MainLine

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Australasian Region
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NMRA Australasian Region Directory

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Contributions

All members of Australasian Region are invited to submit articles of a railway nature for publication in Mainline. Submissions in Word or JPG format can be Emailed to

editor@nmra.org.au. or to my home Email address rjtonkin@iinet.net.au

Original uncropped photo files would be preferred.

Please ensure any contributions of copyrighted material have written approval from the copyright holder for the use of the materials.

Disclaimer

All comments published are the views of the author/authors and not the views of NMRA AR

Articles are provided by members in good faith and the views expressed therein are not necessarily those of NMRA AR

Cover photo

Arthur Hayes photo of a Union Pacific freight lead by EMD SD70Ace 8488 and GE AC4460CW 7307 at Portland Oregon in 2015.

Target dates for future issues

July/August

Content submissions **15 August2016**

Publish date on web **31 August 2016**

September/October

Content submissions **15 October 2016**

Publish date on web **31 October 2016**

Contents

Articles

Regular features

From the President's Desk

Welcome to this edition of the electronic MainLine.

Planning is well advanced on our Australasian Region mini-convention for this year. The Convention will be a one-day event on Sunday 11th September 2016 with layout tours on the Saturday prior to the Convention and on the Monday following the Convention. The Convention will be held at the Berowra Community Centre in the northern suburbs of Sydney. More details including the clinic program can be found on our web site at www.nmra.org.au

The transfer of all members to a 1 July membership renewal date should be complete as you read this. That means if you have not received your membership renewal in the last month and acted upon it, you will need to contact our Membership Officer, Erik Bennett, to sort out your membership situation.

The NMRA National (in the USA) asked our Region to submit a bid to conduct the National (world-wide) Convention in Australia in 2022. Martyn Jenkins (Div 1) and is small team have put together a brilliant bid package proposing to hold the 2022 Convention at the Royal Pines Resort on the Gold Coast. NMRA National also asked England to submit a bid and their bid is based on holding a convention in Birmingham. The Board of Directors will evaluate the bids and advise a winner during this year's convention at Indianapolis in July.

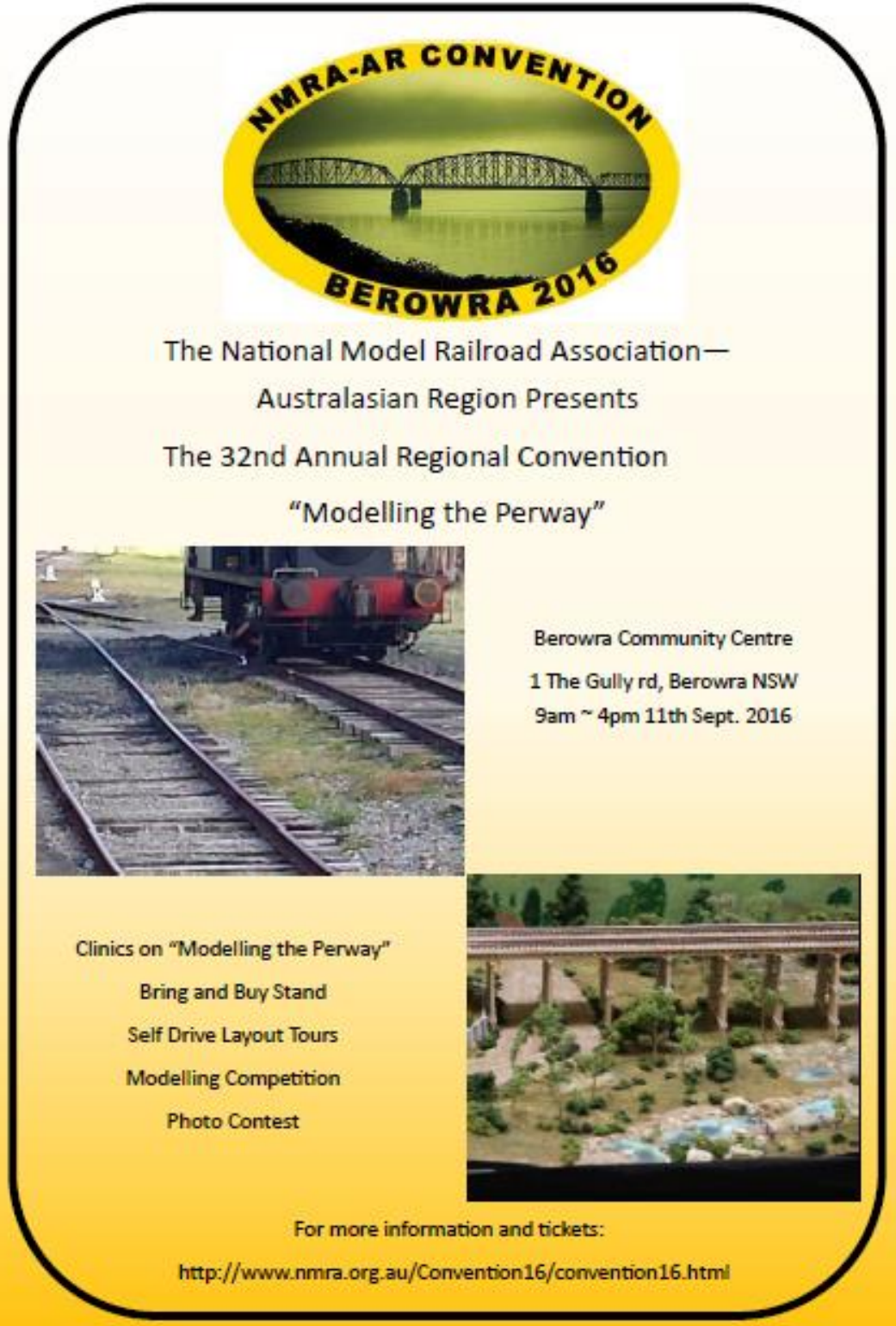
The Achievement Program (AP) is going strong as evidenced by the numbers of MMRs, especially in the smaller divisions such as Divisions 2 and 6. The APs are one of the great benefits of being an NMRA member. This benefit cannot be provided by any other organisation. Therefore, I encourage you all to talk to the Assistant AP Manager in your Division and get involved in the program. It costs you nothing and it helps improve your hobby skills.

Until next time, enjoy your modelling.

David O'Hearn

AR President

16 June 2016



Education Program

WANTED – EDUCATION CHAIR

The current Education Chair (Peter Burrows) has retired from this position as he is now the AR Secretary and cannot do both jobs. We are seeking an enthusiastic and energetic person to take over the role to assist the Australian Region Committee (ARC) to build upon the work done by Peter and Rod Tonkin (who is now our Editor of ML) that assists members to access information and training to improve their modelling skills.

This is not an easy job and the pay is zip but can potentially bring great satisfaction and the gratitude of members. It involves building a reference knowledge base and linking with the US EduTrain program and our Achievement Program (AP). The principal tasks in order of effort and importance are as follows:

- Collect and maintain a list of the publisher/web addresses of presentations on advanced modelling subjects/techniques that can assist region members improve their modelling skills.
- Develop and maintain a data base of Australasian Region members with modelling skills and or prototype knowledge and presentation skills willing to share their skills and or knowledge with fellow members on an individual or group basis.
- Work with the AR Achievement Program Manager to identify areas where training could be provided to members to assist them in attaining their APs.
- Maintain the Beginners Program to assist anyone getting started in model railroading.
- Ensure the application of EduTrain principles to training materials developed in the AR and other Regions.

Anyone interested in taking on this role or wanting more information should contact the AR Secretary at secretary@nmra.org.au.

Editorial Announcement

MainLine goes Bi Monthly

This issue of MainLine marks the end of an era. From the next issue onwards MainLine will be published bi monthly. Since I took over editing MainLine, it became obvious the three monthly publication interval did not support promoting region, division or 100% club events. Changing MainLine to a bi monthly publication gives us more opportunities to publicize upcoming events. Digital distribution of MainLine makes a bi monthly publication interval possible without additional cost to our region.

How will the change alter MainLine? Currently an issue of MainLine is thirty two pages giving us 128 pages per year. The number of pages of an issue of the printed MainLine was dictated by the printing process. The number of pages in a printed issue had to be divisible by four. This production limitation no longer applies. Being digitally produced the number of pages in an issue of MainLine will depend on content. The intention is to publish at least as many pages of content in the bi monthly version of MainLine as was published in the quarterly version. Allowing for the additional two extra issues' covers, region index and title pages this will be around twenty two to twenty four pages per issue.

The size of each bimonthly issue will depend on region activities, annual general meeting reports, convention news, office bearer's reports, division news items, coming events notices and members contributions.

This is the opportunity for convention chairmen, division superintendents and 100% clubs to promote your planned events by listing them in MainLine so web browsing railway modellers (Potential members) can see what we do.

Individual members can help MainLine by contributing articles, notes, hints, photos etc. Contributing copy to Mainline earns you points towards your Achievement Program "Model Railroad Author" Award . (A page of text or photos published in a regional magazine is awarded two points towards the 42 points required for the award. A scale drawing is awarded four points per page)

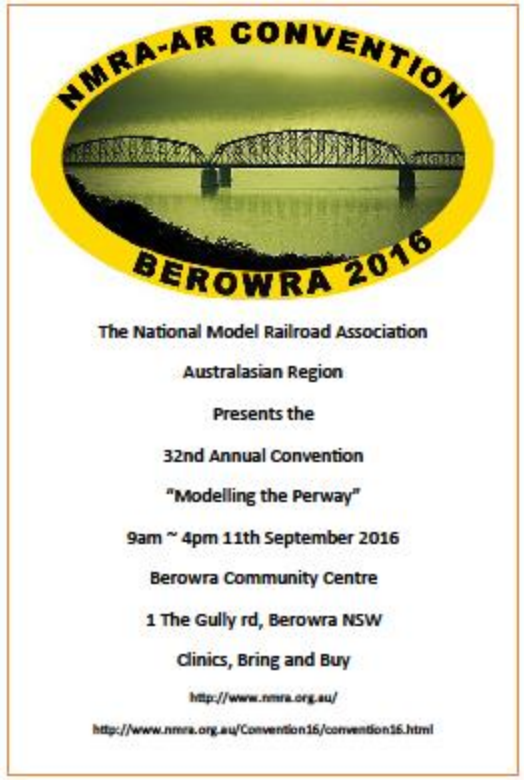
Regards

Rod Tonkin Editor MainLine

Australasian Region 2016 Convention Layout Tours

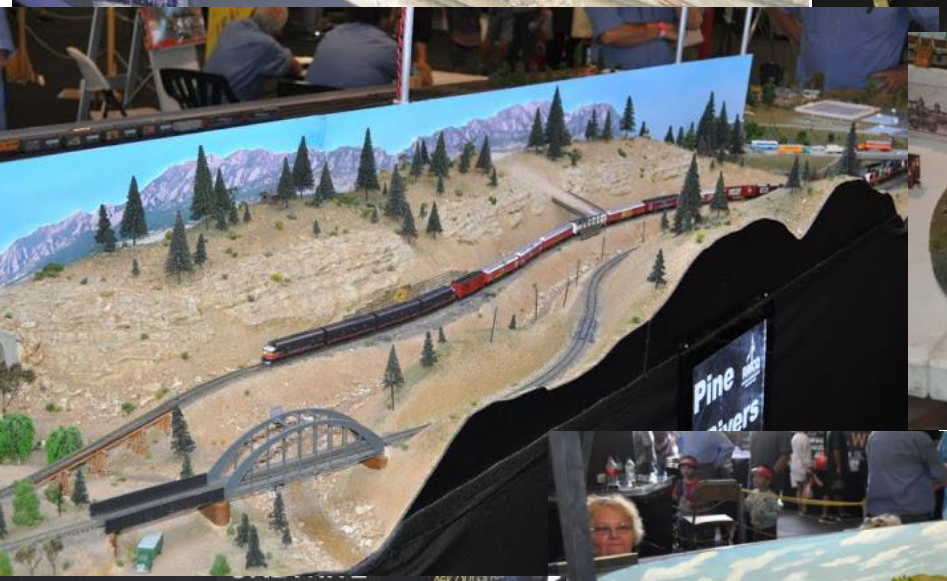
The layouts shown below will be available for viewing on the Saturday between the hours of 9.00 am and 5.00 pm in most cases.
More details will be shown on the convention web page as they come to hand. More layouts will be added.
You can click on the layout to see more details of the layout.
Some of the layouts may host operating sessions that will require that you book for the sessions.

