

# MainLine



**The Journal of NMRA**

**Australasian Region**

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# NMRA Australasian Region Directory

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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

A scene from Gerry Hopkins "Great Falls Sub Division" Photo by Gerry Hopkins MMR

## Target dates for future issues

### Summer

<b>Content submissions</b>	<b>10</b>	<b>December</b>	<b>2015</b>
<b>Publish date on web</b>	<b>20</b>	<b>December</b>	<b>2015</b>

### Autumn

<b>Content submissions</b>	<b>15</b>	<b>March</b>	<b>2015</b>
<b>Publish date on web</b>	<b>31</b>	<b>March</b>	<b>2015</b>

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## **National Election Results And Opportunities.**

Election results were published some months back now, but this is my first opportunity to thank all of you who took the time to vote for doing so. The NMRA is only as strong as its members and member involvement is crucial to a healthy NMRA. Only

about 10% of our members vote and that has been true historically. I can only assume the remaining 90% of you are satisfied with the direction taken. If not, well, you had your chance! Actually, you always have a voice and an opportunity to share your opinions with us. Interestingly, also only about 10% attend a National Convention. Boy, that 10% is sure busy!

Congratulations to the winners and thanks to all who ran. As I said, member involvement is key to a strong association and nothing is more selfless than taking time from a fun hobby to help others enjoy it even more. Volunteers make the NMRA work at all levels and those efforts are deeply appreciated. With the election behind us but another looming for next year, is this not a good time to reflect on what you might do to help your Association and hobby? Truly, what you give is what you receive back tenfold. I can assure you, I have gotten back more satisfaction than I ever expected in my years of volunteering. A big thank-you for what you all do for the NMRA.

Growing the hobby remains our #1 challenge but also presents another opportunity. The hobby ironically is doing quite well in Europe and Asia with a younger demographic. But in the US and Canada we continue to age as a demographic. This means we need to keep our existing members and welcome those new members with increasing devotion. If we could retain 95% of existing members, we would actually be growing at a healthy rate. Regions and Divisions are crucial in this effort. You are the "neighbourhood NMRA". You are where the new or existing member interacts with the NMRA. You make or break the NMRA. So we all need to work together to make members feel wanted and special. Because they are. Truly, the potential is huge but the challenges great. I hope you will help all of us in the NMRA meet those challenges. Tom Draper, our Director of Support Services has done a great job with InfoNet News, so tell us how you think we can retain members and attract new ones. We'd love to hear from you.

**Charlie Getz President NMRA**

## **New NMRA Layout Directory**

Bob Chaparro

Work is underway on a member Layout Directory. This will replace the visitation feature of the old NMRA Pike Registry Program.

The Layout Directory will be an on-line system that allows NMRA members (only) to:

- Identify the layouts of participating NMRA members by location, scale, gauge, era, prototype and area modeled, etc.
- Review the particular features of the layouts

Contact layout owners to arrange visits or exchange common-interest information

Layout owner participation will be voluntary and built-in security features will protect privacy.

A working group has been formed to develop the Directory and input is needed from NMRA members. One of the first tasks of the group is to survey layout owners from the old Pike Registry and visitors to their layouts to determine:

- What visitation aspects worked
- What didn't work
- What features they liked
- What features they didn't like
- Suggestions for the new Layout Directory

The working group also will survey other NMRA members who either own layouts or are interested in visiting layouts to determine what they expect from a directory, what concerns they may have and suggestions in general.

NMRA members are invited to comment by contacting the working group chairman, Bob Chaparro, at [chiefbobbb@verizon.net](mailto:chiefbobbb@verizon.net) or 951-925-2069.

Members interested in having their layouts included in the Layout Directory also should contact Bob.

## From the President's Desk

Welcome to this 4<sup>th</sup> edition of the electronic MainLine. To meet publishing deadlines, I am writing this before our Australasian Region (AR) Convention has taken place and you will be reading this just after the Convention. For those who made the effort to attend the Convention, I am sure you had a great time establishing and building on friendships in this great hobby and learning new skills. For those that didn't attend, you don't know what you missed – maybe you can attend a future convention.

Next year, there will only be a “mini” convention in the Sydney area while in 2017, Division 6 in Adelaide will host a regular Convention so start planning for a trip to Adelaide in two years' time.

On the 1<sup>st</sup> July this year, the new annual membership renewal cycle came into effect for many members (with remaining memberships due on 1 July 2016). For those members with MainLine subscriptions in existence prior to the MainLine becoming an electronic publication, you were owed a credit on your unexpired paper magazine subscriptions. As part of the membership renewal, members were offered the choice of donating this credit to the Association or having the credit put against your membership renewal. To date, the majority of members have donated the amount to the NMRA and this sum totals \$945. The Committee and I thank you for your generous donations to the Association.

Our Achievement Program Regional Manager, Gerry Hopkins, advises that we now have another two MMRs: Peter Jackson (MMR #263) and Bob Best (MMR #264). Congratulations to these two gentlemen for reaching the pinnacle of railway modelling. Also, congratulations to those who have achieved individual Achievement Program Awards over the last three months.

The NMRA's US web site ([www.nmra.org](http://www.nmra.org)) has recently been revamped. In addition to the information accessible by the general public on the website, there is also a special “members only” section that contains over 100 clinic videos, Data Sheets, your membership details and a number of Discussion Forums. This “members only” section is well worth exploring. To access the member's only section of the web site, you must register. It only takes a few minutes. First click on the words “Member Log-In/Registration” on the right side of the red bar at the top of the page. This will open a new page called “Members Only.” Next click on the blue bar that says, “Need a username? Register now.” This will take you to a page called “User Account.” Enter a username (any combination of letters and/or numbers) and your email address, then click on the blue bar that says “Create New Account.” You'll see a mes-

sage that says an email confirmation has been sent to your inbox. Follow the instructions in the email to set your new password - the password you receive is only a temporary password, so change it immediately. That's it!

*Note: the email you enter MUST be the same one that you have on file with the NMRA membership system in the US. If you have changed your email and not notified the NMRA or the change in the Australian membership records has not been updated in the US system, you will get an error stating your email is not found. A number of Australasian Region members have found that the US membership system does not contain their current email address. If this is the case, you will need to email Jenny Hendricks, the NMRA Office Manager, at [nmrahq@nmra.org](mailto:nmrahq@nmra.org) advising of your correct email address. The same goes with any other membership details that may have changed such as your address details. Once the US membership system has your correct email address, you can register and access the great information in the members only section of the US web site.*

With the warming days of spring upon us, it's time to get back to cutting bench work and painting the layout! Enjoy your modelling.

David O'Hearn

AR President 2 September 2015

## Introducing Dion Koch

### New Division Two Superintendent

I am a virtual latecomer to the world of Model Railroading, I was born in to a family with a rich Railroading history. My Great Grandfather, Grandfather, and Father all worked for Queensland Rail. Other members of my family also worked for Queensland Rail. I had the biggest model railroad as a kid, with the mainline heading out to the Queensland coal basin running right past my front door.

My modelling interest is Union Pacific in the Pacific Northwest with a couple of other railroads making an appearance in my roster as shared power in N scale . I have convinced my beloved wife to forego a spare bedroom so that I can build my layout inside, leaving the garage for the motorbikes. This layout will be my first, so it will certainly be a lot of trial and error in the development of it.

# Pacific Directors Report

Since my last report I have visited Portland, Oregon and attended the Board of Directors Meeting. As usual, the majority of the meeting was devoted to matters concerning the United States. The main topic of discussion was the declining membership. The Board feels that the Association would best address the current situation by appointing a Marketing Person. This matter is being addressed as a matter of urgency and if we need to pay someone to do this job we will do so. Gerry Leone has been authorized to find this person and has been given a budget to work with so that the appointment can be speedily handled. The Chief Financial Officer, Frank Koch, delivered a very comprehensive report and outlined the state of the Association's financial state which is very sound. Frank is a most able financial person and conducts his role and responsibilities to the Association with great professionalism.

Charlie Getz gave a report on his recent visit to China and Singapore. In China there is a very active Model Railway community of approximately 250,000 members. They are very interested in how the NMRA works and are particularly interested in our standards. The NMRA already has a Memorandum of Understanding with the Chinese group which will develop over time.

The system of judging at the National Contest and the awards given to the winners were discussed and will remain the same. That is, all models will be examined by the judging panel and first, second and third places awarded for each category. These awards are then presented together with some special awards. The last award presented is the Gold Award or Best In Show which goes to the highest scoring model as per the judges' score sheets. This award can go to any category and is on top of the award that may have already been given. The awarding of the Gold Award does not change the awards already given. For example, the award this year went to an O scale water tanker which had already won its class. Therefore, the modeller kept the award for the class concerned plus the Gold Award.

The Convention was well run with a great variety of clinics, layout tours and prototype tours available together with an excellent non-rail programme for the ladies. There were three streams of clinics during the week plus Modelling With the Masters and the various SIG groups. Several Australian attendees suggested to me that we should have a similar "Modelling With The Masters" at our annual convention.



**Mike Bartlett admiring Tom Miller's live steam Union Pacific Big Boy. Its for sale but a trifle large for carry on baggage**

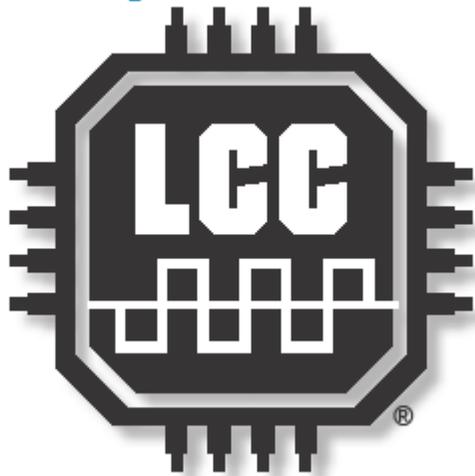
The highlight for me was a visit to the Beaverton property of Tom Miller. Tom has a building approx. 50ft by 80ft in which he has built a beautiful G scale layout together with an S scale American Flyer setup on a mezzanine floor. However, the main event was a 7-1/2 inch layout in his garden which had a 400ft trestle and a long tunnel. On the track was a magnificent, custom built Big Boy quietly chuffing its way around this beautiful layout spread over his 20 acres. For your info, the house and trains are all for sale so don't hesitate to buy now.

The line up of Conventions for the future is as follows: Indianapolis 2016, Orlando 2017, Kansas City 2018, Salt Lake City 2019 and St Louis 2020. A bid for 2021 was received from Santa Clara which was deferred till the Mid Year meeting awaiting more details.

Mike Bartlett

7<sup>th</sup> September

# Introducing Layout Command Control.



## The NMRA sets a new standard. Again.

There's no doubt DCC revolutionized our hobby by creating a single pipeline for train control.

The problem was, over the years more and more innovations have been using that single pipeline for things like sound commands. Signaling commands. Turnout control. The list gets larger every year.

But the pipeline doesn't.

The result? An over-crowded DCC bus that results in delays, missed commands, and slow response. All these goodies have taken the power out of DCC.

### Introducing Layout Command

**Control.** It was developed by independent electronics experts who are model railroaders, and it's designed to take the burden off the DCC bus by re-routing all of those non-locomotive commands through its own, more powerful, single wire.

The LCC standards ensure interoperability and have been approved by the NMRA. They're being distributed to manufacturers right now. So the sky's the limit.

Imagine wiring signals by simply plugging them into the LCC bus. Imagine remote dispatching from anywhere in the world. Imagine a plug-and-play phone system. Or layout lighting. Imagine being able to program it all without using a computer.

And imagine using it right alongside your current DCC system. So DCC becomes more responsive, more powerful again.

That's LCC. And that's only the beginning.

Visit your favorite manufacturers' websites or contact them by email, let them know you're interested in LCC, and ask them what they've got planned for LCC accessories.

For the past 80 years, the NMRA has been at the forefront of setting the standards for our hobby. And with the new LCC standard, we're doing it again.



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## Exactly what is LCC?

