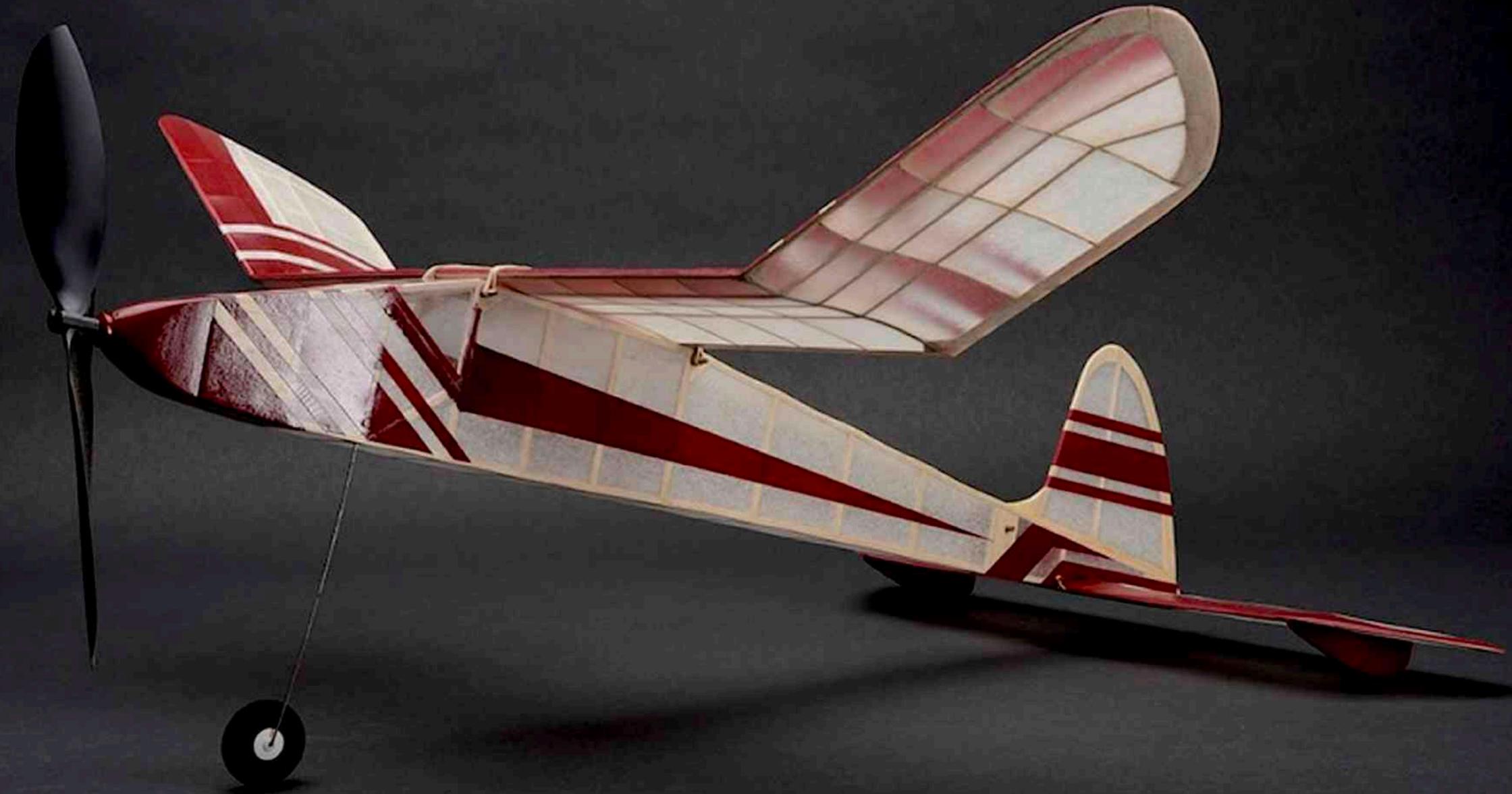


AVANZ



NEWS

Newsletter of the Vintage Special Interest Group of Model Flying New Zealand #178



FEED-BACK

Plenty of feedback for the unusually comprehensive issue #177. We have all had extra time, sometimes too much extra time, to fiddle-faddle, build, and (*hooray!*) write something for the bulletin. Some writers mentioned pleasure in reading of other's aeromodelling activity. If you enjoy the building projects of others, return the favour and tell them about your latest build.

Responses to David Ackery's observations on E-Rubber Texaco ranged from simple agreement to some jolly strong words including "*abominable*". One response is on the right.

Dick Twomey advises that his book "Wing Tips" may be ordered directly from him at r-twomey@live.com for \$NZ 25 plus about \$NZ 6 for postage. Mauritius Post is much more reasonable than NZP as sending Dick's 185g book from NZ to Mauritius would double its cost.

Dick also sent photographic evidence (see Real Vintage page) to show that the *Junior Sixty* design predates the 1955 date printed in Issue 177. Quite right, the original 1946 design was re-vamped by KK in 1955. Outerzone has both versions and a quick comparison revealed only a change to the firewall and wing spar placement.

Rejoinder to David Ackery

Wayne Cartwright

On my first reading of David Ackery's article in AVANZ News 177, I thought that it must be a humorous spoof, but I now think he was serious.

Trying a little spoofing myself, David's article reads much like a fiery sermon. He appears to assert with fervour and focus that the One Path to True Rendition of Vintage Rubber Designs is to power these models with Elastic Polymer. He urges us to banish and repent our Electron-powered Renditions, which he refers to as 'an exercise in silliness' and 'no longer Vintage'. Surprisingly, David's Calling on this subject has been delayed for several years. The objects of his Righteous Indignation are not a 'recently discovered genre' as he asserts, but have been flown as a Nationals class since 2013. The text for the sermon seems inconsistent because David declares it 'OK' to substitute Electrons for the original petrol, methanol and diesel in our Renditions of Vintage Power Designs. End of spoof!

It is ironic that David waxes lyrical about his Vintage Rubber models having 'the beautiful glide overhead as the sun shines through the covering' because these words also describe the flight of Vintage E Rubber Texaco models when cruising and gliding. This is so because these models have wing loadings that are similar to the originals.

Contrary to David's stance, the Vintage E Rubber Texaco class contributes well to the Vintage SIG's aim of 'flying model designs of another era'. This aim is implemented through the stated purpose of the class: 'To enjoy electric RC flying with Rubber Model designs from the Vintage period through managing battery energy supply to achieve maximum flight time.'

I wonder whether David would prefer vintage rubber designs to moulder as dusty plans rather than again have wind beneath their wings, even if they are electric powered? Surely a committed Vintage person would be grateful to people who revive these lovely old designs in this way, rather than pour scorn on their efforts?

All readers who know David respect him for his aeromodelling prowess and achievements. It is sad that he does not reciprocate by respecting the contributions to the Vintage movement that are made by others who take paths different to his own. If David really intended to exhort his readers to build and fly FF Vintage Rubber, the tone of his message could have been far more positive and encouraging.

PS The Editor's accompanying remarks expressed his concern that the quest for lightweight structures might 'cross the boundaries that give Vintage its character'. The wing loading of 4 oz/sqft that he refers to is not especially low. For instance, my Lanzo Championship Stick - built without any special lightening - is flown at close to the weight specified by the designer in his 1940 article (9.25oz). Lanzo's wing loading is 4.44 oz/sqft. Surely building light structures is very much a part of the Vintage Rubber tradition, within the limits imposed by our Rules that require fidelity to original appearance.

Vintage RC and FF events at the 2021 Nationals

2021 NATIONALS PROGRAMME for VINTAGE					
REGISTRATION Sun 3rd January 2021	DAY 1 Mon 4th January	DAY 2 Tue 5th January	DAY 3 Wed 6th January	DAY 4 Thur 7th Jan	DAY 5 Fri 8th January
	7am - Noon	7am - Noon			
	Vintage FF Power	Nostalgia FF Power			
VINTAGE	Vintage FF Rubber	Nostalgia FF Rubber			
FREE FLIGHT	Vintage FF Glider	Small FF Power			
7 am - 12 noon	Vintage FF Precision	Classic FF Comb R/P/G			
	Vintage FF Catapult				
	1pm to 5pm	1pm to 5pm	9am to 5pm	9am to 5pm	9am to Noon
VINTAGE RC	Vintage Open Texaco	Vintage 1/2A Texaco	Classical 1/2E Texaco	Vintage 1/2E Texaco	Vintage A Texaco
Days 1-2 1pm - 5pm	Vintage Precision	Vintage IC Duration	Sport Cabin E Texaco	Vintage E Texaco	Classical IC Duration
Days 3-4 9am - 5pm	Classical Precision		Classical E Texaco	Vintage E Rubber Tex	
Day 5 9am - Noon			Classical E Duration	Vintage E Duration	3pm AGM and PRIZEGIVING
	Fun Fly				

NDC, Rallies

July 2020	136	VINT	FF Nostalgia Glider Duration
September 2020	145	VINT	FF Nostalgia 1/2A Min Replica
September 2020	146	VINT	FF Classic Power Duration
September 2020	147	VINT	RC Vintage 1/2A Texaco
September 2020	148	VINT	RC Vintage A Texaco
September 2020	149	VINT	RC Sport Cabin IC Texaco
September 2020	150	VINT	RC Sport Cabin E Texaco
October 2020	151	VINT	FF Vintage Hand Launch Glider
October 2020	152	VINT	FF Vintage Catapult Glide
October 2020	153	VINT	RC Vintage Open Texaco
November 2020	156	VINT	FF Vintage Glider Duration
November 2020	157	VINT	FF Classic Glider Duration

July 2020	137	VINT	RC Vintage and Classical Scale Texaco
July 2020	138	VINT	RC Classical Precision
July 2020	139	VINT	RC Sport Cabin IC Texaco
July 2020	140	VINT	RC Sport Cabin E Texaco
August 2020	141	VINT	RC Vintage IC Duration
August 2020	142	VINT	RC Vintage E Texaco
August 2020	143	VINT	RC Classical E Duration
August 2020	144	VINT	RC Vintage Precision
September 20	147	VINT	RC Vintage 1/2A Texaco
September 20	148	VINT	RC Vintage A Texaco
September 20	149	VINT	RC Sport Cabin IC Texaco
September 20	150	VINT	RC Sport Cabin E Texaco
October 2020	153	VINT	RC Vintage Open Texaco
October 2020	154	VINT	RC Classical 1/2E Texaco
October 2020	155	VINT	RC Classical E Texaco
November 20	158	VINT	RC Vintage E Rubber Texaco
November 20	159	VINT	RC Vintage 1/2E Texaco
November 20	160	VINT	RC Classical IC Duration

2020 Southern North Island - Levin

September 19 and 20 John Selby Memorial

Contacts: Stew Cox 027 5481 894
 Bryan Treloar 0204 147 6917



SOUTH ISLAND FREE FLIGHT CHAMPS

25-26 July 2020

MFNZ members are invited to the revival of the South Island Free Flight Champs hosted by Christchurch MAC on July 25th and 26th 2020.

Flying at the Willows Saturday 0730 and Sunday 0730.

No Entry Fees



Christchurch Model Aero Club
Thompsons Road, The Willows, Christchurch

MINI-COMBINED

3X120

(A1, 1/2 A POWER, COUPE)

KENNEDY PRECISION

3X120

KIWI POWER

3X120

P30

3X120

OPEN COMBINED

3X180

CLG / HLG / TLG

6X60

To register and more info
please contact:-

Bill Long

03 322 7202

billlong@xtra.co.nz

Bob Burling Memorial Vintage Event

Levin 16 and 17 May 2020

Having been expecting to have to cancel or postpone the event due to the Covid-19 Level 3 lockdown, things changed very quickly with the change to Level 2 during the week the event was planned for. It was clear after contacting a few regulars that people were itching to fly and it then became a matter of whether we could conduct the event within the new Level 2 requirements which as you may recall were continuing to evolve and be refined as that first week of L2 wore on. We determined we could run the event within the L2 rules and this proved to be the case – thanks to all those who attended for keeping to the guidelines.

Levin again turned on excellent flying conditions both days and attendance was quite good under the circumstances. Over the course of the two days, nine people recorded times over five classes. Another four did some Vintage RC sport flying without recording times and two sport fliers flew Free Flight Vintage models on the Sunday. Most got in some sport flying as well as recording times which is very much in the spirit of these events. A lot of vintage flying was accomplished over the weekend!

Wayne Elley flying in his first vintage event had his elegant 1936 *Miss America* which he built and finished to a very high standard from a NZ produced Hangar One short kit.



Wayne Elley's 1936 Miss America zeroing in on the spot



Bryan Treloar readies his Lanzo Airborne - you can almost hear the McCoy.

Wayne flew both Vintage Precision and Vintage Duration and enjoyed his first vintage competition – welcome Wayne. Bryan Treloar protege Ross Gray from the Ashurst Club played an active part on the Sunday helping with timing and taking the wonderful photos included with this article. Welcome to Vintage Ross. We look forward to seeing you flying with us soon. The Kapiti Club was well represented by a keen and growing group with some entering times and a few sport flying – a wide range of models from the club and several attended both days. Wellington was also well represented as were the Levin, Ashurst and Feilding clubs.

In addition to setting the standard in most of the events he flew, Bryan Treloar gave his new 1936 *Dallaire Sportster* plenty of test flying. Sporting the Treloar blue and red livery, the Dallaire looks to have great potential matching its good looks.

