



Points of Interest:

- List of upcoming events in 2011.
- President's message - Basil Healy.
- R/C Oldtimer Gliders at Champs.
- Western Australia Report.
- Oldtimer Report - David Owen.
- Electric Oldtimer - Lou Amadio.
- Control Line - David Owen.
- AAC & ABC Engines.
- The Back Page - Rubber Bandit.

BULLETIN No. 167 November-December



2010



DURATION TIMES



WISHING YOU
AND
ALL MEMBERS & FRIENDS
A
HAPPY, SAFE & PEACEFUL
CHRISTMAS
AND A
BRIGHT & PROSPEROUS
NEW YEAR

WORTH NOTING: The 2011 SAM 1788 Championships are getting closer and there are a few changes which are going to be tried out at these Champs. Entry forms are being sent out very shortly and it is important to note that the closing date for entries is 11th April, 2011.

Information regarding your models will be required on the entry form to enable the score sheets to be prepared in a timely manner rather than in the mad rush, just as the event starts, which has been the norm in past years. There is no BBQ on Saturday night and new arrangements for the Presentation Dinner on Sunday night.

Note: It will be necessary to pay for your dinner tickets with your entry fees, all of which will need to be in the hands of the Entries Co-Ordinator by 11th April, 2011. Dinner tickets will not be available after that date.

Please comply with these new arrangement to ensure a successful and enjoyable SAM Champs for all competitors.



ORANGE MODEL AIRCRAFT CLUB Inc.

INVITES YOU TO ATTEND AND COMPETE FOR THE
ALAN BROWN

Perpetual Memorial Texaco Shield

On the Weekend

5th and 6th FEBRUARY, 2011.

At the

ORANGE MAC FLYING FIELD at BORENORE

Saturday 5th - Commencing at 10am - $\frac{1}{2}$ A Texaco & Gordon Burford

Commencing at 1-30pm - Oldtimer Duration

Sunday 6th - Commencing at 9-30am - Oldtimer Texaco

(ALL EVENTS WILL BE FLOWN TO 2009 MAAA RULES)

For Information Contact: Stewart West - Telephone 02 6331-9822



TOMBOYS IN TASMANIA

Duration Times is the official Bulletin of SAM 1788

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UPCOMING OLDTIMER EVENTS FOR 2011.

February	5-6	Alan Brown Oldtimer Texaco Shield	Orange MAC	Stewart West	02 6331-9822.
February	19	Oldtimer Glider trial flying 1.30pm start	Goulburn	Grant Manwaring	02 6241-1320.
February	20	Geoff Shaw Memorial Oldtimer Texaco	Goulburn	Paul Marshall	02 4821-5869.
March	19-20	Diesel and Texaco Oldtimer Weekend	Wyong Rivers	Basil Healy	02 4341-7292.
April 30 - May 1		Veterans Gathering	Muswellbrook	Simon Bishop	02 6543-5170.
April	21-25	SAM 1788 Championships	Canowindra	Peter J. Smith	0423 452 879.
May	12-15	Belconnen MAC Oldtimer	Yass	Grant Manwaring	02 6241-1320.
June	11-13	SAM 84 Vintagents Championships	Calvert Field, Qld.	Mick Walsh	07 3849-6991.
June	18-19	New England Gas Champs	Tamworth	Peter J. Smith	0423 452 879.
July	23-24	Golden West Oldtimer Competition	Parkes	Peter J. Smith	0423 452 879.
August	20-21	FARCON Oldtimer Weekend	Cowra	Peter J. Smith	0423 452 879.
August	26-28	Oily Hand Diesel Weekend	Cowra	Andy Luckett	02 6342 3054.
October	1-2	Eastern States Gas Champs	Wangaratta	Peter J. Smith	0423 452 879.
October	22-23	Lithgow Oldtimer Weekend	Lithgow	Dave Brown	02 6355-7298.
November	19-20	Muswellbrook Oldtimer Weekend	Muswellbrook	Simon Bishop	02 6543-5170.



From the President: Well, the last Old Timer competition for the year was cancelled. However, a number of us still gathered at Muswellbrook for a trimming and "try-out" session. The weather was hot with a stiff breeze on both days but that did not stop most of us getting in a few flights.

The highlight of the week-end was the first flight of Pete Scott's scale Spitfire powered by an RCV engine. Peter entrusted the first flight to Dave Brown. All was going well until Dave started a "beat-up" of the field only to lose elevator response temporarily. A hasty reduction in power and speed saw the elevator control return and Dave heave a sigh of relief as the Spitfire levelled off then climbed away. Full power was not used for the rest of the flight. The problem appears to have been flexing

of the elevator pushrod. Peter has some engineering to do before it flies again.

It is sad to see another good model shop in my area close. Apparently, the young couple who ran the shop found that they were unable to run the shop and look after a young family too. The business was not big enough to warrant employing staff, but was too much for them to handle and still devote quality time to their two children.

In the last issue of the Miniature Aero Sports NSW newsletter I noticed a comment about the 2013 Nationals to be held in NSW. Special Interest Groups (e.g. SAM 1788) were to be approached to conduct their respective disciplines. What's new, we usually get asked to run the Old Timer events? Let's hope that they don't try to run all of the R/C events on the one field like they did at Cootamundra last time. That Nationals ran for two weeks!

By the time you get to read this the 2010 Nationals will be underway or even over. We have a good-sized team attending and hope to give the local Queenslanders a run for their money.

Merry Christmas and a Happy New Year and may all of your flights be thermal assisted in 2011. Basil Healy. President.





From SAM Secretary: Hi, Wishing all members a Merry Xmas, and Happy New Year. No doubt I will see some of you at Dalby.

there is still SAM covering material available, for the flier who has everything, at a special Xmas price of \$8.10 a metre (hey, everything else went up). Contact me with your order, please.

The 2011 SAM 1788 Champs entry form is being sent out with this DT. The tickets for the Presentation Dinner on Sunday night, have to be ordered before last mall on 11th April, 2011, as i have agreed to let the caterers know numbers. There will be absolutely no late dinner tickets issued. Only dinner numbers taken by me will get to eat. Hope Santa finds you, Regards, Condo.

From Dave Brown:

Gooday All, Muswellbrook get together in November was hot with moderate winds, enough to save the models, until about 3pm, then it dropped. Casual flight testing and a lot of arm chair experts, some had carnage, but otherwise was terrific weekend.

