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the

MainLine

magazine

the official journal of the

National Model Railroad Association Incorporated
Australasian Region

NMRA Inc - Australasian Region Directory

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All members of the Australasian Region are invited to submit articles of a railway nature for publication in the 'MainLine' magazine.

I would appreciate all articles to be sent to me in an editable format, such as 'Word, Pages, text, email, but not pdf, and high resolution photos sized between 1 to 5mb.

Please send your articles to editor@nmra.org.au

NMRA Inc. - Australasian Region Directory

(cont.)

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New Articles

Regular Features

the Cover Photo

Loco #8 (brass 2-8-0) heads a freight train leaving Grass Valley and about to cross the Bear River trestle on its way to Marysville – the next stop.

Editor's Comments

As we begin to come out of the lockdown situations, some divisions have been able to resume having their monthly Division meetings in the last month or two and some are about to commence being able to meet again in the foreseeable future, be it in a restrictive manner. Whatever is your situation I believe there is light at the end of the tunnel and I for one am very much looking forward to meeting face to face with the other modellers in my division, as soon as we are able to do so in relative safety.

While I haven't been able to go to meetings I have been keeping well occupied with building my layout and of course, producing MainLine, so onto what's in this edition!

The author of the Feature article for this month likes to refer to model railroading as an 'Art', and when you see the attention to detail in his layout, you will come to agree with those sentiments. The '*Eureka Valley Narrow Gauge Railroad*', built by Peter Jackson - MMR, has graced the pages of MainLine in the past, but there has been much more added and more detail included in the past 8 years, so it is fitting that we have another look at this superb model railroad from South Australia.

If you are a regular to the model train show scene, especially in NSW, then you may be familiar with the small switching layouts that Al Harris has built to encourage people at shows to '*have a go*' at running trains, with particular emphasis on switching cars with pick ups and set downs at different industries. In this edition, Al describes one of these show layouts which he calls 'The Bottoms'. I can't think of a better way to entice people to enter the hobby than to let them drive a train.

We then look at the second article in the series of '*Trackside With the SM*' articles from Arthur Hayes - MMR. In this edition, Arthur outlines how adding lights is a great way to bring a layout to life, as lights added can highlight a scene or show detail within a structure. Arthur also describes how to make your own goose neck light poles which were common on many platforms in the 60's & 70's, especially in regional Queensland.

Gerry Hopkins - MMR outlines the pros and cons of including Momentum in DCC equipped Locomotives. Gerry also gives a few tips on CV settings that should tame your loco to make it a joy to operate.

Merv Bagnall is about to embark on an expansion of his layout which will see it double in size over the next couple of years. To make it a more operations friendly layout, a 13 track staging yard is needed and a 7 level multi tiered dual track spiral (*or helix if you prefer*) will need to be included to move trains into the main part of the layout. I wanted a spiral to have no obstacles and be completely open on one side of the spiral for full access for uninterrupted cleaning and access to the track. A good model railroading mate of mine, Harold Albury, had designed such a spiral, so with Harold's permission, I will outline the method that he used to cut the trackbed segments and also the method I used to assemble, lay track and provide power to both tracks.

I am very thankful to the members who have taken the time to put pen to paper, so that there are interesting articles to read in MainLine. As can be seen by checking out the previous editions, I am using five articles in each edition to make up for the lack of reports, due to not having any train shows or conventions to report back on, as well as there being very limited activity with Divisional meetings, 100% club and SIG groups.

An easy calculation sees that we need around 30 articles to fill the pages of the six editions of MainLine for 2021, if present restrictions prevent delays for model railroading life from returning to near normal anytime soon.

So I am interested in seeing as many model railroading articles sent in to me as possible.

I know the overwhelming majority of NMRA members would have home layouts and I am sure other members would like to see and read about what you are modelling and how you are going about it. Maybe you are scratch building some buildings or cars or creating scenery or hand laying complex track work to qualify for an appropriate AP certificate? I am sure other members would derive encouragement by reading what other NMRA members are doing with building their railroads.....M

Merv Bagnall

Editor - MainLine On-Line

EUREKA VALLEY

NARROW GAUGE RAILROAD

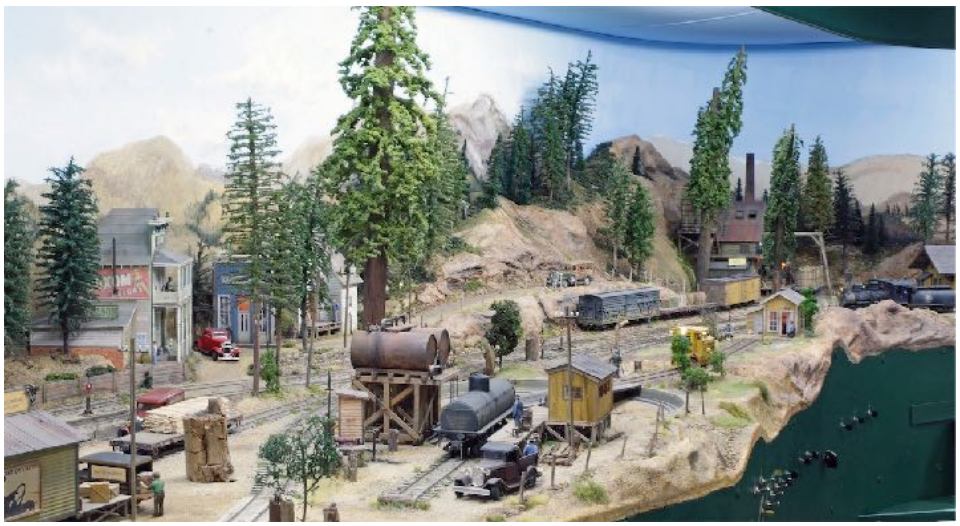
By Peter Jackson - MMR
Layout Description - April 2020

The theme for the EVNGR owes its origins to the Nevada County Narrow Gauge (NCNG) – a 3' gauge railroad that serviced some of the gold mining areas of Northern California. Inspiration initially came from reading Gerald Best's book about the NCNG. The era for my layout is set in the 1930's to early 1940's.

The EVNGR is designed to be 'thematic' and does not attempt to copy or emulate a specific prototype, in structures and scenery, at least. However, locomotives and rolling stock have been acquired and built to follow the prototypes of the D&RGW, C&S and the NCNG in most cases.

Location

The EVNGR is housed in a stand-alone building in my garden measuring approximately 8.0m by 3.5m. I call this building my 'studio' – it's where I practise my art – the art of model railroading! I object to phrases like 'train shed' because I think they most often undervalue what model railroaders do – three dimensional art. The layout is built as a 'shelf-style' and operates point-to-point with a main line run of about 25 metres. Shelf width varies from about 350mm to 750mm at the deepest point in Grass Valley. Layout height averages about 1.3m. The layout is designed for walk-around operation using EasyDCC wireless throttles. The layout was built in modules out of 75mm by 19mm pine using the L-girder method to support the joists. The modules form a box-like shape and are attached to the walls on wooden brackets with braces angled back into the skirting for



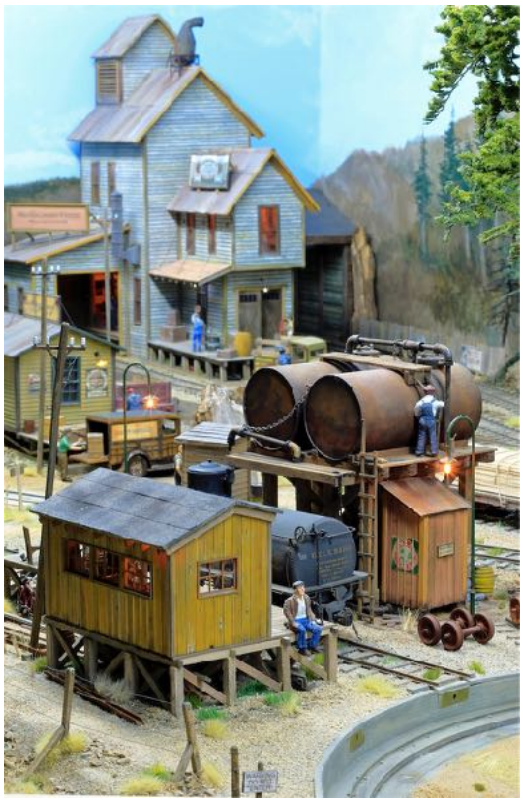
1 On entering the Studio you'll first come across Grass Valley. This shows the overall scene and highlights the false ceiling, valance and fascia which gives the appearance of a shadow box effect that I was looking to achieve around the layout.

support and designed to keep the floor area as clear as possible. The layout is fully valanced with the intent of creating a 'shadow-box' like effect, which is combined with a false ceiling to minimise dust and create a low sky effect. LED Daylight tubes located behind the valance provide layout lighting with several incandescent spots added to highlight specific locations. Rows of blue LED's have been installed in the valance and when powered

2 Here in Grass Valley the layout attempts to focus attention on small detailed areas such as this engine facility featuring the fuel tanks – plastic tubes and timber based on a drawing I saw somewhere.

3 The crew quarters filled a small unused space. Note the interior detail/lighting and the number on the switch stand - used to assist operators select the correct push button on the fascias.

give a moonlight effect for night time operations which also accentuates the lighting effects in buildings around the layout.