Gerry Leone, HLM, MMR  
NMRA Vice President/Special Projects

LCC stands for "Layout Command Control," and it's a system for controlling all the functions on your layout that don't have to do with how fast the locomotive is moving -- things like signals, or sounds, or passenger car lighting. Some of you may have heard of "NMRANet." LCC is NMRANet, just under a different name.

You probably know what DCC is -- digital command control. DCC allows you to run a "command bus" (in other words, one pair of wires) around your layout and attach your track and stationary decoders to it. So when you push the "bell" button on your DCC throttle, your DCC command station sends a signal through the DCC command bus to the track and your sound decoder generates a "bell" sound.

When DCC was designed 20 years ago, its developers had no idea how many products manufacturers would develop using DCC, so that today, the command bus is really getting crowded carrying DCC commands for multiple engines, sound, lights, stationary decoders, etc. Having all those commands traveling on one wire is like pouring a gallon of water through a funnel -- eventually everything gets backed up and has to wait.

That's what's happening today with DCC. There are so many signals traveling through the command bus that sometimes they don't reach their decoders for several seconds. So, for example, when an operator turns down the speed of his locomotive, it may not respond for several seconds...and that could mean disaster in some cases.

LCC, or Layout Command Control, is designed to take some of the burden off the DCC bus by routing all the non-locomotive commands through a different pair of wires...the LCC bus. Only the locomotive control stays on the DCC bus. And because the LCC command bus is taking the burden off the DCC command bus, there are far fewer signals on the DCC command bus, so locomotives can respond within a split second.

In addition, LCC is a *bi-directional* bus, so that LCC products can both receive commands and reply to them. This allows additional features such as status reporting and easy, intelligent configuration of those products.

### What does NMRA have to do with LCC?

Just like NMRA set the standard for DCC 20 years ago, we've now set the standard for LCC.

A group of independent volunteers who are both model railroaders and experts in electronics got together and developed concepts, protocols, interfaces, and documents for LCC. That group calls itself Open LCB. And we owe all of those modellers a huge debt of gratitude for the time and effort they've put into LCC.

That group developed the standards, and the NMRA approved them.

The NMRA has no vested interest in any one manufacturer or product, and we certainly aren't going to be making products -- that's up to manufacturers. We just set and approved the standard that manufacturers will use.

### **Will LCC have the same interoperability as other NMRA standards?**

Yes. That's what the "standard" means. When the NMRA approves a standard and distributes it to manufacturers, and when manufacturers follow that standard, all LCC products should be interoperable, meaning, you can mix and match different manufacturers' products in one LCC setup.

### **What products are available now for LCC?**

Because the NMRA just approved and released the LCC Standard to manufacturers, *as of this writing (late June, 2015)* there are currently no products that we know of that are ready for LCC. However, manufacturers have known about LCC for a while, so many have probably come up with some pretty cool ideas that will use it. Some may have already started building and designing products. Now that they have the LCC Standard, the manufacturers can continue developing LCC products.

**The best way to get manufacturers interested in making LCC-compatible products is to ask them what they've got planned for LCC. Let the manufacturers know you're excited about LCC and waiting for products!**

### **Will LCC work on my DCC layout?**

Absolutely! DCC and LCC are totally compatible. LCC doesn't make DCC obsolete. In fact, it's just the opposite! Because LCC is taking some of the workload off of DCC, DCC can run smarter and faster again.

But no matter what brand of DCC system you currently use, LCC will work with it.

### **Will LCC work on my DC layout?**

Yes. No question about it.

### **What do I need to get started with LCC?**

You'll need LCC-compatible products -- in other words, products designed for LCC, based on the LCC Standard the NMRA just released. However, manufacturers will undoubtedly also develop LCC products to control existing accessories. These will probably be just like today's DCC decoders -- small, compact, and easy to wire.

### **Will LCC be expensive?**

Right now it's impossible to say, since we need to wait for manufacturers to begin develop-

ing and pricing products. But the LCC standard was developed to strike a good balance between the cost of materials and the features and performance, and LCC accessory boards are expected to be comparably priced to existing, equivalent products..

### **Will LCC be easy to use?**

In theory, yes. And we say "in theory" because, again, as of this writing there aren't any products out there. But the way the LCC Standard is set up, most LCC-compatible products should be plug-and-play. In most cases and LCC accessory can teach another one how to respond to it, and vice versa. In addition, programs such as JMRI will be able to detect and configure LCC accessories, because LCC products can announce and self-describe themselves.

### **What kinds of products can we expect from LCC?**

LCC is extremely flexible and easy to adapt to a wide variety of products. So virtually anything a manufacturer can dream up can use LCC. Some examples are signal systems, intercoms and phones, structure lighting... even *room lighting* could conceivably be controlled over the LCC bus. Again, it all depends on the demand, and what manufacturers can come up with. *So start talking to manufacturers and asking them for products!*

### **Why wasn't LCC integrated into current DCC systems?**

The DCC command bus (sometimes called "the pipeline") just isn't big enough to carry both DCC commands and LCC commands. LCC needs its own pipeline, and that pipeline was designed to accommodate many more commands (also called "throughput") than the DCC bus.

### **Why is the LCC command bus so special?**

When DCC was first invented, the developers had no idea how many commands would eventually be sent down the command bus, so they didn't think it needed to be very large. The LCC command bus was just designed recently. Knowing how popular DCC is and envisioning the possibilities of future products, the LCC developers made the LCC command bus much faster. In fact, it has 10 to 1000 times more throughput than the DCC bus. In other words, it's a much bigger pipeline.

### **Will layouts have to be "programmed" for LCC?**

Yes, but the developers learned some valuable lessons from the way DCC was set up for programming. Rather than relying on cryptic CV numbers and binary/hex values, LCC programming was designed to be programmed in plain language. The LCC product itself presents plain language option fields, and you place plain language values into the field...whether it's a decimal number or a selection from a drop-down menu. Plus, descriptive text provides you with a detailed explanation of each field without your having to dig out the user manual.

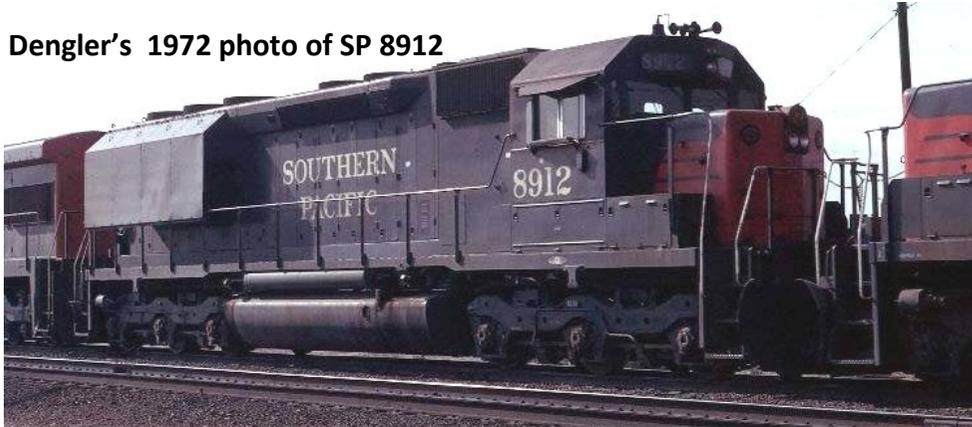
**That's a brief look at LCC, and answers to some of your initial questions about it. Find out more about LCC and LCC products by contacting model railroading manufacturers. Ask them what plans they have for LCC products, and tell them you're interested in getting all the benefits of this great, new standard!**

# Editorial Musings

## Why do few of us model these days?

At a recent gathering of experienced members the lament was few of us are modelling these days. There is a reason why few of us bother to model nowadays, the manufacturers beat us to it.

### Bob Dengler's 1972 photo of SP 8912



One of my long term modelling aims was to modify an SD45 to resemble the units Southern Pacific fitted with radiator inlet shrouds. The shrouds prevented hot air being sucked into the radiators while operating up grade at full power in long tunnels. The hot air sucked into the radiators caused the engine to over heat and shut down the locomotive

The so called "Elephant Eared" SD45s certainly looked different but not out of place on Southern Pacific. The modification solved one problem and introduced others. The shrouds caused access and maintainability problems requiring another solution. The result was the low radiator air inlet SD40T-2 and SD45T-2 unique to Southern Pacific and Rio Grande.

I started building my "Elephant Eared" SD45 in around 2003. I started modifying an Athearn SD45 body shell to mount the nose gya light and the long hood mounted hand brake wheel. Trial radiator inlet shrouds were built up out of card stock. The advent of better models of the



Partly modified vintage Athearn SD45 body shell

SD45 than the 1965 vintage Athearn body shell I was working with derailed the project.

A year or so ago I decided to start again using a current production Southern Pacific detailed SD45. Looking up suppliers offerings I found not only was a Southern Pacific detailed SD45 available, but so was one fitted with "Elephant Ears"

Why learn to bark when you can buy the dog. A HO scale model of Southern Pacific "Elephant Eared" SD45 8912 was placed on order. Out of the box the model has all the detail visible in prototype photos of SP 8912. All I needed to do to my model of Southern Pacific 8912 was install a DCC decoder and weather to taste.

The detail on my purchased model of Southern Pacific 8912 is of a higher standard than my modelling skills can usually produce. While the model railway industry continues to anticipate my modelling interests, I'll devote my railway modelling endeavours to the scenery I've been getting around too for far too long.

Your thoughts appreciated.

Regards

Rod Tonkin



Athearn's HO Scale rendition of SP 8912

# GE 70 Tonner to Climax

Bob Best MMR

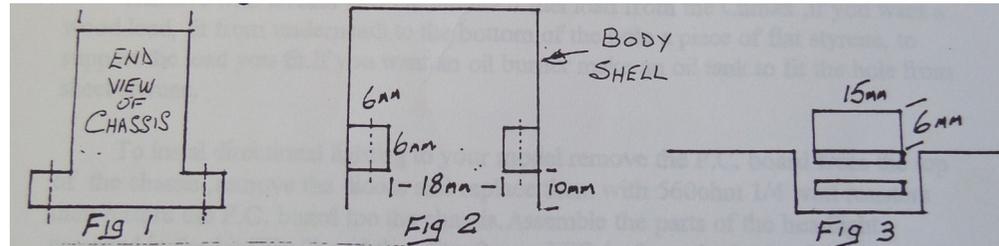
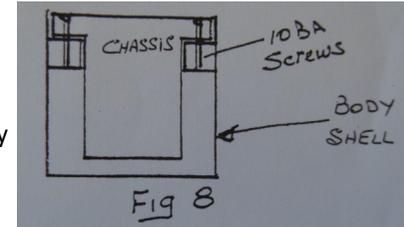
This article is to show how to turn a Roundhouse dummy CLIMAX into a smooth running and reliable locomotive using a Bachmann Spectrum 44 or 70 ton chassis.



buffer beam can now be constructed using a piece of 2mm x4mm styrene approximately 11mm long; 4 of these are needed and mount either side of the coupler pockets (Fig 6). A small gusset piece of 200 x 4mm styrene 7mm long will be needed on the return at each end mounted with a 4mm measurement vertical.

From the buffer beam each end hang a pair of steps built from the styrene the measurements of which are shown in Fig 7

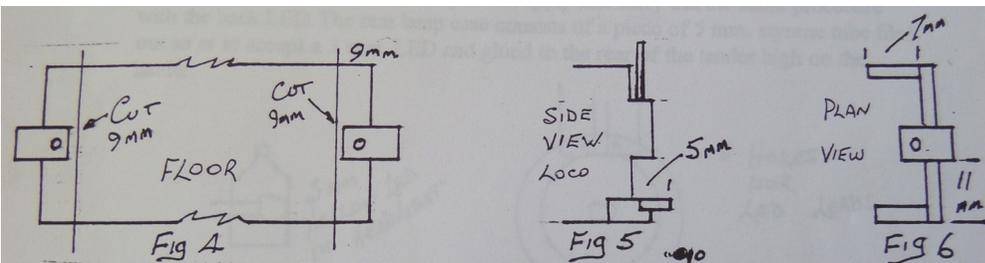
Now the mounting blocks have dried take the Climax body and turn it upside down in a work cradle to hold it steady while you mount the chassis. Take the chassis of the chosen loco either 40 or 70 tonner and fit it into the body so that the mounting lugs of the chassis sit on the styrene lugs you have glued into the body (Fig8). Centre the chassis in the body and with a pen mark the mounting holes on the styrene. Remove the chassis from the body and drill and tap the holes for a 10BA screw or it's equivalent.



