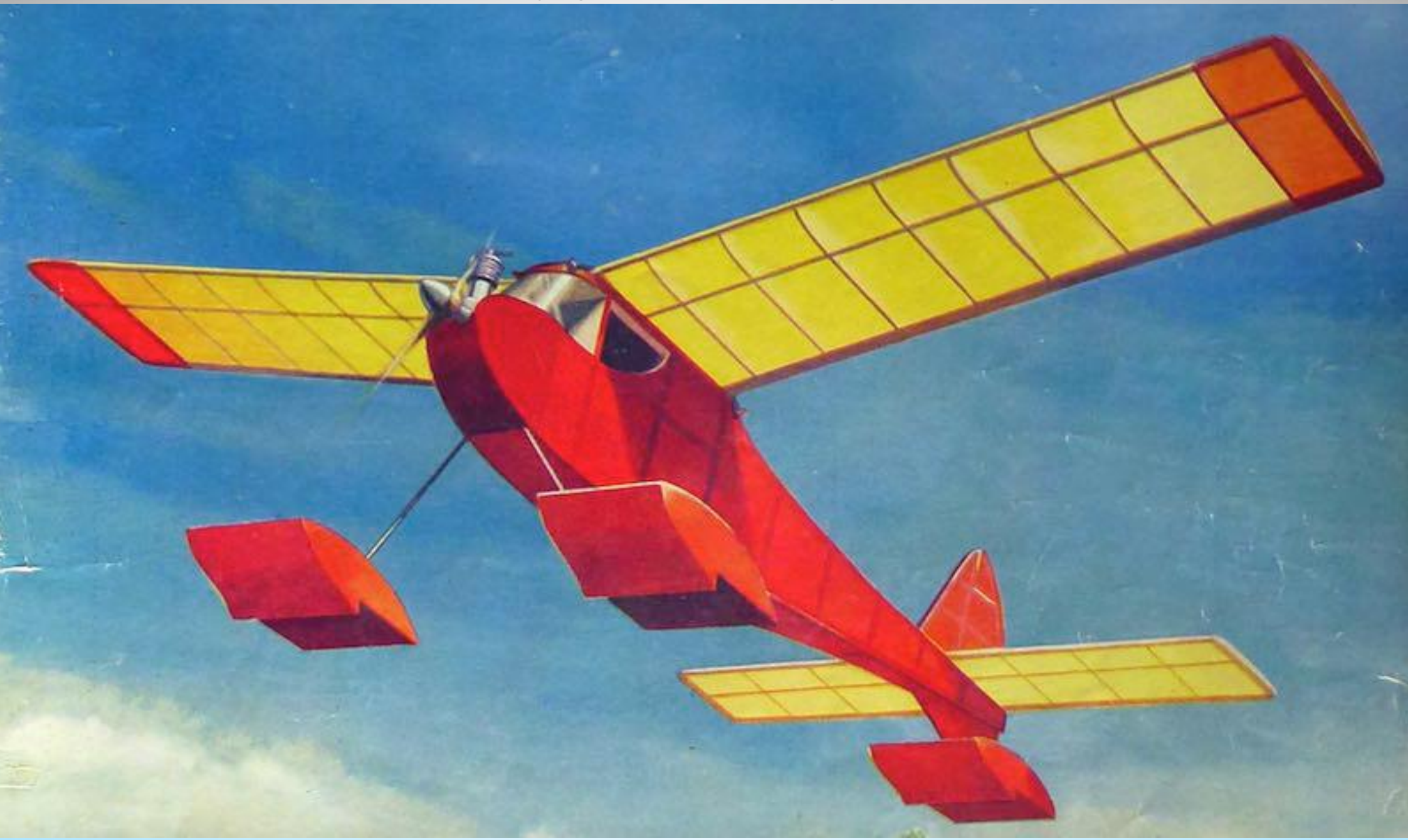
AVANZ NEWS

AVA
ASSOCIATION of VINTAGE AEROMODELLERS

Newsletter of the Model Flying New Zealand Vintage Special Interest Group SAM 55



Issue 146 *November / December 2015*

In this Issue

From the Editor

For most New Zealanders, the major concern of 1950 was the Korean War. When Mr. Zedong brought China into play and Mr.Truman announced that nuclear weapons were an option, fears that the conflict could escalate into atomic war made it easy to give other, happier, events of that year less than their due attention.

Under Korea's shadow, the first Volkswagon Kombi Van was produced; the 14th Dalai Lama was named; Xerox machines came into use; *Peanuts* comic strips appeared, closely followed by the first human organ transplant; and Zenith Radio invented the first TV remote, aptly named the "Lazy Bones". *And then,* there was that simply *extraordinary* batch of raspberry conserve by Mrs Mable Slabe of 17a, The Elms, Pickleford. But, to aeromodellers, none of these could match the lasting significance of a small power model designed by Victor Earnest Smeed, published in the November 1950 issue of Aeromodeller.

The perennial appeal of the *Tomboy* cannot be attributed to the many contests that are staged for it by modelling groups around the world, for it was the model's popularity that created the contests, not vise-versa. Neither can good looks be the sole reason, for there are many better looking models of the same vintage that receive relatively little attention.

Cometh the hour, cometh the model. The *Tomboy*'s arrival was timely. By 1950, affordable model engines had taken power flying out of the preserve of a well-heeled few with their complex models and expensive bespoke engines.

By 1950, everyday modellers could reasonably consider building and flying a power model ... and the *Tomboy* was an easily built, sure-flying model that meant this could be done with confidence.

The Vintage movement and the venerable *Tomboy* are object lessons for those high-tech areas of aeromodelling that seem hell-bent on extinguishing both their own existence and the joy of aeromodelling with their demands for ever more exotic models that few can afford, fewer can fly, and almost none can build.

In contrast, Vintage aeromodelling is thriving because it embodies the major reason for the *Tomboy* phenomenon - accessibility. Vintage models do not require advanced building techniques, hi-tech materials, or state of the art workshops. They do not have to be imported, ready to fly, at great cost: they are home built from readily obtainable materials. They give their builders the satisfaction of creative effort, their performance satisfies both sport and competition fliers, and if damaged, they can be put right in the home workshop. All of which brings Vintage aeromodelling within reach of anyone with an interest in model building and flying.

Here's hoping that the *Tomboy* spirit is around for another 65 years ! *Bernard Scott*

Contributors to this issue -
Allan Knox John Butcher
Wayne Cartwright Dave Crook

On the Cover *Still looking good at 65 ! Tomboy from the cover of November 1950 Aeromodeller*

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Notice of 2016 Annual General Meeting. Agenda and Remits 1 & 2

Notice of the
MFNZ Vintage SIG AGM, 2016
3.00pm 28th March 2016 at Nationals Headquarters, Clareville Showgrounds

Agenda:
Roll Call and Apologies
Minutes of the previous AGM
Matters arising from the Minutes
SIG Committee Report
Financial Report
AVANZ News and Plans report
Election of Officers
Notices of Motion/Remits
- Age bonus
- RC Scale Texaco

General Business

Remit 1: That Rule 3 Vintage Classes be amended as follows:

3. VINTAGE CLASSES

Models shall be flown in the classes specified in Sections 5, 6, 7, 4B, and 4C.

VINTAGE AGE BONUS CHART

1950	0	1943	4	1936	7
1949	1	1942	4	1935	8
1948	1	1941	5	1934	8
1947	2	1940	5	1933	9
1946	2	1939	6	1932	9
1945	3	1938	6	1931	10
1944	3	1937	7	1930	10 (max)

Reasons

1. The opportunity has been taken to delete the out-of-date list of classes from this Rule and replace it with reference to where the classes are specified.

2. The last Vintage SIG AGM resolved that the Committee should initiate a review of the Age Bonus that is specified in Rule 3 and implemented in all Vintage class rules.

a. A discussion paper was published in AVANZ News and comments have been received. This Remit is one of the outcomes of that process.

b. One of the purposes of the Vintage Age Bonus is to compensate for the relative aerodynamic inefficiencies of early designs relative to later ones. This applies to the Duration and Texaco classes and – possibly – to FF Precision, but not to RC Precision because success in that class does not require aerodynamic efficiency.

c. If Age Bonus compensation is working well, selection of designs for contest flying would be distributed evenly across the age range.

d. Analysis of 72 models flown to post RC Leader Board scores in Duration and Texaco demonstrated that selection of models is skewed in favour of designs up to 1941. This indicates that the current rule provides too much compensation, with the effect that there is a disincentive to select post-1941 designs.

e.The Committee considers that the same reasoning applies to FF Duration.

f. Therefore, the Remit proposes that Vintage Age Bonuses be reduced to 50% of current levels, rounded as shown in the table.

Remit 2: That in 6.2 RC Vintage Precision, Rule 6.2.5 be amended to:

6.2.5 Age bonus does not apply.

Reasons

1. The current purpose of the Age Bonus in this class is to establish a 'points buffer' around the target flight-time points in the Precision classes. Older designs provide a larger buffer and any aerodynamic disadvantages are irrelevant due to the allowed motor run time relative to needed glide time. A larger buffer increases the ease of attaining maximum points. For example, the earliest design being flown currently in RC Precision (Lanzo RC1) has a buffer of 32 points around the target 180.

2. The analysis of Leader Boards data showed no RC Precision models later than 1941, which can be interpreted as an outcome of fliers selecting early designs that provide large points buffers from the Age Bonus. There is a large disincentive to select designs from the late part of the Vintage period, so they are seldom or never seen in Precision.

3. It would be better to have an even distribution of designs across the age range, and this can be encouraged by removing the Age Bonus from this class.

4. More precise flying will be encouraged if the 'points buffer' is removed.

5. Introduction of the RC Classical Precision class has demonstrated that a contest can be enjoyable without application of an age bonus.

Annual General Meeting - Remit 3

Remit 3: That the class Vintage RC 1/2A Texaco Scale (Rule 6.7) be deleted and replaced by the following:

6.7 Vintage and Classical RC Texaco Scale

Purpose: To enjoy IC-powered RC flying with a Vintage or Classical scale modeldesign through managing a limited fuel supply to achieve maximum flight time.

6.7.1 This is a class that combines the Vintage and Classical design periods. Eligible models are built from Vintage or Classical model plans originally intended for IC-powered free flight, or rubber-powered free flight, or IC-powered RC. The model is a recognisable scale replica of a specific full-size aircraft type.Plans may be scaled up or down.

6.7.2 A reasonable effort is made to use colours and markings typical of the type of full-size aircraft modelled. There is no restriction on the materials used for colours and markings.

6.7.3 Rules 6.1.1 – 6.1.5, 6.1.7, 6.1.10 and 6.1.11 all apply.

6.7.4 There is no restriction on the flight controls fitted.

6.7.5 Rule 6.1.8 applies for monoplanes. For multiplanes the minimum wing loading is 6 oz per sq ft.

6.7.6 There are two separate options for motors and fuel tank capacity:

Option 1: Motor is a stock Cox reed valve 0.049 cu in.

Motor may be modified only as follows:

a. Fuel pick-up moved to bottom of tank.

b. Tank vents changed or replaced.

c. Improved needle valve assembly.

d. Addition of muffler.

Fuel tank is a Cox Babe Bee or Texaco Jnr.

Option 2: Multiple motors are allowed if specified by the design. Motor(s) is(are) of any IC type.

Rules 4.4.3 and 4.4.4 apply to the aggregate capacity of the motor(s).

All motors have an RC operated cut-out, which may be a throttle.

A throttle may be used in flight.

Maximum fuel tank capacity is 0.1cc per 5 sq in wing area, rounded down (eg 504 sq in allows 10cc). The fuel tank is visible to the CD and the contestant is responsible for verifying fuel tank capacity if the CD requests.

6.7.7 Age bonus does not apply.

6.7.8 Landing bonus applies.

6.7.9 Models using Option 1 in Rule 6.7.6 have a bonus of 120 points for each flight.

6.7.10 Score is aggregate of 3 flights, each scored at one point per second up to 540 with bonuses added up to a maximum of 560. No points are deducted for exceeding the maximum.

6.7.11 If scores are tied, fly-off has no maximum and the bonuses specified in 6.7.8 and 6.7.9 apply.

(For NDC see Para.4.8 Fly-offs.)

Reasons and comments

1. There is little interest in the current RC Vintage 1/2A Texaco Scale class, but those who have tried it say that it is a lot of fun.

2. The Committee feels that RC Texaco Scale may have more appeal if it is opened to a wider choice of motor types, model designs, and model sizes.

3. The proposed rules allows designs originally flown as any of: power FF, rubber FF, and RC. This is simply to enlarge the pool of eligible designs, but it differs from all the other RC classes.

4. The proposed rules combine the Vintage and Classical periods. This is also to enlarge the pool of eligible designs – a large number emerged in the 1950s and 60s – especially small IC FF scale designs from the UK. There would be no significant aerodynamic advantage for designs of the Classical period, so combining the two periods makes sense, but it differs in this sense from all our other RC classes.

5. For the same reason, there is no age bonus.

6. The proposal also differs from all other RC classes by allowing any form of control surfaces. This is to enable selection of scale designs that would not be sufficiently controllable in Texaco competition without ailerons or elevons.

7. There is provision for selection from two motor/tank options. One allows retention of the 1/2A set-up, and the other is from Open Texaco. The one derived from Open Texaco has provision for multiple motors. It is thought that the 1/2A option would be at an inherent disadvantage so it is awarded 120 bonus points per flight. This is based on experience that 420 secs is a good time for a scale 1/2A and on the view that even a draggy scale model should make 540 secs under the Open Texaco tank rule. These bonus points may need fine-tuning on the basis of experience.

Allan Knox sends photographs of **Allan Baker**'s new 55" *Scorpion*. Powered by a Super Tigre 2.5 diesel turning a 12 x 6 wooden propellor. Coverite on the fuselage, FibaFilm on the wings. *"He reckons 16 minutes is easy, just pottering around on an Open Texaco fuel allotment".*

Dave Crook's colourful 1/2E Texaco *Playboy* is now ready to fly. Read about Dave's build on page twelve.

VINTAGE AT THE NORTH ISLAND FREE FLIGHT CHAMPIONSHIPS

Proctor Road, Waikato.

Friday 8th January
VINTAGE
Power / Rubber / Glider Combined

Saturday 9th January
NOSTALGIA
Power / Rubber / Glider Combined

Saturday 9th January
CLASSIC
Power / Rubber / Glider Combined
VINTAGE *Precision*

Full FF Program is in the September 2015 Model Flyers World. There is also an evening of Indoor events at Morrinsville - details from Indoor CD Rob Wallace **ffonzrjw@xnet.co.nz**

Entry Fees (Set by Free Flight SIG)
$15 for the three outdoor days, or $5 per day, plus $15 for the Indoor events.

