

Duration Times is the official Newsletter of SAM 1788

# SOCIETY OF ANTIQUE MODELLERS OF AUSTRALIA 1788 Inc.

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# UPCOMING OLDTIMER EVENTS FOR 2010

Dec-Jan	28-6	63rd MAAA Nationals (Oldtimer 29-2)	Albury	Graham Scott	03 9737-1707.
January	16-17	Wyong River MAC Oldtimer	Wyong	Basil Healy	02 4341-7292.
February	6-7	Alan Brown Memorial Texaco Shield Oldtimer	Orange (Borenore)	Stewart West	02 6331-9822.
February	21	Geoff Shaw Memorial Texaco Shield	Goulburn	Paul Marshall	02 4821-5869.
March	7	Old Timer at Hunter Valley Champs	Muswellbrook	Simon Bishop	02 6543-5170.
April	1-5	28th SAM 1788 Australia Championships Oldtimer	"Bogwood" Canowindra	Peter Smith	0423 452 879.
May	1-2	Vetrans Gathering 2010	Muswellbrook	Simon Bishop	02 6543-5170.
May	TBA	Belconnen MAC Oldtimer	Goulburn	Alan Laycock	02 6254-3076.
June	12-14	Queensland Oldtimer State Champs	Dalby	Richard Hart	07 3857-4302.
June	19-20	New England Gas Champs	Tamworth	Peter (Condo) Smith	0423 452 879.
July	24-25	Coota Cup (Provisional)	ТВА	Peter (Condo) Smith	0423 452 879.
August	21-22	FARCON Oldtimer	Cowra	Peter (Condo) Smith	0423 452 879.
October	2-3	Eastern States Gas Champs	Wangaratta	Peter (Condo) Smith	0423 452 879.
October	23-24	Lithgow Oldtimer	Lithgow	Dave Brown	02 6355-7298.
November	13-14	Muswellbrook Oldtimer	Muswellbrook	Simon Bishop	02 6543-5170.



**From the President:** Greetings one and all. Well here we are again at the end of another calendar year which has been fairly successful from a SAM 1788 viewpoint..... well almost, and that has been solved now that the new 2009 MAAA Rules have been posted and are in force.

Our comps through the year have been for the most part successful with some good attendances and, for once, mostly good weather as well. However on the down side there have not been too many newcomers this year and that is a little disappointing. Let's try harder next year and encourage Old Timer fliers to come along to our comps.

The MAAA Nats are upon us once again at Albury and I hope Oldtimer will be well supported and that some good competition and fellowship results. Due to my situation at home/farm this year I will most likely miss the Nats but will be firing on all cylinders for our Canowindra Champs at Easter. Don't forget to get those entries in by the due date to assist Condo in his new role as the Canowindra Champs Co-Ordinator. (and pray for lots of rain in the meantime!).

Don't forget the comps after the Nats. First is the Wyong Club's event on 16-17 January and then Orange Oldtimer on 6-7 February. The Goulburn Club are again running the Geoff Shaw Memorial Texaco on Sunday 21 February in 2010 and then there is the Hunter Valley Champs 6-7 March. The Canowindra Champs are 1-5 April. The Canberra mob are running their comp in May at Goulburn so I am led to believe so watch out for announcements. And so it goes on from there, Dalby on June long week-end followed by Tamworth the following weekend. Again no Rebel Club event in 2010 due to field problems, but in August, there is the FARCON at Cowra, and Coota Cup is yet to be decided. Then the Eastern States Gas Champs and Lithgow Oldtimer in October and the final event for 2010 at Muswellbrook in November. Added to this there are events in Victoria which are always very enjoyable to participate in and I would recommend them to our members. Looks like there is plenty to do in 2010! Keep tuned!

I would like to send a special Christmas Greetings call to Ian Connell. Ian has been in Royal North Shore Hospital for around three months now and is expected to be there for at least another month to six weeks or so, but it is reported that he now being on the mend. Great! Hurry up and get well Ian, we all miss you. Also a special cheerio to Harold Stevenson who is also missed by all. Any one else on the sick list please get well soon.

May I take this opportunity, on behalf of myself and Kim, to wish all 1788 members the very best for Christmas and the New Year. I am sure I can repeat this on behalf of the SAM 1788 Executive as well. Take care when you are flying, travelling and make sure you enjoy your Oldtimer flying, safely.

Cheers and take it easy and lots of thermals, Paul Farthing. President.



# Tissue on Mylar Covering.

Dear Duration Times.

I read with great interest your article on the benefits of tissue-on-Mylar covering and the one chief bugbear, cutting the Mylar to working size and handling the stuff.

Try this dodge and be amazed:

Roll out some Mylar and stick strips of masking tape across the width at intervals corresponding to the size of Mylar panel you want, allowing for a workable margin of course.

Cut straight through the masking tape strips, end to end, thus separating off your panels.

These will then be edged on two sides with half-width tape and you can do what you like with them without them becoming snagged up.

It makes Mylar-handling as easy as tissue.

Best regards from Epsom, UK,

Peter Michel.

# Burn Marks on Laser-Cut Kits.



Hi All! I am finishing a set-aside Sting Aero glider with built up wing I bought from A to Z a year ago. I'm going to mod it for rapier/jetex flight at SW Regionals.

I did sand where parts meet, but was reticent to sand exposed ribs. My plan is to have semi-transparent light covering tissue (yellow) perhaps, maybe over mylar. The darker burn marks bothered me.

After Googling for a while, I stumbled across a forum where one fellow said he used titanium oxide(?!) artist paint to cover dark spots. Further researched that nitrate dope will work over acrylic.

Found some acrylic (Amsterdam Acrylic Titanium Buff light) at a local art store, took a Q-Tip with a small amount of water aside, and presto, the exposed rib matches the other balsa parts!

The reason I brought this up at our flight meeting Saturday noon was because some complaints were raised about laser cut kits, the burn marks, and the reticence to sand too much so that it doesn't show through tissue on small scale models.

Anyone else done this? Are there better suggestions? Attempting to brush on bleach didn't seem to work well.

Rick Carnrick San Antonio kstart@swbell.net





## DURATION TIMES

# MUSWELLBROOK OLDTIMER WEEKEND

Great weather ensured a very enjoyable weekend for all. All events very relaxed with some good lift enjoyed by all. Simon Bishop and his crew ensured competitors were well fed and they must be thanked for their efforts. Look forward to next year. Gordon Burford Event.

