

MODEL AEROPLANES

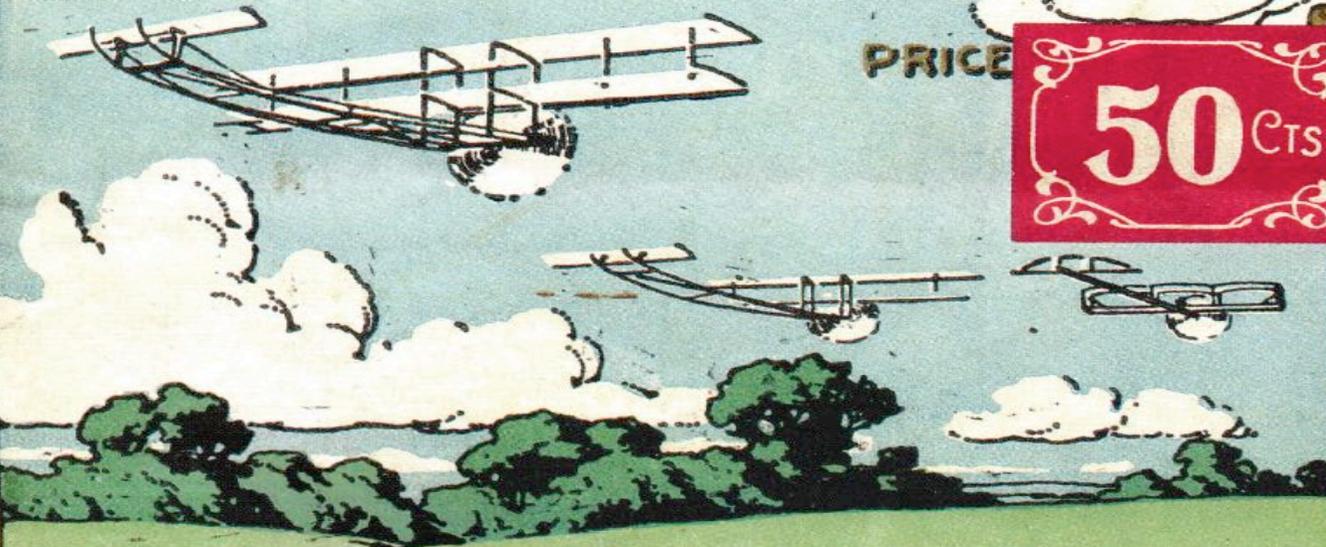
HOW TO BUILD AND FLY THEM, BY E.W. TWINING.

PRICE

50 CTS



LAUNCHING A MODEL AEROPLANE

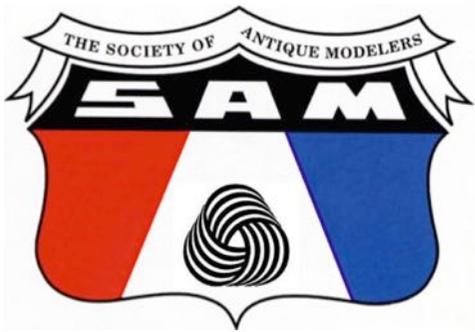


THIS ENVELOPE CONTAINS FIVE SHEETS OF FULL SIZE WORKING & DETAIL DRAWINGS AND BOOK OF INSTRUCTIONS FOR BUILDING THREE MODEL FLYING MACHINES

PUBLISHED BY PERCIVAL MARSHALL
PROPRIETORS OF "THE MODEL

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COMMITTEE NOTICES



1. LEADER BOARDS

The aim of this note is to clarify how the Vintage Leader Boards (LBs) work.

The LBs were introduced in 2012. There is a LB for each class in the Vintage Flying Rules. At any time during each calendar year, every LB lists the 10 top scores recorded for that class in the year to date. The LB scores at the end of each December rank the top fliers in each class for the whole year. These results are saved to be reported, and the LBs are then emptied and begin afresh in January.

The LBs have contributed to enthusiasm for contest flying by enabling fliers to compare their scores within each class during each year. More recently, the highest score in each class since 2012 was added to the heading of each LB. This is the class record recognized by the SIG.

The main aspects of how the LBs work are:

1. LB scores may be recorded at any time during the year, at contests, rallies and club flying. All that is required is a sign-off of a score by the timekeeper.
2. Scores for the LBs are sent to the Editor of AVANZ News, who maintains the LBs by adding in new scores if they qualify to be in the top 10 of a Board, and removing those that are no longer high enough to be on that Board.
3. For the purposes of LB scores, a fly-off may be scored by any flier who maxes the rounds, irrespective of whether or not a fly-off is required in a contest situation. The Vintage Rules call for two different procedures for fly-offs, and these must be observed when recording LB scores, as follows:
 - a. All the Texaco classes with unlimited fly-offs are simply scored as the total of the maxed round flights plus a single unlimited fly-off time.
 - b. The Duration and Precision classes are different because they have a fly-off maximum. For LB purposes, any flier who maxes the rounds and also maxes the fly-off may continue with further fly-offs with the same maximum until a flight does not reach the maximum.

2. SCALE TEXACO RULE ERROR

The Committee notes a small error in the Scale Texaco rules. Rule 5.9.1 appears to exclude designs powered by CO2 because the words 'IC-powered' are used instead of 'Powered', which would allow CO2 according to Rule 2.1.1. The rule will be corrected at the next AGM. In the meantime, CO2-powered designs are allowed.

*On the Cover: 1909 modelling advice from E W Twining who later produced kits for full size aircraft
Logo: Woolmark logo (see Miscellaneous page)*

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Bob Burling Memorial Meeting - Rescheduled

Levin MAC Field - June 09th and 10th 9:30am to 4:30pm

Entry fee \$10 for one day or two. BBQ both days - Sausages @2.00 Burgers \$5.00

You can fly each event twice, once on each day. Best score counts. You can just fly for fun too.

EVENTS: (Vintage prior to 31/12/1950. Classical 01/01/1951 to 31/12/1975).

Vintage and Classical Precision	Vintage IC Duration	Vintage A Texaco	Tomboy
Vintage and Classical Electric Duration	Vintage Open Texaco	Vintage E Duration.	

RULES: <http://www.modelflyingnz.org/docs/comprules/S04-Vintage.pdf>

DESIGN YEAR: <http://www.antiquemodeler.org> "Approved lists"

Every model must have its name and design year clearly visible on the model.

Precision Any model from the period can fly this as long as it can fly high enough in 60 seconds or less to glide down at the 3 minutes total flight time. Being on time and on the spot is the key to success.

E and IC Duration The key is fast near vertical climb under power. You need about 800 feet in either the 20 second, 25 or 40 seconds allowed for your power type. See rule 4.1.6 for engine runs, rule 4.1.3 for engine sizes and 4.2.4 for battery capacities. For IC models you are looking for 4 minutes total flight time then a spot landing. For Electric the target is 5 minutes. You can go over time.

A Texaco All Texaco events are fuel economy runs. For A Texaco you need any IC motor from 1.5 to 3.5 ccs (.09 to .20 Cu Inches) four strokes and diesels are best. The fuel tank has to be a small Humbrol paint tin. Fly for 10 minutes and land on the spot and you have a max! You can go over time.

Open Texaco Any size vintage model can be used with any IC engine but the fuel tank size is set by the wing area. See rule for Tank capacity. Fly for 15 minutes, land on the spot and you have a max!

Tomboy 36 inch Electric Tomboy with a 180 Mah 2 cell. There is an IC option too. See the Sport Cabin Texaco rule 5.10. Fly 3 up to times for as long as you can. Add up your 2 best times to get your score. No spot landing needed.

