



# *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](mailto:carlmcmillan@ihug.co.nz)

**Committee Members:**

Mark Taylor

Ph: 5789885

Allan Fairweather

Ph: 5786265

Carl McMillan\*\*\*

Ph: 5780716

Ron Perkinson

Ph: 5789699

\* Primary contact people for Engineering section

\*\* Primary contact person Boating section

\*\*\* Primary contact person Flying section

**MAMS Website:** [www.mams.org.nz](http://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](mailto:carlmcmillan@ihug.co.nz)**

---

**August 2014**

---

## **Committee Meeting notes for June/July**

Things have slowed down somewhat over the winter months with not as much grounds maintenance required but it is better for indoor leisure activities such as boat and plane building. Winds have been a bit light for sailing on the boating pond but train running and flying at Tuamarina have been going well.

We welcome new members Colin Waite (boating) and Ben Solomon (flying). Our condolences go to the Aimers family on the death of Bryan recently.

The pin oaks and silver birch trees around the pond and raised track have been causing concern and ongoing problems with branches falling off, leaves and needles becoming a fire hazard as well as fouling the pond, and tree roots causing damage. The committee is in the process of obtaining quotes for removal of the offending trees and replacement with trees that are more suitable to the area.

The committee is assessing the requirements for registration under the amusement Devices Regulations and identifying areas where action is needed.

A new road sign has been purchased to advertise when train running is taking place and we hope this will bring more people into the park. Other signage is being organised to replace deteriorated warning signs or to advise people of what is required when riding on trains.

2015 Heritage Day and weekend activities - Philip advised that there could be an opportunity for members and our visitors to visit Omaka and look around the area where the Gnome rotary engines are being manufactured. We have been advised that the diesel generators at the old Springlands sub-station will probably be operating during the weekend as well. Invitations have been sent to Nelson and Christchurch clubs to join with us for the weekend but any other clubs are welcome to join us if they are up this way. Activities will be low key but the weekend is an opportunity to operate locomotives and have a time of fellowship together.

Nigel Wood  
Secretary

### **Steam Section Meeting 17th June 2014.**

8 members attended this meeting.



Ken McIntyre had made a 60oz injector for his Australian friend's Phantom and brought it along for inspection. It would be interesting to hear how it performs. He had a mishap with the 1/4 scale rotary aircraft engine when the prop boss broke while he was turning it. The wall thickness of the boss is apparently too thin which will be amended on the replacement part.



He still cant get it firing properly even after re-doing the timing and suspects the valve cams may be incorrect in that the valves are not closing completely. He is in process of fabricating new cams with re-machined profiles and showed us the tool he made for broaching keyways in the new cams.

Bill Ward has been experimenting with gear cutting in his mill - something he has wanted to try for a long time - and had questions he would like answered. He had



a modular cutter and queried how to determine the depth of cut. This is usually shown on the cutter but was hard to decipher. In discussion which followed various points were noted such as selecting the correct cutter, the outside diameter of the gear is critical and the depth of cut is important.

John Neal commented on the restoration of the ex-Marlborough District Council steam road roller being undertaken by Vintage Farm Machinery. John is involved in the restoration of a Hanomag tractor which has been a learning experience as there is no handbook and there were very few machines manufactured. He is machining the steam ports on his Tich cylinders using his Senior milling machine which is also another learning experience as there are a lot of attachments that came with the mill.

Brent Coburn has been working on the regulator controls for his 5" Britannia which were operated by bowden cable passing through the tender.



The set-up was erratic and very sensitive to curves in the track - curves one way would close the throttle and vice versa for curves the other way, so he developed a control mechanism with left-hand and right-hand threaded internal parts which would extend and retract to give the required throttle movement with minimal rotation of a control wheel on the back of the

tender. The rotating shaft from the hand wheel connects to the control mechanism in the cab via a universal joint and sliding square section tube. (subsequent to the meeting the arrangement was tested and performed very well). He said the mechanism took a bit of working out but is ingenious and a simple way of getting the desired result.