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2.	Bruce Knight	Dream Weaver	ΡВ	900 +	383		l
3.	Peter Scott	Maid	ΡВ	900 +	316		
4.	Peter Smith	Ollie	ΡВ	900 +	237		
5.	Robert Rutledge	Eliminator	ΡВ	880			
6.	Basil Healy	Dixielander	ΡВ	862			
7.	Geoff Potter	Playboy Cabin	ΡВ	810			
8.	Bob Marshall	Lil Diamond	Рb	DNF			
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6.	Alan Wooding	Bomber 110%		Spit 60		1200	
7.	Albert Fisher	Lanzo Airborne	And	Spit 60	Spk	DNF	

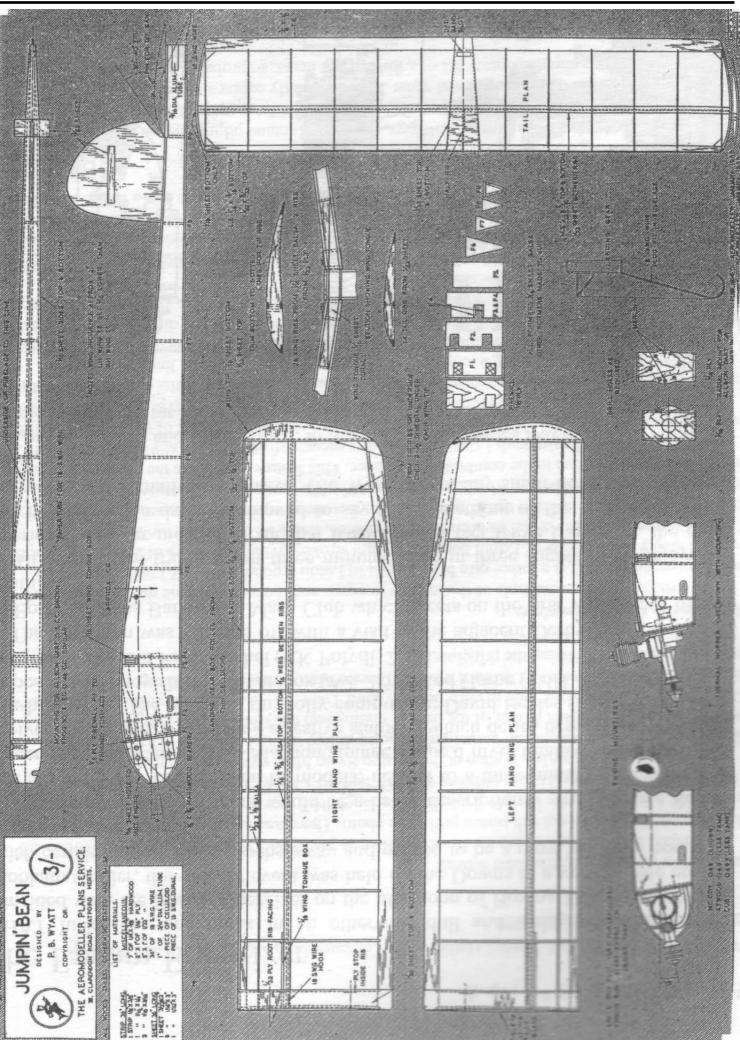


# From Dave Harding davejean1@comcast.net

Two years ago I sought a suitable powerplant for the Boehle Giant to fly in the Classic Texaco event. The advice I received was Forster 99. Ok, where can I get one? Well, my SoCal flying and eating good buddy Mike Myers said, "I have a brand new RJL replica you can borrow" great, thanks Mike. Next problem; what props to use? As we were driving down Orange Grove in Pasadena on our way from flying at the Rose Bowl to some carefully screened but obscure restaurant, Mike said "here push this button on my cell phone and ask Sal. He is an expert on Forster 99s". So I did and sure enough Sal Taibi gave me the whole low down on Forster props. (Which, even though I am a good deal younger than Sal Taibi, I now can't remember, but I digress).

Fast forward to Sal's 89th(?) birthday celebration at one of the SCAMPS meetings this spring and I sat for a while with Sal, reminding him of this conversation. Sal proceeded to tell me more about his Forster props. It seems that his practice back in the day (as we say now) was to carve his own. At one of their gatherings he was discussing this with a new member, indicating that it only took half an hour to carve a prop. The new member as much as called him a liar, so at the next meeting Sal took a prop blank and carving knife with him and proceeded to carve the said prop in less than the stated half hour.

Thought you ought to know.....



# ELECTRIC OLDTIMER REPORT from LOU AMADIO.

Insiders View - Electric Old Timers

By Peter Henderson

At the beginning of May Trish & I ran away from home in the old bus that has been popping up in various states and Electric events around the country for many years. (don't mention getting bogged in the wet Armidale field!). At the time of writing we are in Mareeba on the Atherton tablelands West of Cairns QLD. The temp is 2 deg C, sorry that is the temp inside the fridge, the temp is currently 27.6 deg, but it was warmer yesterday. Did you know that your average fish trap will only fit 20 Red Claw from Lake Tineroo? Add a marinade of garlic and ginger - anyhow you get the picture.

You have all previously been invited to join in the various very casual Electric Old Timer comps. You are all aware that we do not have landing points, we have discretionary motor runs, we fly probably the slowest outdoor models and are able to chat to each other on any topic during our comp flights, such is the pleasure of Old Timer flight.

What I thought might be of interest is a few brief model profile from the pilot's perspective, remembering that with only one exception (ARF Lanzo Bomber from Mick Walsh - www.DirectModel.com.au ) Old Timers have to be built. There are three classes of EOT, the 1/2A model is limited to 450sqin wing area and all others are eligible for the Duration and Texaco [according to SAM rules]. The competitions have battery/flight/motor run limits and new EOT flyers will be welcomed with open arms. The following is an insight into a group of modellers with a fun problem.

John Brennan – loves smaller models and has three 1/2A aircraft which are often seen in the skies of the Central Coast of NSW.

The Topsy (which I have just recovered from 50 ft up a pine tree where it has been shirking its duties for the last 3 months) is a bit rare and I had quite a lot of trouble identifying it. Some one in Paris eventually recognised it. Released by Graupner as a free flight kit in 1961 this particular

aircraft was built in Hong Kong in 1971 and found its way back to Australia where it was flown as a free flight model for many years. The Topsy finally ended up as an instructional airframe for a TAFE course. It was subsequently

rescued and partially rebuilt and converted to electric for radio controlled flight. The Topsy is a good stable flyer with no vices. The large dihedral angle necessary for free flight inhibits its glide capacity but it still is capable of long relaxing flights in its current configuration.

The Tom Boy was designed by Vic Smeed and first published December, 1950 in Aeromodeller. It has been flown in competition all over the world mainly in its IC version but is recently metamorphosing in an electric configuration sometimes called an "E Tom Boy". The International Rules for

the electric configuration allow for some lightening of the airframe, and with a small brushless motor and a two cell 350 mAhr battery is very competitive with timed flights of over 20 minutes readily achievable. This aircraft is just

a wonderful flyer. Stable in the extreme and lifting off the hand with 1/2 throttle, it is a great ' must have' addition to any Old Timer collection.

The Buzzard Bombshell was designed by Joe Konefes' in 1940 and is although originally designed for IC motors readily adapts to electric power. This is a very stately aircraft and with its wide chord and multi dihedral wing, has great presence in the air even in its smaller 44 inch version. Sedate is the best word to describe flying this aircraft. Yet it is competitive in competition and thermals well.

Mike Colston - also from the Central Coast has an interesting 1/2A Model

Model details are Lanzo Airborn, wingspan 1370mm, AUW 450g, powered by Rimfire Brushless Outrunner 28-26-1000 with OEMRC Pulsar 18A ESC and a 9x6 APCE prop, battery is an Hyperion Litestorm VZ (25 700 mAh 30C). I





chose the model because of its low wing loading which allows it to glide and thermal efficiently. This makes achieving duration relatively easy, especially after I replaced the original 640mAh batteries with the 700mAh batteries. The only downside is that it is a bit of a handful in anything but light winds, although I still managed my duration at Cootamundra in 2008 in gusty conditions, I just had to make sure I didn't get downwind or I would not have got back!

Laurie Baldwin - Laurie is a recent recruit into the ranks of the Electric Old Timer Postal Comp and has embraced the relaxed spirit of this particular comp with gusto! It must be pointed out however that some of Laurie's heat times are very competitive.