Peter Scott had a mixed weekend, I test flew his new Spitfire for him, and he crashed a 2cc or Burford model, (had a diesel in it and shut off didn't work). Geoff Potter had a radio malfunction and lost he sport model, but had a new (lite) bomber that will be a weapon if it doesn't fly away.

I had drama with the new Cox motor, (after Wangaratta), must be brand new has consistent stopping problem, (maybe overheating) I think my Antique model is now all sorted and ready for Dalby Nats. More later, Dave Brown.

GOULBURN MULWAREE SPORTS FLIERS - GOULBURN

Geoff Shaw Memorial Oldtimer Texaco

Sunday 20th February, 2011.

Swan Field - Hume Highway (14 Kms south of Goulburn)

10am start - 1/2A Texaco followed by Oldtimer Texaco.

Sausage Sizzle, Coffee and Drinks at the field.

Contact Paul Marshall 02 4821-5869 for more information.



**Wyong River M.A.C.
3rd Old Timer Weekend
19-20 March, 2011.**

Program

Saturday 19th

- 9am - R/C Tomboy
- 10am - 2cc Oldtimer
- 12 noon - Lunch
- 1pm - Texaco

Sunday 20th

- 9am - R/C Tomboy
- 10am - 1/2A Texaco
- 12 noon - Lunch
- 1pm - Texaco

Note: Due to the close proximity of a residential area, vintage spark ignition engines used in Texaco must be fitted with a muffler

For further information

Contact: Basil Healy

02 4341-7292

R/C Old Timer Glider 2011 SAM Championships

From Grant Manwaring

Another article to further promote the Old Timer Glider event at the SAM Championships at Easter 2011. From the feedback we are hearing interest in the event is growing with several new models being built and some old ones dusted off to fly another day.

New models under construction include a Fugitive by Jim Rae, Don Southwell is building a Thermal Sniffer and Dave Brown is cutting a Leprechaun partial kit for Alan Brady. Basil Healy and Ian Connell have both been flying the current models.

As mentioned in the last issue of Duration Times, we have been able to arrange a test day which can be used for trimming and to allow flyers to use the winches we will use at Canowindra. This day will be on Saturday 19 February 2011, start time 1.30pm at the Goulburn Ted Swan Field. This is the day prior to O/T Texaco and $\frac{1}{2}$ A Texaco on the Sunday. It will be an informal afternoon of gliding where flyers can perfect their launch technique and check out the soaring ability of the new models. I will arrange a dinner venue in Goulburn on Saturday night.

A reminder, Dave Brown, Model Draughting Services can provide laser cut partial kits from the glider plans we have listed, or from your own plan. This is a real time saver during the building process.

I have just received a CD from Mike Adams from South Australia which gives a listing of Aeromodeller magazine early glider plans. Also on the CD are a selection of magazine articles and plans. These are suitable for scaling for the Old Timer Glider event. Models include BD-12, Cobra, Elmira, Farthing Lightweight, Iolanthe, Nimbus, Saint, Warring Aegeus, Warring Atalanta, Warring Zeus, Warring Leander and the Thermalist. Please contact me if you want any of these plans. Thanks Mike for your help in providing these plans.

Also included in this issue are the current MAAA Old Timer Glider rules for this event. Check them out, especially the design cutoff date.

I encourage members to consider this event and build a model for the next SAM Champs. Your support we may be able to run the event at other comps through next year, a lead up to an even bigger entry for the 30th anniversary SAM Champs in 2012. Both Basil Healy and I can provide assistance and advice on suitable models.

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Chris Chalker - Parkhaven Motel
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Goulburn NSW 2528

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Telephone: 02 4821-44555



From Jim Rae jsrae@netspeed.com.au

Some progress pictures of my Fugitive. Needs to have gear installed and a nose cone made, not sure what it will be made of, depends on CG. Might be a lump of lead. Pictures taken this morning. Weather not as bright as it could be so they are a bit dull, like me.



MAAA OFFICIAL OLDTIMER RULES 2009 - 5.4.7. R/C OLD TIMER GLIDER RULES.

DESCRIPTION: This event is to encourage the re-creation of suitable early design gliders and to fly them in a relaxed competition.

5.4.7.1 Aircraft eligibility

- (a) The event is open to all gliders which were designed, kitted, or published on or before 31st December 1950.
 (b) All R/C Assist Old Timer rules in relation to the out line and construction of a model (including scaling) will apply with the following exceptions:-
 (i) The number of ribs in the wings may be increased when enlarging a model to ensure wing integrity, but rib spacing must be the same or greater than that shown on the original plan.
 (ii) When reducing the size of the original model, the number of ribs shown on the original plan must be retained.
 (iii) Radio control of rudder, tow hook and elevator functions only are allowed.

5.4.7.2 Flight procedures

- (a) All models may launch from bungee or hi-start or electrical-powered winch or may hand tow with 175 metre tow or pulley type hand tow. Winches are allowed.
 (b) The maximum flight time as defined in clause 5.4.1.5.(f) is six (6) minutes (360points)
 (c) The model must land in the defined area for the flight to count towards the score.

5.4.7.3 Fly-off

- (a) If at the end of the official flights a fly-off is necessary, it will be conducted as set out in rule 5.4.1.6.
 (b) For the fly-off, the longest flight shall determine the winner.