Tom Hood reported he has been working on the tender of his 5" gauge 'Belton Manor' locomotive because the axle driven water pump didn't appear to be working. Several other aspects of the tender were not very satisfactory such as suspension springs not being effective and the pipe-work was a bit of a mess.

Mark Taylor has decided to put compressed air braking on his 7 1/4" Phantom tender / ride-on trolley and is working on the valve blocks at present. He mentioned use of pressure sensitive control valves. He has drawings for a steam pump but plans to use reed valves for using the pump as an air compressor.

There was general discussion covering a need for more trolley and loco storage. Suggestions include lean-to walls & roof alongside the signal box building covering the raised track for passenger trolley storage and extending some of the existing storage tracks inside the lower part of the signal box through to where tools & lawn mowers were stored. Members were asked to think about the matter and bring suggestions to future meetings.

The session closed at 9.20 pm.

---ooOOOoo---

## Steam Section Meeting 15th July 2014.

7 members attended on a cold winter's evening but a good time of fellowship and discussion was enjoyed.

Peter Holdaway apologised for not being present but had sent along copies of lathe details and prices as well as a Scott Machinery catalogue for perusal. He had been receiving a number of requests about selling/purchasing lathes for home use and wondered if club members were interested. He also included the details of who won the latest UK IMLEC trials for information.

This led on to general discussion about lathes - capabilities, feeds, speeds, suitability, advantages of old v new and backup service.



Murray Brown has been busy on his clock project and showed progress on the fusee shaft and gear wheel with spring loaded ratchet which maintains power to the gear train. He cut the gear teeth with a cycloidal cutter and the ratchet teeth with a radial saw blade. He had to fabricate a back gear train to obtain a suitable speed and torque for cutting the large gear wheel. He will be using cord on the fusee rather than chain

and this governed the design of the fusee grooves.

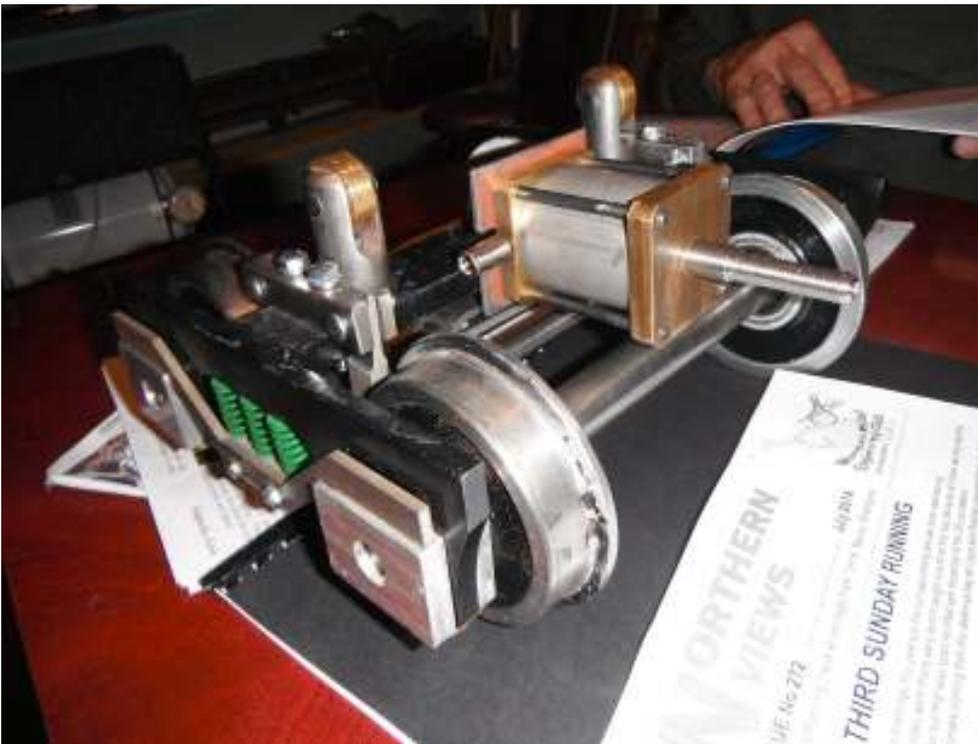
Bill Ward has been involved with pottery but he commented he had been reading an interesting book about chain making.