The photo is complete with GMAC Dragon in the background. It must be regularly appeased with the ritual sacrifice of some unsuspecting flying machine, which [some] club members are happy to provide. My Bomber has not been one of those to date. As far as the flying characteristics - its a pussy cat. I've flown a fair bit with a Goldberg Electra (electric Gentle Lady) and Great Planes Spectra that are often described as entry level 'floaters'. I think the Bomber is as easy, or even easier, to fly than them. I don't try to taxi into takeoff position because the big wing and light weight make it easy to topple over and almost impossible to handle on the ground unless it's pointing into wind. But the take-off roll is only a couple of metres so who cares. Once aloft the aircraft seems to respond to the faintest hint of a thermal. MotoCalc predicts it has a sink rate of 110 feet per minute - and its delightful to have an aircraft that just doesn't want to come down. Everyone should have one!

Brian Payne. - Brian is another member of the Gosford Aeromodellers (Central Coast NSW) and as you can see is a little wayward with some IC skills interfering with a definite electric talent.

I have only flown the 1/2A electric comp and have used 600mAh Dualsky battery, ST Model 2212/Kv1250 motor, Dualsky XC 2512 controller and APC 9x4.7 prop. This has been transferred from one model to another. Both models were built from Dave Brown partial kits and were to compete in SAM1788 comps and then modified to electric. I have competed in SAM1788 comps, the Nationals, etc, for over 20 years.

Model 1: 1/2 A RC1 Covered in Lightspan this is a very easy model to build. It flies OK but needs to be flown all the time. When the electric comps started I built a new fuselage for the electric gear.

Model 2: Stardust Special - not the electric version. Covered in Polyspan and dope, the nose has been modified to use either a Cox 049 or the electric set up. This is much harder to build and mine is very light - 11oz with the Cox. It flies and thermals beautifully, gaining me second place at Canowindra SAM1788 Champs this year in a field of nearly 40 competitors. With the electric gear it flies just as well but is way over powered on a full throttle climb.

Under the existing electric rules, given a reasonable day, both models will max easily.

Gary Andrews - Current EOT Duration Champ (Coota 2009). As well Gary is the most consistent competitor in the EOT Postal - excellent duration model.

The model is a 100% Playboy that I built from a partial kit and plan purchased from Dave Brown. In its present configuration the current draw is about 100 amps. The flying weight is 1492 grams. It has an excellent climb and given good conditions has wonderful thermalling characteristics. In strong winds it will not penetrate well but will still shows rising air and sink extremely clearly and thus is great





for improving thermalling skills. This model is very tolerant of changes to the centre of gravity and is always very stable in flight. It is a pleasure to fly whether in competition or just for fun.

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Garry Henderson-Smith - Garry advises that he intends to get back in the air shortly after experiencing "a bit of ticker trouble" earlier this year. All the best Garry!

Model is a 1/2A Dallaire Sportster that he was using in the EOT postal comp. The model was built from plans drawn up by, the late, Alan Trinder when he had a company called Old Fashioned Hobbies. It uses a small in-runner and gearbox with an APC 9x6 prop, weight is about 14 ounces. It's covered with Solarlite. As for flight characteristics, the Dallaire is a gentle, slow model that thermals very well and doesn't mind a mild breeze. "A real floater" says Garry.





Geoff Burling: Geoff was one of the prime movers in getting the EOT Postal competition established and is a pillar of the OT flying scene and has two EOT models.

My 1/2A Texaco model details are as follows:-

Model - 66% Playboy Senior, 53" wingspan, 373 sq" wing area. Motor ST Model RC 2212, Current propeller - 7x5 APCE, Jeti ESC, Battery - 400mah 3s 20C Hyperion. Comments:- Although this model has

served me well, at 66% it is a bit on the small size for 1/2A Texaco. If increased in size to the maximum wing area limit [450 sq in] it will be interesting to see how it performs against the current swag of 1/2A models.

### My Duration Model.

Model - 105% Playboy Senior, 84" wingspan, 934 sq" wing area. Motor HP-Z3025-6, Current propeller -12x6 APC-E, 125A Eagle ESC, Battery - 3200mah 35 Hyperion VZ Lite Storm. Comments:- The Playboy Senior is a great Duration model if built light but strong. Duration is all about high climb rates for the power phase and low sink rates in the glide phase. To achieve a vertical climb and seam-



less transition from power to glide I employ a small amount of right rudder and down elevator mixing with the throttle stick. The wing and fuselage construction for this model lends itself to power upgrades which are needed to keep up with the competition. Built and trimmed correctly this model exhibits an exceptional slow glide that gives the pilot plenty of time to register the presence of rising air.

Stan Clifton - Stan is a member of the IMAC club and has competed in EOT comps both postal and at the AEFA annual rallies. After a milkshake or two Stan, when prompted, will describe his adventures as a young man in various [full size] vintage aircraft, including the DH82. I thought that it is worth including a picture of Stan's latest model DH82 with his comments.

"This DH82 is now flying and it is a dream to fly no



bad habits at all. The wing span is 59 inches and is powered by two 35 2500mAh 18C batteries in series. The motor is Hyperion out-runner Z4020-16 turn, the speed controller is Hyperion 80 amp and the prop is 13x6.5 APCE. It is covered in clear laminating film and I propose to finish it off in Australian Air Force colours."

Ah Stan, any chance that we will see this model flying in the SA Scale Event at Barossa next Easter?

If you would like a to view a few of the models available visit: www.DirectModel.com.au to view the ARF Lanzo. To visit the Spirit of Yesteryear range of excellent laser cut OT kits visit: www.darehobby.com For a list of eligible OT models visit: www.antiquemodeler.org/adl

Peter Henderson can always be contacted on 0400 67 99 22 or peterhenderson4@bigpond.com

# Letter to The Editor.

To Editor, Duration Times. Please find attached our reply to letter from Trevor Carey contained in DT160. I would appreciate it if you could publish it in the next Duration Times. Brian Laughton, President SAM600 of Australia.

"Hi Trevor, Let me introduce myself. My name is Brian Laughton. I am president of SAM 600 in Victoria.

Firstly I would like to point out that we are a VMAA Special Interest Group entrusted to co-ordinate the activities of the flying of old timer aircraft in Victoria .

SAM 600 has one voice on the MAAA Old Timer Committee and accepts the decisions made by that committee .

In the last issue of Duration Times you made comments about SAM 600 which we find curious. You have indicated that we have aligned ourselves with the Sarina Club or should we say vice versa. Where do you get this information from ?? We did not know of the existence the Sarina Club until it's name appeared in Duration Times.

Now, I would like you to advise me of where SAM 600 has exercised a greater influence other than their single vote in any affairs related to the MAAA committee, and or influenced the affairs of the Sarina Club .

You have also referred to the rule amendments that appear on the SAM 600 site.

Just to inform you that any proposed rule amendment that appears on the SAM 600 site is for the information of SAM 600 members so they can voice their opinion to SAM600 on what rules they are in favor of or oppose.

We then follow the established process of referring our opinion to the Old Timer Committee who then makes the final decision on what rule changes are to be placed before the MAAA rules conference.

If you then want to check the final decision on the old timer rules I would suggest that you refer to the MAAA site.

Anything on the SAM600 site is inserted by our committee. Therefore we are non-plussed as to how Kevin Fryer, a non-committee person, is putting his or anyone else's spin on any proposals.

It appears that not all information is getting to F.N.Q. or are you putting a F.N.Q. spin on the information, as we already have a National Body that works effectively in the interest of all flyers in all States. SAM600 is an avid supporter of the current structure.

