



**August 2014**  
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## **Newsletter of THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC**

**Managers of the "MARRINER RESERVE RAILWAY"**

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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 difficult. We may even offer you a cuppa.

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.

Sender:- PNMEC  
22b Haydon St,  
Palmerston North 4414

Place  
stamp  
here

### **This Months Featured Model**



## Report on the July Meeting.

The President asked for a minutes silence while we remembered John Couchman, Bren Campbell and Peter Hatton who have all passed away recently.

**Richard Lockett** reported that our participation in the Rail-X Exhibition had been very successful.

Members were then invited to speak on their favourite vehicle.

**Chris Saunders** told us that his favourite vehicle was the Ka945. He had seen it laying in the Taumarunui Railway Yards in a derelict state. After it was restored by Steam Incorporated Chris was able to ride in an excursion train drawn by Ka 945 to Wanganui.

**Murray Bold** displayed his recently replaced hip joints. The joints had been replaced about 14 years ago and it was interesting to see the amount of wear in the plastic part of the joint.

**Cynthia Cooper** showed us her favourite Hornby locomotive. It is a three rail 0-6-2 tank bought second hand after she had started work. It was bought from a lad who was selling his layout to fund a move into photography. The lad was evidently a bit astonished to be selling one of his locomotives to a girl.

**John Tweedie** said that his father owned a Bradford van and John learnt to drive in it. John related how the family drove in it to Auckland from Stratford and further into North Auckland on a camping holiday. The Bradford had three speeds and synchromesh on top gear only. Top speed about 54mph (88kph). They were imported as an engine and chassis with mudguards and cab. The bodies were made in New Zealand out of untreated wood which later led to trouble.

**Les Fordyce** had two cars that had meant a lot to him. A 1935 Willys Coupe and a 1924 Humber bought in 1935 second-hand.

**Merv George** is building up a motor cycle. He made his own frame that carries oil in the frame tubes. The engine is a 500cc single cylinder BSA. It will have a low seat and raised handle bars.

**Dave Edmonds** has a love of Volvo cars and owns two, a Volvo 144 and a Volvo 242.

**Richard Lockett** showed us a slot car, a Formula 1 Renault that he had made himself. The electric motor was 'off the shelf' but there was a lot of development in the chassis, tyres and tiny bearings in the front wheels and rear axle. The car won a NZ Championship.

**Doug Chambers** favourite car was a 1935 Ford V8 Roadster. As he recalled "A couple of laps around the Square in Palmerston North on a Friday or Saturday night, and park by the Regent Theatre and prepare to fight the girls off!"

**Robert Edwards** started off in 'P' class sailing boats and advanced to crewing much larger yachts, age catching up with him, he now has a large cabin cruiser.

### Bits & Pieces

**Graeme Hall** showed us the exhaust pipes, water pipes and inlet manifolds for the 'Snow' engine all looking very nice, just back from the electroplaters where they had been nickel plated

**Murray Bold** showed us a figurine of 'Yoda' the 'Star Wars' character made on his 3D Printer.

## August Club Night

7:30pm, Thursday 28 August 2014  
Hearing Association Rooms  
Church Street, Palmerston North

'Bits and Pieces' is the theme for the evening, so bring along your current project and show us what you are up to.

## COMING EVENTS

### Track running at Marriner Reserve Railway

September 7<sup>th</sup> from 1pm to 3pm  
September 21<sup>st</sup> from 1pm to 3pm

### Open Weekends

**Labour Weekend at**  
Keirunga Park Railway 24<sup>th</sup> to 27<sup>th</sup> October.  
and  
New Plymouth 25<sup>th</sup> to 27<sup>th</sup> October

The closing date for the next issue of The Generator is Friday 12th September

## Subscriptions

Subscriptions are now overdue and remain at the previous years amounts.

Full Membership \$30

Country Membership \$15

Junior Member \$15

There is a joining fee of \$10 for new members.

**These must be paid by 31 October or your membership will be terminated.**

## Wanted to Buy

Myford ML7 or Super 7.

Call Brian Leslie 06 323 4128

## For Sale

### 1. Hafco Metalmaster Mill Drill

Model HM48 With digital readout .