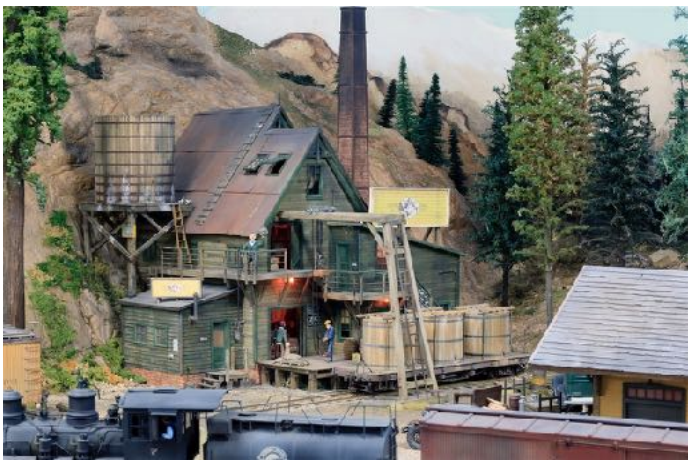


4 This scene looks back towards the tunnel (top right corner) where trains are stored in staging. That's MacGillivray's Mill in the background. Many of my structures are named after friends and fellow modellers.

Terrain

Mountains, hills and ground areas are formed using card board strips with newspaper laid across these areas. Paper towels were then dipped in soupy plaster and applied to create basic hardshell. In recent times, plaster impregnated gauze has been used to either build new hardshell areas or repair/alter existing scenes. If I was starting again, I'd use foam sheets to form the mountains and hills.

The base for track was created from sandwiching Canite sheets to 35 mm blue foam sheets (used in buildings for wall insulation) with construction adhesive and then cookie cutting out the required shapes.



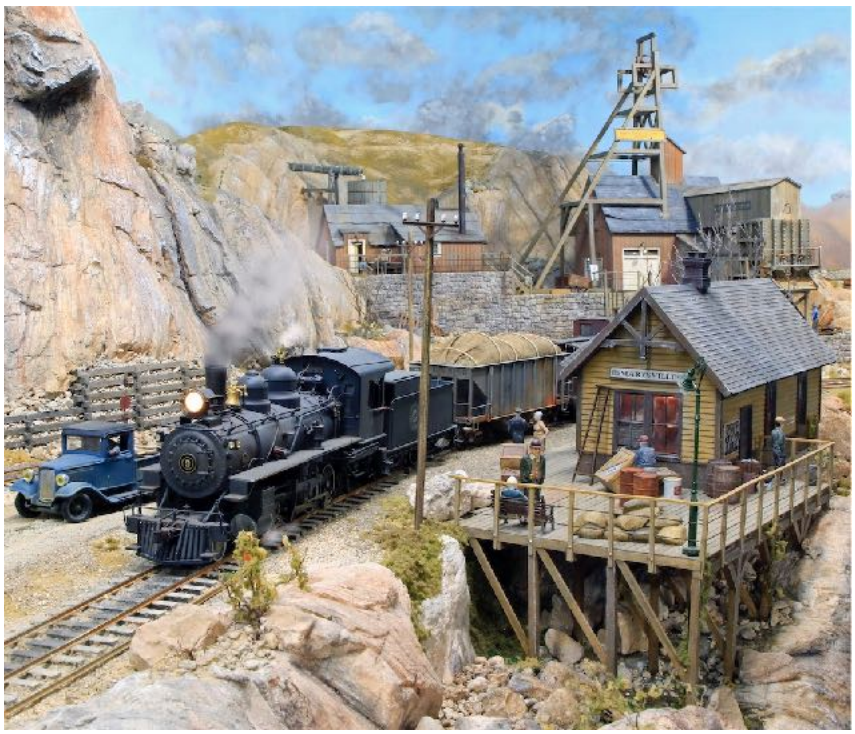
5 Brown's Brewery took up an unused corner and was built to fit into the mountain behind. That's Jim Brown, the owner, standing on the balcony waving his hat at the passing train!

The scenery was designed to represent at least five distinct geographic areas comprising Grass Valley, Marysville, Cedar Kress, Cedar Junction/Reid River and Eureka. Each area has its own rock types, vegetation and rock and ground colourings. In order to achieve this outcome, a large number of different (real) rock faces were collected and latex moulds made to suit each area.

Structures

All but a few of my structures are scratch built with ideas coming from photos, magazines, plans and kits that I've seen. I use plastic, foam core board, cardboard, paper and lots of coffee stirrers! All structures have been built keeping in mind the era and region being modelled and have been designed with functionality and purpose to serve an operating railroad and its various communities.

6 This photo is looking back towards the Bear River trestle and Grass Valley. Note how the plaster rock moulds were wrapped around the edge of the fascia to remove that always obvious sharp edge to the scenery.



7 Loco #9 heads a freight leaving Marysville. Here the land form dropped away sharply forcing the depot builder to underpin the structure with strong timber supports. The Empire Mine features in the background.

The valance and the lower level facia are painted dark green together with the ceiling above the walkways. This is designed to have the viewer focussed on the layout and not have the eye distracted by other surroundings.

The layout has a painted backdrop (now mostly complete) about 600mm in

height and above this sits a false ceiling – painted a sky blue colour. The backdrop is curved into the corners of the room. My mate, Bob Reid who started the Narrow Gauge Downunder magazine, painted most of the backdrop and taught me the basics to finish off sections.

8 Loco #9 (a brass 2-8-0) leads a short freight thru Marysville heading for the Bear River trestle.

9 Shay #3 is switching ore cars at the Empire Mine in

10 Loco #9 leads a freight train over the Howe truss bridge just outside Marysville - the Southern Pacific standard gauge line goes under the EVNGR narrow gauge track. This scene was intended to demonstrate the difference in size and gauge between narrow gauge and standard gauge track and equipment.

11 The line from Marysville to Cedar Junction goes through the Greenhorn Mountains where you'll find the township of Cedar Kress located high in this rugged area. The General Merchandise store has full interior lighting and detail – was built mainly out of coffee stirrers.

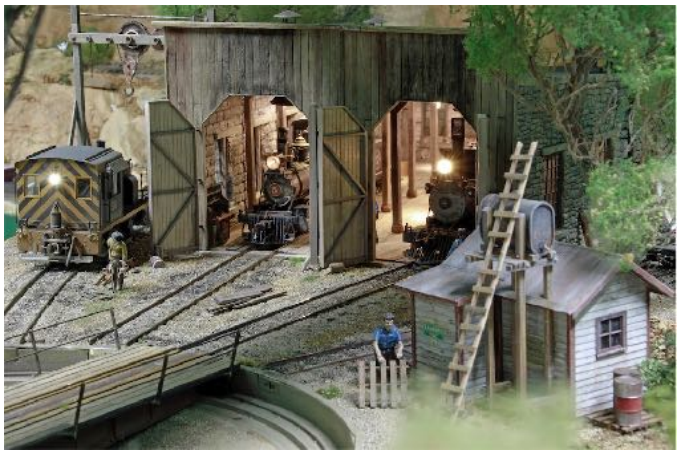
12 Loco #15 (a Climax) can be seen switching cars outside the Moyes & Lang building in Glenbrook – a relatively new town adjacent to the EVNGR line.

13 It's dusk in Reid River and President Jackson can be seen standing on the deck outside the head office of the EVNGR. Loco #50 has finished for the day – the Reid River Meats processing plant can be seen in the background.

14 After leaving Cedar Junction, loco #12 is about to arrive in Eureka as it rounds the curve behind the engine house.

Realism/Conformity

The styles of buildings, vehicles, people and signage have been selected to fit with the railroad's era. Books, articles and various plans have been used to guide design and finishes. All built-form is weathered, but to varying degrees – there are no really run-down structures since the EVNGR was serving successful mines and the local communities showed the benefits of this success. The EVNGR, therefore, was well used but also well maintained!



15 The engine house in Eureka has full interior detail and lighting (old Xmas led's). The small building in the foreground is the crew quarters.

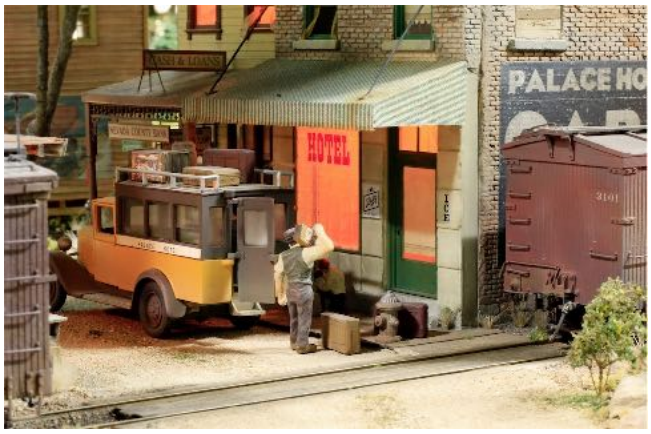
16 Shows Loco #12 on the outside storage track and loco #5 (a brass 2-6-0) in for service. Timbers are coffee stirrers and the interior and exterior walls were caste in plaster, painted and stained.