Looking forward to your reply. Brian Laughton. President SAM 600."

# From the September 2001 Issue of the SAM 26 Newsletter, Bob Angel, Editor.

## <u>TECH TOPICS - TWO SPEED TIMERS</u> - a problem from the past.

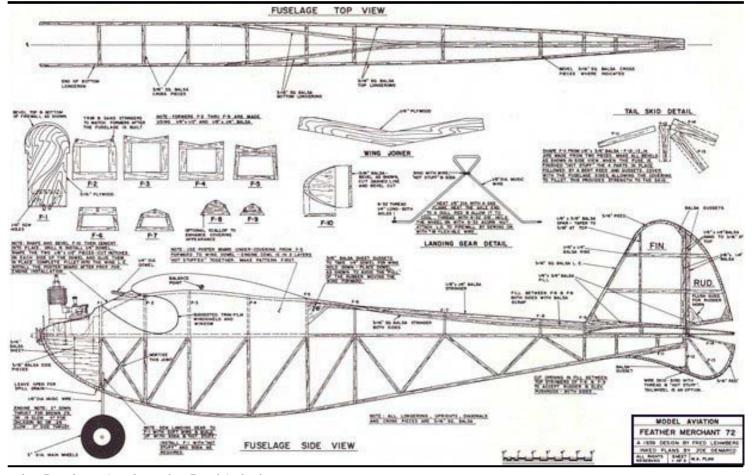
Dick Fischer recited a problem from control line days which was new to me. He'd been flying a spark ignition engine with a two speed timer and a two position three-way switch in the point wire. Current could be switched alternately to either the low or the high speed point. When switching speeds, he'd get an occasional backfire which would kick the prop loose, sometimes losing nut and washer/s.

Here's what was happening: Most such switches are momentarily open in both directions during switching to prevent a short circuit. During switching, if the active points happened to be closed, that momentary "open" sent the coil the same firing signal as if the points had opened. If the engine also happened to be at a certain point in the upstroke at that moment, it would fire early (Backfire) and either slow, or back the piston up, while the prop's inertia would unscrew the prop nut. This can also bend a rod, or do other gruesome things to an engine. Due to the different timing of the two point sets, this would be most apt to happen when switching from high speed to low.

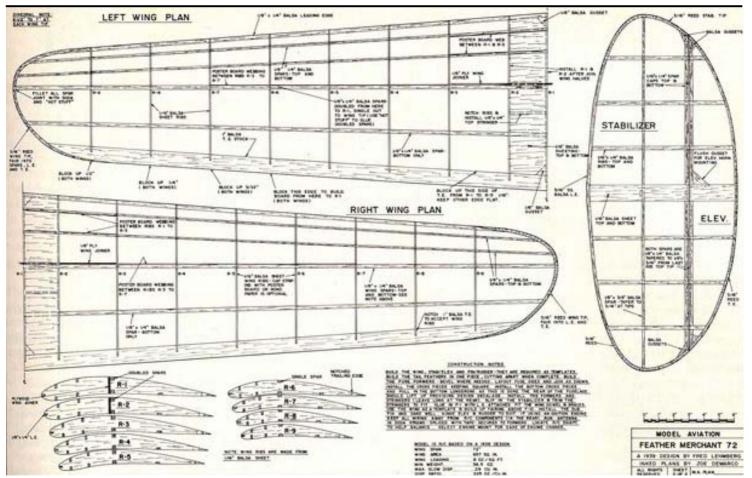
The solution is to "hard" wire the coil's point lead directly to the high speed point, and from there, extend a lead through a switch to the low speed point. With low speed switched off, the high speed point operates normally. When the low speed switch is turned on, there's normally an overlap of dwell between the two points, which assures continuity during switching. That overlap in dwell also lets the low speed points operate correctly, but having a bit longer dwell than usual. You can use a simple one way switch with this arrangement, rather than a three way.

It's easy to see how the high speed points work normally with this setup, but if you're having trouble visualizing the low speed operation, try this: With the switch closed the current is flowing to both points. The high speed closes first, then the low speed. Then the high speed opens, but with the low speed still closed, the current continues to flow until the low speed opens later, causing the coil to fire later.

This problem would happen infrequently and possibly not to all engines. It's more likely to happen to slow running engines (i.e.: a Forster 99) and to those with longer dwell.



The Feather Merchant by Fred Lehmberg days of Gas model flying I belonged to the San Antonio Gas Model Airplane Association (SAGMAA). We did quite well in competition from 1938 to 1942 and attended meets together all over Texas. Arriving at an Austin meet one morning, we overheard someone quip, "Well, here are the Feather Merchants coming to steal our Presarved Turnips!" Before long I'd clapped the name onto a Bantam-powered original I'd had good results with during the 1940 and 1941 contest seasons. The model I came to call Feather Merchant traces its origins to a Cavalier built from a standard Berkeley kit in 1938.



# Hey Guys & Gals !!!!!

Isn't it about time that Australia made an impression on this event!

Just because we lost the Ashes doesn't mean........ And as for the Kiwis....... Congratulations!

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# **International Postal Tomboy Competition 2008-9 Results**

### Hello Graham,

Please find attached results for the 2008-9 Tomboy Postal. The number of competitors is an improvement on previous years. I was very pleased to see that nearly 50% of the entries were from NZ. As you will see from the results congratulations go to John Danks from Whangarei who achieved 3rd place with a good time. It has been a very busy year with the Tomboy 3 competitions in the UK with 8 meetings held from the 10 planned [2 lost to bad weather] and normally 10-12 in each fly off. [25 fliers took part in the league]. With sport flying and competition flying the number of Tomboy flights must run into many hundreds over the year. Unfortunately very few UK competitors made a claim in the Tomboy Postal. The competition is to continue for 2009-10 (see advert below) and I hope we have a little more interest from the UK fliers. *Tony Tomlin* 

Results:

Name	Time	Date	Location	Pos
Tom AIREY	25 mins14 secs	28.6.09	Old Warden, UK	1
Paul NETTON	18 mins 38 secs	14.6.09	Cocklebarrow Farm, UK	2
John DANKS	17 mins 17 secs	29.3.09	Whangarei, NZ	3
Graham MAIN	15 mins 02 secs	29.3.09	Whangarei, NZ	4
Kerry SURGESON	13 mins 04 secs	26.9.09	Wainui, NZ	5
Tony TOMLIN	10 mins 42 secs	14.6.09	Cocklebarrow Farm, UK	6
Stephen POWELL	10 mins 41 secs	12 4 09	Middle Wallop, UK	7
Chris HAGUE	10 mins 25 secs	10.5.09	Middle Wallop, UK	8
John BUTCHER	8 mins 56 secs	29.3.09	Tuakau, NZ	9
John STRUTT	7 mins 54 secs	10.5.09	Middle Wallop, UK	10
John WATSON	5 mins 02 secs	16.9.09	Villaricos, Spain	11
Bryan LEEVES	2 mins 27 secs	26.9.09	Wainui, NZ	12

# <u>INTERNATIONAL TOMBOY POSTAL COMPETITION</u> 1<sup>st</sup> October 2009 - 30<sup>th</sup> September 2010

This competition is for maximum duration of a timed R/C TOMBOY flight in competition or in sport flying

Models to be to TOMBOY3 competition specifications and to David Boddington's rules i.e. 36" span, 3cc tank, Mills.75 [any type]

Prizes for the first 3 places!!!!!