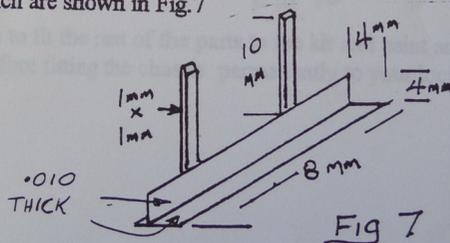
Firstly glue a block of styrene 6mm x 6mm (Fig 1)(this can be constructed from Evergreen styrene # 167 (2mm x 4mm) to the inner surface of both sides of the Climax body (Fig 2) so that the bottom edge of the styrene block is level with the top of the top step hole, 10mm from the bottom edge of the step (Fig 3). Put the body aside and let glue set.

Take floor supplied with the kit and using a razor saw cut off the ends just behind the coupler pockets, 9mm from the end of the floor (Fig 4). Glue these pieces to the underside of the Climax front and rear so that 5mm protrudes past the end of the locomotive body (Fig

5). A

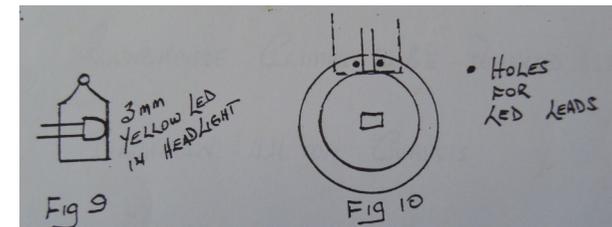


From the buffer beam each end hang a pair of steps built from styrene the measurements of which are shown in Fig.7



Remove with a razor saw the moulded fuel load from the Climax, if you want a wood load, fit firm underneath to the bottom of the hole a piece of flat styrene, to support the load you fit. If you want an oil burner make an oil tank to fit the hole from sheet styrene.

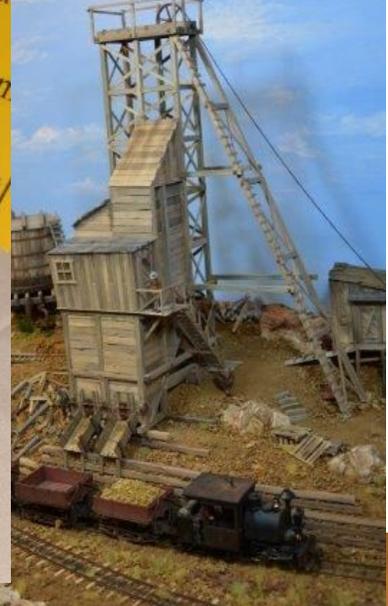
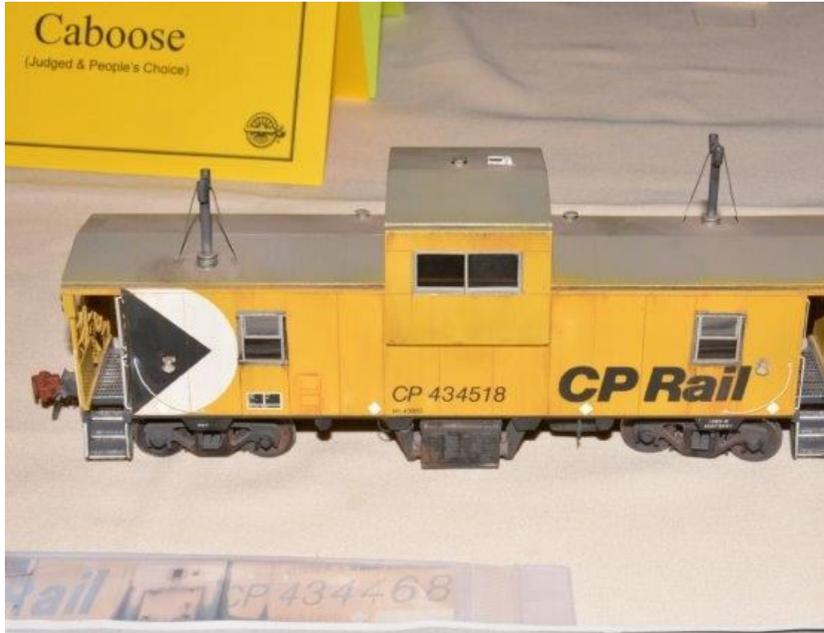
To install directional lighting to our model remove the P.C. board from the top of the chassis, remove the diodes and replace them with 560ohm 1/4 watt resistors then restore the P.C. board to the chassis. Assemble the parts of the headlight provided in the kit (Fig 9) and then fit a 3mm led in from the back of the lamp with holes in the front of the boiler for these legs to pass through into the cavity of the moulding (Fig10). Solder lightweight leads to the ends of the legs with enough length to allow removal of the chassis from the body with these wires connected. With power connected to the chassis in a forward direction touch the wires from the front LED one to each of the metal strips on the front end of the P.C. board until the front LED lights. Reverse the direction of the power supply and carry out the same procedure with the back LED. The rear lamp case consists of a piece of 5mm styrene tube filed out so as to accept a 3mm LED and glued to the rear of the tender high on the ladder. These instructions are for normal D.C. use, if using DCC remove the PC board and fit the decoder you are going to use in the normal fashion.



Now is the time to fit the rest of the parts to the kit and paint and weather to your requirements before fitting the chassis permanently to your locomotive.

# 2015 National Convention Contest Entries

Arthur Hayes photos of contest entries at the 2015 Portland NMRA National Convention.



# Layout Command and Control Part 3

Chris Minahan

LCC is a system in which a change in the state of an object causes other objects to react. This may be a button is pressed, a locomotive enters a track block, or a clock indicates night has fallen. The object causing this change of state is called a producer because it produces an event.

Objects which react to this event are called consumers because they use their knowledge about the event, usually to change their state. A locomotive entering a track block may cause a light on a panel to turn on, night falling may cause street lights to turn on. It is possible that an event triggers an action which produces a subsequent event. An example is a slow motion point motor which changes from its current position as a result of a button being pressed. The point motor has a set of contacts which could be used to trigger an event which indicates the point has moved to its new state. This subsequent event may cause a signal to indicate the road is set or a light on a panel to indicate the true position of the point. (Or both)

In LCC, these events are conveyed around the layout in a fraction of a second and each event is simply given a number. This number is called an event identifier (id). It is reasonably easy to accept that even in a small layout, there could be many unique events, so it is a requirement of LCC to have sufficient event ids to distinguish events from each other. As LCC was designed to be easily implemented on all sizes of layouts, the range of numbers for these event ids is extremely large. It was also required that these event ids be globally unique, that is, an event id would never be duplicated in any other layout. There are  $2^{64}$  or roughly  $10^{20}$  ids.

To guarantee uniqueness, blocks of ids have been allocated to specific groups. A large block has been allocated to manufacturers. They are required to ensure that the event ids generated by their equipment is only allocated once. A block of ids has also been allocated to NMRA members should they wish to use a sequence of personal ids in their layouts. Each NMRA member has been allocated 16,777,216 ids based on their membership number.

There is a small number of events reserved for "Well Known" functions. An example is Emergency Power Off, and several others related to power restoration.

If an event is programmed using the BLUE/GOLD method described in last month's article, the user would never need to know the event id. However, if we are setting up more complex configurations it will become necessary to deal with these large numbers. Fortunately, software such as JMRI, makes this process reasonably easy.

Figure 1 shows the JMRI configuration screen for a Railstars board pictured in last month's article. Notice there are two event ids shown with each input. One is the Activation event id which is sent when the input becomes active, for example by a button being pressed. The other is the Inactivation event which is sent when the button is released.

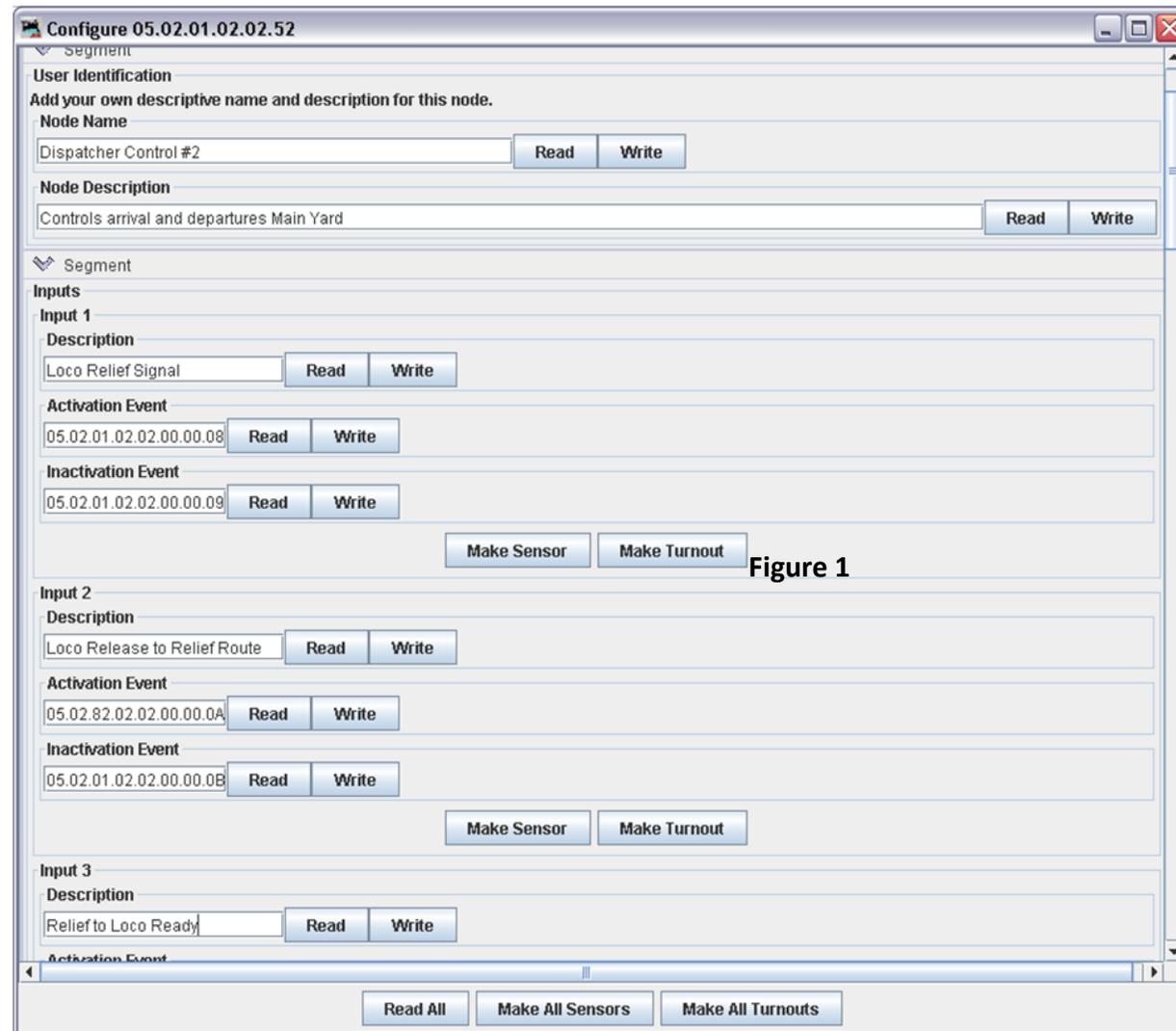


Figure 1

Even though these ids are assigned for a particular event, they may never be used in a layout.

As an example, a location on a layout may have a local panel for controlling points during a shunting operation and there may be a master panel at some other location ( maybe in a dispatcher's office). These panels might consist of a push button for each direction the point is desired to be.