17 Two locos, #9 and #360, being repaired/serviced by the overnight work crew in Eureka.

Operations

Having got the layout to the point where all track is in place, scenery and structures are well progressed and the EasyDCC system is in full use with all locos having Tsunami

decoders and speakers installed (thanks to the expertise of Gerry Hopkins), I'm now starting to think more carefully about the EVNGR's purpose. This has caused me to reconsider industries and their needs and, in conjunction therewith, my loco and rolling stock rosters. I'm currently using a card and waybill system with Train Orders issued to engineers as required. 'Operation' – the next big challenge!…..M



18 Small detailed scenes are a feature of the layout. Here is the Palace Hotel bus being unloaded outside the hotel in Jackson Avenue, Eureka. The Palace Hotel is a Downtown Deco plaster kit – one of only two commercial kits used on the EVNGR

19 Ray Brownbill, the AP Manager for the NMRA in SA, is presenting Peter Jackson (on the left) with his MMR Award #563 in January 2015.

20 Looking down one of the storage tracks in Eureka towards the Green and Hince hardware store. Note the decking and stairway needed to accommodate the slope which came before the building!

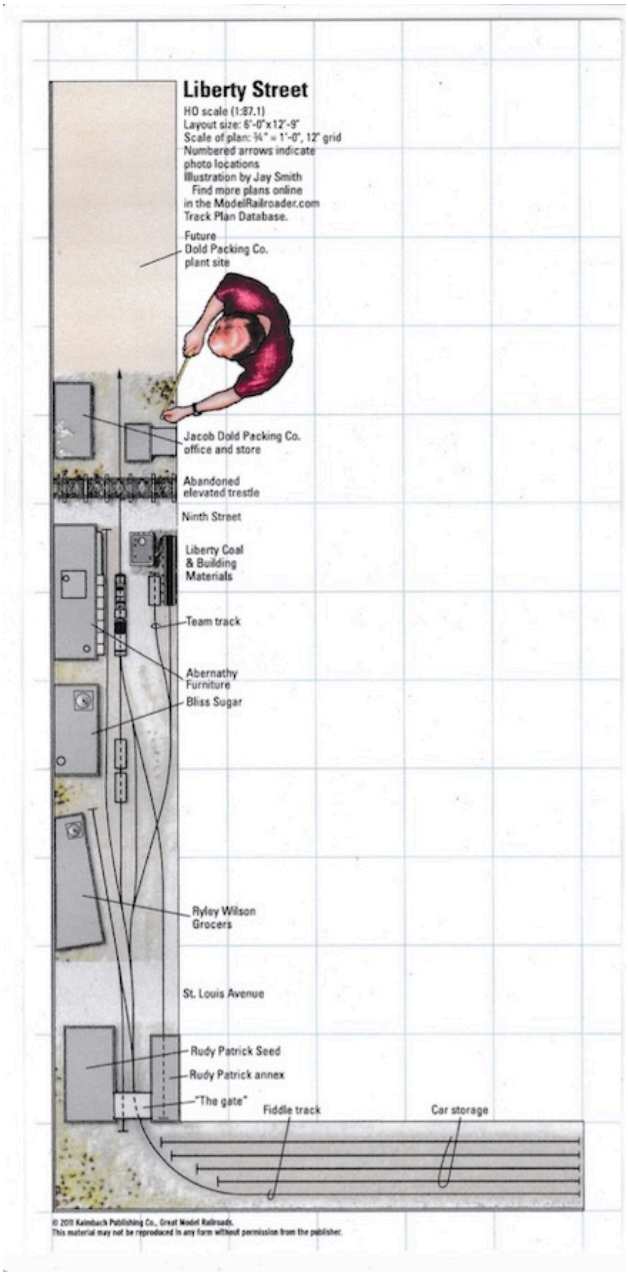
The Bottoms

By Al Harris

Following my participation in the Coffs Harbour Module SIG Open Weekend in January 2013 and observing a constant queue of children waiting to operate Bill Baggett's switching layout under instruction, I was hooked. For the 2014 Coffs Open Weekend I decided that I would construct a small switching layout. I had a number of aspects of model railroading I wanted to demonstrate with the layout's construction. It had to be modular, demonstrate that a fully functioning layout could be built in a small space, be able to be transported in the average sized family car and be interactive and easily operated by children of all ages.

Track Plan.

In the Kalmbach 103 Track Plans book I saw a track plan **1** that would suit my requirements with some minor modification. A footnote to the track plan indicated that the layout featured in Kalmbach's Great Model Railroads 2012 edition. Perusal of the 2012 GMR showed that the layout was the owner's interpretation of the West Bottoms area of Kansas City at the turn of the 20th century. The original track plan comprised a 12 ft 3 in x 6 ft "L" shaped layout with the base of the "L" being a 6 ft x 1 ft module and the long leg of the "L" being 11 ft 3 in x 1 ft 6 in. To fit in with my list of requirements I chose roughly 8 ft of the track plan for my layout. All I needed now was to construct some base boards to lay the modified track plan on.



1 Track Plan from Kalmbach 103 track Plans

Base Boards:

On a trip to the local Bunnings I found 1200 mm x 400 mm x 7 mm sheets of 5 ply for less than $10 per sheet. I also found 1200 mm lengths of 90 mm x 19 mm pine. Each of my module base frames would require 3 lengths of the 90 mm x 19 mm pine. To construct the pine base frames I used 8g x 40 mm timber screws. To attach the ply to the frames I used 8g x 20 mm

timber screws. Before fully assembling the base frames I clamped the two end timbers that would become the module joins together and drilled 2 holes with a ¼ inch drill bit 100 mm from each end and 45 mm up from the bottom. After unclamping the two end timbers I drilled a recess on one side of one of the end timbers to take a ¼ inch "T" nut **2**. This would facilitate the modules being secured together with 1½ inch long ¼ inch joining bolts.

2 "T Nuts" and recess

Legs:

At Bunnings I also found 1200 mm lengths of 42 mm x 19 mm pine. To construct 3 sets of legs I would require 3 of the 1200 mm lengths of 42 mm x 19 mm pine for each set of legs. In the base of each leg set I drilled a ¼ inch hole 50 mm in from each outside edge. On the underside I drilled a recess to take a ¼ inch "T" nut. This allowed a ¼ inch bolt to be inserted into each "T" nut to be used as a levelling mechanism for the layout. I found that the height and narrowness of the legs affected the stability of the layout and made it difficult for children to reach the controls even when seated on a stool. To lower the layout height and improve stability I purchased some folding saw horses from Bunnings and modified them to fit the layout. The lower height improved the layout stability and makes it more accessible for children to operate and easier for them to view the layout in operation.

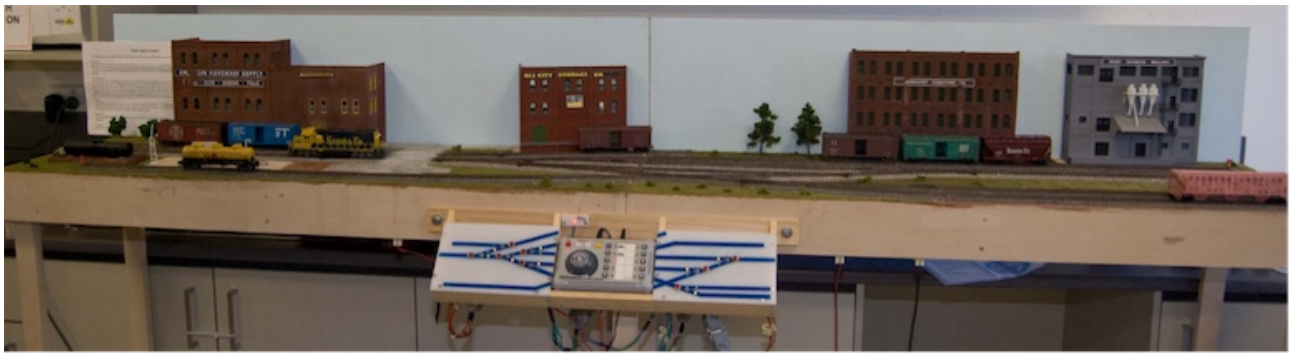
Track:

Peco code 100 flex track and Insulfrog points were laid on 3mm cork road bed. Fellow NMRA member, Graeme Quin, and I spent the 2 days of the Coffs Harbour Module SIG January 2014 Open Weekend laying 3mm cork road bed and the Peco track. To facilitate track security at the module joins I used single sided copper clad PCB nailed to 3 mm plywood. A continuous piece of track with sufficient plastic ties (sleepers) removed was laid across both pieces of PCB and the track soldered to the PCB. When secure the track was cut with a rotary cutting disc. The points are powered by Peco point motors with a Peco accessory switch attached. Small gaps (1 mm) were left where the flex track joined the points and diamond (crossover).

Wiring:

The layout was wired for DCC with 2 bus wires on each module. The ends of each bus wire were secured in a terminal block screwed to the module end timbers. A small section of additional bus wire leads from the terminal block at the module joins to a female plug secured to the back of each module. Droppers were soldered to each section of track and then attached to the respective bus wire. To join the bus wires of

each module an umbilical lead was made with male plugs at each end. The Peco point motor and accessory switch assemblies are connected to terminal block sections to facilitate easy change out should a motor or accessory switch fail.