CD: Allan Knox 021 747 950

Other than a brief spell of rain which called a halt to proceedings on Saturday afternoon, the rest of the Championships was a resounding success.

The field was in pristine condition, as always, so a big thank you from all the Vintage flyers to the team at TMAC for their fine efforts. In addition, David Squires arranged for a Pancake and Coffee caravan on Saturday. This went down a treat by everyone and David Gush did an excellent job with the BBQ both Sunday and Monday. In between the fine cuisine being served up there was lots of flying to be done as the sun was shining and the wind was behaving, but not from the most favorable direction, mind you.

As is customary with the NI Championships and the Nationals, these events run differently to our normal competition and rally days in that specific events are scheduled for each of the flying days. This levels out the playing field somewhat by one competitor not getting an advantage over another due to flying the same event in different conditions. That's the theory, but you still have to know when the best time to launch is. This also helps when it comes to packing the car as you don't have to stuff everything in at once.

*One of the most popular events to get done and dusted with first off is usually the **Vintage and Classical Precision** events as these do not require looking for thermals or battery management. A high and fast climb is all it takes, along with being able to land dead on time and getting the aircraft within the landing circle. Don Mossop is a worthy champion in both these categories.*

***Vintage E Rubber** is starting to become a very popular event with Tony Gribble now joining in with his beautifully looking Smith Mulvihill in red, white and blue. While not footing it with John Butcher who won the event this time out, Tony does take the award for flying the furthest downwind. After exploring the countryside the model was found in good condition.*

***Classical E Duration** is also another class increasing in popularity. Along with Wayne's trusty Nig Nog, David Squires new Crowbar and David Gush with the first of the Glow Worms took to the sky whilst Dave Crook's Dixielander decided to remain in the back of the car.*

***Vintage E-Texaco** and **½E Texaco** events both went full distance with fly-offs required. Keith Trillo again showed his expertise by taking out top spot. Keith also topped the score sheet in both **Vintage Open Texaco** and **Vintage ½A Texaco**. John Butcher, the other master of the skies, took wins in **Vintage E Duration**, **Classical ½E Texaco** and **Vintage IC Duration** in addition to his **E Rubber** win.*

*No one flew the **E Tomboy** event but there were four Tomboys flying alongside a Pertardo in the **E Sports Cabin Texaco** event. The Pertardo built and flown by Tony Gribble made its first appearance at the JR Airsail Vintage competition and rally event held in February. Being both very small and light it will be a difficult plane to beat until other similar type models are built.*

While the number of competitors was low it did not detract from the quality of the flying which was challenging given both the wind direction and the air. This can be gauged by the number of people who were able to complete all qualifying rounds to get through to the fly-offs. Not an easy task over the period of the weekend.

Thank you to everyone who did turn out to fly, compete and hopefully enjoy themselves and also to both Brett Robinson and Barrie Russell who made the trip north from the Hawkes Bay to compete. We look forward to heading your way one day where I hear the sun is always shining and the thermals are big and plentiful. Nice.

DAVE CROOK









SPOT the *TOMBOY*



		R1	R2	R3	FO	Total
Vintage Precision						
Don Mossop	Bomber	200	200	200		600
Dave Crook	Playboy	200	189	200		589
John Butcher	Miss FX	200	200	188		588
Barrie Russell	Stardust	200	200	188		588
Brett Robinson	Bomber	192	177	200		569
Keith Trillo	Tomboy	176	177	194		547
David Squires	Miss FX	200	185	-		385
Doug Baunton	Miss Arpiem	200	178	-		378

Classical Precision						
Don Mossop	Madcap	197	199	195		591
David Squires	Crowbar	199	180	190		569
Barrie Russell	Popsie	154	175	199		528

Vintage E Duration						
John Butcher	Miss FX	315	265	320		900
Don Mossop	Playboy Snr	250	320	310		880
Barrie Russell	Stardust	320	320	229		869
Brett Robinson	Bomber	243	320	269		832
Keith Trillo	Stardust	195	306	320		821
Tony Gribble	Stardust	193	217	-		410

Classical E Duration						
Wayne Cartwright	Nig Nog	300	300	300		900
David Squires	Crowbar	187	170	172		529
David Gush	Glow Worm	223	-	-		223

Classical ½ E Texaco						
John Butcher	Maverick	720	720	999		2439
Wayne Cartwright	Tigress	720	720	948		2388
Tony Gribble	Jumpin Bean	720	672			1392

Vintage 1/2A Texaco						
Keith Trillo	Skipper	500	500	500	1500	
John Butcher	Miss FX	387	-	-	387	

Vintage Open Texaco						
Keith Trillo	Stardust	706	890			1596

Vintage IC Duration						
John Butcher	Miss FX	255	260	-		515

Vintage 1/2E Texaco						
Keith Trillo	Stardust	740	740	1431		2911
John Butcher	Miss FX	740	740	1184		2664
Wayne Cartwright	Arrow Nut	740	740	991		2471
Barrie Russell	Stardust	740	740			1480
Brett Robinson	Stardust	674	740			1414
Dave Crook	Tomboy	667	740			1407
Tony Gribble	Benny Boxcar	535	472			1007

Vintage E Texaco						
Keith Trillo	Stardust	620	620	620	1048	2908
Tony Gribble	Bomber	620	620	620	731	2591
Dave Crook	Bomber	620	620	620		1860
John Butcher	RC-1	620	596	620		1836
Wayne Cartwright	Cruiser	620	620	590		1830
David Squires	Pine needle	607	620	577		1804
Barrie Russell	Stardust	552	549	620		1721
Doug Baunton	PB 2	526	466	620		1612

Vintage E Rubber Texaco						
John Butcher	Gollywock	620	620	620	1262	3122
Keith Trillo	Yonder	620	620	620	1119	2979
David Squires	Gollywock	620	620	466		1706
Tony Gribble	Smith Mulvihill	620	530			1150

Sports Cabin Texaco – E						
Tony Gribble	Petardo	609	791			1400
Barrie Russell	Tomboy	528	508			1036
Keith Trillo	Tomboy	513	462			975
Brett Robinson	Tomboy	474	486			960
Dave Crook	Tomboy	501	342			843

We had a great day at Levin today with the biggest turn out for a while. 27 cars at one point with the Club fliers also doing their thing. Vintage fliers from Kapiti, Levin, Wellington and Ashurst. The *Buzzard Bombshell* was the most common model closely followed by *Playboys* and *Lanzos*. We had great air for much of the day and the big models made the most of it. There were not too many results posted but that's OK - the day was mostly about flying and having fun. I did three NDC events and totaled over two hours of air-time. IC models predominated which is good to see. Most were 4-stroke powered and many of the big ones now have Texaco tanks for Open. George brought along the biggest *Bombshell* I have ever seen. A real monster, it flew great and he had no trouble seeing it!

Levin never fails to impress as a place to fly. A super-friendly Club, nice facilities and great air most days. I posted a 32 minute fly off flight in the amazing air, longest ever for me. Thanks Warner for hanging in there on the stop watch.

Roll on next month's gathering which will have Texaco Scale and Open Texaco.