Layout	Scale	Owner	Suburb	Scenery	Running	Control System
Great Northern - Great Falls Sub	GN - HO/HOn30	Gerry Hopkins MMR	Narara	97%	100%	CVP
Barren Creek & Santa Fe	SF - HO	John F Parker	Umina	94%	100%	CVP
Costaplenti	SP - HO	Doug Kirby	Woy Woy	70%	95%	CVP
Santa Fe - Shortlands Sub	SF - N	Doug Cook	Shortlands	95%	100%	DC
Cedar Valley	AM - HO	John Saxon MMR HLM	Yatalunga	90%	100%	CVP
Essence	NSW - HO	Colin Hussey	Wadalba	50%	50%	NCE
NSW - Buff Point Branch	NSW - HO	Sam Mangion MMR	Buff Point	95%	100%	CVP
Barmendman	NSW - HO	Dennis Clarke MMR	Buff Point	95%	100%	CVP
Santa Fe Ontario & Western	SF - HO	Ken Scales MMR	Blue Haven	100%	100%	NCE
The Wet Lands	Heinz - HO	Bill Fowler	Medowie	85%	100%	CVP
Northern Lakes	NSW - HO	David O'Hearn	Hamlyn Terrace	50%	50%	NCE
UP/SP - Mandalong Sub	UP/SP - N	Trevor James	Mandalong	60%	100%	CVP
Milwaukee Road - Kansas City Sub	MR - HO	Kelly Loyd MMR	Lakelands	95%	100%	CVP
Short North Mainline	NSW - HO	Spencer McCormack	Bonnel Bay	90%	100%	CVP
Main South Line	NSW - HO	Rowan Mangion	Buff Point	20%	90%	CVP
Vermont Railway	USA - HO	Peter Jensen	Narara	10%	60%	Digitrax
Moonan Flats	NSWGR - O	Chris Lord	San Remo	98%	100%	



Brisbane Model Train Show 2016

These are some of Division One member David Bromage's photos of the 2016 Brisbane Model Train show.



HO Scale Cajon Pass Layout Construction Part 1

Rob McLear

Some members have visited my layout at home and I thought it would be nice to pass on some of the history and the reasons for the layout. It will of course ultimately be stored as the new one is constructed.

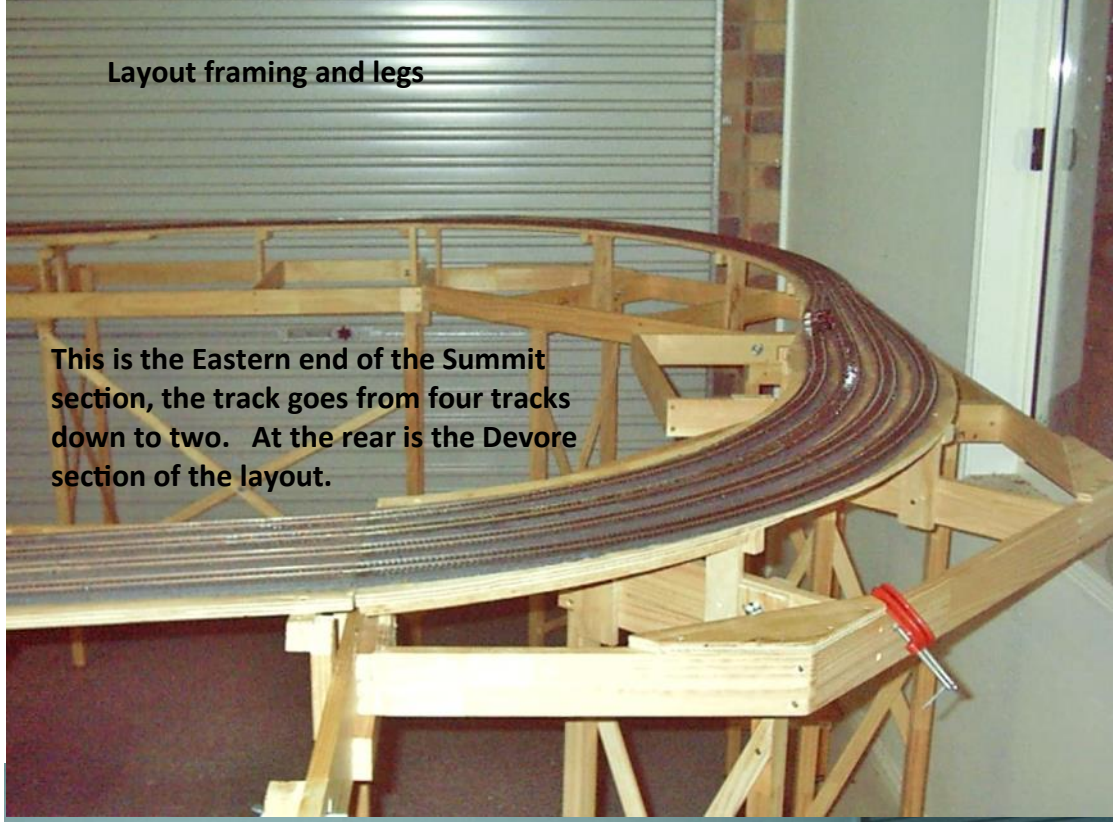
The layout was started in 2004 and completed by 2007, the purpose of the layout was to be used as a show layout and transported in a large carry box on an 8 X 5 foot tandem trailer. The layout consists of 13 pieces varying in size from over 7 feet to under 2 feet. The overall size of the layout is 29' X 15' at the widest point which is the Wye at Summit, normal width is approximately 12'. The individual modules are approximately two and a half feet wide. All of the work on the layout including construction and scenery was completed entirely by me; there was no outside assistance at any stage.

The layout depicts as a prototype a partial portion of the Santa Fe's line over Cajon Pass or the First District of the Los Angeles Division of the Santa Fe Railway. The layout has been built to represent the Summit location at the top of the pass, including the turning wye, and Devore at the bottom.

The timber used was dimensional pine 90mm X 19mm, the sub roadbed used is 12mm ply-wood and the roadbed was a foam product normally used in the concreting industry to sepa-rate pours. It is approximately 10mm thick.

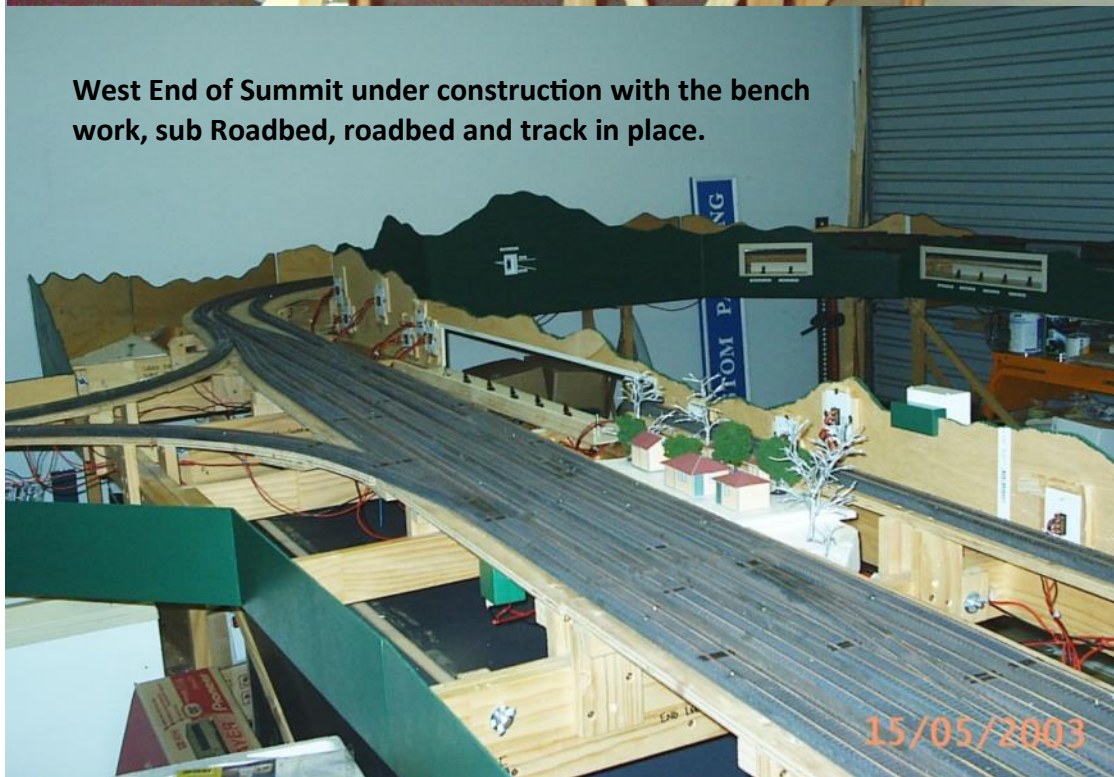
The track and points used were Shinohara Code 83, all points were powered using Tortoise by Circuitron slow motion switch machines.

