



Piston'n'Prop.

Newsletter

Marlborough Associated Modellers Society Inc.
Brayshaw Park, 8 Arthur Baker Place, Blenheim 7201

President: Philip Gibbison**
Ph: 5780016

Secretary: Nigel Wood*
Ph: 5787086

Treasurer: Tom Hood
Ph: 5784066

Vice President: Brent Coburn

Ph: 5738511

Librarian:

Newsletter Editor: Carl McMillan***

Ph: 5780716

Email: carlmcmillan@ihug.co.nz

Committee Members:

Mark Taylor

Ph: 5789885

Allan Fairweather

Ph: 5786265

Carl McMillan***

Ph: 5780716

Ron Perkinson

Ph: 5789699

* Primary contact person for Engineering section

** Primary contact person Boating section

*** Primary contact person Flying section

MAMS Website: www.mams.org.nz

If Clubs or members currently receiving this Newsletter by mail could receive it by email please let me know carlmcmillan@ihug.co.nz

June 2015

Committee Meeting notes for April/May

Our Annual General Meeting was held on Tuesday evening 14th April at 7.30pm in the Clubrooms. It was encouraging to see a good good attendance of members at this meeting and the officers and committee were re-elected. These are as follows:

Patron - the Office of the Mayor of Blenheim

President - Philip Gibbison

Vice President - Brent Coburn

Secretary - Nigel Wood

Treasurer - Tom Hood

Committee - Alan Fairweather

Carl McMillan

Ron Perkinson

Mark Taylor

Brayshaw Park Reps - Tom Hood & Nigel Wood

MEANZ Rep - Brent Coburn

Newsletter Editor / Website - Carl McMillan

Honorary Solicitor - P. Radich

Honorary Auditor - Don Manning

Annual Subscriptions were held at the same level as the previous year. These are - ordinary Senior member \$55.00, Junior & Country members \$35.00, Family membership \$60.00. These subscriptions are now payable to the Treasurer.

We welcome Alan McGreevy and Roy Crosswell to membership of the Flying Section and Kerry Campbell to the Boating Section

We trust each member will have a successful and enjoyable year in their modelling and we look forward to seeing the results at the Model of the Year evening in December.

Nigel Wood

Secretary

Steam Section Meeting notes for April 21st.

9 members attended the meeting and we had a pleasant evening discussing various topics and individual projects. Now the total fire ban has been lifted (downgraded to a restricted fire ban) we have been able to fire up the steam locos again and these appear to be working well after the three month rest. It was good to see Mark's new Phantom / Baldwin look-a-like loco on the 7 1/4" track, and after a successful steam accumulation test and a few teething problems, Mark was able to give the loco a good workout for a large part of the afternoon. It looks very good and Mark was finding that firing the boiler will be a learning experience to get the best results.

On the table Mark had a substantial 8" steel set square he had made from 8mm stainless steel to aid in setting up his milling machine where he is machining a dovetail cutter. He had acquired a set of castings for making a milling machine and it will be interesting to see progress on these in coming months. Mark is also

reassembling the A3 Flying Scotsman after an extensive overhaul. He found that a superheater tube joint had failed and this would go a fair way in accounting for the steaming problems they experienced. He is altering some of the pipework and lubricator tubes which will make the smokebox tidier and a lot easier to clean.



Ken McIntyre had completed a very nice 1850 style clinker built pinnacle in which he had installed his completed Stirling cycle Ringbom hot air engine. This performs very nicely - not fast but the motor has enough torque to drive it. He had to modify the burner tube to get even heating as the engine has been mounted on an angle in the hull. His other larger hot air engine is progressing.



John Neal advised that the Vintage Farm Machinery club will be holding a celebration in October over Anniversary weekend and our Society was invited to operate our locos if we wished. John had recently flown a Cessna 206 from Australia to NZ and gave us a brief talk about the journey which was completed in stages, leaving from Coffs Harbour and making landfall at Kerikeri to clear customs and then on to Omaka. The longest leg of the trip was 4 1/2 hours but the aircraft was fitted with a 44 gal drum plumbed in to the fuel system which gave endurance of 8 hours if needed. The journey went well although there was some concern about cyclone Pam but this didn't affect the trip. The aircraft belongs to

Missionary Aviation Fellowship and will be based in Blenheim where John will use it primarily for assessing candidates to fly as MAF pilots.