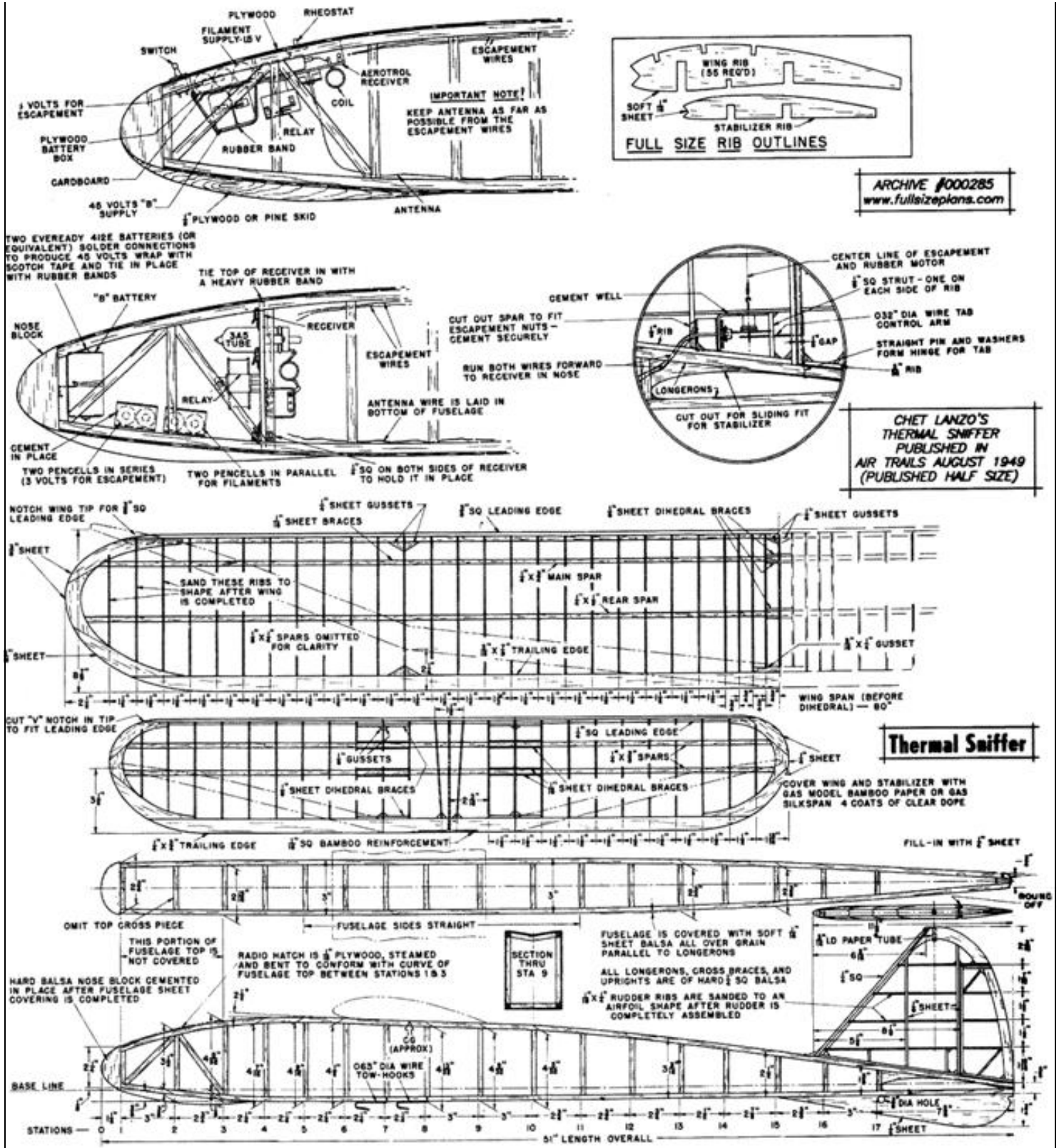
**FROM IVAN POLONI - SAM ITALY.**

I send you some Oldtimer glider photos taken by our Tiziano Bortolai during the Italian Championship O.T. at Gaffaro Valley in 2010. Many kind regards,
 Ivan Poloni. ivanpoloni@gmail.com

Pictures labelled clockwise from top left:

Aliante Binelli, Nibbio, OTVR Gruppo,
 SAM 2001 Banner, Balestruccio Mersechi.





WESTERN AUSTRALIA REPORT

From Troy Latto

AWA O/T Texaco - 24 October 2010

In what could be described as perfect spring conditions, the AWA O/T Texaco kicked off at WAMAC's Oakford Field with 9 stalwart competitors. CD Gary Dickens lay down the law, models were weighed, fuel allocations given and the first competitors chugged majestically in to the air at 10:00.

Some engine tuning was required to get the maximum run time out of the miserly fuel allocations - a few struggled to get the balance of prop, needle and carb just so and a lot of lean runs resulted. Those able to achieve the balance were rewarded with good thermalling conditions.

As the morning wore on, the air got warmer and the lift stronger but more difficult to find. The gentle Easterly gave way to a fitful Sou' wester and this had the effect of spreading out the thermals. 10 minutes is a long time in the air, especially when the engine stops after 2-3 mins run time. Troy Latto managed to find a wisp of lift that he was able to work from 80 feet up to 400 for his max in Round 1 before radio problems saw him fall away toward the final rounds. Glen Baldwin came close to the magic 3 max scores with one 10 minute flight and two flights of 9:30 and 9:50 - heartbreaking stuff. Ian Dickson continued to show why he is the man to beat with a comprehensive win - 3 maximum scores in a row and a 13 minute flight in the flyoff to take out the event. Rusty club icon Alan "Trottsky" Trott, made it to the winners circle with a creditable second place (only 18 seconds behind Ian) and Rod "Big Mac" McDonald rounded out the flyoff group with a solid third. Well done all!

The spread of aircraft types was pleasing to see. Chet Lanzo was represented by 4 Bombers, Ian Dickson's Anderson Pylon is a treat to watch and Rod McDonald can always be relied upon to pull out a weird one - the MG 2 was certainly a standout. Rob Rowson re-engined the Miss America with an open rocker FS60 but couldn't get a reliable engine run or any decent air - a problem shared by Les Isitt with his Bomber. Ray Sherburn's venerable Flamingo showed its usual good form and Kevin Hooper was a welcome addition to the event. Glen Baldwin's OSFS40 powered 70% Bomber showed that you didn't need a 100 inch monster to be successful in

Final Results - Texaco

1. Ian Dixon	Anderson Pylon	1800 + 800
2. Alan Trott	85% bomber	1800 + 772
3. Rod McDonald	MG2	1800 + 656
4. Glen Baldwin	70% Bomber	1720
5. Ray Sherburn	Flamingo	1629
6. Troy Latto	85% Bomber	1612
7. Rob Rowson	Miss America	1307
8. Kevin Hooper	Playboy Cabin	1266
9. Les Isitt	85% Bomber	398

Texaco and Alan Trott showed you didn't need 100% eye-sight to be a canny pilot! Engines varied in size and manufacturer with four strokes dominating due to their ability to swing a larger/coarser pitch prop at lower revs for better economy. The OS open rocker FS60 being the preferred power plant for most competitors.



Top to Bottom: 1st Place Ian Dixon with his Anderson Pylon. 2nd Alan Trott with his 85% Bomber. 3rd Rod McDonald with his MG.

AWA ½A Texaco - 7 November, 2010

The state ½A Texaco event got under way at Oakford with a bumper entry of 10 modellers - including the welcome return of Paul Baartz from extended illness. Gary Dickens conducted the pre-flight brief and launched the first round in to a stiff southerly breeze.

For those not in the know, ½A Texaco is an old timer event that utilizes scaled down aircraft that were designed/kitted/published prior to December 1939. Entrants must run a Cox 049 with a 5cc tank and achieve a maximum flight time of six minutes 3 times over four rounds. If there are multiple competitors that achieve three six minute maximum scores, there is a flyoff with no time limit.