<i>NDC Event 122</i>	<i>Texaco A</i>
Allan Knox	3780
Bob McGrath	1777
Bryan Traloar	612
Warner Summerton	491

<i>NDC event 123</i>	<i>Vintage E Texaco</i>
Allan Knox	1832

<i>NDC Event 121</i>	<i>Vintage 1/2 E Texaco</i>
Allan Knox	2487
Jonathan Shorer	433

A number of guys took a shot at other classes and recorded the odd flights to see how they went. John Miller did 7 min 55 secs in Open Tex with his *Bombshell* and had a shot at IC Duration too but needs more power for this class. Owen Stuart managed a 4.40 in IC Duration with his *Playboy* so it has the necessary vertical performance. It was nice to see Alan Sissons have some success with yet another *Bombshell* and posted 3 Precision times.



THREE BRITISH POWER MODELS

BEATNIK

" Jim Baguley's series of articles on power model design, which appeared in Model Aircraft between December, 1959 and March, 1960, aroused considerable interest both here and overseas.

The plan is for the sixth development in a particular series, the main improvements over earlier versions being structural and an increase of tailplane chord.

The most potent 3.5 c.c. engine will not prove too powerful for it and the ideal is probably a .19 glowplug motor, by using which the Hying weight can be taken down to 14 oz. The original

Beatnik weighed i6£ oz. with a modified Oliver, and using over-hard balsa all round. The only hard balsa needed is that used for the fuselage longerons. "

Model Aircraft June 1960



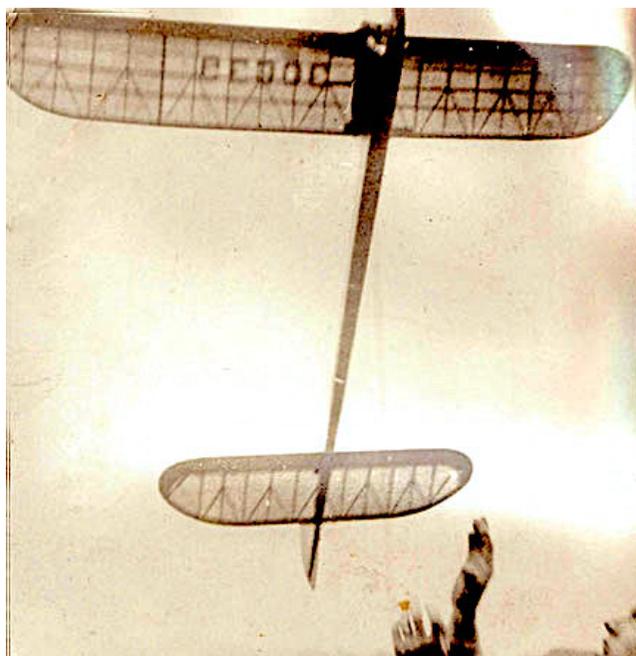
DREAMWEAVER

Credit to John Thompson for the following comment, cribed from the Feb 2015 issue of the *New Clarion*.

"Dave Posner, also the designer of the *Dreamboge*y glider, moved to power models in around 1953/4 and this is my take on his very successful *Dream Weaver*.

Looking at the *Dreamboge*y's wing section I think that one can get the idea that Dave was somewhat taken with the Marquardt S-2 wing section (Beloved of lightweight rubber fans). It's very unusual to use such a heavily under-cambered section on a power model and not only that, but to use a similar section on the tail-plane.

He was very successful with this *Dream Weaver* series. One powered with an Oliver at the 1956 World championships flew beautifully, very consistent pattern and possibly it would have been a much closer result if he had used an engine run closer to the allowed 15 seconds, which Ron Draper did with his *Crescendo* in the fly off.



DIXIELANDER

Not the first pylon model, nor the best performing but for those outside the US, the *Dixielander* is probably the most widely recognised power model from the Nostalgia period. Probably the most widely built, as well.

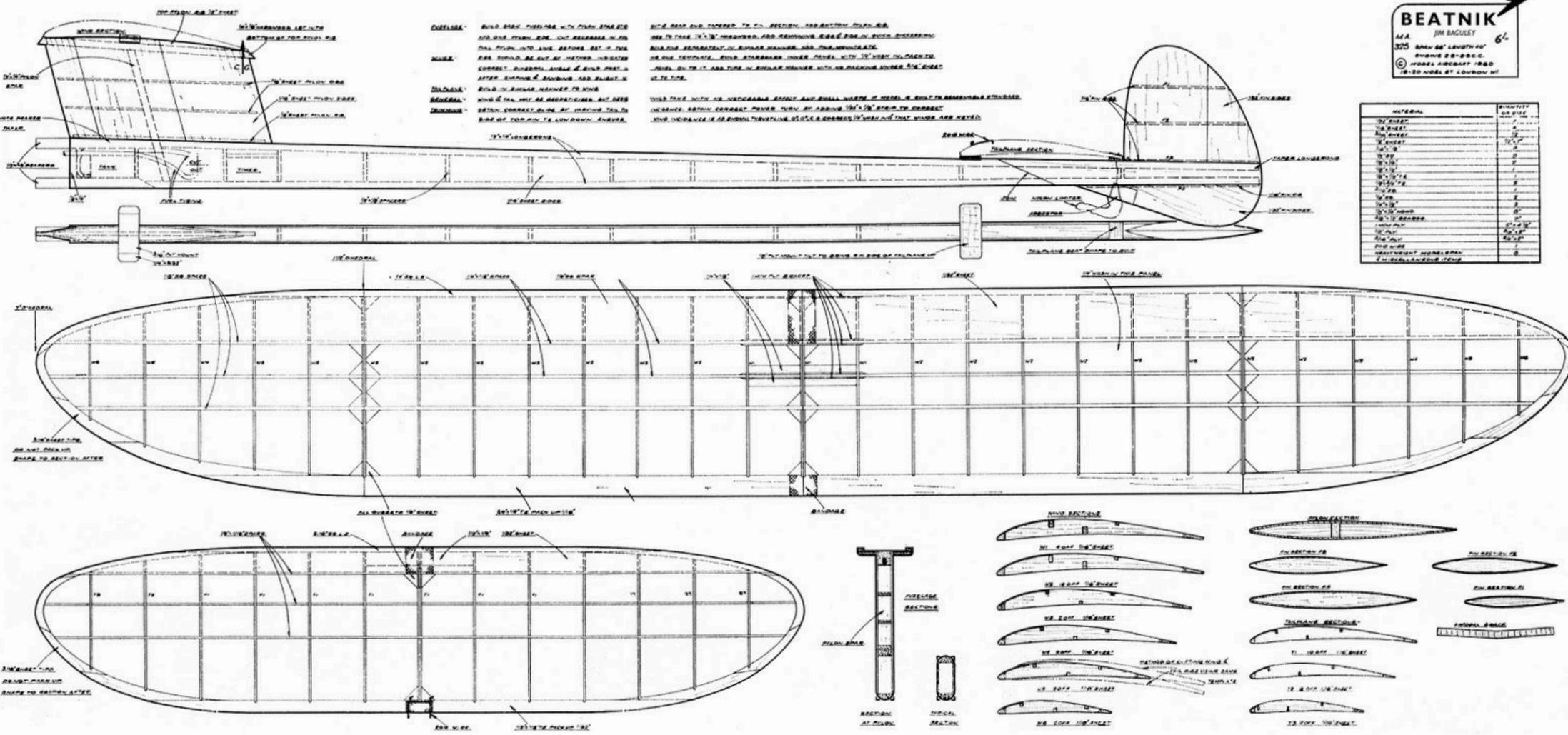
The easily built *Dixilander* is just the right size, big enough to be easy to trim but not so big it is a handful to transport. The readily available .15 glow is perfect power, and for those who are brave enough to trim it as it was intended with the CG *behind* the trailing edge, its climb and glide are things to behold.