Carving the foam scenery to shape

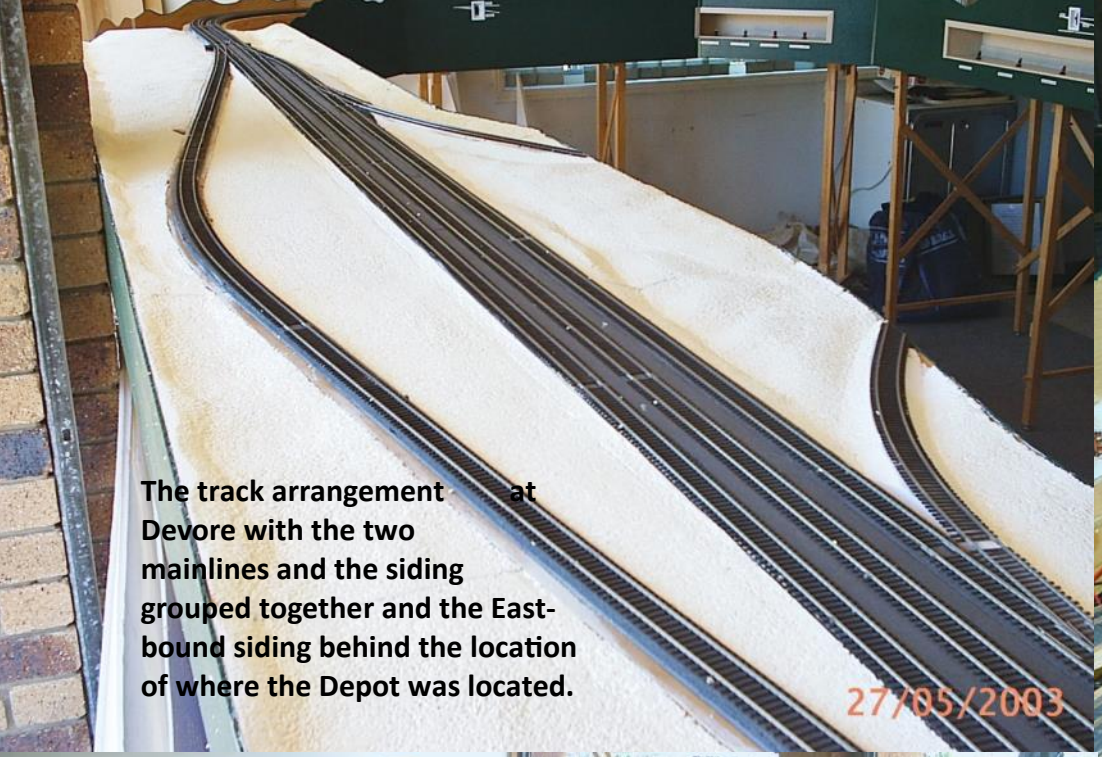


Layout framing and legs

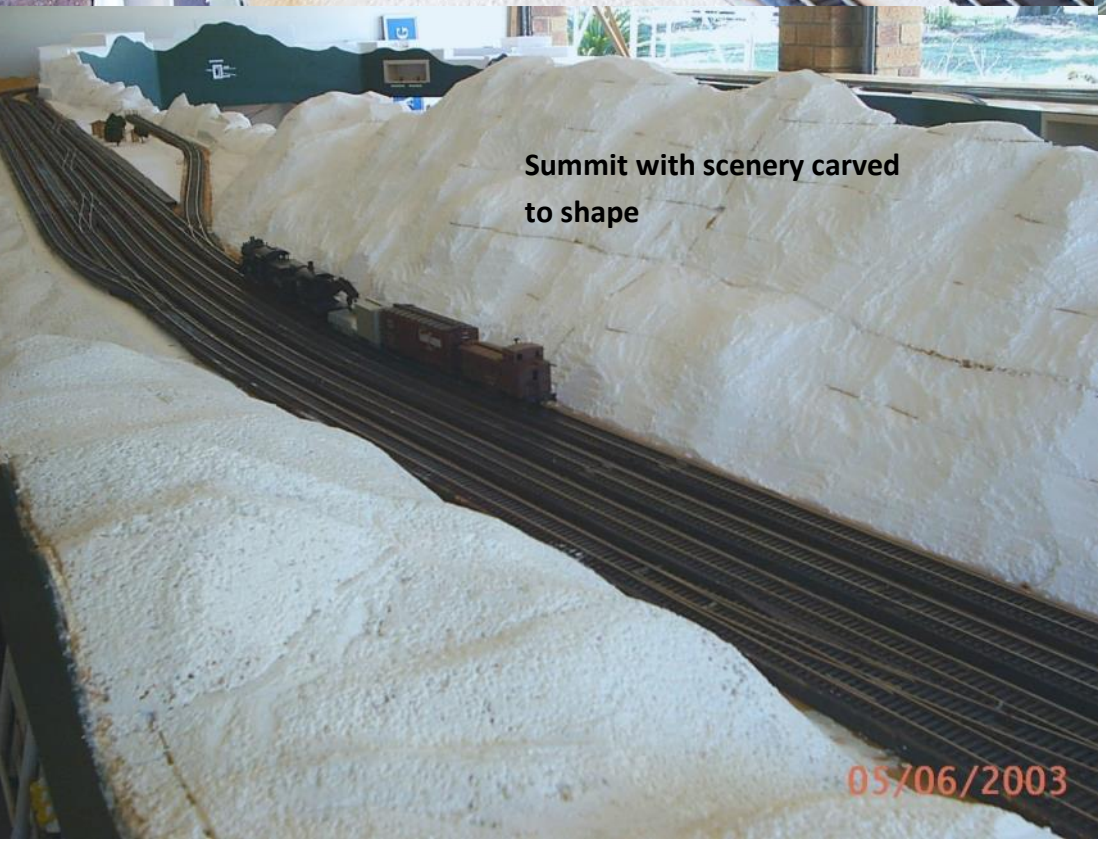
This is the Eastern end of the Summit section, the track goes from four tracks down to two. At the rear is the Devore section of the layout.



West End of Summit under construction with the bench work, sub Roadbed, roadbed and track in place.



The track arrangement at Devore with the two mainlines and the siding grouped together and the East-bound siding behind the location of where the Depot was located.

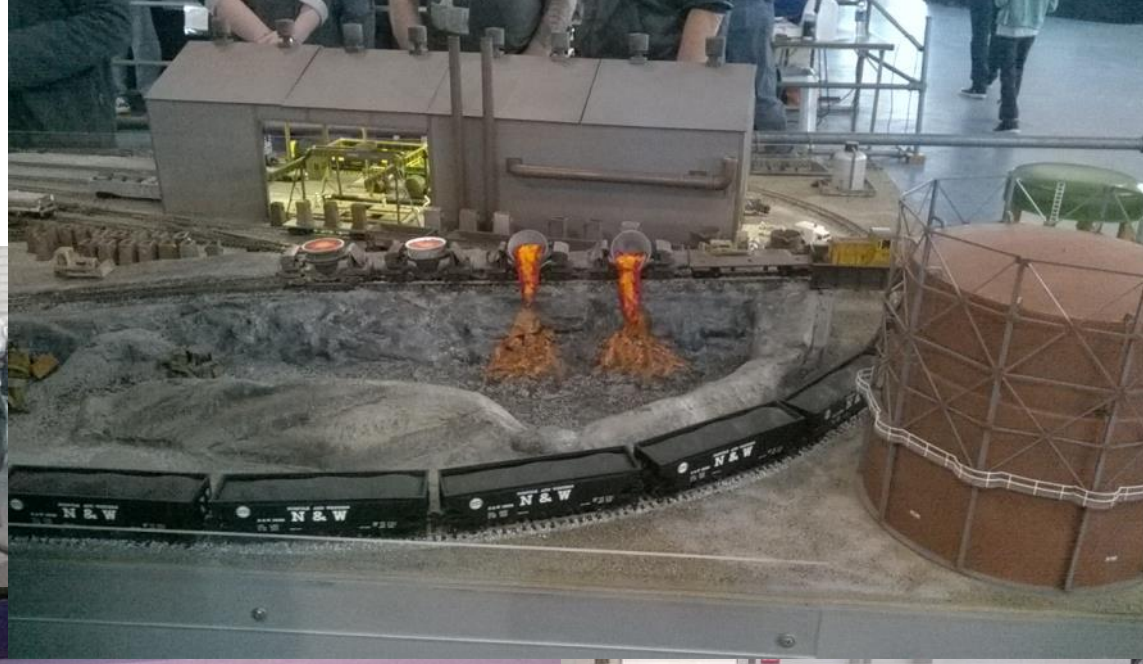


Summit with scenery carved to shape

Summit with scenery colouring added

Perth Model Railway Exhibition 2016

Photos by the editor



AN INTRODUCTION TO XTrackCAD

User-friendly Layout Design Software

Lyndon Spence

(From a clinic presented at the 2015 Australasian 'Region convention)

YOUR CHOICE OF DRAWING MEDIA FOR LAYOUT DESIGN

Until relatively recently, your choice of media for drawing track plans came down to these:

- **Sketching.** Writing or sketch pads, even the back-of-an-envelope.
- **Graph paper.** A great step forward. Graph paper with graduations suited to your drawing scale. Your essential "hardware" would include scale rules, tee square, protractor, a compass set, circle gauges and French curves.
- **Drawing board and machine.** By *"machine",* I am referring to some sort of device that automatically keeps your straight edges parallel and square to your work. e.g. a track machine or pantograph-type drafting machine.

- **Full-size plan.** This would involve drawing a full size plan on butcher's paper. Your own track components such as turnouts and crossings or photo copies of them are used as templates and simply traced around on site.

But, not everyone has the skills necessary to draw. Computers have revolutionised tasks in all walks of life including industry, commerce, office and hobbies. So, let's step up to the computer age with the ultimate drafting step:

COMPUTER-AIDED DESIGN or CAD

A SHORT HISTORY OF CAD.

Computer-Aided Design has actually been around longer than you may be aware.

- Influenced and encouraged by improved post-World War II radar displays, engineers began the development of CAD systems initially for military needs in the 1950s.
- Pioneers included MIT, GM, Ford, Lockheed and McDonald-Douglas.
- Early CAD systems ran on mainframe terminals and later mini computers.
- In the 1980s they became more readily available and easier to use.
- By the end of the 1980s several CAD companies had emerged that were successful in providing CAD systems to customers all over the World.

John Walker founded AutoDesk Inc in 1982. Last year (2014) AutoDesk's World-wide employees numbered around 7,500 and its revenue from AutoCAD supply, support, training and related products was over $2.2 billion US.

WHO CAN USE IT?

It does seem to be not that long ago organisations depended on typists for typing tasks.

- With the PC revolution, anyone lacking typing skills could now do their own word processing. Corrections, alterations, copying and pasting text were so much easier.
- Similarly, CAD has revolutionised how organisations are structured. Architects and engineers no longer have to give their concept sketches to a detail draftsman to draw up. Instead they can now directly produce their designs in neat, accurate, finished drawings.
- Accuracy is improved. Drafting and hand lettering skills are no longer essential requirements.

CAD ADVANTAGES.

There are a zillion advantages of CAD drawing compared with any other method. e.g.

- Accuracy & speed.
- Ease of drawing & lettering.
- Ease of corrections, revisions.
- Copying objects & even complete designs.
- Using built-in library objects.
- Efficient storage of designs & back-up copies.
- Print out designs in various scales.
- Print out full-size drawings.
- Uses cheap, readily available hardware.
- Less paper wastage.
- Less dependence on drafting skills.
- Can be emailed to colleagues & friends.
- Less office space taken up (compared to drawing board & machine).

CAD DISADVANTAGES.

Not that many, strangely enough. One big one is the steep learning curve. Another is the expense of the software .

CAD SYSTEMS AVAILABLE.

There are many commercial systems now available. You can pay from $50 to $6,000! In simple terms, if you already own a computer, the software you choose comes down to two distinctive types:

- Generic CAD software aimed at all user types. i.e. engineering, architecture, professionals or hobbyists or
- CAD software designed specifically for model railway layout design.

BUT WAIT! There's more! THIS IS THE BEST PART:

One of the best model railway layout design CAD systems X**TrackCAD** is now FREE!