Trevor Glogau also had his beautiful new 1939 *Streamliner E Rubber* model but had technical issues preventing it flying on the day. The writer has subsequently seen it fly and can report it has great presence and character in the air. Both Bryan and Ian Munro flew also their sparkies to good effect.

As is usually the case, Precision proved most popular. The rules of this class seem to have a wide appeal to both newbies and experienced fliers alike. Joe Bradbury and Bryan Treloar flew the rounds perfectly and in the fly-off, Joe won with only 1 second separating the two. The newer fliers especially seemed to enjoy the challenge of landing on the spot and it was great to see the obvious enjoyment on their faces when they achieved the goal.

There were some very long flights in Open Texaco from Bryan and Trevor and E Duration was won by a significant margin by Jonathan Shorer with his potent 1946 *Viking*. Thanks Jonathan for all the support you have provided for Vintage events at Levin over the years and for the great BBQ lunches and food that you and Gill have provided the event participants. A pity we couldn't have a BBQ on this occasion due to the Covid-19 level 2 rules. All the best for the next phase of your lives back in England!

Wayne Lightfoot and Graham Lovejoy of the Feilding club also attended with their small field free flight vintage rubber models. Wayne was flying a 1946 Modelair *Silverking*, a design that his father Stuart flew used to fly 74 years ago! Graham was flying a 1950 KeilKraft *Senator*. There appears to be interest in including some small field vintage free flight competitions at future Levin vintage events.



Trevor Glogau,
1939 *Streamliner*
E-Rubber model



Yes, it definitely
is inside the spot
landing circle

The next vintage event at Levin is the John Selby Memorial in September. Same format as the Bob Burling event with the likely addition of some free flight classes to be advised. Some will also be using the NDC Vintage events as an excuse to air their vintage models with others at Levin and other club fields throughout the rest of the year.



Wayne Lightfoot flew a free
flight Modelaire *Silverking*

Results

Vintage Precision

							Flyoff	Total
1. Joe Bradbury	Levin	Junior 60	1946	200	200	200	196	796
2. Bryan Treloar	Ashurst	Red Zephyr	1936	200	200	200	195	795
3. Jonathan Shorer	Levin	Buccaneer	1940	197	200	200		597
		Buzzard						
4. John Miller	Kapiti	Bombshell	1940	200	182	200		582
5. Ian Crossland	Kapiti	Mercury	1939	175	200	180		555
6. Wayne Elley	Kapiti	Miss America	1936	179	166	175		520

Vintage IC

Duration

1. Bryan Treloar	Ashurst	Lanzo Airborne	1938	252	252	260		764
2. Wayne Elley	Kapiti	Miss America	1936	157	218	260		635
3. Terry Beaumont	Kapiti	Lanzo Bomber	1938	198	199	159		556

Vintage E Duration

1. Jonathan Shorer	Levin	Viking	1946	320	320	304		944
2. Ian Crossland	Kapiti	Tomboy 2X	1950	233	231	204		668
3. John Miller	Kapiti	Tomboy 2X	1950	293	146	124		563

Vintage Open

Texaco

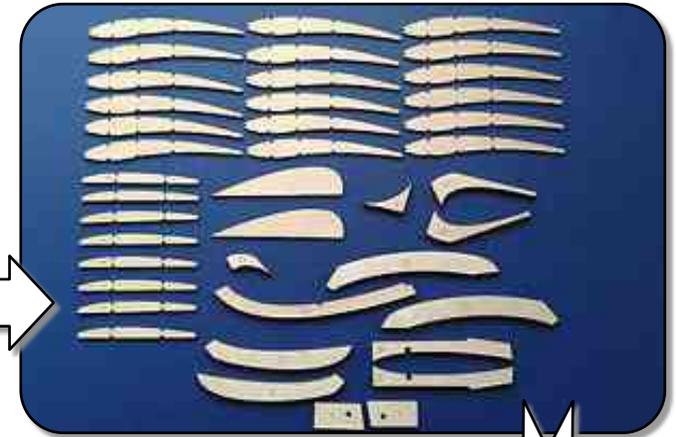
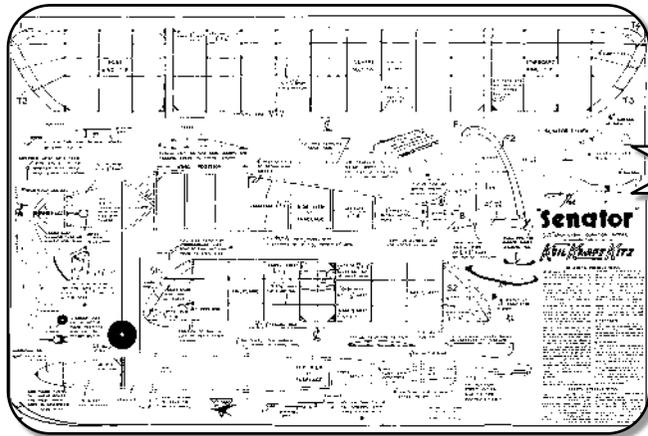
1. Bryan Treloar	Ashurst	Lanzo Airborne	1938	920	912			1832
2. Trevor Glogau	Wellington	Falcon	1949	901	752			1653
3. Ian Munro	Wellington	TD Coupe	1936	803	726			1529

A Texaco

1. Ian Munro	Wellington	Simplex	1941	609	404	489		1502
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BUILDING A SENATOR in nine easy steps

(Editor's technique)





Frederick Lewis Allen, (Fred Allen was a famous radio comedian from the 1930's) or some equally profound social historian, could likely explain the conditions which brought about the hobby within a hobby which in the last eighteen years has become known as Old Timer (OT) modelling. Perhaps it was the social and technical climate in the 1960's. The long war in Asia, political assassinations, civil demonstrations, the individuals struggle against computerized stupidity, and other such factors constantly reminded us of the turmoil and change in our daily lives. Such conditions have been known to drive people to seek comforting distraction in recreating nostalgic elements of younger and (seemingly) more happy times.

Such profound analysis we will leave to the sociologists. However, there was a factor which we should record that non-modeler researchers might fail to comprehend. In the '60s there were in the USA a large body of still active modelers who had spent their adolescent years in modelling during the 1930s and early '40s, which were the so-called "golden age" of free flight development. By the mid-'60s these modellers were in varying levels of middle age. They had developed careers in business, and some were even beginning to plan early retirements. Their children were half or full-grown and many other factors of their busy younger lives were either accomplished or in-hand. As a result, they began drifting back into modelling on a more regular basis. They began thinking in terms of regular building sessions, and once more attending contests.

The Retreads Look: In surveying the contemporary model scene however, these "retreads" found things much changed from their youthful memories. The AMA national organization had enjoyed

tremendous growth... in both numbers and remoteness. Its emphasis was on radio control activities, with the associated factors of re-emphasizing building and promoting spectator oriented flying. This was where the buck was to be found and "Big" business (by model airplane standards) was calling the tune. What really hurt was that the modeller's organization had taken on all the warm, personal communication of an IBM or a GMC. Greater and greater numbers of faceless marchers... all in lock step.

Digging deeper into the purely free flight activities around the country, the middle aged modeler looked for current alternatives. He examined the international FAI events; and found them about as casual as America's Cup racing or Formula auto competition... and requiring roughly the same amount of time, money and travel! He also surveyed the contemporary Free Flight scene and found it less regimented than FAI events but still involving a race of constant technical and mechanical refinements.

Two Real Reasons: There was also another factor inherent in both of these possibilities, which did not jell with the budding old timer prospect. That was the deadening factor of monotony in design planform and general concepts in modem models. Wild, unusual and highly individual approaches, all directed toward a common goal of stable performance and good duration were part of the golden age of modelling development. With the definition of sound design patterns, these variations largely died out in post-war modelling. As the future OT modeller viewed the accepted modem concepts he realized that a common monograph planform could be laid over any contemporary design (FAI or AMA) with little deviation required.... and from a little distance, there was no difference at all!

This factor of expressing individual design tastes, along with the more leisurely low- pressure approach to organized competition, may be the key reasons behind the unexpected interest in OT modelling, here and abroad. It is certainly clear that a variety of OT designs are selected for building and competing each year. Among the more serious OTers, the search goes on for the unusual and/or long forgotten subject... with which to surprise, entertain (and perhaps defeat?) fellow flyers.

A Little History: In retrospect, it is difficult to back track all the individuals and events that made OT modeling bloom in the 1960's as a popular "unofficial" national movement. However, we can identify a major factor which unified nationwide pockets of interest and activity. This was the formation of a national organization for OTers based on a statement of objectives, a common definition for OT models and a single set of rules for OT competition. How this organization came about also involves many individuals and events. But we can isolate some blocks of people's actions, which were key factors in getting the job done.

Plans, Engines & Chapters

The Warbucks Factor: Running like a rampant thread throughout the fabric of Old Timer development was a package of boundless energy named John Pond, whose smooth dome, shockwave personality and earth moving organizational capabilities have earned him the affectionate nickname. "Daddy Warbucks". During the first trickles of the movement, John got into a running discussion with a fellow Northern California modeler. Bob Bowen, on the performance merits of pre-WW II models. Bowen contended that many of these ships could perform as well as contemporary

designs, and that it would be fun to have regular contests for them as a distinct class.

These conversations aroused the interest of other flyers in the area and as a result the Stockton Gas Model Association held its first Old Timer Annual in 1961. Around this time other clubs throughout the country were also producing OT advocates, and some competitions to widely varied regulations. But there was a unique outgrowth of the Northern California activities: and it was to become one of the true foundations of the movement. The \$1.25 Dream: John Pond, in his zeal to get the California OT contests off to a good start, volunteered to draw full size plans, on order, of the kit and magazine published pre-war models. The tab was \$1.25 for a blueline print of the original vellum, and from that casual beginning the demand for these plans mushroomed. More and more modellers seemed to want to rebuild that first "real" flyer from their youth, or to finally get to build their dream ship that the rushed adult responsibilities had not left time for.

Today this demand for old plans continues to expand, with no end in sight. Even the most obscure designs continue to be unearthed in this country and literally from the four corners of the globe. John's old drawing board has grown into the Old Time Plans Service with a four-volume catalog (Gas, Rubber and two on Flying Scale) now in its ninth edition update.

The Collection Agency: With the beginning of scheduled club competitions and the available working drawings from Pond, the OT'ers had two-thirds of their requirements. Their remaining need was old ignition engines; and that presented a problem. Even high production rate pre and post-war makes, such as the Ohlsson, had long been off the public market by the beginning of the 1960s.

Some builders solved this dilemma by using modern glow engines. However, there were a couple of things wrong with this that kept the problem from going away. First, some of the older designs weren't happy with the increased power of the modern engines; and second, many OT'ers were of the purist ilk. and since they were resurrecting old designs, nothing less than three and one fuel (gas-to-oil mix) and an internal ignition system would do. Some of these flyers had retained their old engines, but most had not.

The solution to this requirement began in an unusual way because it involved a group of largely non-flyers and even many non-modellers, in the active sense. Roughly in parallel with the OT flying activities in the early '60s, a modeler named Joe Wagner decided the rich history of model engines was also an important aspect of old time modeling, and should be preserved. Toward this end he literally single-handedly began to publish a newsletter called, the Engine Collectors' Journal. Joe struggled along with his dream for many months. He completed a massive alphabetical listing of common and rare engines, and published much of the old engine histories and technical data gleaned from his personal files.

Joe's efforts gathered a small but strong following of enthusiasts who shared his fascination with the old engines. But, like so many labor of love, one-man-band efforts, in the end Joe had to give up his publishing operations. However, the seed had been sown, and others came along to continue the work Joe had begun.

In August 1963, Tim Dannels of Denver began publishing the Journal again, and from that point on this branch of the hobby began

to gather momentum. Regular collector "swap meets" began to spring up, and an ever-increasing wealth of history and how-to information began to fill the pages of the Journal.

For the average OT flyer/competitor, this engine collector activity had two distinct benefits. First, the intense activity of locating old engines by the collectors brought to light many non-rare and otherwise unattractive "chipped" engines. These soon found their way into the hands of those seeking "runners" to power their growing fleets of OT models. Second, the collector's newsletter would provide a nationally distributed grass roots publication which could document and promote the widely scattered and largely independent building and flying activities of OT enthusiasts across the country. This convenient circumstance was to set the stage for the final chapter in formalizing the OT movement.

Let's Play It Again, Sam: In October 1963, John Pond and another OT modeller, Lee Freeman, were sharing a ride to the Stockton Gas Model Association's third Annual OT contest. During the trip, Freeman suggested that what the OT movement needed at that point was a national organization; some focal point for the administration and rules development that would unify the current widely varied activities. The benefits to the individual modeler would be a source of information exchange with like-minded hobbyists, and a common platform for those interested in OT competition on both local and national scales. Of course, uniform contest rules would be the salvation of the poor local contest director!

How the Vintage Movement Started 4 Ken Sykora (1979)

John agreed wholeheartedly with Freeman's ideas, but when Lee further suggested that John was just the man to organize such a plan. Pond begged off. At the time John was heavily involved in AMA politics, as well as several local model organizations, and just could not find the time for another undertaking. Freeman let the matter drop, and decided the issue was closed. Like so many others, however, Lee had underestimated the Warbucks Factor!