2 years old, extras are Precision Swivel Vise ,Clamping Set, ER40 Collet Chuck and 10 collets, Boring head set, Optical edge finder, Draw Bolts, Some cutters.

Price \$5500.00 The specs for this machine can be viewed on

[www.machineryhouse.co.nz](http://www.machineryhouse.co.nz)

### 2. Mastiff Petrol Engine.

This is a Hemmingways Kit approx half built plus all info and plans. More info can be found on there website,

Both items are in Matamata. Contact  
[brianwiffin@icloud.com](mailto:brianwiffin@icloud.com)

## THIS MONTH'S FEATURED MODEL

By Doug Chambers and Paul Dodge

Some years ago Paul asked me to build a boiler for a model boat he was building. He had the drawings for a gas-fired boiler and I duly built and hydro tested it before handing it to him. Paul called in a few weeks ago with some pictures of the completed boat and gave me the following information about it.

The boat is 4 foot long, and built to look vaguely like a 24 foot cutter of the sort seen round inlets and estuaries in Victorian times.

Construction is fibreglass over pine planking and it weighs around 22kg including ballast.

The boat is radio-controlled with servos operating, forward and reverse, throttle and rudder. It can steam for about 45 minutes on a full tank of gas.

The engine is built from a Gage TVR1BB kit Bore ½ inch, Stroke 5/8 inch – with Hackworth gear. It runs a max pressure of 35 psi, but will turn the prop easily at 5 psi. The engine was purchased from Minitech in Australia with current list price of \$275 Aussie.

I was very grateful to Paul for bringing in the pictures of his boat as over the years I have done all sorts of jobs for others and seldom get to see the completed project and hear about how well it goes.

## LETTER from ENGLAND

By Stan Compton

Recently my wife and I took a tour by coach to Kent on the South-East Coast; chosen because we were taken to 'The Kent Battle of Britain Museum at Hawkinge' (Post Code LT18 7AG0). All that is left are a group of Nissen Huts containing a lot of wartime memorabilia plus a hangar containing RAF vehicles and 'Spitfire' and 'Hurricane' fighters. I was told by one of the retired volunteers that it was the 'Hurricanes' that bore the brunt of the action being far more numerous than the 'Spitfires'. There were a number of recovered German fighters plus a number of engines and the mountings for those engines looked very substantial.

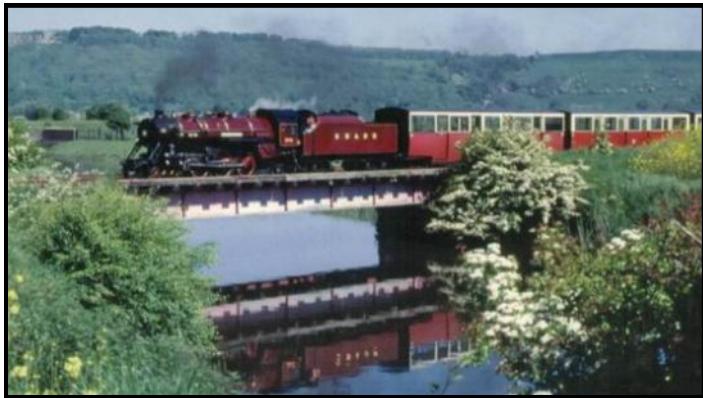
Also of interest was the uniform of a WAAF Officer who had been the young officer depicted in the film about the Battle of Britain who realised that a number of members of her staff had been killed in an air-raid on the base where she worked.

This Museum gets no Government funding and relies solely on donations, one very keen volunteer provided us with delicious home-made cake, tea or coffee at modest prices; she only had a tent to work in, but was determined to obtain a Nissen Hut to provide a better service for the public.

On display outside was an articulated trailer built by 'Taskers' of Andover and given the nickname 'Queen Mary's' due to their overall length of 60 feet. They were designed to carry crashed aircraft. Lucas Ltd who I worked for in my youth had one and it could carry seven gun turrets in crates for delivery to Aircraft Factories.