Outdoor CD Graham Lovejoy (06) 323-5922

2016 North Island RC Vintage Championship

Dates: **January 23 / 24 / 25 2016**
Times Each day commences at 9.30am and all flying of rounds will finish at 4.30 pm. Fly-offs will commence as soon as possible after 4.30, or at an earlier time if all fly-off participants agree.
Venue: Torehape Road, Ngatea
Host: Thames Blackfeet Club
Contacts: CD Wayne Cartwright: 07 210 0298 and 022 153 4679, wcartwright@vodafone.co.nz
Club Martin Evans: martin.evans@ihug.co.nz

This is a full-on contest, run similarly to the Nationals, except registration is on the day of flying and there are no entry fees. Events may be flown only on the days specified in the Schedule. There are no 'rain days'.

All classes will be flown to the rules published in the Vintage page of the MFNZ website or, in the case of the Tomboy events, in AVANZ News. Only one entry is allowed in each class, but a reserve model may be flown in each class. There is no minimum number of entries for each event to qualify as 'official'.
Contestants and spectators should bring their own food and drink.
Results will be sent by email and published in AVANZ News. Certificates for 1st/2nd/3rd will be sent by mail, including overall North Island RC Vintage Champion, using the points systems used at the Nationals.

Saturday 23 January
Vintage Precision
Classical Precision
Vintage IC Duration
Vintage Electric Duration
Vintage E Rubber Texaco

Sunday 24 January
Classical IC Duration
Vintage 1/2A Texaco
Vintage 1/2E Texaco
Tomboy IC
Tomboy E

Monday 25 January
Vintage Open Texaco
Vintage E Texaco
Vintage A Texaco
Classical Electric Duration

68th MFNZ National Championships
24th – 28th March 2016

With the cold southerlies blowing up from the Antarctic, Easter seems to be a very long way off. But, enthusiastic competitors like to have plenty of time to prepare for the Nationals and so now is the time to publish the list of events. Due to moving to the Easter break in order to look for more settled weather in the Waiarapa and the schedule for magazine publications, you actually get an extra month's notice this year. After Waharoa in 2015, we will be back to familiar flying fields in 2016 and all of the traditional sites will be in use. In addition, we are seeking to make best use of the hall and the oval which we pay for over the whole 6 days but seldom use. Elsewhere you will find separate programs for those venues. These are a mixture of competitive and fun events and may serve to gather people together in the evenings as it will be getting dark at around 7.45pm.

The registration form will go live on line after the New Year and will be only slightly changed from last year. The entry fees and points scheme will be the same as last year. You will be able to see the number of entries in each class and so decide which events need your participation. Last year, we reduced the number of under subscribed events from 27 to 3. It would be great if this time we can get a substantial entry in every category.

From MFNZ website

VINTAGE FREE FLIGHT	day
Vintage FF Catapult Glider	1
Vintage FF Power	1
Vintage FF Rubber Dur	2
Nos FF Power Duration	2
Vintage FF Glider Duration	3
Small Nos/Vintage Power Dur	3
Nos Rubber Duration Vintage	4
Nos FF Glider Duration	4
Vintage FF Precision	5
Classic FF Duration Combined	5
VINTAGE RADIO	
Vintage RC Precision	1
Vintage RC IC Duration	1
Classical RC IC Duration	1
Classical Precision	1
Vintage RC E Duration	2
Vintage 1/2A RC Texaco	2
Vintage 1/2E RC Texaco	2
Vintage RC A Texaco	3
Vintage RC E Texaco	3
Vintage RC Open Texaco	4
Vintage RC E Rubber	4
Classical RC E Duration	4

National Decentralised Contests

NDC events for each month may be flown on any Saturday or Sunday of that month.

Send results to : *mfnz.recordingofficer@gmail.com*
For the Leader Boards, Cc the Editor at : *scott.scott@xtra.co.nz*
(Include NDC event number and model details)

JANUARY

#72	Vintage	FF Precision
#73	Vintage	FF Rubber Duration
#74	Vintage	FF Glider Duration
#75	Nostalgia	FF Glider Duration
#76	Classic	FF Glider Duration
#77	Classic	RC 1/2E Duration
#78	Classic	RC E Duration

FEBRUARY

#79	Vintage	FF Power Duration
#80	Nostalgia	FF Power Duration
#81	Nostalgia	FF Rubber Duration
#82	Classic	FF Rubber Duration
#83	Vintage	RC 1/2A Texaco
#84	Vintage	RC E Rubber Texaco

North Island RC Contest/Rally Schedule 2015 / 16

January 22, 23, 24
NI Championships Blackfeet Fliers

February 6, 7
Gareth Newton Memorial Levin

February 20, 21
NNI Contest and Rally Tuakau

March 24 - 28
68th Nationals Clareville

April 23, 24
Vintage and Glider Rally Cambridge

May 8
Bob Burling RC Fly-in Levin

May 22, 23
NNI Contest and Rally Pukekawa

September 11
LNI Vintage RC Champs Levin

[NNI = Northern Nth Island LNI = Lower Nth Island]

EVENT REPORT - PUKEKAWA 24-25 October Wayne Cartwright

The weather for the first event of the NNI vintage and classical season was challenging. Saturday had rain until mid-afternoon. Those who waited were rewarded with three hours of excellent conditions. Although Sunday was fine, wind gusting over 30 kph was unpleasant and only a few people flew – several models remained safely inside vans. Over both days, 10 flyers made 21 entries and flew 60 scored flights.

Despite the weather, there were excellent fly-off scores by Bernard Scott (1/2A Texaco and Open Texaco), John Butcher (1/2E Texaco and E Rubber Texaco) and by Keith Trillo and John Danks, also in E Rubber Texaco. Keith flew his new *Yonder* – an elegant high aspect ratio design. Brian Harris also had a new model for Classical E Duration, *Vapour Trail,* a top FF Power design from the early 1950s.

Sharon and John Danks were again excellent hosts - a really convenient field, cream scones and sausages, and a model shop. What more could we want? Thanks also to the folk who kept note of scores on Saturday in my absence.

Wayne Cartwright

Results

			R1	R2	R3	Total
Vintage Precision						
Stuart Lightfoot	*New Ruler*		200	200	200	600
Brian Harris	*Playboy*		188	200	200	598
John Danks	*Gas Buggy*		200	200	186	586
David Gush	*Miss Fortune X*		200	179	200	579
Charles Warren	*So Long*		181	149	163	493
Classical Precision						
Brian Harris	*Humbug*		197	196	200	593
Vintage IC Duration						
John Butcher	*Miss Fortune X*		260	190	260	710
David Gush	*Miss Fortune X*		243	179	254	676
Vintage A Texaco						
Bernard Scott	*Simplex*, OS 20FS		601	620	0	1221
Vintage 1/2A Texaco						
Bernard Scott	*Stardust Special*		500	500	500	1500 + 1280
Open Texaco						
Bernard Scott	*Playboy Snr Cabin* ASP.30FS		920	920		1840 + 1249
Vintage E Duration						
Stuart Lightfoot			320	232	320	872
Vintage E Texaco						
Dave Crook	*Bomber*		620	620	620	1860 + 571
Tony Gribble	*Bomber*		528	0	0	528
Vintage 1/2E Texaco						
John Butcher	*Miss Fortune X* 150 sq in, 360mAH 2S		720	720		1440 + 1466
Tony Gribble	*Stardust Special* 306 sq in, 360mAH 2S		512	720		1232
Vintage E Rubber Texaco						
John Butcher	*Gollywock*	2S, 270	620	620	620	1860 + 1230
Keith Trillo	*Yonder*	2S, 240	620	620	620	1860 + 1185
John Danks	*Ascender*	1S, 240	620	620	620	1860 + 1062
Classical E Duration						
Brian Harris	*Vapour Trail*		276	300	296	876
Tomboy E						
Keith Trillo	180, 2S		541	509		1050

PUKEKAWA 24-25 October

TOP	Charles Warren,	*So Long*
RIGHT	Tony Gribble,	*Stardust Special*
LEFT	Keith Trillo,	*Tomboy*

TOP	David Gush,	*Miss Fortune X*
RIGHT	John Butcher,	*(Tiny) Miss Fortune X*
LEFT	David Gush,	*Miss Fortune X*

The Northern RC Vintage competitions seem to have staggered off the mark at the first meeting on half throttle and then stalled at the second scheduled event. Some good however came from the first event with Bernard Scott making some excellent times in ½A and Open Texaco. The law of averages would indicate the next event, the North Island Vintage Champs should be approved by the weather gods. We are eagerly anticipating the emergence of some new super-competitive models for the coming season.

With Vintage competitions being so well contested we need to keep up with the huge advances in battery and motor technology. With the competitive cost of said items, the future looks rosy, not to mention exciting. I very much hope this does not hasten the demise of IC competition, but with the current generation's fixation with electronics and foam, I'm not hopeful.

Now, further on the development of E -Rubber Texaco models. One Tuakau member, Peter Townsend, is going for a 520 sq inch wing area model to suit a 460 mha 2s battery and I believe Bernard is going even larger *(It's a 300 sq in model, Bienenstein's Challenger, for a 270-2S battery, Ed).*

It should be possible to get below the 3 oz sq feet mark, model, weight and battery. Battery quality is very important. For example, a 2S-240 powered model of 240 grams does around 15 min in still air. So every extra milliamp is worth around 4 secs. Also, a reduction in the model weight is probably worth about the same per gram. My latest my latest model is the *Falcon* (above) a 1928 Wakefield design, 290 sq inch area and has one flight so far. Sad to say it demonstrated the flight characteristics of a crock of excrement - will try a more forward CG and maybe change the incidences.

Cheers, John B

PS Our club has unfortunately suffered the sad loss of Doung Baunton who has moved back to the Taranaki. Fortunately, he has promised to return for the vintage champs and rallies.

Dave Crook's 1/2E Texaco *Playboy*

Those familiar with the AVANZ News of July / August, Issue 144 will have read how I embarked on building a Playboy for 1/2E Texaco competitions. At the time of that newsletter, all that was left to do was to mount the firewall, add the motor and wheels and then insert all the electronic goodies inside plus, of course, cover it.

Well, let's start with the easy bit, the ply firewall. Cut it, glued it on and sanded it to shape. If only the rest was that easy! Next up was the covering. After skimming through all my magazines looking for inspiration, then scanning the interweb for covering from all over the world, I realised I had wasted three weeks! The simple solution, that I should have done all along, was to head to my local hobby store, Hobby Hanger in Hamilton and purchase a selection of what they already had in stock. A problem with ageing is that an aircraft that is sitting by your feet doesn't quite look the same at 400 feet. Therefore bright colours were essential. How does a bit of safety red and safety yellow with a bit of contrasting carbon sound? Have a look and see what you think.

Covering finally done (and covering the pylon was a nightmare) it was onto the motor. As you will recall I purchased a little E Max Brushless 980kv Outrunner motor together with a Skyartec 15 amp ESC. Both cheap Chinese items for $30. I said I wasn't going to complain, but I am about these babies. I followed the programming instructions in Chinese Engrish (sic), got all the right noises and it all worked - excellent!

Fitted said motor together with the ESC and battery into the aircraft then nothing. This was not going well, and after repeated attempts at reprogramming I could still not get the motor to rotate. Fortunately I had another motor of similar spec already fitted into an existing aircraft. I set about the engine swap and everything was humming beautifully once again. I placed all the components up the front of the aircraft as was the plan per the previous article and so the next step was to recheck the CG. The Playboy promptly fell on its tail. A hefty additional 4 ounces was required in the nose to get it to balance. Remember this is electric, not I.C. Now everything had to come out (again) and the 4 ounces of lead was knocked into shape and glued all around the inside the nose which meant the replacement of the ESC and battery further south.

It was now time for the test flight ...

On what was a beautiful sunny Sunday (remember them) I had Wayne Cartwright assess the plane and give it a nice gentle launch while I sweated at the controls. The Playboy flew beautifully but not perfectly. The plane was still slightly tail heavy which was a bit of a concern as this could not be trimmed out and had to be flown with a little bit of constant down elevator. It was decided in the de-brief with Wayne that, unfortunately, a little bit more weight was needed up front. I also experienced an undercarriage problem which was sorted after a couple of failed attempts to fix it. In the first instance the undercarriage wire I used was what I had in my workshop. This turned out to be woefully less than adequate as 1) it kept flexing as it was too thin and 2) it now couldn't support the weight of the plane. The solution was to head off to Hobby Hanger once again and get what the plan said I should have used in the first place, namely 3/32 not 1/16.

So, with the Playboy now finished I'm awaiting yet another fine sunny Sunday in which to give it those final check flights before committing it to full on Vintage competition.

How did it all turn out? The wing area: 47.5 x 6.5 = 309 sq in. Ideally the all up weight of the model at 8 oz per sq ft should yield 17.16 oz. The actual AUW of my Playboy to balance at CG is 19 oz, being 8.86 oz per sq ft. At some nearly two ounces over the ideal weight I am not worried, nor do I care.

I do not have a lot of building experience under my belt but I enjoyed the build immensely and am more than happy with my Playboy. It is not an ARF - I built it myself from scratch and it was a labour of love. I think it looks pretty good and on its maiden flight it flew well enough to be considered a success. I now only need to experiment with different props in differing weather conditions in order to optimize that 12 minute flight time required.

Dave Crook, Hamilton Model Aero Club

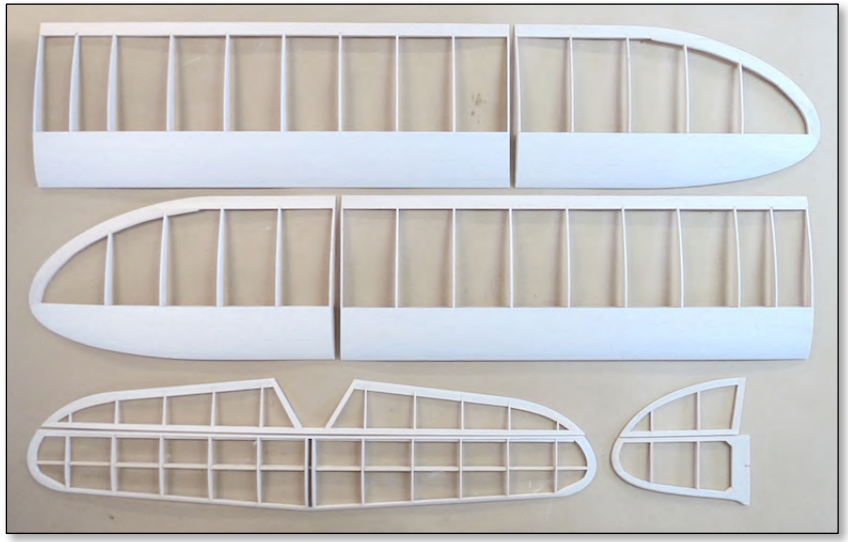
Congratulations on a fine build, Dave. A Playboy in this size is a great way to get into Vintage RC. There is a dark side, though. Vintage modelling is addictive, and you have jumped in at the deep end, for the Playboy has to be the most addictive of models. In drugs terms, you have skipped over amphetamines, crystal meth and cocaine, and gone straight for the heroin of the Vintage aeromodelling world. After 35 years and seven Playboys, I finally went cold turkey last year. It's been hard, but I have had good support from my Stratostreaks and Dixielanders. My suggestion is to limit yourself to building no more than one more Playboy every three years. *Editor*

WORK IN PROGRESS 2

The new Stardust Special for 1/2A Texaco went so well that I took the plunge and started straight away on a bigger version for E-Texaco. The fuselage is a bit of a challenge, so the simple bits have been done first. Photographs show how I meet the requirement of having the design name and age on the model. Cut-out tissue letters are roughly positioned on wing, water saturated with atomiser, finely positioned using brush, excess water is blotted off, then letters are adhered to wing with thinners. A final coat of thinned dope secures them. Lighter, cheaper, and more satisfying than laser-cut vinyl. (I tell myself that the imprecise nature of hand-cutting adds character to the finished product).