A few early starters straggled in to the air and were rewarded with the usual series of lean runs as those sodding 049's tried everyone's patience. The wind also played havoc with the field as the lift blew in and out during much of the day. Glen Baldwin

suffered an early setback when his Anderson Pylon was blown over on the ground by a passing gust which damaged the wing. He then struggled with engine problems that forced him to withdraw. Gary Dickens had his Anderson/Cox combo tuned to perfection and found himself in a monster thermal - which promptly whisked his plane out of sight. This made the fourth aircraft Gary has lost in the past 3 years and we were all upset on his behalf (Happy ending! Gary got the Anderson back a few days later when a farmer found it in his property not too far from our field!)

Ian Dixon had an unusually poor event this time round as the Cox on his 50% Bomber kept failing on climb. The problem was eventually traced to a blockage in the fuel line but by then he had fallen behind the pace. Rob Rowson was an unfortunate casualty as he broke his Dallaire when it flipped on landing. Rod McDonald had to switch models when he broke his main ship during a test flight - however the little Strato Streak proved a worthy replacement as he went on to record 3 max's for the event and made the flyoff. Kevin Hooper - the reigning 1/2 a champ - proved he was still a force to be reckoned with but just missed out on the flyoff by 4 seconds! Still - he did enough to wrap up third place. Hans Van Leeuwen and his little Atomizer put in a good showing to take out fourth and your editor suffered his usual travails with 1/2A engines and structural failures of varying magnitudes.

Paul Baartz showed that his extended layoff hadn't dulled his flying skills. Aply assisted by Alan "Trottsky" Trott, his RC1 was climbing skyward within minutes of him being wheeled to the flightline. Paul managed 2 max's despite a couple of lean runs.

Greg McClure and his delightful Little Diamond proved to be the combination to beat. His engine was reliable and the aircraft light and strong - an essential combination in this event. He easily made the flyoff and recorded a definitive winning time to clinch the title. Well Done Greg!

It was fantastic to get 10 flyers in this State event and while we all had problems of some sort during the day, 1/2A Texaco remains the most popular competition on the calendar. Thanks to all who participated and to Gary and Angela Dickens for running the show - much appreciated by all.

Results 1/2A Texaco

1	Greg McClure	Lil Diamond	1080 +311
2	Rod McDonald	Strato Streak	1080 +162
3	Kevin Hooper	Stardust Special	1076
4	Hans van Leeuwen	Atomiser	900
5	Paul Baartz	RC1	845
6	Ian Dixon	50%Bomber	539
7	Troy Latto	Lil Diamond	558
8	Rob Rowson	Dallaire	442
9	Gary Dickens	Anderson Pylon	360
10	Glenn Baldwin	Anderson Pylon	301

Top: 1st Greg McClure and 2nd Rod McDonald.

Middle: 3rd Place Kevin Hooper.

Right: Great to see that Paul Baartz is back on deck after a long illness.



AWA Open Duration - 21 November 2010

After a brief pause, the AWA Open Duration that was cancelled in September was finally flown on Sunday November 21 2010 at WAMAC field, Oakford. Nine stalwart flyers and a gaggle of assistants gathered to farewell the 2010 contest season with the vertical drag race that is Open Duration!

The weather gods smiled upon us with a wind free day but tempered their benevolence by making it very humid and overcast. The extra humidity required some subtle alteration to mixtures to get the best out of the engines and liberal applications of fly repellent to repulse the insect population!

Rob Rowson's day began disastrously when he snapped his fuselage on take off during a test hop. This would have put a lesser man out of the comp, but not our Rob! With some spare balsa, a drop of zap, some packing tape and a lot of nous he was back in business better than ever - eventually nabbing third place! Troy Latto's earlier test flights were not promising as the OS52FS on his 85% Bomber snorted and backfired before quitting on climb out. The problem was eventually traced to gunk in the spray bar which was promptly flushed out before he put in a solid flight. Hans Van Leeuwin suffered radio problems (of the 36mhz variety) and was fortunate to recover the Bomber from a series of wild gyrations before withdrawing from the event with a suspect receiver. Eventually, with all testing done, CD Gary Dickens waved the chequered flag and nine angry engines tore their mounts sky-

Results Oldtimer Duration

1	Troy Latto	85% Bomber	1260 + 422
2	Rod McDonald	Kerswap	1260 + 284
3	Rob Rowson	85% Bomber	1247
4	Alan Trott	85% Bomber	1238
5	Ian Dixon	Kerswap	1236
6	Les Isitt	85% Bomber	1028
7	Paul Baartz	85% Bomber	979
8	Kevin Hooper	70%Bomber	945
9	Ray Sherburn	Playboy Senior	831

wards in 32 seconds of raw power!

Thermals proved difficult to ferret out in the moist conditions. The phenomenon known as "thick air" was prevalent - no strong lift but enough buoyancy to make it possible to fly the full seven minute slot. Most max's were in the "just scraped in" category. To further complicate matters, a rain shower plodded through and ate up valuable time as competitors struggled to make 3 maximum flights within the 90 minute time frame.

Ian Dixon max'd early but 3 further short flights put him out of the running. His Magnum 61 powered "Kerswap" was on song but the lift deserted him. Paul