Tom Hood is in the process of making a new bottom fitting for the sight glass on Maid of Kent to try and fix the water indication problems.

Ron Perkinson has finished the stand for his new loco.

Brent Coburn is working on his 5" DF loco which is stripped at present and having the engine adapted to run an alternator which will drive DC traction motors. This is to have better control of the loco rather than through the mechanical gear box and drive train.

Nigel Wood has had his Sweet Pea running on a rolling road using compressed air and is working through the defects / leaks revealed in the process.

There was discussion about the raised track extension project and Mark had started getting estimates of materials for the different construction methods. To save on costs as well as considerations of manpower age and availability, it had been suggested that a number of the existing concrete beams from the steaming bays and track by the signal box could be used as part of the extension. These would be replaced by lighter structure to support the steaming bay tracks. However, Mark had estimated that for making new beams to similar dimensions we would get 10 beams (30 metres) per cube metre of concrete @ approx \$200 / mtr cub. 200 metres of beam (66 beams) would cost approx \$1400. Rebar could cost about \$20 per beam. He suggested it would be cost effective to fabricate 5 steel moulds and have beams poured by Marlborough Concrete and we would pay for labour and materials. We could cut and assemble the rebar in the roundhouse ready for installing in the moulds prior to pouring concrete as required. The alternate method of construction suggested was to use steel for the beams but this could prove more expensive at \$200 per 6 metres. The cost of piles has not been estimated yet but would be the same whatever method of construction was used.

Steam Section Meeting notes for 19th May

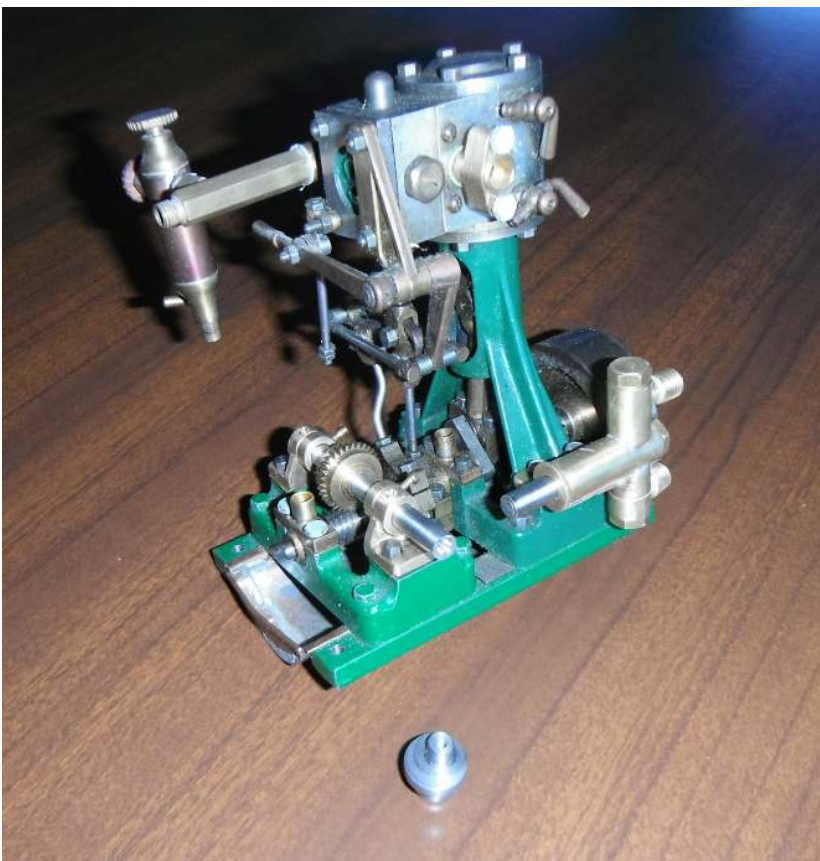
6 Members attended and many topics were discussed including comparisons between manufacture and purchase of wheel and cylinder castings for the next loco dream projects. Each method has advantages and disadvantages.

Ken McIntyre commented that after 18 years of operating his 7 1/4" Southern Belle he was finding he is not able to manage the handling of it now, also finding this with his 5" NZR 'J' which is too heavy. He had brought along his completed Stirling

hot air engine and it was fascinating to watch this in operation as it was heated by a light bulb. We discussed the topic of adhesives used in different situations and their relative merits.