MY RECOMMENDATION.

After spending the majority of my 48-year working career in design and project management, there is no way I'm going to endorse any commercial CAD system, when this one is so good and available to everyone as a free download! **XTrackCAD** is

- Open source software and really is a free download. No strings, time limits or obligations attached.
- Takes up minimal space on your hard drive (less than 5 MB) including its track and structure libraries.
- Started off as a commercial product written for LINUX. Produced by Sillub Technologies of Ottawa, Canada.
- Later, it became open source. Now available for the Windows and MAC operating systems as well.
- Continues to be supported and upgraded by model railroaders from all over the World.
- Current owner is a model railway enthusiast, Martin Fischer from Germany.

This has become my preferred model railway design CAD program. I searched for a relatively easy to use layout design program and was prepared to pay good money for it. Then I found XTrackCAD in early 2008. What a bargain! I then put one of our local NMRA members on to it who had no CAD experience and he was up and running within a week.

XTrackCAD will also let you design control panel layouts complete with turnout and signal indications.

SOME OF THE MANY FEATURES OF XTrackCAD:

- Minimal system requirements.
- Most manufacturers' track supported.
- NMRA standard turnouts in its library.
- Working with flex-track is a breeze.
- Easy to design your own objects.
- Any scale, gauge or layout size.
- Learn at your own pace.
- Tutorials available on line.
- Built-in animated help feature.
- Can create full-size track templates.
- Automatically draws easements.
- Generate grade profiles.
- Generate material lists.
- Bench work design capability.
- Run a virtual train to test your design.
- Up to 99 layers of editable graphics.
- Third party utility available for JMRI.
- Option to display track sleepers.

HOW or WHERE DO YOU GET IT?

Follow the download links on the XTrackCAD Wiki home page at: *http://www.xtrkcad.org/Wikka/HomePage*

LEARNING & USING XTrackCAD

Persevere with it and you could be drawing within a week. BUT . . . .

Find the tutorials on the XTrackCAD site and print them out. You need to do the tutorials first before you can progress. Sorry, but it's worth repeating: ***print out the tutorials first.***

- English modeler, Mike Sutton, has also published helpful tutorials on the web. Mike's first part is at:
  http://smallphry.com/eecore/index.php?/site/xtrkcad_tutorial_part1/

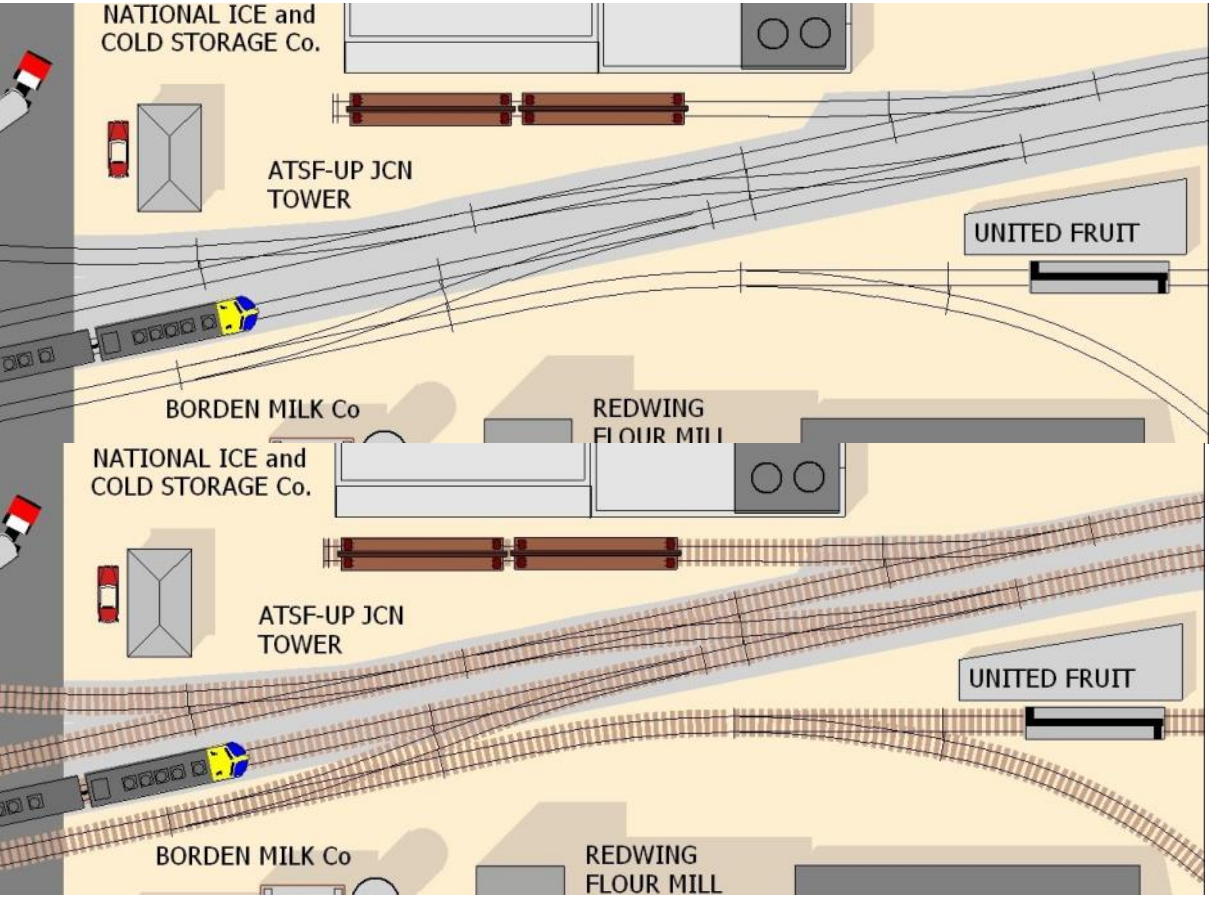
- For further help or encouragement, there is a Yahoo XTrkCAD support group at: *http://groups.yahoo.com/group/XTrkCad/*

PRINTING OUT YOUR XTrackCAD LAYOUT DESIGNS.

XTrackCAD includes a great little printing utility that allows you to print out your designs in any scale including 1:1.

Your only limitation will be the capabilities of your printer or plotter.

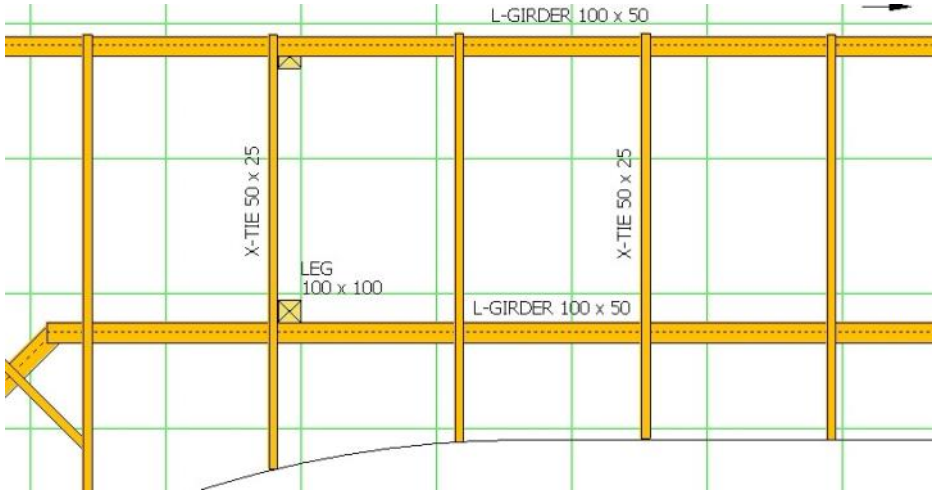
XTrackCAD also offers various ways you can display and print out your track: centre line only, 2-rail, with/without track descriptions & with/without sleepers – outline or solid in any colour you chose. Examples below.

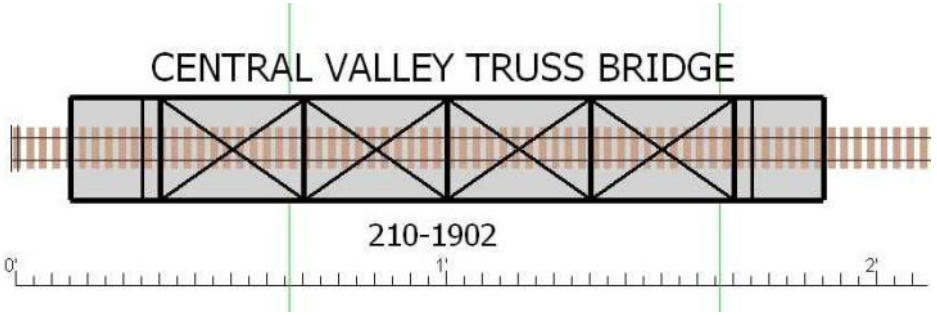


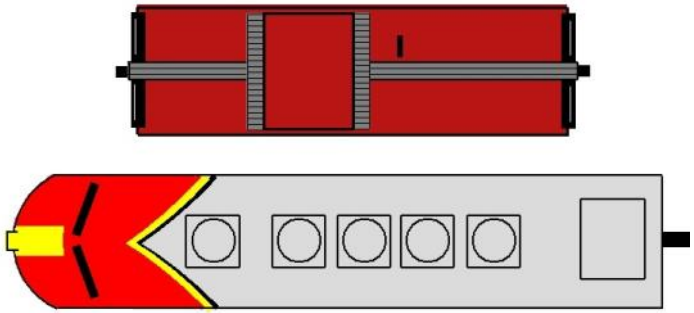
SOME EXAMPLES OF THINGS YOU CAN DO WITH XTrackCAD

Great for benchwork design. Standard timber sizes in library in both metric and imperial units including L-girder.

Custom draw any vehicles and rolling stock:







Modelling Santa Fe's Lone GP40 in HO scale

Rod Tonkin

I enjoy modelling prototypical oddities. Santa Fe's lone GP40 is one such oddity. Santa Fe acquired their one and only GP40 when they took over the Toledo Peoria and Western. As they didn't have any other 3000 hp eight wheeled diesels the mechanical department de rated 2964's engine to 2500 hp and re classified the locomotive as a GP35R. Santa Fe 2964 operated as a member of Santa F's extensive maids of all work GP30/GP35 roster. The real 2964 was written off after a wreck in 1988.

You can model 2964 relatively easily by modifying Bachmann's "DCC equipped" Santa Fe lettered HO scale GP40 incorrectly numbered as 3501. Bachmann's HO scale GP40 except for the number and a few missing details, is a reasonable model of Santa Fe's lone GP40.

"Ready to Run Bashing" adds additional challenges to the traditional challenges encountered in "Kit Bashing". For a start there are no kit instructions, your model is already on one piece. Even getting the model to bits can be a challenge in its own right. One good thing about ready to run bashing, you can test run the model prior to modifying the body work and know it should work once it is reassembled.