ALL CLAIMS SHOULD BE MADE WITHIN 1 MONTH OF THE FLIGHT TO THE EVENT ORGANISER *Tony Tomlin, 122 Marlow Drive, Sutton, Surrey, SM3 9AS* Email; pjt2.alt2@btinternet.com / Tel 02086413505

### **DURATION TIMES**

# "GORDON BURFORD'S MODEL ENGINES" by Maris Dislers

'Gordon Burford's extraordinary output of model engine designs over a lifetime has long deserved a comprehensive record. Years of research are behind the material in this book, which goes beyond the basic "Which Burford engine is that?" exercise.

Inside, you'll find photographs of the finest examples of each model and variant that could be found in Australia. Model engines are described in detail. There's even an Appendix listing the screws, prop washers and needle valves for each model.

As these engines were intended to do real work, you'll find many test reports of individual engine performance, to objectively assess the various design ideas that Gordon applied. There are some real surprises amongst them.

For anyone with an interest in model engines and their manufacture, I hope the narrative of this book is interesting, as well as providing a historical record and technical details. Like Gordon Burford, the fascination for many of us never ends.'

The above lines are taken directly from the back cover of this important new book, the result of years of studying Gordon's prolific work, taking countless photographs and actual hands-on testing and flying of his engines.

Maris' book is timely and fills a real need at a time when there is great interest in both flying and collecting Burford engines.

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Carefully written and scrupulously edited, the book itself stands out as a fine publication, devoid of annoying spelling and punctuation errors. It is in A4 format, 200 pages well bound in quality paper, with hard covers.

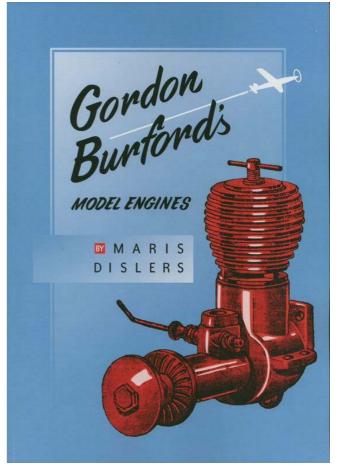
Full details of all the production Burford engines, as well as variations and specials are featured therein. At last we have an accurate and logical time-line of engine production and positive identification of the various models. Added to this is a comprehensive description of each engine, accompanied by a full colour image of that engine. Maris has painstakingly assembled these photos, ensuring that each engine is depicted with the correct needle valve and prop drive assembly for that model, as a valuable aid to accurate ID. Finally, a logical progression of Marks is outlined, putting to rest forever the confusion over which engine is which!

If, like many other Australian aeromodellers, you grew up with an appreciation of Gordon's wonderful engines, this is a book which will interest and delight you.

Copies are only available direct from the author, Maris Dislers. The price is A\$75 plus \$10 postage within Australia. Up to three copies can be mailed in the one satchel if friends would like to make a joint order. Contact Maris by email: jamd@adam.com.au for orders and payment methods.

Reviewed by David Owen 17/12/09.

Disclaimer: as a major contributor I have received a free review copy. I have no financial interest in the publication or sales of the book.



while leaving sufficient metal, the exhaust ports are cut with a tapered cutter, resulting in narrower edges at the bottom than before, but wider at the top. A revised piston is now generously bored internally, rather than having a milled slot to clear the control.

mher than having a miller stori of certain All Mk 7 crankeases have a threaded hole for a starting spring retaining screw. The spring starters were not fitted as standard to Mk 7, but were available as an optional extra. In our experience, the entire arrangement of spring and screw mounting point is not quite right to the extent that the screw annot be properly tightened and the spring's coul annot be properly aligned perpendicular to the makshaft axis. It seems they were seldom used.

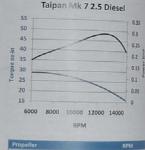


Second Mk 7 variant has sand blasted crankcase and no anodising.

There are a number of variations in Mk 7 production engines. Earlier examples are fitted with a grooved prop driver having its main diameter the same as the crankcase. nose, A new look permeated the Burford engine range some time in 1963 or early 1964. Anodiang was out and matte sand-blasted crankcases were in. The Mk 7 followed suit. This facelift included a new prop driver shape shared with the final Glo-Chiel 29 & 36 engines. Rapid crankshaft bearing wear had been experies owing to the unfavorable ratio of created diameter to journal length. So this later varias fitted with a traditional bronze bush

#### Running the Mk 7 engine

Our Mk 7 engine handled quite acceptably day testing. The actual peak of 0.20 BHP at and 12,500 RPM is as good as the best Mk 3 total b top performance is over a narrower range of space Perhaps friction from the large crankshaf at has speeds limits its performance. With the best of more knowledge about port timing and good gained since their day, it is interesting to special how much better the Mk 6 engine would im performed if matched with the Mk7's puse at cylinder design and port timings.



Propeller	RPM
APC 11x6	6,800
APC 10x6	8,000
APC 10x4	9,600
APC 9x4	12,100
APC 8x4	13,800
APC 7x4	14,900



Topan Series 65 2.5 diesel fitted with optional exhaust ring.

#### Mark 8 Taipan "Series 65" 2.5 diesel

A keen eye will spot that this model Taipan 2.5cc deed, called the "Series 65" by the factory, is based on the Mark 3 rankcase costing. However, there is no other connection between the two and it was perhaps just good fortune that model Mk 3 die could be modified to suit the new Mk 8 design. An mereased diameter around the crankshaft bushing and liftle more metal in from the crankshaft bushing and liftle more metal in from the crankshaft bushing and liftle more metal in from the crankshaft bushing and liftle more metal in from the crankshaft bushing and liftle more metal in from the crankshaft bushing and liftle more metal in from the crankshaft bushing and liftle more metal in from the crankshaft bushing modified to was made.

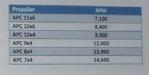
The Series 65 diesels introduce a new cylinder style foring is changed to three exhausts and three mafters milled into the inner cylinder wall. Unlike the earlier Sabre diesels with this arrangement, the optimizer now seats at its base instead of a protruding thats belt. For the first time, a contra piston with a shilow dome and squish chamber shape is adopted (makhafi) optimal diameter is 1 hmm (0.433in). The M& Mas a turned aluminium spinner nut in place of the usual hexagonal steel prop nut. The new design revend the trend towards ever heavier Taipan 2.5%, which had reached 171g (6 oz.) with the previous model. The M& 8 weight 156g (5.5 oz.)

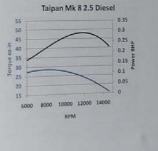
Early Mk 8's have the brass Glo-Chief style needle valve assembly and as production continued for

several years, later examples would have had the black Fox-style NVA. This appears to be the oally variation and the Mk 8 can be said to have "Got it right" from the start. A cast exhaust collector rang with twin outlet tables was available as an optional extra, probably in response to the UK market's multifer requirements at that time.

#### Running the Mk 8 engine

Last in the line of plain bearing Taipan 2.5x dissels, the Series 65 test engine matched the best of its predecessors at 0.29 BHP, but at a relatively low 11.500 RPM. This is in line with the quoted maximum power of 0.277 BHP in Taipan advertising material, although that source has the peak at 14.200 RPM. Take the Mk 7, power drops off quite quickly beyond the peak and no real purpose is served by working this engine at higher speeds. As with other Taipans that have no conster spaceds, as with other Taipans that have no conster balancing on the cranishaft, whation over 14,000 RPM becomes a practical limitation.