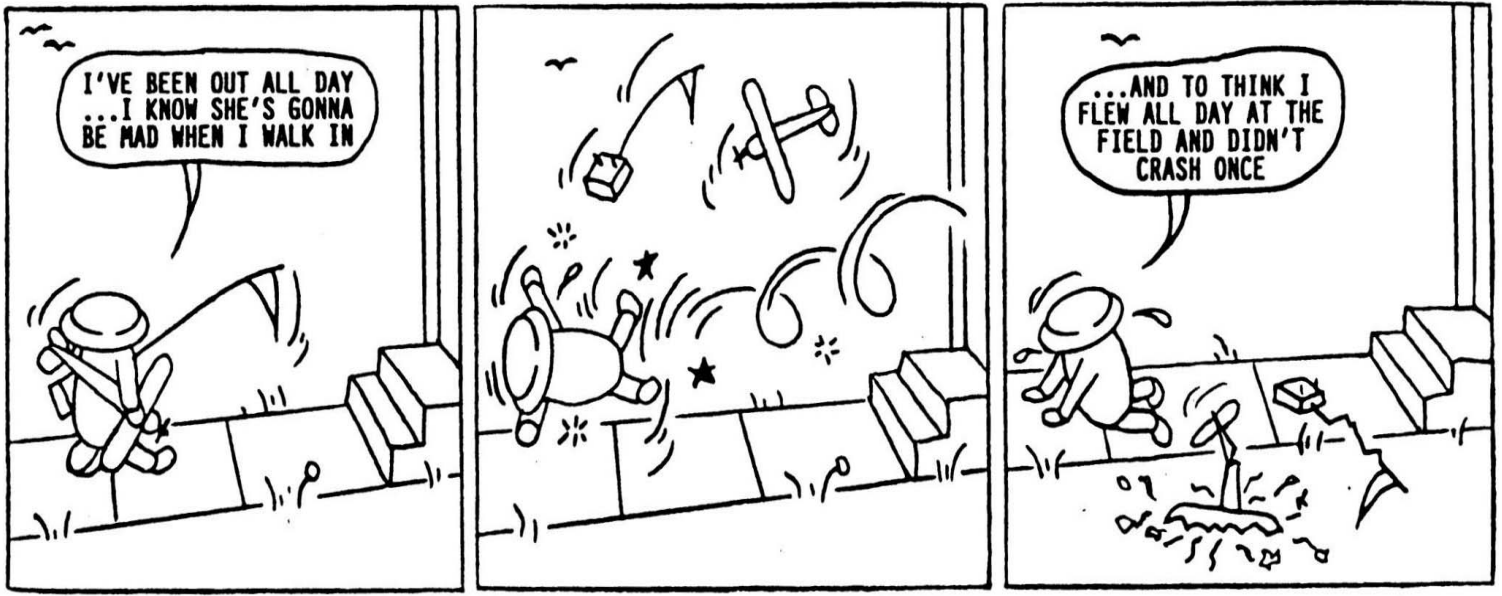


Baartz managed to drive himself to the field for the event and his 85% Bomber was sounding strong but he could only manage 2 flights before he had to leave. Paul looked very much at home on the flightline and I'm sure that he will be able to stay the distance as his health improves. Rusty club icon Alan "Trottsky" Trott was in the running for the flyoff but was hampered when his right wingtip came unzipped at the top of the climb in round 3 and his 85% Bomber spiralled to the deck. Ray Sherburn's day come to a crashing halt when his Playboy Senior decided it liked the tree on the downwind leg of the circuit better than the runway and broke its fuselage on exit.

After all flights were logged it came down to a two way flyoff for the championship. Rod "Big Mac" McDonald and Troy "Zeek" Latto launched in to oppressive, tropical conditions and shadowed each other before Troy snagged a wispy thermal and milked it for all it was worth. Rod drifted with the light breeze but couldn't find anything that would match it with Troy's "Ghost Bomber" and the latter eventually landed a full three minutes in front of Rod to be proclaimed AWA Open Duration champ for 2010. As always, thanks to all who participated and to Gary and Angela Dickens for running the event.



Top: Troy Latto 1st in Oldtimer Duration. Above: Rod McDonald's 2nd placing Kerswap. Left: 3rd Rob Rowson with his 85% Bomber.



OLDTIMER REPORT FROM DAVID OWEN - BITS & PIECES

Here's an extract from an email received from Bill Deal < wdeal@internode.on.net > from Hobart MAC, Tasmania:

"Hope you had a great trip! Of course very sorry to see the loss of Ron Moulton - I hope you had the chance to see him one last time.

We have had more of our relaxed Tomboy comps both in Launceston & Hobart - a few photos attached. One of the boys in the photo is Tony Gray's grandson! I know we have a relaxed attitude to the Tomboy event, however when Greg Robertson unloaded the 10 foot wingspan Sportster !!! The electric powered model is magnificent, complete with bomber doors - on this occasion released a parachuted Mr Bean Teddy!

The Hearn's Sportster is a favourite in Tassie and has been modelled in many sizes. I know the design was from around 1950, and I assume was released as a Hearn's Hobbies kit. I would certainly appreciate any help with the correct date of the Hearn's Sportster."



Yes Bill, my wife and I were privileged to spend a day and evening with Ron Moulton whilst on our recent trip to Europe. Though frail, he was in good spirits when we left him at his home in Bushey, where he had lived for many years with his late wife, Betty. Ron's passing is a great loss to Aeromodelling worldwide.

Your group there in Tasmania certainly seem to be having a great time with your Tomboys and that Hearn's Sportster is certainly impressive. Your flying field looks pretty impressive as well from what can be seen in your photos. I'm afraid I can't assist with an exact date for the Sportster, but certainly early fifties. The Hearn's kit was still available into the early 1960's stating that it would be suitable for radio control in a 1961-62 catalogue.



As can be seen in the photos there are other models present in this active "Little Models" group in Tasmania. Scaled-down Sportsters and Simplex's to name a couple. All powered with small diesel engines or electric motors. Great to see that simple models can be such fun.

So build a "little model" and join in. There are a lot of Postal Competitions available for these models if you can't join in with a group.

WORTH NOTING...

From Jack Hiner j.hiner@comcast.net

SAM'ers, A while back a fellow with an electronic background explained why one should not use a high amp ESC in a low amp application for our SAM electric powered old timers.

I forget the fellow's name. Also I intended to keep his article but can not find it on my computer. Another copy of his explanation would be helpful and very appreciated.

Over-Current Protection in Brushless Motors.

Roy Bourke MAAC 204L roybourke@yahoo.com

Section 6.1 of the MAAC Safety Code recommends that all electric aircraft be properly fused "between the motor and the first connector when using a BEC system. Units that have separate power to the radio may prefer to fuse between the battery and the connector." This regulation is currently under review and will likely be amended somewhat in future revisions of the Safety Code

Obviously the original regulation was drafted without too much regard for the newer brushless motor types because, how do you fuse a 3-phase motor/controller system?? Putting a single fuse in one of the 3 lines to the motor just doesn't cut it!! Blowing a single fuse will disable two of the phases, but the motor will still run, or try to run, on the remaining phase. And putting a fuse in all three lines wouldn't cut all power to the motor unless two of the fuses blew simultaneously. One could of course fuse one of the power lines from the battery to the speed controller but this should not be done unless the radio receiver has its own separate battery, because blowing this fuse will disable a BEC system in the speed controller.

Fortunately, most electronic speed controllers already have some form of fusing, either a thermal cut-off or over current protection. Castle Creations, and possibly some other ESC suppliers go one step further and give the user a bit of programming control over the sensitivity of this over current cut-off, but not much control of the level itself. The cut-off level for over-current is usually based on the normal current rating of the controller, and most controllers are designed to allow a temporary surge of current over the rated current draw for continuous operation. (For example, the Phoenix 80 controller will pass 80 Amps continuous and 120 Amps surge).