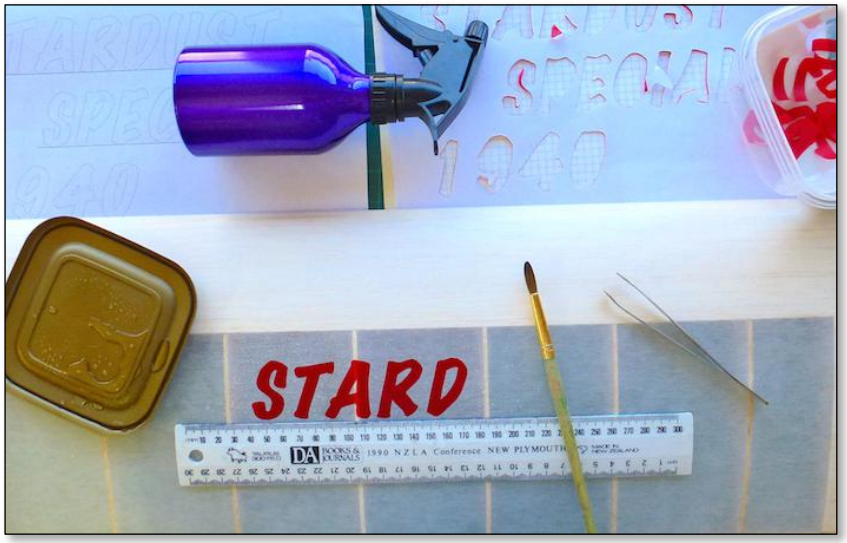
Bernard Scott

Left: Framed up flying surfaces. Two-piece wing, removeable tailplane and rudder for ease of transport and storage.



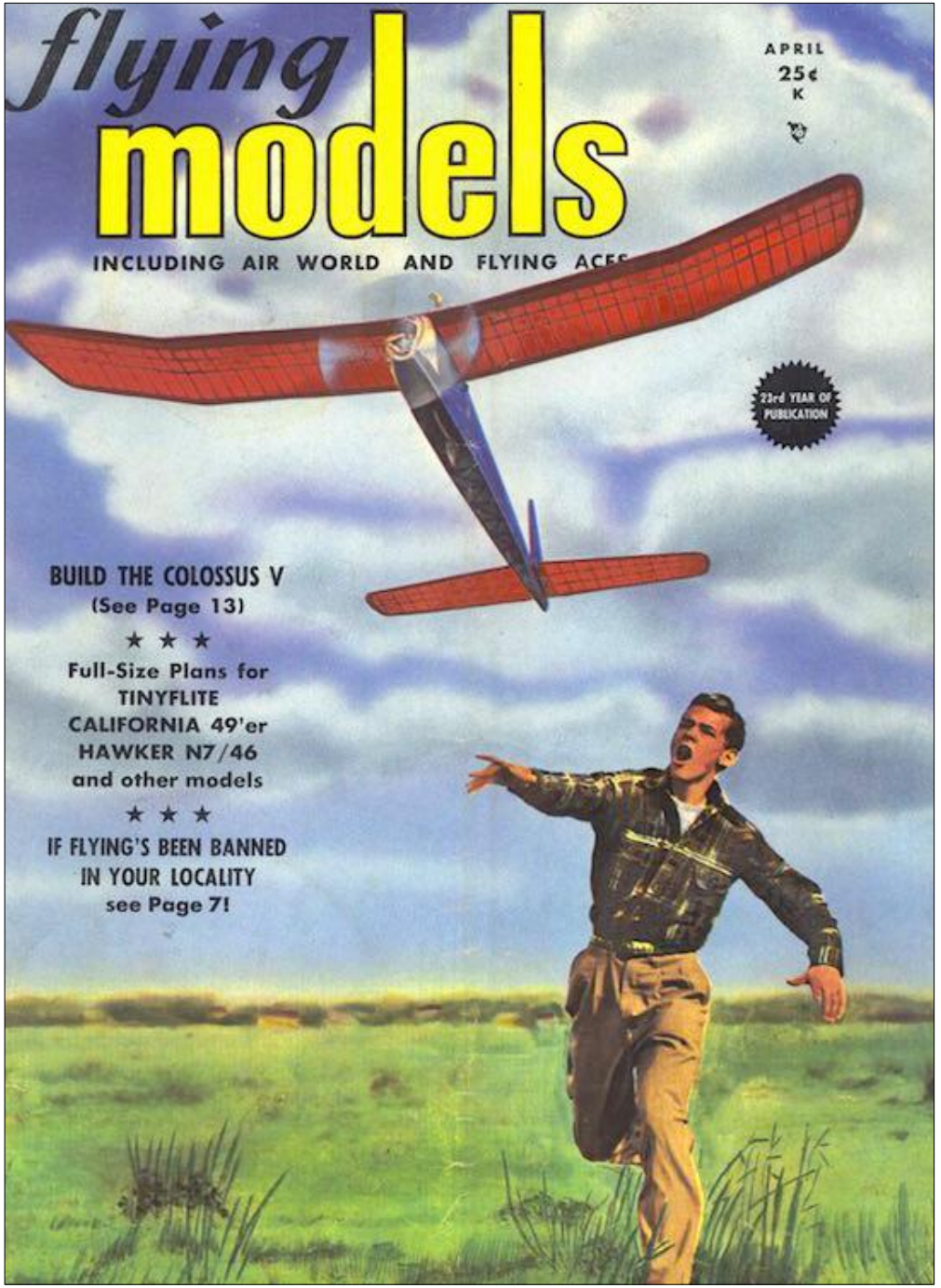
Right: Tissue letters cut out by sandwiching between a print-out of lettering and backing sheets of newsprint.

Left: Essential tools. Water atomiser, tweezers, camel hair brush for positioning wet letters.



Right: That'll do. Design year will be on the other wing.


ANNO II - NUMERO 12
15 OTTOBRE 1946
L'ALA
AVIAZIONE - AEROMODELLISMO - VOLO A VELA


flying models
INCLUDING AIR WORLD AND FLYING ACES
APRIL
25¢
K
23rd YEAR OF PUBLICATION
BUILD THE COLOSSUS V
(See Page 13)
★ ★ ★
Full-Size Plans for
TINYFLITE
CALIFORNIA 49'er
HAWKER N7/46
and other models
★ ★ ★
IF FLYING'S BEEN BANNED
IN YOUR LOCALITY
see Page 7!

*(From **The National Championships** - a history of the first 50 years of aeromodelling championships in New Zealand - by John Malkin, Brian Roots and Dr Michael Taylor. Available from NZMAA).*

CRITERIA TO HOST THE NATS

In considering nominations for the venue, Council placed particular emphasis on

(a) the ability and willingness of clubs adjacent to the venue to shoulder the responsibility for local organisation.

(b) the suitability of the locality for both indoor and outdoor flying and camping, and ease of access by road and rail

(c) the size of the town as viewed from its likelihood of public support, both at the Nationals and before by local bodies.

1st NATIONALS, WANGANUI, 1948-49.

Venue: City Park & Castlecliff
70 Contestants

F/F:	Glider,	H/L, Class A Towline (100 ft)
	Rubber,	Spar (H/L), Fuselage (ROG), Wakefield
	Gas,	Class A (H/L), Aggregate
Indoor:	Open Rubber, RTP Class A	
C/L:	Speed Classes A (3.5 cc), & B (5 cc), Aerobatics	
	Concours d'Elegance	

Notes: F/F 7, C/L 3, Indoor 2, plus Concours d'Elegance (referred in the Results as "Workmanship")

The official entry form advised that the entry fee for each class was 1/- (10 cents) per event and those not affiliated could do so for the sum of 2/- (20 cents) per year for Seniors, remembering that no Insurance was provided at that time. Torrential rain failed to dampen the enthusiasm of the 70 contestants. Wakefield class was won by H Bissenden, Towline glider by Vern Gray, Hand-launched glider by John Woodley, and Power duration by Bryan Marsh. Noel Hewitson came first in Gas Aggregate with 32:3.8s of flight time in the two hour contest. Merv McRorie took the control line titles with speeds near 50 mph. Prizes for workmanship were gained by Merv McRorie, Bruce Keegan, Angus Macdonald and Frank Bethwaite. Angus Macdonald broke the indoor RTP record with 4:15.2s and placed well throughout to become Champion of Champions.

The AGM of 1948 saw Harold Righton and Les Mayn elected Life Members of the NZMAA.

Angus Macdonald, 1948/49 Champion of Champions receives the Airsale Champion of Champions Trophy from the Wanganui Model Aeroplane Club President. Frank Bethwaite looking on in background.

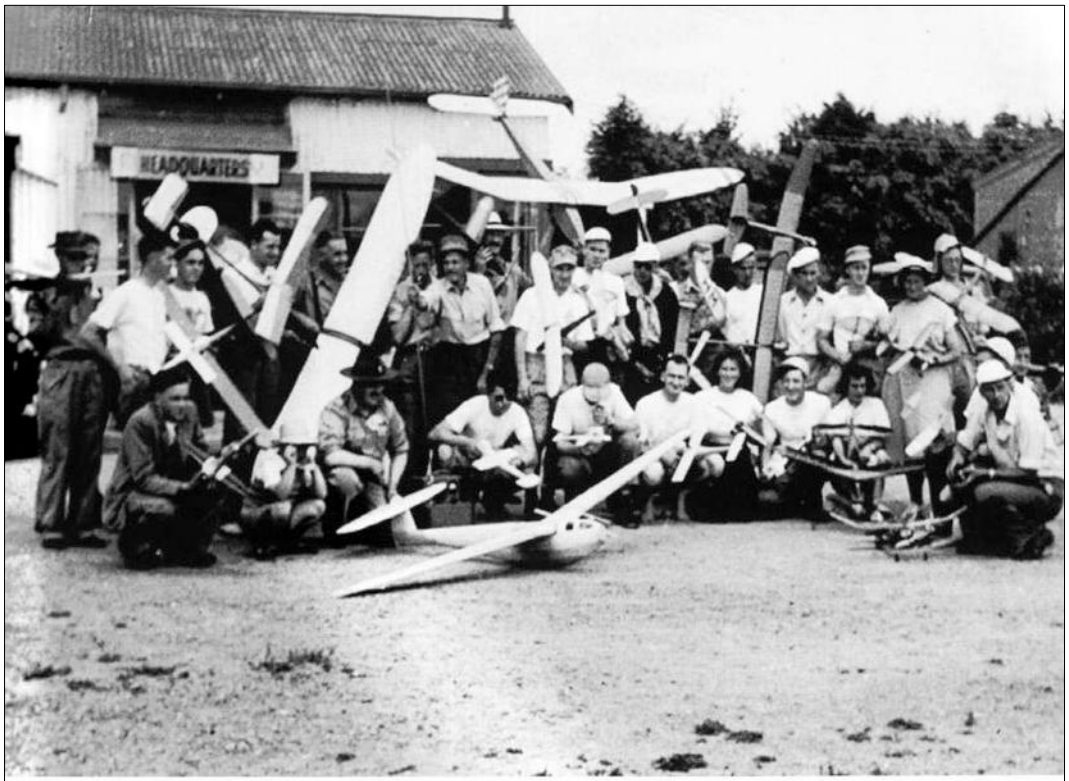
Angus Macdonald Photograph

Left: Alan Williams,Dunedin, holding cap in centre, with his C/L Speed model surrounded by an admiring group at Wanganui.
Des McAnelly Photo

Right: Geoff Perkins makes a precarious launch with his Wakefield at Wanganui.
Des McAnelly Photo

Left: John Woodley, Auckland assists Angus Macdonald with his Indoor Round The Pole (RTP)
Angus Macdonald Photo

Right: A group of Auckland MAC fliers complete with their model boxes "Coffins" at the Nationals site. L to R. John Woodley, 2 Juniors, Bruce Keegan. Behind Bruce is Noel Hewitsons old Reo car fondly called "The Erbitage"
Angus Macdonald Photo



The group photograph of all the aspiring contestants outside the Headquarters of the 2nd National Championships, Hamilton.
Seddon Fenn Photo

PROTOTYPE EVENT

This class called for "A scale model of a known aircraft or an original design representing full scale practice". Did such original design prototypes ever feature in the model aircraft field? After 1953, the term "Prototype" was dropped in favour of "Scale".

2nd NATIONALS, HAMILTON, 1949-50.

Venue: Rukuhia Airport
150 Contestants

F/F:	Glider,	H/L, Towline Class A* (100 ft)
	Rubber,	Spar (H/L), Fuselage (ROG), Wakefield*
	Gas,	Class A* (ROG, 20s motor run), Payload, Aggregate [[<0.1 cu inch, 0.1-0.625 cu inch]]
Indoor:	Free Flight, RTP Class A*	
C/L:	Speed Classes 1-3, Aerobatics,* Prototype.	

Notes: F/F 8, C/L 5, Indoor 2
*The Star Classes (marked *) were regarded as the most advanced and difficult and used to determine the National Champion and the Champion Club.*

This was the first Nationals to have full catered meals available to contestants and families. Weather was perfect throughout.

Eight free flight and three control line records were broken. Wakefield victor Bryan Marsh averaged 4:07s. The PAA Payload event was won by Aub Carmine with a best ratio of flight time to motor run of 35.5. Frank Bethwaite set a record of 12:00s in winning the 100' Towline Glider contest. Noel Hewitson totalled 40:07s in the two hour Aggregate competition.