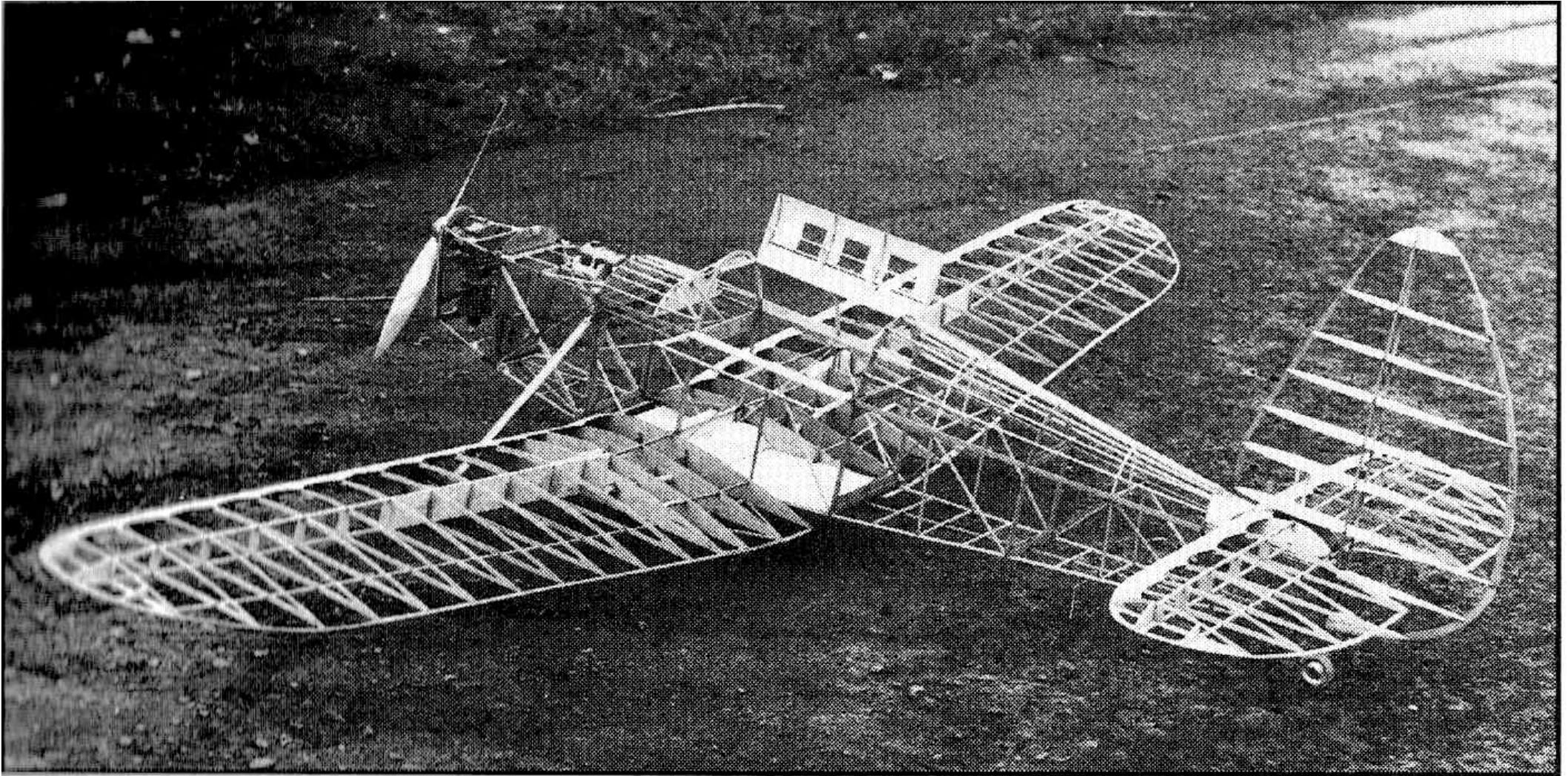
In the Spring of '64 Freeman was somewhat taken aback to read in Dick Black's VTO column in Model Airplane News that he (Freeman) was forming an Old Timer League and interested modelers should get in touch with him for details! (One guess who'd leaked this tidbit to Black!). But, being a congenial fellow, and seriously concerned with helping the OT movement along, Freeman accepted the task. The result was a staggering pile of incoming letters and outgoing replies over the next three years, as OTers all over the country began to participate in hammering out their own organization.

By the winter of 1964, Tim Dannels had made a going thing out of the Engine Collectors' Journal, and in the Jan./Feb. issue John Pond presented the first of his series of 3-views and descriptions of famous OT designs. In the Mar./Apr. '64 issue also started his famous "Gas N' Oil" column, which he would produce for several years. This feature of the Journal presented many photos of OT'ers and their ships, news items, results of contests, gossip, and technical tips and data.

Dannels further extended his courtesy to the active OT'ers in the Sept. Issue of 1964 by providing Lee Freeman with space for a column to promote, and provide an opinions sounding board for, his continuing efforts to establish an OT League, which by now had acquired the name. Antique Model Association. (In a classic demonstration of their adroit group handling of a crisis, the founding members of the movement, some eight months later, discovered that their initials might well be confused with another group of old fuds, namely; the American Medical Association. In response. Freeman asked for alternate name suggestions. Bob Stalick of Albany, Oregon, provided the eventual winner: Society of Antique Modelers...and "SAM" was bom.

Founding Fathers: In his first column. Freeman proposed an idea that was to finally let the penny drop on moving forward with formal national organization. He proposed the formation of Chapters, made up of five or more O'Ters, from a specific club or area. These chapters would establish basic regional units to form the national organization, and provide the voting system (majority vote of each Chapter's members represented one national vote) to elect national SAM officers, decide national rules and determine other Society business matters.

By the fall of '65 the chapter idea had brought into the fold over 100 registered SAM members, representing a group of 15 Chapters scattered across the country. These first groups, and the spark plug individuals who worked to organize them, represent the true "founding fathers" nucleus of SAM.



This seven-foot 10 inch span semi-scale Percival Gull by A E Morrod weighed 6 lbs and was powered by the 15cc Grayspec engine. Typical of a number of petrol driven low wing models made during the 1930s that, despite exhibiting excellent workmanship, did not possess the workaday features that would have ensured a reliable flying performance.

After losing two E Rubber Texaco models, both after getting caught in thermals and out of sight, I knew I needed to do a couple of things before flying my latest E Rubber build (yet another Stormont Australian Record Stick):

1. get my eyes tested (and yes, I did need new glasses!) and,
2. explore GPS tracking devices suitable for this purpose

I had some difficulty obtaining a suitable GPS tracker which operates on the 4G cellular network. There are plenty of 2G GPS trackers available, and a couple of my flying buddies use them, but Vodafone is the only ISP now using this network, and they don't seem committed to retaining their 2G network beyond 2025.

The GPS unit I settled on is a Lightbug Zero, <https://thelightbug.com/>. It is their smallest device and is supplied with its own 1S, 850mAh battery (Fig 1 and 2). I removed it from its plastic and aluminium case to reduce weight from 40 to 30g. This may be light enough for many model applications.

As I planned to use a receiver battery in the E Rubber model anyway, I figured I could eliminate the 1S battery supplied and save further weight by tapping into the receiver battery via a spare servo channel in the receiver using a Zener diode (Fig.3). Electronics is something of a dark art to me – fortunately, I had the help of a kindly electronics engineer to get this sorted. The GPS tracker draws only about 5mA for most of the time, but as it uploads information it can get up to 100mA for a very brief time. You would need to size the Zener diode accordingly. It

pays to check whether you can plug 7.4V straight into your receiver – JR and others are OK with it. It is also worth measuring the voltage output from receiver. JR receivers seem to have the same input and output voltage. If you prefer to run a voltage regulator between your receiver battery and receiver (say reducing the voltage from 7.4 to 5.5V) it would be just a matter of sizing the Zener diode to restrict voltage to the GPS tracker to a maximum of 4V.

Using the receiver battery (2S 300mAh) rather than the 1S battery supplied with the tracker reduced the weight down to 16g. I put it into a plastic bag to prevent shorting and to keep the bits in one place (Fig.4).

The downside (and isn't there always one), Lightbug include their own SIM card, and supply the device via a plan which includes access to a cell phone app to manage the device and track your model in the field. So, you need to subscribe to their plan – and the standard yearly fee is US\$60.00 for GPS locations every 4 hours. There are monthly plans also, and more expensive unlimited plans which give more frequent GPS locations. The Lightbug Zero is able to be programmed and monitored from your cell phone in the field. Hopefully, leading you straight to the wayward model!

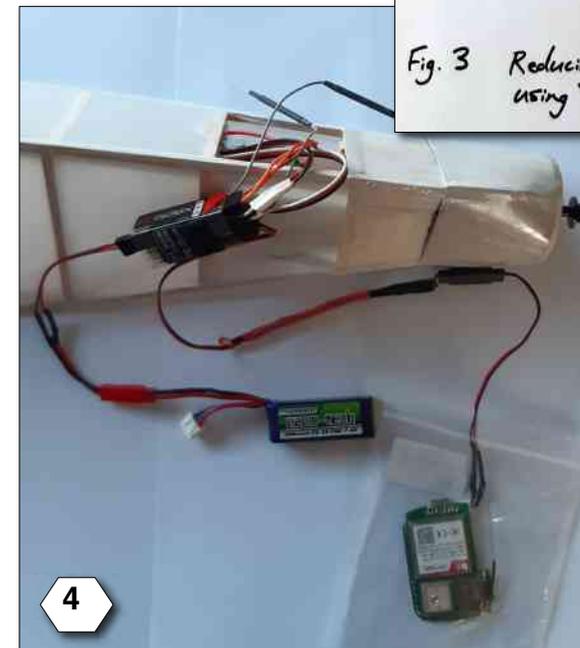
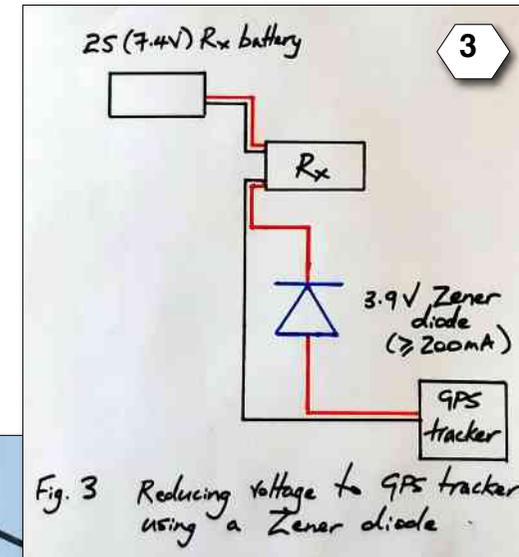
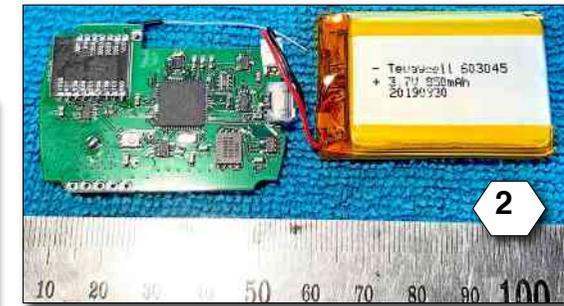
Captions:

Fig. 1 Lightbug Zero

Fig. 2 Case removed, supplied 1S battery

Fig.3 Reducing the voltage from 7.4V to 3.7V using a Zener diode.

Fig.4 Ready to squeeze it all into the model



Covering Material Weight Comparison

Useful chart provided by Peter Townsend.

Wayne Cartwright provides further information on two other covering materials.

1. Heat-shrink polyester tissue - medium weight German product from Mike Woodhouse in UK: 25 gm/sqm as provided and 35 gm/sqm with 3 coats 50:50 nitrate non-shrink dope. This material is lighter than Polyspan (also a polyester tissue, available in US) and needs less dope to fill the grain.

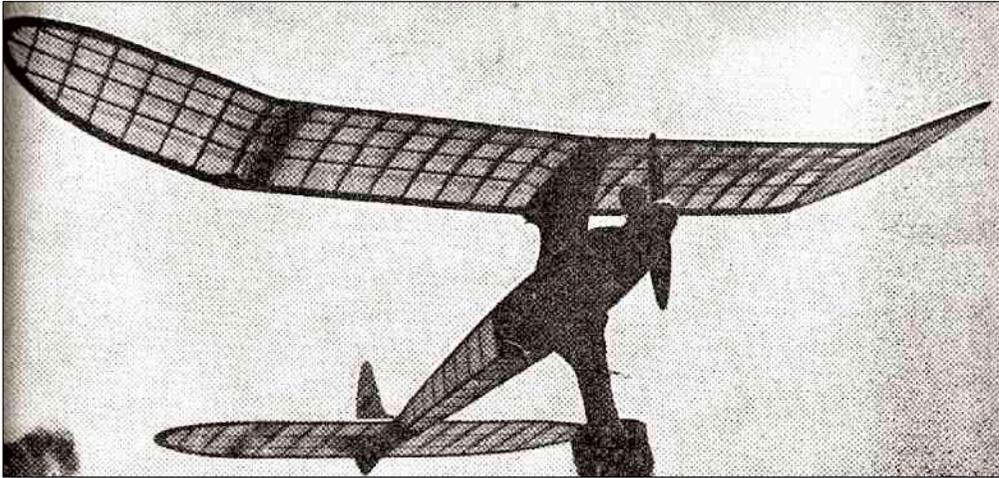
2. Sig Koverall with 4 coats 50:50 nitrate non-shrinking dope: 60 gm/sqm.

The doped weights are from my own measurements.