The point might be listening for an event, let's say 129, to set it straight and event 133 to set it turned. The "straight" buttons in each panel would be configured to send event 129 when pressed. The "turned" buttons would send 133 when pressed. The Inactivation events for these buttons would be sent, but in this example, nobody cares. The auxiliary switch on the point motor could be assigned an event id of 466 for the straight direction and 725 for the thrown direction. These events could be consumed by indicator lights on the control panels and possibly the red and green lamps in signals guarding the points. A further enhancement to this example could be use of buttons

(Activation events enable 535 and disable 721) on the dispatchers panel that would enable or disable the use of the buttons on the local panel, if necessary, during formal operation sessions on the layout.

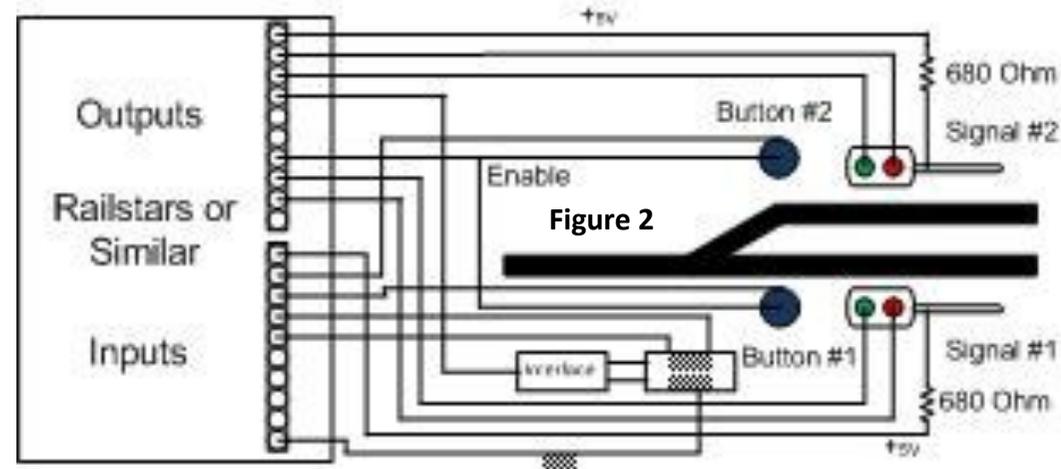
The wiring to realise this example is extremely simple as shown in figure 2

The configuration of the various devices is shown in the table below and using JMRI would take no more than five minutes

You may notice the format of the numbers in the event ids in figure 1. These numbers are in dotted hexadecimal format. Hexadecimal format allows numbers to be represented in a compact format. In the decimal system a two digit number can represent 100 ids, that is, 0 to 99. The hexadecimal system allows numbers in the range 0 to 255 to be represented as two digits. It is this system which allows the extremely large number of events to be represented by eight groups of two digit numbers. In most layouts, users will simply ignore the use of the hex digits in the lower portion of the id. The ultimate responsibility for the management of ids rests with the layout owner and the "It's your layout" rule applies.

LCC is an exciting addition to a layout and its applications are only limited by imagination. The reduction in wiring and electrical complexity adds a dimension perhaps not imagined by

Device	Location	Listens for	Produced by	Location
Point Straight	Mainline	129	Straight Button	Local Panel
		129	Straight Button	Dispatcher
Point Turned	Mainline	133	Turned Button	Local Panel
		133	Turned Button	Dispatcher
Signal #1 Red	Mainline	725	Aux Switch Turned	Mainline
Signal #1 Green	Mainline	466	Aux Switch Straight	Mainline
Signal #2 Red	Mainline	466	Aux Switch Straight	Mainline
Signal #2 Green	Mainline	725	Aux Switch Turned	Mainline
Turned Indicator	Local	725	Aux Switch Turned	Mainline
Turned Indicator	Local	725	Aux Switch Turned	Mainline
Straight Indicator	Dispatcher	466	Aux Switch Straight	Mainline
Straight Indicator	Dispatcher	466	Aux Switch Straight	Mainline
Local Enable	Dispatcher	535	Enable Button	Dispatcher
Local Disable	Dispatcher	721	Disable Button	Dispatcher



modellers a short time ago. Manufacturers are gearing up and there is at least one Australian manufacturer about to release a range of LCC products.

# Looking Back - 40 years

## Part 2 - Building & Running the Great Falls Subdivision.

Gerry Hopkins MMR

### Druthers

After much thought I decided against double deck but a hill with 2% grade was very acceptable. I drew up a few plans to fit the area I had (6m x 7m). There were a few 'druthers' – minimum isle width of 900mm (3ft), minimum height of 1250mm, single track mainline with passing sidings, all (most) switching areas to be away from the mainline.

### Track work

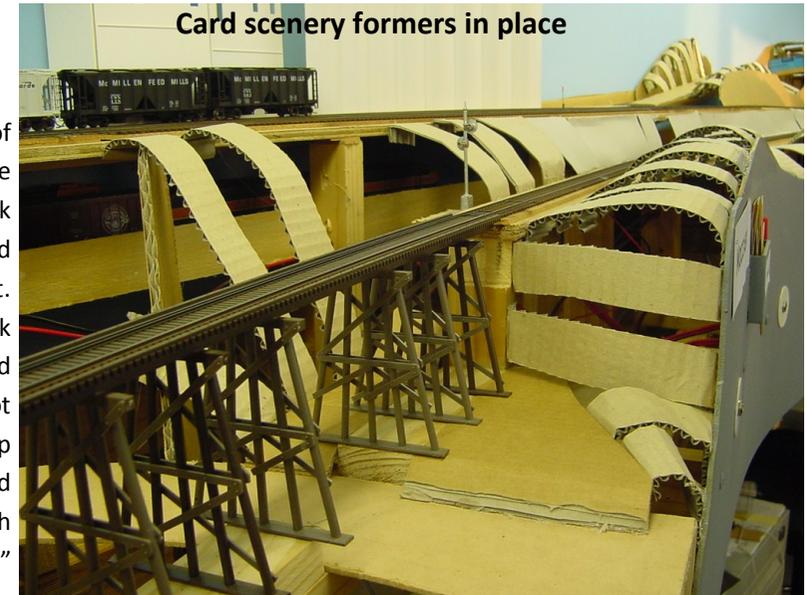
By the middle of 2002 the layout was taking shape. All turnouts were hand laid No.6 with dead frogs. This meant less wiring and switching. The main line is Code 70 rail and all other tracks are Code 55 rail with a few bits of Code 40 in industrial areas. All the main line turnouts have motors, mostly



Switchmaster but a few Tortoise and Tam Valley servos. The wiring is straight forward with the droppers soldered to the bottom of the rail – looks tidy that way. Before sections were scened, the track was fully tested – with full trains and plenty of operation. A few minor changes were carried out but generally things were OK. All mainline turnouts are run by accessory decoders. I am now at the stage where I am motorizing the turnouts in the yards and switching areas all with servos.

### Scenery

Numerous methods of scenery building were tried but I came back to my original method for most of the layout. This was a framework of card or gutter guard held in place with hot melt glue. Over the top of this I hot glued cheese cloth which was then "painted" with plaster.



Most of the scenery texture is from Woodland Scenics in assorted colours and is held in place with P60 – a latex product that dries to a matt finish and is flexible. The P60 is perfect for use with ground foams of all types.

By 2005 much of the scenery had been completed – as much as any scenery gets completed. The background at Shelby Yard was my first attempt at painting a backdrop. I laid out a strip of light blue wall paper long enough for the wall. I painted a few hills and put it on the backdrop. I was pleased with my attempt and did a second one with lower hills. This was mounted below and in front of the first one.

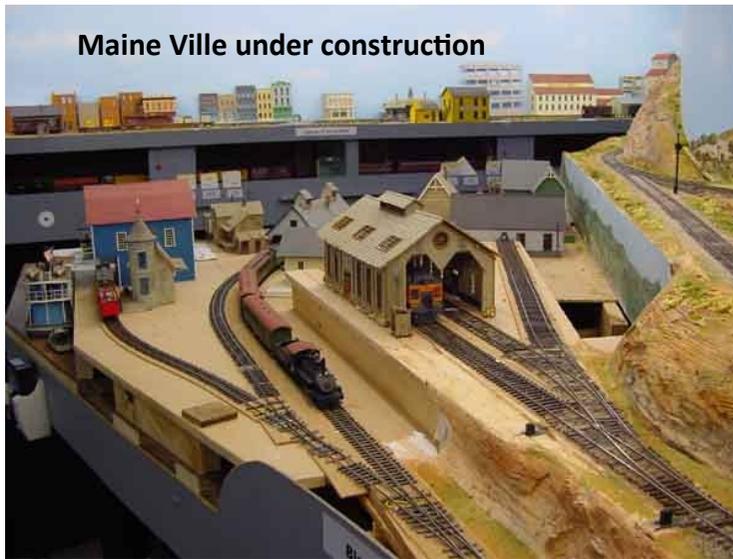


## The Moving Bits

The whole world of model railroads has changed in the past 40 years. The methods of scenery building and structure building have changed little, all the “progress” has been with the locos, rolling stock and how they are run. In those days there were craftsman kits for the buildings and quality kits for rolling stock from Proto 2000, Intermountain and Red Caboose. All the rolling stock items have different numbers – this makes setting up for operations very easy. All the wheels are metal and are either Proto 2000 or Reboxx. The Reboxx are code 88 wheels and run beautifully.

## Maine Ville

Work was also progressing on the narrow gauge section of the layout. The main feature was the town of **Maine Ville** – a theme park with locos and rolling stock of the **Maine Two Footers**. There is also a hidden 3 track staging yard as well as the loops at the front with sidings. Some of the buildings are from the old exhibition layouts and some are new craftsmen kits.



## Making It Run

Most of the locos have had sound decoders since 2001 – all pre-Tsunami sound. The steam locos were later upgraded to Tsunami in 2007 but the diesels have kept their original Soundtraxx LC decoders. The steamers are now being upgraded to TCS WOW decoders – just great! There are 86 switching spots on the layout – enough to keep a crew of six busy for 3 hours. As I am a very lazy modeller, I did not want to spend days preparing switch list or similar for these sessions, instead I use the **Car Cards & Waybill** system. It takes about 20 minutes to check and set up before any session – my kind of paper work! If the operator



wishes, he can write out a switchlist for his train – as long as he exchanges the car cards when he is finished.

Finding a regular, motivated and able crew is the difficult part. 50% of the local modellers follow the Australian Prototype and they are not familiar with American Practices – like using the bell and headlights. The other problem is their lack of rolling stock type knowledge. I use mostly steam locos, and these have been upgraded to **TCS WOW** decoders. The decoders are fun to use but take a little getting used to. The functions are common to all steam locos – getting the crews to learn how to turn the lights on is hard enough. They have not started to use the throttle to control turnouts or select routes yet. It is still common for a loco to run a red signal or derail while going against a turnout.



It is my aim this year to get a crew operating once a month – proficiently. By the end of the year, I hope to run a night operating session – with, maybe, some moonlight. This has always been on my bucket list – and the layout is almost ready.

Most of the yards have lights as do the buildings. All locos have headlights and marker lights. The current project is fitting marker and internal lights on the cabooses.

Behind the upper valances there are strips of blue LEDs. A five metre coil was cut into sections and these were mounted on cheap plastic channel from Bunnings and placed above the switching areas around the layout. To operate under these conditions, the crew will need to be able to read the signals without having to look at the turnouts. The signalling has been kept as simple as possible – green means go, red means stop, and amber means take the diverging route or at reduced speed.

## Using Car Cards and Way Bills

**What are car cards?** If you look at the end or side of a unit of **US freight stock** you will see a **‘Tack Board’**, this is where some of the information required to move the car is shown. It could have a chalked message or a piece of paper attached.

HO rolling stock is too small for this, so, a car card is substituted for the purpose of carrying the message. The car card would carry the minimum amount of information to identify the car. These are the reporting marks (road name), the car number and the type of car (using simplified AAR codes). For the benefit of the novice operator the card also carries a short description – Red Box Car etc.

**The waybill** contains several pieces of important information written by the freight agent attached to the car or carried by the conductor.

The way bill is 4 sided, and in the normal sequence of things the waybill is turned between operating sessions. This means that the car may come back again in 4 months but this can vary from industry to industry and the efficiency of the operating crews.