Peter Holdaway showed a photo of the 7 1/4" King crosshead and slide bars which are of a distinctive shape. He had purchased new bars in cast iron which needed machining. He has been occupied in restoring/refurbishing the model tug 'Cerva' made by his father many years ago and he showed the glazed brass portholes he had purchased from UK to fit the hull. Peter asked ideas on how to make the square section coil springs for the leading bogey of the King. These are the same as rectangular section die springs and Mark advised he had a catalogue which Peter could refer to. The combination of coil and leaf springs in the bogey suspension was interesting but apparently gave a very smooth ride in full size.

Mark Taylor showed us the safety chain coupling hooks for his tender that he had cut out by water jet from 1/2" plate and which he started machining to shape. He has been working on re-assembling the A3 Flying Scotsman and initial steam tests were promising and minor leaks fixed but then he experienced a repetition of original problem of water jetting up the chimney. Contamination in the boiler causing priming is the likely cause and the boiler will need flushing. He suspected that silicon used to seal joints in the tender could be the culprit. Mark is working on using air instead of hydraulics for the braking system.



Nigel has been working on an unfinished project by making a water pump for a Stuart 10 vertical engine to be installed in a launch. The conrod and eccentric are still to be fitted.

Nigel

Boating Report

Not a lot to say this time, I haven't been at the pond much over the last two months. Those that have been have had some good days boating.

It's certainly got cooler lately and probably a good time to stay indoors and build, repair or maintain your boats. I know there are a few boats on the go so we hope to see them soon.

We welcome new members to the club and trust you will enjoy your time with us. Our monthly meetings have been well attended and ideas are being shared. We now have a sail pattern for the Starlet yachts and we will hopefully make some sails at our next section meeting. The Starlet hulls are still under construction due to moulding problems. From what I've been told most have been done with two or three to go.

I got all the new gear from Hobby King we wanted, (all except the stuff I wanted as I forgot to put it on the order), so I will have that at the next Section meeting, Thurs 4th May. If you need it before then or after let me know and we can organise a time.

The pond drain has been flushed out and problem areas identified. There is a tree root that may cause problems if it's not removed. It's about 8 meters in from the end of the pipe so it's not easy to get to. Any ideas would be appreciated.

We are still looking at extending the existing boat shed, if anyone knows of a 10 square meter heavy duty shed going cheap, keep us in mind.

Reminder that subs are now due. You can either pay online or to a committee member. If you pay online please ensure you put your details with it.

Philip.

Flying Report

The weather has been really good for flying for the last month. I have been clocking up the flights with my Edge 540, and enjoying that, and flew the Giant Big Stik at the aerotow meeting up the Waihopai valley on the 16th May (see Allan's report for more on that). It was good to see Allan McGreevy, a new MAMS member, out at the aerotow with his own designed scratch built Slingsby Swallow Glider. He was also at the BMAC Queens Birthday fly-in with a quarter scale Fokker DR1 triplane for sale, it looked like he got a buyer for that.

The BMAC Fly-in was very good, Robert, Linton, and I flew there and I saw several other MAMS members there. Saturday was cool and overcast but only a light breeze and nice flying conditions. A huge variety of aircraft were present on display and flying, with flyers from Christchurch and Nelson as well as locals. Linton had a bit of a bad run and damaged two of his planes. I saw Ron there and he was telling me that the week day flyers have been getting out and enjoying the calmer weather lately, and that Ross had replaced the bearings in an old engine for him which resulted in a huge increase in power.

Robert and I flew there on Sunday morning as well in nice sunny and calm

conditions, beautiful. A very nice event, well done BMAC, as usual.

There was an interesting article in the April Model Fliers World magazine regarding LiPo battery fires, certainly worth a read. See it on the MFNZ Website or at the Library (MFNZ members get it delivered). The gist of it is that even using reliable chargers and well proven batteries with no sign of deterioration you can still have LiPo fires, and charging in a closed container in the workshop is not a good idea. Outdoor charging clear of anything combustible seems to be the safest option.

In the last few weeks there have been a couple of issues with servo extension leads. At the Aerotow when I set up the Giant Big Stik one aileron servo did not work. I have a short extension connected to the receiver to plug the aileron lead into, when I removed this and plugged the aileron lead directly into the receiver it worked fine. A week later Karl Griggs had trouble with flying his Edge 540 with the ailerons twitching, he landed safely and he found that when he moved the extension lead to the aileron the servo waggled randomly. Little faults can have dramatic consequences, not all faults are apparent but it pays to be vigilant and check out anything out of the ordinary.