Cheers

Wayne

Supplier	Product	Grams sq Meter	Weight Dependant on colour Grams sq meter
Esaki	Jap tissue (Lite Flite)	13	
Freeflight Supplles	10micron clear mylar	14	
Dow	Saran Wrap	14	
Oracover Air Indoor (No Adhesive)		17	
Oracover Air light (No Adhesive)		18	
Esaki	Jap tissue (Medium Flite)	14	
	ripstop polyester	17	
Sig	light silkspan (doped)	17	
Coverite	Microlite (transp)	18	18 > 22 grams sq meter
Salzer	Polyspan	18	
Homefly	13micron alum mylar	19	
Esaki	Jap tissue (doped)	19	
Nelson	LiteFilm (So Lite)	21	
Sig	heavy silkspan	21	
Esaki	Jap tissue (Super Flite)	22	
Solarfilm	Airspan	23	23 > 28 grams sq meter
Coverite	Micafilm (transp)	25	
Coverite (Solar Film)	Coverlite	29	29 > 31 grams sq meter
Sig	heavy silkspan (doped)	29	
Oracover Air outdoor (No Adhesive)		33	
Oracover Air Medium (No Adhesive)		34	
Coverite	Micafilm (opaque)	35	35 > 40 grams sq meter
Horizon	UltraCote Lite, Oracover lite, Oral Light, Pro film	36	
	Ultracote, Park light	36	36 > ?
Balsa USA	Aerospan	37	
Solarfilm	Fibafilm	41	
Sig	Koverall	46	
Hobby Lobby	Polycover (transp)	47	
Sig	Supercote	52	
Horizon	UltraCote (transp)	54	47 > 69 grams sq meter
Solarfilm (Aero Film, Solar Span)	Solar Film, Aero Film , Solar Span	55	55 > 69 grams sq meter
Oracover Air Heavy Duty		56	56 > 70 grams sq meter
TopFlite	MonoKote (transp)	57	57 > 59 grams sq meter
SolarFilm	Supershrink Polyester	60	60 > 80 grams sq meter
Hobby Lobby	Polycover (opaque)	61	61 > 81 grams sq meter
TopFlite	EconoKote	61	
Tower	TowerKote	61	
TopFlite	MonoKote (opaque)	62	62 > 88 grams sq meter
Sig	AeroKote	65	
Horizon (Hanger 9)	UltraCote (opaque)	70	69 >109 grams sq meter
Solarfilm	Solarkote	75	
Coverite	Black Baron (opaque)	76	
Coverite	21st Century Film	78	78 > 104 grams sq meter
Coverite	Super Coverite	81	81 > 90 grams sq meter
Solarfilm	SolarTex	85	81 > 95 grams sq meter
Hobby Lobby	Superfabric	92	92 > 118 grams sq meter
Solarfilm	Glosstex	115	115 > 125 grams sq meter
Horizon	WorldTex	143	



J.U.2 1950 Free Flight Model Designed by Federico Deis

Why do we choose to build a particular model? Most often I suspect it's just because we like the look of it. The J.U.2 was kindly pointed out to me by Peter Townsend and Wayne Cartwright,

I quickly decided that it would become my next lockdown project. I figured it would make a lovely Vintage E Duration model. First published in Dec.1950 (AeroModelismo) by Federico Deis of Argentina. I scaled the original up slightly (108%) to give a wing area of 703 sq inches to enable me to use a 4S LiPo of 850mAh (45C). I intend to use a Turnigy 36/42 1250kV motor I have lying around.

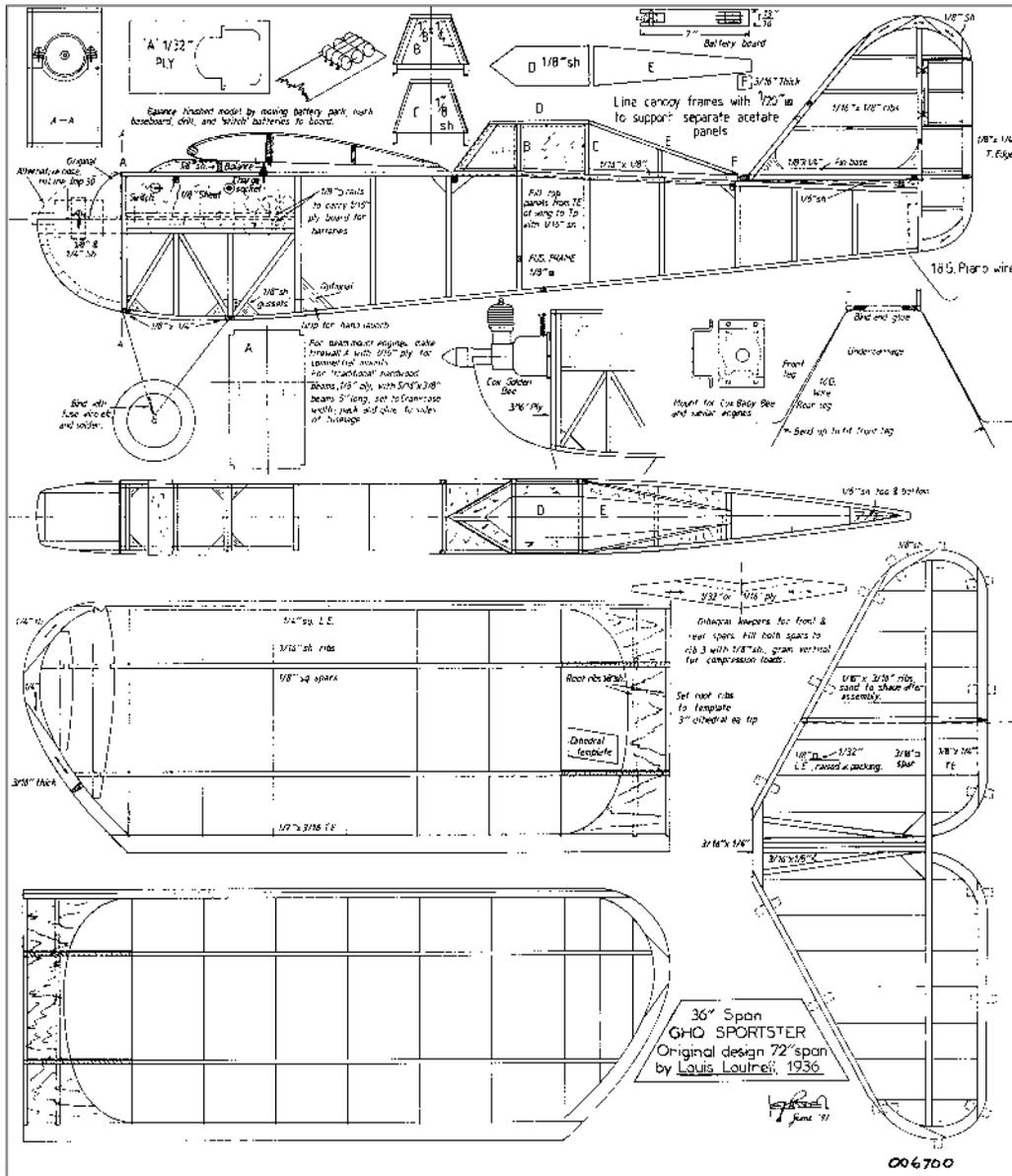
The original design has no undercarriage or skid but the dimensions of balsa specified and the construction method is fairly beefy so it should handle belly flops well enough. Props are another matter and I suspect that I will resort to using sport, rather than thin electric propellers, to reduce breakages. The stabiliser is relatively huge (43% of wing area) so I decided to make this detachable for ease of transport



To increase the integrity of the wings, I have added another under-spar to create a box section at about 30% of chord, and beefed up the dihedral braces. Can't wait to get it covered and flying.



SPORTSTER 1936



"Why would you build that thing?" Maybe the virus got to me. I've been building Vintage models for a time and usually it is the good looking designs that are chosen. In the interests of impartiality, giving the underdog a fair go, and several other platitudes, I chose a truly non-pretty design. Also, this ugly bugger is about as old as power models get, 1936. In Vintage Precision, the generous age bonus makes maxing out with the *Sportster* an un-*Sportster*-like certainty. A bonus margin of 14 seconds each side of the 90 seconds target allows anywhere between 76 seconds and 104 seconds as a maximum. *Three cheers for the Age Bonus and her positive ageism!*

I already have a reliable model for VFFP, a 1937 *Shadow*, so the *Sportster* needed to have another challenge. It would be electric, something allowed but never before seen in VFFP. This approach was tried a few years ago by electrifying another *Shadow*, but it was overweight, underpowered and not a joy to fly. Fitting all the electrics into the *Sportster* was more complicated than simply bolting an engine onto the firewall. The motor chosen was a basic HK item, a Turnigy 2730-1300 that needed stand-offs to ensure the nose moment was not altered. Its is mated to a 9x4.7 slowly propeller.

The motor controller is an E-ZEE, cheap and having a benefit not found on all FF controllers - motor speed can be adjusted. Other functions include motor run time, motor ramp-up and ramp-down periods, optional programming and operation by remotely located controls, and dethermaliser via a servo and/or by remote DT. Pretty clever for something that weighs 4g and costs less than a Thai takeaway (even with a double serve of rice and a Diet Coke). Programming is with a single push-button and an LED, a process that takes a bit of mastering. I fitted a remote push-button and LED so that the controller can be enclosed in the fuselage.

As the aim is 90 second flights the controller's DT function will rarely be needed. The belt-and-braces remote DT is also fitted because ... well, I had one, and (the real reason) if the flight turns to custard it is better to get it down for a zero score than lose the model. Not that there is much chance of that as its flights have been consistently safe and graceful. I am slowly starting to think of it as not so much *ugly* as *excentrically cute*. A case of not judging a book by its cover.





Dallaire Sportster 1935

The *Dallaire Sportster* was designed in 1935 by Frank Dallaire and was a bit unusual in that it looked like a real airplane compared to the obviously model look of its contemporary designs.

The Covid 19 crisis visited us in March 2020 and required an extraordinary response from the government right through to the people on an individual basis. We went into lockdown that entailed a serious curbing of normal day to day activities from cessation of work through to restricted movements from home. It was during this time that I decided to build the plane as I needed something extra to do to keep me occupied.

First job was the wing. The design had the wing join at the center as a "V" but I decided to make it with a flat section that spanned the width of the fuselage in order to make it blend in with the cabin front and make it look neater.

Two dihedral braces were made by laminating two layers of 1/16 ply on either side of 0.2mm carbon fiber cloth, using epoxy resin as the adhesive. The braces built as such were immensely strong. Two sets of wing spars top and bottom were made from 3/16 square spruce. Laying up each wing panel was straight forward with ribs being placed in position, properly squared up and glued in place. The the wing tips were installed along with the trailing and leading edge. Prior to joining the panels, the space between the top and bottom spars both front and rear were infilled with 3/16 balsa to allow the dihedral braces to have full contact with wood when being glued into place.

The wings were aligned and the tips raised to set the correct dihedral angle before glueing the braces using araldite as the adhesive. Everything was held together with clamps and allowed to set overnight. The next day the centre section leading and trailing edges were installed and the center sheeted top and bottom with 1/16 balsa sheet.

The front bulkhead was prepared by installing wooden bearers at the correct width to accommodate a Saito 40 four stroke engine. Near the bottom of the bulkhead a brass undercarriage tube was installed and wired and araldited in place.

The fuselage sides were built, one on top of the other to ensure accuracy and left/right symmetry. They were then joined up, starting from the bulkhead to the rear of the cabin where the sides are parallel. Then the sides were pulled together, following the curve of the plan outline with the cross members being installed one set at a time, top and bottom.

The rear undercarriage tube was mounted on a 3/16 ply plate and glued into position.

The bottom of the fuselage is round in shape and is formed from formers and stringers and once done gave a very pleasing appearance. The nose was formed from 1/2 inch soft sheet for the cowl cheeks and bottom and sanded into shape to blend in with the fuselage and the 2 1/2 inch spinner that I decided to use. A point to note here. Even without the spinner, the sanded shape of the nose very closely matched that as shown on the plan as the is no significant deviation here.

The inside floor of the cabin was sheeted with 1/16 sheet to allow mounting of the tank and battery.

Finishing touches were the addition of planking from the bulkhead to the front of the cabin and a curved cabin fairing to blend the wing curvature to the front windscreen.

The tail, tailplane, rudder and elevator were built up as per plan and sanded to the appropriate shape. Holes were drilled to allow use of Robart pin hinges.

Prior to covering, all parts were given a final gentle sand and inspection and then painted with Balsaloc to give good film adherence. I used Solarfilm transparent blue and red as they are good high conspicuity colours and do make for an attractive appearance.

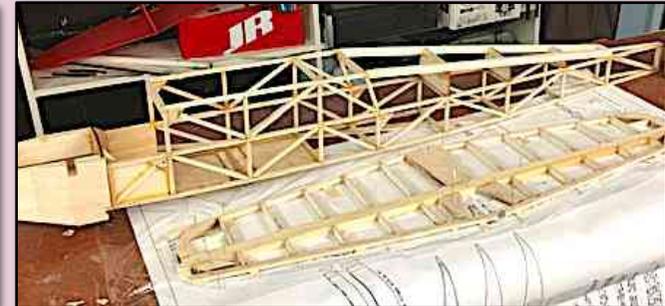
The undercarriage was made in two parts, left and right and plugged into the brass tubes and when satisfied that alignment was correct, removed and the inserts coated with a light coat of araldite and plugged back in place and allowed to set overnight.