The waybill carries the information as to where the car has to go, I.E. town, industry, track spot, and goods carried or MT. A typical waybill for a single door boxcar (**XM**) could be set up as:

**Side 1 = Sun Burst, Harding’s Furniture, Door 1, Metal Supplies.**  
*This is an industry on the layout.*

**Side 2 = Clearfield, Sears Robuck & Co. MT, VIA Billings**

*When the car is picked up it goes to Clearfield, we have no idea where this is, all we need to know is that the car has to go to the yard at **Billings**. They will put it on the right train to Clearfield*

**Side 3 = Elgin, Del Monte, Dry Peas, VIA St Paul**

*When the car is picked up it goes to Elgin, we have no idea where this is, all we need to know is that the car has to go to the yard at **St Paul**. They will put it on the right train to Elgin.*

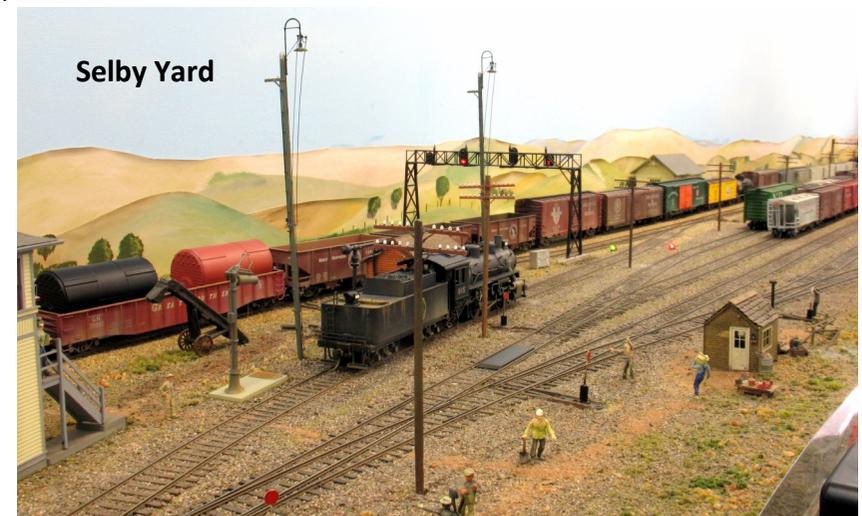
**Side 4 = Cushenbury, Kaiser Cement, MT, VIA Augusta**

*When the car is picked up it goes to Cushenbury, we have no idea where this is, all we need to know is that the car has to go to the yard at **Augusta**. They will put it on the right train to Cushenbury.*

The layout has 3 main staging yards – St Paul, Seattle and Billings, and 2 branch line staging yards – Augusta and Sweetgrass. Staging yards are used to represent the towns off the layout. These towns are shown in the **VIA** section of the waybill and are printed in **RED**.

In the example shown above, the town of **Elgin** is to the east of the area modelled so instead of saying east staging, the main yard in that direction is **St Paul**.

A mainline freight comes from **St Paul** onto the layout and stops at **Shelby yard**. *Here it will pick up cars for its destination and drop an equal number of cars for delivery on the layout.* Cars which have a **VIA** on the waybill are obviously “through traffic” and are of no concern to the operators on this section of layout. Another, and better, name for ‘this layout’ is “the **Great Falls Sub**”.



The cars dropped at **Shelby** are then sorted into "locals" for each of the industrial towns on the sub-division. The local has 5/6 cars and caboose. To have too many cars means the local is gone all session and can run out of work time. Once at the yard, the loco has to be returned to the loco yard for service and refuelling. The **Great Falls Sub** has 86 'industry spots' to be serviced. It takes a 4 hour session to service all the industries.

When a train is ready to depart, first it must pump up the air in the brake system. This process takes a while – a count of "3" for each car in the train is normal.

At each of the yard areas there are at least two water columns for the steam locos. The amount of water taken on is normally a count of 5 for each car in the train. All locos must take on water before leaving the town. On the throttle, **F5** gives the sound of water going into the tender and the closing of the cover when finished. Both the Tsunami and the TCS WOW have this function.

## Operator Jobs

**DISPATCHER** – this is the "top" job, He gets to tell others where to go and how to get there – all in a nice way. He must decide which train has priority over another and who gets access to the main line.

**YARD MASTER** – gets to set up the trains that leave the yard. He also sets out the cars that are to be delivered to industries in Shelby.

**HOSTLER** – has two rolls. He must move the locos around for servicing and have a suitable loco ready for a particular job. His second job is that of switcher around Shelby local industries.

**ENGINEER, LOCALS** – There is enough work for three/four locals to be run at the same time. The engineer has the dual job of engineer and conductor. Before leaving the yard he must check that all the rolling stock has all the correct paperwork for the area he is going to. Before leaving the yard he must pump up the air for the brakes – a count of 3 for every car in the train. As always, he must sound the bell while leaving the yard.

**ENGINEER, MAINLINE** – This engineer drives the train between St Paul (east), Seattle (west) and Billings (south). He drops off and picks up cars from Shelby Yard. If there are 5 cars at Shelby to be picked up, these are added to the rear of the train. This is normally done by the yard switcher. At the same time the mainline engine will switch 5 cars from the front of the train.

**ENGINEER, PASSENGER** – There are four passenger trains that can be run. The Tourist Special from Maine Ville, The Cascadian – similar to the Empire Builder, and two rail motors. These trains stop at each depot for a count of 30 – long enough for passenger to get on or off.

### OVERVIEW of the Layout.

The layout can be run with any number of operators between 1 and 8. This is different to some American layouts that have a minimum of multiple operators. The layout itself is always ready for an operating session – may just need the vacuum over floor to look tidy. There is no paperwork to prepare for each session, trains can be parked at their location and the session can carry on the next time – days, weeks, even months later.

## To come – Tour the layout as it is now.



# Beside the Track.

Arthur Hayes



Mail Train down to the seaside and return.

It is on this train journey that we get another perspective of our local railway first hand from the carriage window. We see other locations on the way, things change, for me after a couple hundred miles it was an engine change. With the heavier track came bigger engines in different colours. As we travel along on our journey, bush changes to farms, towns become larger, not two back yards are the same, very few houses are the same, more and more rail activity becomes evident with more industry using the railway. The railway has a purpose, it was the life blood to many locations, the only way in and out of town for most in the sixties. The train is part of the bigger scene going from place to place. On our model railway layouts I think our trains should do the same, go from place to place serving the community and being part of the wider world.

We spent a lot of time on our rolling stock making sure it is right and it looks the part to fit the era in which we model. The scenery on our layout can also tell a story just like the prototype on our holiday trips. Our trains can move from one scene to another, this gives distance. We can space or separate our scenes with bush/farms/road etc. Most layouts have limited space, thus it is impossible to fit everything in. Selecting key items with good detail-

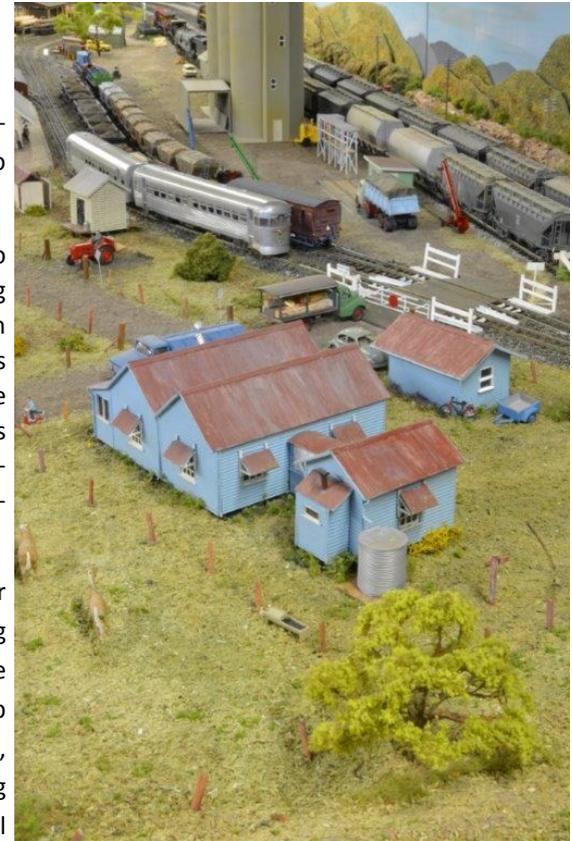
Most of us get hooked on Railways/Model Railways by observing the prototype from track side in our youth. For me as a young bloke in western Queensland the local railway operations was visible from the front yard. Others, it was over the back fence or walking home from school. When it came time for holidays down in the big smoke, it was on the

ing draws the viewer into the scene, plus it provides an awesome setting for our rolling stock to pass through.

I model the 60's and in setting the scene I try to recreate country living as I recall as a boy growing up in the bush town. Most stations had a Station Master residence provided by the railway, it was generally located within walking distance from the station. Smaller locations may have a Ganger's residence beside a level crossing and his wife doubles up as the gate keeper as the case in this scene.

The house is a Turntable kit which is no longer available, however various laser cut building around today would be quite suitable. The garage is scratch build using evergreen styrene clap board. Security is not a big issue in the country, thus the doors are open a bit, note the landing pigeon on the roof cap. In the back yard you will find a wood heap complete with chopping block.

Wood/fallen branches was collected from nearby bush and cut to size with an axe for the stove by the man of the house. Chips for lighting the fire were cut by the kids and taken to the kitchen stove daily. Cut wood stack is also near the back door. Nearby is the all-important earth closet (toilet).





Country folk are good at looking after themselves, after all the local shop or supermarket could be miles away, thus the chook pen and veggie garden. The fence for the pen was made from aluminium fly wire cut at 45° and super glued to case nails with their heads cut off. The chook roost is a cotton reel cut in half, styrene legs add and cover with corrugated iron. A couple of chooks have got out and the family dog is keeping an eye on them. Also in the back yard is the cloths line, long before the Hills hoist a wire was stressed between two posts, props cut from bush timber were used to raise and lower the line. Fishing line was used for the cloths line and fallen branch

leaning up on the front corner of the house and garage. Kids play out on the road while the local Garbo collects the rubbish. The truck is a Weiso Dodge with a scratch built body. Flower garden is across the front and along one side of the house, plus a few plants along the garage wall to add some colour.

Waiting at the level crossing gates is the local fruit truck doing his rounds. The truck is a Weiso Austin with a scratch built tray full fruit and vegetables. Beside the house is a horse paddock with three mags taking off with the sound of the approaching train. The water trough was made from a drinking straw and scrap styrene.

Adding detail bring the scene alive, it tells a story. I have found little scene around your layout create discussion between viewer and the operators. From time to time you don't feel like starting another big project, a change is as good as a holiday, few hours making some small item can enhance your layout.



twigs made the props

Like most country yards, things are all over the place, trailer behind the shed, kids push bike

# Modifying existing flat cars to carry logs

Rod Tonkin

The two plain old Tyco flat cars had lain in the discard box for some time. These models only weighed in at three ounces each and were notoriously easy to derail. Maybe if I modified them to haul logs I could improve their appearance and operational performance?

The lettering on the flatcars showed they had a capacity of 140,000 pounds. Photos of current Australian logging operations show logs are cut into twenty foot lengths to suit the saw mills. A few calculations showed me these cars should be capable of hauling around thirty six freshly felled two foot diameter, twenty foot long logs.

Having arrived at the load for my converted flat cars I could sketch up the log cradles to

and unloading would result in the stakes being quickly bashed out of true. The cross bearers are mounted either side of the vertical stakes on the flat car deck.

The log cradles were given a coat of red oxide PVA artists paint. To give each car a different



hold the load. Each car would have two pairs of log cradles to accommodate two piles of logs. I used match sticks for my log cradles. The vertical stakes were cut to fit into the existing stake pockets on the flatcar sides. I wasn't concerned if the vertical stakes were not dead square to the flat car floor. The battering this equipment would receive during loading

identity, the number of one of the cars was altered by scrapping the number with a modelling knife to change its number. To show some time in service the modified flat car was weathered with watercolours diluted with hand washing detergent. My logs were cut from a creeper invading my backyard. (Showing there is some merit in gardening.) The creeper stems were cut into around twenty scale foot lengths with secateurs and contact cemented into place in the log cradles on my flat cars.