The Control Line Class 1 Speed event was won by Doug Kennedy, while Doug Wallace took Class 2 Speed. Ira Pepperell achieved 126 mph in the 10 cc C/L Speed event. Alf Leong won C/L Aerobatics by a wide margin. Control Line Prototype (Scale) was won by Ross Hansen.

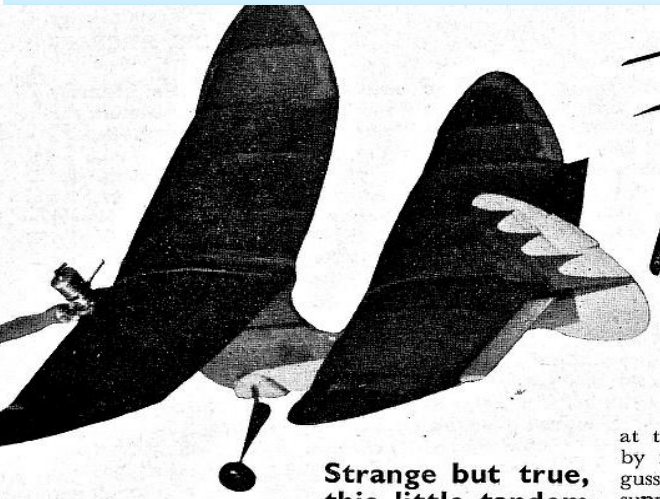
Champion of Champions was Alf Leong, with John Woodley being Junior Champion.
Champion Club was Auckland MAC.

Left: Ira Pepperell displays his Pepperell .61 powered Control Line Speed Model to L to R Alf Leong, Pop Pepperell, Ira Pepperell, Doug Wallace, Hamilton 1949/1950.
Michael Taylor Photo

Below: Wynn Craven standing watches Reg Truman service his "Rudderbug" Radio Control model, Hamilton 1949/1950.
Michael Taylor Photo

Below left: Frank Bethwaite winds the rubber motor of his Free Flight Wakefield model. Hamilton 1949/1950.
Michael Taylor Photo

Below right: Phil McCrorie reassembles her Eta .29 powered Control Line Speed Model, Hamilton 1949/1950.
Michael Taylor Photo



MARTIAN

by Ray Malmström

Strange but true, this little tandem wing job really flies. Any ½ c.c. motor will supply ample power.

I CAN almost hear the aeromodelling wits murmuring, on seeing the *Martian*, " evidently a case of what you lose on the tailplane (non-existent !) you make up for on the wings " Well, frankly, that's about it, and when it comes to real flying, this tiny tandem-wing certainly has no need of a tailplane. Simple to build, easily trimmed, it has proved to be a very stable little job in the air. The following notes are for the less experienced. To the old hand, resting for a while from the nerve racking business of building contest jobs, the *Martian* should present no problems, and provide just about a couple of evenings' light entertainment, before this diminutive little job is ready for the wide open spaces.

Fuselage

Trace the shape on ¼ sheet. The lucky ones with some 6-in. wide stock tucked away can do it in one go. Others with only 3-in. wide sheet handy must make the fuselage in two parts and dowel and cement them firmly together. Add the engine mount, drilled for the engine of your choice, noting here the right thrust (viewing model from the rear). Add blocks A, wing platforms, fin, and the four dowels firmly cemented in, for the rubber bands. Add to this the undercart blocks and 1/16 ply inserts, if you are going to use an undercart. The undercart legs are simply bent from 16 s.w.g. wire with bushed balsa or celluloid wheels retained by small washers soldered on. Round off all edges. Give two coats of clear dope and lay aside.

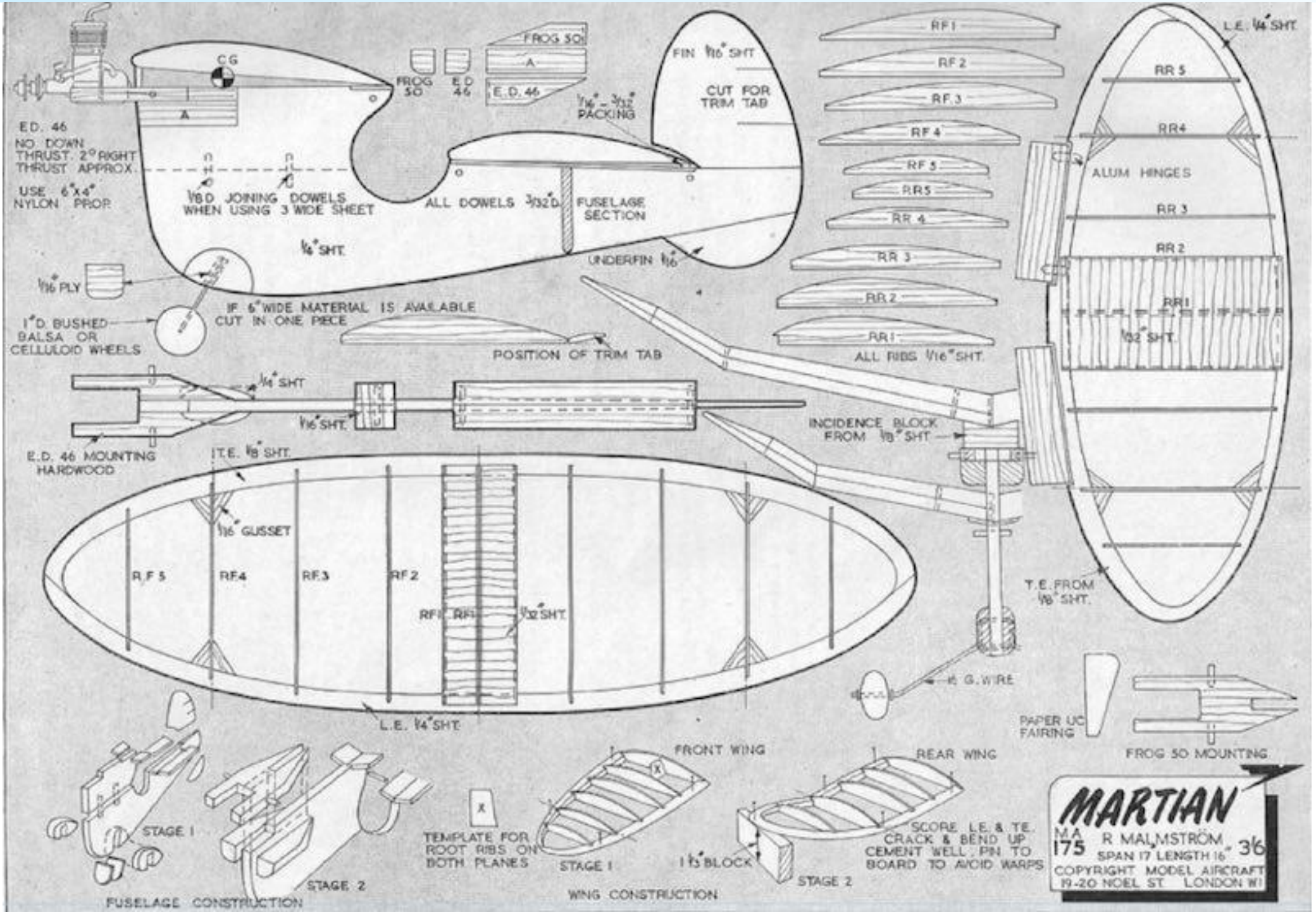
Wings

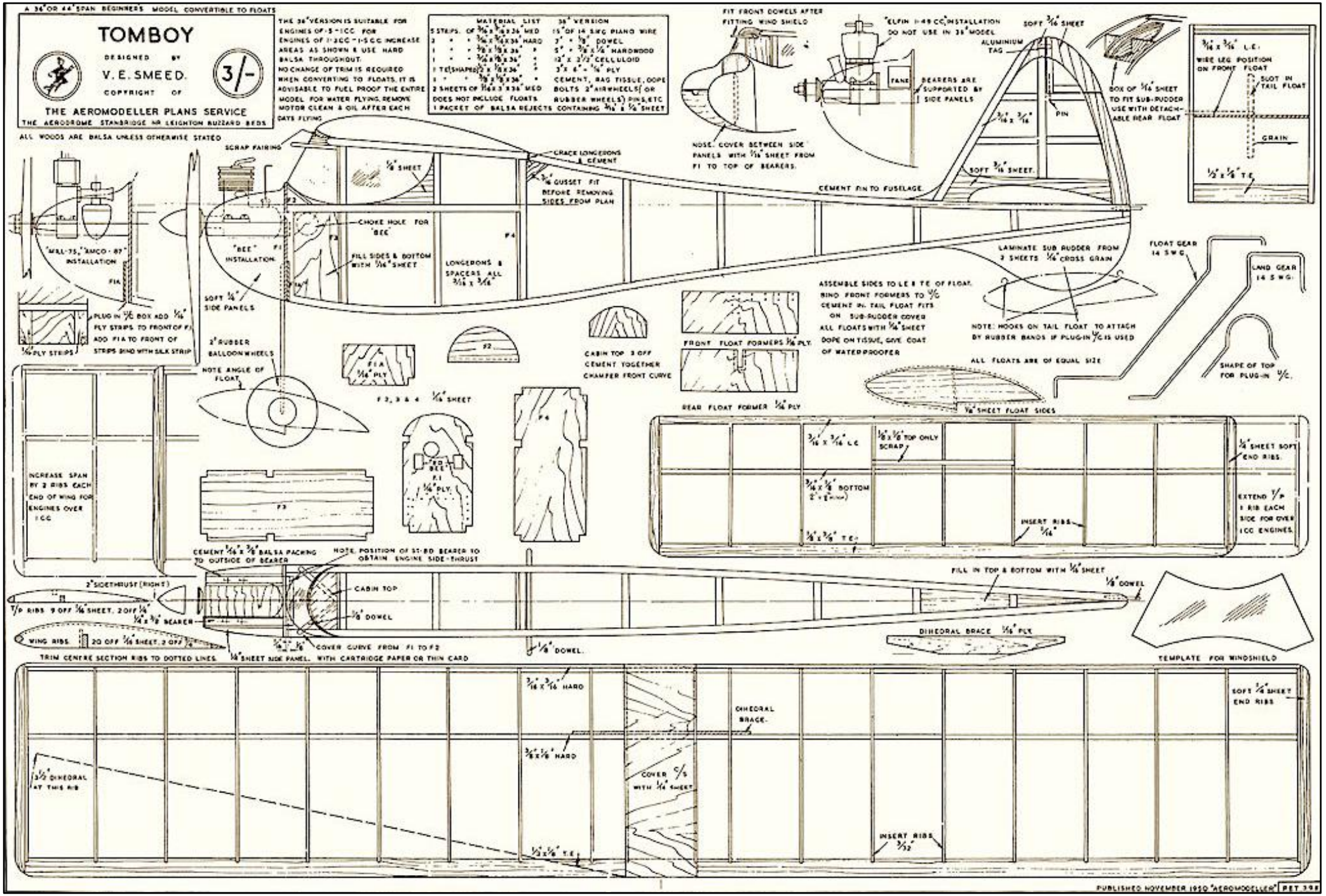
Front and rear wings are built in exactly the same way. Leading and trailing edges are cut from sheet. Pin these over plan and add ribs. Set root ribs by means of the template X, provided. A V-cut is made on the leading and trailing edges at the points shown, and the outer panels raised by 1⅛-in. Cement generously at crack, and add gussets. Join right and left wing panels together, supporting at correct angles until dry. Sheet with 1/32 the two centre sections. Cover, water shrink, and give one coat of clear dope. Please see that your wings are absolutely true, and free from warps. This is important. Add the trimming elevator tabs to trailing edges of the rear wing, with aluminium hinges. Cement incidence block (from ⅛ sheet) to L.E. of front wing. Decorate model with either coloured tissue or trimstrip, and give one coat of fuel proofer. Bolt engine complete with 6 x 4 propeller in place, assemble wings and balance model at point indicated.

Flying

Choose a calm day and a field of long grass for your test flying. The model is usually flown without the u/c, and the settings that produced a very satisfactory flight performance with the original *Martian*, are detailed on the plan. Slight engine right thrust, with the trim tab on the fin offset to the right (model viewed from the rear) about ⅛ in. The elevator tabs on the rear wing are bent up to the angle shown. The model is very sensitive to these elevator tabs, and they should be adjusted a little at a time. When the correct setting has been found, they should be locked by cementing. A 1/16-3/32 packing under the trailing edge of the rear wing was found to be necessary. Naturally the settings will alter from model to model but these from the original model can serve as a starting point. Get the glide as shallow and as straight as possible, avoiding any tendency to stall. Violent turning on the glide can be cured by raising the wing tip on the inside of the turn by packing at the centre section. Throttle the engine down, or fit the prop. on the wrong way round for your first power flight. The engine torque should give a wide climbing turn to the left. With this first flight successfully logged you can begin to open up. One other thing, avoid power turns to the right. With this type of model they usually build up into a spiral dive.

With a ¾ full tank (F.D46 engine) the *Martian* climbs to a dot in the sky. So either limit your power run, or start chasing. You have been warned !