I test flew the plane at Ashhurst on May 14th and it flew beautifully. Just a bit of right rudder trim needed. Flying was nice and gentle with the motor running at a fast idle to maintain constant height. The second flight was just as good but this time I got it up to a good height and stopped the motor to test the glide. Very good glide with low sink rate and augers well for a potential duration machine but I have really built this plane for the pleasure of building and flying in a very relaxed sport vintage mode of flying.

It is a model I would recommend to anyone as it is good to build, aesthetically pleasing and excellent to fly and would make a truly superb duration model with the right motor.

**Vital statistics:**

Wingspan: 84 inches
 Wing area: 890 square inches
 All up weight: 1.702Kg or 3 lb 12 oz
 Wing loading: 9.71 ounces/square foot
 Engine: Saito 40 four stroke
 Propeller: Top Flite wood 12x4



As a modeller of more years than I care to remember, I have enjoyed the many strains of aer-modelling from free flight tissue-covered models, through to control line, then to RC, enjoying general sport models, soaring both slope and thermal, aerobatic and scale.

All through this period I built kits and from plans cutting out all my own parts. A few years back I started producing 'CAD' drawings for laser cutting, primarily for myself and then for others who wanted to receive the benefits of accuracy, consistency and quicker build times using laser cut kits.

I now provide a laser cutting service to fellow modellers from all strains of the hobby and recently contacted Wayne Cartwright who in turn forwarded me on to Bernard to see if the Vintage Flyers Group would be interested in finding out more about how the process works.

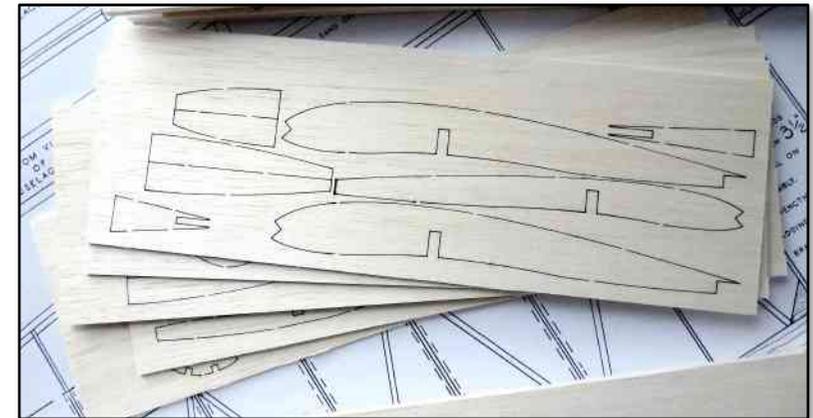
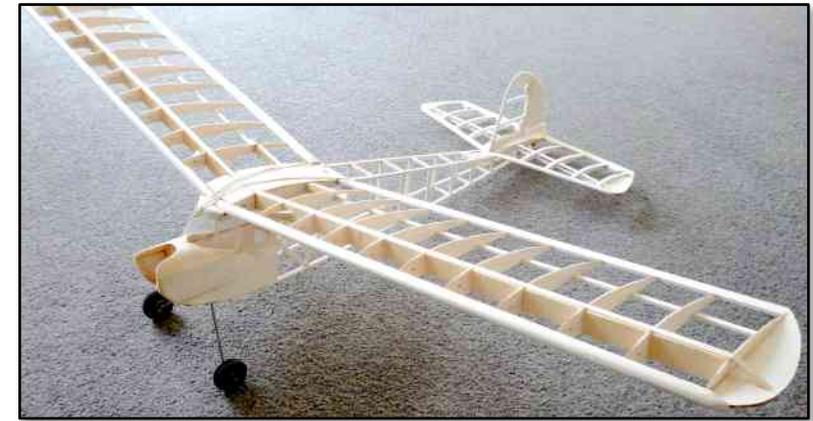
The process starts with the modeller providing a 'PDF' plan of the model which can then be increased or reduced in size if required or left at its

original size. The size is limited to a degree on the standard balsa sheet sizes, however parts can be cut and joined to make the required size. In addition various ways of lightening the structure can be incorporated into the laser cutting to the modellers requirements.

Cost is dependent on the complexity of the structure and the materials in its construction and only the best balsa and ply is used. The kits are cut locally here in NZ which reduces the high cost of freight from purchasing kits from overseas. Laser cut kits produced to date include control line, classic pattern, gliders, general sport, scale and vintage.

Should you have a plan that you are interested in discussing about a laser cut kit for and an estimated cost to produce, please contact me, Chris Pearce, on the email or mobile below and I will be happy to discuss your requirements.

Email: cjpinternz@hotmail.com
Mob: 027 298 2016
(after 6.00pm)



Commando 50"
John Eaton
Air Trails Sept 1942
Kitted by Phris Models



THIS ARTICLE looks at some aspects of the Vintage RC 1/2A Texaco event. It gives an overview of the event, its rules and a little of its history, suitable designs, hints for setting up an engine, fuel mixes and propellers, how to get the best out of contest flying.

1/2A Texaco is flown in many countries. Other than historical references, this article refers to the event as flown in New Zealand. There are different flying tactics in Texaco events: comments on flying are based on using a long, slow climb which has been found to be the most effective.

First, an explanation of the 1/2A Texaco name. Despite looking rather cryptic it concisely encapsulates the event's origin and purpose.

1/2A comes from a model engine designation in use well before the start of the Vintage movement and referred to engines up to .050 cubic inches capacity. This cut-off point explains why engine manufacturers such as Cox made engines in .049 and .051 capacities. As they were almost identical in power output, a single model could be used without re-trimming in 1/2A Power events using the .049 and in the next category up, A Power, using the .051. In practice, variation in manufacture and user technique had more effect than the slight capacity difference.

TEXACO comes from *The Texas Company* which started producing gasoline products for the US market in 1902. Almost immediately, its unadventurous name was shortened to *Texaco*. Much snappier - and it cost less to

send by telegraph, too. After a merger, the company runs today under the name Chevron Texaco and continues to use the same advertising logo.



SPONSORSHIP Back in the days when companies were more willing to sponsor sporting events than they are today, and at a time when model aviation was seen as a valuable enterprise for aspiring aviators and aeronautical engineers, Texaco sponsored one type of model flying event. Then as now there were two main types of power events - those that allowed a certain length of engine run, and those that allowed a specified volume of fuel. The latter were the types of event that today bear the Texaco tag in one form or another. They are events where economic use of a set fuel allowance is decisive, and it may

have been this "value for money" implication that encouraged Texaco's sponsorship.

So, the 1/2A Texaco event uses an engine of under .050 cubic inch capacity and has the aim of making maximum times through economical use of a limited fuel allotment.

SAM 55 When the NZ Vintage Chapter began introducing Vintage RC classes, 1/2A Texaco was one of the first. It has been running ever since with only minor tweaks to the rules. The Cox reed valve series that includes the ubiquitous Babe Bee .049 was the required engine. Specifying a common, cheap, and readily available engine was a wise decision as it equalized contestants in the power aspect of the event. Consequently, attention to engine management and flying skills became more important than being able to afford the fanciest engine.

NZ RULES These form Section 5.1 of the Vintage Rules which are available from the MFNZ website under SIGs / Vintage and are essential reading before starting in the class. Some parts will be enlarged upon later. The General Rules that apply to all events must also be considered, such as the minimum wing loading of 8oz sq/foot.

EYESTRAIN Following US practice, an 8cc tank was used and each round maximum was an eye-watering fifteen minutes. Most 1/2A Texaco models are quite small at less than 50 inches wingspan so as experience with taming the little Coxes grew, so did the eye-strain and the inadvisability of going all-out for altitude.

CHANGE The change to a 5.1cc tank and an eight-minute maximum relieved the stress, though not without some lamentation and gnashing of teeth at our breaking step with the overseas mother organization. A couple of years later, Mother admitted to eyesight problems and also moved to the smaller tank so all was happy again in NZ 1/2A Texaco Land.

The earliest local scores I have recorded for 1/2A Texaco are from the Ashburton Nationals of 1992. There were only three fliers that year, not helped by the Southern location, but by the Clareville Nationals of 1998, there were 15 entries, making it one of the more popular RC events.

DECLINE Since the introduction of the Vintage 1/2E event, support for 1/2A has decreased - a decline often blamed on the Cox Babe Bee engine. Tuning this little jewel can be trying, especially when a "perfectly tuned" example decides to quit early in one round and run for an unexpectedly long time in the next. That is the charm of 1/2A. Unlike electric Texaco where it is just flick a switch and away, exactly the same every time, exactly the same every time, exactly the same every time, the IC Texaco events, especially 1/2A, can seem to be straight from Forrester Gump ... *like a box of chocolates, you never know what you will get.*

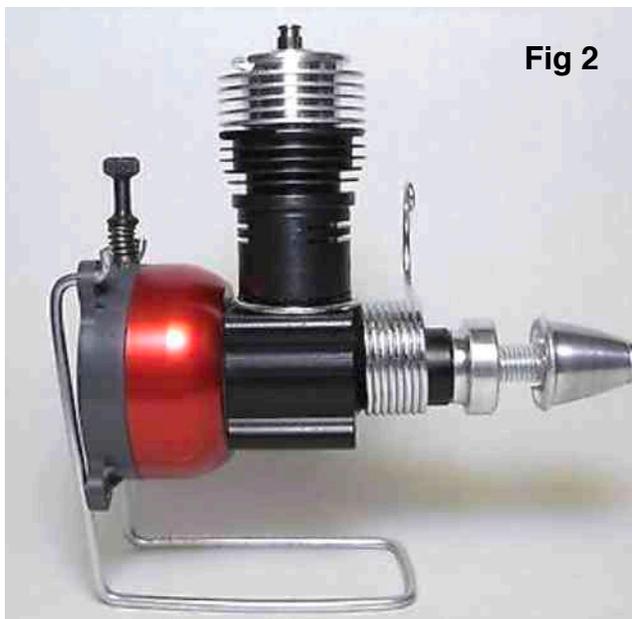
In truth, the inconsistency blamed on these little engines can usually be traced to a lack of rigorous preparation. Assuming the engine seals in all the places it should, most difficulties are the result of inappropriate or dirty fuel and incorrect needle setting.

Fig 1



BABE BEE The BB [Fig 1] was produced from 1956 until 1996. Production ceased when Cox

Fig 2



was sold to Estes, after which the engine continued to be assembled from stocks of parts. This process continues today with "new" Babe Bees still available. Its use in 1/2A Texaco was catered for in 1989 with a variant called, not surprisingly, the *Texaco* that sported a black crankcase and a red anodized 8cc tank. A glow head with five fins was later developed for this engine to dissipate the extra heat from low speed running with a large propeller. After the move to the 5.1cc tank, the *Texaco Junior* was offered - the same engine with the smaller tank [Fig 2]

DESIGNS The first magazine articles about 1/2A Texaco tended to recommend model sizes between 280 and 300 square inches wing area. This was a safe bet as it was within the wing area range of many Free Flight models that used the Cox.049 engines. At these sizes, there is plenty of power and the required all-up weights to meet 8oz sq/ft of between 15.55oz and 16.66oz are easily hauled. Experience has shown that larger wing area designs enable increased duration although above 350 sq inches the penalty of the minimum weight requirement starts to cancel out any benefit.

A BONUS A sleek aerodynamic design will perform better than a boxy one, but in 1/2A it is not essential. The models fly slowly for much of each flight so drag is less important, and as most of the flight will be under power, glide performance does not have to be great to make the eight minute maximum. But, if you need the highest performer, it will have a narrow chord and be about 55" wingspan. This should keep the required weight under 20oz, about the heaviest that will perform well and be easy to fly. The *Footie Westerner* and the *Stardust Special* meet these requirements.

GETTING AN ENGINE Cheapest route is through ex-free flighters who may have a BB or two in a dusty drawer. They appear on auction sites but the sellers are often non-modellers judging by their price expectations and overly optimistic descriptions. Buying a new engine is the safer option. Cox International sells BBs but by the time conversion rates and postage are taken into account, the NZ deal from RCNZ is attractive. [See **Suppliers** for contact details]

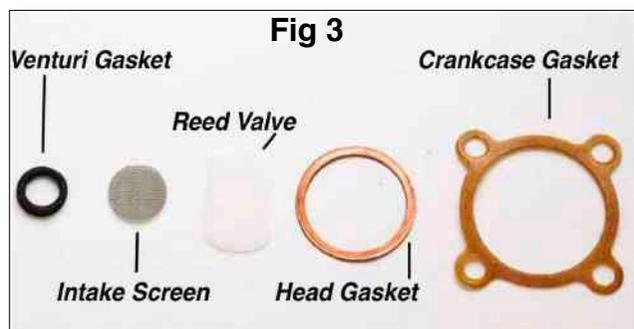
SETTING UP AN ENGINE The following comments assume starting with a new or second hand engine in reasonable mechanical condition. It is also assumed that you are familiar with Cox engines or can call on someone who has experience with them.

Having the following items to hand before starting will speed things up:

1. Babe Bee Gasket Kit
 2. Cox .049 Piston reset Tool
 3. Head Gaskets
 4. Spring Starter
 5. Cox Silencer
 6. Propellers 6x4, 8x4, 9x3.8, 9x4.7
 7. Fuel 10% Nitro / 10% oil
 8. 1/8 aluminium and brass tubing
- Notes on these items follow.

GASKETS A used engine, even one that appears to be in tidy condition, should first be overhauled. This is not as drastic as it sounds and disassembly will enable the little-end socket

joint to be inspected and tightened if needed. Six dollars spent on a gasket kit [Fig 3] will seal potential leak areas and eliminate many tuning problems.