The rearward CG, wash-in on right inner, and little or no engine offset are such good starting points for many power models of this size that they have been referred to in trimming articles as the *Dixielander* trim.





MATERIAL	QUANTITY
1/8" Balsa	100
1/16" Balsa	50
1/32" Balsa	20
1/64" Balsa	10
1/8" Ply	5
1/16" Ply	2
1/32" Ply	1
1/64" Ply	1
1/8" Fiberglass	1
1/16" Fiberglass	1
1/32" Fiberglass	1
1/64" Fiberglass	1
1/8" Epoxy	1
1/16" Epoxy	1
1/32" Epoxy	1
1/64" Epoxy	1
1/8" Glue	1
1/16" Glue	1
1/32" Glue	1
1/64" Glue	1
1/8" Sandpaper	1
1/16" Sandpaper	1
1/32" Sandpaper	1
1/64" Sandpaper	1





NEW RULER REFURBISHMENT

Dave Richardson brought along a very tired old and poorly repaired *New Ruler* to the Champs at Levin last year. (Clearly not repaired by Dave as his workmanship is the very best.) Stew Cox bought it to replace a recently departed *PlayBoy*. On inspection he found it was a real roughy having fuel soak, warps and broken frames and stringer amongst other thing. I have very fond memories of this design. John Ensol built one and it was the first Vintage RC model that I ever noticed. John's of course was a masterpiece finished in immaculate red silk. I loved it.

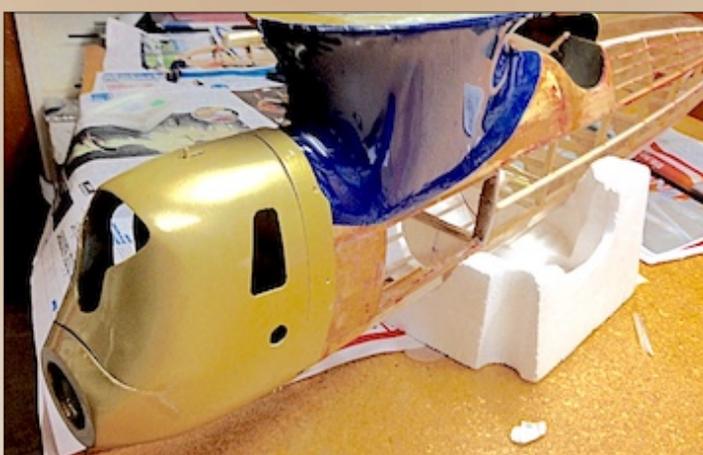
So.....when Stew lost interest in it I was keen to give it a birthday on his behalf. Together we pulled the covering off to reveal the true horrors. I made a start on them a few weeks back. The wings were straightened by dunking them in a hot bath for a minute then strapping them down. They came back dead straight. Same with the tailplane. Once dry I repaired the cracked and broken bits, then cut the wing in half on the centre line. Carbon tubes were inserted through the ribs and now take the bending loads in the inboard areas and are connected by a couple of homemade solid carbon joiners set to the right dihedral.

When we measured the model we found it was scaled up a bit so its has enough area for a .65 4 stroke. Good news, as Stew acquired a Saito .65 - my favourite. A good one will give at least one horse power and spin a 13 by 6 at 10k. Better still, it is good for the 25 second run due to age, so still air performance ill be good for the 4 minutes. John's was a 4 minute model on a lower powered OS.52 Surpass.

The bigger motor needed a new cowl and these are fun to build with the lost foam method. The front firewall was shot so that has been replaced along with front sheeting, lower frames and new stringers. There is now a heavy 3/16 wire landing gear to take the Precision arrivals, matched up to some skinny vintage wheels.

The tailplane and fin are now removable with a front pin and nylon bolts at the back, a Stew requirement. The original rudder control was a sticky push pull cable. It has been replaced with a servo down the back with short straight linkage for precision. All the old film colour and original tissue finish residue will get smoothed then covered with new film. We are thinking white for upper surfaces and dark Corsair blue for the rest with gold for highlights. That should make a silk purse out of this old pigs ear.

I'm setting it up with an Open Tank as well, so Stew will be able to fly 3 classes with this beast. I will get a buzz everytime I see it in the air.





Lanzo Airborn build by Bryan Treloar

The Lanzo Airborn was designed by Chester Lanzo in 1938 and the original design was as a glider with a wingspan of 108 inches. Currently the model's plan is offered in a range of sizes from 1/2 A Texaco to a monster 144 inch with a wing area of 1600 square inches. Why did I decide to build the Airborn in the 108 inch version? Because I have built two of them, one as an A Texaco model with a 680 square inch wing and one for Duration with a 870 square inch wing.

Both are superb fliers and their glide performance is exceptional. This build is for Open Texaco and with a 1360 square inch wing, 27.2 mL of fuel can be used according to the fuel allocation rules. The engine to be used is an OS 60 four stroke that has been converted to spark ignition by Otto Bernhardt in the USA. He converted engines to spark during the mid 1970's through to the mid 1980's. I did a number of test runs of the engine using a calibrated tank and achieved an average run time of 10 minutes with the throttle set at about 1/3 power and turning a 14X3 Top Flite wood propeller. Fuel was 91 octane petrol and 25% v/v SAE 20W 60 mineral oil (Penrite)

To the build itself. I started with the fuselage and built both sides, one on top of the other separated by a film of Gladwrap. The longerons were 1/4X1/4 spruce instead of balsa as I wanted the fuselage to be strong and stiff. The firewall is 1/4 ply. The nose was built up using 3/4 inch thick balsa for the cowl cheeks and bottom and sanded to shape to blend in with the fuselage, especially the "V" shaped bottom. The tailplane, elevators, tail and rudder were built and sanded to shape. The tailplane is a bolt on assembly that attaches to a ply plate fitted with blind nuts to take 3mm steel bolts. This allows for a model that disassembles to provide easy storage and transport. The wing was built in four parts, two centre section panels and two wingtips. The wingtips were araldited to the centre panels and the two wing halves are joined together using carbon fibre tube and rod assemblies. The original layout was for a single piece centre section with removable wingtips but I felt that the logistics of removable tips didn't allow for a satisfactory method of easily attaching and removing the tips. The covering used is transparent Solarfilm that allows for the framework to be visible as there is a lot of work in the building and it is good to have it on display.

The all up weight is 3116 grams which gives a wing loading of 11.63 ounces/square foot.