Tom Hood has been continuing work on the injector plumbing in the tender of his Belton Manor but this has been proving frustrating. A very small part dropped in the works somewhere and is eluding detection. The axle driven pump is too efficient but he has been able to control delivery with the bypass valve. The mechanical lubricator is using too much oil and he is looking at fitting a smaller

diameter plunger in a new cylinder. The long stroke would be hard to alter because of space limitation between the frame.

Ron Perkinson had purchased steel to make crank pins a while ago but this had become mixed with other grades of steel and he wanted to know how to identify the different steels. Discussion on the matter included the type of chip or curl of swarf when turning or the different colour of spark produced when grinding. Probably the easiest would be to purchase more steel.

Ken McIntyre has also had a frustrating time with his rotary gnome engine and the lack of success in getting it working. He brought a book on the Bentley BR2 engine to get some idea of what might be wrong and has remade piston rings to get better compression with some improvement. Valve timing is still biggest headache. The cam numbering and keyway orientation on the plan is different to that on the full size engine but assembly as per the full size engine doesn't appear to work at present, either. Will persevere.



Mark Taylor has been working on a number of projects including his Phantom tender bogey on which he has fitted an air brake cylinder and actuating levers/cam mechanism. The valve block on the converted steam pump has been causing problems and he has out-sourced the production of this. He has been working

on an electronic controller for his 7 1/4" diesel shunter and is gluing his Pawnee back together again. It flies very well but the problem is getting it back on the ground safely.

I have been working on a driving trolley for the raised track and this is a work in progress.

The meeting closed at 9 pm.

Nigel Wood

## **Boating Report**

No report

## **Flying Section report.**

We welcome Ben Solomon to the flying section, he has taught himself to fly and is looking to move up from a trainer to something more lively.

We did a bit of aerotow at our Tuamarina site on 27<sup>th</sup> July (may have been 20<sup>th</sup>) after noon. Several people stayed to watch as we towed Peter's 4 metre ASW 29, and Allan's 5 metre SHK scale gliders for a few flights. I also took Mark's big Pawnee for another test flight, and although it flew well I managed to bounce on landing and it dropped a wing and cart-wheeled, doing a bit of damage to a wing and tail.

The last few Sunday flying sessions I have been at there have only been a few other flyers there, even on some perfect flying days. Good for clocking up the flying hours, but I do miss a bit of the social side of the club, catching up in the gossip and seeing what everyone is up to with there modelling and flying. From what I here Saturday seems to be the popular flying day now.

Ron told me a guy from the council came out to look at the site while he was there, and was pleased with how we are looking after it, well done guys (especially Errol for mowing the paddock).

I went to the Aerotow meeting held up the Waihopai Valley 19<sup>th</sup> & 20<sup>th</sup> July and enjoyed that. Numbers were down on previous meetings and it had a very relaxed friendly atmosphere, we had flyers from Gore, Dunedin, and Fielding as well as locals. Alex Taylor brought his big Pawnee (42% scale) doing the majority of the towing, and 1/3<sup>rd</sup> scale Pawnee, and a large scale glider. This glider had a retractable electric motor power pod of his own design. It uses a folding tractor prop that is folded forward by rubber bands around the spinner and blade roots when the motor stops. When the boom retracts rearward, the prop and motor stay horizontal to sit flat inside the fuselage and at the same time the main battery slides forward in a tray mounted on dowels so that the C of G does not shift, and rubber bands close the doors covering the motor.

I found Jack Coker's model Sperber Junior very interesting (see photo below in Allan report), imagine flying the real thing with only the little side windows on the cockpit. Allan tells me it was designed to fly in cloud on instruments as at the time they figured that was where the strongest lift is.