SOCKET The socket joint that connects the piston to the conrod should move freely without any slop. Cox make a simple tool for reducing play in this joint [Fig 4]. It is well worth obtaining as regular tightening of the socket is required to keep an engine in top form.



MORE GASKETS As received, the BB will have one or two head gaskets. These serve to seal the cylinder to glow head joint and also adjust the compression. Most engines will need more than two gaskets when run on a large

propeller. Some engines have needed six gaskets, so get some spares.

STARTERS Before settings are established, starting an .049 can be troublesome. Even with a correctly adjusted engine, first starts after a period of non-use can be tricky as fuel residue gums up the reed valve.



Flick-starting is possible but tedious, so adding a "Snap Starter" [Fig 5] is one answer. This spring starter also ensures that the engine starts in the correct direction as with reed valve induction it will happily run in reverse. An electric 1/2A starter is easiest: don't use an electric starter intended for bigger engines. [Fig 6]



SILENCER Cox made two devices that reduce engine noise. The rules allow the use of only one of these. [Fig7] The second device has a rotating barrel that closes off the exhaust ports. It does a good job of quieting the engine but because it is adjustable in flight it is classed as a throttle which is not permitted. [Fig 8]



A muffler reduces engine speed, and in 1/2A Texaco that is a *good* thing.

PROPELLERS .049 engines are happiest turning a small propeller at high speed. Typical BB performance might be 15,000 rpm on a 6 x 3 propeller using high nitro fuel. This is all wrong for Texaco where efficiency comes from low nitro, low revs and a large propeller.

Once the engine is sorted, three sizes of *well balanced* propeller can cover all conditions. A 9 x 4.7 for flat calm, a 9 x 3.8 for when there is a little breeze, and in stronger wind, dropping down to an 8x4 gets the revs up for penetration. There is much advice against using electric propellers on an IC engine but on a small, slow revving Texaco engine they may be considered.

FUEL Methanol is where the energy comes from, so the best fuels increase this component while reducing oil and nitro. There is always a trade-off. Reducing nitro also reduces reliability, that is, the engine's ability to run the tank completely dry. 15% nitro fuel is likely to run the tank dry, but will do so more quickly than a less reliable 5% nitro fuel that lasts for an extra half minute - all going well. I have ranged between 5% and 15% nitro and have settled on 10% as a compromise between duration and reliability.

Running at one third of usual speed, oil content can also be reduced from the typical Cox brew of 18% castor down to 10% of a castor / synthetic mix oil such as Super Techniplate.

80% methanol, 10% nitro, 10% Super Techniplate is a mix that has been used for many years to good effect.

Any foreign matter in fuel is a disaster, causing at best erratic running, or more likely it will stop the engine. The tiniest of particles can restrict or block the fuel jet and damage the reed valve.

Fuel should be filtered after mixing, then after it has been standing for a week or two, and just before use. Coffee filters are effective.

Fully drain and flush out the fuel tank with methanol after flying.

BACKPLATE Early engines use a metal backplate while more recent ones are plastic. They are interchangeable although the metal

one is preferred as there is no chance of it being distorted inwards by the tank screws and reducing tank capacity. It also gives a more rigid mount to the fuselage which can reduce vibration.

FUEL PICKUP The standard pickup is a plastic tube that can harden and move so it no longer reaches to the lowest point of the tank. The pickup should be replaced and positioned to the tank bottom. 1/16" aluminium tuning is used as seen on the right-hand backplate in Fig 9.

The right hand backplate has also had the vents on either side of the needle extended with 1/16" brass tube for ease of filling. After filling, one tube is blocked off and the other left open. If fuel is pulled out of the open tube when the engine is running, use silicon fuel tube to extend it by an inch.



Some backplates have just one tube for filling and a hole as an overflow in the position the second tube would be. In this case a second tube is added as without this fuel will be sucked out the hole when the engine is running. Pickup and filling tubes are secured with JB Weld after drilling their hole or nipple out to 1/16".

NEEDLE Check that the needle has not been distorted by being forcibly closed. The tapered tip may be polished by twirling it in a fold of 1200 grade finishing paper. Any imperfection will show up once it is shiny. Distortion or grooves in the tapered tip make precise adjustment impossible. Replace it with a new one.

The needle spring needs to be strong enough to prevent vibration changing the needle setting. Slightly stretching the spring will improve its ability to lock the needle. Some have added silicon fuel tubing over the spring end of the needle to prevent an air leak down the needle threads. I have not found this necessary.

Getting fingers to the needle while the engine is spinning a nine-inch prop is precarious. Use a Dremel cut-off disk to make a slot in the top of the needle so it can be turned by screwdriver. Such a slot can be seen in the right hand needle, Fig 9.

The first start of the day will almost certainly need the needle opened a little. Use a screw driver in the slot to open the needle exactly one half a turn. After warm-up, slowly reset the needle while the engine is running, using the slot to return to the previously determined running position.

GLOW HEAD While the 5-fin Texaco head looks the part, it is not necessary and in cold weather may actually be a disadvantage. This is speculated from having to shield some of the head fins in cold weather to prevent the engine from cooling too much and stopping mid-tank. The standard 3-fin head [Fig 10] works well.



The Cox 1-piece head and plug does not allow experimenting with plugs of different heat range but this could be tried by using a plug adapter as in Fig 11. The fact that any plug manufactured for



the Cox engine is legal suggests that this type of plug adapter, since it is manufactured specifically for the Cox .049, is also allowed. The benefits and legality of this have yet to be tested.

SLOTS Different exhaust slots were used on the BB. For 1/2A Texaco the preferred of the two types in Fig 12 is on the right. It has two thin exhaust slots on either side of the cylinder.



The single slots of the left hand cylinder extend about a millimetre extra toward the crankcase allowing the piston skirt to clear the bottom of the slot at top dead centre, allowing air to be sucked into the crankcase. This is not of benefit for slow speed running and if a muffler is fitted, exhaust gases will be ingested.

SUGGESTED TUNING SEQUENCE You can jump straight in with the propeller you wish to use, but working up to it with smaller propellers gives the chance to get to know how changes to propeller, needle setting and fuel mix affect the run. This makes it much easier later on to diagnose what is needed to get a balky engine sorted.

Initial tuning trials are done with the engine on a test stand. Once a consistent run is achieved, it is more interesting if tests are continued in the air. Airborne performance is different to that on the ground, which is why an engine that is "perfectly tuned" at home may fail to perform in flight. Tuning at the field is no big deal: all that is being altered is head gaskets, propeller sizes and fuel mix - nothing that requires a workshop.

1. Adjust for best running on a 6x4 propeller.
2. Time run with a full tank. Needle setting will be a compromise. To run the tank out it needs to be a little rich at the start of the run.
3. Add 2 head gaskets, time run on 8x4 propeller. Revs should be down and duration up. Several runs will be needed to make adjustments.
4. Move to a 9x3.8 propeller. Experiment with number of head gaskets to get longest *consistent* run. Again, expect to make many runs to home in on the best settings.
5. Try more or less nitro, always looking for a steady, consistent run at the lowest speed.

A TYPICAL TUNING HISTORY The engine in Fig 13 was assembled from an assortment of used parts using new gaskets.

6x4 propeller with two head gaskets: First runs



were decidedly hairy while the internals cleaned themselves out, then settled to a steady 13,400 rpm and two and a half minutes duration after a half dozen tankfuls.

8x4 propeller and four head gaskets: revs down to 5700 and duration to six minutes. Again, several tanks were run through before running and duration became consistent.

9x3.8 propeller, five head gaskets, muffler added: revs drop to 4750 and duration up to just over seven minutes. A 9x4.7 propeller may give a further increase of duration but less than 4750 revs would be too little power, so this engine will stay on a 9x3.8. Not all engines are created equal so adjust expectations and "know when to fold 'em" (80/10/10 fuel throughout)

TEST STAND A folding sawhorse makes a handy mount for testing all engines.

CONTESTS

1. Filter fuel ... again!
2. Ground run two tankfuls before flying.

3. Fly early as mornings are usually calmer. If the engine is well tuned, thermal assist will not be needed - at least for the rounds.

4. Fly all three rounds. Three average rounds will usually beat two maxes and a zero.

5. In the rounds, climb slowly to your safe maximum height then trim for level circles. Stay off the sticks as much as possible and let the model fly itself.

6. Try for those damned spots. Unfortunately, there is no getting to the flyoff without them.

7. The flyoff is a test of nerve. If going for insane height, do it upwind - at least that way the model may drift back if sight of it is lost. Some sort of tracker or GPS is good insurance if you want to go for the stars.

SUPPLIERS

RCNZ <https://www.rcnz.com> A NZ business based in Rolleston. Cox engines including the Babe bee and useful parts range. Prompt personal service. Orders have a standard postage of five dollars.

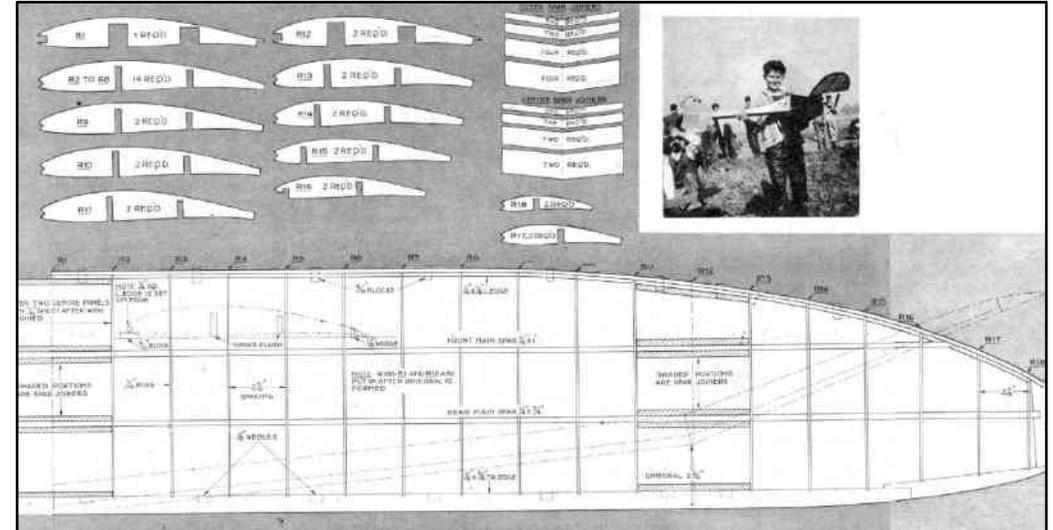
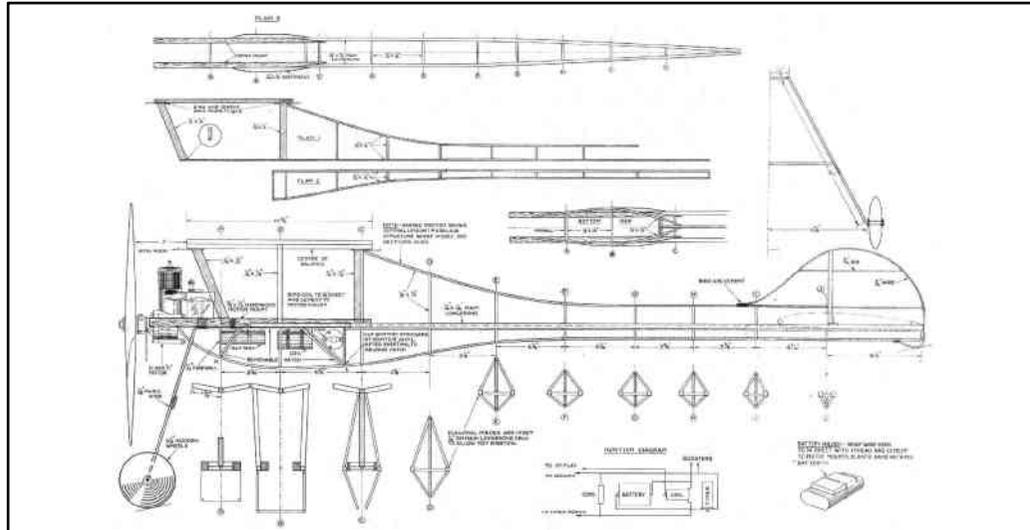
Cox International <https://coxengines.ca> Canadian business carrying all the parts to build or repair BBs. Service is prompt and postage is reasonable.