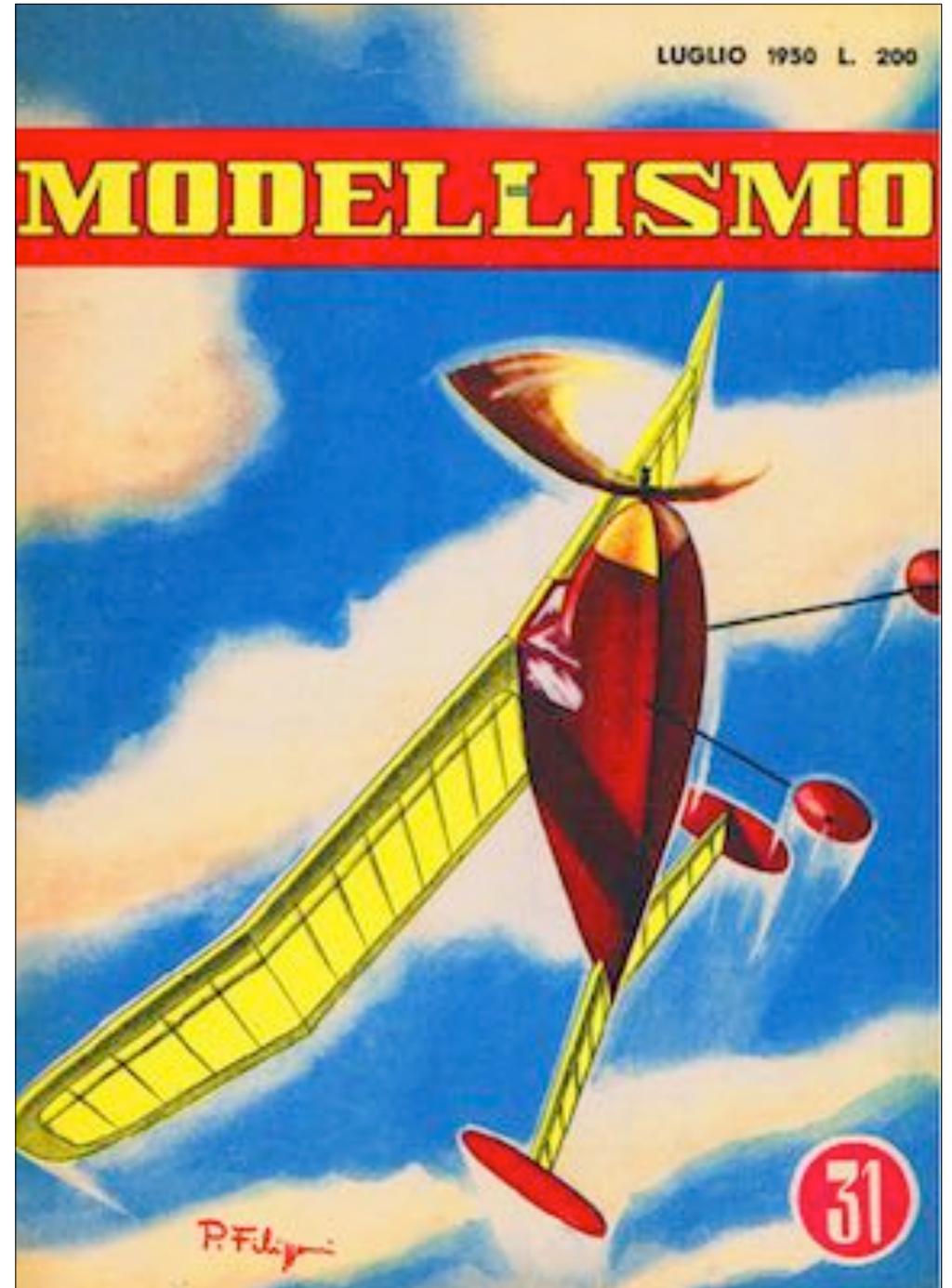


Later ...

On Thursday 10th May I went to Levin to test fly my Lanzo Airborne. Conditions were calm with high cloud. At the field I assembled the plane and did the pre flight inspections and range and function checks on the radio system. The tank was fuelled with 27mL spark ignition fuel as allowed according to the wing area rule for Open Texaco. The engine was started and I took the plane off the ground on about 1/3 power. The take off run was about 3-4 metres before it lifted off. Climb out was steady and I throttled back to 1/4 power and circled about to gain good height before I stopped the engine in order to assess glide performance. The glide was very flat and surprisingly slow and it stayed up for a good time, no stopwatch used though. The approach to landing was a long straight in run and the plane landed within 2 metres of me. I thought the speed was about that of a fast walk or a slow trot. Clearly the large wing provides for great low speed lift and the Airborne is a departure from the ubiquitous Bombers (no criticism implied)



COVER STORIES



DTs by DT

Dethermalizers were unknown during my early aeromodelling days, and the bitter-sweet emotions that I experienced when watching a flyaway remain in my mind as treasured memories! As a self-confessed reactionary I admit to having squeezed more aeromodelling enjoyment out of the occasional out-of-sight (o.o.s.) flight than I could ever find while observing one of our modern-day (but necessary) DT Flyoffs! In my school M.A.C. we would feel like heroes if we could boast of flights of xx minutes “o.o.s.” A flight that terminated in full view was somehow not nearly so much fun!

Back in the late '40s my pals and I were not very well read on the changes and advances that were already taking place in the free flight contest world, so our early models were all built with the expectation that they would return to earth in forward motion and as nearly horizontally as possible. Eventually the news of progress in the world outside the school drifted in, thanks to “Aeromodeller”, “Model Aircraft” and the like.

Much later on I came across a “Model Aeronautical Digest” which had been published in 1944 by Ron Warring, Bob Copland et al, and it makes an interesting read nowadays. This slim booklet was the brainchild of a group of stalwarts whose names, in addition to the two mentioned above, included those of Norman Lees (of Flying Minutes fame) and the famous L.G. Temple, who was described then as “the leading exponent of model sailplanes” (remember the “Celestial Horseman”?) These gentlemen had heard that a new idea called a “Dethermalizer” had been germinating in the United States from about 1940.

Having no Internet it is probable that they did not have all the latest detail on this, but all the same the 1944 Digest team thought it worth six whole pages of information, beginning with the words that “In America the most popular method” (of getting your creation to come down) “is by spinning the model out of the thermal. The system incorporates a mechanical timer coupled to a spring-loaded rudder tab...”. Oh dear! We can see what is

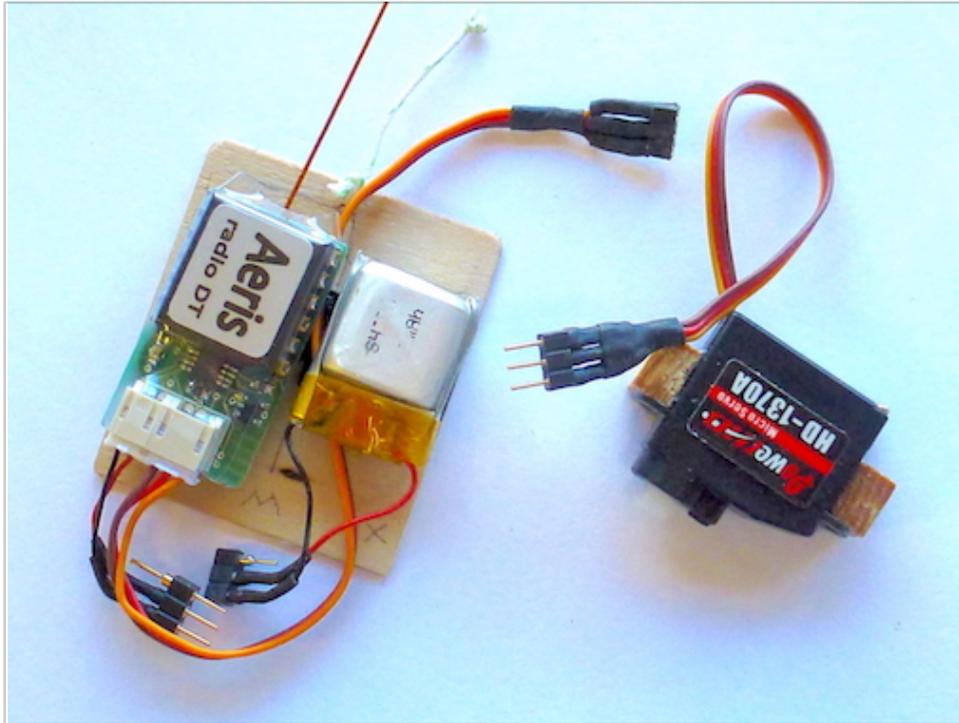
going to happen, but the Digest writers hoped that they could reduce our anxiety by adding that “the system is not so drastic as might at first appear, since it is only after the model is completely clear of the thermal that the dangerous spin makes its presence felt, and very often this may not occur until quite near the ground”! (NO PROBLEM, THEN!)