3 Control Panel & The Bottoms at its first outing at Malkara Special School in August 2014

Control:

I built a control panel frame from 50 mm x 11 mm pine. I used 3 mm thick white Perspex to make the two faces of the control panel (one for each module) on which I painted the track plan and installed the point motor control switches and route direction indication LEDs. (Note: The Perspex comes with a paper covering which allowed me to cut a linear representation of the track plan with a metal ruler and sharp hobby knife. Removing the track plan paper from the Perspex allowed the track plan to be painted on the Perspex with a can of spray paint.) I purchased a Bachmann EZ DCC system when they were first released in Australia which suited the layout. It is easy to operate with two directional control push buttons with red LEDs to provide visual indication and a rotary knob for speed control. I installed a Capacitor Discharge Unit under the layout and installed a red LED on the control panel to indicate when the CDU was charged.

The control panel **3** is connected to the module wiring via colour coded wiring looms and computer terminal connectors.

Structures:

Due to the limited depth of the layout only low relief industrial structures would fit across the back of the layout. The background structures on the left hand module are scratch built using DPM wall module pieces. The structures on the right hand module are made from Walthers wall module pieces and a modified Walthers Cornerstone Redwing Milling kit. The diesel servicing facility is a mix of Walthers Cornerstone kit pieces and a scratch built shed. The shed comprises a strip wood frame covered with corrugated card. The tank is from an Athearn 40 ft tank car kit. Structure names were either computer printed or from Walthers Cornerstone decals.

Scenery:

I purchased Woodland Scenics Landscaping (LK954) and Trees (LK953) Learning Kits to see what they offered in the way of materials for scenery and trees. To create ground contour I laid plaster bandage on the base board and covered it with plaster. I then

painted the plaster and remaining bare base board with the earth undercoat from the Landscaping kit. When the paint was dry I used old spice shakers to sprinkle ground cover over the plaster and after wetting it down with wet water (water with a couple of drops of dish washing detergent added) glued it in place with scenic cement (diluted PVA white glue can be substituted for the Walther's scenic cement). The Trees Learning kit provided plastic tree armatures, clump foliage and glue to make a variety of trees for the layout. Clump foliage was also glued to the ground cover to simulate smaller bushes. Minature turf clumps were used to simulate spilt grain growing around the tracks in the vicinity of the mill and in small spaces between closely situated tracks.

Operation:

4 'The Bottoms' Switching Layout

To add to the complexity and interest of switching operation I built some restrictions into the track plan **4**. The simulated mainline (lighter coloured ballast) between the points and outer end of each module will only take a GP35 or similar loco and 2 x 40 foot cars. The siding in front of the wedge shaped building will only take the loco and 1 x 40 foot car while the siding in front of the long split level structure will take 3 x 40 foot cars. The loco and wagons are fitted with Kadee couplers while Kadee delayed action and standard magnets are located on the layout to facilitate uncoupling action to position the wagons and for run around moves. To mark the position of the uncoupling magnets I made signs using pieces of "N" scale rail with a piece of strip brass as the cross member and soldered to the rail. I painted the assemblies white to assist with visibility. 34 foot covered hoppers and a 40 foot grain box car are used to service the Mill. Where possible I have used 40 foot box cars of different colours. I have found that it is easier to instruct children to move a particular coloured box car than to refer to box car road names when operating the layout. The same principle applies to the hoppers and tank wagons.

Lighting:

To add lighting to the layout I constructed a frame for each module from 42 x 19 mm pine and then added a valance to hide part of the frame and the LED lighting strip. The LED lighting strip on each module is connected to a terminal block on the frame upright closest to the centre of the layout. This facilitates the transformer for the LED light strip to be connected to each of the module terminals.

Transportation:

The layout is designed and constructed to be transported in the average family car fitted with fold down rear seats.....**M**

"Trackside with the SM"

Platform Lights

by Arthur Hayes - MMR

Another way to bring a layout to life is to add lights. They are a great way to highlight a scene or to show detail within a structure. Plus, it can give different effects under altered lighting conditions in the room like day or night. Today, there are various methods available to make it more realistic and easier.

Modelling the 60/70's it was time to reflect back to the era when I started work. Some country areas around the state did not have electric power. Just after I was married I dropped into Bobawaba to show Kerrie the Station Masters ringer washing machine, you kicked started it just like a motor scooter. Often the Station Instruction Book contained instructions on what lights that could used and when. You would think some Station Masters were paying the power bill out of their wages. In 1974 I was appointed to Coopers Plains in Brisbane, lighting on the platforms was not all that flash, just six goose neck poles with 40 watt bulbs. The local young lads would regularly climb the steel pipe poles and knock off the light bulbs. That was until the Station Master applied graphite grease to the top of the poles. It was funny in a way when they would come to the office and ask how to remove the grease. (*Kind of got you, how did you get that stuff on your hands, etc., we had a lot of fun with them*).

1 Light at Cattle yard loading ramp

For my new station platform extension at Wyandra, the lighting required was along the lines of what we had at Coopers Plains, just a steel pipe pole with a goose neck at the top with a shade for the bulb. The light needed to reflect a 40 watt incandescent bulb for the era I'm modelling. Previously, I added a light to the loading ramp at the cattle yards **1** using a small surface mount LED. The light pole was code 55 rail and the wires were glued into the rail web out of sight to the viewer. For the platform lights **2** I needed to find a different method for the wires. At first I was toiling with using 1 mm brass rod, but the wires would be visible. One x 1 mm brass tube was available, but would the tube

2 Platform seats under the lights

flatten out when bending the goose neck. One way to find out was to do a test pole, yep the method worked without flattening the tube.

Material used. **3**

K & S Brass Tube # 9830 1 mm x .225mm thin wall. (Pack of 4 pcs x 293 mm)
Grandt Line H0 # 5062 Lamp Reflectors.
DCC Concepts Proto white NADO LED NLPW (Steam/early diesel era). The pack comes with 1000 ohm resistors. Similar LED are available on eBay.

3 Tool and Materials Used

Tools.

Razor saw to cut the brass tube.
Wire Looping Pliers. Your Kadee Coupling uncoupling pin adjusting tool **3** will do the job. Micro-Mark or Burfitt Tools have them.

Construction.

1.First I painted inside the Lamp Reflectors/Shades with a white gloss white, I had some Humbrol gloss white # 22. A couple of coats may be required. Once happy with the paint coverage the hole was cleared.
2.Cut a length of brass tube to size. Allow for the goose neck and base board thickness.
3.Test the LED to make sure it is works.
4.Feed the LED leads through the lamp shade and the brass tube.
5.Place the brass tube in the looping pliers, I placed the lamp shed just clear of the pliers side. Close the pliers gently bending the tube.
6.Pull the LED leads placing the lamp shade on the end of the tube. Run a drop of super glue around the joint.
7.When glue is dry, paint your master piece. I painted them a light grey for a weathered silver look.
8.Add to layout, I made my light shade 10 scale feet above ground level. I made a jig (piece of styrene cut to the correct length) so that all lights are at the same height along the platform. Hook up the leads to your power supply. I have a 12 volt 1 amp DC bus for lights. The pack contains 1 k resistors, I feel this is too bright. I added a 3 k resister to reduce the brightness of the light. Also in the pack is a small tube of brown paint which can be applied to the LED.

I added a platform seat with passengers under the lights **2 & 4**, when the room lighting is reduced, the light highlights that area of the platform creating a separate mini scene. Another was placed near the cream shed, which is also the location where platform staff would load/unload roadside onto/off trains....M

4 Platform Lights Highlighting Scene (when room lighting is reduced)

Momentum or No Momentum . . .

That is the Question?

by Gerry Hopkins - MMR

On different chat lists and at modellers' meetings, the subject of momentum comes up. Some like it - some hate it. Often the question is "what values do you put in CV3 & CV4?" Although these are the two CVs for the momentum values, there are a number of other factors to take into account that can make the results very different.

First, I set the start speed – loco should just start to move on the first throttle step. On some decoders this is very easy (TCS WOW + Tsunami 2) others need a little adjustment of the BEMF (Tsunami 1 and to a lesser degree the Econami). When set correctly – makes driving a pleasure rather than frustration.

The next part is often overlooked – the top speed! The top speed on my layout is 30 mph for the mainline and 20 mph for switchers. In the Tsunami 1 this is done with the speed table but with the Tsunami 2, Econami and the WOW - then CV5 & CV6 are used.

How does all this relate to the setting in momentum? For both CV3 & CV4 a value of "1" means the time it takes to move from 1 speed step to the next is 0.89 secs. If 30 mph is at speed step 10 then a "nice" brake rate is 10 in CV4 this is 8.9 secs to come to a stop. If 30 mph is at speed step 28 then a value of 10 in CV4 will bring the loco to a stop in 25 secs. The maths have been rounded for simplicity.

When using the brake in a Tsunami or ECO – a value of 120 in CV4 will allow the loco to "coast" for a reasonable distance. With a setting of 110 for the brake, then 120 minus 110 is 10 a "nice" setting.

When using the WOW brake, there are 5 settings – you can press the brake up to 5 times for it to stop. First press is 20% brake, second press is 40% brake and so on.