# NIGHTMARE.

By Condo

I had just finished painting my brand new toy, so I wandered over to the house to have a cup of tea and toast with cookies joy [golden syrup to you].

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Now Beaky often rings to skite, among other things, he had been having a very good year as he had won all the trophies far and near.

His run had begun at the  $29^{th}$  Sam Champs, where he had won every event and thus was Top Gun.

Farthing took him to Dalby so they could have some more fun, but Beaky won all their trophies too, so I guess he is "No 1".

On the way home they stopped at Tamworth and he continued on his winning way, even Browny and Condo couldn't beat him on the day.

Even Farcon and Wangaratta brought him no fear as Beaky continued his winning year.

He even won at Lithgow on a cold and windy day.

Beaky was having such a good day.

Now the 30<sup>th</sup> SAM champs were approaching and I was beginning to sweat, I could feel my left leg getting a bit wet. My eyes shot open with a bolt and I looked around, I saw my old sheep dog licking my left leg as he lay on the ground. I knew I had a night mare as I had fallen asleep, in my favorite chair.

# The Winners For 2009 Electric Old Timer

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Posto	al Are:	<u>1/2A Texaco:</u>
Durat	<u>ion:</u>	1st: Mike Colston
1st:	Laurie Baldwin	2nd: Lou Amadio
2nd:	Garry Andrews	3rd: Stan Clifton
3rd:	Peter Henderson	
Texac	:0:	Congratulations to the
1st:	Laurie Baldwin	winners, place-getters
2nd:	Lou Amadio	and all competitors.
3rd:	Stan Clifton	Cheers, Peter Hender-

Aviation a

George Augustine Taylor 'G A' 1872 - 1928

A pupil of Lawrance Hargrave, he constructed and flew a glider in 1909.

On the same day his wife Florence also flew to become the first woman to fly in Australia.

Taylor was founder and Secretary of the Australian Air League and Australian Administrator of the British Science Guild and promoted gliding in New South Wales until his premature death in 1928.

http://www.tne.net.au

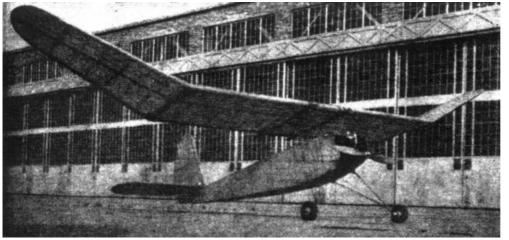


the **PIONEERS** 



Here's a Gas Model That Made a World's Record for Duration and Weight Lifting --How You Can Build It

**By CHESTER LANZO** 



The finished plane is light and has large wing area



The author, at right, waits to have his record breaking ship "gassed up"

TO PRODUCE a consistent championship gas model, a ship must possess these two main flight characteristics.

Ability to Soar: Any ship will climb with a powerful riser "slamming it skyward," but to have a model take advantage of the slightest trace of a thermal and produce a long soaring glide is to have soaring ability.

Climbing Ability Under Power: Utilize every erg of energy in the motor to make the most of the limited run. Every foot of altitude gained in the climb is minutes added to the total length of the flight. Get the model high enough where the more active air currents will affect the ship.

This model has proven to have both of these characteristics to an amazing extent, plus an extreme in stability. In fact it is so stable that it can be made to circle right or left under power or in the glide without having to warp or twist the wings. As a weight lifting or a radio control job it cannot be beaten. This model won the Scripps Howard contest for lifting the greatest weight and then remained in the air for the greatest length of time.

During a recent gas duration contest, with a motor run of 21 seconds, the plane remained aloft for 25 minutes. Upon returning to the field the ship was sent up again with a motor run of 25 seconds. This produced a flight of two hours covering a distance of 25 miles, and incidentally established a new world record.

This plane also incorporates the following desirable features : detachable wing, adjustable rudder and elevator, crash proof wire landing gear, flexible wire wing mount to eliminate wing breakage and to produce greater stability.

All of the excess frills and baggage are entirely eliminated, thus producing a straight forward and simple but efficient design. Quoting one of the best model builders in the country, "Super streamlining has a tendency to induce complicated and heavy structures."

### Constructing the Plane

Start out with the intentions of spending two or more weeks of hard but enjoyable work on the construction of this model.

Its specifications are: Wing span, 8 feet; wing cord, 14 inches; wing loading, 8 ounces per square foot.

Make an accurate full size drawing of the side view of the fuselage on drawing paper. Place this on a large flat piece of soft wood and hammer one inch brads along the outside edges at close intervals. The longerons are one quarter inch square very hard balsa. Hold these over the mouth of a steaming tea kettle and bend to the approximate fuselage outlines. Cut the fuselage uprights, making a duplicate of each and place them between the longerons, using plenty of cement.

Pull out all of the brads after the sides have dried. Remove them from the drawing and split the sides apart with a thin double edged razor blade. Obtain a large sandpaper block and sand both sides of the fuselage until very smooth.

Pin one side of the body to the work bench, cut two of the longest cross pieces in the top view to the correct length and cement them in their proper place. Then lay the other side of the body on top of this mak-

ing sure that all sides are square. After this has dried glue the tail posts including the tail skid together, wrapping well with silk thread. The rest of the top cross pieces are easily glued in place.

Trace the outlines of the nose on a piece of 3/32" plywood and cut to shape with a coping saw, gluing them between the longerons. The 1/8" plywood firewall is also formed. Before assembling the firewall be sure all of the holes are drilled and the coil and condenser are mounted securely on the back of it. Dope the firewall and fuselage nose with two coats of "black" followed up with two coats of "clear." This is to make it resistant to the destructive action of gas and oil.

Prepare the metal motor mount from half inch angle duraluminum. Also make the landing gear fittings, tail skid and tail mount fittings out of duraluminum. After assembling these to the fuselage the structure will be ready for covering.

### Wing

All of the ribs in the center section are the same shape and size but the rear of the tip ribs are cut off to fit flush with the trailing edge. The wing is asPage

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tips are joined to the center section, adding the twelve inches of dihedral.

#### **Double Paper Covering**

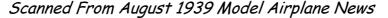
The wing, fuselage, and tail assembly are all double paper covered. Covering in this manner produces a strong and durable coating for the plane which will not split into long tears when punctured.

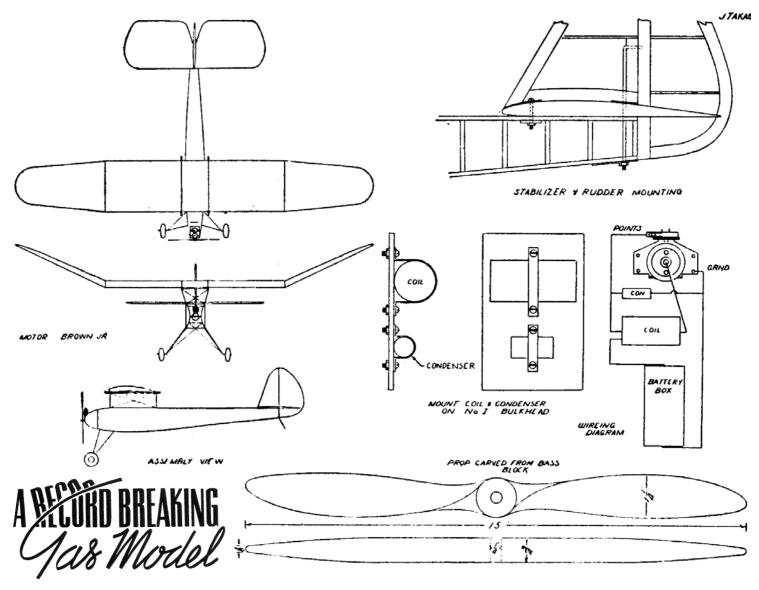
Place the tissue on the parts to be covered with the grain of the tissue running lengthwise. Spray with water and follow with two coats of clear thin dope. Add another layer of tissue with the grain running crosswise to the first covering. Spray the second coat with water and apply two coats of heavy clear dope.