Okay, our experts (which they mostly were) went on to describe other DT methods, showing that split elevators could be made to become drag flaps, that a parachute attached at the tail would be another solution, or that altering the CG by swinging out a piece of lead might work. Surprisingly, although there was also mention that “pivoting the tailplane to force it into a negative angle offers great possibilities” this was not immediately recognized as the real best solution. With hindsight one wonders whether anyone in those far-away days could have foreseen the infamous “deep stall” of some full-size aircraft, from which – without the artificial aid of a stick-pusher – it was virtually impossible to recover. Ask a retired Trident or One-Eleven pilot.

But back to our models, with thoughts of the Free Flight era that I loved: Although it is perfectly clear that dethermalizers had to be born, and admitting that Radio DTs are also very useful... I still see (in my best nostalgic dreams) my glider circling ever higher and higher... until that wonderful tribute to aerodynamics drifts slowly, gracefully and with no apology O U T O F S I G H T !

THAT for me was LIVING!

Editor: Thanks Dick for this reminiscence on DTs for Free Flight. OOS flights can be very moving, though for me the thrill is tinged with worry over retrieval. Some information on RDT (radio DT) units follows.

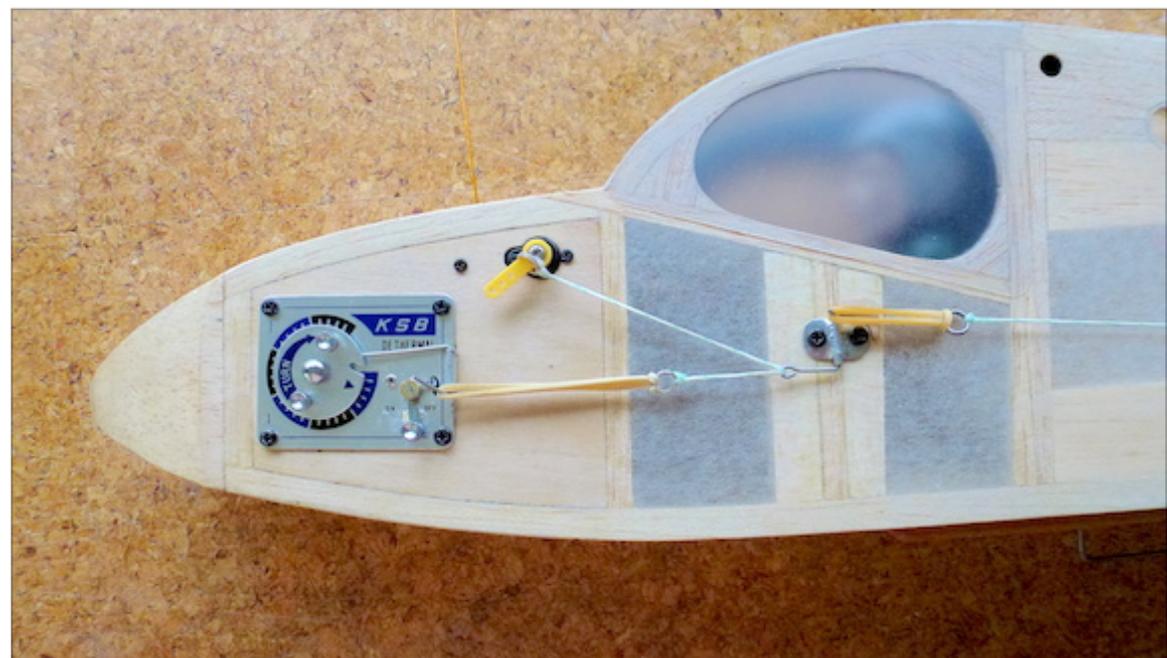


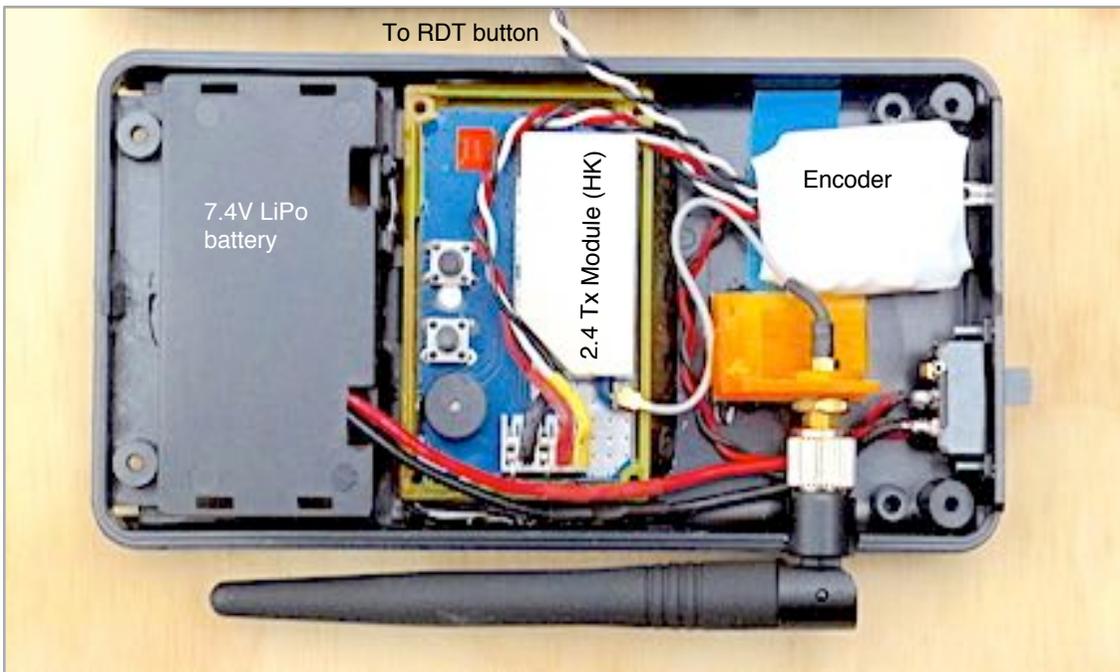
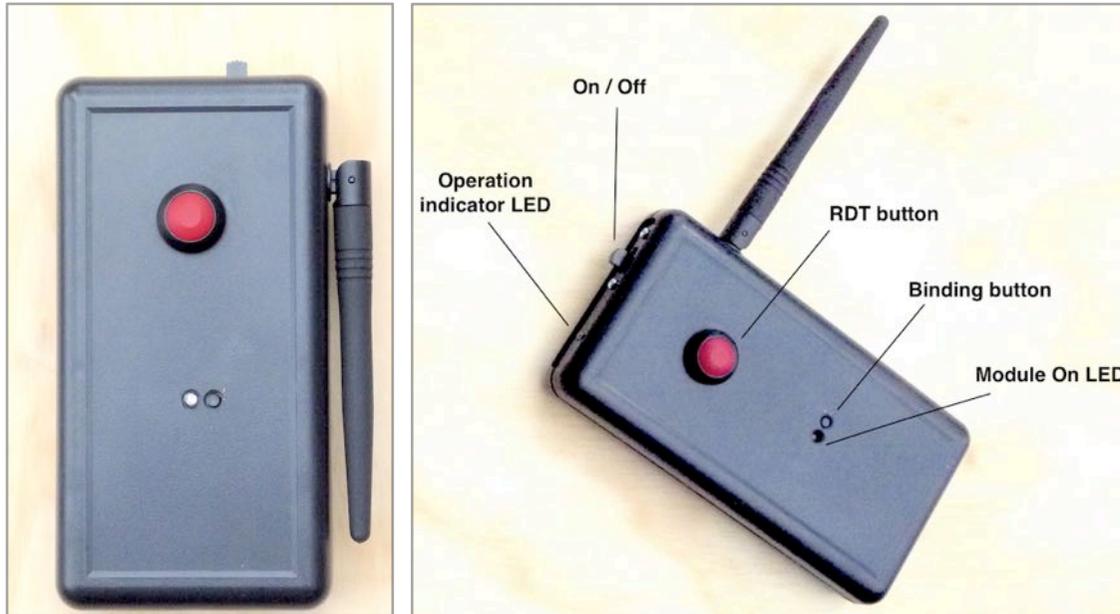
Top left. The Aeris Radio Dethermaliser receiver with 80mAH LiPo battery and miniature servo. This RDT has always worked well for me and has great range. I mount the receiver and battery on a ply board so they may be slipped into a slot built into the model, as in pic at *Below Left*, leaving only the permanently installed servo to be connected.