Only a few miles away is Hythe the base for the Romney-Hythe and Dymchurch 15" gauge Railway where we boarded a train for a return trip to the end of the line at Dungeness which takes an hour each way. Our locomotive 'Black

'Prince' had a driver who knew his job, steaming along at about 20mph. The ride was very good considering the narrow gauge of the tracks which were in very good order as were the rolling stock. One of the staff told me that after World War 1 was over some of the two foot narrow gauge track that was used to bring supplies up to the front lines in France was bought as well as some trusses used to build the train shed in the station at Hythe.



Back home again I have been completing a 5" gauge 'Koppel', a 'Polly' kitset, for an old friend who sadly passed away. As supplied the roof opening was very sharp and weak.

This I trimmed with a section of brass curtain track giving me a small angle section which when riveted with 1/16" copper rivets made a very neat job. The trick is to anneal and quench before bending to fit in the corners after cutting out a 'V' section which can be soft soldered later. A spare length can be fitted around the boiler, trimmed off later once riveted to the cab front making a neat job. It may be necessary to cut slits in one flange all round to form the radius required.

A friend took me to a private railway owned by a retired business man called 'Statfold Farm Railway'. It is not open to the public and admission is by booking in on certain days of the year. A traditional set of workshops built to house good machine tools for a permanent staff to restore narrow gauge locomotives to a very high standard. Ten of these were in steam providing rides around the extensive lay-out, mostly two foot gauge with some of my favourite quarry 'Hunslets'. There was a small collection of vintage cars to view, plus late model 'Bentleys'. There was an old Red Label Bentley on loan and it was driven away as we watched the exhaust note a pleasure to hear. In my youth I foolishly 'took on' a similar car on a steep hill, the driver simply put his foot down and left my

500cc 'Matchless' far behind.

In one barn was an old 'Davenport' shunter from the USA originally; it was in a shocking state, fit only for the scrap-yard but it had been recovered from India and it will be interesting to see it restored later.

When the US Army Engineers took on the construction of the Panama Canal they used 'Marion' steam shovels made in Ohio. I imagine they would have had to import the coal to fire them. Imagine my surprise when I saw a 'Bucyrus steam powered excavator in working order on the site of the Statfold Railway. I had only ever seen the diesel powered versions before.

On our recent coach holiday we had a day in Canterbury and while my wife searched for needlework supplies, I spent some time in the City Library and found a book about the bombing of the German battleship 'Tirpitz' in a Norwegian Fjord. The book contained descriptions from members of the crew who were deep down in the ship during the bombing and how they managed to survive when it 'turned turtle'. They were very lucky to survive and be able to tell their tale.

### In the Newsletters from other Clubs

**Blastpipe Petone** Gavin McCabe gave a talk on the details of plastic injection moulding as employed at McCabe Industries in the Hutt. On the 20<sup>th</sup> of July 11 members of the Anderson clan travelled to Arthurs Pass on a train drawn by Ka942.

**Maidstone** On the 6<sup>th</sup> July The Maidstone members were lucky with the weather and 233 people turned up for rides after a feature in the local newspaper. The second day saw the afternoon washed out with heavy rain.

**Whangarei Model Engineers** The weather has not been very co-operative on running days. A new club locomotive is being built for them by IKON Engineering.

**Manakau Live Steamers** Trials with Welsh Coal. Chris Arts is building an NZR 'Dsc' starting with the bogies.

**Christchurch Model Engineers.** The new engine shed is now complete. Some of the track has been re-ballasted and levelled. They have lost a couple of Sundays through bad weather. A type of grass that ducks do not like is to be trialled near the pond.

**Marlborough Model Engineers** Some trees near the raised track and the pond are causing problems through falling leaves and branches that are posing a fire hazard near the track and fouling the pond. The committee are looking at having them removed and replaced with more suitable trees.