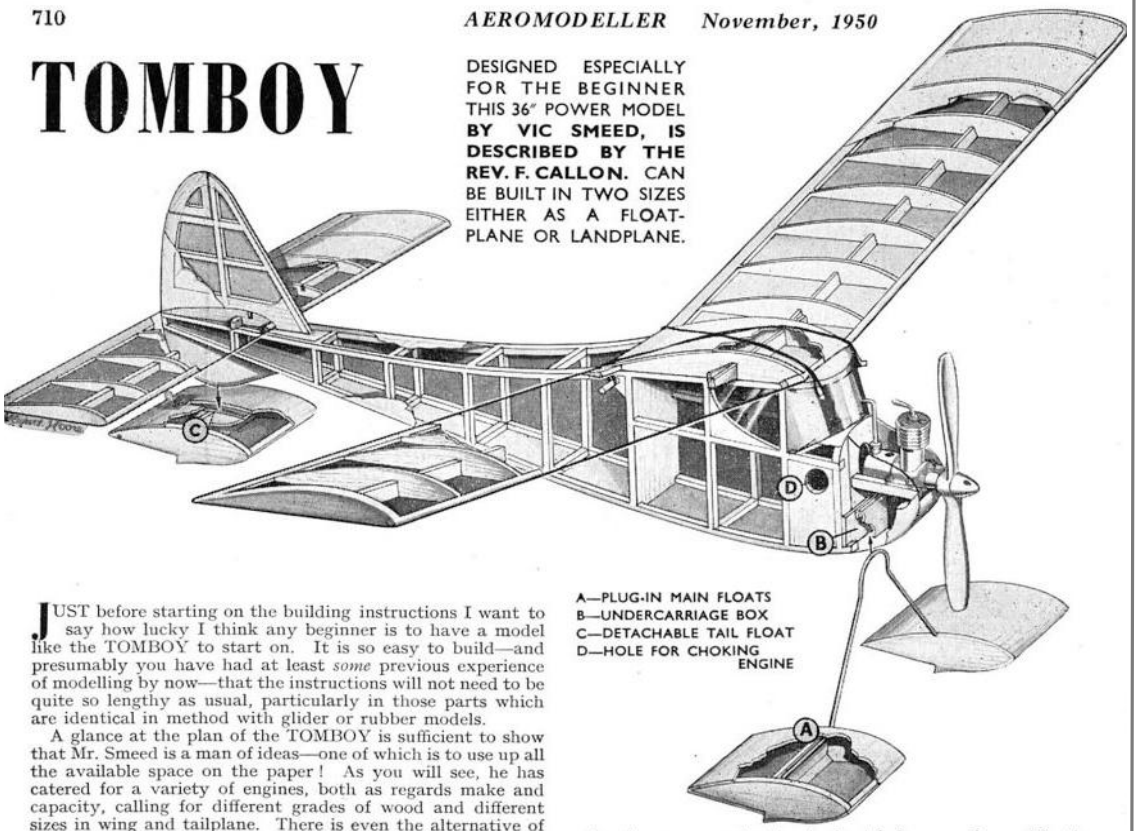

E.D. 46
NO DOWN THRUST. 2° RIGHT THRUST APPROX.
USE 6"x4" NYLON PROP
CG
A
FROG 50
E.D. 46
FROG 50
A
E.D. 46
1/16" - 3/32" PACKING
FIN 1/16" SHT
CUT FOR TRIM TAB
1/8D JOINING DOWELS WHEN USING 3 WIDE SHEET
ALL DOWELS 3/32D
FUSELAGE SECTION
1/4" SHT
UNDERFIN 1/16"
1/16 PLY
1"D BUSHED BALSA OR CELLULOID WHEELS
IF 6" WIDE MATERIAL IS AVAILABLE CUT IN ONE PIECE
POSITION OF TRIM TAB
RF 1
RF 2
RF 3
RF 4
RF 5
RR 5
RR 4
RR 3
RR 2
RR 1
ALL RIBS 1/16" SHT
L.E. 1/4" SHT
RR 5
RR4
ALUM HINGES
RR 3
RR 2
RR1
1/32" SHT
1/4" SHT
1/16" SHT
INCIDENCE BLOCK FROM 1/8" SHT
E.D. 46 MOUNTING HARDWOOD
T.E. 1/8" SHT
1/16" GUSSET
RF 5
RF4
RF 3
RF 2
RF1
RR1
1/32" SHT
L.E. 1/4" SHT
T.E. FROM 1/8" SHT.
1/16 G.W. RE
PAPER UC FAIRING
FROG 50 MOUNTING
STAGE 1
STAGE 2
FUSELAGE CONSTRUCTION
TEMPLATE FOR ROOT RIBS ON BOTH PLANES
X
FRONT WING
STAGE 1
1/8 BLOCK
REAR WING
STAGE 2
SCORE L.E. & T.E. CRACK & BEND UP CEMENT WELL, PIN TO BOARD TO AVOID WARPS
WING CONSTRUCTION
MARTIAN
MA 175
R MALMSTROM
SPAN 17 LENGTH 16" 36
COPYRIGHT MODEL AIRCRAFT
19-20 NOEL ST LONDON W1


A 36" OR 44" SPAN BEGINNERS MODEL CONVERTIBLE TO FLOATS
TOMBOY
DESIGNED BY
V. E. SMEED.
COPYRIGHT OF
THE AERODROME STANBRIDGE NR LEIGHTON BUZZARD BEDS.
3/-
THE AEROMODELLER PLANS SERVICE
THE 36" VERSION IS SUITABLE FOR ENGINES OF .5 - 1 CC. FOR ENGINES OF 1.2 CC - 1.5 C.C. INCREASE AREAS AS SHOWN & USE HARD BALSA THROUGHOUT.
NO CHANGE OF TRIM IS REQUIRED WHEN CONVERTING TO FLOATS. IT IS ADVISABLE TO FUEL PROOF THE ENTIRE MODEL FOR WATER FLYING. REMOVE MOTOR CLEAN & OIL AFTER EACH DAYS FLYING.
MATERIAL LIST 36" VERSION
2 SHEETS OF 1/16 x 3" x 36" MED
DOES NOT INCLUDE FLOATS.
1 PACKET OF BALSA REJECTS CONTAINING 3/16" x 1/16" SHEET
15" OF 14 S.W.G. PIANO WIRE
3" x 1/8" DOWEL
5" x 3/8" x 1/16" HARDWOOD
12" x 2 1/2" CELLULOID
3" x 6" - 1/16" PLY
CEMENT, RAG TISSUE, DOPE
BOLTS 2" AIRWHEELS (OR RUBBER WHEELS) PINS, ETC
ALL WOODS ARE BALSA UNLESS OTHERWISE STATED
SCRAP FAIRING
1/8" SHEET
CRACK LONGERONS & CEMENT
1/16 GUSSET FIT BEFORE REMOVING SIDES FROM PLAN
CHOKE HOLE FOR "BEE"
FILL SIDES & BOTTOM WITH 1/16" SHEET
LONGERONS & SPACERS ALL 3/16 x 3/16
"BEE" INSTALLATION
"MILL-75," "MICO-87" INSTALLATION
SOFT 1/16" SIDE PANELS
PLUG IN 1/16 BOX ADD 1/16" PLY STRIPS TO FRONT OF F1. ADD F1A TO FRONT OF STRIPS BIND WITH SILK STRIP
1/16 PLY STRIPS
2" RUBBER BALLOON WHEELS
NOTE ANGLE OF FLOAT
F1A 1/16" PLY
F2
F3, 3 & 4 1/16" SHEET
F4
INCREASE SPAN BY 2 RIBS EACH END OF WING FOR ENGINES OVER 1 CC
CEMENT 1/16 x 3/8 BALSA PACKING TO OUTSIDE OF BEARER
NOTE POSITION OF ST-BD BEARER TO OBTAIN ENGINE SIDE-THRUST
2" SIDETHRUST (RIGHT)
T/P RIBS 9 OFF 1/16 SHEET. 2 OFF 1/4 x 3/8 BEARER
WING RIBS 20 OFF 1/16 SHEET. 2 OFF 1/4
TRIM CENTRE SECTION RIBS TO DOTTED LINES.
1/16" SHEET SIDE PANEL WITH CARTRIDGE PAPER OR THIN CARD
CABIN TOP
1/8" DOWEL
COVER CURVE FROM F1 TO F2
1/8" DOWEL.
FIT FRONT DOWELS AFTER FITTING WIND SHIELD
NOSE COVER BETWEEN SIDE PANELS WITH 1/16" SHEET FROM F1 TO TOP OF BEARERS.
"ELFIN 1.49 CC" INSTALLATION DO NOT USE IN 36" MODEL
BEARERS ARE SUPPORTED BY SIDE PANELS
SOFT 3/16 SHEET
ALUMINIUM TAG
PIN
SOFT 3/16" SHEET.
CEMENT PIN TO FUSELAGE
BOX OF 1/16" SHEET TO FIT SUB-RUDDER USE WITH DETACHABLE REAR FLOAT
3/16 x 3/16 L.E.
WIRE LEG POSITION ON FRONT FLOAT
SLOT IN TAIL FLOAT
GRAIN
1/2 x 1/8 T.E.
LAMINATE SUB RUDDER FROM 3 SHEETS 1/16" CROSS GRAIN
FLOAT GEAR 14 S.W.G.
LAND GEAR 14 S.W.G.
ASSEMBLE SIDES TO L.E. & T.E. OF FLOAT. BIND FRONT FORMERS TO 3/8 CEMENT IN. TAIL FLOAT FITS ON SUB-RUDDER COVER
ALL FLOATS WITH 1/16" SHEET
DOPE ON TISSUE, GIVE COAT OF WATERPROOFER
NOTE: HOOKS ON TAIL FLOAT TO ATTACH BY RUBBER BANDS IF PLUG-IN 3/8 IS USED
SHAPE OF TOP FOR PLUG-IN 3/8.
ALL FLOATS ARE OF EQUAL SIZE
CABIN TOP 3 OFF CEMENT TOGETHER CHAMFER FRONT CURVE
FRONT FLOAT FORMERS 1/16 PLY.
REAR FLOAT FORMER 1/16 PLY
1/16" SHEET FLOAT SIDES
3/16 x 3/16 L.G.
1/8 x 1/8 TOP ONLY SCRAP
3/16 x 1/8 BOTTOM 2" (MIN)
1/8 x 3/8 T.E.
INSERT RIBS 1/16"
1/16 SHEET SOFT END RIBS.
EXTEND 1/8 RIB EACH SIDE FOR OVER 1 CC ENGINES.
FILL IN TOP & BOTTOM WITH 1/16" SHEET
1/8" DOWEL
DIHEDRAL BRACE 1/16" PLY
TEMPLATE FOR WINDSHIELD
3/16 x 3/16 HARD
3/8 x 1/8 HARD
DIHEDRAL BRACE.
COVER 5/8 WITH 1/16 SHEET
1 1/2 DIHEDRAL AT THIS RIB
1/32 x 1/8 T.E.
INSERT RIBS 1/32"
SOFT 1/16" SHEET END RIBS
PUBLISHED NOVEMBER 1950 "AEROMODELLER" PET 398


3/-
E. SMEED.
DDELLER PLANS SERVICE
UNLESS OTHERWISE STATED
SCRAP FAIRING
CHOKE HOLE FOR 'BEE'
FILL SIDES & BOTTOM WITH 1/16" SHEET
LONGERONS & SPACERS
FILL IN TOP & BOTTOM
DIHEDRAL BRACE
INSERT RIBS

TOMBOY

DESIGNED ESPECIALLY FOR THE BEGINNER THIS 36" POWER MODEL BY VIC SMEED, IS DESCRIBED BY THE REV. F. CALLON. CAN BE BUILT IN TWO SIZES EITHER AS A FLOAT-PLANE OR LANDPLANE.



JUST before starting on the building instructions I want to say how lucky I think any beginner is to have a model like the TOMBOY to start on. It is so easy to build—and presumably you have had at least *some* previous experience of modelling by now—that the instructions will not need to be quite so lengthy as usual, particularly in those parts which are identical in method with glider or rubber models.

A glance at the plan of the TOMBOY is sufficient to show that Mr. Smeed is a man of ideas—one of which is to use up all the available space on the paper! As you will see, he has catered for a variety of engines, both as regards make and capacity, calling for different grades of wood and different sizes in wing and tailplane. There is even the alternative of making the model a floatplane, with interchangeable land or water undercarriage! For the sake of those who are building this as their very first power model, I think that the best plan will be to standardise on the following layout: E.D. Bee engine; 36 ins. wingspan; land undercarriage—the wheels to be detachable or not according to choice. (If they are detachable, they can later be replaced at will by floats without effecting the rest of the model.) Right? Then here we go!

Perhaps the slowest part of building a model is the cutting out and sanding of all the ribs and the fuselage formers. Personally, I always like to get this over with right at the start, so I suggest that we do it now.

First of all the ribs. The method applies to both wing and tailplane ribs. Lay a piece of semi-transparent paper—greaseproof will do—over the rib outline as marked on the plan, and trace it onto the paper, including the place where the spar cuts through the rib. Now use carbon paper to trace this outline onto a piece of thin plywood—1 mm. if you have any, otherwise $\frac{1}{16}$ in. The outer grain of the ply should run from end to end of the rib shape. Cut out the ply rib, and sand accurately to shape, checking by laying it onto the plan rib as you proceed. Use this rib as a template, round which to draw all the ribs needed onto $\frac{1}{16}$ in. medium sheet balsa; 20 for the wing rib, 9 for the tailplane. Cut these out roughly *without* cutting out the spar slot, and sandwich them side to side against the accurately finished ply rib. Push two straight pins from each side right through the "sandwich" to hold them firmly, and sand until they are identical with each other and with the ply rib. Then use a small hacksaw to cut right through all the ribs together at the spar slot; one cut down each side of the slot as already cut in the ply rib is sufficient; the loose pieces can then be scraped out.

Formers. These are traced out first onto greaseproof or similar paper over the plan, and then transferred by means of carbon paper onto the $\frac{1}{16}$ sheet balsa—or plywood in the case of Former 1 and 1A. With balsa, the grain should be running along the *length* of the former, *i.e.*, from end to end, rather than from side to side.

The outlines of the ply formers 1 and 1A are best cut with a small hacksaw; the curve on the top of F1 can be finished off with a rough grade of sandpaper wrapped tightly round a hardwood block. The two rectangular holes for the engine bearers are quite easily cut by drilling a series of $\frac{1}{16}$ in. holes as close together as possible just *inside* the lines traced on the wood. Then remove the inside piece with a razor blade, and use a small file—a nail file will do—to clean up the edges of the apertures. Keep trying the end of the engine bearer into the aperture as you go along with the filing, and stop when it will *just* push inside—a really tight fit. The same method of drilling holes can be used for opening out the circular choke hole in F1.

We are now all ready to start the construction proper.

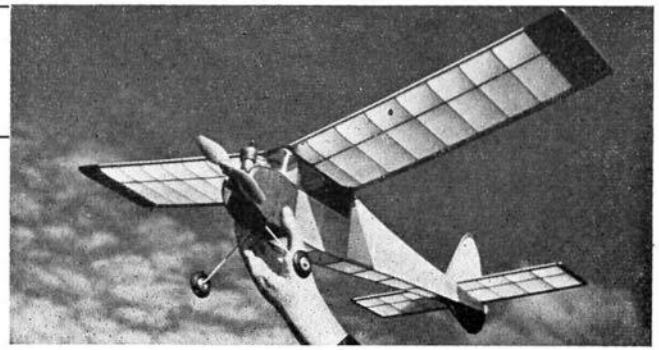
The Fuselage. Cover the plan with grease-proof paper, and pick out five lengths of *medium* $\frac{3}{16}$ in. square strip. The four softest of these should be used for the longerons.

Pin down the first two longerons over the plan, using straight pins on alternate sides, *not through*, the strip. Crack the top one at the point indicated, but if possible do not actually sever it. Add all the spacers, etc., and the $\frac{3}{16}$ in. gusset against the shoulder where the top longeron was cracked.

Work down the next pair of longerons between the upright pins and push down onto the previous pair. Complete the side in exactly the same way as the first one, not forgetting the shoulder gusset. The longerons can be trimmed off accurately at the tail, but should be left overlapping a little at the nose end of the model. Fig. 1 shows the construction at this stage, with the ribs, formers, etc., all laid out ready.