Below right. A "belt and braces" system in which either the usual mechanical timer or the RDT may trip the dethermaliser via a "mousetrap".

It's no big problem to swap the units from one model to another, but it is one more thing to do at contests, and another area where errors may be made. Permanently installed RDTs in each model would be ideal, but rather expensive, so cheaper home-built units are the answer.



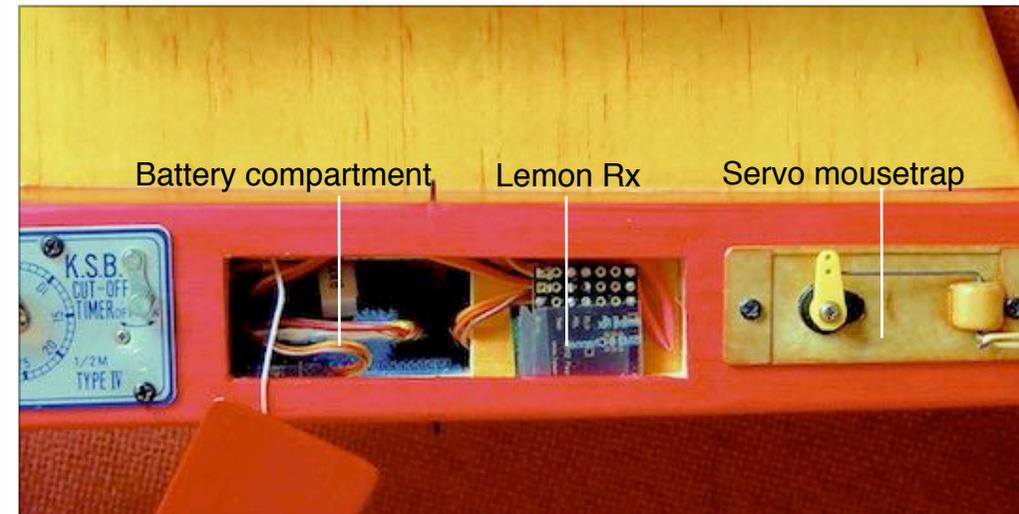


This is just a glimpse of my RDT, not a construction guide. There are in depth articles available on-line although most of my guidance has come from British club bulletins.

The use of RDTs in international events has been restricted to commercial products so manufacturers can ensure no interference between units. The arrival of 2.4 systems meant that interference was not such a problem and has opened the way for experimenters to devise their own systems, at least for local use.

My unit is based on the published work of Phil Smith - RC Forums and philg@talk21.com - who builds and sells the encoder unit that makes this a simple project. No electronic knowledge is required as both the RDT Tx and Rx are assembled from over-the-counter components.

The airborne side uses a hard-wired Lemon Rx that is available without case and pins for minimum weight and 3.7V operation, a micro 1-cell servo, and a single 100mA LiPo. No switch is used, the system is always-on so there is no chance of launch without power. The tiny LiPo lasts for a typical morning's flying. No endurance tests have been made, so for security I recharge or replace for full-day use.



A shot of Texaco starters at our annual Old Timer weekend in Townsville. 18 entries, not all in the photograph. All *Lanzo Bombers*, as seems to be the norm in our Texaco competitions. Our cutoff for Texaco is Dec. 31 1938. The Stardust Special was designed in I think, 1940, which makes it ineligible. This is in line with the original rules back then, when engine runs were changed from fuel allocation to timed engine run. Most of our regional Texaco comps, in Qld. anyway, consist of Bombers with the odd Flamingo thrown in. A pity, because there are so many great designs in the following few years. At our SAM Champs in Canowindra each year, where we get 25- 30 entries in Texaco, some are a bit more adventurous and we do get a bit more variation.

John Urry. Queensland.



Vintage Precision	2017 A Knox	800
1 J Shorer	Bob Burling	800
2 D Squires	Airsail	797
3 A Knox	Bob Burling	792
4 D Mossop	Airsail	791
5 B Treloar	Bob Burling	766
6 G Main	Airsail	599
7 D Thornley	Nationals	595
8 J Butcher	Airsail	593
9 A Knox	Nationals	591
10 B Harris	Airsail	590

Vintage IC Duration	2014 R Anderson	1308
1 A Knox	Nationals	780
2 B Treloar	Nationals	757
3 K Trillo	Nationals	775
4 J Millar	NDC 116	774
5 D Thornley	Airsail	744
6 W Summerton	Nationals	718
7 R Anderson	Nationals	614
8 S Cox	Bob Burling	462
9 G Main	Airsail	413
10 J Butcher	Nationals	255

Vintage E Duration	2018 B Harris	1560
1 B Harris	Airsail	1560
2 D Mossop	Airsail	1306
3 A Knox	Nationals	960
4 K Trillo	Nationals	960
5 J Butcher	Nationals	709
6 D Squires	Nationals	673
7 A Macdonald	Nationals	615
8 D Baunton	Airsail	538
9 T Gribble	Airsail	310
10 J Butcher	Airsail	269

Vintage 1/2A Texaco	2017 A Knox	2580
1 A Knox	Bob Burling	1660
2 J Butcher	Airsail	1369
3 K Trillo	Airsail	1081

Vintage A Texaco	2018 A.Knox	3780
1 A Knox	NDC 122	3780
2 B Treloar	Nationals	1852
3 B McGrath	NDC 122	1777
4 I Munro	Nationals	975
5 B Treloar	NDC 122	612
6 W Summerton	NDC 122	419

Vintage Open Texaco	2014 J.Butcher	3320
1 A Knox	Nationals	1670
2 T Glogau	Nationals	1597
3 W Summerton	Nationals	1351
4 I Munro	Nationals	1289

Vintage 1/2E Texaco	2017 K Trillo	3415
1 K Trillo	Airsail	2830
2 J Butcher	Airsail	2691
3 A Knox	NDC 122	2487
3 W Cartwright	Airsail	2476
4 B Spenser	Airsail	2188
5 D Crook	Airsail	1460
6 R Anderson	Nationals	1440
7 A Macdonald	Nationals	620
J Shorer	NDC 122	433

