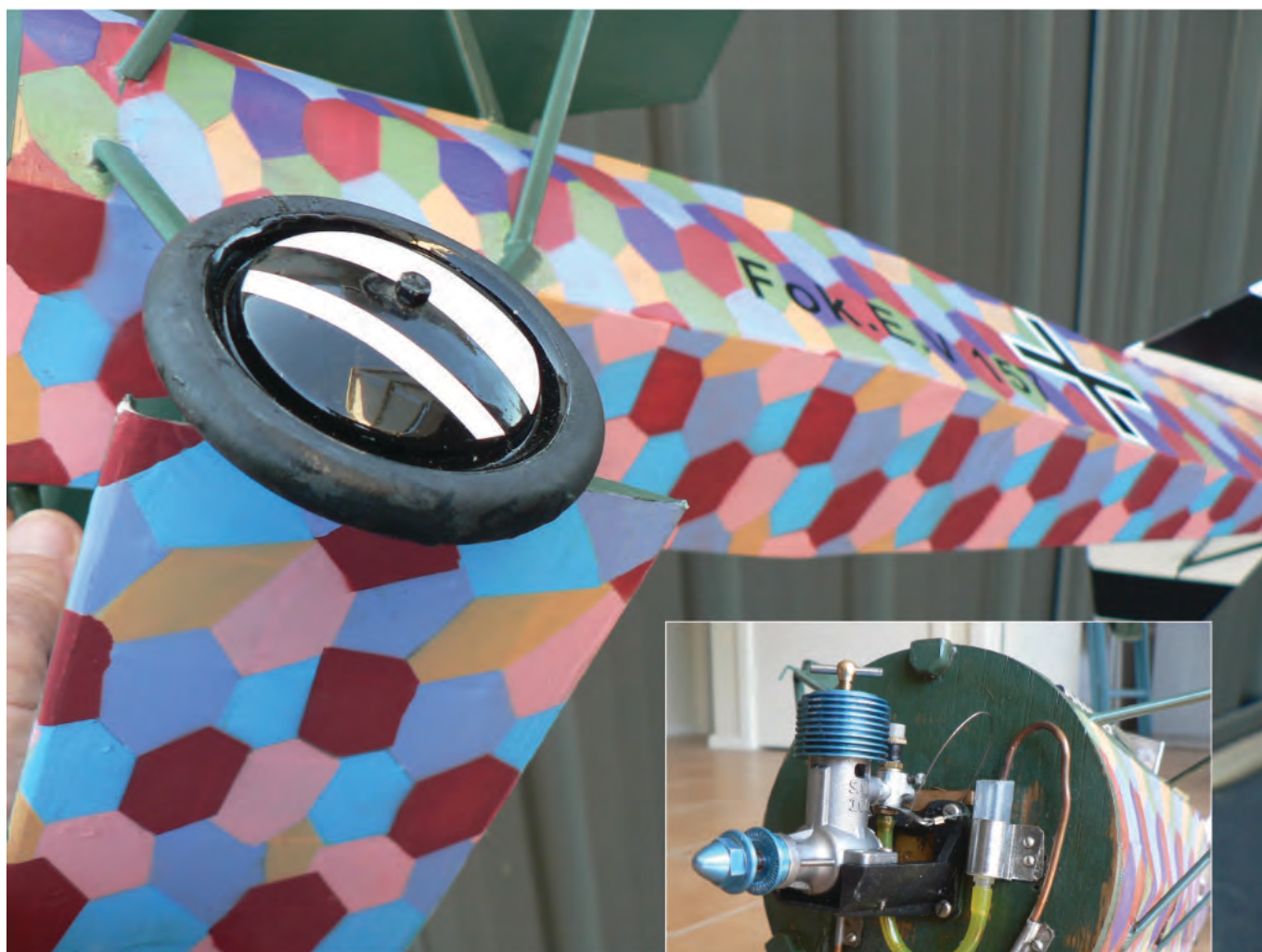


ABOVE AND RIGHT: Views of the DVIII showing the lozenge markings. Under wing hooks show that the wings are fixed with internal rubber bands. Machine guns are visible under the centre-section.



LEFT: A view of the KSB engine timer set-up and the lozenge scheme under the fuselage.

BELOW: A further view of the lozenge pattern applied to the fuselage and also the wheel detailing.



RIGHT: The other end of the KSB engine timer set-up and the SAM 100 diesel installation.

Free Flight Scale

Guide for Flying Judging

The following sets out to explain more clearly, the points in the FAI Judging Guide that may be found as an appendix in the F4 Rules for Free Flight Scale. The existing Judging Guide is an excellent summary of the aspects that judges should be aware of in judging the flying part of free flight scale in contests at any level but nevertheless it can be daunting for judges to be confronted with this when accepting the task of judging. It is my hope that presenting these points with the support of visual pictographs will provide a much easier and quicker understanding of them. This is particularly relevant in an age where it is becoming harder to find experienced judges for free flight scale events.

Hopefully scale flyers will also find that the pictographs make it easier to understand how their models are being judged and thus aspects of model trimming and set up that can be improved, resulting in better performance in contests.

I have had mixed feelings about publishing this visual explanation of the Guide for some time.

The drawings were produced in April last year and I have held back on publishing them because of having some diffidence that they may make free flight scale appear too complicated to pursue, for some. When you look at them, they actually provide easy access to the information and should be helpful rather than the reverse.

The article applies to the following classes:

F4A Free Flight Scale

F4D Free Flight Rubber Scale

F4E Free Flight Scale CO2/Electric

To find the FAI document on the Free Flight & Control Line Scale SIG page on the Model Flying New Zealand website follow the following steps.

