



**Newsletter of THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC**  
Managers of the "MARRINER RESERVE RAILWAY"  
Please address all correspondence to :- 22b Haydon St, Palmerston North.

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**TRACK RUNNING**  
This is held on the FIRST and THIRD Sunday of each month, from 1 pm to 4 pm Summer and 1 pm to 3 pm during the Winter. All club members are welcome to attend and help out with loco coaling, watering and passenger marshalling - none of the tasks being at all  
Visiting club members are always welcome at the track, at the monthly meeting, or if just visiting and wishing to make contact with members, please phone one of the above office bearers.

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| Sender:- PNMEC<br>22b Haydon St,<br>Palmerston North | Place<br>stamp<br>here |
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**This Months Featured Model**



**Barry Parkers new Piper Cub**

## Report on the July Meeting.

The Bits and Pieces evenings are always interesting as our members seem to have pretty diverse interests resulting in a very varied collection for us to see.

**Bruce Geange** led off with a Mamod steam wagon that he had been given. It was one of the first series which were built from 1972 on. The boiler didn't appear to be in very good shape and the water that drained out of it was black in colour. To affect some repairs the end plate of the boiler was removed and the inside of the boiler was found to be full of crystals. After the boiler had been cleaned out it was found to be full of holes. Not deterred, Bruce got to work and made a new one. The cold weather has delayed some repainting but when that is done the steam wagon will be as good as new. Bruce has researched a lot of history of Mamod steam powered products and it appears about 70,600 of the Mamod Steam Wagons were produced.

**Graeme Hall** showed us his version of the Stirling Hot Air Tractor described in Home Shop Machinist. This is the same design that Bruce Geange used when he built his some years ago. Both Graeme and Bruce added steering and an oscillating front axle and I believe there was some collaboration between the two of them during the construction of Graeme's tractor. Graeme said that he machined the piston out of graphite, not an easy task, but now he doesn't have to worry about keeping the cylinder bore and piston lubricated with oil.

Graeme had with him some parts of his next project. This is a Model of the Bremen Caloric Pumping Engine that was built by the Bremen Manufacturing Company of Ohio, USA. The model was designed by James G. Rizzo (Malta) and was published in the Australian Model Engineering Magazine in their March-April 2004 issue. As usual Graeme has picked an intriguing design and it will be great to see it going.

**John Tweedie** has recently purchased a larger lathe and has found the benefit of having a heavier and more solid machine to work on. He has been producing tail stock die holders and a rear tool post for parting off. Another device was the carriage stop he has made which he has found to most useful.

**Doug Chambers** had brought along a nearly completed Stuart Turner No9. He said that it had been bought at a sale and that it had consisted of only the major castings. Some machining had been done by the original owner and unfortunately this was found to be rather inaccurate. However this has been corrected and the engine will prove to be a good looking example of Stuart Turner's line.

**Richard Lockett** had the bogie frames for his NZR U class and a driving wheel and a tender wheel. The wheels had been machined and were ready to have the steel tyres shrunk on. Richard also had with him a copy of the New Zealand Railfan magazine that Brian Leslie had given him. In it is a feature on the NZR U class locomotives and the photos showing details will be invaluable to him during the building.

## COMING EVENTS

### Track running at Marriner Reserve Railway

September 2<sup>nd</sup> from 1pm to 3pm  
September 16<sup>th</sup> from 1pm to 3pm

### Open Weekends

Hawkes Bay Model Engineers, 50<sup>th</sup> Reunion  
6<sup>th</sup> - 7<sup>th</sup> October.

New Plymouth Model Engineers  
60<sup>th</sup> Birthday Bash Labour Weekend  
20<sup>th</sup>-21<sup>st</sup> 22<sup>nd</sup> of October.

Havelock North Live Steamers Open Weekend  
19<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup>, 22<sup>nd</sup>. October.

E.B.o.P. MEs River Edge Miniature Railway  
10<sup>th</sup> Anniversary Run  
15<sup>th</sup> -16<sup>th</sup> December.