Give the cement a few minutes to dry, then remove from the

TOMBOY is one of the most amazing models we have handled at the Aeromodeller offices. The float version took off without difficulty in approximately half of the width of the Grand Union Canal, and we succeeded in losing it, complete with floats, from a 20 second engine run. It is simple to build, easy to fly and as intended, an ideal beginner's model.



plan, sand edges, and slice the two sides apart. Cement formers 3 and 4 in position to *one* of the two sides, making sure that they are at right angles to it; see Fig. 2. When dry, push the second side into place against the formers and cement it there—see Fig. 3. Now cement the two sides together at the tail, and add all the top and bottom spacers.

Former No. 1 and Undercarriage. You must here make up your mind whether the undercarriage is to be detachable or permanent. If at a later date you think you may want to change over to a floatplane, then you will have to make the wheels detachable. The method for this is slightly more complicated, but is well worth the trouble if only for the extra simplicity of transport.

Detachable undercarriage. Cut three strips of $\frac{1}{16}$ in. ply about $\frac{1}{4}$ in. wide, and use Durofix or some similar hardwood glue to cement them down the sides and across the top of former 1A. Then cement this unit against the *front* of F1, so that the ply strips form a box between F1 and F1A. Since Durofix is slow drying, the unit should be left for some hours under pressure—either in a table-vice or with a weight resting on it. When dry, it should be cemented in position at the front of the fuselage, after which the overlap of the four lower longerons can be trimmed off.

Bend the undercarriage wire carefully to the shape shown on the plan. The "U"-shaped bend in the centre must be a push fit into the ply "box" between F1 and F1A. The arms of the "U" should be slightly splayed out for preference, so as to grip tightly by pushing against the sides of the "box".

Permanent undercarriage. Cement F1A against the *back* of F1; no packing strips are necessary. When the Durofix has set, bend the undercarriage wire as shown on the plan; the centre section in this case is more rectangular than "U"-shaped. Place this centre section symmetrically against the front of the lower part of F1., and mark its position. Remove, and drill a double row of holes ($\frac{1}{16}$ in. or smaller) round both sides of the marked line. Actually the spots for drilling are marked on the plan. Now replace the undercarriage wire between the double row of holes and use strong twine and a large darning needle to bind it in place, the thread passing through the holes and over the wire. Finish off with a thick smear of Durofix all over the twine and the wire. F1 can then be cemented in position against the front of the fuselage, and the overlap of the four lower longerons trimmed off. The wheels must be attached by soldered cup-washers.

Engine Bearers. Cut two similar lengths of hardwood $\frac{3}{8} \times \frac{1}{4}$ in. spar as shown on the plan, and mark the places (also shown on the plan) where they have to be drilled for the engine bolts. Make sure that you choose the right size of drill for the particular bolts you are using. The hole should be very slightly *smaller* than the thickness of the bolt, so that the latter is a tight screw fit into it. A $\frac{3}{32}$ in. drill will be about right for 8 B.A. bolts, but the safest way is to test it for yourself by drilling into a piece of scrap hardwood, trying various drills until you find the correct one. Then drill the four holes through the engine bearers, making sure that the drill works quite vertically through the wood, and checking the spacing of the holes against their opposite numbers in the metal flanged shoulders of the engine itself. I have found it quite a good idea to widen these bolt holes to $\frac{1}{8}$ in.

Now push the engine bearers into place through former F1; they should be a tight fit, and if so will remain rigidly in place. Check them for alignment both vertically and horizontally, and then push the starboard (right hand) bearer about $\frac{1}{16}$ in. further into former F1. This will mean that the engine when mounted will have a small degree of natural right thrust. Liberally cement the joints on both sides of F1.

Former F2 and the cross-grained laminated cabin top should now be cemented in place. Fig. 4 shows the front part of the fuselage at this stage.

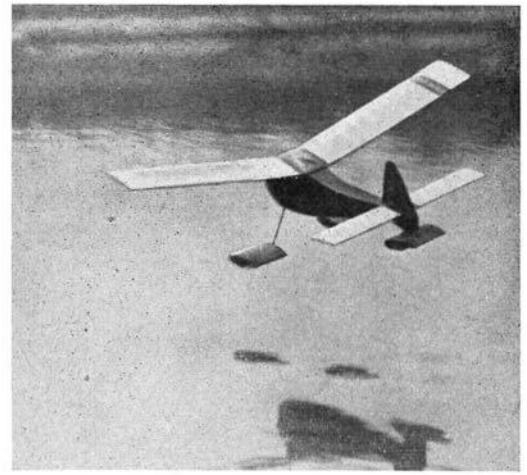
Finishing Off the Fuselage.

Sheet in the sides and bottom of the front panel with $\frac{1}{16}$ in. balsa, and also the curve of the cabin windows. Cartridge paper or thin card should be used for covering the curve from the top of F1 over F2. Make the choke-hole in the starboard side panel big enough to admit your particular size of first finger without any effort.

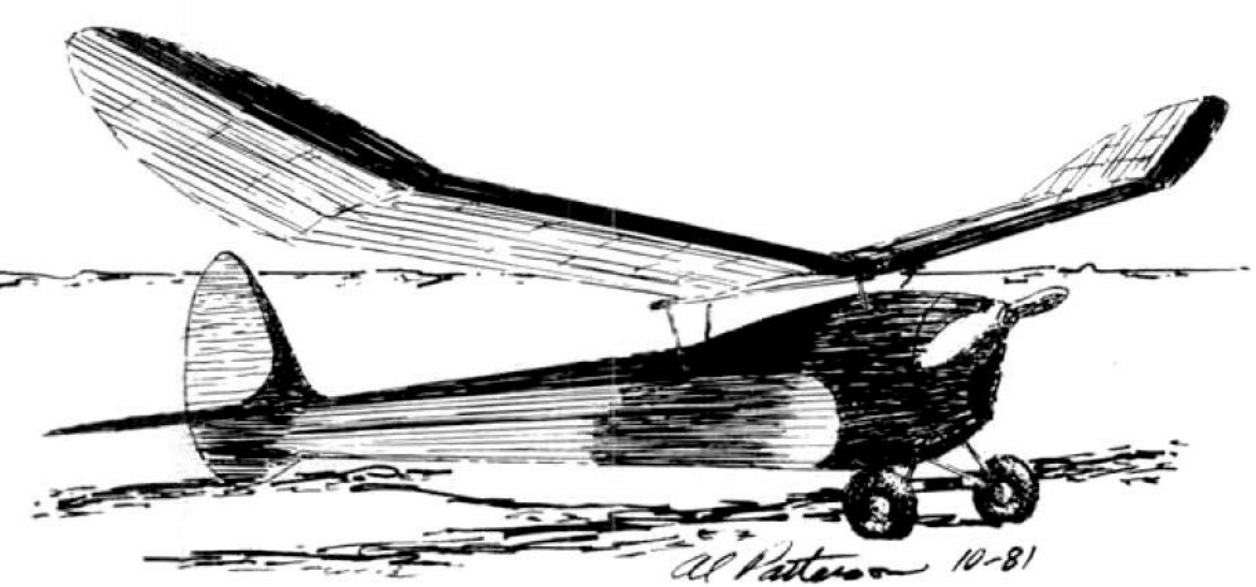
Cement a strip of $\frac{1}{16}$ in. sheet to the outside edge of both the engine bearers; screw the bolts in place from below, and drop the engine itself into place over them. Then trace the side cowlings onto $\frac{1}{4}$ sheet and cement them against F1 and the packed bearers. If the undercarriage is detachable, the side cowlings will have to be shaped to fit round F1A and the undercarriage box. Fig. 5 illustrates this point, being a shot of the underneath part of the front unit. (Gussets were used here, as an alternative to sheeting in the front lower panel.)

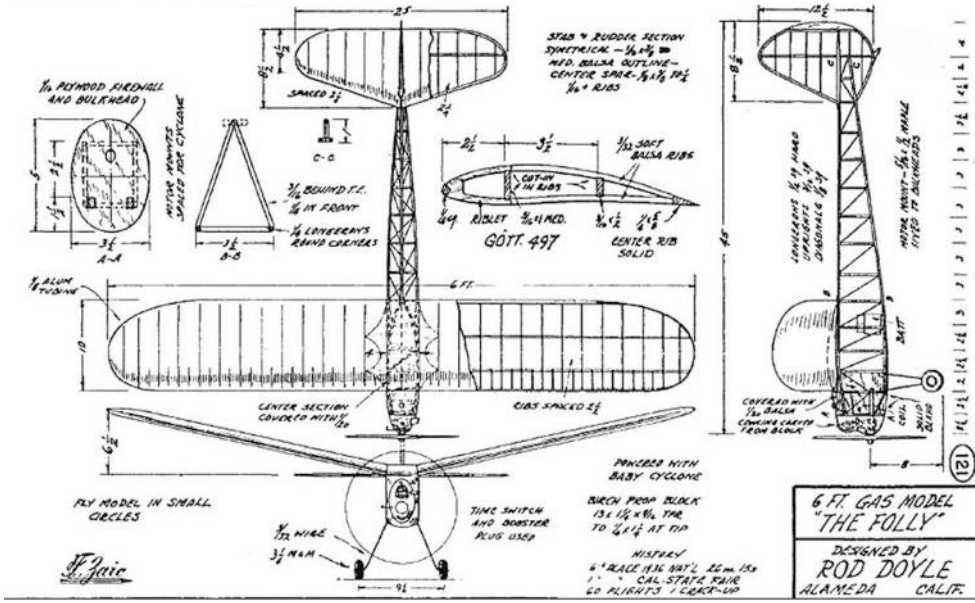
Now sheet in between the lower halves of the side cowlings. It is important to leave the engine in position while this is done to make sure that the space between the bearers is not widened or lessened during the process.

Trace the windscreen from the plan onto grease-proof paper; cut it out, and paste onto the celluloid; then cut the celluloid windscreen round the edge of the pasted grease-proof template. The plan suggests cementing the windscreen in place, then cutting two holes for the wing dowels, which are to be pushed through and cemented under the cabin top after the windscreen has been added. Personally I found it simpler