Re weighing my now loaded flat cars showed their weight had increased to around six ounces. NMRA RP20.1 recommends a weight of four and a half ounces for these seven inch long models. My models are over 30 percent heavier than RP20.1 recommends but I'm able to live with the odd few freight cars being overweight to RP20.1 My previously unloved flatcars are now visually interesting models, revenue earning and more importantly from a model railway operating point of view heavy enough for reliable layout operation.



## Subtle detailing and weathering



BR D200/40122 as acquired

Rod Tonkin

The model of BR D200/40122 I acquired at a recent model railway exhibition looked rather ordinary. A little subtle detailing and a light weathering would, I thought, considerably enhanced its appearance.

The model as manufactured by Lima is painted and lettered to depict the locomotive after it was retired from service and re painted into an earlier colour scheme. The two numbers correctly displayed on the model are its original service number D200 and its TOPS number 40122.

As acquired the model lacks the train identity discs fitted to the early versions of these locomotives and the model is too clean, rendering the detailing on the roof of the model difficult to see.

BR locomotives of this period carried four identity discs on each end. A row of three across the end of the locomotive above the buffer beam and another one centred above the row of three train identity discs. These discs opened to display a white disc in daylight and a white light at night. Folded down the yellow rear of the disc matches the yellow nose of the locomotive.

The train identity discs were included with the model by Lima. Luckily these were still in the box with the model. I decided my model of BR D200 would be hauling an express passenger train,



D200/40122s blackened exhaust ports and lightly weathered

so it would display two white discs, one above each buffer. The other two discs would be folded down. To install the train identity discs I carved off the moulded in place lenses on the identity disc locations and drilled a two mm hole in the body shell to accept the spigot on the Lima train identity disc moulding.

The colour scheme of these locomotives in the 1960s was a serviceable green on the sides, a high visibility yellow nose and a light grey roof. (The wizard who dreamed up a light grey roof on a diesel locomotive was probably also responsible for the design of the Morris Marina)

An obvious visual improvement was painting the inside of the four engine exhaust ports and the train heating boiler exhaust port matte black.

Even a preserved locomotive in enthusiast specials service would acquire some staining on the roof, inlet grills and underframe. I applied a light weathering wash of black water colour on the roof to highlight the radiator fan grill and the engine and steam generator roof access hatches. The radiator and traction motor blower inlet grills were highlighted with a wash of brown water colour. The bogies and fuel tank were also highlighted with a wash of brown water colour.

A bit of thought and a little effort resulted in a more effective looking model. Now all I need to do is make it run reliably.



D200/40122 with train identification discs mounted

# Modern North American Tunnel Portals

Jeff Lee

I purchased several single and double track portals for my N Scale BNSF layout, but found I needed a few extra for the layout. This is strange as I have tended to over purchase in the past due to many years of attending train shows and conventions. My layout room has many building kits that will never see the light of day on my layout. In my case the only spare tunnel portals I had were sandstone (English types) that did not suit Western USA.



Off the peg tunnel portal



Scratch built tunnel portal installed on layout

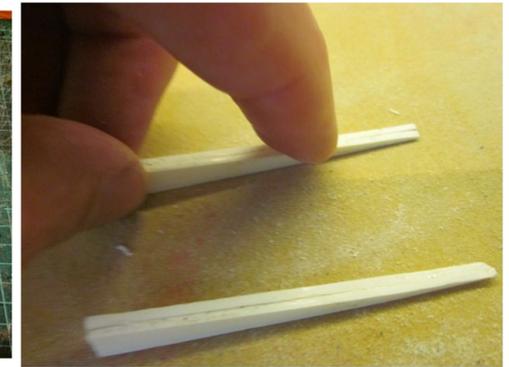
With the encouragement of a fellow modeler, I decided to make some portals from plastic and they turned out as good as the bought ones. The end result took less than an hour to make and would cost less than \$1 each. By comparison the purchased tunnel portal without tunnel liner cost around eight dollars.

Start by cutting out the pieces from sheets of 2-4 mm thick plastic sheets. I buy my plastic in large sheets from an industry seller – Sydney West Plastics. It works out a fraction of the hobby store price. I like to support the local hobby stores and do buy a lot of plastic shaped strips from hobby shops.



My plastic sheet was 2mm thick so I made a double thickness to make the portal 4mm thick. I model in N Scale so you may need additional thickness if you model in larger scales. You can buy plastic sheets in most thicknesses.

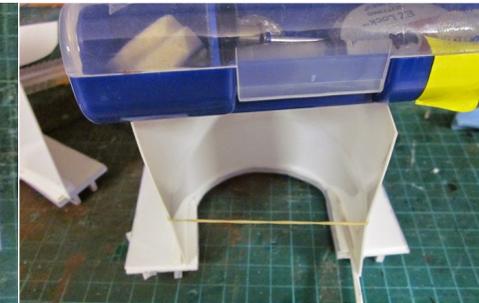
Here are the pieces cut out. The strengthening front pieces were also doubled to give a bigger thickness.



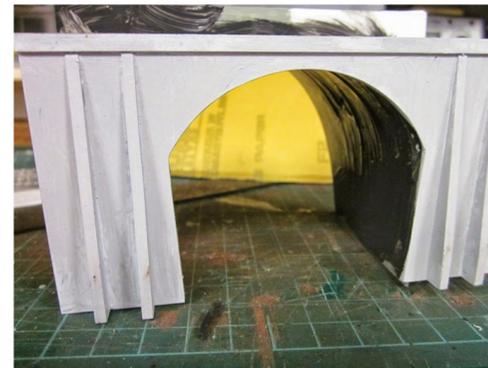
Each of the sections were glued and held together whilst the glue dried.

The braces on the portal were sanded to create a uniform shape and correct any irregularities in the two sections. If you find a joint line this can be filled with plastic putty. Tamiya make a great putty.

At the rear of the portal I attached a tunnel liner about 4 inches (10 cm) long. To do this attach brackets on the rear of the portal to support the liner which will need to be bent to shape. The reason the liner is only 4 inches or 10cm. long is so I can gain access to the tracks to clean them or heaven forbid, pick up a derailment. When the shape of the liner is about right glue using either plastic cement or super glue and use weights to hold until dry.



The inside of the liner can then be painted black and the concrete portal your favourite concrete colour.



# Division One Highlights

Earlier this year AR Kits received a request for support for the NMRA National Convention in Portland, Oregon in August. I thought how do I support the Convention from far away Australia with any real meaning? I discarded the idea for a while and after producing a number of limited run items for local clubs that gave me an idea to set the picture in motion. I would do a limited run of three HO models each with a banner that would be purely NMRANational Convention but with an Australian twist. Using AR Kits NGHF wheat hoppers I came up with three unique banners that would enhance the models with a couple of local mountain icons that would give them meaning. All cars carry the code PDX followed by the wagon number. PDX being the Highlight red lettering of the Portland Daylight Express and the wagon number starting with 2015 (the year) followed by a two digit number. The wagon also carries the AR Kits logo and the logos of the NMRA.Org and the NMRAAustralian Region. The scenes are representative of the reason behind it all from far away South East Queensland, Australia to our modelling friends all over the world.

AR Kits is located in Warwick, Queensland and the mountain the mid foreground is Mount Dumaresq. A small mountain to the East of Warwick where the explorer Allan Cunningham stood in 1828 when he named the Darling Downs region of what was to become the state of Queensland.

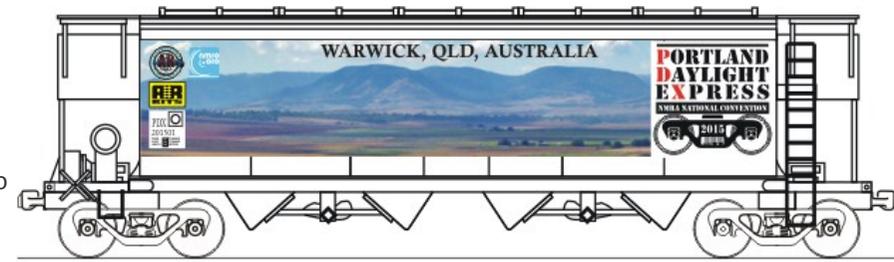
Teditor is the maker of the decals that adorn the models. He lives in Toowoomba, Queensland. One of the sights to the East of Toowoomba is Table Top Mount which is part of a small rift valley running along the eastern rim of the Great Dividing Range in that area. Ted is a wiz with Corel Draw and the Alps Printer and given a little encouragement can produce some great results.

Last but not least is Mount Shasta. This is the image that got me started on this line of

thought. When I first went looking for ideas I went to the Convention website and got

hit in the face with Mount Shasta.

So there we have the story. Although it did not quite finish there. Ted is an avid N Scaler so we just could not let it go at that. With three Atlas ACF Centre Flow Hoppers we have created the N Scale equivalent.



All cars are painted Sky Blue to match the heavens above all three locations. I do hope that each car, be they as individuals or in sets go to modellers who appreciate the small contribution we have made to what I hope is a very successful meet.

Regards and All the Best

Al and Barbara Cutmore

AR Kits

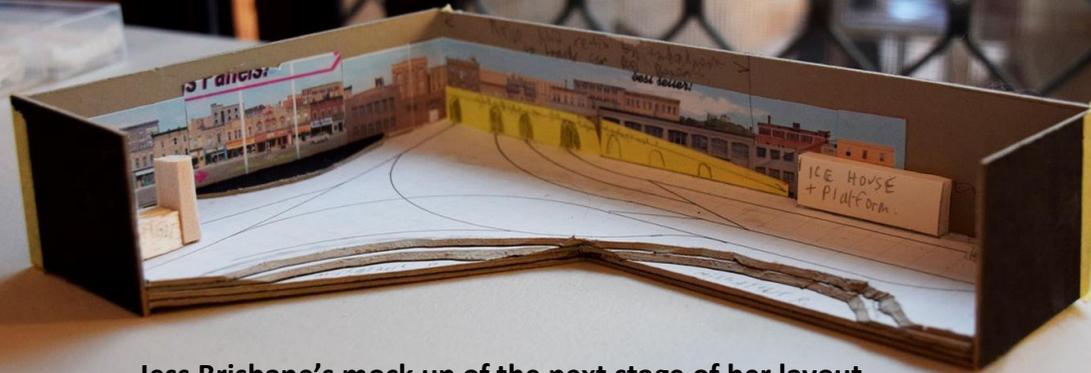
## In Memoriam

We regret to advise the recent passing of Bob Deakin a long time member of Division One and the Caloundra and District Model Railway Association