Hawkes Bay and New Plymouth events will require pre registration.

The closing date for the next issue of The Generator is Friday 14th September

## August Club Night

7:30pm, Thursday 23 August 2012  
Hearing Association Rooms  
Church Street, Palmerston North

The subject for discussion will be,  
sharpening of Tool bits. Lathe tools,  
Drills, Milling cutters etc.

### THIS MONTH'S FEATURED MODEL

By Barry Parker

My new aircraft is a 105" wing span ¼ scale Piper Cub which is an ARF model (almost ready to fly).

When the kit arrived I went through all the hardware bags and replaced hinges, clevis pins, wheels and push rods as they were sub-standard and would not meet MANZ requirements and therefore it would not pass inspection on a flying day.

I had a pair of ¼ scale Piper Cub wheels but these needed to be re-bushed to fit the landing gear. I turned up a pair of bushes on the lathe and they fitted just right. I had to replace all the pushrods with heavier gauge material and these were installed along with clevis pins, hinges, control horns and heavy duty servos to all the control surfaces and fitted in place. As I have fitted a DLE20cc petrol engine which is hidden by the cowling, I also had to fit a 'kill switch' so that the engine can be stopped from the transmitter if necessary (safety feature). When assembling the plane I changed a few things on it that will improve its balance and weight displacement. Rather than screw the side door in place, I made this removable so there is easy access to the radio gear and the choke system. The door is easily refitted. The Piper still has to be test flown and trimmed out to make flying more pleasurable and this needs to be done before it is flown at a Rally. I hope to have the test flying completed by the end of the month as the next MANZ meeting will be held in Taupo on the 1<sup>st</sup> -2<sup>nd</sup> September. I will let you know how this goes later.

**Editor's Note.** In the Marlborough Club Newsletter (flying section) they tell of using a ¼ scale Piper Cub to tow gliders aloft. The glider is able to release the tow rope and remain airborne while the tow plane returns to the flying field.

### LETTER FROM ENGLAND

By Stan Compton

We are now busy on running days carrying passengers and fine weather means heavy loads. Regulations now mean a Guard must be on the rear of the train. A boring job, so our junior members happily take on the task and simply sit there enjoying the ride instead of watching that the younger passengers do not drag their feet on the grass unaware that a set of turn-outs ( points over here) can injure them as the train moves through.

After about five years of use we had a broken axle on one of the guard's riding trucks. It was a classic fatigue failure due to a stress-riser caused by the use of a tool-bit with minimal tip radius. Also the lack of a good bevel machined into the bore of the wheel to allow the wheel to be pressed tight up to the shoulder.

This reminds me of an instance of a first attempt loco builder who I helped in Palmerston North many years ago, his wheel sets had exactly the same problem, no relief for the wheels to fit up to the shoulder on the axle. When I asked him why this was not done his reply was "No one told me"! What is logical to me is not so to others, the drawings he was working to did not show this essential bevel; only a simple thing to produce using the boring-bar when the bore of the wheel is finished.

Our Club Secretary bought a 7¼" gauge 'Barclay' locomotive, a useful engine and it gives good service. The builder had called it 'Swarf' and the new owner was not happy with that. I said that I would make him a pattern for a new name, maybe his wife's name? "No that would not do," well how about her favourite terrier? "That would be fine," the terrier's name was 'Elley' so a pattern was made, brass castings were produced, machined, painted and fitted.

Another member acquired a 5" gauge 0-4-4 locomotive, it has inside valve gear and outside cylinders; I think it must be free-lance. I have never seen such fine cylinder castings with the valve chests included. Just one piston ring on each piston. It reminds me of Henry Greenly designs as he used to specify small diameter pistons (these are 1¼") with high steam pressure. LBSC and Martin Evans would use 1½" pistons for a 5" gauge locomotive. The snag

with the valve chests included with the cylinder casting is the difficulty to lap in the port-faces compared to a removable valve chest.