FOLLY II Rod Doyle circa 1937

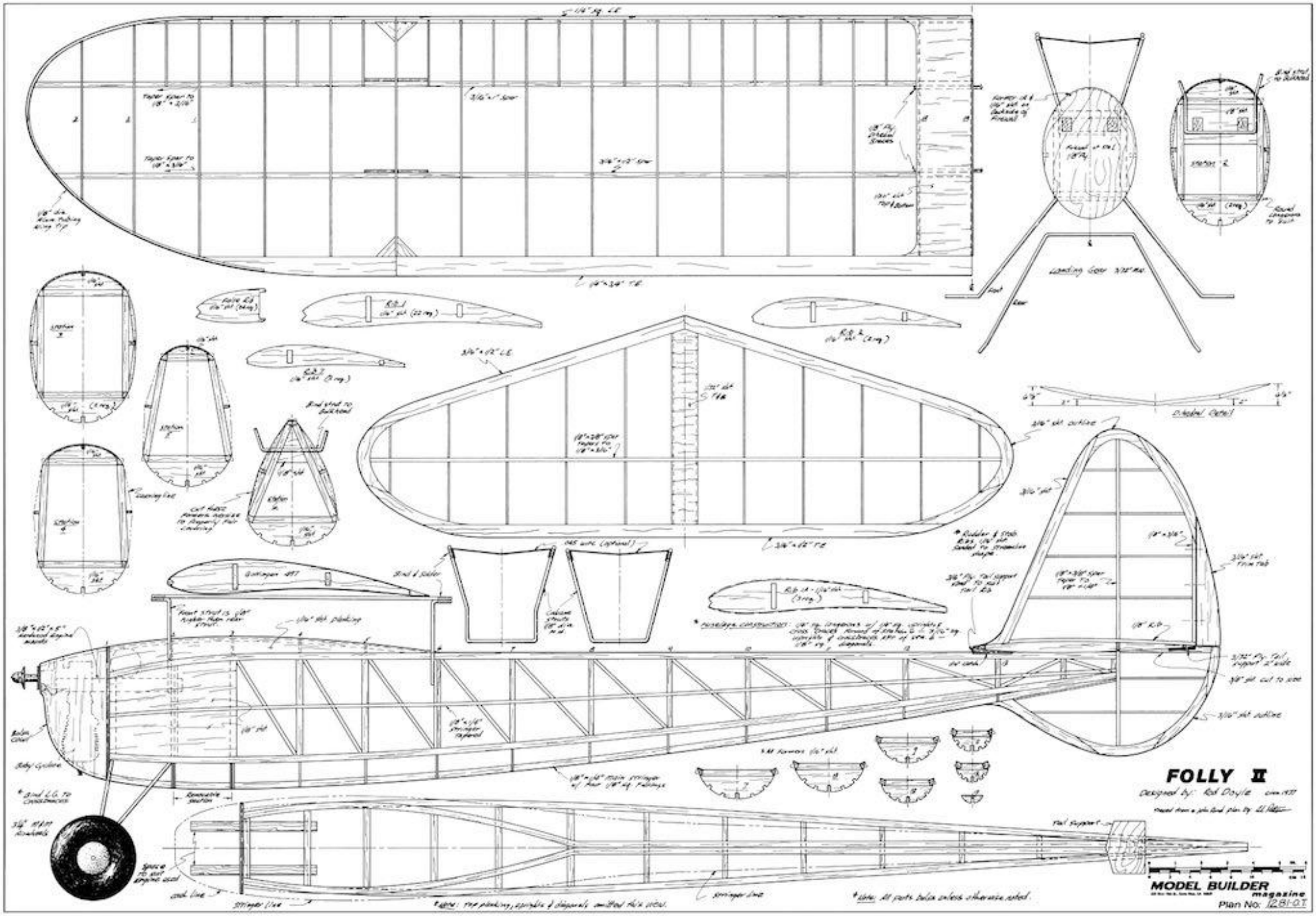


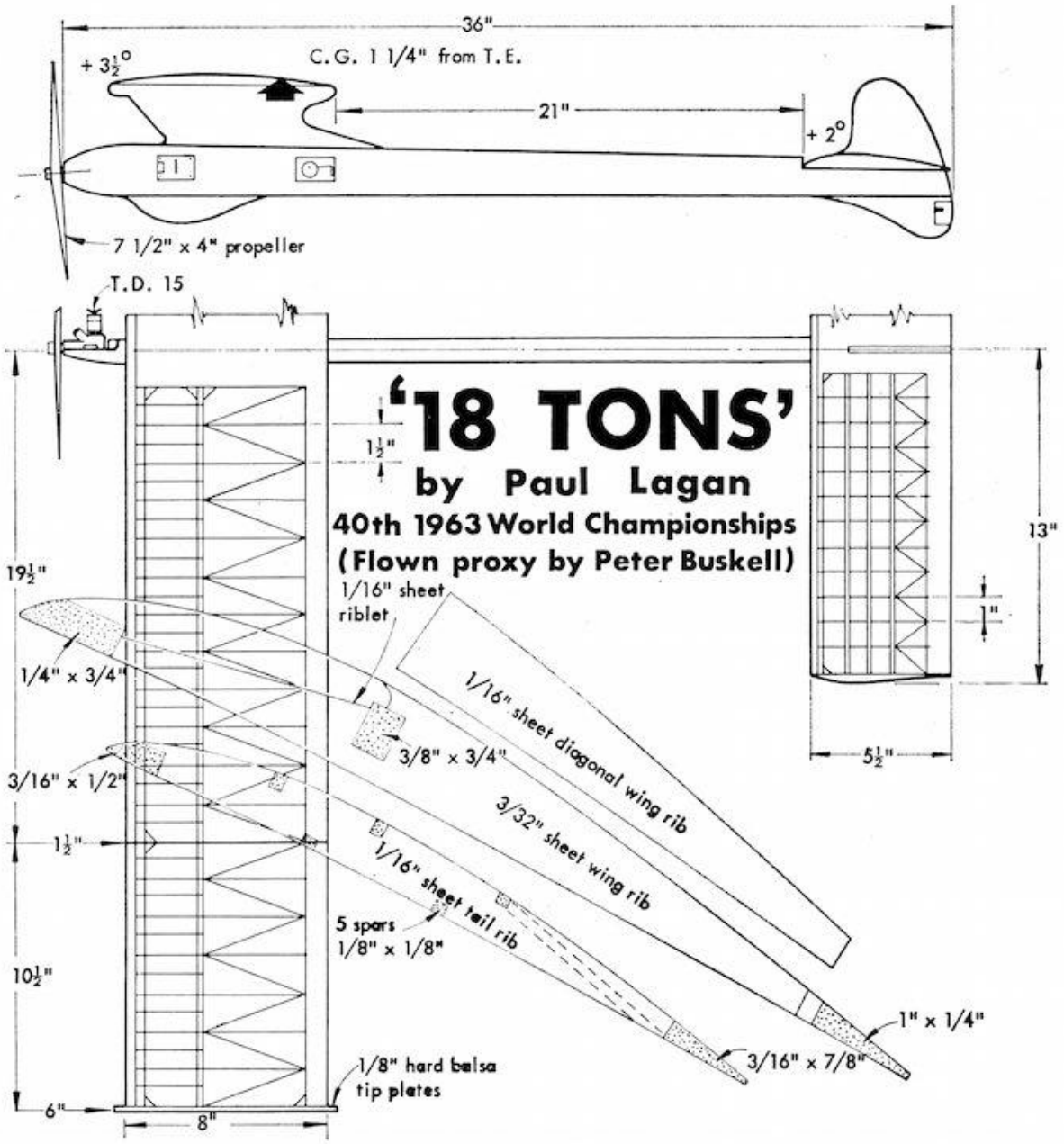


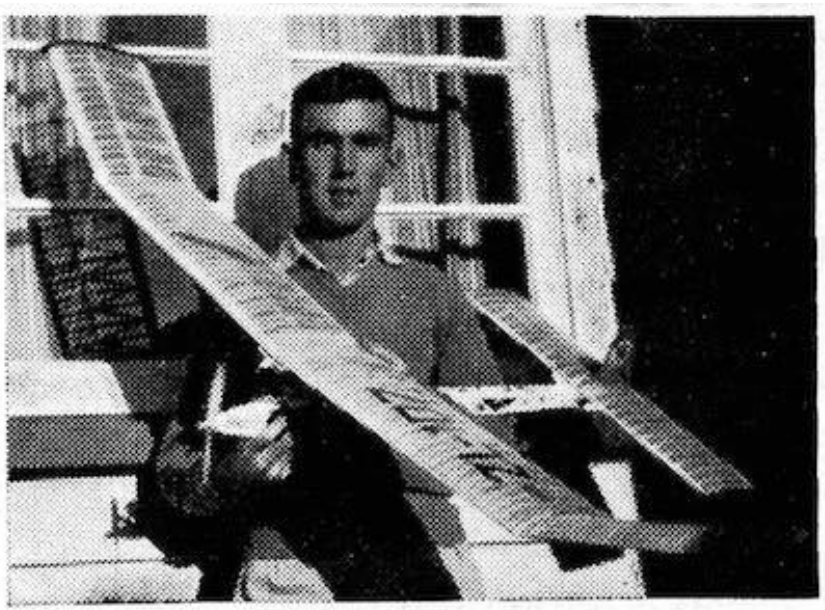
Above Right: The 1937 Zaic Year Book presents the original *Folly* which had wing dihedral. First plan publication date for the *Folly II* with cabane mounted polyhedral wing is uncertain, although the extract below suggests it was built in the same year as the *Folly.*

We inquired about the designer of the Folly II, in the *Workbench* column of our August '81 issue. A photo of the original aircraft appeared in the July '40 issue of *M.A.N.*, and we were attracted by its pretty layout and clean lines. Sad to relate, letters from John Pond and Frank Zaic confirmed the fact that Rod Doyle lost his life during World War II, as a troop glider pilot in Europe.

Rod was the California State Champ in 1936, and his Folly II came in second at the 1937 State Fair, Senior event. In a year when flying boxcars still dominated the scene, Folly II was a standout. In our opinion, it's still one of the prettier designs, both esthetically and functionally. In keeping with the latest trend, it should be a real performer if enlarged to 9 foot span. Ought to give the Lanzos a real run for the money. Plans were published in the Zaic Yearbook.


FOLLY II
Designed by: Rod Doyle
MODEL BUILDER magazine
Plan No: 1281-OT





PAUL LAGAN's "18 Tons" from R.N.Z.A.F. Wigram, New Zealand, is based on Ed. Miller's "Texan F.A.I.-Ton", using the airfoils from Pimenoff's "No. 18"—hence the origin of name. Paul found sheeted surfaces prone to heavy D/T landing damage so relies on normal covering. Tip plates are there purely to simplify construction. With Eta 15, it gained 1st place in South Island Team Trials (4 max's plus 1:29) and 3rd place at N.Z. Nats. Also held N.Z. records prior to rule changes. Two models went to Austria fitted with Cox Tee Dee 15. Auto rudder is a suggested mod, otherwise "18 Tons" is easy to trim.

VINTAGE PRECISION

Gordon Meads	Lanzo RC-1	1934	Vint Champs	600 + 200
David Gush	Miss Fortune X	1935	Nationals	600 + 199 +200
John Butcher	Miss Fortune X	1935	Nationals	600 + 199 +197
Brian Harris	New Ruler	1940	Nationals	600 + 198
Graham Bradley	RC-1	1934	Nationals	600 + 197
Steve Warner	Spook	1940	Nationals	600 + 197
Don Mossop	Bomber	1938	Nationals	600 + 192
Allan Knox	Lancer 45	1940	NDC 8 June	600 + 192
Allan Baker	Lancer 72	1938	NDC 28 June	600 + 172
Angus MacDonald	Bombshell	1941	Nationals	600

VINTAGE IC DURATION

Bernard Scott	Playboy Cabin	1941	Nationals	780
John Butcher	Miss Fortune X	1935	Vint Champs	780
Rex Anderson	Playboy	1941	Nationals	770
Tony Christensen	Playboy	1941	Nationals	770
Allan Knox			NDC	766
Wayne Cartwright	Bomber	1938	Nationals	764
David Thornley	Bomber	1938	Vint Champs	764
Gordon Meads	Lanzo RC-1	1934	Nationals	754
Angus MacDonald	Bombshell	1941	Nationals	740
Bryan Treloar	Miss Fortune X	1935	Gareth Newton	732

VINTAGE E DURATION

Brian Harris	Playboy	1941	Vint Champs	960 + 530
Wayne Cartwright	Top Banana	1950	Vint Champs	960 + 403
Allan Knox	Scram	1938	15 August	960 + 34
David Gush	Miss Fortune X	1935	Nationals	960 + 215
Keith Trillo	Stardust Special	1941	Vint Champs	950
Bernard Scott	Bombshell	1941	Nationals	949
Stuart Lightfoot	New Ruler	1940	Vint Champs	940
Rex Anderson	Anderson Pylon	1937	Nationals	922
Don Mossop	Playboy	1941	Nationals	905
Mark Venter	Comet Cruiser	1938	NDC #152	894

VINTAGE 1/2A TEXACO

Bernard Scott	Stardust Special	1941	Pukekawa	1500 +1280
Martin Evans	Miss Philly.VI	19--	Nationals	1500 + 597
Allan Knox	Skipper	1948	NDC Feb	1500 + 513
Rex Anderson	Playboy	1941	Nationals	1500 + 283
Mark Venter	Atomiser	1941	NDC Feb	1460
John Butcher	Texaco '39	1939	Tuakau	1400
Allan Baker	Slicker	1948	NDC Feb	1330
David Gush			NDC Sept	1295
Wayne Cartwright	Airborn	1938	Nationals	1240
CharlesWarren	Bomber	1938	Nationals	1211
John Selby	Playboy	1941	Gareth Newton	1195

VINTAGE 1/2E TEXACO

Wayne Cartwright	Arrow Nut	1949	Nationals	1480 + 1554
John Butcher	Miss Fortune X	1935	Pukekawa	1480 + 1466
Keith Trillo	Stardust Special	1941	Tuakau	1480 + 1414
Rex Anderson	Tomboy	1950	Vint Champs	1480 + 1286
Bryan Spenser	Slicker	1948	Vint Champs	1463
Bernard Scott	Tomboy	1950	Nationals	1422
Graham Main	Tomboy	1950	Tuakau	1379
Martin Evans	Brigadier	1941	Vint Champs	1354
Allan Sissons	Coronet	1941	Gareth Newton	1282
Tony Gribble	Stardust Special	1941	Pukekawa	1232

VINTAGE OPEN TEXACO

Bernard Scott	Playboy Cabin	1941	Pukelawa	1840 + 1249
Ian Munro	TD Coupe	1936	Nationals	1825
John Butcher	Lanzo RC-1	1934	Nationals	1340
David Gush	Miss Fortune X	1935	Nationals	1332

VINTAGE 1/2A TEXACO SCALE

Allan Knox	Chilton	26 July	668

VINTAGE A TEXACO

John Butcher	Lanzo RC-1	1934	NDC Sept	1860 + 1035
Stuart Grant	Simplex	1941	NDC June	1840
Charles Warren	So Long	1941	Nationals	1838
Bernard Scott	Simplex	1941	Tuakau	1785
Ian Munro	Simplex	1941	Gareth Newton	1773
Graham Main	Simplex	1941	NDC	1671
Joe Bradbury	Viking	1940	Gareth Newton	1534
Rex Anderson	Cloud Snooper	1940	Nationals	1523
Des Richards	Junior 60	19	Nationals	1376
Graham Main	Simplex	1941	Tuakau	1350
Bryan Treloar	Playboy	1941	Gareth Newton	1230

VINTAGE E TEXACO

Rex Anderson	Kerswap	1942	Tuakau	1860 + 1030
Dave Crook	Bomber	1938	Pukekawa	1860 + 571
John Butcher	Miss Fortune X	1935	Vint Champs	1860 + 560
Keith Trillo	Stardust Special	1941	Vint Champs	1860 + 535
Angus MacDonald	Eight Ball	1949	Nationals	1860
Tony Gribble	Bomber	1938	Tuakau	1860
Wayne Cartwright	Cruiser	1937	Tuakau	1853
Doug Baunton	Miss Arpiem	1938	Vint Champs	1354
Martin Evans	Miss Trenton	1938	Nationals	1074

VINTAGE E RUBBER TEXACO

John Butcher	Gollywock	1944	1 December	1860 + 1466
John Danks	Ascender	1949	16 August	1860 + 1270
Keith Trillo	Yonder		Pukekawa	1860 + 1185
David Gush	Rocket Stick	1941	Tuakau	1860 + 866
Wayne Cartwright	Lanzo D	19	Vint Champs	1860 + 863
David Gush	?		NDC #227	1835
Doug Baunton	JA Skokie	1938	Vint Champs	1722
Graham Main	KK Gipsy	1946	Tuakau	1547
Bernard Scott	Lanzo Duplex	1937	Nationals	183

CLASSICAL PRECISION

Brian Harris	Humbug	19	Vint Champs	594
David Thornley	Satellite 1000	1972	Vint Champs	590
Don Mossop	Super 60	1961	Vint Champs	571
Graham Main	Gigi	1964	NDC April	538

CLASSICAL IC DURATION

Wayne Cartwright	Amazoom	1955	Nationals	858
David Thornley	Satellite 1000	1972	Nationals	857
Bernard Scott	Starduster 600	1959	Nationals	840
Evan Pimm	Tequila	19	Nationals	836

CLASSICAL E DURATION

Don Mossop	Texan FAI	1961	Nationals	900
Brian Harris	Vapour Trail	1953	Pukekawa	876
Bernard Scott	Frisco Kid	1955	Nationals	867
Wayne Cartwright	Nig Nog	1961	Nationals	802
John Warner	Texan FAI	1961	Nationals	761
Graham Main	Gigi	1964	NDC May	760
Martin Evans	Skymaster	19	Nationals	626

TOMBOY IC and International

Rex Anderson	Doonside	Vint Champs	1432
Mark Venter	Doonside	12 April	1400
Jack Godfrey	Mills .75	Vint Champs	855
Charles Warren	Mills .75	Tuakau	835
Rex Bain	Mills .75	Vint Champs	755
Sean Currie	Mills P.75	August	595
Lynn Rodway	MP Jet .06	NDC May	592

TOMBOY E and International

Rex Anderson	180 / 2S	Vint Champs	1782
Bryan Spencer	180 / 2S	Vint Champs	1442
Keith Trillo	180 / 2S	Tuakau	1231
Lynn Rodway	180 / 2S	NDC May	1026

VINTAGE POWER

Bernard Scott	03 Jan	540
Rex Anderson	03 Jan	536
Rex Bain	03 Jan	530
Paul Evans	03 Jan	322
John Butcher	03 Jan	126
R.Gunner	NDC	70
Allan Douglas	14 Mar	13
-		
-		
-		

VINTAGE RUBBER

William McGarvey	03 Jan	540
Devon Sutcliffe	14 Mar	502
Bernard Scott	03 Jan	468
Ron Magill	03 Jan	411
John Malkin	03 Jan	409
Chris Murphy	03 Jan	381
Rex Bain	03 May	255
Stan Somerfield	03 May	249
Alwyn Graves	03 Jan	246
-		