The modifications needed to convert the as delivered Bachmann GP40 into Santa Fe 2964 are

- Re number to 2964
- Blank off the rear number boxes
- Air conditioner
- Radio antenna platform
- Rotating beacon
- Weathering to taste

Re numbering the model to 2964 requires removing the cab side numbers and the number box numbers. I find an angled straight blade modeller's knife ideal for scraping painted numbers off plastic body shells. To remove the cab side numbers lay the model on its side and rest your hand on the foam packaging the model was shipped in. You can now gently scrape the painted numbers off the cab sides. To remove the number board numbers hold the model vertically with the rear of the step wells on the edge of the work bench with one hand.

With the model in position rest your other hand on the work bench surface and gently scrape the black paint off the number box glazing.

I used Microscale decals as I had some handy for the cab side numbers and long hood number. I used Testor's general purpose decal set solution to set the decals. Testor's general purpose decal set solution consists of diluted acetic acid. If you don't have any commercially manufactured decal setting solution to hand, you can "borrow" some diluted white vinegar out of the kitchen cupboard.

My previous success using MS Excel to format model locomotive name plates and print them on an ink jet printer prompted a trial to produce diesel locomotive number box numbering. 2964's number box numbers are white on a black background. I set Excel to a black background and the numeral colour to white for 2964's number box numbers. Printing the number box numbering onto white paper gave me white numerals on a black background. 2964's numbers were 10 point Calibri in bold printed 60 % full size. The printed numbers were secured to 2964's number boxes and sealed with acrylic matt medium. The art work for 2964's number box numbering is shown below.

2964

GP40

2964

Blanking off the rear number boxes requires installing blackout blinds inside the body shell. The blackout blinds shield the number box glazing from the rear headlight LED.

Installing the blackout blinds required access to the inside of the body shell. This meant removing the body shell from the chassis. Bachmann include an exploded view of the works inside the body of the model. The minor detail of how to get the body shell off the chassis was cunningly omitted.

Older Bachmann GP40's could be dismantled by simply springing the body shell apart at the fuel tank. This one wouldn't. After a lot of wrestling the fuel tank moved. It apparently was a press fit onto the chassis. Removing the fuel tank uncovered two screws securing the body to the chassis. Removing the two screws allowed the body moulding to be removed from the chassis.

My blackout blinds cut from black photo copier paper were cemented behind the number box glazing.

The cab roof mounted air conditioner is a block of balsa covered with photo copier paper

The dummy rotating beacon is a defunct 3 mm yellow LED mounted in a hole in the cab roof.

The radio antenna platform is a rectangle of file card supported on cut down panel pins. The radio antenna is above the Bachmann PC containing the decoder. After the antenna support pins were secured, I isolated the ends of the antenna platform support pins from the decoder with electrical tape.

The cab window shades were cut from file card and cemented onto the cab sides.

All the modifications are on the yellow painted parts of the model. I mixed a matching yellow PVA paint on a pallet to match the factory yellow paintwork and brush painted the modifications.

After suitable weathering using the techniques described in the spring 2012 issue of Mainline, my HO scale model of Santa Fe 2964 was ready for layout operations.

HO scale Santa Fe 2964 heading up a freight on Wombat Gully in 2013

Alternative Zip Texturing Pigment

Rod Tonkin

I've been using Linn Westcott's Zip Texturing technique for basic scenery texturing since the mid 1960s. I've always used cement colouring oxides to colour the dry plaster as they were easy to obtain. I recently ran out of the green oxide I use as the basis for what passes for grass on my layout. Unfortunately the green oxide is no longer available. My wife suggested Tempura paint powder as an alternative. Art and Craft Riot in Perth sell 250 gram jars of tempura paint powder for seven dollars a jar. It looked worth a trial.

I blended a jar of dry plaster of Paris, some green tempura paint powder and a little yellow oxide to what seemed to be a reasonable shade of green grass and gave it a go. I sprinkled the coloured plaster mix over damp plaster coated scenery from a tea strainer and waited for it to set. Inspecting the results the next morning showed the coloured plaster had set firmly. While I'll need more experimentation to get the grass colour I want, it looks worth persevering with.

ZIP Textured grass on the cliff edges at Wallaby Falls on the authors layout Martindale Creek

Rev Dr Vern Cracknell MMR 567

I have often wondered what influences in my life directed me to an interest in modelling railways, to the point where it has become a dominant pursuit amongst my daily routines.

I vividly recall the experience on a scout hiking and camping trip with another scout when we were able to stand on the footplate of a mountain type locomotive hauling a goods train from Willunga to Mile End, in South Australia. We were in our mid-teens and had mistakenly read the passenger train timetable, arriving in the evening when the passenger train was not to leave until the next morning. The goods train crew spotted our dilemma and said "You can stay in in the crew quarters with us tonight, and if you want to you could come with us on the footplate. We'll slow down for you to get off at Oaklands." That was a most memorable experience.

But it may have been the model tinplate, three rail circle which our father had mounted on a framed board when my brother Peter and I were still at primary school. This was in the early war years when toys were in short supply. This was O gauge, with batteries secured beneath the board, which had run out by the evening of Christmas Day. My father's radio business friend solved this battery problem with a workshop built transformer.

No doubt a significant gift came in my mid- teens when my uncle gave me a Hornby O gauge locomotive, rolling stock and tin plate track, already well used. But it could be packed in a bag and taken to friends' places, laid out on garden paths, with afternoons spent on working our trains. The loco, tender, and several remaining pieces of rolling stock sit on a shelf in my train room.

There must be some lasting influence of our father's decision to build a platform on our galvanised iron side fence so that as toddlers Peter and I could climb up to watch the trains coming and going at Oaklands station some 400 metres away. There were no houses then to block the view.

During secondary school years there was the daily trip to school in the Adelaide CBD with the question as we waited on the platform "What will haul the train today?" The answer was either an F Class steam loco (I always thought this was an elegant loco) or perhaps the first of the diesels in the South Australian Railways as a shunter. These were times of severe coal strikes in Australia, so even the F Class locos were converted to oil burning.

I recall a sense of frustration when we bought one of our sons, Paul, a train set for a birthday

present. That set received much use. We increased the amount of track, built a foam tunnel and mountain, made a bigger board, and that train was worked almost to its death. The frustration for me was that my work as a minister in a parish was demanding and time was severely limited. I wanted to do more.

So these must have been some of the influences leading to my strong railway interest. They represent pleasant memories, but modelling railways still lay in the future.

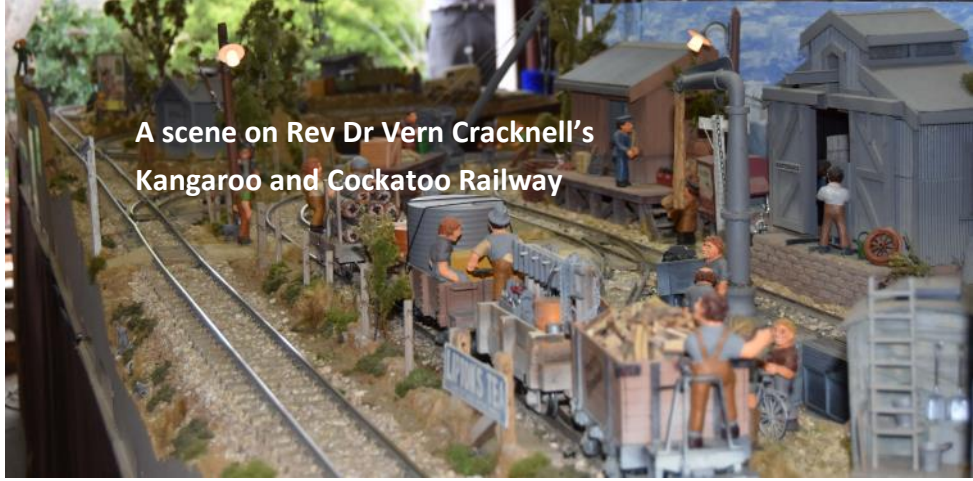
It was two or three years after my wife's illness and death in 1992, that model railways became a therapeutic, rewarding and constructive pursuit. I was still working as a lecturer, but here was a purposeful way to be creative, solve problems and learn new skills.

I told my children that when I retired I would take up modelling railways when the time was right. So one Father's Day my younger son Paul (who had received the birthday present years before) gave me a transformer and a controller with the statement "Put these in the cupboard, and when you are ready get out my old train and get started." So it happened that I returned to modelling railways well before retirement.

After several years working on the home layout (HO scale) it was time to venture into the exhibition scene. This has had the added benefit of travel particularly in South Australia and Victoria, to many shows. In total, four different layouts have been exhibited, two in HO, and one "Kangaroo and Cockatoo Railway" in G gauge, has been shown some forty seven times. An out-station of the K&CR is "Magpie Glen" which is also in G, is still being exhibited.

I joined the NMRA late in my model railway journey. Of course, I had read about its existence and the standards that the organisation has helped develop. Although I had come to know many modellers through the exhibition experience, I had been a private modeller and had never belonged to a club. Perhaps it was time to seek a new avenue for friendships with like-minded folk. I was attracted by the notion that NMRA membership did not involve working on a club layout (I think I am too independent and too keen to see results to be happy with a layout project which is managed by a committee!).

I remain forever grateful to my older son Dale, who is an excellent controller of trains, who has helped to stage exhibits especially interstate, and in latter times my brother Peter who has done likewise, and to a team of helpers who have assisted in the loading and unloading of layouts through all the years of exhibitions. They have not been modellers (except one) but have helped the hobby and myself out of the goodness of their hearts. My daughters Lisa (nearby suburb) and Mary (other side of the continent) seem well pleased that their father has a worthwhile hobby that keeps him well occupied.



A scene on Rev Dr Vern Cracknell's Kangaroo and Cockatoo Railway

Sharing photos of Kangaroo and Cockatoo Railway with some members encouraged me to begin the Achievement Program. This has been a stimulating experience. Many aspects of the program were able to assess work already done, and self-evaluation and descriptions of how problems were solved have all proved of value. The process of documentation has also been an enjoyable aspect. Some new projects have helped hone skills.

To successfully complete the Achievement Program has been personally rewarding and satisfying. Membership of my division is important as it leads me to appreciate the breadth of knowledge and experience which come to the fore when keen modellers from different gauges, styles and particular modelling approaches come together. For example, modellers may say the layout's emphasis is "telling stories" or perhaps "depicting an historical time and place", or "demonstrating railway practices". And there are other approaches too. But we teach and learn from each other which is one of the great benefits of the NMRA.

I started the Achievement Program late in life, but young in NMRA membership. But I am pleased and satisfied on all counts. There is still much to learn, to try, lots to experience and enjoy.