#### Tail Unit

Try to make the tail units as light as possible, so that the wing may be placed closer to the nose. This will increase the longitudinal and directional stability. Fill in around the metal mounting parts with 1 /8" sheet balsa to produce a more rigid assembly.

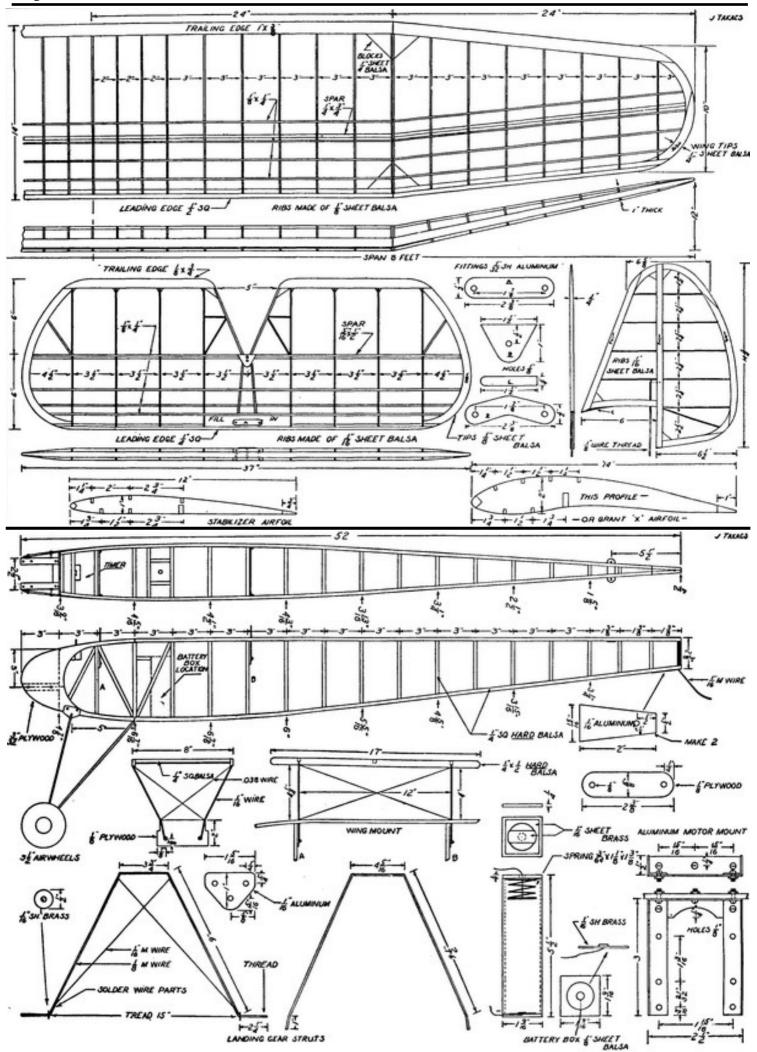
That's all there is I Hope you have a winner!







## DURATION TIMES



# Polyspan and Spunbonded Polypropylene

From Mike Myers. mikemyersgln@charter.net

Rudy Hewert asked: Gents; In following this discussion, I am getting somewhat confused by the names of the various products. Anyone know who actually makes "Polyspan Lite"? Polyspan, Polyspan Light (sold by Larry Davidson and maybe Mike Woodhouse), Salzer Tissue, and SAMSpan (polyspan sold by SAM 27 in Northern California) are all variants of the same thing - spunbonded polypropylene. It is an industrial product and it's made by a lot of people. (In my old work life I was a lawyer who helped form a joint venture and gave ongoing business legal advice to a world scale polypropylene plant that was built in Southern California.)

Here's what Dupont has to say about "Spunbond Polypropylene": DuPont™ Spunbond Polypropylene is a non-woven fabric composed of thermally bonded, continuous polypropylene filaments. The structure gives it good filtration properties and tensile strength even in diagonal direction. In addition, it is made of 100% polypropylene, which makes it resistant to moisture and chemical attack. It is a unique composite media that combines polymer technology with DuPont nonwoven manufacturing expertise. The polypropylene based material is an exceptionally strong yet light, pleatable material with excellent drainage and permeability properties. It is manufactured by a unique integrated process in which continuous filaments of polypropylene are spun and then immediately formed into a multi-directional arranged web that is heatbonded at filament crossover points.

Polypropylene comes out of the reactor in the polypropylene plant as a white plastic pellet about the size of large rock salt. It's then shipped to fabricators. Fabricators melt that plastic pellet and do lots of different things with it by running it through extruders, moulding machines etc. It shows up in plastic deck chairs, flower pots, medical trays, in a clear film wrapping cigarette packs and CD's - and in various "spunbond" forms. That spunbonded polypropylene is a fabric. It's made in as many different weights as there are manufacturers and end users. We sold a lot of it to people who made disposable diapers. It gets rolled up and used in filters - cigarette filters, water filters, automobile oil filters, for all I know. It also gets used in sheathing or interlining or facing material that you can buy at your local fabric store. In thicker fabric weights it gets used to make disposable lab coats, Hazmat suits etc.

The manufacturers have large capital investments in these machines - one of our customers was making clear film in China. He had the film coming off the machine at about 2,500 fpm - or close to 30 miles per hour in a roll that was 10 feet wide. You'll note on Mike Woodhouse's earlier post that when he got some light polyspan from a manufacturer in Austria, he had to buy a 2.5 kilometre long roll of the stuff.

Since spunbonded polypropylene is a plastic, it doesn't react to water - and so doesn't shrink when you spray it. It does react to heat, so you can shrink it or set a different warp in a wing through use of a heat gun. And because it doesn't react to water, it doesn't sag on a damp morning.

For our modelling purposes, we want it in the relatively lighter weights. You can buy "Polyspan" from the usual suppliers - Woodhouse, Davidson, some of the local hobby dealers and cottage industry people. That stuff is all good, and a lot of us use the material in just a single coat with nothing but dope.

But if you can't find a polyspan supplier and you're in a pinch you can go to the local fabric store (they still have a few of those around) and look for dress interlining or interfacing. That material is spunbonded polypropylene. The sewing and tailoring folk use this stuff to thicken up colours, cuffs, coat lapels etc. It comes in white - any colour you want, so long as it is white because after all it's going to disappear inside the finished article of clothing.

It comes in several different weights so you need to look around. The lightest stuff is probably not useful, so go for the medium or heavier weights. Most of the stuff that I've seen is light - a bit lighter than Larry Davidson's "Light Polyspan", and would take a lot of dope to fill. But if you are going to double cover with tissue or silk over the material, then there's a lot to be said for it. The polypropylene fibres run in all directions and are bound to each other by heat - so you add tremendous tensile strength to whatever you already have in the tissue or silk where the fibres tend to run at right angles to each other.