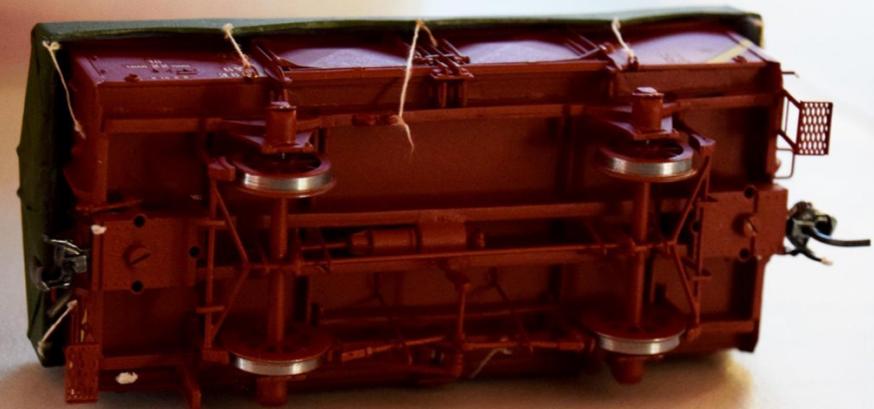
Jess Brisbane's laser cut kit cabooses

## Division Two Highlights



Jess Brisbane's mock up of the next stage of her layout

Brian Thomas's VR "GY" wagon



Viv Brice's photo of street running in Kamloops



Peter Dinham's scratch built N Scale BCW

John Cracknell's HO Scale 830 Class



Dan Packard's

O14 Deutz



Alan Ogden's 7 mm scale  
Hunslet on a Joueff chassis

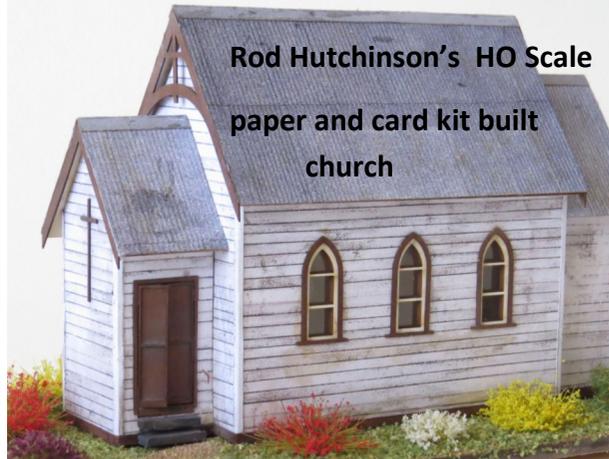


## Division Three Highlights

Ken Hughes On30 Boulder bodies kit on a  
Bachman HO Scale GE 44 tonner chassis



Rod Hutchinson's HO Scale  
paper and card kit built church



Peter MacDonald's On30  
Davenport on a Bachmann  
chassis



Paul Riches S scale 70 tonner on two NWSL Stanton Drives



Laurie Green MMR 's Outback models  
paper and card On30 NDC Van



# Division Four Highlights

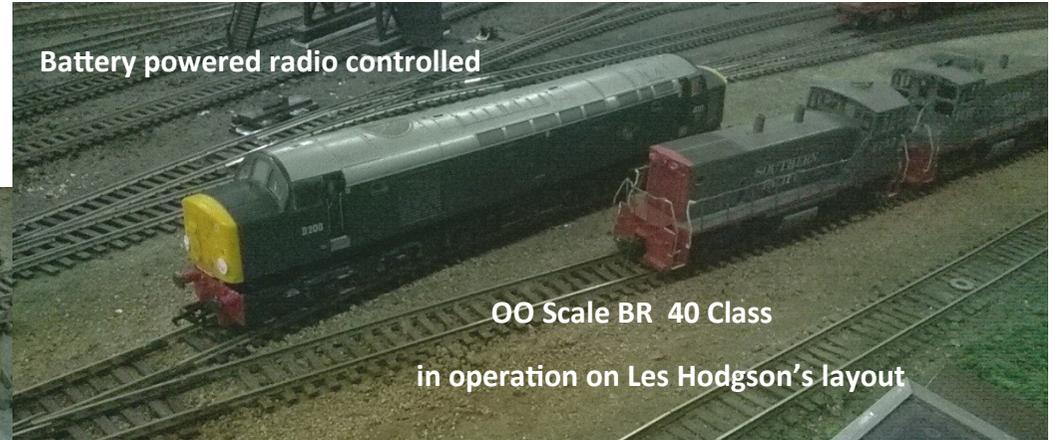
Our June meeting was held at Peter Scarfe's. Alan showed us his progress on operating signal lamps by the auxiliary switches on a tortoise point motor. Rod showed us some freight cars he has converted to timber industry cars.



Gondola modified for wood chip haulage

August brought us to Les Hodgson's. Les is embarking on a major overhaul of his now twenty year old HO Scale Layout. Alan showed us the soft cover copy of Kalmbach's classic book "Steam Locomotive Cyclopaedia" he acquired through their recent 50 % off sale.

The model 40 class Rod showed at the July meeting looks elegant (To him anyway) but the brass wheels didn't give reliable current collection. He has rectified its poor operational per-



Battery powered radio controlled

OO Scale BR 40 Class

in operation on Les Hodgson's layout



Low trestle bridge on AMRA WA's

HO Scale North American "Valentine Run" layout

formance by converting it to battery powered radio control. To prove it worked he demonstrated its operation at the August meeting on Les Hodgson's layout independently of the track power.

He also showed the detailing changes (Relocating the buffer beams onto the bogies and changing the battery box covers) that he made to the "Great British Locomotives Collection" static model of a BR 45 class to more closely resemble the real thing.

July saw us meeting at Alan's other home AMRA WA Branch's club rooms. We were able to admire progress on the extensions to the Valentine Run layout that Alan is responsible for. Alan showed us the as yet unlettered 2-8-0 that he has acquired



Alan's unlettered 2-8-0



Rod's re detailed BR 45 class

## Division Six Highlights

The June long weekend saw the Division along with the DECCA SIG hosting a stand at the Adelaide Railway Exhibition.

The Division members carried out a number of various activities and the DECCA SIG had their computer controlled layout operating.

The Division offered a challenge to members of the public to operate a time saver layout, provide by John Prattis and ably manned for the best part of the show by David Stokes.

After the exhibition we welcomed 3 as new members of the Division and SIG.

Hutch Hutchinson welcomed us at this home on 11 July. After some discussion it was decided to hold meetings monthly rather than our present bi monthly meetings. The division has tried this in the past without much success. I reminded members that it will take a considerable effort on everyone's behalf to make this work.

Ray Brownbill, who is the AP rep presented the following awards to:

- Ron Solly
  - Model Railroad Engineer Civil
  - Master Builder Scenery
- Max Wright
  - Chief Dispatcher
- Peter Jackson
  - Association Volunteer
  - Master Model Railroader

Congratulations to you all.

Max Wright gave a demonstration using "Muscle Wire" as a remote un coupler for KD couplers.

After the meeting, members adjourned to Hutch's layout room to see the progress on his N Gauge layout.

On the 12 September saw 23 members meeting at the Mallala Museum as guests of Bev and Bob Bevan. After touring the museum, members adjourned to the former Long Plains classroom located within Museum grounds. Whilst many members were reminded of the school days they were for the most part on their best behavior.

We welcomed the Wynne family and Graeme Parkin as new members.

Many issues were discussed including LED lighting and where it can be obtained, as well as where members can obtain information to resolve problems that they encounter. Rather than starting our own blog, a number of sites were suggested to members.

We now have a full calendar of hosts for meetings for next year. Thank you everyone for your enthusiasm for the new monthly meeting schedule.

For Bring and Brag:-

- Bob B - circulated some photographs of the now demolished Mallala station
- Michael R - photographs of his layout
- Scott T – Parts for a scratch built 1/24 locomotive.



Ron Solly



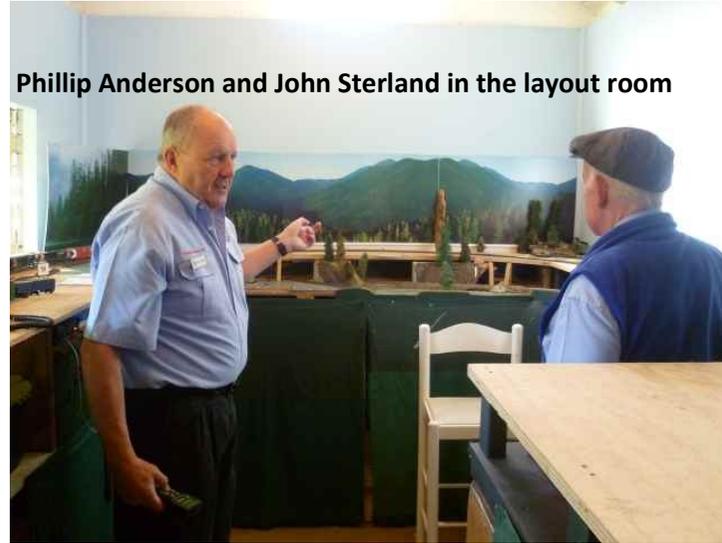
Max Wright



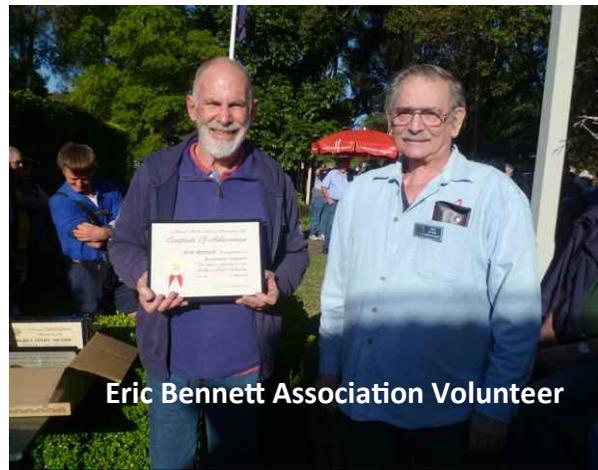
Peter Jackson MMR

# Division Seven Highlights

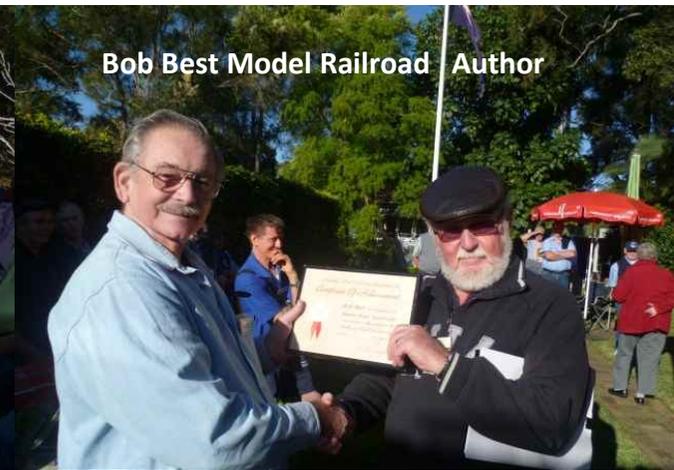
The July Meeting was hosted by Phillip and Laurel Anderson on Saturday 11 July 2015. Despite weather predictions of arctic blizzards, mother nature turned on a perfect, sunny winter's day.



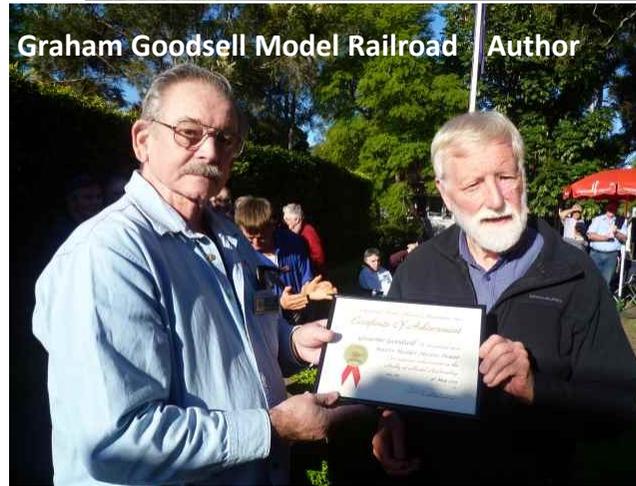
Phillip Anderson and John Sterland in the layout room



Eric Bennett Association Volunteer



Bob Best Model Railroad Author



Graham Goodsell Model Railroad Author



Bob Best Master Model Railroader



Phillip's tidy workspace

## Recent Division Seven AP awards

- Erik Bennett – Association Volunteer
- Bob Best – Model Railroad Author
- Bob Best – Master Model Railroader
- Graeme Goodsell – Master Builder Structures
- Graeme Goodsell – Master Builder Cars
- Graeme Goodsell – Master Builder Motive Power
- Graeme Goodsell – Model Railroad Author



Graham Goodsell Master Builder Structures

# How to get the most from NMRA Conventions.

Jeff Lee

I have been attending NMRA National conventions for around 20 years and continue to do so. From this, you can conclude that I get value from them and would recommend them. This experience has encouraged me to document some ideas that I think will help you get the most from them, from a model railroaders perspective.

The National conventions are almost always held in the USA around July or August. About 1500 to 2,000 people attend and the week ends with a large Train Show over the Friday to Sunday. The week also includes about 5-6 concurrent clinic streams, daily layout and industry tours plus rail excursions, and non rail activity. The Special Interest groups – namely Operations and Design also have meetings and tours.