So if we are using a BEC, essentially we are relying on the speed controller to provide us with this safety fusing. But just as we must carefully select an appropriate fuse size for a brushed motor, we need to select an appropriate controller size for a brushless motor. Yes, an 80A speed controller will control the speed of a motor that is designed to run on a maximum of 25 Amps. But what if a short develops in that motor, or if something stops the prop from turning and/or the motor shaft locks up while the speed controller is calling for maximum speed (after a crash for example)? How much current will the motor draw?

Probably a high enough level to blow the motor, and maybe even a high enough level to cause the LiPo battery pack to explode. (Have you ever seen one explode? Check out the videos at <http://www.utahflyers.org>). But the 80A speed controller won't cut power until the current level is well above 120 Amps !!

So, if you are using a controller with BEC, this just underlines the importance of matching the size of a speed controller to the current capability of the motor. Admittedly it is tempting to use a larger speed controller than is needed, to make sure that the speed controller stays cool and is never overloaded, and may be useful for a larger motor in a future aircraft. But the downside is that you may be creating a potentially dangerous over-fused and under-protected condition for the rest of the power system.

If you do insist on using an oversized controller, the safest way is to appropriately fuse the battery line to the controller and install separate power for the receiver and servos (Hint: The two-bladed automotive fuses sold at auto parts stores can serve nicely as drive-system arming switches as well as fuses).



MPJet listens..... and they have released a new 'T' style comp screw for their great little MPJet diesel. This replaces the slippery, one-arm type which is responsible for so much cursing and swearing from R/C Tomboy fliers!

To be a gentleman again, send a \$10 note to:
OWEN ENGINES, PO Box 1739 Wollongong, NSW 2500 and we'll send you a new 'T' comp screw by return mail.

Electric Old Timer From Lou Amadio

Fly two different events on the same day with one model?

With the number of events on offer at national meetings slowly increasing, I wanted to see if a model could be used for more than one contest with minimal compromises.

Given the pressure of competition, often one makes a decision to restrict the number of contests entered to minimize the models that have to be prepared and maintained. Also, different competitions have widely varying model requirements, particularly with the power system.

The current EOT rules allow for the following competitions and power needs:

- (a) Duration - rapid climb using very high power levels, brief motor run time (<35 sec).
- (b) Height Limited Oldtimer - medium climb rate, medium power levels, brief motor run time (<30 sec).
- (c) Texaco - moderate to low power, extended motor run until battery is exhausted.
- (d) Nostalgia - moderate power level, brief motor run (<35 sec).

(a) looked a bit hard to deal with so I left it for another day. (d) is not yet contested in Australia which left (b) and (c) for my experiments.

With this in mind, I set about trying to achieve the following:

1. One model to be used in two competitions
2. Changes between competitions restricted to battery and, only if necessary, propeller swapping.

The model used for the experiment was my 66% Lanzo, set up previously for Texaco with the following power system:

- Motor - Hyperion Z3013-14 , Kv 1085, 10x5 prop
- Battery - 2S 850 mAh, 20C rating
- ESC - 30A, using BEC Rx power
- Current - 18A resulting in power = 120 watts and a modest loading of 65 watts per lb
- Ecalc - Simulation predicts a climb rate of 4m/sec which is OK for Texaco.

To convert the Lanzo to HLOT it needed a power boost of ~x2. There are two easy ways to increase power in an electric model: increase the size of the propeller or use a battery pack with more cells.

To make the Lanzo competitive in HLOT it had to climb to 200 metres in less than 30 sec. The latter limitation is a result of the in-built timer in the height limiter used in this competition. The minimum climb rate is therefore 400 m/min or 6.7 m/sec.

The additional power was achieved by moving to a 3 cell pack of 1200 mAh rated at 30C discharge. Current was measured at 28A using the same 10x5 prop. Part of the extra 10A came about by using a pack with a higher 'C' rating, i.e. 30C -v- 20C. Weight in HLOT mode was 32 Oz and a PC simulation using Ecalc predicted a climb rate of 9.6 m/sec which allows for windy conditions.

Limitations: With the height limiter permanently installed in the model, the apparent limitation in Texaco is that the motor cuts automatically after 30 seconds or on climbing to 200m. This does not appear to compromise the Texaco event because, in EOT, the pilot is allowed to turn the motor back on until the battery is exhausted.

So, theory predicts that an Electric Old Timer can be optimized for two events by simply changing the battery. Bear in mind that for this to work seamlessly, the ESC must have auto-detect for LiPo cell count. My programmable Hyperion ESC was not suitable and had to be replaced. The last thing you want in a competition is to have to programme the ESC for different cell counts between events!

This is how I went about setting up my existing model but, in hindsight, it would be wise to reverse the procedure. Set up a model for HLOT using a 3 cell pack then revert to 2 cells for Texaco. You may have to add some lead to the lighter Texaco pack to balance the model in that mode (see photo).



Just a change of battery and you can fly two different comps on the same day.



Field Testing: All went well at the field with both events handled with just a change of battery. In HLOT, the model climbed to 200m in 22 seconds and stayed up for the full 7 minutes in buoyant air. In Texaco, the lower climb rate resulted in the power cutting after 30 seconds. The throttle was immediately reduced to zero then back to 100% with little loss in height. Again the task was completed with a 10 minute flight.

For EOT Competition Rules see:

http://www.aefa.dreamhosters.com/files/Electric_Old_Timer_Rules_2011.pdf

For Height Limiters, contact Greg Potter (South Australia) on:

gpotter@opalibusiness.com.au or visit his website at www.glidergear.com.au



Electric Oldtimer Rules for 2011 From Lou Amadio.

Note that for 2011 Contests and Postal Contests:

1. Duration rules are unchanged (10 min contest, 35 sec motor run, battery size based on wing area).
2. Height Limited Old Timer (new 7 min contest) - model must be fitted with a limiter to cut power at 200m. There are no battery capacity rules.
3. Texaco task time has been reduced to 10 minutes so battery rules have changed. Use the calculator in the rules to determine your new maximum battery allowance. Note that ballasting is permitted if you wish to fit a larger battery.
4. 1/2A Texaco task time has been reduced to 10 minutes so battery rules have changed. For Lipo batteries fit either a 2S 460 mAh or 3S 310 mAh battery. These are maximum battery capacities that can be used.