On the MFNZ website

<https://www.mfnz.org>

Go to members and pilots then

Special Interest Groups

Select FF+CL SIG

Scroll low down that page to

The Rules

Click on **Section 4: Aeromodelling**

When it opens select CIAM F4 Scale volume - Edition 2025

Download it and go to page 114

6.4 ANNEX E

F4A, F4D AND F4E FLIGHT JUDGING GUIDE

Models should at all times fly in the same manner as the prototype.

Judges should use their own personal judgement to decide on an appropriate flight style for the prototype submitted and mark the flight accordingly.

NOTE: Competitors may submit a description of the prototype's flight characteristics (originated by a competent authority), which should be used to judge the flight.

2.1 Take-off

The model should slowly accelerate from rest, leaving the ground after an appropriate ground run. The take-off run should be straight, and the transition to flight should be smooth.

Deduct marks from a full score if any of these errors occur:

- the ground run is too short



- assisted,



- too long



- the nose or tail wheel does not leave the ground before the main wheels,



- the wing drops or



- the run is curved.



NOTE: a swing may occur as the tailwheel leaves the ground; this is normal and should not be penalised unless it is excessive.)

2.2 Initial Climb

The model should smoothly rotate to a climbing attitude, and commence a gentle straight or curved climb.

The climb should be smooth and appropriate to the prototype

Deduct marks from a full score if the climb is:

• too steep,



• too shallow,



• too highly banked,



• wing drop or



• wing rock occurs or



• nose attitude is too high or too low.



(Note that a high bank steep spiral climb is normal for a Pitts but that a Bleriot should hardly leave ground effect.)

2.3 Transition to descent

The model's flight path should smoothly change between cruise and descent.

The change may be abrupt, after an engine failure, or prolonged as the power slowly reduces.

The direction of flight may or may not change.

Deduct marks from a full score if

- the model stalls as the engine fails,



- wing drop or wing rock occurs or



- an excessive pitch change is apparent.



2.4 Descent and Landing Approach

The descent should be smooth, continuous and stable. It may be straight or curved.

The angle of descent should be consistent with that of the prototype either engine on or engine off.

Deduct marks from a full score if

- the model stalls,



- drops or rocks the wings,



- shows too steep a glide or
- does not change to a landing attitude.



NOTE: the glide angle may change significantly with engine on or engine off.

2.5 Realism in Flight

The model should mirror the flight characteristics of the prototype in speed, flight attitude, stability and balance.

The model may fly in a straight line or turn in either or both directions.

Turns should not display inappropriate amount of bank.

The flight should be smooth and continuous, especially in the transitions between, take-off, climb, cruise, descent and landing approach.

Due allowance must be made for the prevailing wind conditions.

Deduct marks from a full score if

- the model flies too slowly or too fast,



- the nose attitude is too high or too low,



- the model stalls, or shows a stalling flight path,



- has persistent wing drop or wing rock,



- flies an out of balance turn or



- pitches harshly on engine failure.



(A stall or wing drop may occur if the model hits turbulence or its own slipstream. If the recovery to stable flight is smooth, this should not be penalised.)

A grossly out of balance turn, left turn with right bank for instance, or a flat turn should be penalised.

2.6 Quality of Landing (indoor only)

After adopting the landing attitude, the model should descend slowly to the floor, and touch down without bouncing.

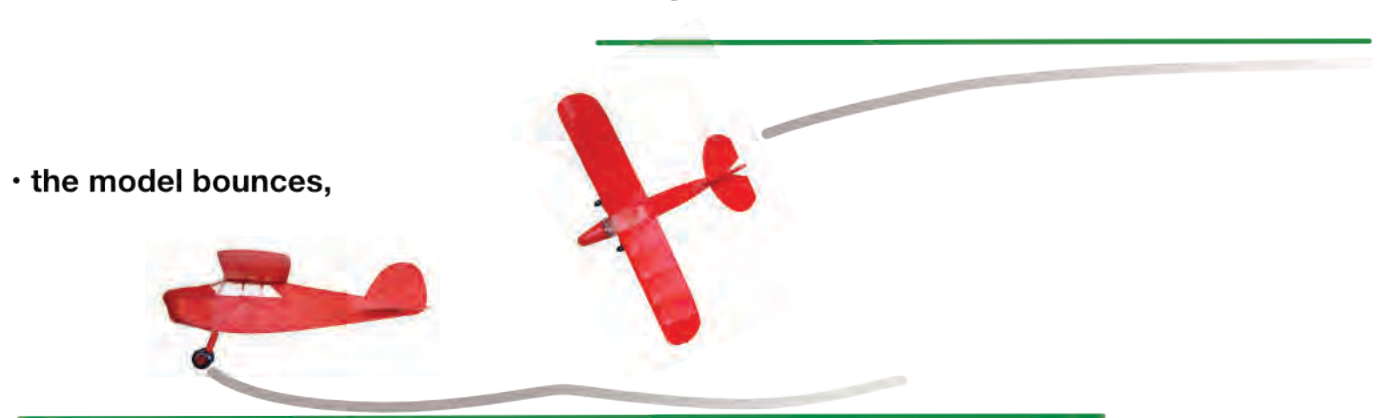
The ground run should be smooth and straight, with the model coming slowly to rest.

Touch down may be on main wheels only, or on tail down three points.

Deduct marks from a full landing score if:

• the ground run is curved,

• the model bounces,



• the model does not stop,

• it ground loops



• touches down too hard.



(Landings in a nose down attitude, or on the nose wheel, should be penalised.)