Also along the lines of learning from others mistakes, I had a receiver Battery come loose inside the Edge 540. No harm done but it was an eye opener when I took the top hatch off and saw it. The battery had been secured on a foam pad with a velcro strap over top to restrain it just aft of the fuel tank, it ended up almost level with the trailing edge of the wing with the lead still connected and wrapped around the elevator servo lead. Now it gets secured with velcro on the battery and pad then a velcro strip over top. I run two receivers and two batteries in the Edge so even if it had pulled the plug it might have been possible to land it anyway.

Just a reminder that MAMS 2015/16 Subs are due if you have not already paid. Also MFNZ Subs are due for MFNZ members. If anyone wishes to join MFNZ let me know and I will get you the application forms. If any flyers are not intending to renew their Subs this year and resign from MAMS please let me know, and can you return the airfield gate key if you have one.

Just went through Roselands again today, they seem to have more modeling stuff than ever.

Have fun, fly safely.

Carl M.

Allan's Report for April and May

Aero Tow May 16th.

Pete Deacon has got us Aero Towing again on a monthly basis. He has organised access to the magnificent Waihopai valley site for club aero tow use on agreed days. It is a real picture now the green grass is back. The day was perfect with a buoyant Southerly breeze. The Notam for 1500 feet was really not high enough at

times for my SHK in the conditions. The lady in my Tx kept calling out higher and higher altitudes at a rapid rate at times.



SHK behind Carl's reliable and powerful 50cc Ugly Stick. The Waihopai valley far below is looking great now it has greened up.

Sam Laidlaw and Phil Jordon from Nelson came over for the day with a bunch of gliders and a heap of enthusiasm. Carl Mc and Pete D kept us airborne for the day doing sterling duty on the tugs.



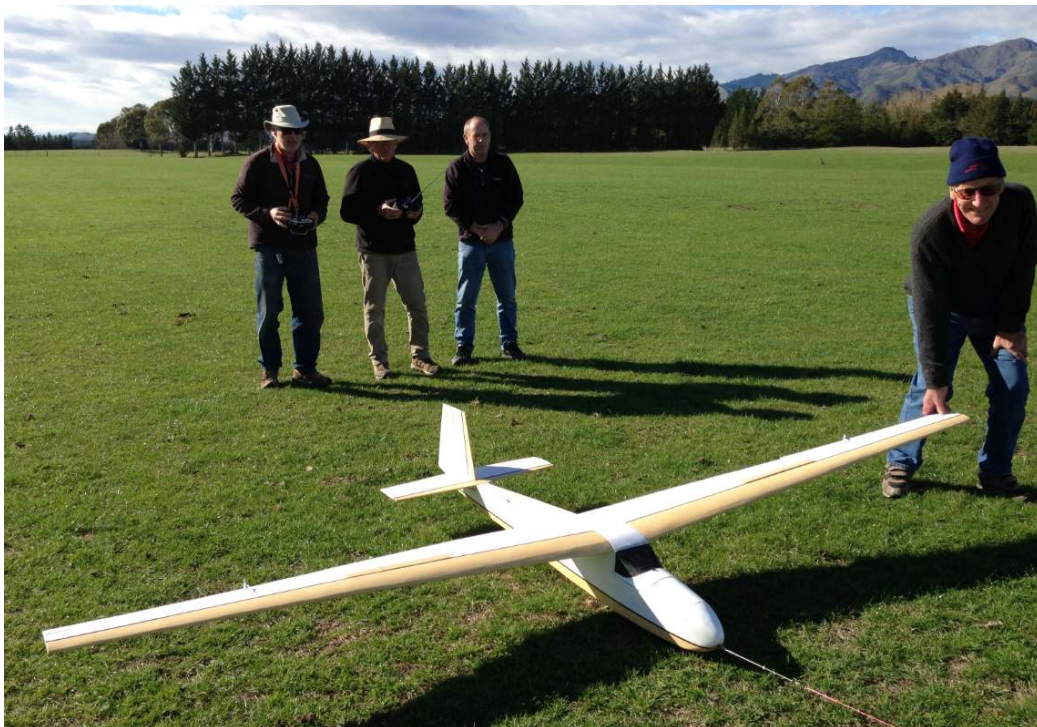
Pete's 40cc twin powered Morrisey Bravo. A fine tug for up 4.5m models. Looks good too!