VINTAGE GLIDER

Rex Anderson	03 Jan	369
David Ackery	03 Jan	344
Bernard Scott	03 Jan	341
Martin Evans	03 Jan	256
Paul Evans	03 Jan	198
Graham Main	NDC	163
Kyla Fisher	03 Jan	157
Peter Wilson	03 Jan	92
John Butcher	03 Jan	89
-		

VINTAGE HL / CAT GLIDER

David Ackery	03 Jan	313
Graham Lovejoy	08/02	306
David Gush	03 Jan	287
Ron Magill	03 Jan	286
Kyla Fisher	03 Jan	283
John Butcher	03 May	266
Peter Wilson	03 Jan	257
Heath Butcher	03 Jan	220
Des Richards	08 Feb	239
William McGarvey	03 May	235

VINTAGE PRECISION

Bernard Scott	03 Jan	261
Lynn Rodway	NDC	251
Stan Somerfield	03 May	249
Stewart Morse	NDC	244
Charles Warren	03 Jan	235
Chris Murphy	14 Mar	229
Bryan Leeves	03 May	223
Roy Gunner	NDC	212
Bruce Weatherall	NDC	200
Dave Jackson	NDC	197

NOSTALGIA POWER

Bernard Scott	03 Jan	540
Rex Bain	03 Jan	528
Rex Anderson	14 Mar	340
Bruce Bonner	NDC	331
Steve Wade	14 Mar	301
Lincoln Vincent	03 Jan	135
Peter Wilson	08 Feb	88
-		
-		
-		

NOSTALGIA 1/2A & MIN REPLICA

Rex Bain	03 Jan	321
Lynn Rodway	NDC	302
Bernard Scott	03 Jan	281
Rex Anderson	03 Jan	221
Chris Murphy	03 Jan	137

NOSTALGIA RUBBER

Bernard Scott	03 Jan	540
John Malkin	03 Jan	500
Graham Lovejoy	03 Jan	412
Chris Murphy	03 Jan	335
Alwyn Graves	03 Jan	128
Ray Yuile	08 Feb	43

NOSTALGIA GLIDER

Martin Evans	03 Jan	470
Terry Tank	14 Mar	203
Rex Anderson	03 Jan	185
Bernard Scott	03 Jan	165
Kyla Fisher	03 May	162

CLASSICAL GLIDER

Rex Anderson	14 Mar	540
Moira Vincent	03 Jan	405
Terry Tank	NDC	90

CLASSICAL POWER

Rex Bain	14 Mar	540
Bernard Scott	03 Jan	364

CLASSICAL RUBBER

Lincoln Vincent	03 May	485

South Island News and *News of the North*

On his way through Hamilton on the Targa Rally of NZ, Ken Buckley dropped off a collection of *News of the North*. Most of the bulletins were printed on newsprint and have withstood nearly half a century with a range of of success. This, and the varying size of paper used, has resulted in some less than perfect copies but despite this the enthusiasm and camaraderie of the Free Flight community of the time comes through undiminished. Copies of the 28 scanned issues may be obtained from the editor by sending an SD card or USB stick drive of at least 2GB and an addressed stamped envelope.

Thanks Ken for the loan of the originals.

Vintage classes on offer at the 68th Nationals include 10 Free Flight, 12 Radio Control, and 4 Control Line events. The range was not always so wide. 1973-4 had just one lonely Vintage FF Power event on the programme. Below are the introductory years of some of the other, pre-electric, events.

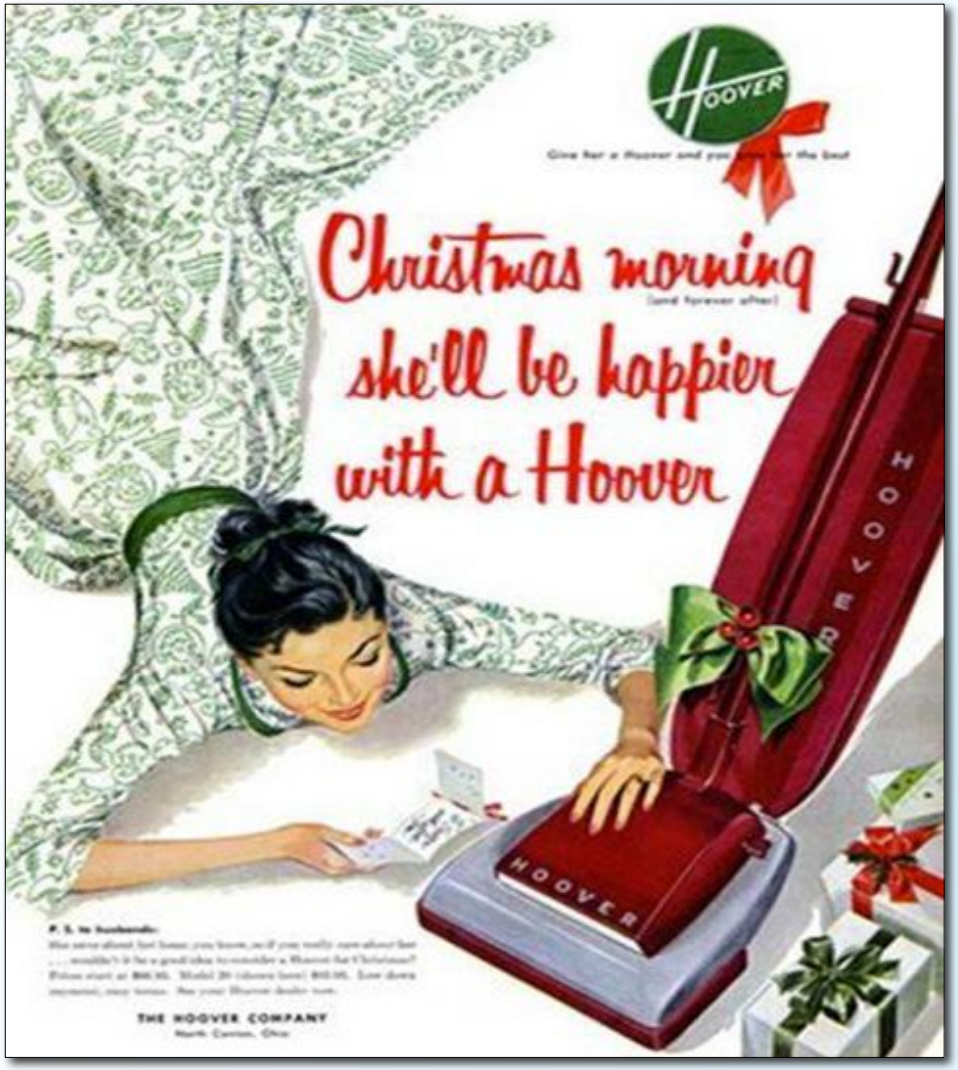
1973-74	Vintage FF Power
1975-76	Vintage FF Rubber, Vintage FF Glider
1978-79	Vintage FF .020 Replica
1983-84	Vintage FF Diesel
1984-85	Vintage FF Spark Ignition
1988-89	Vintage FF Precision, Vintage HLG, Vintage RC Precision Vintage CL Midge Speed, CL Old Time Stunt Classic CLTeam Race
1989-90	Vintage RC Duration
1991-92	Vintage RC 1/2A Texaco

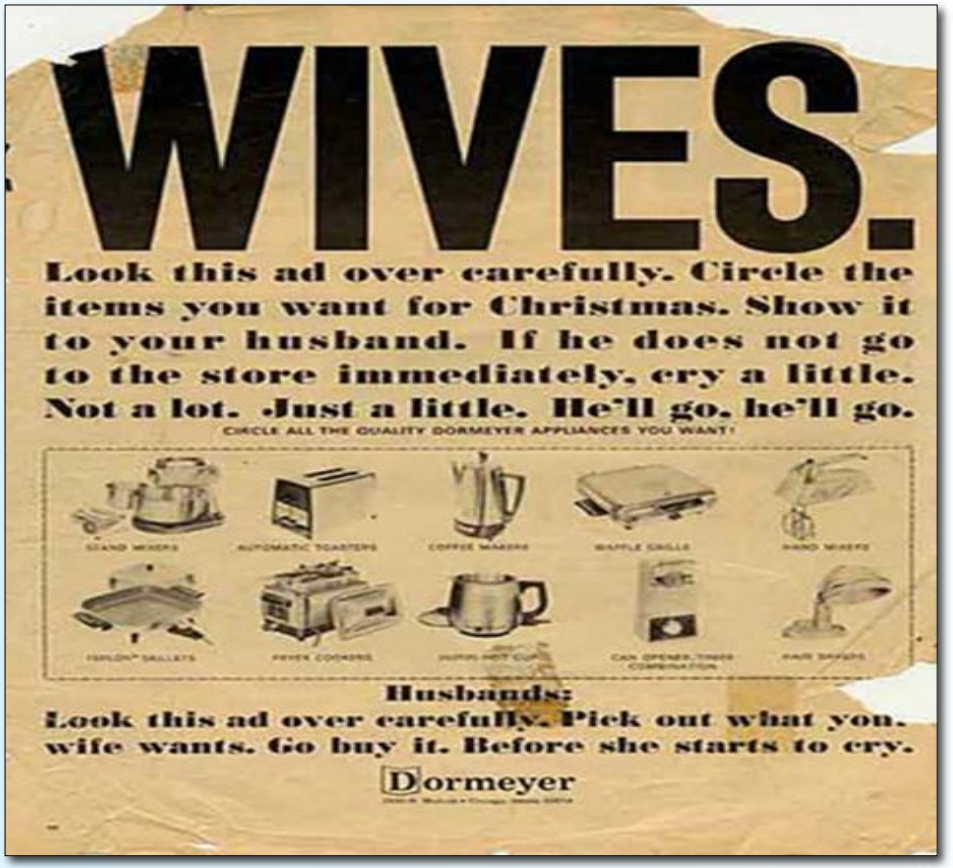
Leader Boards for 2016.

Before the start of the next round of events for the Leader Boards I will email blank forms which can be used for recording scores and details of the event. Using these will simplify updating the boards.

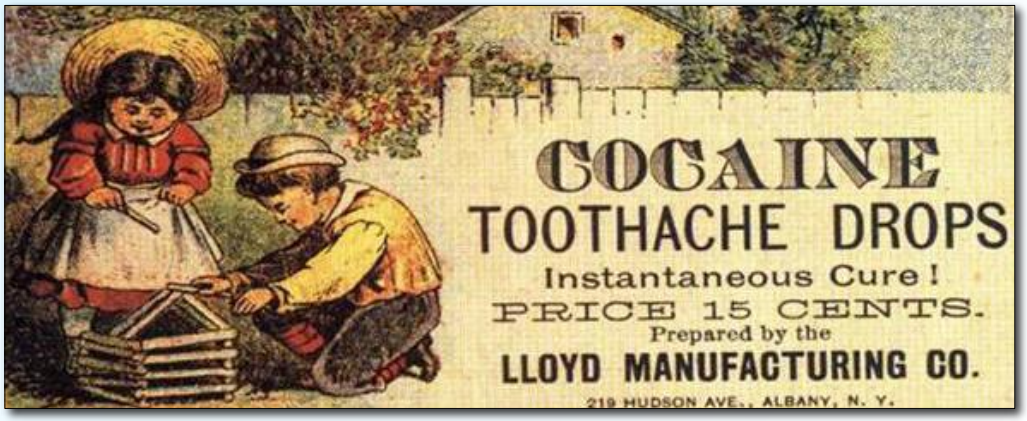
The Leader Boards record only the single highest score in each event for each competitor, so there is no need to send scores that are less than your previous best.

VINTAGE POSTER ADVICE FOR A HAPPIER CHRISTMAS





And, if you break a tooth on the thri'pence in Auntie Mable's pudding, you can sooth the ache with .....



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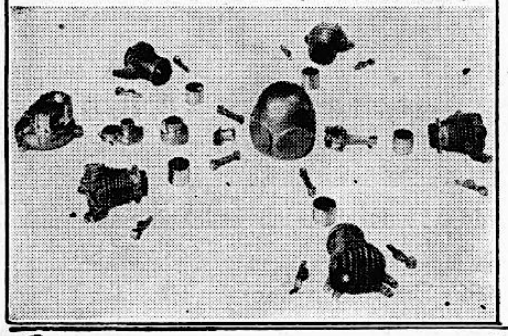
5-Cylinder Model Airplane

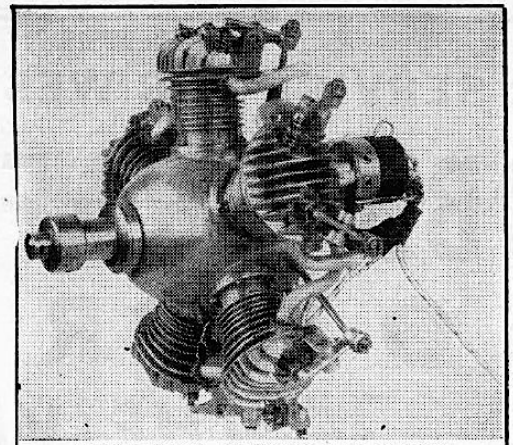
RADIAL ENGINE

Bore: .625″ Stroke: .600″
Overall Diameter: 5⅜″
Estimated ½ H.P. at 3500 R.P.M.
WEIGHT: 22 oz.

At last, here it is: A model 5-cylinder radial airplane engine, PRECISION BUILT, and weighing only 22 ounces. Hardened, ground steel sleeves, cast in aluminum cylinders. Pistons lapped in individual cylinders, insuring perfect fit and maximum compression. Valves are made of special steel, and seat in replaceable valve cages. Crank Shaft and lead gear are mounted in three New Departure ball bearings. In fact every part of this remarkable little engine is made just like the big ones. All castings are high pressure aluminum die cast, and will meet the most rigid inspection. IMAGINE THE THRILL of seeing and hearing this engine hitting it off on "all five," the tiny rocker arms jumping up and down. It even has a THROTTLE in the carburetor.

BELOW: M-5 CASTINGS (UNRETOUCHED)





FRONT VIEW—MORTON M-5 ENGINE

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This engine will come to you factory tested and GUARANTEED to run. Price delivered, less coil, condenser, fuel tank and propeller—$79.30. If you want the fun of assembling this little beauty yourself, you can get a complete set of all parts completely finished and ready to assemble—less coil, condenser, fuel tank and propeller—price, delivered: $67.40.

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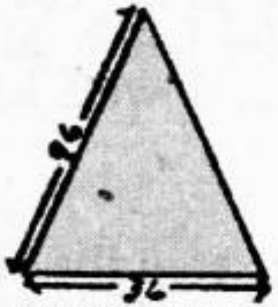
Complete Chute $15.50

Typical Section



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