The above momentum settings work for any decoder – we can then add sound to the mix. Because of the "lag" between the decoder setting and the level set in the throttle the sound is changed. On a steam loco the chuff is harder/deeper, while on a diesel the prime mover will notch up.

Just closing the throttle will cause "rod clank" on a steam loco, the prime mover drops to idle for the diesel. While braking will cause brake squeal for both once the loco drops to a moderate speed.

We have looked at the important part – stopping. Now look at acceleration (CV3) this ties in with the "start" point, if that is set correctly, and you turn the knob correctly, you should not notice a setting of 25 in CV3, it should be slightly less than the momentum programmed in.....M

Build a Spiral
with
Open Track Access

by Merv Bagnall
Spiral designed by Harold Albury

Spirals (*or helixes)* have been used for decades to move model trains from one elevation to another and they have been designed in many formats. There are various commercial products made from plastic that are available from your local hobby shop that will do the job. This is probably the easy of all methods to get some elevation happening without giving a lot of thought to construction methods. For some modellers, this is all they need on their layout.

Then there are the three most commonly used '*do it yourself*' methods that I am aware of, the first of which is by attaching timber risers to 'L' girder frames to get the desired rise. Another way is by using the block method, whereas dozens of similarly sized wooden MDF spacers are cut to the same size and are placed either side of the spiral road bed to get the track to rise at a gentle preferred rate, usually less than a 2% grade. Some modellers may also prefer to substitute the wooden blocks with continuous threaded rod with nuts and washers to adjust to the trackbed to the correct height. There are probably more methods that I am not aware of and all four methods above are fine, but all have one similar drawback when track cleaning is required or a derailment occurs in the spiral, that being, that there are obstacles either side of the trackbed that restrict uninterrupted access to the track.

1 Track open with no Obstacles

A good model railroading mate of mine, Harold Albury, needed to build a 4 tier spiral for his large N scale layout, but he didn't like the obstacles presented by either method when it came to cleaning and accessing the track around either wooden spacers or steel rods placed either side of the trackbed, so he came up with a different solution to enable full access to one side of the track **1**.

At around the same time when Harold showed me his new spiral, I was in the process of designing a new multi tiered double track spiral for a major expansion to my HO layout.

2 Jig set up to cut with Router attached

I was also concerned with access to the track and I liked the new design, so Harold has been very much involved in the development of my new spiral.

My layout room is approximately 6 metre square with the entrance on one corner, which is slightly truncated. Not all that large when compared to other train rooms, so every piece of real estate in the train room is valuable and needs to be fully utilised to have good operational ability. The layout is being built in two stages and I will outline the first of the two build stages in more detail in the January / February edition of MainLine. However to have an increased operational capacity, I found it is necessary to include a 13 track staging yard on a lower level and located under the main yard, so I need to use a functional and reliable multi tiered double track spiral to get the trains in and out during an operating session.

My spiral is double tracked, circular and has 7 levels, with an outside track diameter of 1600mm and it rises evenly at slightly less than a 2% grade. The first section of track to exit rises 3.75 levels from lower staging before the outer track exits, and then tracks either exit or enter the spiral at 5 separate locations in the remaining 3.25 levels. I will be capable of fully utilising both tracks to allow any train from any track in staging to be able to be routed to run in either the East or West directions on the layout, when exiting from the staging yard. The top three spirals will allow multiple options for routing trains to three higher levels of track on the layout. That will be explained in more detail in a later article on the layout, but in this article, I will focus on providing a general description on how to build the spiral only.

3 Mark trackbed with a ruler extending from the centre, then cut the end of section square with a Drop Saw

PROCUREMENT OF MATERIALS:-

So off to a major hardware stockist we go to procure all the necessary materials and lighten the wallet somewhat. The material list for my spiral is as follows, but if lesser levels in the spiral are required, then adjust the components on the shopping list to suit your needs.

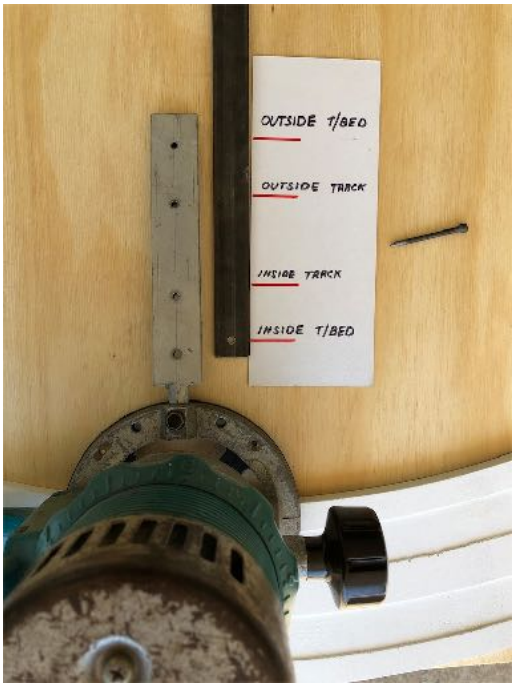
Materials

- 4 each sheets of 12 x 2400 x 1200mm ply.
- 12 each of 12mm diameter x 815mm long galvanised steel continuous thread rod (*the length will depend on how many tiers are required*)
- 36 each of 12mm galvanised nuts
- 24 each of 12mm x 2mm galvanised round washers
- 24 each of 12mm x 3mm galvanised square washers
    - "Tip - *Use galvanised rods, washers and nuts if you live anywhere but in the middle of the desert, as rust and corrosion may be an issue in years to come"*
- 84 each of 90mm long x 20mm diameter lengths of PVC conduit. (Photo)
    - "*Tip - Set up a jig in your drop saw and cut 84 (or how ever many you need depending on the height of your spiral) to 90mm in length*."

[*I am not concerned with running double stacks on my layout, but from tests carried out, that spacing should allow for double stack height, (only just though). If you have room for a spiral with a circumference greater than what I have used, then you will be able to increase the length of the spacers to more than 90mm and still maintain a rise of around 2%*].

- 12 each of 20mm varying lengths of PVC conduit, required for the bottom level to commence the rise in increments. (*My lengths were 7.5, 15, 22.5, 30, 37.5, 45, 52, 60, 67, 75, 82.5, & 90mm, but the lengths will be determined by the diameter of your spiral and the % of rise required, plus any imperfections in the base timber. Once in place, test with a train and do some adjusting of lengths if needed. (Photo)*
- 84 each of 3mm x 25mm x 150mm lengths of mild steel with a 12mm hole drilled 15mm in from one end and centred. (photo 8)
- 1 x 150 pack of #20 Wood Joining Biscuits
- 2 x 2400 lengths of 70 x 35mm construction pine. (*for frame*)
- 3 x 2400mm lengths of 40 x 40mm timber (*for legs and bracing*)
- 2 sheets of 1200 x 2400 x 17mm MDF sheet *(for the base*)
- Track (*I needed to use 70 metres for my spiral*)
- Cable 1.5 sq mm and 0.75 sq mm (*for bus wires & droppers*)
- Paint

4 Router set up to cut inside trackbed



5 Showing Router with Radial Arm Attachment & Positioning Points

CONSTRUCTION:-

Trackbed

Start construction of your new spiral by cutting each section of trackbed from the sheets of ply. Now you could just head off to your local cabinet maker and exchange some funds to get the track bed for your spiral cut out professionally if you wanted to, but if you are a bit handy in the toolshed, then you can easily cut it out just as accurately at home, with a couple of jigs **2** and some basis power tools, and save yourself a few dollars.

As the saying goes, a photo says a thousand words, so if you would like to refer to the attached photos while reading the description, you should get the drift on how to cut out your trackbed yourself.

Firstly, make up a jig from 20mm x 3mm flat steel as shown in **2, 3, 4** and **5**.

Attach a router with a 6mm cutting blade (*or you could use a jigsaw),* onto a radial arm and anchor it in the centre of the sheet **2**, at a distance of half the outer diameter of your spiral, plus an allowance for clearance, which we made as 60mm from the centre of the outer track. Cut the outer diameter for your track bed from the 12mm ply sheet.

Both tracks are recessed 2mm into the trackbed in my spiral, so the next step is to cut out both the outer and inner track positioning segments **6**.

6 31mm Router Blade used for cutting trackbed recess

For my spiral, the trackbed sections shown in **6** are 132mm wide and as mentioned, they are double tracked with 60mm between track centres. So next, fit a the 31mm router blade to the router (*32mm blades are readily available*) and cut out both recessed track segments so as the recesses are centrally located. This allows the sleepers to fit snuggly into the recess and to ensure the circumference of the tracks remain an even circle with no unnecessary kinks in the track. All sections were painted before assembly.

7 Biscuit cuts in end of the Trackbed Sections

When the track segments are routed,

then reposition the router and reattach the 6mm cutting blade (*or jigsaw*) to cut the inner diameter of the trackbed section.
Continue to reposition the jig to a different position down the length of the sheet of ply and continue to cut out your trackbed sections as described above until the required number are cut.

When all track bed sections are cut out, then square the ends of each section by cutting along the line as previously marked in **3** above, and cut the ends of each section of trackbed section in a drop saw to ensure they are cut square. Then cut two biscuit slots into the end of each section as shown in **7**.