See http://www.aefa.dreamhosters.com/files/Electric_Old_Timer_Rules_2011.pdf for a complete set of rules.

Cohuna Old-timers IC or Electric Old Timers? From Laurie Baldwin.

One way to explore the possibilities is to get together and that's what happened at Cohuna recently. The Cohuna Model Aero Club and SAM600, the Victorian chapter of the Society of Antique Modellers, extended an invitation for electric aircraft to join their regular Old Timers meeting over the 6/7 Nov weekend.

The convenience of electric power has struck a chord with both old time flyers and potential newcomers and it was nice to see a few more electric participants, plus their mates, at this event. In terms of format, EOT followed the IC schedule, flying at the same time, but not competing against, the wet fuel models. Only two 1/2A electrics flew but handled the windy conditions as well as their IC counterparts. Ted Hall achieved 11 minute flights with 3S 460mAh packs while the IC aircraft achieved 8 and 9 minutes times. Daryl McCleary won the Duration event with his 85% Bomber and was pretty enthusiastic about the set up recommended by Bob Hickman. Nice to see theory and practice come together. Daryl also led Texaco when a couple of scratchings from the others left him with the field to himself.

SAM600 runs a Climb and Glide event. In essence it's looking for the longest flight from a 60sec motor run. However multiple attempts are allowed within a 30 minute launch window. This was another chance for electric participation, but with a twist. Because electrics will start on command, a simultaneous launch, and the All Up Last Down format, seemed a good way to go. Add a Cularis plus a couple of Radians and let the fun begin.

Gary Ryan with his 87% RC1 took out the event. He reported that he shut down before the motor run time had elapsed because he was so high he almost couldn't see the model.

So back to the question, IC or Electric Old Timers? Why not both, but who cares? It was a great weekend enjoying the experience and friendship of people flying old aeroplanes. I'll be back next time. (This report courtesy AEFA Newsletter)



Above, left to right: Gary Ryan (RC1) and Ted Hall (Stardust)
Photos from Laurie Baldwin.



Below, left to right: Gary Ryan (RC1) Daryl McCleary (Bomber) and Chris Genglese (Buzzard)

Control Line Roundup and other stuff from David Owen



Above Left: Henri Stouff's famous Blue Pants design, which was published in *Aeromodeller* in 1955, was the subject of a one-model event held in Queensland earlier this year. These nice models were powered with ED Racer 2.46 and Enya 15D diesels.

Above Right: The Taurus, a very large stunter which featured a wing held by rubber bands, was designed by J. Coasby and published in *Aeromodeller*. This nice one, powered with a Super Cyclone .60 on ignition, is being flown in a recent Vintage Stunt event in the US.

Below: The Hearns Hobbies Gladiator is the C/L model for the Vet's Gathering in Muswellbrook next year. Kits and plans are available from Brownly. Here is a very young Gary Lake with his Gladiator in 1960!



Above: Metal restraining pins in engine test stands, in some form, are absolutely essential (from a safety point of view). I was overseas recently and was asked to assist with test-running an old glow engine. I did not know it was unrestrained. Soon after starting, it began to slip forward in the test stand. It would have slipped right out, had I not grabbed it quickly and torn the fuel line off.

Here's a shot of an old maple EZ-Just test stand someone sent to me years ago. Both clamps have broken. They might not have done so had the clamp bolts been located further in towards the engine

Inventions that changed the World. From Hank Sperzel <hsperzel@cox.net>

Did you guys ever think about some of the simple inventions that changed the world forever? How about the guys that came down from the north of Europe wearing pants rather than a Toga? The same guys that were standing up in "stirrups", now you can get some real power behind that lance thrust, a whole horse power. Of course "Gunpowder" now a man with a "Musket" was equal to a man on a horse or how about the guys that invented the "Blast Tube" and the "Quick TD", inventions that changed the world forever. Free Fight Hank in Omaha



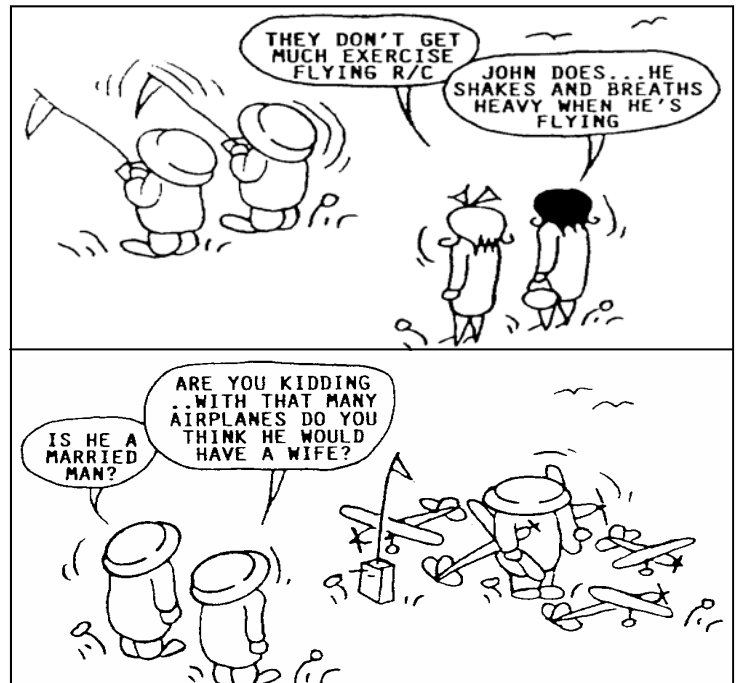
ABC/AAC ENGINES--WHAT THEY ARE, HOW TO RUN, AND TREAT THEM:

From the late George Aldrich.