As long as you're down at the dress or fabric shop, you might also look at the coloured dress sheathing material. A lot of this stuff is made from polypropylene or other plastics. I covered a Peerless Panther in red and silver grey dress sheathing in the late '80s, and flew it with a Mills 1.3. The red and grey was heavier than silk, but it was hell for stout and that was just fine for a sport model. Unlike silk the colours never seemed to fade much in the sun.

You have to be careful with the coloured dress sheathing when you put it on, because it doesn't shrink with water, or much with tautening dope for that matter. It does shrink with heat. I still have some of it - as I recall it was like \$3 a running yard of material that was 50 inches wide - when I was paying \$10 a square yard for Esaki silk. Cheap is good!

# From Condo SAM Champs Co-Ordinator.



Because Condobolin is at least 3 days postage from Sydney and I only get mail delivered to the farm gate 3 days a week I am going to close entries for the 2010 SAM Champs at Canowindra on March 26th 2010.

As models will be weighed scrutinized, MAAA Licenses checked, radios checked and I and my helpers **WILL BE** flying Phantom and Tomboy, I will not be taking any entries at all on, Thursday, Friday, Saturday, Sunday, or Monday.

ALL ENTRIES must be received by me on or before March 26th 2010.

# \*\* 2009 MAAA Oldtimer Rules will apply \*\*

# PROGRAM 28th SAM 1788 CHAMPS Canowindra 2010

# <u> Thursday 1.4.2010</u>

Free Flight 8am start. Scrutineering 8.30 to 1pm Phantom C/L 1pm to 3pm Tomboy 3.15 to 4.30pm

# <u>Friday 2.4.2010</u>

Scrutineering 8.30 to 10.30am Phantom 8.30 to 12...  $\frac{1}{2}A$  Texaco 12.15 to? Nostalgia after  $\frac{1}{2}A$  Texaco . AGM Friday night 7.15pm sharp

# <u>Saturday 2.4.2010</u>

Burford 8.15am briefing for 8.30am start. Texaco after Buford Will have a lunch break. BBQ at Paul's Shed at 7pm

# Sunday 4.4.2010

'38 Antique 8.15am briefing for 8.30am start Duration after '38 Antique Will have a lunch break. Sunday night Presentation Dinner 6.30 for 7pm.

# <u>Monday 5.4.2010</u>

8.45 briefing STD Duration 2 CC Duration Oldtimer Glider, if more than 8 entries. Lunch on the run. I haven't given lunch times as they might fall between rounds if all goes well. CONDO. Saturday, July 11, 2009.

# Western Australia Report

# From Paul Baartz.

WA State Championships 2009 1/2A Texaco

This event was held at Cardup on the 8<sup>th</sup> November, 2009. Nine entered however there was an early withdrawal when a flyer lost radio contact on a test flight and the model, although only slightly damaged, was unflyable for the rest of the day.

The conditions were near perfect being a stereo-typical spring day; light winds and light cloud cover with a temperature in the low twenties.

The Cox engines did live up to their reputation with a few being a little difficult but in the main good engine run times were managed by at least half of the field.

Four qualified for the fly-off which began in spectacular fashion with all achieving great height during the engine run, to the point that a couple actually brought the model down a little in order to maintain visual contact. Then just as suddenly the air cooled and a little breeze got up with the result that what was looking like a test of battery capacity became very good flight times instead.

Two models suffered minor structural damage due to rough landings but these were quickly repaired and back into the event.

### RESULTS:

1.	Kevin Hooper	Stardust Special	1080 + 732
2.	Glenn Baldwin	Anderson Pylon	1080 + 677
3.	Paul Baartz	55% RC-1	1080 + 580
4.	<b>Richard Sutherland</b>	55% RC-1	1080 + 495
5.	Gary Dickens	50% Dallaire	985
6.	Greg McLure	Lil Diamond	979
7.	Ian Dixon	50% Bomber	773
8.	Rob Rowson	50% Dallaire	692

### '38 Antique Event 2009.

This event was held on 8<sup>th</sup> November as a trial for future State Championship status.

Six flyers entered and flew in the near perfect conditions which strangely saw a number of out-landings which of course resulted in a zero flight score for what was usually a good flight if not a maximum of ten minutes.

Two models used ED Hunter diesel engines in models of three and four pounds weight, and these engines performed admirably with both models achieving good height and flight times.

Sadly Gary Dickens Miss Fortune X, on its first flight, became obscured by a row of trees and landed a little rough with limited but enough damage to scratch it for the remainder of the contest.

Two models had the good old reliable O&R teardrop

engines and although promising Ian Dixon's model underperformed due to ignition problems which I am sure will be ironed out very quickly in the workshop. Paul Baartz used his well tried and true RC-1 and recorded a near perfect score being only 8 seconds short.

Graeme Cooke was also having difficulty in achieving a full engine run but the model showed enough to suggest that when it is running up to its capability it will be very competitive.

The BG special of Ian Dixon attracted some interest mainly due to the distinctive fuselage shape, said cruelly by several to resemble a flounder, however it performed well under a trying situation with the ignition system malfunctioning.

### RESULTS:

1. Paul Baartz	RC-1 / O & R .60	1792
2. Graeme Cooke	Rec.Breaker/And Spitfire	670
3. Troy Latto	Powerhouse/O&R .60	609
4. Rob Rowson	Miss America/ED Hunter 3.46	600
5. Ian Dixon	BG Special/O&R .60	373
6. Gary Dickens	Miss Fortune X/ED Hunter3.46	dnf

Gary Dickens - Miss Fortune X.







Ian Dixon and his BG Special.



		~~ THE	BACK	PAGE	~~			
24	MODEL AIR	PLANE NEWS - N	MODEL AIRPLAN			1941	23	
NAME	CLASS BARE FLYING		OKE CYCLE PORTS	GAS	OIL DIAN POTCH	TYPE OF MOUNT	TYPE OF	WEIG
XAL	C 6.5	INCHES		500-8000 3	DALTU	of the second state of the second state of	SUCTION	29
TERNATE RING TWIN ION MERCURY	C 19.5 28		/32 2 4 1/5 /4 2 3/4	500-8000 4 500-3800 4	1 14 8	BEAM	SUCTION	26
OM NTAM	C 19.5 28 A 20 35 A 32 7.1	1.53 1-1/4 1-1/ .097 1/2 1/	(1 x 3/4 (2 2 9 1/101/	8 250-17,500 3	1 20 10	BEAM BEAM BEAM BEAM	SUCTION	122
W BANTAM RKER A RKER B	A 32 7.1 C 12 18	.097 1/2 1/ .165 19/32 19/ .199 .656 59 .69 15/16	32 2 3 1/8 10 2 BIRG WAL 1/7 2 3 1/4	500-8000 3 250-9350 3 1000-7000 3	9-11 6-7 15 10	REAM	SUCTION SUCTION SUCTION GRAVITY	1
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LLARY' FORTU		g a recent publicit		ly shaken, Hillary	stared at the wor	nan's wrinkle	ed face, t	hen
lary sneaked of	ff to visit a fortun	e teller of some local i	reputation: the s	ingle flickering ca	ndle on the table.	Looking asid	e for a m	omer
		o a crystal ball, the my			ck down to her wr			
ed grave news.	As the mystic to	ok her reading, she ha	id a struck took	a few deep breat	hs to compose her	self and cor	nsider her	' que

look on her face, looked up and said, "There's no easy way to say this, so I'll just be blunt: Prepare yourself to be a widow. Your hus-band will die a violent and horrible death this year."

۱P tion; she just had to know.

Hillary met the fortune teller's gaze, steadied her voice, and asked her question: "Will I be acquitted?"