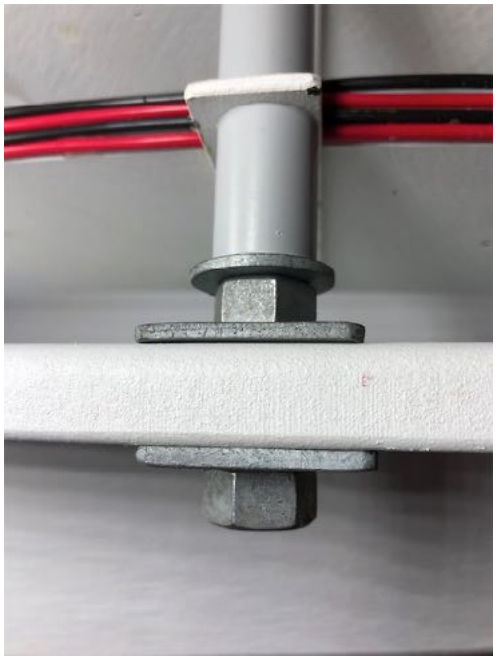
All measurements will be different for each spiral, depending on the diameter, number of tracks, number of levels etc, so I haven't included many measurements, but I hope the description is generic enough to allow anyone to construct their own spiral.

Base

The spiral is built on a 1660mm x 225mm x 17mm MDF base, which is supported by a hexagonal 70mm x 35mm frame, with six 40 x 40mm legs which are evenly spaced and braced to ensure no movement as per **8**. Two sheets of 1200 x 2400 x 17mm sheets are required to form the base.

8 Base, Frame and Legs

Twelve x 12mm holes are drilled into the base to support 12 x 12mm x 815mm long continuous thread rods, which are evenly spaced around the circumference of the base. The location of 4 of the holes are shown in **8,** and are drilled 20mm from the outside of the base and approximately 420mm apart. The base was painted.



9 Nut, Washer and PVC Spacer arrangements

ASSEMBLY:-

With all components cut and painted where necessary and the base constructed as described above, it was now time to start assembling the spiral. Nothing difficult here, just like playing with a Mecano set.

Start by inserting all twelve x 12mm galvanised rods into the pre drilled 12mm holes in the base as described above and secure firmly with one square 3mm galvanised washer and one 12mm galvanised nut either side of the base as per **9,** and tighten the nuts firmly.

Place one x 12 x 2mm galvanised washer on top of each nut as shown in **9**.

Place one of the 12 varying length PVC spacers as noted above in '*Procurement of Materials*', onto each of the washers as shown in **9**, starting with no spacer on the lowest point and proceed with placing the 7.5mm spacer on the next and continue to add the remaining eleven spacers from the smallest to the highest in order of the direction you want your spiral to rise.

10 Order of installation of nuts, washers spacers and steel supports

Place one 3mm x 25 x 150 mild steel trackbed support arm on each of the twelve PVC spacers, then place one of the 90mm PVC spacers on each of the twelve steel brackets.

Continue to place steel brackets and PVC spacers on each rod until the desired number of levels is reached as per **10.**

Place one 2mm washer and one 12mm nut on top of the top bracket and tighten the nut **10**. You now have a very solid tower to support the ply trackbed sections, as well as the track. You can loosen and tighten each rod during assembly of the trackbed as required. *"Tip, position all 3mm steel brackets to the side until you are ready to install the trackbed. Then just loosen the top nut and swing the bracket towards the centre of the spiral, then tighten the top nut."*

Assemble one complete circular section of trackbed ply by joining two or three together and by inserting and glueing 2 x #20 wood joining biscuits into the slots which are cut into the centre of the end of each section as per **11**. *"Tip - assemble one level at a time and then lay and glue the track in place before proceeding to assemble the next level."*

11 Glue Trackbed sections together with two #20 Wood Joining Biscuits

TRACKWORK AND WIRIING:-

With the wood work out of the way, now for the track. I didn't want to have an unnecessary amount of wiring in the spiral, but I did want to have maximum power available with no electrical resistive losses. On all other parts of the layout where ballast and water can have a severe impact on power losses to the track, I solder a dropper to each and every length of

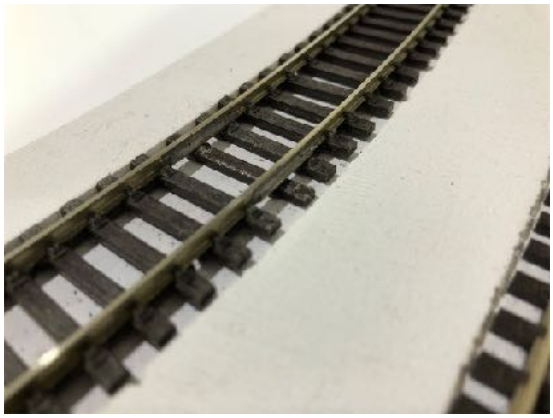
rail. To do that in the spiral would be a nightmare of untidy wiring, so a better solution was needed.

"I use code 70 track primarily on all the viewable parts of my layout, both commercially available and hand laid, but for the spiral I used code 100 Peco track. Two reasons for using this track, the first is that there is more 'bulk' of material in code 100 than used in code 70 track and I would expect there would be less likelihood of expansion and contraction issues in the spiral compared to what I have experienced on other parts of my layout. The cost is also another factor, as you don't see the track in the spiral and being that there is approximately 70 metres of track required for both tracks, there is a significant saving by using code 100 flex track."

12 Bead of white glue under track

Before wiring is undertaken, the track is glued to the trackbed with a bead of white glue **12**, and I then clamp the track to the trackbed overnight to ensure it is positioned and sets correctly.

As there is no ballast in the spiral, I could relax my golden rule of having a dropper on each length of rail.



13 Solder every track join

I soldered each and every rail join in the spiral and soldered both sides of the joiner **13** using Bakers soldering flux to ensure the 60/40 solder with core flux made a solid join. I soldered each join while the track is straight and then bent the track into the curved position to ensure there are no kinks at the track joiners.

14 Connection of Track Droppers to Vertical Bus Wiring

I then divided the diameter of the tracks into three and ran a bus wire for each track, both horizontally at the base level and then vertically at three equal spacings of approximately 1650mm apart. From there I soldered the droppers to each vertical bus cable as shown in **14**, and also directly to the tracks.

When all track work and wiring is completed, the

trackbed is then secured to the steel support bracket by turning all steel brackets so they point toward the centre of the circle. Lift the ply trackbed and run a bead of silicon along the top of each steel bracket as shown in **15** and clamp the bracket to the ply and let it set overnight for a secure joint.

By using white glue and silicon, the track and the trackbed can be removed at a later date if required, but the materials used are strong enough to keep the track and trackbed in place under normal conditions.

15 Secure steel support bracket to trackbed with a bead of Silicon

The spiral will be a vital part of future operating sessions on my layout and I look forward to fully utilising it in the coming months when the next part of the layout is fully operational.

If you are looking to have a go at building your own spiral and would like a bit more in depth information, then send an email with your questions to the Editor and we will answer your questions where we can do so.....**M**

Rails By The Bay – NMRA 2021 National Convention

July 4-11, 2021

www.nmra2021.com

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100% NMRA Inc.-AR Club News

Wide Bay Burnett Model Railway Club Inc.

Update for MainLine

By Stephen Reeves

Since our initial article that featured in the July/ August 2017 edition of MainLine a few changes have taken place for the Wide Bay Burnett Model Railway Club (WBBMRC). One of the major changes experienced by our club was the shifting of our annual Bundaberg Model Train Expo from the Bundaberg Civic Centre to the Bundaberg Region Multi-use Sports and Community Centre, or Multiplex as it is more commonly known.

This move was extremely beneficial due to the increased space available and having air conditioning and excellent lighting throughout all areas makes the venue very attractive. Our first show **1** was held in the Multiplex in 2018.

1 General View of 2018 show

2 One of the amazing scratch built live steam locomotives on display in 2018

To increase the number of patrons, and to broaden the scope, and therefore the appeal of the show, we welcomed other model building hobbies from the Bundaberg region (and beyond) for 2019. The hobbies represented included aero-modelling **3**, RC yachts, and RC cars. These were all local clubs. In addition, we were pleased to host tank modellers from Brisbane and the Model Engineers and Live Steamers Association (MELSA) **2** located at Maryborough. The NMRA was also represented with their own stand at the show.

3 RC Bi-Plane on display at the 2019 show

Furthermore, to reduce our costs in hosting the Expo we applied for a Gambling Community Benefit Fund grant, to purchase our own set of crowd barriers **4**. Our grant was successful, and we took delivery of the barriers in time to use them for last year's show. The remainder of the grant was utilised to purchase blinds and curtains for our clubhouse to provide security, comfort, sun-protection, and privacy. We also were able to purchase some storage equipment such as a filing cabinet and cupboards **5** to secure important items.

4 Crowd Barriers for use at our shows

5 Blinds and Cupboards in our Clubhouse

The WBBMRC has had a very quiet year for 2020 due to the COVID-19 pandemic and the subsequent restrictions that have been imposed. Our annual Model Train and Hobby Expo, which was to be held 21st and 22nd March, was one of the first 'casualties' of events they were cancelled due to the reduction of people who were allowed to gather indoors.