So, what works and what are some suggestions to get the best value from the week of rail-roading?

- Before the convention carefully look at the layouts you may want to visit. Layout visits cater for all levels of mobility and a bus of 50 people can take a long time to load and unload at stops, so if you are impatient look at other ways to visit the layouts – see further on.
- Study the clinic schedules and lock in the ones you want to visit. The clinic are generally of a high standard, and a great chance to interact with experts.
- Look at the before and after convention activities and build these into your schedule. For example there are often layout visits and operating sessions that you can add to the trip. These are much better than a bus tour in my opinion.
- Join or participate in the mid week LDSIG self drive layout tours. The layouts here are the best ones and you can visit at your own pace. If you don't have a car it is worth hiring one for this day, or going as a passenger with someone else. Generally you can see the best layouts this way without doing a bus tour with 50 others.
- Carefully consider the organized events at the convention. Unless you are an NMRA executive the final dinner is expensive and of little relevance to ordinary modelers. It can be convenient to use the NMRA transport to do a river cruise but if you are with some colleagues you can save 50% by booking direct and using public transport to get there. Most US cities have improved their public transport recently and it is cheap.
- If you are designing or building a layout book up an interview with one of the LDSIG leaders. These guys will look at your plans, comment and work with you to improve them. In my opinion one of the best consulting sessions you can attend.

- The Train show from Friday to Sunday has some great layouts, and many of the key manufacturers. It is big but not as big as many years ago. The reason is that most retailers stay away, and there are no swap tables or second hand stalls as you may find at other conventions. Hence it is not the attraction it once was.



- Local hobby shops advertise and encourage visits with discounts during the convention and are worth checking out. Usually the “locals” know them and can advise on which one would best suit your needs.

Next year's NMRA Convention is in Indianapolis from July 3-10. The convention hotel is opposite the convention city and Indianapolis is a very easy city to enjoy and get around. Plan on getting there and I hope the suggestions help you get more from your trip.

Jeff's photos show a couple of layouts on display at the Portland Convention.



## Coming events

### WA 11th October Perth

#### **Rail Heritage WA's 2015 Railfest**

10.00 am to 4.00 pm

WA Railway Museum 136 Railway Parade Bassendean

Railway memorabilia and model railway equipment traders tables.

Behind the scenes tours, Afternoon tea in the dining car and sausage sizzle

Adults \$9.00, Concessions \$7.00, Children \$4.00; pre schoolers, free.

#### **Division Four will have a stand at RailFest this year.**

### 9<sup>th</sup> – 10<sup>th</sup> October,

#### **Caloundra & District MRA**

Sale and Display.

### 10<sup>th</sup> October,

#### **Miniature Train Club,**

Gold Coast Show,

Heritage Park, Rifle Range Rd., Pimpana.

### 17<sup>th</sup> & 18<sup>th</sup> October

#### **Ipswich Model Train Show,**

Ipswich Railway Workshop Museum.

### NSW. 31st October – 1st November

#### **New England Model Railway Club Inc.**

model railway exhibition

Open 9am to 5pm (Sat), 9am to 4pm. (Sun).

Holy Trinity School, Moore Street, Inverell.

Admission \$10/\$5/425.

Contact Graeme Tampion 02 67223331 or Warren Herbert 02 67325711.

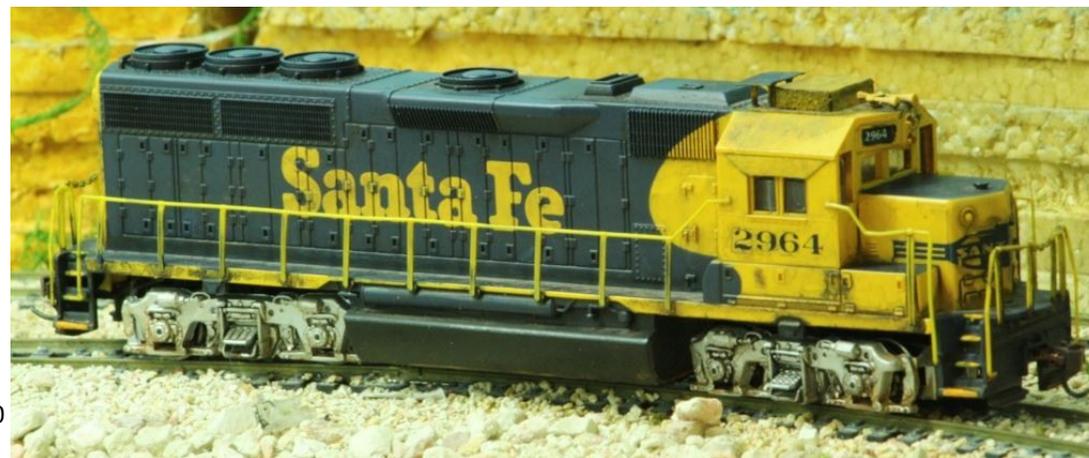
**This space is your opportunity to promote your exhibition or open day. Please send details of your event to the editor [editor@nmra.org.au](mailto:editor@nmra.org.au) for publication in MainLine.**

## Editors note

My notes on photos for MainLine in the Winter 2015 issue posed the question of the source of the photos of my HO scale model of Santa Fe GP40 2964. All can now be revealed. The photo of 2964 on the outdoor setting was taken with the camera in my Nokia Lumina 520 phone. In good light the phone camera produces adequate photos for reproduction in MainLine.



The photo of 2964 on my layout was taken with my Canon EOS 1000D digital SLR. Under artificial light the SLR with its range of exposure and shutter speed options provides a more reliable result.

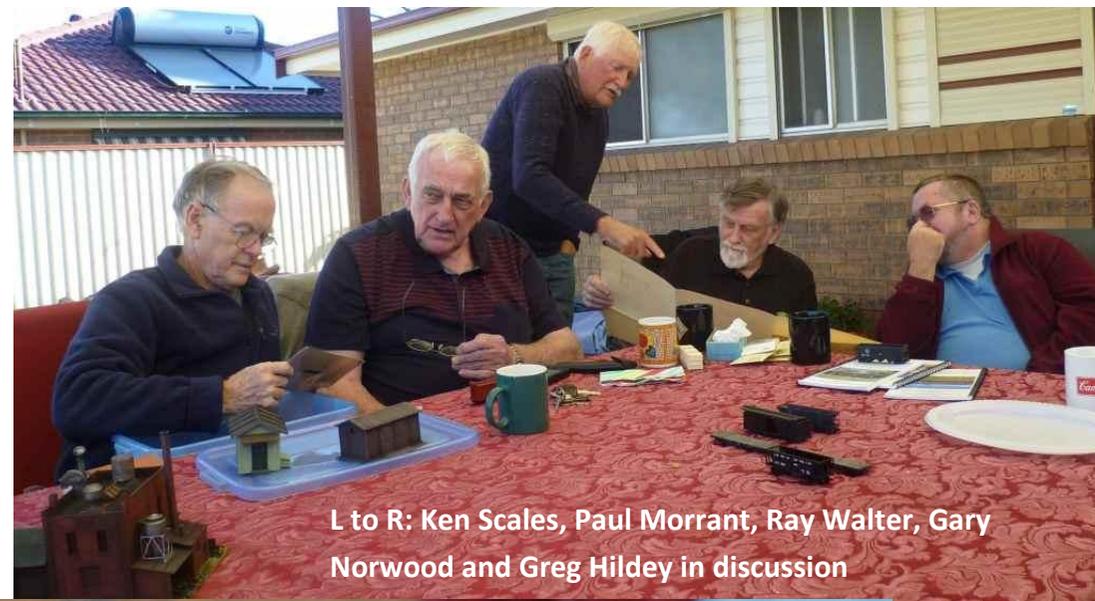


## Narrow Gauge SIG

The June Narrow Gauge SIG Meeting was hosted by John and Natalie Montgomery on Saturday 27 June. It was a beautiful sunny winters day. The early starters were treated to a BBQ on John's very impressive wood-fired BBQ around noon with the remainder of the group rocking up around 2 pm. For the afternoon's "show & tell", Ken Scales displayed a few kit bashed structures, Greg Hildey showed off a number of HOn3 rolling stock items and Ray Walter had a train schedule sheet (from 1942) plus some lovely photos and a small shanty shed.

John Montgomery then showed how to get a good effect using embossed paper towel and plaster.

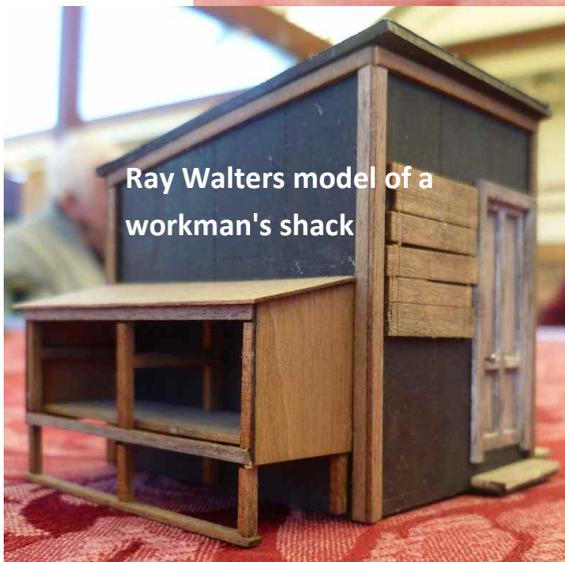
The following photos tell the story.



L to R: Ken Scales, Paul Marrant, Ray Walter, Gary Norwood and Greg Hildey in discussion



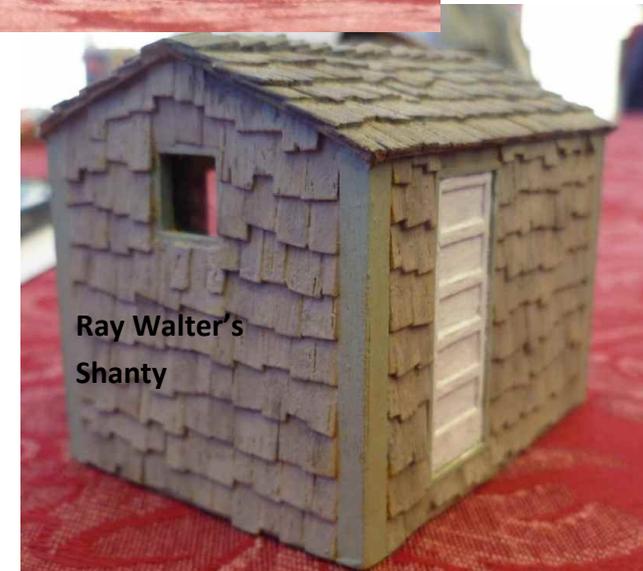
Greg Hildey's HOn3 rolling stock



Ray Walters model of a workman's shack



Plaster showing the pattern from using embossed paper towel. Pure and Simple was used as a mould release agent



Ray Walter's Shanty

# Prototype observations

Arthur Hayes

The Black Hills Central Railroad is a heritage railroad in South Dakota, United States. It currently operates the 1880 Train on the former Keystone Branch of the Burlington Northern Railroad (BN) between Hill City, South Dakota and Keystone, South Dakota. This line was originally built by the Chicago, Burlington and Quincy Railroad as a mining railroad to tap the Black Hills gold field. It reached Keystone on January 20, 1900 and was later used to haul equipment for carving nearby Mount Rushmore.

In 1957, William Heckman and Robert Freer started the Black Hills Central Railroad which began operating a tourist passenger excursion trains. In 1972, the Black Hills flood destroyed the last mile of the Burlington Northern/Black Hills Central line in Keystone, which was later restored in 2001.

The Black Hills Central Railroad restores early twentieth century-era locomotives and cars. It has been featured on television shows such as the Gunsmoke episode "Snow Train", General Hospital, and the TNT mini-series "Into the West". It also appeared in the movie "Orphan Train".

Trains operate between early May and early October over the scenic 10-mile (16 km) line.

Arthur's photos show locomotive number 110, a Baldwin 2-6-6-2T, built in

1928 in action.