I really had a ball with both my SHK and the Alchemist. The Alchemist was my first home made composite thermal soarer. It's no longer competitive but is perfect for aero tow off Pete's dolly. At 5 pounds, anything can tow it and its performance means long flights are easy.



*The Nelson guys showed again big models are not necessary to have fun Aero Towing
Foam ASW 17? And ASW 28 around 2 meters. SHK (5M) and Alchemist (3.35M).*

It was great to see new arrival Alan McGreevy getting lots of help to get his vintage glider airborne with Sam on the sticks. It needs some tuning but went well. He went home a happy man.



*Alan steadies the tip on his first Maiden flight. Sam Laidlaw on the sticks, Pete flying the tug and
Phil Jordon looking on.*



And away it goes behind the Morrisey.

It is great to think we can do it all again next month!

I miss the Slope

Talking of gliding, I'm missing my regular summer slope soaring evenings. They really are good fun and provide a heap of air time to keep reflexes sharp.



Phillip, Carl and Rex up on meadow Bank, last week of daylight saving.

LMA Certification for Peter's new IMAC model.

One of my duties these days is as a large model inspector for the Large Model Association. If your model is over 15Kg and/or has large motor over 75cc then you

need it certified if it is to fly legally and if you want your insurance to be valid; LMA and its inspection system can do that for you.

Pete Deacon has just bought a really nice IMAC completion Extra 330L with a DA 100 in the front. It is a truly magnificent model built professionally for IMAC competition.

It was preowned so Pete needed to get it recertified in his care. We ran through a 6 flight test schedule on Sat 23 May. Peter and the model passed with flying colours and the paperwork is done so it can fly at the BMAC fly in at the end of May. The Extra is a real thoroughbred; you can see it in the way it groves and does exactly what you tell it. The Power and noise are awesome too.

Carl and Karl have been flying smaller Edge 540s lately and they go equally well.



Peter Deacon and his new IMAC model. It's a big beast!

And we flew some NDC contests too.

Thermal Sailplane 12 April

We had interesting conditions at Chaytor's for our two NDC glider events with the wind going around 3 different directions before settling to a strong blustery Nor'west for Class D.

We chased it around with winch direction changes and managed to get both events in although Allan Baker and Rex Ashwell were sensible and gave it away in

the Nor' west. Peter Deacon and I persevered but there were some short flights and hairy landings in the turbulence. Peter did an outstanding job with some great flying in the conditions.

For Class B earlier in the day we had lovely gentle lift conditions and were joined by nature's experts, the Hawks, from the nearby pine plantation in some outstanding convergence lift.

No one damaged a model or broke a line and we all went home happy which is what it is all about.

Class B Event 95																					
CD	Allan Knox																				
Date	19-Apr-15																				
Position	Competitor	Total	MFNZ	10 Min Flt Prelim				10 Min Flt Prelim				10 Min Flt Prelim				Fly off	10 Min Flt First F				
				Flight Time		Landing	Points	Flight Time		Landing	Points	Flight Time		Landing	Points		Competitors	Flight Time		Landing	Points
				mins	secs		mins	secs		mins	secs		mins	secs				mins	secs		
1	Allan Knox	551	7621	8	49	85	120	10	15	90	120	10	26	96	120	Allan Knox	11	25	91	191	
2	Peter Deacon	550	10441	10	20	96	120	10	5	94	120	10	2	94	120	Peter Deacon	10	15	90	190	
3	Rex Ashwell	350	10749	3	55	75	110	4	20	92	120	3	33	97	120					0	
4	Allan Baker	265	4943	5	33	80	120	6	23	75	120	2	52	0	25					0	

Formula 500 (Class D) Event 94																				
CD	Allan Knox																			
Date	20-Apr-15																			
Position	Competitor	Total	MFNZ	2 Min Flt				8 Min Flt				2 Min Flt				8 Min Flt				
				Num	Flight Time		Landing	Points	Flt Time		Landing	Points	Flight Time		Landing	Points	Flt Time		Landing	Points
					mins	secs		mins	secs		mins	secs		mins	secs		mins	secs		
1	Peter Deacon	1441		2	0	50	450	7	59	20	499	1	59	92	492	4	28	20	288	
2	Allan Knox	1346		1	55	97	477	6	9	20	389	1	58	85	480	5	24	20	344	



Peter Deacon with Supra, Rex Ashwell with Prima and Allan Baker with his Muller 4CAM. My Pike Perfect is in foreground.