We hope that we will be able to host our show next year and will begin to cautiously plan to run it again in March, whilst monitoring the ongoing situation, and the government response, and measures regarding COVID-19.

Our AGM was also postponed and in turn was held Saturday 12th September, when normally it occurs in April. The committee was largely unchanged with myself, Stephen Reeves, continuing in my role as President, Wendy Bucholz as Secretary and Graham Nicolson as Treasurer. Our Vice-President Jeff Rosenberg has stepped down to become a committee member and Cory Bucholz has taken on the Vice-President's

position. Rounding out our committee is Craig Thistlethwaite as our other committee member.

During 2019 we had some discussions regarding a club HO layout and this progressed into getting some plywood cut for the layout, however, work has halted due to lack of funds from not running our show this year. With the prospect of another successful show in 2021 we anticipate we will be able to further advance our project.

The WBBMRC has been leasing facilities off Bundaberg Regional Council for some time now, and whilst this has been suitable for the club, we are starting to plan for a new purpose-built facility. This will provide much more possibilities for increasing our membership, facilities, and the range of activities, and involvement we will be able to offer to the community of the Bundaberg region.

If you are travelling to Bundaberg please drop us a line if you'd like to visit our modest clubhouse, which houses our N scaled layout, "North Kogan". I hope you might be able to come up in March next year to attend one of the best Model Train Expos in Queensland. We look forward to seeing you there!....M

Magazine Publishing Deadline Dates

If you are submitting An Article for MainLine, your article may be submitted at any time and it will be included in a future addition where the subject matter will allow for a balanced number of differing subjects in MainLine, where the number of available articles will allow that to occur.

If you are providing a Divisional Report, it needs to be submitted prior to the cut off date of the 5th of the month of MainLine issue, to ensure the editor can complete the edition in the required time frame prior to release.

100% Club & SIG Activity Reports can be submitted at any time but preferably well before the cut-off date of the 1st of the month of MainLine issue, to ensure that their report is included in the next MainLine edition.

The following are the deadline dates you may need to know for the next two editions;-

January / February 2021
For 100% Club & SIG Activity Reports = 31st December, 2021
For Divisional Reports = 5th January, 2021
Publish Date on Web = < 15th January, 2021

March / April 2021
For 100% Club & SIG Activity Reports = 1st March, 2021
For Divisional Reports = 5th November, 2020
Publish Date on Web = < 15th November, 2020

City of Sails Model Railway Club

By Phillip Sharp

September Meeting #1

Auckland was under a level 3 lockdown late August and we postponed the August meeting until early September. The time and date for the new meeting was arranged and confirmed in just 14 hours, illustrating one advantage of all club members being regular email users.

The first September meeting was a hands-on clinic on decaling and run by Paul Hobbs. Seven of our eleven members attended. Having seven meant we did not run afoul of the cap in Auckland at the time of 10 people in a gathering.

Paul first gave an introduction to decaling using Jeff Hanke's clinic Modeling Basics: Decaling and some of his own slides (the slides for Jeff's clinic are easily found on the internet). Then it was to the hands-on part. We first practiced putting several decals on a strip of smooth plastic. Paul challenged us to lay down a thin, 10-centimetre long straight decal. I clearly need more practice. We then experimented with applying Solvaset to decals Paul had prepared.

A thoroughly enjoyable clinic finished off with a moderately calorific supper.

September Meeting #2

This meeting was held at the Western Districts MRC (WDMRC). We again had seven members present but it was a different seven. The aim of the meeting was to build a cardstock model of a canal boat for the WDMRC HO layout.

1 Concentration

Possibly because we are a smallish club of 11 members, we get on well together and our meetings are marked with much merriment. This meeting was no exception. If anything, there was more laughter than normal. **1**. shows attendees hard at work cutting out the pieces.

We did not make as much progress as we hoped. We had planned to get the canal boat design printed on to 250 gsm card but the printing costs were too high. Instead, we glued paper copies of the design onto cardboard. In hindsight, the cardboard was too thick and this slowed progress.

The situation was retrieved by supper which included spicy potato and pea samosas made by CoSMRC member Elizabeth Mead.

October Meeting

The October meeting was joint with the Auckland Garden Railway Society Inc (AGRSI). Both clubs had been wanting to hold this meeting for several months but Covid-19 had caused delays.

The meeting was at the garden railway layout of Michael Hilliar, a life member of the AGRSI, and who along with his wife Liz has been rightly credited with guiding garden railways in Auckland through low points during the last

2 Some of the attendees at the joint meet

3 A G scale Santa Fe locomotive in war bonnet

4 A G scale European locomotive

20 plus years. Around 40 people attended,
the largest attendance I have seen at an AGRSI meet outside of conventions. The 40 included seven CoSMRC members and about six younger members of the community. The latter had much delight in waiting for trains to reappear from a tunnel or from behind scenery, or in watching a train cross a bridge. The weather was fine and there was a near continuous supply of food and drink. This contributed to a delightful afternoon of talking about, watching, and in some cases, running trains.

2 shows some of the attendees inside the layout. **3** and **4** show two of the battery-powered G scale locomotives that ran. **5** is a photograph of children watching a train cross a truss bridge.

5 Watching a train cross a truss bridge.

Other Activities

The Auckland-Hamilton-Tauranga Free-mo group held their annual running meet late September in the small country town of Paeroa. HO Free-mo is increasing in popularity in New Zealand and this was reflected in the numbers compared with last year's running meet. Over 30 percent more track and more people contributing modules. James participated in the event and Philip spectated. Both learnt a lot about Free-mo.

Mid October, the aviation, military and rail

sections of Auckland's Museum of Transport and Technology (MOTAT) held a by invitation-only running evening to raise funds for a young rail section volunteer who is seriously ill. Several CoSMRC members attended. In addition, CoSMRC member Anthony Eames who is a rail section volunteer, helped with the running evening. He offered jigger rides. **6** is a middle-distance photograph showing Anthony at the right end of the jigger driving.

6. Jigger rides at MOTAT

Late October, about half of the CoSMRC members helped crew a layout for three days at the Auckland edition of the pop culture convention Armageddon Expo. A large number of people attended the convention. It is unclear how much the layout promoted the hobby of model railways. A photo taken by Mark Sheldon

7 Crewing at Armageddon

7 shows Anthony (left) and another CoSMRC member Craig Mayall (centre) crewing the layout.

New Member Chris Draper who works for Kiwi Rail has recently joined the NMRA. Chris owned Winter Creek Railway, a dual gauge 5" – 7 ¼" railway, until he recently sold it. Before Winter Creek Chris had a large N scale layout. He is now back with the smaller scales.

Division 5 Zoom Meetings

Paul, James and Philip attended the second Division 5 zoom meeting hosted by Division 5 superintendent Kel Shearson. All of the approximately 30 NZ NMRA members were invited. For various reasons just nine members attended.

The main parts of the meeting were a show and tell of what was on our work benches, and video tours of two member layouts. One tour was of James' incomplete, large, triple-deck mushroom layout that models part of the Montana Railway Link. James attended the meeting as James Smartphone and James Laptop. James used his smartphone to video his layout and a track plan that he had open on his laptop screen.

The meeting was a very good length of one hour and there was strong support for continuing with this series of meetings.

The next in the series was held early October. The overall attendance was up compared with the previous meeting, as was the number of CoSMRC attendees. The meeting got a little technical at times with Alex Sheppard, an LCC expert, and Mike Hill, CoSMRC president, discussing the pros and cons of LCC vs a wi-fi based approach. After a while, the host and Division 5 superintendent asked Alex and Mike to defer their discussion to another time…….M

Divisional Reports

As the restrictions for having Divisional meetings start to ease, we may soon again be able to attend Divisional Meetings around the country. Just for now though, meetings have been restricted due to the pandemic and activities to report on have been limited. Those Divisions who have been able to have meetings and who have sent me their activity reports, have their reports recorded below.

Division 1,

September 19th Meeting:-

Division 1 held a 'Virtual' meeting on the 19th September.

There were approximately 20 Division 1 members who participated in an online 'Zoom' meeting. No minutes of the meeting were available at the time of writing…..M

October 24 Meeting:-

Division 1 were able to hold a meeting at the home of Darrel Lee. It was well attended and was the third time this meeting had been scheduled in consecutive months, however 3rd time lucky and the meeting did go ahead on this occasion. No minutes of the meeting were available at the time of writing……M

Division 2

I have not received any report of Division 2 meetings having been held during the months of September & October……M

Division 3

I have not received any report of Division 3 meetings having been held during the months of September & October…..M

Division 4

From Frank Godde (NMRA Inc.-AR Div4 Superintendent)

October 25th Meeting:-

We had our first meeting here in WA for a little while on 25 October 2020 at 2 pm. We had just 4 members present: Frank, Rod, Peter, and our newest member Dave Whibley.

Introductions were made outside where Dave had brought his amazing G scale bridge **1**. This was 3mtrs X 800mm, so it was a sterling effort to get it set up. The 34 degree day added another dimension to that effort!. The bridge was complete with scenery, animals, trees and weathering. A wonderful achievement and I will talk more about this bridge further in the report.