Rev Dr Vern Cracknell

AP Certificates

- Master Builder – Cars
- Master Builder – Motive Power
- Model Railroad Engineer – Electrical
- Master Builder – Scenery
- Master Builder- Structures
- Model Railroad Author
- Model Railroad Engineer - Civil

Wallaby Falls Bridge

Rod Tonkin

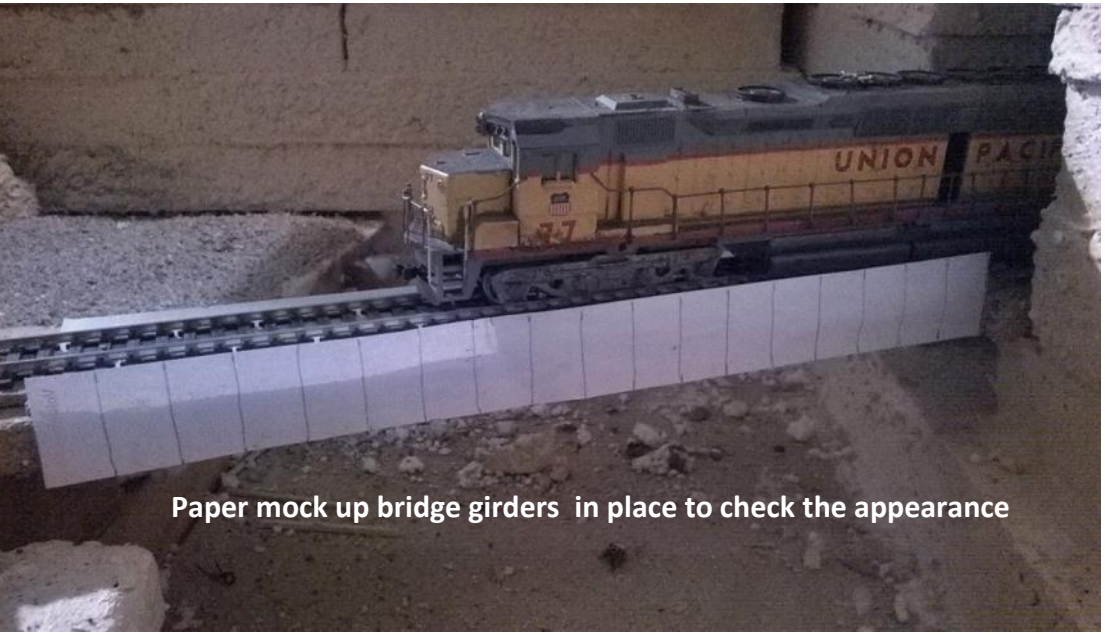
Trains travelling from Damien's Crossing to Simonton, pass through Wallaby Falls. The track crosses Putty Creek. The original plan was a stone bridge. The space for the bridge would only accommodate a two span stone bridge. I'm not too keen on bridge piers in the middle of a stream bed so a re think was in order. The width of the crossing is 270 mm, in HO scale this is around seventy seven feet. This crossing width could be crossed by either a single span truss bridge or a single span girder bridge. As is usually the case none of the readily available model bridges fitted the gap. The bridge would need to be scratch built.

I selected an all welded through girder bridge for the location. Current practice has railway bridge girder depths of around eight percent of the span. Older bridges used girder depths of ten to twelve percent of the span. My bridge is meant to represent a 1970s replacement of an earlier bridge so I chose the ten percent criteria for the girder depth on this bridge.

To see how it looked on the layout, I made a paper mock up of the bridge girder and cemented it onto the side of the road bed to see how it looked. The paper mock up showed the 27 mm deep bridge girders looked reasonable.

I looked up some references on the proportions of plate girders. Plate girders need stiffening to prevent the web plate between the top and bottom flanges from buckling. These stiffeners can be mounted on one or both sides of the web plate. Typically the vertical stiffener spacing is less than the depth of the girder. A through girder bridge needs substantial stiffeners onto the deck cross members to prevent the girders buckling. The top and bottom flange width of a plate girder is typically a third to a fifth the depth of the girder. Based on these design criteria I've decided on

- 27 mm deep bridge girders (ten percent of the span)
- Eight mm wide flanges (thirty percent of the girder depth)
- 15 mm spaced web stiffeners on the outside of the web
- 45 mm spaced transverse stiffeners on the inside of the web



Paper mock up bridge girders in place to check the appearance

Bridge girders ready for installation

Clearance checking trial bridge girder installation

To give my model some chance of surviving layout operation I've chosen to build the web of the bridge girders out of three mm thick Corflute board. The fifteen mm spaced web stiffeners are made of match sticks. The transverse stiffeners are cut from 1.6 mm balsa sheet. The top and bottom flanges are cut from 110 gram per square metre card. The girders are cemented together with contact cement.

The deck of my bridge is a sheet of three mm thick Corflute board. The Corflute board sits on top of the 12 mm chip board track support in place of the three mm thick cork ballast strip supporting the track work on either side of the bridge. Once the track is ballasted the Corflute board won't be visible.

Trial bridge girder installation

Rolling stock clearance is essential for smooth operation. The assembled bridge girders were trial fitted to the bridge deck. The clearances were checked by running a DDA40X over the bridge. While locomotives of this size rarely operate on this part of the layout I felt they should not be restricted from operating on this part of the layout.

With the trial fit up successfully completed the bridge deck and girders were painted a dark grey with PVA artist's paints. Once the paint had cured the bridge girders were contact cemented to the bridge deck.

The track across my bridge sits in a concrete ballast trough. The ballast though accommodates the slight curve in the track across the bridge. I made the visible ballast trough edges from strips of 3.2 mm balsa sheet contact cemented to the Corflute board bridge deck. The ballast trough edges were painted a lighter shade of grey than the bridge steel work.

Re detailed Bachmann ATSF SD40-2 5083 crossing the Wallaby Falls bridge

Assembled painted girder bridge ready for track ballasting

The bridge needs a further minor detail added; the abutments to support the bridge. My model bridge is supported by the chip board track support so the abutments will be purely decorative.

Hornby's OO Scale LNER 40 foot Closed Carriage Truck

Rod Tonkin

Hornby's recent release of an OO scale model of the LNER 40 foot Closed Carriage Truck provides British modellers with additional variety from bogie passenger train rolling stock. To suit the period I model I've selected the British Railways version of the model. My first impressions out of the box were the delicate under frame moulding, the crisp detailing of the body moulding and the distinct lettering.

The model looks superb, but how well would it perform on the layout? To accommodate less than prototypical curve radii Hornby have allowed considerable side play on the axles. This means while the model runs freely, it does not roll as freely as models fitted with needle point axle bearings. On the scales the model was rather lighter than the 0.5 to 0.6 grams per millimetre of length of typical British outline coaching stock. I unclipped the body from the chassis and ballasted the model to match the unit weight of 0.6 grams per millimetre of length of most recent production British outline coaching stock. Once the cement holding the additional ballast was cured I gave it a test run. Coupled between a train of BR Mk1 coaches and a locomotive the model was test run around Hornby number two curves. The model performed smoothly.

The finish of the model as delivered is pristine. A trip though the Martindale Creek Aging Studio soon rectified the too clean to have been in service look of the model. All up a neat and different vehicle to add variety to the passenger traffic on British Railways Layouts.

Leafield's goods platform

Rod Tonkin

Leafield's first exhibition outing featured a mock up goods shed made from a breakfast cereal packet. As well as helping frame the scene the mock up goods shed hid the power connections for the layout.

On reflection this structure visually overpowered the scene. I wanted to retain for operational purposes a siding in the scene but not a massive goods shed. After much thought I decided Leafield needed a goods platform. The goods platform would allow loading or unloading side door, end door or open wagons. The rocky outcrop behind the goods platform would hide the layout power connections and not obscure other buildings on the layout.

The layout of my goods platform was based on the dimensions of an OO scale BR (ex GWR) Siphon H. These wagons originally built to transport milk churns spent many years in parcels service. As well as side doors, the ends of these wagons opened fully to allow bulky loads such as motor vehicles and occasionally circus elephants to be loaded and unloaded.

The level of the goods platform was set by the floor height of the Hornby Siphon H. The paving of my goods platform is cut from 5 millimetre black foam core board. The foam core board is mounted on a sheet of expanded polystyrene foam. The foam was secured to the layout decking with white glue. The foam was cut back at the end of the siding to allow wagons to buffer up to the edge of the paving without damaging the couplers.

Once the foam substructure was secure the paving was aligned with the track and secured to the substructure with white glue. With the white glue cured the pavement could be detailed. I added a concrete edging to the paving with grey card and a timber buffer block at the end of the track to protect the paving from rough shunting impacts. The colour of the paving and edging was toned down with grey pastel.

BR siphon H at the Leafield goods platform ready for loading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An MMR's Journey

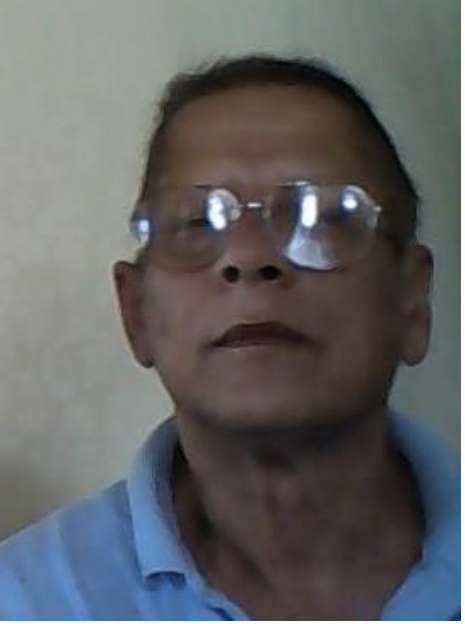
My wife, Mary, and I have lived in the beautiful Adelaide Hills at Aldgate for 30 years. Initially trained in finance, I spent most of my working years in the mining and construction sectors in a variety of senior positions – employment that enabled me to see much of Australia and the USA as well as parts of south-east Asia. Having moved into retirement from full-time work several years ago, I'm now spending more time in the studio which houses the Eureka Valley Narrow Gauge Railroad (EVNGR) layout. However, in recent times Mary and I have had frequent trips to Sydney and Perth where four grandchildren have been growing up.

I've always had a strong interest in model building, but the railway theme has consistently pervaded my modelling efforts (HO scale) over the years. I guess I gained skills in working with my hands having come from a family of tradesmen whilst growing up in Melbourne. But I did not get the chance to build a layout of any significance until we moved to Adelaide to start a new job in 1984. I was fortunate to get Mary to agree to buy a house with an established steel structure located in the garden, near the house. And then it took some years to get around to installing power, insulation, lighting and carpet. Whilst these activities were underway, I started collecting and building in O scale and eventually settled on On3 for the soon to be built EVNGR.

I regard active model railroaders as 'artists' working with a three dimensional art form and describe myself as such to those interested in my hobby. As a result I model and build in a 'studio' – not a 'shed' or 'train room'. The hobby itself offers so many opportunities to develop skills and expertise in a wide variety of areas – and we model railroaders need to do a much better job of ensuring that what we do is described as something other than just 'playing with toy trains'.

The hobby has given me lots of opportunities to make friends and share ideas – and membership of the NMRA and the challenges of the Achievement Program have helped develop my skills and knowledge. My philosophy these days is very simple – 'get on and give it a go! And be prepared to tell people about our model railroading hobby and the benefits that it offers to people of all ages.

Peter Jackson MMR 563



My Journey to MMR

My journey to MMR was a long, if simple one. As a lad of five, I was walking down Oxford St while visiting London and as usual was pestering my father for a train set. The harassed man finally relented and approached a nearby six foot 11-inch tall bobby. "Where can I buy this boy a train-set?" was the enquiry. With obvious pride, the booby swelled to his full six foot 27-inches and pointed. "Just around the corner, sir. Hamley's. Best toy shop in the world!".