Vintage Electric Duration.

It was a rough cold afternoon at Tua Marina on Sunday April 12 so we cancelled some electric sailplane flying. I decided to get Vintage Electric Duration done though as I'm the only one who flies it here and Pete Deacon was available to time.

The poor old Scram could really only point into wind but still got close to target times. Darned if I could land it though and even landed it full stalled onto the face of the stop-bank.

Results: Vintage Electric Duration.

Event 70 Vintage Electric Duration.
Allan Knox #7621
Model Scram form 1938, Age Bonus
12

Flt 1, 4 mins 34 secs, landing 0, Age
12 = 285pts
Flt 2, 6 mins 3 secs, landing 20, Age
12 = 320pts (Max)
Flt 3, 4 mins 39 secs, landing 0, Age
12 = 291pts

TOTAL = 896 points.

*Scram now converted to electric for
Duration events*



Electric Sailplane

We had amazing weather at the end of April. We flew Saturday 25th under some powerful cloud cover at Tua Marina. The lift was outstanding much of the time but also had some serious downs. I found one of these on my last ALES 200 flight to be on the ground in under 5 minutes. Pete Deacon didn't and posted 4 great flights. Speaking of Pete, he went on to fly his lovely Graphite electric after the event and to experiment with his vario altimeter. The model again climbed out in strong lift and was at 1200 feet when it disappeared upwards into cloud. A matter of seconds later it was at 1500 feet and not long after that it reported 3000 feet before contact was lost. The vertical flow in the cloud core must have been huge. Pete set the crow brakes in the hope it would eventually reappear and make a safe landing some place. A great shame, the Graphite was a beautiful model that he bought brand new 3 years ago. Still, you never know, it may be found and returned.

It was good to see continued support for Electric Sailplane in both clubs. There is a special class for Radians now and Peter Graham flew this and did well with a good score. Radians are seriously good soarers in light conditions. They make excellent trainers too. Roselands have them at around \$200 complete with motor controller and servos.

Results: ALES200 and ALES Class P Radian

Rex Ashwell, Flt 1 10 min 2 sec Landing 0 598 Flt 2 9 min 25 sec landing 0 565 Flt 3 4 min 14 sec landing 0 254 Flt 4 7 min 52 sec Landing 80 592 TOTAL POINTS = 1819	Allan Knox, Flt 1 10 min 06 sec Landing 50 644 Flt 2 10 min 03 sec landing 30 627 Flt 3 10 min 06 sec landing 50 644 Flt 4 4 min 43 sec Landing 40 323 TOTAL POINTS = 2236
Peter Deacon, Flt 1 9 min 56 sec Landing 20 616 Flt 2 9 min 51 sec landing 0 591 Flt 3 9 min 58 sec landing 20 618 Flt 4 10 min 01 sec Landing 50 649 TOTAL POINTS = 2474	ALES Radian Class P Peter Graham MFNZ Num Unknown Flt 1 6 min 51 sec Landing 50 461 Flt 2 6 min 35 sec landing 50 445 Flt 3 5 min 30 sec landing 50 380 TOTAL POINTS = 1286

Peter Deacon with the lost Graphite.



Vintage IC Duration

I went on to fly my Cumulus in Vintage IC Duration. Again the air was great and I had to spin it down on a couple of occasions. I couldn't land it though. A pity as it would have been a great day to do a long flyoff flight.

Results: Vintage IC Duration

Allan Knox, MFNZ Num 7621				
Model, Shereshaw Cumulus 1937 Age bonus = 13				
Flight 1	4 min 31 secs	Landing 0	Age 13	= 253 pts
Flight 2	4 min 45 sec	Landing 0	Age 13	= 253 pts
Flight 3	5 min 25 secs	Landing 20		= 260 pts (Max)
TOTAL POINTS = 766 points				

Vintage Texaco A and Texaco Open

Al Baker and I finished the month out at Chaytors flying Texaco. It was cold but a lovely day. We flew Tex A first. On his second flight, Al had the misfortune of

losing his Zipper when it climbed up out of sight. He shut the throttle and we both searched the sky but it was gone. Afterwards we both realised he should have applied full rudder and spiralled it down 'til it reappeared. Its great being wise after the event. We suspect it is between Chaytor's and the Sea but who knows. Let Al know if you hear anything about the Zipper being found please. The Zipper was pretty special. It was built by the Old Master, John Ensoll, back about 2005. I remember its first flights. With a stonking OS40 in the front it was a real handful so John sold it. Al Baker converted it into a very successful Texaco A model with an OS20FS in the front. Since then it has gone walk about twice but we found and retrieved it both times. Not this time though. RIP Zipper.