1 Dave Whibley's G Scale Bridge

The meeting decided that in future, we would meet bimonthly on the 3rd Sunday vis 17/1/21; 21/3/21; 16/5/21. Our next meeting will be held at Dave's house in Lesmurdie.

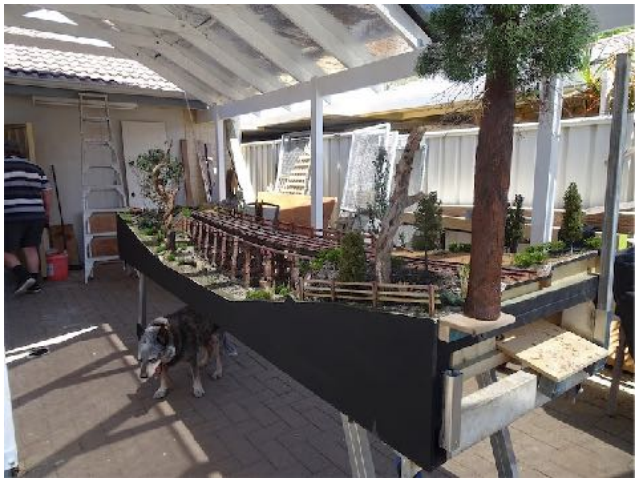
We discussed country meetings but as our country members are all between 3-5 hours away from the metro area, that logistically, it is not feasible to travel there for a meeting.

An exciting part of the meeting was to present Dave with his Golden Spike award **2**. Dave is an amazing modeler and we will all learn a lot from his ideas and techniques.

2 Dave Whibley receiving his Golden Spike award from Frank Godde

Dave's bridge arrived in a covered trailer and then was pulled out just enough so that the front swivel wheels guided the model along the floor. Dave had thought about access sizes and has made this module wide enough to go through standard doorways. Once the module was where we wanted to display it, Dave calmly pulled out two bolts in the base, lifted one end and miraculously two steel legs appeared, and were set in place to bringthe module up to 1 metre high (a comfortable viewing height).

Dave has done a great job with the trees by using a polystyrene armature and he used



swamp cypress for the branches and leaves. He has placed a pelican checking out the fish; an owl was sitting in a tree; a snake was on the ground below and some swans were in the swamp. He made a bridge maintenance shed completely detailed inside including tools and a bench. Parked at the side of the shed was a nicely weathered truck. Unfortunately, it was such a hot day, we didn't stay too long at the bridge but retreated to the air conditioning inside. We are very grateful that Dave made the effort to bring his latest model for us to admire.

The meeting finished about 6 pm with Frank and Dave reloading the bridge module into the trailer.

All in all a successful first meeting.....M

Division 5

From Kel Shearson (NMRA Inc.-AR Div5 Superintendent)

Please refer to the report for the 'Zoom' meeting for Division 5, as reported in the City of Sails 100% MRC report on page 33. ....M

Division 6

From Jane Robinson (NMRA Inc.-AR Div6 Superintendent)

September 12th Meeting:-

There were 13 members in attendance for this meeting and we visited the AMR clubrooms located in the Outer Harbour Railway station.

Discussion of developing modules to join onto NT Junction were held.

Methods of ways to clean track led to an interesting discussion between members. Our first meeting since March was held at Bob Bevan's home at Mallala. A big thank you!

David Orr has volunteered to be our new Divisional Superintendent next year.

Commenced with some freebies to give away.

John Prattis Received his Chief Dispatcher Certificate **1**

Some of our members **2**.

1 Ray Brownbill presenting John Prattis with his Chief Dispatcher Certificate.

2 Photo of some of our members

3 Some of the Sedum trees made by Michael

4 Trevor Seddon shows us 3D church.

Michael Robinson showed how he decorated some dried Sedum flowers to make into trees **3**.

Trevor Seddon showed us his 3D church and Archimedes pump he is working on **4**.

5 David Orr shows us his storage boxes

6 Vern Cracknell showed us some mini spring clamps he purchased

David Orr had modified some wooden storage cases to sell **5**.
Vern Cracknell showed some mini spring clamps he purchased from Cheap as Chips **6**.John Prattis Showed us his early NSW goods vans **7**.
John Prattis showed us his Korea track cleaning model **8**……M

7 John Prattis showing his early NSW Goods Van

8 John Prattis Korea Track Cleaning car

October 10th Meeting:-
From Jane Robinson (NMRA-AR Div6 Superintendent)

Thanks to David and Maggie Orr for hosting our October meeting. David was presented with his host plaque.

There were 13 members in attendance **1**.

Our meeting diary for next year is now complete. Peter Jackson has volunteered to host the January meeting instead of David Teague. Thank you for all the members who volunteered to host a meeting.

The raffle wasn't drawn this meeting.

Business:

1.Finances – Ron Solly reported no change.

2.AP - Ray Brownbill spoke about a Chief Dispatcher Certificate for Peter Jackson.

3.Library - Michael Robinson reported that we had received two more NMRA magazines and were available to borrow.

4.Social - Trevor Seddon reported on our lunch at Modbury Plaza Hotel which there were five of us in attendance.

5.Modules- Ray Brownbill reported there was no further progress on them at present **2**.

1 There were 13 members in attendance

2 Ray Brownbill Reporting on Modules

6.Ainslie Brittain contacted me regarding Ray Applebee's layout. He is helping Marcelle to list the items to be sold and will make a list which I will send out to members in the next few weeks.

3 Peter Jackson with a Building Mock-up

Something to consider in the future.

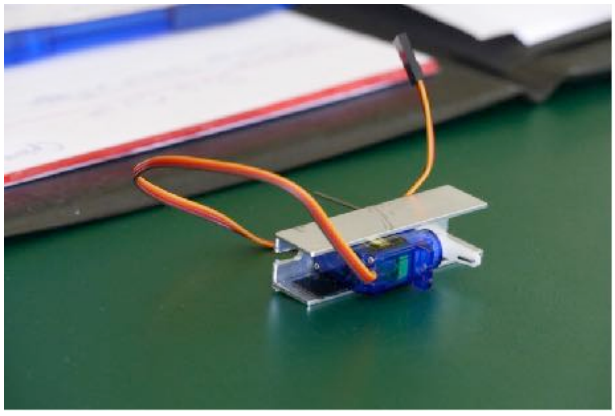
7.David Teague rang and asked for me to remind members to contact him if they wish to have their shirt/jumper embroidered with the NMRA logo.

8.November meeting will be held at Ray Brownbill's home.

9.Ron Solly reported that the future plans for AMRE are still unclear at present.

10. I made the suggestion to members that we could give any old railway magazines away to visitors at various shows instead of putting them in the bin.

Bring and Brag



4 Ardino Servos used by David Orr

5 David Orr with new Control Panel

Peter Jackson showed us how he made a mock-up model of a building and tried various texture papers from "Clever Models" until he was satisfied with it **3**. David Orr showed us how he was using Ardino servos for his layout **4** and also his new control panel **5**.

Vern Cracknell **6** explained to us how Marklin LGB club he belongs to sends out a gift to members and then runs a competition to see how they use it. This years is a lineside telephone box which Vern is going to build a diorama to fit it.

Our meeting finished at 3pm and we visited David's On30 scale layout **7** called 'The McLean County Railroad' and browsed his table of railway articles he wished to sell or give away. We had a great afternoon tea thanks to Maggie and admired her and David's new outdoor area and garden.

6 Vern Cracknell

Ken House has videoed David's layout and those members who were unable to attend our meeting can view it on Youtube. We plan to do this for future meeting with the host's permission. Here is the link to Ken's channel. https://www.youtube.com/watch?v=OCSvcPlXzR0

7 David Orr's Layout

Thank you Ken for doing a video of David Orr's layout.

Thank you to Michael Robinson for taking the photos…..M

Division 7

From Les Fowler (NMRA Inc.-AR Div7 Superintendent)

With the status quo not changed re home visit numbers etc, essentially no activity……M

Division 8

I have not received any report of Division 8 meetings having been held during the months of September & October…..M

Division 9

From Chris Minahan (NMRA Inc.-AR Div9 Superintendent)

The Zoom meetings have been reduced to Friday evenings.
The Taree Club has recommenced operations on Wednesdays and Saturdays.
The Blackhead has recommenced operations sessions twice monthly……M

Division 10

From Pat Britten (NMRA Inc.-AR Div10 Superintendent)

From the start of March through to the end of June, I was unable to travel back to Tasmania due to the state's lock down.

When I was able to get back I was subject to a 14 day quarantine period every time I flew back in to the state, as I am a FIFO worker. I am happy to say as from Sept 20th I no longer need to quarantine.

So I can get the division up and going, I will I start visiting the various clubs and shops in this state, and provide handouts and brochures etc about the NMRA…..**M**

What's in the Next Edition

- ***The Braidwood Division:*** Modelling a location in NSW that in reality never had a railway to service their town, is a challenge. Even though the town tried hard to get a real railroad, then maybe one in miniature will do.
- ***Chicago Rock Island:*** New life after a few years of storage for an Alco HH unit following a new paint job with decals and light weathering.
- ***Wheel Wagons:*** Use all those unwanted wheel sets that you have replaced over the years by giving realistic loads to your open wagons.

And So Much More ……