I still have the original 0-6-0, though it hasn't been run for many years. As a child my Triang train set expanded to include a variety of sets, even some early 'Australian' stuff. A 40 Class look alike springs to mind. We started with series 3 track, then series 4 and finally my first bit of flexi track, but never a layout to be seen.

As a young married man, my good wife and I took on a house parenting job with 11 foster children. Of course it was mandatory that we had a trainset, as should be the case for all children. Equally of course we needed a large dining table to seat us all, so it was only natural to build a 9 x 5 table with a top that could be removed to reveal an 8 x 4 layout!

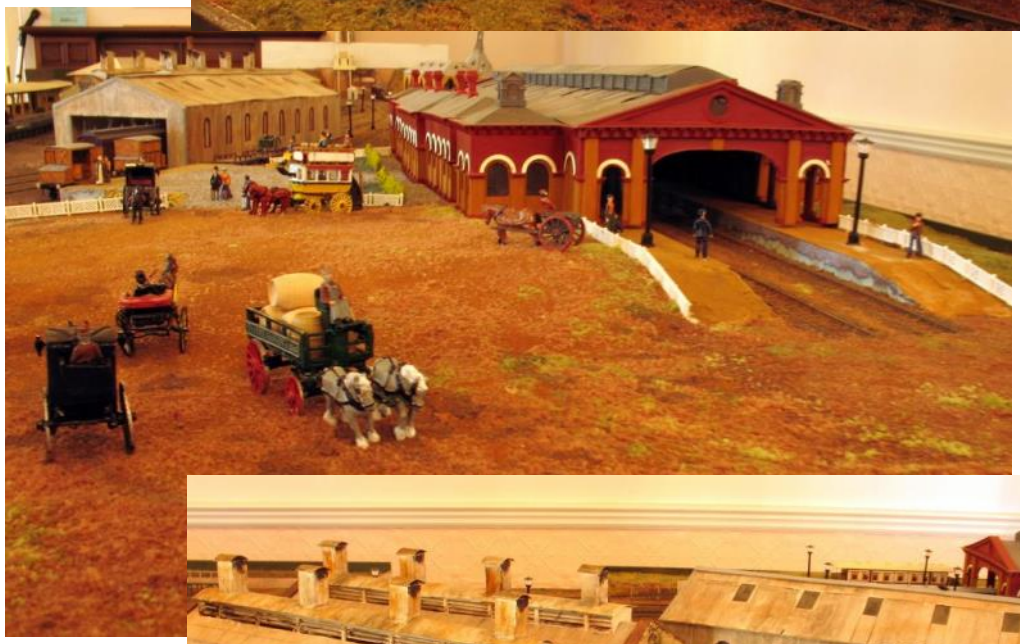
That layout lasted for some years until we had a break-in in which the layout was severely vandalised. What could be saved was put in a box while I sulked for a number of years that just happened to coincide with establishing my career and bringing up children.

However, when my youngest son was nearing his second Christmas he began to show an interest in that wonder of wonders "Thomas". Kangaroo Valley Historic Railway was born. Six hollow doors on fold-up legs were the start and still form the core of KVHR today.

Sometime later, as KVHR grew, I was introduced to the NMRA. Its Achievement Program led to many improvements and modifications that ultimately led to the layout being featured in the AMRM and then to award of an MMR.

Now twenty years old, KVHR continues to develop and grow. It will do so, I'm sure, until I am no longer capable of progressing it. The lessons of the MMR journey are still being implemented. One of those is that there is always something new to be learned, practiced and mastered, but the real lesson is the Achievement Program is just school and we all know that most learning happens after one leaves school. Doesn't it?

Stephe Jitts MMR 515



Division One Highlights

Division 1 met at the home of Bill Rohr for our introduction to Bill's well modelled Victorian Ferntree Valley Railway on Saturday 12-3-16.

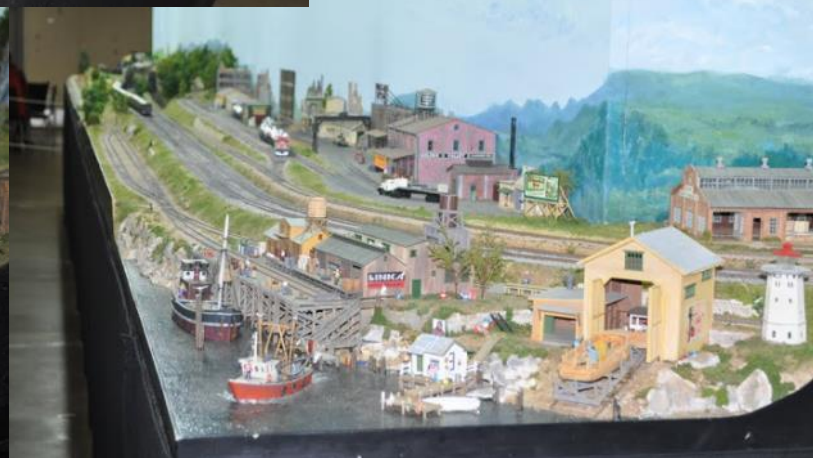
Bill's railway has all of the elements required to give exacting fidelity with the prototype, even down to ensuring all vehicles, and there are lots of them, are in the right time frame. Bill Rohr's layout contains many scenes that you would expect to see in a small town and all are in keeping with the prevailing customs at the time depicted as is the wedding scene outside the church

You will notice how much of a scene story Bill has managed to get into his layout. This prevents it from being sterile and Bill has used figures to highlight his scenes and bringing us into his scenes. Even though they are not moving, the gestures and the careful placement has brought a believable life into what he is trying to depict. For some, no doubt he has brought them a lot of nostalgia and that makes his layout warm and human.

A "Meeting Plaque" was presented to Eddie Stavleu for our attendance at his place last month and to Bill Rohr for our attendance in March.

Toowoomba Model Railway Club
(100% NMRA Club)
Model Railway and Craft Expo 2016

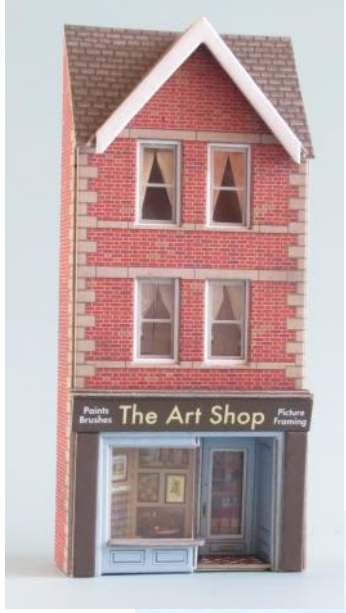
Photos by David Bomage



Division Three Highlights

At the March meeting of NMRA AR Division 3 the superintendent, Grant McAdam, presented Ron Bennell with a plaque commemorating 25 years membership of the NMRA Australian Region. Ron joined NMRA in January 1973.

Geoff Truman
OO scale card kit



John Cracknell HO SCT 009

Rod Hutchinson HOn30 18 ton Climax

Peter MacDonald 0n30 Sandy River 19

Peter MacDonald 0n30 Kraus

Laurie Green On30 Caboose with interior

Division Four Highlights

Due to the last Sunday in March falling on Easter Sunday, we delayed our March meeting until the first Sunday in April. We met at AMRA WA's club rooms to inspect progress on the Western United States set "Valentine Run" layout Alan will supervising the exhibition of at the Foundation Day long week end exhibition this year.

The "Valentine Run" layout provides an ideal setting for Western United States prototype models, as demonstrated by Union Pacific 6932 and 6927 on the head of a freight

On the Ides of April our fearless leader gave an introduction to railway modelling presentation to a group of school children and their parents at his local library. The presentation combined some power point slides, hands on structure building and operating Leafield. The power point slides did not hold the kids interest but their parents were interested.

The pre-cut and scored building kits were a hit. Once they were shown how to assemble the models we rapidly had a couple of dozen ready to decorate sheds. These were soon decorated to taste and in some cases detailed with door ways.

Operating Leafield was a hit. The radio controlled 40 class was a big hit as was a newly acquired Bachmann Junior diesel shunter that had a surprising turn of speed for such a small locomotive. The children went away happy. The library staff assured us the presentation was well received.

Alan and Peter enjoying afternoon tea

The April meeting was held at Rod Tonkin's place in Perth's northern suburbs. Alan filled us in on preparations for the AMRA exhibition on the first weekend in June. Volunteers to help operate the Valentine Run at the show would be appreciated. Rod advised us his Bachmann Junior diesel shunter "Rusty" had recovered from its high speed exploits at the library.

Rod's layout was behaving itself until the day before the meeting when power to the branch line failed. The rest of the layout performed satisfactorily during the meeting. Repairs to the branch line wiring will be attended to in the near future.

The May meeting was held at AMRA WA's club rooms. The main effort of the day was test running rolling stock intended to run on "Valentine Run" layout at the June model railway exhibition. Rod showed us progress on his hides car converted from an old box car. The detailing does not extend to the smell of the lading.

Rod's hides car

Re detailed repainted and lettered Athearn ATSF SDFP45 5998 on test pre the exhibition on the "Valentine "Run"

Division Five Highlights


Flying over Port Huron.

Kel Sherson hosted the March meeting on his NKP themed layout. An early Autumn weekend that thought it was still late Summer. The weather has been so good lately a lot of things that would have been done on the layout (like cleaning track) haven't been because I've been doing other projects outside.

The meeting was a Friday night operating session. On the previous evening usual reminder was issued about remembering to charge batteries and bring throttles was sent out. This time including some information on updates and changes regarding the layout and the operating session.

So, nine of the crew turned up. As often happens, those travelling the greatest distance arrived first. Ray is thinning his book collection and bought a box of books, most of which found new homes. Thanks Ray, I'm already refreshing my knowledge of the history of American railroading. It's interesting to compare what was happening in the USA in the mid-1800s with New Zealand history around the same time.

After the usual early banter I then explained the reasons for my Thursday night email. We assigned crews, with Ray and Brent handling the Port Huron Turn, Stewart and Ken the Yardmaster's job at Bellvue, Ian and Karl the same at Buffalo, and Alan, John and Tony running the sequence of manifest and local freights.

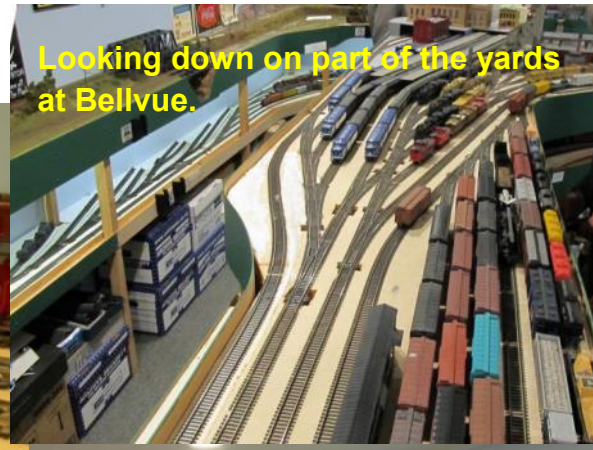
During the two hour operating session we moved five manifest freights (117 Cars, with 23 Cars being switched), one Local (7 switched cars) and four Turns (28 switched Cars). During the session we didn't quite get to the schedule sequence where the coal trains ran.