ASSISTANCE

Some aspects of 1/2A Texaco have been covered only in minimal detail. Contact the author if there are areas on which you would like further information. scott.scott@xtra.co.nz

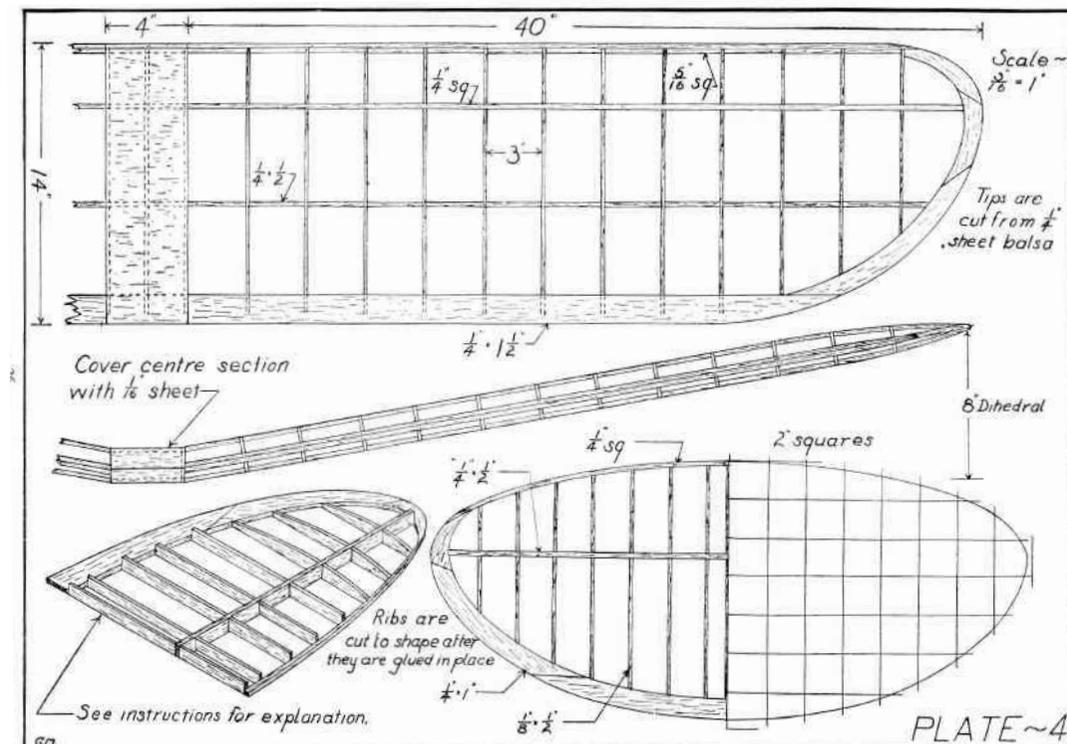
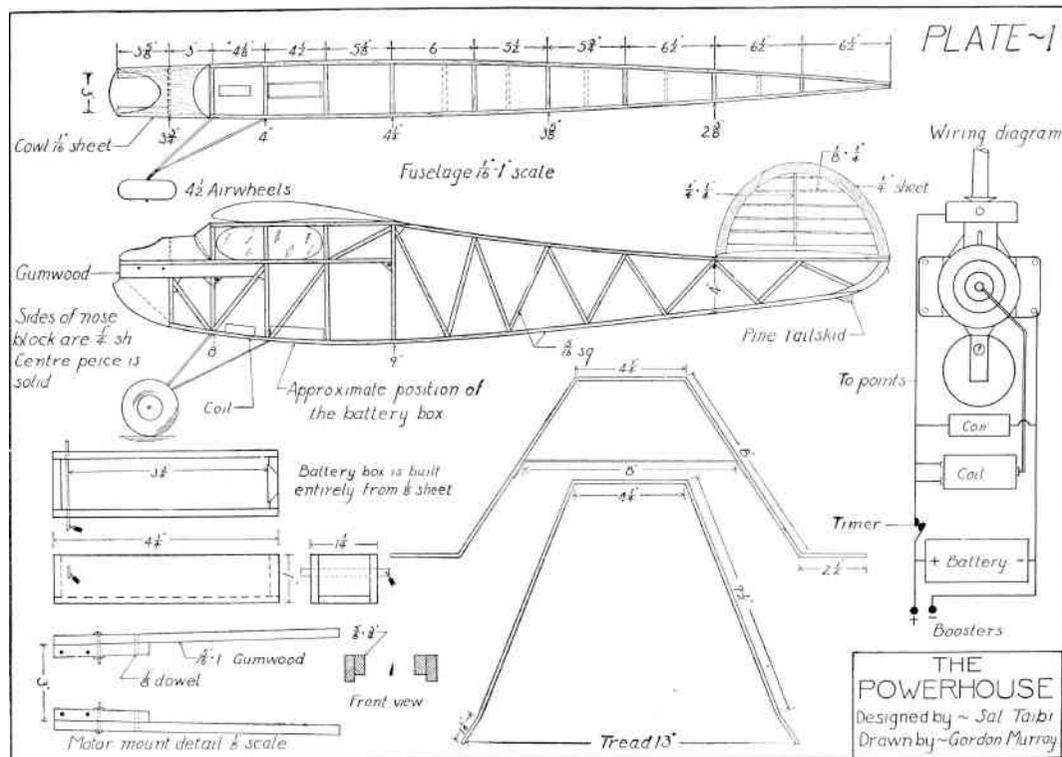
FOOTE WESTERNER for 1/2A Texaco

Don't be fooled by the ungainly fuselage. The high aspect ratio wing would be a real floater. Reduce to 55" span.
First published in *Air Trails Pictorial* August 1943.



POWERHOUSE for 1/2A Texaco

First published in *MAN* November 1939. This one is by Sal Taibi, so has to be worth considering. It is chunky with plenty of room for the wireless gear. "Designed for stability and performance, sturdy and of simple construction" says the original plan, who could ask for more? (Well, maybe polyhedral, but you can't have everything).



Vintage Report. MFHB

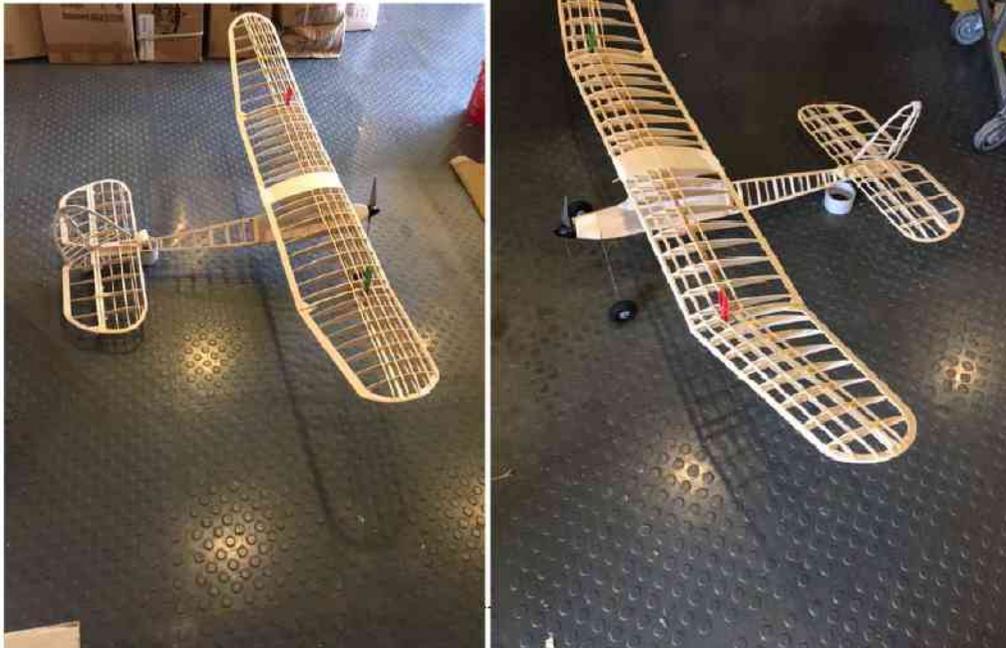
Interest in the vintage movement at MFHB continues to grow by the day as more members realize the joys of building and flying models from the past eras, with several using this lockdown period to enjoy and further their building skills.

NDC. Needless to say this has been in abeyance, but now at level 2, the competition is available again. The two vintage comps available for May are/were RC Vintage Open Texaco and RC Scale Texaco, the former only flyable at Awatoto being an IC comp and the latter, I think I'm the only one with a qualifying scale aircraft, my Aeronca C3 Cub, so that's basically a gone one. In June after the D/S closure we have RC Vintage Precision and RC Vintage E Duration, for which we have a number of qualifying aircraft in each event so refer to the rules, get some practice, and we'll put out a call to those who can fly when the time is suitable and the forecast good.

A reminder for your reference, the **Radio Control Vintage Rules...** down loadable from the MFNZ web site.

sections 1 through to 5 inclusive... <https://www.modelflyingnz.org/docs/comprules/S04-Vintage.pdf>

Gavin Shute is making progress with his Lanzo bomber build, this one 30% smaller than the 96 inch model giving it a 67 inch wingspan. Just about at the covering stage.



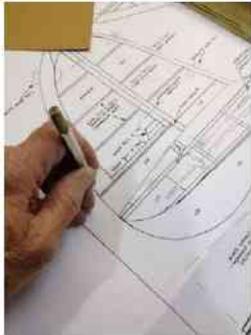
Barrie Price has made a start on his Falcon and writes from his bubble;



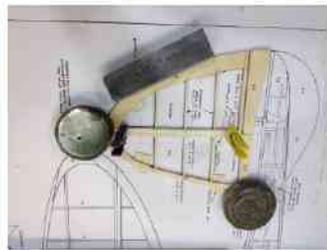
This is the build to date. I've have had to laminate a lot of the stringers etc but hopefully balsa wood will turn up today or tomorrow. As you said it is not an easy build. I have traced all of the components including the rib template and have lightened it by cutting the centres out. There is certainly a lot of wood in this plan but after the Gollywock I have learnt to lighten things considerably. Regards, **Barry Price**.

Anthony Hales, a recent convert to our Vintage SIG is enjoying his first build and writes..

Hello Barrie. It took a while but I've finished painting the car and other chores and as you can see have now made a start on my Playboy, pictures attached, I'm not rushing to get it finished however as I have other things I want to



get finished. I seem to be amassing a number of unfinished projects at the moment and because I enjoy all of them I don't know what to work on next so I start something new. My plane nesting in the top of a tree has finally flown home after 6



weeks.



Danny went for a walk and found the wing and tail section and asked some golfers near by and they said the green keeper had found it and he recovered it from the shed for me. The plane is wrecked of course but all the electronics are fine, even the battery although a bit puffed up recharged, I did have to give it a nudge with a Hi-Mh charge as was completely exhausted but it charged ok so I put all the servos and ESC into the receiver and everything was working fine. I did remove the undamaged prop first of course! (*Well done that man Ed. !!*) Looking forward to getting back to the field, I really want that wings badge now. Have been using my simulator but it's not the same. What is the best covering film to use on the Playboy, I've considered tissue but I like the look of the coloured transparent materials, is there a requirement to meet the rules. Hope to see you at the field before too long. **Anthony**.

Barrie Russell reports on the Flying Minutes. Construction now complete and all covered, just awaiting the delivery of the Cobra motor from the States so I can sort out the mounting. The build has been an enjoyable and challenging experience though flying wise I doubt that it will be super competitive as it's a bit heavier than hoped. I was aiming for a wing loading close to 4oz sq ft but think I will finish up nearer to 5 oz. Will just need to find some bigger thermals to activate those high aspect ratio wings!

Learning to use the Polyspan covering, a UK polyester tissue has been a learning experience in itself which I like, but next time will be on a flat slab sided fuselage and not a round and tapered one! Must say I'm looking forward to flying it and seeing just how it will perform like. **Ed**.



And last but not least, **Russ Nimmo** continues to make good progress with his playboy down in his Poukawa shed. He reports, Hi Barrie, Waiting for wheels, servos, ESC and some covering, Trust you and yours are well. Kind regards, **Russ**.

Nice one Russ, As my Mother always said, what a pity to cover up all the beautiful workmanship, Ed.

We'll look forward to reinstating our regular Vintage Thursday morning sessions as soon as the field opens again, so try and keep Thursday 11th free, weather permitting and we can again enjoy the fruits of our labours over the lockdown. See you at Awatoto Field.

We may try and have a few flying sessions at the Black Bridge site during D/S if we get some good days, so will endeavour to have a ring around those likely Vintagers and we can meet at the entry gate. If you're interested, give me a call.



FASHION NOTE: BAGGY TROUSERS WERE 'IN'!



FRANK ZAIC
THERMIC 50

DICK TWOMEY
COBRA

The Ampleforth Model Aero Club in 1947

SUNNANVIND

GOSLING
TERN

KK JUNIOR 60

Dick/29/4/20

FREE FLIGHT DREAMING ... a calm and icy morning at the FF field, Hamilton



DOUG KENNEDY ... a NZ modeller remembered in Australia by Ken Brady

" This is a tribute to Mr Doug Kennedy, a great man who started my modelling career more than sixty years ago.

Moving to a new town in the early 60's was an exciting experience for a twelve year old boy. It was in the middle of South Island, New Zealand, a place called Otematata with plenty of rivers and swimming holes and open paddocks for the model flying in which I was becoming interested.

Monday nights would see a number of boys in the back room of the community hall, with our one and six pence for our balsa wood, sanding and making chuck gliders. The man behind all this was Doug Kennedy a great friend and mentor who would walk around the room for a couple of hours each Monday night showing us how to read plans and sand air foils. After building chuck gliders, we progressed to control line, free flight and Wakefield models. On Saturday mornings we would turn up at Mr. Kennedy's home, pile into his 1954 Vauxhall, and head down to the footy field for a chuck glider contest - longest flight wins.

I recall that Doug always wore a tweed pork pie hat and smoked a pipe. After the glider event we flew our control line models and Doug would fly his stunt, combat, speed and pulse jet models. When the weather was calm and warm, we would go to the golf course to fly our Wakefield models and gliders. I don't remember seeing any greens there, just rolling hills, sheep and a club house.

One night dad came home after the six o'clock rush (pubs shut at 6:00pm in those days) and gave me some money to buy a model.

I went around to Doug's place and bought a Hummingbird kit and a Mills 0.75cc diesel engine. I had about six kits over the years and didn't know much about finishing and fuel proofing the models so eventually the balsa wood would become soggy with diesel fuel.

Sometimes I would lose a model in a thermal, but it would eventually be returned by a rabbit or a musterer. Mr. Kennedy had kits in his shed and sold us mainly free flight planes, gliders and control line, I don't know how his wife put up with kids always around the place but walking into his shed and building room was like entering Aladdin's cave.