Wayne from Fielding brought a couple of big scale gliders but had a mishap on takeoff with his 7 metre Ventus when a wing tip caught the ground and spun the model sideways and the release didn't work resulting in a fair bit of damage.

Fortunately he had several flights with his other slightly smaller model ASK18.

Peter Deacon managed to get his wing tip smoke canisters working on the Sunday, unfortunately it was overcast and the smoke did not really stand out but have a look at his onboard video

<https://www.youtube.com/watch?v=FxPqwyddS9s&feature=youtu..be>

If anyone is considering using smoke generators, they do add a bit of a fire risk so caution is required when using them.

My Giant Big Stik flew well on Saturday doing 15 tows. On Sunday after 4 tows I had a bit of an issue, the servo output arm came off the left flap servo (the screw fell out) causing a bit of a handling problem coming in to land, and as I did not realise what was wrong I did not raise the flaps, which caused me to drift over the fence beside the runway. I flew it back to land on the runway but the tow line caught the fence when I was just above the ground. No harm done.

**Lesson learned**, screws threaded in to servos with metal output shafts need to be locked in (Loctite type thread-lock) otherwise they are prone to working loose (not like self tapping screws into servos with Nylon output shafts). When I mentioned what had happened to Allan he said he had had screws come loose on his gliders in the same way, especially with metal servo arms, so it is something for everyone to be aware of. It would be more of a problem with the bigger petrol powered models about these days as they are most likely to have metal geared servos and servo arms, and they vibrate. I was lucky it was only the flap servo that came loose and the Big Stik is flyable with one flap up and one down (it does get you working the sticks though).

Reminder: if you haven't paid your MAMS (or MFNZ) subs for this year they are overdue and you will no longer have any insurance cover while flying.

### **Allan's stuff June July.**

Winter, cold crisp mornings followed by beautiful calm clear flying weather. You have to love it.

### **Aero Tow Invitational**

We have had a couple of Aero Tow days including the Winter Invitational up the Waihopai, July 19 and 20. The turnout was small, what with ferry issues and some guys away at the F3J World Champs. Those that made it had fun though. Lots of great tugs so no shortage of flights for the glider guys. I had a couple hours each day with the SHK which I'm really starting to understand. The highlights were Alex Taylor's scratch built 42% Pawnee and Jack Coker's 5m vintage Sperber Junior. It flew very well too. Went home with minor damage but not before it had shown us its beautiful gull wings in the air. Hmmmm I need to try a big wooden build, perhaps the Junior would be good.



*The Sperber at the top with the classic Minimoa below.*

Jack Coker has modelled both of these. If you like Minimoas then Chris Williams Moa videos are superb. See them at <http://www.rcgroups.com/forums/showthread.php?t=1022480&highlight=Minimoa+video>

Check out my video of the Aero Tow event at <http://www.rcgroups.com/forums/showthread.php?t=1842930&page=9> if you are keen.

**We flew some NDC too in the last couple of months.**

I flew **Vintage Precision** with the Lancer at ARA with Kenny Mc helping on the watch. Nice conditions and a great score that helps me up the AVANZ Vintage leader board. You need a perfect score to match the top guys now though and mine was 2 seconds off. I missed Al Baker for this one. It's always more fun with others competing.

**Caution:** Not all servos go the same way. Prior to flying the Lancer I had swapped out a damaged servo replacing a Hitec HS-55 with a HXT900 on an aileron. Didn't check its movement direction. First flight had ailerons going the up and down together. I flew it back down on rudder/elevator but it was a scary moment. I learnt that old maxim, always check control movement and direction every time you change something including radio programming.