With any operating session there is always 'Lessons learned'. This time was no exception. The fine weather outside (my excuse) kept me from further track cleaning post installation of the new lights in the room. While the main line has had a fair bit of running most of the spurs had not. This especially showed up in very fine ceiling plaster dust in turn-out blades in Port Huron and Cleveland and so turnouts not conducting electricity like they normally do. So while inconvenient that's an easy fix.


Ready to roll. Nickel Plate power at its best on Kel Sherson's layout.

We retired for supper around 10.15pm (thanks Ruth). All in all another great evening with friends, and running trains was a great bonus. That the new 'Schedule' worked, with very much less in the way of 'instructions' from the Dispatcher, made for a terrific start to the weekend/


PA Alco locomotives awaiting departure from the passenger terminal at Bellvue


Looking down on part of the yards at Bellvue.


The crew getting instructions as to what is new on the layout.

Division Six

DS Max welcomed everyone and thanked Marcelle and Ray Applebee for hosting the meeting. AP Manager Ray Brownbill explained how the judging for the AP with regard to cars operates. DECCA Coordinator Ray Applebee reported that the SIG layout is primed and ready for AMRE.

Convention Coordinator John Prattis reported that there seem to be no problems as the Committee prepared for the Convention in 2017. As there was a Committee quorum present, the date was settled on 17th and 18th.

Preparations for AMRE are basically the same as last year. Nominations closed on the 11th and Max had submitted the names of attendees who will require passes and meal vouchers.

John Prattis raised the possibility of Div 6 promoting a modular layout enterprise. He will send Max the link so he can circulate all members to gain some feedback regarding interest.

Show and Tell was led by Peter Jackson with various items, ranging from his purchases at Ozrail Hobbies, to the DVD he donated to the group library and magazines. Hutch showed a new block detector he's discovered. Vern Cracknell brought along a vintage power supply which gave everyone a good laugh. Max showed some of his scratch built cars. A lavish afternoon tea was laid out by Marcelle. Then Ainslie Brittain continued his series of clinics on the multimeter. This time focusing on resistance and how it relates to testing earth leakage in 240 Volt equipment.

Roger Wheeler receiving his 50 years service plaque

Friday 10th June, the advance party from Division 6 assembled at the Adelaide Greyhound Racing Club to set up for the annual Adelaide Model Rail Exhibition. The exhibition ran from Saturday until Monday 13th. Members demonstrated various modelling techniques and the children had a go at driving trains on John Prattis' Timesaver layout. Brochures and Application Forms were taken, so we may pick up some new members. In the mean time, members took the opportunity to socialise with each other and catch up with other modellers they haven't seen for a while.

This weekend it was my pleasure to present Roger Wheeler with his plaque for 50 years of continuous service to the NMRA. Congratulations, Roger.

Ainslie Brittain's clinic on the multimeter

Division Seven

On Saturday, 12th March everyone met at Peter and Barbara Jensen's residence at Narara. It was a typically warm March day. Peter displayed his progress on his home layout featuring the Vermont region of the USA.


Sam receiving his meeting host plaque

The Div 7 May meeting was hosted by Sam and Jan Mangion on Saturday 9th April 2016. It was a lovely day by the lake and a good roll up of members enjoyed viewing Sam's Buff Point Branch layout.


Trevor James receiving the Association Volunteer AP


Trevor James receiving the Model Builder –Scenery AP


Trevor James receiving the Chief Despatcher AP


Lyndon Spence receiving Model Railroad Author AP


Michael Flack receiving his 25 year membership plaque


Lyndon Spence receiving his 25 year membership plaque

Narrow Gauge SIG Meeting

The NG SIG meeting was held at the home of Doug Wallace on Saturday 30 April. 20 members were in attendance an excellent roll-up.

The show and tell was interesting.

Steve Pettit had some very nice models including an engine repair shed. He also had some model boat kits which were of a very high quality and included lots of detail parts in the kit. Steve is also painting some figures which were purchased overseas. They are very good quality figures. Michael Nott has put a camera on the side of the boiler on a K27 which when viewed on film represents looking out the driver's (engineer's) window. John Meredith presented an attache case size layout he is building. He also had a scratch built wheel cleaning and programming module that he has built.

A number of other members brought along a mixture of buildings and rolling stock which are their current projects. It appears that most people in the group are still building or undertaking some type of project. This is good for the group as at each meeting we can get updates on their progress.

Doug has transformed a room on the back of his house into a new train room which will start to have bench work and track laid from next week. This will be the start of his new layout. Doug also showed us a large piece of paper which contained his track plan for the new layout.

John Montgomery


Narrow Gauge SIG Meeting attendees

Coming Attractions

Model Railway Discussion Group

Meets at Whitfords Library, corner of Marmion Ave & Whitfords Ave, Hillarys WA 6025 at 2.00 pm on the first Tuesday of the month, facilitated by NMRA AR Division Four

Darling Downs Model Railway Club Inc.

(100% NMRA Club)

Model Trains at the Toowoomba Farmers Market

We are pleased to announce that we will be opening our Model Railway Museum & Display Centre during the Farmers Market Days in the Toowoomba Showgrounds.

Opening times will be 9am to 12noon.

The Farmers Markets are a monthly event, generally on the last Saturday of the month. Links to their sites and information are shown below.

Our operating displays are sure to intrigue with layouts in N and HO/OO scales operating, displays showing how to build your own model railroad, FREE Magazines, including the latest copies of Model Railways in Australia. You can see the beginnings of the clubs large permanent HO/OO Scale layout, colouring in for the children, a U-Drive HO Scale layout just for the kids and constant screening of railway subjects on a big screen TV.

Toowoomba Farmers' Market contact details

E | info@toowoombafarmersmarket.com.au

W | www.toowoombafarmersmarket.com.au

FB | www.facebook.com/Toowoombafarmersmarket

Steam Train Sunday

Brisbane's moving heritage experience Steam Train Sunday returns. Back by popular demand, The Workshops Rail Museum's Steam Train Sunday returns to the track from 6 March until December for one-hour trips through Brisbane in heritage style.

Passengers are free to move between the carriages, take in the sights from the petite balconies and relax with the gentle sway of the age of steam.

Steam Train Sundays. Selected Sundays, 10.15am and 11:40am Roma Street Station, Brisbane. Purchase tickets at theworkshops.qm.qld.gov.au or call QTIX on 136 246

This space is available for you to publicize your event. exhibition or open day. Please send details of your event to the editor for inclusion in future editions of MainLine.

Portland Oregon.

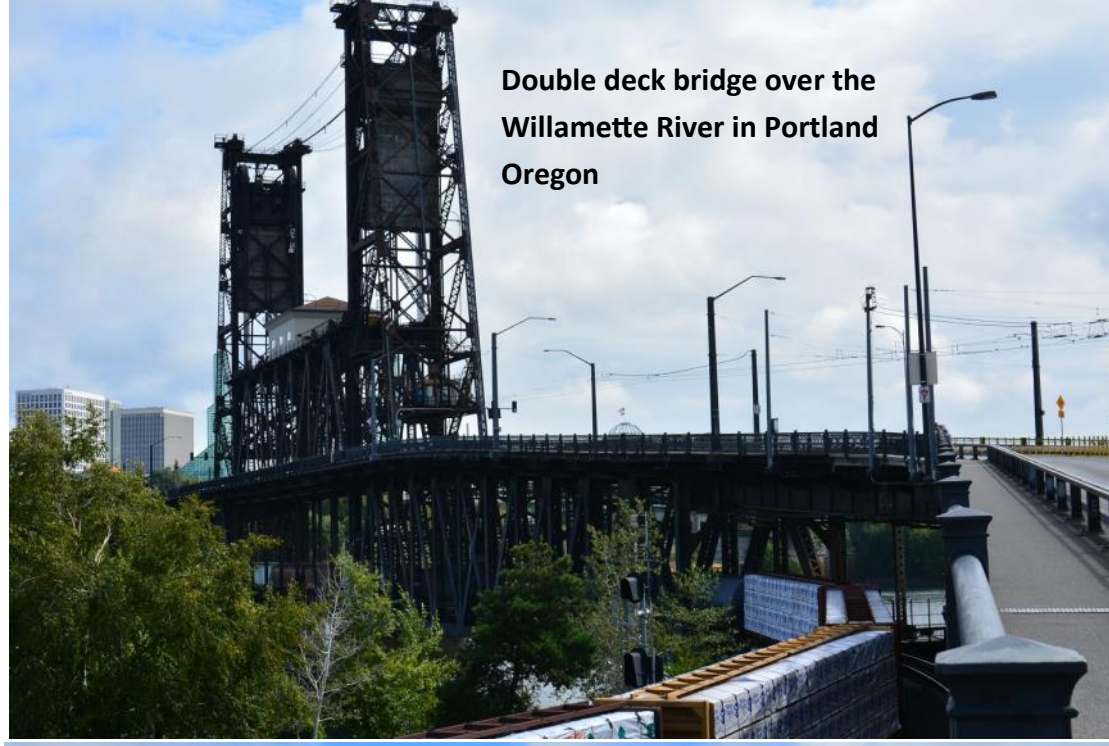
Arthur Hayes.

When travelling across the United States recently, taking photographs of the local railroads was a lot easier than here at home. Trains travelling through town gave plenty of warning approaching level crossings, they could be heard coming several blocks away. I not sure how the locals get any sleep at night. Here in Ossie, I'm sure it would be an environmental issue. Another thing that astounded me was the lack of fences.

During the National Convention at Portland in Oregon in 2015 there were many opportunities to photograph local operations. Travelling into the CBD on the light rail, photo spots were jumping out at you. Just about every time you cross over the Willamette River on the Steel Bridge there was trains moving in the area. The bridge itself was over 100 years old (completed 1912) and was something to see. A double deck lift bridge, trains on the lower deck, cars, buses, trams and pedestrians on the upper deck. The average daily traffic in 2000 was 23,100 vehicles, 200 light rail, 40 trains including Amtrak services, and 500 bicycles. In 2006 a cantilevered walkway was added to the lower deck, bicycle traffic increased to 2,100 daily crossings. With additional three light rail lines opening by 2012, light rail crossings increased to over 600 daily.

The lift span of the bridge is 211 feet (64 m) long. At low river levels the lower deck is 26 feet (7.9 m) above the water, and 163 feet (50 m) of vertical clearance is provided when both decks are raised. Due to independent lifts, the lower deck can be raised to 72 feet (22 m), telescoping into the upper deck without disrupting traffic on the upper deck.

On the CBD side of the river is Union Station. Trains leaving the station travelling towards the bridge do so around a tight curve, the bridge then forms the apex like a turning angle (or Y). Trains can leave the bridge turning left or right, once again on tight curves. Thus all train movements are very slow allowing the rail fan to photograph every wagon if so desired. Plus you have a choice of trackside or an elevated position from the bridge to take your photos. As trains leave the bridge on the left, they travel around the outside of an export grain terminal serviced by rail. A shunt tractor performs unloading operations in the terminal.



Double deck bridge over the Willamette River in Portland Oregon

Rail served grain export facility in Portland Oregon

Prototype observations

The walkways on the Steel bridge over the Willamette River in Portland Oregon in 2015 provided Arthur Hayes a good location to capture photos of often hard to find roof details of passing freight cars.