Vintage E Texaco	2012 W Cartwright	3325
1 W Cartwright	Airsail	2853
2 D Crook	Airsail	2805
3 J Butcher	Airsail	2671
4 D Squires	Airsail	2031
5 K Trillo	Nationals	1860
6 A Knox	Nationals	1860
7 A Macdonald	Airsail	1857
8 T Gribble	Airsail	1060

Vintage E Rubber Tex	2018 J Butcher	4001
1 J Butcher	Airsail	4001
2 W Cartwright	Airsail	3225
3 D Gush	Airsail	3001
4 K Trillo	Airsail	2810
5 T Gribble	Airsail	2395
6 D Squires	Nationals	1860
6 A Knox	Nationals	1860

Classical Precision	2016 B Harris	598
1 D Thornley	Airsail	591
2 D Mossop	Nationals	571
3 B Harris	Airsail	563
4 D Squires	Nationals	554
5 G Main	Airsail	548
6 J Butcher	Nationals	544

Classical IC Duration	2017 D Thornley	1150
1 D Thornley	Airsail	650

Classical E Duration	2014 B Harris	1217
1 B Harris	Airsail	900
2 D Mossop	Airsail	854
3 D Crook	Airsail	803
4 G Main	Airsail	688

Classical 1/2E Texaco	2017 B.Scott	2864
1 T Gribble	Airsail	2449
2 G Main	Airsail	1915

Vintage Scale Texaco	2017 A.Knox	2232
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Tomboy IC	2015 R.Anderson	1432
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Tomboy E	2014 S.Grant	1935
1 K Trillo	Airsail	1680

Sports Cabin E-Texaco	2018 T Gribble	676
1 T Gribble	Airsail	676

CATAPULT GLIDER **2012 J.Butcher 339**

1. Dichards	Nationals	288
2. J Butcher	Nationals	242
3. D Warner	Nationals	240
4. K Fisher	Nationals	217
5. A Graves	Nationals	198
6. J Warner	Nationals	150
7. S Warner	Nationals	143
8. D Ackery	Nationals	69
9. S Cox	Nationals	64

VINTAGE FF POWER **Anderson/Bain/Scott 540**

1. Rex Anderson	Nationals	540
2. R Bain	Nationals	534
3. J Butcher	Nationals	283

NOSTALGIA FF POWER **Bain / Scott 540**

1. R Bain	Nationals	540
2. R Anderson	Nationals	403
3. B Gibson	Nationals	281
4. P Wilson	Bob Burling	183
5. S Cox	Nationals	65

VINTAGE FF GLIDER **2013 R.Anderson 427**

1. R Anderson	Nationals	436
2. S Wade	Nationals	309
3. S Cox	Nationals	266
4. M Evans	Nationals	265
5. P Evans	Nationals	141
6. K Fisher	Nationals	112
7. J Butcher	Nationals	60

SMALL POWER **2016 B.Scott 353**

1. C Murphy	Nationals	275
2. S Cox	Nationals	257
3. R Bain	Nationals	247
4. J Butcher	Nationals	231
5. R Anderson	Nationals	116

NOS FF RUBBER **McGarvey / Scott 540**

1. P Squires	Nationals	510
2. B Cox	Nationals	426
3. C Murphy	Nationals	180
4. B Gibson	Nationals	38

VINTAGE FF RUBBER **McGarvey / Koerbin 540**

1. P Squires	Nationals	480
2. W Lightfoot	Nationals	432
3. G Lovejoy	Nationals	311
3. B Gibson	Nationals	311
5. C Murphy	Nationals	103
6. J Dowling	Nationals	59
7. J Butcher	Nationals	12

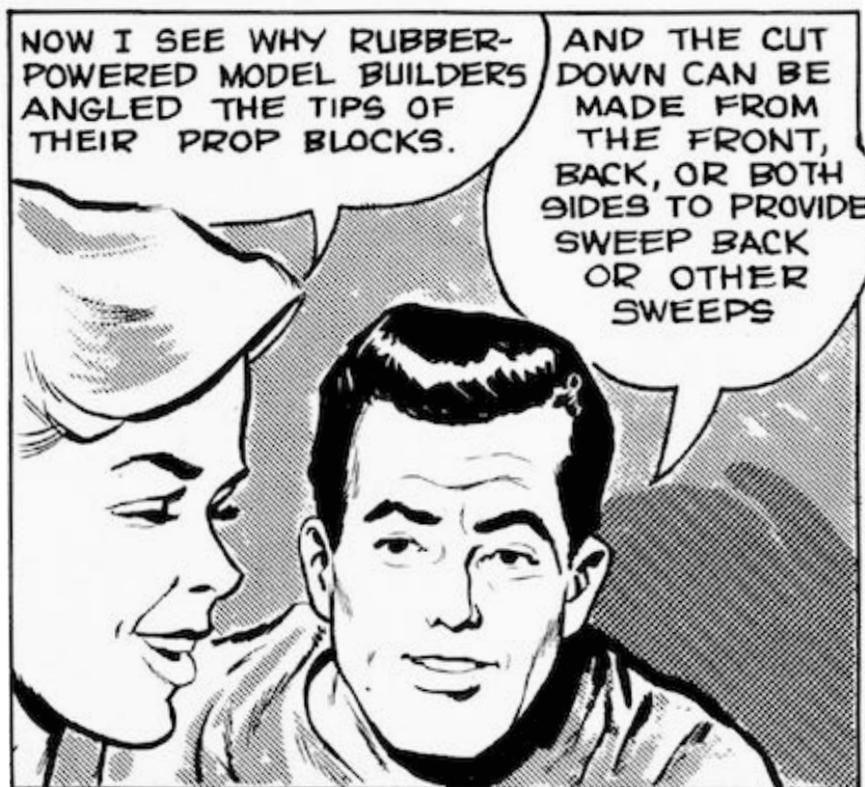
CLASSIC / A2 FF GLIDER **2015 M.Evans 470**

1. R Anderson	Nationals	446
2. M Evans	Nationals	317
3. B Gibson	Nationals	263
4. M Vincent	Nationals	254

PRECISION **2014 G.Burrows 411**

1. S Cox	Nationals	200
2. A Graves	Nationals	157
3. K Fisher	Nationals	109
4. J Dowling	Nationals	74
5. C Murphy	Nationals	59
6. P Wilson	Bob Burling	39
7. J Butcher	Nationals	14





ICON 164 :

Woolmark Logo

Considering the number of wool products bearing this logo in our shops it is easy to assume it is a NZ trade mark. It is in fact is a woollen industry trademark owned by *Australian Wool Innovation Limited*.

AWI licenses it to be used by affiliated vendors on their products as a certification mark that the product conforms to a set of standards laid down by the organization. The mark is employed on textile products as an assurance that the product is made of 100% pure new wool. The logo was designed by Italian graphic artist Francesco Saroglia and introduced in 1964.



FDOR SALE: 1947 Bunch Mighty Midget sparky in mint condition.

Contact Dave Marriott, Tauranga MAC, secretary, Taurangamodelfly@gmail.com, who is selling a number of motors on behalf of the family of the late Alan Pennell. He is advertising on the basis of make an offer. Alan was a long time member of the Tauranga club. Dave says the motor looks ready to run.

Have you seen Ripmax is introducing 6 **Keil Kraft rubber and glider kits**, including Caprice, Senator and Ajax and has plans for more. Laser cut parts from decent balsa, with big plastic props for the rubber models. Apparently they were reverse engineered from surviving kits and care has been taken to ensure the plans and pieces match, not always so with the originals.

Lincoln