### Rail-X 2014

12-13 July was the Rail-X 2014 show in the Barber Hall. Inside the Hall were a variety of table top electric train layouts, stalls of business's selling locomotives and rolling stock and all the necessary materials to make scale backgrounds for the realism to the layouts. Outside the Palmerston North Model Engineers set up the portable track and the Kerr Stuart



Inside the Hall we had been given room for a stand and Richard Lockett's NZR 'W' and the 75% complete American 4-4-0 that Doug Chambers is completing for Bob Owen were displayed along with a Garden Gauge steamer called 'Lady Louise' and a 3D computer built flat car both belonging to Murray Bold.

The American 4-4-0 attracted a lot of attention as it was obviously under construction and people could see that these engines were not bought from the Warehouse but had to be built piece by piece in a home workshop. Members manning the stand were peppered with all sorts of questions from interested people.

### NZR Ab 608 'Passchendaele'

After many years of hard work 'Steam Incorporated' have completed the overhaul of Ab 608 and in the beginning of June the engine completed a test run up to Levin and on the 19<sup>th</sup> June it was seen in Feilding. Ab 608 was unusual in being an officially named locomotive. The name 'Passchendaele' is in remembrance of the New Zealand soldiers who died in the terrible battle of that name during World War 1.



'Wren' class locomotive steamed up and down giving rides to small children.



## Building my First Locomotive. continued from July

By Doug Chambers

'Simplex' was then taken down to the track for a trial. By now the track at Marriner Reserve had doubled in length to 500 metres and included a long 1:70 uphill grade. I had tried 'Simplex' on the longer track before the modifications to the front end but I found that it could only manage to haul the driver in a very lifeless display. This time there was a very noticeable improvement and after trying different blast nozzles I settled on one a little larger than that originally specified in the plans.

Now the advantage of the larger nozzle is two-fold. Firstly the exhaust becomes very soft and there is very little chance of sparks being thrown out the chimney.

Secondly, the cylinder back pressure is reduced because of the larger blast nozzle. I will try to explain this. If the boiler pressure is 100psi, then the maximum pressure in the cylinder will be about 80psi. The drop in pressure is due to heat loss and friction in the pipes leading to the valve chest. The small blast nozzle needed for an engine that has a parallel chimney liner will require about 30 psi of exhaust steam to make it efficient. This means that the effective steam pressure on the piston is 50psi because of the 30psi on the other side of the piston being forced out through the blast nozzle.

If a proper venturi exhaust is used the exhaust steam pressure can be dropped to about 10psi which means that the effective pressure on the piston is now 70psi. This in turn means that the regulator can be closed a little or the valve gear can be notched up creating a saving in steam, thus the boiler requires less water to be added and less coal to heat the cold feed water.

The second test run was a revelation. 'Simplex' was steamed up and I was using the 'Wren's' driving truck. To create a light load I attached one of the club passenger cars and completed a couple of laps with the boiler steaming freely. Next I heard the watching club members' present say, "Let's give it a real load". I looked around to see Grant Chalk, Ian McLellan and Ken Neilsen getting into the passenger car. Richard Lockett was seen shaking his head knowing from his experiences trying to get the 'Simplex' around the track that this was a disaster in the making. I heard Ken say, "Well at least two of us will be walking back". Tanks full of water, water in the gauge glass near the

top nut, a very good fire and away we went. The uphill grade was ascended with a bit of slipping at first until I notched up a fair bit and opened the regulator wide. With the axle pump on the boiler pressure remained between 90 - 100psi and the water stayed near the top of the glass. Without stopping I set off on a second lap to hear Ken say that definitely some would be walking back this time. However the bank was ascended with even less slipping and we duly arrived back at the store shed. A third lap could not be contemplated as the side tanks were now virtually empty. Richard's face was that of complete disbelief, and there was a lot of serious talking over the morning tea about exactly what I had done and why the engine was able to achieve what it had. I admit to being more than a little surprised myself. That night I totalled up the weight of myself and the three passengers, the driving truck and the passenger car and that came to about 950lbs. My 'Simplex' weighs in at 145lbs (wet) so I felt that it had done very well. I felt that the boiler's capacity for steam production had been pushed to the very maximum and that one would not want to run all afternoon with that loading.

The photo below shows the new chimney.



Next month 'Simplex' undergoes further testing at New Plymouth and Maidstone.

**Don't forget to pay your SUBS!!**

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