Allan Knox	#7621	Event 123	Vintage RC Precision	
Model Lancer 45	year 1938	Age bonus	12	
Flight one	2 mins 54 secs	landing 20	age 12	= 180 (Max)
Flight two	2 mins 55 secs	landing 20	age 12	= 180 (Max)

Flight three 2 mins 53 secs landing 20 age 12 = 180 (Max)  
 Fly Off Flt 2 mins 58 secs Landing 20 = 178  
**TOTAL SCORE = 718 points**

Next up we flew **ALES 123** with our Electrics. I was flying my new Onyx and managed to tree it and do a lot of damage. All fixed again but disappointing. I had to finish with my trusty Vertex. We all struggled for flight time in the conditions. There was just no lift about. Pete made the best of it with his Graphite for the win. Rex showed that any little electric is fine for this event where you fly to just 400 feet.

Peter Deacon, MFNZ # 10441

Flight 1	5 min 59 secs	Landing zero	359
Flight 2	4 min 21 secs	Landing 50	311
Flight 3	3 min 28 secs	Landing 50	258

TOTAL = 928

Allan Knox, MFNZ # 7621

Flight 1	4 min 59 secs	Landing zero	299
Flight 2	4 min 39 secs	Landing 50	329
Flight 3	4 min 09 secs	Landing 50	299

TOTAL = 927

Rex Ashwell (Not Official)

Flight 1	4 min 34 secs	Landing zero	274
Flight 2	3 min 45 secs	Landing zero	225
Flight 3	3 min 43 secs	Landing 25	248

TOTAL = 747

Finally, right at the end of July we flew two good events at Chaytors. Beautiful weather and good soft lift around the early afternoon but gone by the time we needed it for the last 10 minute flight in **Thermal B**. Both Pete and I maxed the first 3 rounds which is not too hard. That last flight was tough though. The difference between us was launch height. Pete had issues when he tried to steer with aileron on the winch. His Supra hated it and got really out of shape with a low zoom as a result. You really have to use rudder up the winch. My Perfect pinged off for the best launch of the day but it was still only good for 6min 40 in the conditions. I have to say though Pete's Supra is awesome. Lovely and light and super to handle on approach. On the landings he nailed all his spots; a 96 and 3 at 97. That is all within 0.6 meters. Under the old rules they would all have been perfect 100s. I can see I'll have to lift my game.



*A brilliant winter's day at Chaytors, calm and warm.*

### **Event 132 Thermal B flown at Chaytors 27 July**

#### **Allan Knox MFNZ Num 7621 Model Pike Perfect**

Flt1 5 min 6 secs Landing 95 120 pts (Max)

Flt2 5 min 6 secs Landing 94 120 pts (Max)

Flt3 5 min 6 secs Landing 96 120 pts (Max)

Fly Off Flt 6 min 40 secs Landing 91 156 pts

**TOTAL = 516 pts**

#### **Peter Deacon MFNZ Num 10441 Model Supra**

Flt1 5 min 0 secs Landing 97 120 pts (Max)

Flt2 5 min 47 secs Landing 97 120 pts (Max)

Flt3 5 min 6 secs Landing 97 120 pts (Max)

Fly Off Flt 5 min 02 secs Landing 96 146 pts

**TOTAL = 506 pts**

We also flew **X5J**, an event I had a hand in writing the rules for. This one doesn't need an altitude switch so you can fly it with any model. You can run the motor as long as you want and get nice and high for your 10 minute flight. The snag is you have to deduct the motor run time from your flight score so this event rewards the

rocket climbers. You also have to land inside the 10 minute window or loss you landing bonus. This is like F3J. We didn't have fast climbers but did hit 800 feet in about 25 seconds. I flew the repaired Onyx and was rewarded with its first win. Pete was close behind with his Graphite and Al discovered the limitations of his little 2 m Pegasus in the defused winter's light. We really couldn't see it at the height he needed to get to.