I had a 'Simplex' brought to me to check over for a new member. He has been steaming it with the lubricator full of condensate due to a faulty check valve. Even a good one needs to be primed from the lubricator by fitting a simple crank on the ratchet spindle. This will ensure that the oil pipe line is under pressure before steam is raised.

The engine did not steam well and I found that the blast-nozzle and exhaust pipe was out of line to the chimney, a steel bar inserted into the exhaust pipe corrected the problem.

It was a new locomotive but the retaining nut on the reverser stand spindle had dropped off. This meant removing the cab and tanks as one unit as designed, just four bolts to remove, plus water connections and balance pipe and the unit was lifted clear!!! A pity "Simplex" locomotives did not have a section of the running boards above the valve chests removable.

Some time ago we saw a documentary on TV to make the public aware of careful use of mains electricity power. We saw a studio with about fifty bicycles set up with a generator mounted where the rear wheel would be fitted.

Large ammeters displayed power being produced by healthy skilled cyclists pedalling vigorously to generate the power required by an average household. Cameras had been installed in main rooms in a typical modern home where the family carried on as usual, someone would switch on a TV set, not a heavy load, the dials moved and more energy was needed to balance the load. When an electric kettle was switched on everyone had to pedal very hard and fresh cyclists took over from exhausted ones until the kettle boiled. Even opening the refrigerator door showed on the dials and when it was left open while mum decided what to remove as she walked about, the load became obvious as more cyclists had to pedal harder.

It was all very informative while the program was being shown but I bet viewers would soon forget the message.

An American tourist went into a shop in Scotland intending to order kilts for himself and family, "Certainly Sir, and what is your name?" asked the assistant. "Dunlop" replied the American. "Sorry Sir, we have no tartan of that name" said the assistant. The owner of the shop took over and led the American into the stockroom

returning with a sample that pleased the customer who paid up and left. The assistant said, "That was a MacIntyre tartan." That's right said the owner, "Dunlop's have been Mac -In - Tyres for years."

## The PIPER CUB

By Doug Chambers.

A few notes on the Piper Cubs may be of interest in view of this month's featured model. The Piper J3 was a development of the Taylor J2 Cub. I believe that the Taylor Company was taken over by Piper. The J3 production started in 1937 powered by a Continental engine of 40hp. When production ceased in 1947, 20,000 had been built and of these nearly 6,000 had been built for the US Army for use as liaison and spotter aircraft. Engines of increased horsepower gradually replaced the original 40hp Continentals. 50hp Continental, Franklin or Lycoming were used and later a 65hp Continental became available. All the engines were of a 'flat four' arrangement and air cooled. To promote cooling the cylinder heads projected clear of the cowling into the airstream. The pilot and passenger sit in tandem (one behind the other) but if the pilot is flying alone then to keep the centre of gravity appeased it must be flown from the rear seat. This means that a certain amount of stretching has to be undertaken to reach controls like the carburettor heat and the few instruments are mounted in the forward panel. If flying with a passenger the pilot can choose either seat. Empty weight was only a little over 700lbs.



The Military version was known as a Piper L4B 'Grasshopper' and it is of one of these that I have very fond memories. In the early 1950s two RNZAF pilots, Wally Tarr and I think a Mr Brown bought this L4B in Fiji. It had a War

history and had been used for spraying mosquitoes in the Solomons before having a short post-war period in Fiji. The L4B was brought back to New Zealand and it was kept at Taonui airfield just a few miles out of Feilding where I lived. I was about 11 years old at that time and there would have been about a dozen topdressing aircraft based at Taonui in those days but the L4B was the only privately owned aircraft there at that time.

One of my schoolmates was Stephen Gedge and his father owned the Taonui Dairy just down the road from the airfield. Mr Gedge had been in charge of the Naffi canteen on the air base at Ohakea before buying the dairy and Wally Tarr and his partner in the L4B would call at the dairy to visit Mr Gedge. Somehow Stephen and I would get to know what Sunday afternoon they would be calling in and we would be sure to make our presence known.