Mr Kennedy was in the Aorangi Club at Oamaru and in 1937 won the NZ Texaco event. A very talented man he was a Maths teacher and Linesman and also managed the electrical shop in the town. At sixteen I left school to start my apprenticeship and models took a back seat. Somehow, Doug Kennedy popped back into my life when I had trouble with Maths and Electrical Theory, and he tutored me on Thursday nights.

After many years working abroad I moved to Dysart, Central Queensland in the early 90's where I picked up modelling again and started going to competitions in Charters Towers, Mackay and Rockhampton. Going to Charters Towers is always the highlight of the year with Gordon Pardon playing practical jokes - especially if you are a Kiwi. One year I ran into my friend Warren with whom I worked in Twizel /Otematata. The first thing he said was "I have a Hummingbird plan, the only one in captivity".

On retiring to Alligator Creek near Sarina, I joined the Sarina Club where most of the members are scratch builders. We have building nights and projects throughout the year, hence the Hummingbird build."



Ken Brady with his Hummingbird.

Free Flight *Hummingbirds* are popular with Ken's club at Sarina, Australia. Article snaffled from Issue 64 of **Australian Model News** which is edited by John Lamont. Subscription is available on-line. <https://sites.google.com/view/australian-model-news/home>

RC Top 10 Leader Boards 2020

The purpose of the Vintage SIG Leader Boards is to increase enjoyment of competition flying by showing fliers how well they are doing relative to others. Scores are posted from the results of contests, NDC, and independently-timed flying.

The top 10 scores are updated throughout the year, just prior to each issue of AVANZ News. The Leader Boards run for each calendar year, after which they are cleared and started afresh. However, the record for each class is maintained over time, and shown in blue italics with the year in which it was set.

New scores posted in this update are shown in red. It is fortunate that there was a lot of good flying in February and March, giving the Leader Boards a good boost before all flying ceased during Lockdown. The new postings are from the Bob Burling Memorial held at Levin on 17 May.

Please email me if you spot any errors or omissions.

Wayne Cartwright
rwcartwright4@gmail.com

Standings at 15 June

Precision Classes

Vintage Precision

*Record: A Knox (2017), J Shorer (2018),
D Mossop (2019), and B Russell
(2019) 600 + 200*

1.	B Treloar	600 + 199
2=	B Russell	600 + 198

2=	A Knox	600 + 198
2=	D Crook	600 + 198
5.	D Mossop	600 + 197
6=	T Gribble	600 + 196
6=	J Bradbury	600 + 196
8.	D Gush	600 + 193
9.	J Shorer	597
10.	P Pearpoint	596

Classical Precision

Record: B Harris (2016) 598

1.	G Fulton	596
2.	D Mossop	585
3.	B Russell	571
4.	J Butcher	533
5.	T Gribble	527

Duration Classes

Vintage IC Duration

*Record: S. Cox (2019) 780 + 500
+ 391*

1.	A Knox	780
2.	B Treloar	764
3.	B Scott	741
4.	T Beaumont	685
5.	D Gush	639
6.	W Elley	635
7.	T Beaumont	556
8.	S Cox	260

Vintage E Duration

Record: B Harris (2018) 960 + 600

1.	S Nicholas	960 + 330
2.	B Russell	960 + 318
3.	D Mossop	960
4.	J Shorer	944
5.	B Robinson	911

6.	G Fulton	897
7.	A Knox	855
8.	S Hubbard	819
9.	W Cartwright	717
10.	I Crossland	668

Classical IC Duration

Record: D Thornley (2017) 900 + 600

No score yet posted.

Classical E Duration

*Record: W Cartwright (2018) and
B Russell (2019) 900 + 600*

1.	B Russell	900 + 352
2.	P Townsend	879
3.	B Robinson	851
4.	D Gush	766
5.	P Townsend	760
6.	S Nicholas	745
7.	J Butcher	114

Texaco Classes

Vintage 1/2A Texaco

Record: A Knox (2018) 1500 + 1833

1.	J Butcher	1498
2.	B Scott	1490
3.	A Knox	1461
4.	W Cartwright	1182

Vintage A Texaco

Record: A Knox (2018) 1860 + 1870

1.	B Scott	1860
2.	B Treloar	1852
3.	S Cox	1848
4.	A Knox	1568
5.	I Munro	1502
6.	B Russell	1428

Vintage Open Texaco

Record: B Treloar (2018) 1840 + 1703

1.	B Treloar	1840 + 782
2.	B Scott	1840
3.	S Cox	1830
4.	T Glogau	1750
5.	A Knox	1657
6.	I Munro	1529
7.	B Russell	1264
8.	J Butcher	1045
9.	T Beaumont	917

Vintage 1/2E Texaco

Record: P Townsend (2020) 3689

1.	P Townsend	3689
2.	W Cartwright	2138
3.	B Russell	1663
4.	K Fisher	1597
5.	A Knox	1280
6.	B Scott	1221
7.	T Gribble	636`

Classical 1/2E Texaco

Record: D Crook (2020) 2774

1.	D Crook	2774
2.	P Townsend	2310
3.	T Gribble	1789
4.	W Cartwright	1339

Vintage E Texaco

Record: W Cartwright (2020) 2337

1.	W Cartwright	2337
2.	K Fisher	1965

3.	D Crook	1768
4.	B Russell	1507
5.	D Mossop	1476
6.	G Fulton	1322
7.	D Baunton	1099
8.	T Gribble	700
9.	A Knox	574
10.	J Butcher	104

Classical E Texaco

Record: W Cartwright(2020) 2366

1.	W Cartwright	2366
2.	D Gush	2186
3.	P Townsend	2106
4.	J Butcher	1674
5.	K Fisher	1616
6.	T Gribble	1477
7.	B Russell	1418
8.	G Fulton	867

Vintage E Rubber Texaco

Record: B Russell (2019): 5685

1.	P Townsend	4744
2.	K Fisher	4712
3.	D Gush	4272
4.	D Mossop	3900
5.	W Cartwright	3555
6.	D Crook	3337
7.	B Russell	2702
8.	D Baunton	2832
9.	A Knox	2052
10.	T Webby	1225

Sport Cabin Texaco IC

Record: B Scott (2020) 633

1.	B Scott	633
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Sport Cabin Texaco E

Record: K Trillo (2019) 4457

1.	P Townsend	2996
2.	J Butcher	2777
3.	K Fisher	2636
4.	D Gush	2042
5.	T Gribble	1819
6.	K Trillo	1705
7.	G Fulton	958
8.	B Russell	696
9.	D Crook	552

Vintage and Classical Scale Texaco

Record: A Knox (2019) 1680 + 620

1.	A Knox	1660
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Tomboy IC

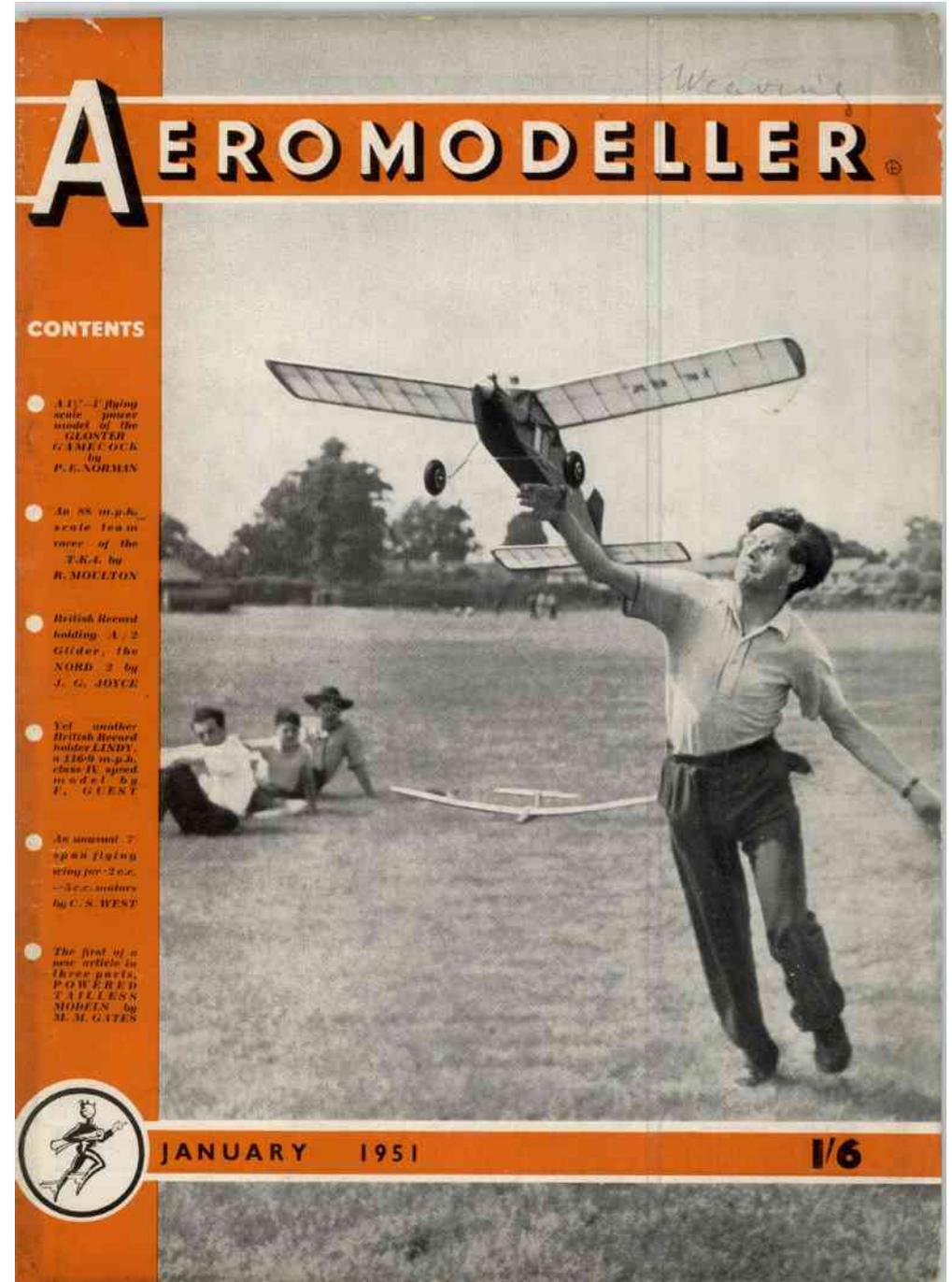
Record: R Anderson (2015) 1432

No score yet posted.

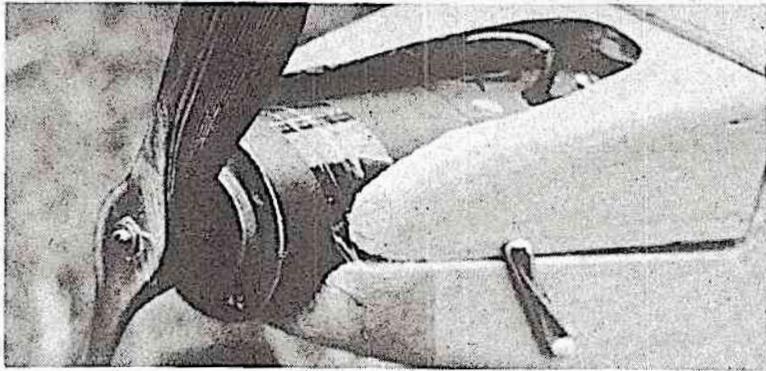
Tomboy E

Record: P Townsend (2020) 3368

1.	P Townsend	3368
2.	J Butcher	1927
3.	D Gush	1848
4.	K Trillo	1200



American Modeler — February 1958

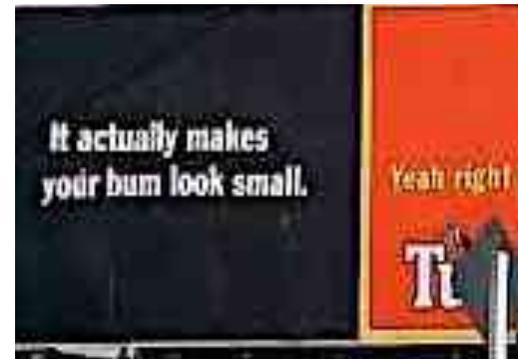
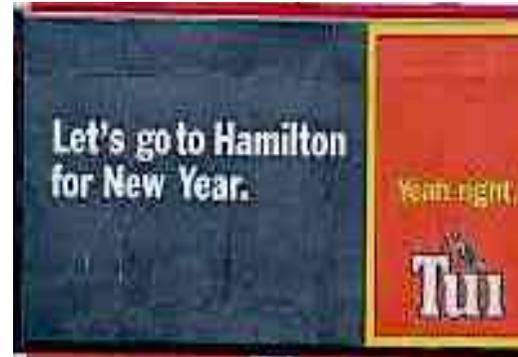


Electric Power's Popularity Rising

Experiments in America and abroad with radio control boats and plane models indicate that direct current-powered motors may soon play a bigger part in hobby-model activities. While the two main problems still remain—weight and cost—new type batteries and more efficient motors are slowly filtering into the hobbyist's domain.

NZ ICON #176 TUI Beer billboards

A sampling of TUI billboards - advertising you looked forward to reading. Then the Correctness Police thought that someone, somewhere, might be offended.



A "Covid-Build"
from Canada

1960 Glowworm
Vintage FAI
Power by Nigel
Tarvin, Canada