*Al executing an arrival with his Pegasus, a great little 2 meter model.*

### **Event 133 X5J Unlimited Electric Sailplane**

Allan Knox MFNZ 7621 Model ONYX Electric

Flt1	9 min 59 sec	Landing 30	Motor run 26 secs	603 pts
Flt2	9 min 59 sec	Landing 50	Motor run 25 secs	624 pts
Flt3	9 min 42 sec	Landing 35	Motor run 19 secs	598 pts
Flt4	9 min 52 sec	Landing 50	Motor run 28 secs	621 pts

**TOTAL = 2446**

Peter Deacon MFNZ 10441 Model Graphite Electric

Flt1	9 min 53 sec	Landing 40	Motor run 29 secs	604 pts
Flt2	9 min 53 sec	Landing 40	Motor run 30 secs	603 pts
Flt3	9 min 58 sec	Landing 0	Motor run 26 secs	532 pts
Flt4	9 min 59 sec	Landing 35	Motor run 24 secs	603 pts

**TOTAL = 2342**

Allan Baker MFNZ 4943 Model Pegasus

Flt1	5 min 47 sec	Landing 35	Motor run 29 secs	353 pts
Flt2	9 min 57 sec	Landing 35	Motor run 29 secs	603 pts

Flt3	7 min 11 sec	Landing 0	Motor run 28 secs	403 pts
Flt4	6 min 25 sec	Landing 0	Motor run 27 secs	358 pts
<b>TOTAL = 1717</b>				

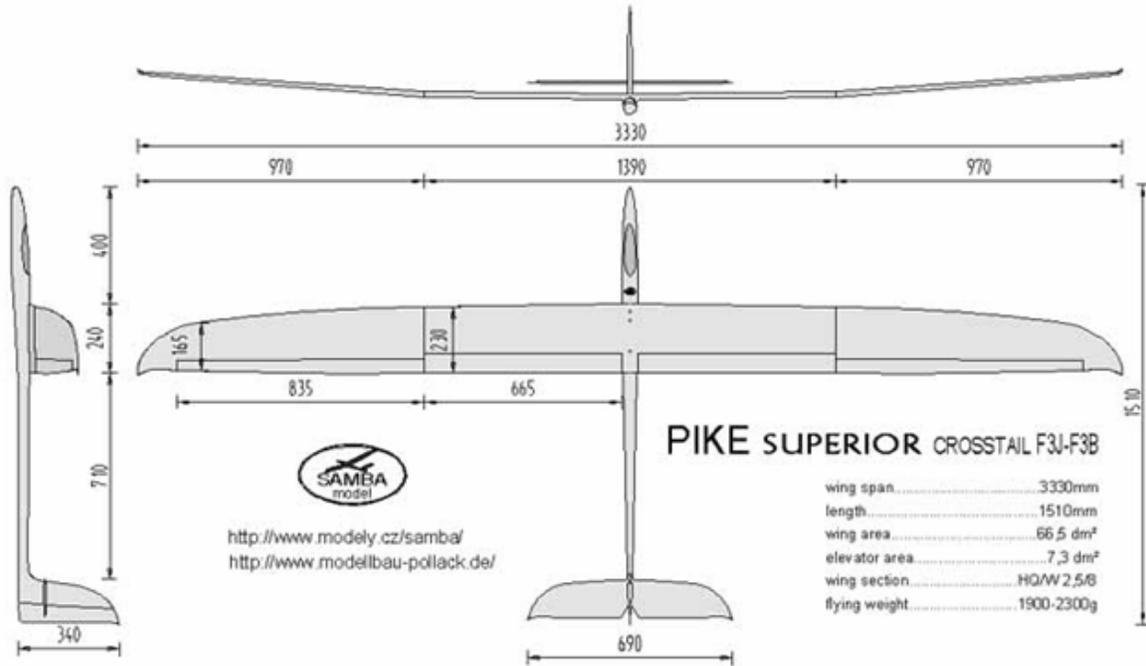
### **Ken's Pike Superior rebuild and conversion to electric.**

As mentioned last month, Kenny Mc and I have been working on his damaged Pike Superior. It now has electrics installed, a professional paint job and looks a million dollars. The Superior was class leader in soaring 10 years ago and beautifully designed by Samba. This one started life with Sven Zalberg as a factory order for his World Champs campaign about 2006. Probably not much change out of \$2,500 back then.