This always resulted in us being asked if we wanted to go flying, stupid question!!! I remember that we were always sat in the front seat and which ever pilot was flying at the time would be in the back seat. It was explained to us that we were not considered heavy enough to qualify as real passengers. While the L4B and its pilot and passenger were away the other pilot and I would look around at the Tiger Moths and Super Cubs and gradually Stephen and I quickly learned about the controls and mechanics of flying. Stephen and I spent a number of Sunday afternoons flying around the Manawatu, and I think that the two pilots were infected by our enthusiasm as they seemed as reluctant as us boys when the time came to tie down the Piper and leave the airfield.

I was delighted to read that in 1983 the L4B passed into Jim Renner's hands and was taken to his farm and airstrip at Coroglen, not far from Whitianga on the Coromandel Peninsular where it was completely rebuilt and fitted with a 90hp Continental replacing the original 65hp Continental, which no doubt gives it a much better performance.

## A VISIT TO ALAN SPINKS RAILWAY

By Doug Chambers.

On Saturday 28<sup>th</sup> July I went down to Alan Spinks' home which is located on the Pauatahanui end of the Paekakariki Hill road. On arrival Alan, Dave Brownlow and Tony

Brown had Alan's "Dolgoch" which he has named 'Bryn Glass' in steam and ready to go. It was my first visit there as because of a 'worn out back' I find travelling around by car rather



uncomfortable.

After half an hour Alan suggested that I take the 'Bryn Glass' out for a circuit of the track and I quickly accepted the offer. With Alan as a passenger to show me how the points worked

I completed a circuit, the first of several during the afternoon, and then completed another lap with Alan driving. This time I got off and took photos at appropriate spots and also managed to get Dave Brownlow and Tony Brown as they followed with the Santa Fe F7. This electric powered engine is very popular with Alan's grandchildren as it is very easy for them to manage.



The track is interesting with up and down grades and two bridges. At present there is a loop at the far end and you return to a 'wye' where the train can be turned ready for another lap. Eventually there will be another loop at the engine shed end and continuous circuits without stopping will be possible.

Tony Brown had one of a pair of passenger car



## Components required for a future project.

Would anyone have any old ugly robust machine tools, broken cross slides, lathe bits, hand shapers, old mills etc etc lying around under the bench that could be converted into a small bench sized vertical slotter.

Anything considered.

In the first instance contact:

Fin Mason Phone 06 356 7849

or email at: mason@inspire.net.nz

bogies that he has bought from DNC System Technologies, (see their advertisement in 'Australian Model Engineering' magazine). This unit was a very professionally made piece of work incorporating vacuum braking.

Alan showed me a driving wheel now fitted with a steel tyre, an axle fitted with new bronze bushes and one of four needle roller bearings that will be fitted to his 'Bryn Glass'. Interesting to see and hear from Alan and Dave how a continuing program of modifications and improvements is being undertaken and how improvements to steaming and operation is being found with the 'Dolgoch' and 'Bryn Glass'.

All too soon it was time to get back into the car and head back to Palmerston North.

Thanks very much Alan.



## Important Notice to Clubs

From September the PNMEC will no longer be posting "**The Generator**" out to all the NZ Model Engineering Clubs.

You may get your colour copy by downloading it from our website.

<http://pnmec.org.nz/newsletters.php>

All the electronic copies of "**The Generator**" back to October 2002, are available for download from our website.

Please email us at [pnmec@trains.net.nz](mailto:pnmec@trains.net.nz) with your "**Club Name**", "**Club Email Address**" and "**Club Generator Request**" in the subject line so that we can advise you when "**The Generator**" is published, this is normally the 3rd Thursday of the month.

If any of your members would like a personal email, then please email [pnmec@trains.net.nz](mailto:pnmec@trains.net.nz) with your "**First name**", "**Surname**", "**Email Address**" and "**Personal Generator Request**" in the subject line.