Launching the Zipper way back in Aug 2005. It was fresh off John Ensoll's building board back then. John on the sticks.

Texaco A Results

Allan Knox, MFNZ Num 7621, Model Lancer, 1938, Age bonus 12.	Allan Baker, MZMZ Num 4943, Goldberg Zipper, 1940, Age bonus 10
Flt 1, 10 mins 45 secs, landing 20= 620 (Max)	Flight 1, 11 mins 36 secs, landing 20 = 620 (Max)
Flt 2, 11 mins 18 secs, landing 20= 620 (Max)	Flight 2, 10 mins, landing 0, Age 10 = 610
Flt 3, 11 mins 5 secs, landing 20= 620 (Max)	Flight 3 DNF
Flyoff, 18 mins 36 secs, landing 20, Age 12 = 1,136	TOTAL = 1230
TOTAL = 2,996	

Texaco Open Results

Allan Knox, MFNZ Num, 7621, Model Lancer, 1938, Age bonus 12.				
Flight 1,	3 mins 37 secs,	landing 20,	Age 12	= 249 (Max)
Flight 2,	13 mins 30 secs,	landing 20,	Age 12	= 842
TOTAL = 1,091				

For Sale:

7 1/4" G Phantom Southern Belle. New Boiler Cert. Locomotive in excellent running order. 3 NZR style carriages, 7 seaters. Storage/work stands for Eng & Tender. Deteriorating health only reason for sale.
Further details:- Ken McIntyre 03 5783346, 15 Solway Drive, Witherlea, Blenheim.

RC model Battleship. HMS Dreadnought. 65" long. 4 electric motors, two speed controllers 12 volt. Old but in good running order. \$50.
Flyzone Albatross Dva RTF indoor model WW1 biplane, Mode 2. \$20
Contact Carl McMillan 03 5780716 or email carlmcmillan@ihug.co.nz

NOTE - NZ Model Flier's World is now available for issue at both Blenheim and Picton libraries.

MAMS Membership and Subscription Structure

Ordinary Member (all Sections)	\$55.00
Family membership	\$60.00
Junior Member	\$35.00
Country Member (+40km from Blenheim)	\$35.00
Life Member	Nil.

Members may belong to any or all of the following Sections, for one Ordinary Membership fee:

Engineering - Boating - Flying.

*Flying Section members may join **MFNZ** (Recommended) for an **additional annual fee of: Senior \$70, Junior \$20, and Family \$75, paid to MAMS.***

*NOTE: MFNZ Fees fall due on the 1st April each year and must be paid by the club before **1st July**, (if you could please pay to MAMS by the end of May to give me time to get the money to MFNZ in June it would be helpful). **NEW** members joining MFNZ after November 1st only have to pay half fees, however existing members renewing late, will still need to pay for a full year.*

For on-line payments members just have to use the club account number, give their name and purpose of payment, i.e. **MAMS subs**, and/or **MFNZ subs**.

SBS Bank Account number is 031355 0512739 00

Subscription Policy: Financial membership shall cease if the required subscription fee has not been paid by the **31st of July**. **Non-financial members are not covered by our insurance policy and therefore cannot operate their models at our designated sites**, and they do not receive a Newsletter.

If members intend to resign from MAMS, or not renew their subscription, could they please let the treasurer or a committee member know.

(**New** members who have joined and paid their Subs from December 2014 onwards are still considered paid up club members for 2015/2016 year)

Those who have paid their subscription since the last AGM may collect their membership card and receipt from a folder on the notice board in the clubroom. Anyone not wishing to renew their membership please let the treasurer, or a committee member, know. If any flying section members are not renewing their membership could they also return their key to the flying field.

Publication dates: 1st week of February, April, June, **August**, October, and December.

Please get any items (Notices, articles, or for sale items etc) for the **August** issue to the editor a few days before the end of **July**.