- 1.) The basics of how these systems work:
 - a.) The piston material, a high silicon aluminum alloy, has a far lower coefficient of expansion, than the cylinder material, whether it is brass, or aluminum.
 - b.) The cylinder material, is either high tensile brass, or aluminum, that is hard chrome plated.
 - c.) The combination of the highly abrasion resistant piston material, running in the very hard chromed cylinder, assures long life.
- 2.) Why does the piston have such a tight fit (pinch), when the engine is turned over TDC (Top Dead Center)?
 - a.) The high tensile brass or aluminum cylinder expands a great deal more, than the piston, when the engine reaches operating temperatures.
 - b.) If an engine is set up with what most consider the normal fit, and the usual bore that has little taper, then when the engine reached operating temperature, it would have little compression ! With a straight bore, when an engine gets hot, it suffers from what is normally called "bell mouth" ! The symptoms of bell mouth, are great cold starting, but poor hot restarts.
 - c.) When I first started working with the first ABC engine, ever sent into the U.S., (1966) the first thing I did was to lap in the piston, to the fit we had developed with cast iron/steel assemblies. This basically ruined it ! From this early beginning, it was found that a tapered bore, a much tighter fit was required to get this system to work at its best.
 - d.) Later technical advancements, in being able to hard chrome aluminum, led to using aluminum cylinders, and the high silicon aluminum piston, for what we now call an AAC assembly today.
- 3.) We now have an engine that often squawks, and makes other "funny" noises, when it is turned over. What is the best way to run these engines ? Because of the tight fit, it's not hard to see, that the moving parts that carry the loads, will have extra stresses put on them, until the engine reaches it's maximum running temperature. Because of this, the most critical time is the **FIRST TWO MINUTES** that are put on the engine. Therefore:
 - a.) The first run on this type of engine should bring it to its maximum RPM's just as soon as possible, or **WIDE OPEN** ! The idea is to get the engine to its maximum temperature quickly, to relieve the extra loads imposed by the tight pinch !
 - b.) After the first two minutes of running, you can set the engine however you choose, and just **GO FLY** !
 - c.) You will see such an engine just get better and better, with more running.
- 4.) With an engine that is a true ABC/AAC type, I have found that a fuel containing a total of 22 % lube, mixed 11%/11% castor/ synthetic, is ideal. This is particularly true, when using a muffler, or piped set up. The castor carries the heavy loads, and the synthetic acts as a detergent, reducing the varnishing, that occurs with all castor fuels. I have never subscribed to the special "hemi-head", and "stuffer" back plate, offered for the Fox .35. While working for Fox, I ran tests with Duke, on an engine that had a piston and cylinder mounted in the back plate. Duke would start the engine, and I would vary the crank case volume, by pushing the piston in, and out, while Duke recorded the results. Duke knew **EXACTLY**, where his engine ran the best ! This engine now resides on the top shelf of the Fox display, in the **AMA Museum**, in Muncie.



"It's the latest innovation in office safety. When your computer crashes, an air bag is activated so you won't bang your head in frustration."



Rubber band-powered plane just example of Stuff That Guys Do.

By Dave Barry (1997)

If you are a regular reader of this column, you know that I make it my business to report on Stuff That Guys Do. A good example is the sport of snowplow hockey, in which guys driving trucks use their snowplow blades to knock a bowling ball past trucks driven by opposing guys. This is not to be confused with car bowling, in which guys in low-flying airplanes try to drop bowling balls onto junked cars. I've also reported on guys going off a ski jump in a canoe, and on guys trying to build a huge modernized version of a catapult-like medieval war weapon and then using it to hurl a Buick 200 yards.

These are guy activities. These are activities that, when you describe them to a group containing both males and females, provoke two very different reactions: Male reaction: "Cool!" Female reaction: "Why?" The answer, of course, is: Because guys like to do stuff. This explains both the space Shuttle and mailbox vandalism.

Today I want to report on another inspiring example of guys doing stuff. There is a guy in Van Nuys, (rhymes with "guys") Calif., who is planning, one day soon, to roll down an airport runway and become the first human in recorded history to take off in an airplane that is powered by a rubber band. I am not making this up. I have met this guy, a 44-year-old stunt pilot whose name happens to be George Heaven. I have also seen his plane, which he designed, and which is called the Rubber Bandit.

Do you remember the little rubber-band planes that you used to assemble from pieces of balsa? This plane looks a lot like those, except that it's 33 feet long, with a wingspan of 71 feet and an 18-foot-long propeller. The body is made from high-tech, super-lightweight carbon fiber, so it weighs only 220 pounds without the rubber band, which weighs 90 pounds. This is not your ordinary rubber band, such as you would steal from the supply cabinet at your office. This is made from a continuous strand of rubber that is a quarter-inch wide and 3 1/2 miles long; if you stretched it out, it would extend for 24 miles, which means that - to put this in scientific terms - if you shot it at somebody, it would sting like a mother. The rubber band has been folded back over itself 400 times, so now it forms a fat, 25-foot-long python-like rubber snake on the hangar floor at the Van Nuys Airport. When the big day comes, a winch will wind the rubber band 600 to 800 times, and everybody involved will be very, very careful.

You have to watch your step when dealing with your large-caliber rubber bands. I know this from personal experience because one time a friend of mine named Bill Rose, who is a professional editor at The Miami Herald and who likes to shoot rubber bands at people, took time out from his busy journalism schedule to construct what he called the Nuclear Rubber Band, which was 300 rubber bands attached together end-to-end.

One morning in The Miami Herald newsroom, I helped Bill test-fire the Nuclear Rubber Band. I hooked one end over my thumb, and Bill stretched the other end back, back, back, maybe 75 feet. Then he let go. It was an amazing sight to see this whizzing, blurred blob come hurtling through the air, passing me at a high rate of speed and then shooting WAAAA across the room, where it scored a direct bull's-eye hit smack dab on a fairly personal region of a professional reporter named Jane. Jane, if you're reading this, let me just say, by way of sincere personal apology, that it was Bill's fault. The thing is, Bill's rubber band was nothing compared with the one that will power George Heaven's Rubber Bandit. If that one were to snap when fully wound, in the words of Rubber Bandit crew chief Tom Beardsley, "it has the potential to kill someone."



Then there is the whole question of what will happen if the Rubber Bandit - with Heaven sitting on a tiny seat hanging below the fuselage, between the wheels - actually takes off. I keep thinking about all the balsa model planes I had when I was a boy. I'd wind the propeller until my finger was sore, then I'd set the plane down on the street, let the prop go and watch as the plane surged forward, became airborne, and then - guided by some unerring homing instinct that balsa apparently possesses - crashed into the nearest available object and broke into small pieces. I discussed this with Heaven, who nodded the nod of a man who has heard it all many times. He told me he was not worried at all. "You're out of your mind," I said. "I know it," he said.

So there you have it: A Guy On A Mission. Heaven (who looks and sounds a little like the late Robert Mitchum, although he denies this) hopes to make his historic flight around the end of August. He's trying to raise money so that he and his crew can finish the Rubber Bandit. Naturally you are wondering if he has approached the Trojan condom company about a sponsorship; the answer is yes, he did, and - incredibly - Trojan turned him down.

But he and his volunteers have been working on this project for two years, and I don't think they're going to quit. So keep an eye out for news on the Rubber Bandit. If you live near Van Nuys, you should also keep an ear out, and if you hear a really loud twanging sound, duck.