This is the old Kelvin Maffey model that was badly damaged in a towing incident. It lay around Ken's workshop a shattered wreck but we both could see the good bits. When I finished my Onyx rebuild I suggested we have a go at it. The damage was daunting, the fuse was in two bits and 5 other areas cracked. One tailplane joiner had broken out. Both wing joiners were broken, the centre wing broken in two and the tip panels crushed back to the spars. It took a while to make whole again and restore the strength with carbon and epoxy but it really did come up very well. I was blown away when I saw the finished model, it is even glossier than the original and you can hardly see the repairs. It is great to give fine models like these second lives as electrics. Ken and I have used the same setup. All from Hobby

King, 12 x 6 carbon folder on a Turnigy 3548 SK at about 800KV. This is combined with a 1600 30C 4S lipo and a 60 amp Plush controller with BEC. Performance is fine at 47 amps and has enough grunt to get this 2.5Kg of model to ALES heights in the time limit with some time to spare.



*Samba actually do an electric version and we have effectively replicated that configuration.*

There have to be old thermal models in lofts all over the country that would benefit from modern electric power. Alex Taylor had a 3 meter Prima like my old faithful converted to Electric at the Aero Tow.

This is mine from 1999. My first ever modern Soarer when I came back to modelling. It served me well for every kind of competition. I see Ian Harvey has a perfect example available for \$250.00. You could hardly buy the servos for that. It is Ensoll built and that is as good as it gets. Call me if you are interested.



*My old Prima, models like these are ideal for electric conversion.*

### **NDC events coming up in the next 2 months:**

#### **August:**

- Free flight, Catapult glider and hand launched glider
- Soaring, Thermal D
- Vintage Duration, both IC and Electric

#### **September:**

- Soaring; Electric ALES 200, Electric 7 x 7, Thermal J
- Vintage; 1/2A Texaco and A Texaco.

Call me if you want to be part of flying these events or even just want to come along for a look. Phone Allan on 021747950 or 5791424

## F3J World Champs:

Our World Champs F3J glider team are just back from Slovakia. They did brilliantly. 2<sup>nd</sup> placed team and Joe Wurts was 2<sup>nd</sup> individual with Dave Griffin 6<sup>th</sup>. The 3<sup>rd</sup> flier, Scott Chisholm also flew very well.

While away the guys did heaps of aviation stuff and made the most of the long journey. Of particular note was attending a GPS triangle race meeting where large scale gliders are raced around a virtual GPS plotted triangle in the sky much like full size. The models are data linked to ground so a navigator can direct the pilot. Very expensive but very cool. See Dave Griffin's video about their visit here

<https://www.youtube.com/watch?v=venPwj5Msew&feature=youtu.be>

They also got to the Wasserkuppe, ancestral home of all gliding really. There is a wonderful gliding museum there including one for models.

Here are some of Dave's photos.



*Models at the Wasserkuppe museum*



*And full size historic gliders*

## Notice:

### **Small Lathes.**

Notice for those interested in buying a suitable small lathe for hobby be it small engineering, boating, model aircraft.

I have had a good few requests over the last 3 or 4 months for such lathes that would suit their individual hobby.

Peter Robinson at Scott Machinery Ltd. Gave me a few hand outs for club members, these Lathes are at a good price for such Lathes.

“this info is on the club notice board.”

I (we) have no personal interests in the above business, I (we) are only trying to help those that may be in need.

Should you require further info Ph Peter 5786165

## FOR SALE:

Myford Universal Top-slide \$100

Pykel Mill Drill, 13mm Chuck, Collet Chuck, 2 vices and Facing Cutter on a substantial steel stand, \$1200.

Contact D Brown,

150 Weld St, Blenheim.

Phone 035789984.

---

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
Family membership	\$ 60
Junior Member	\$ 35
Country Member (+40km from Blenheim)	\$ 35
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 \$67, Junior \$20, and Family \$72, 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 **31<sup>st</sup> 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: 1<sup>st</sup> week of February, April, June, August, **October**, and December.

Please get any items (Notices, articles, or for sale items etc) for the **October** issue to the editor before the end of **September**.