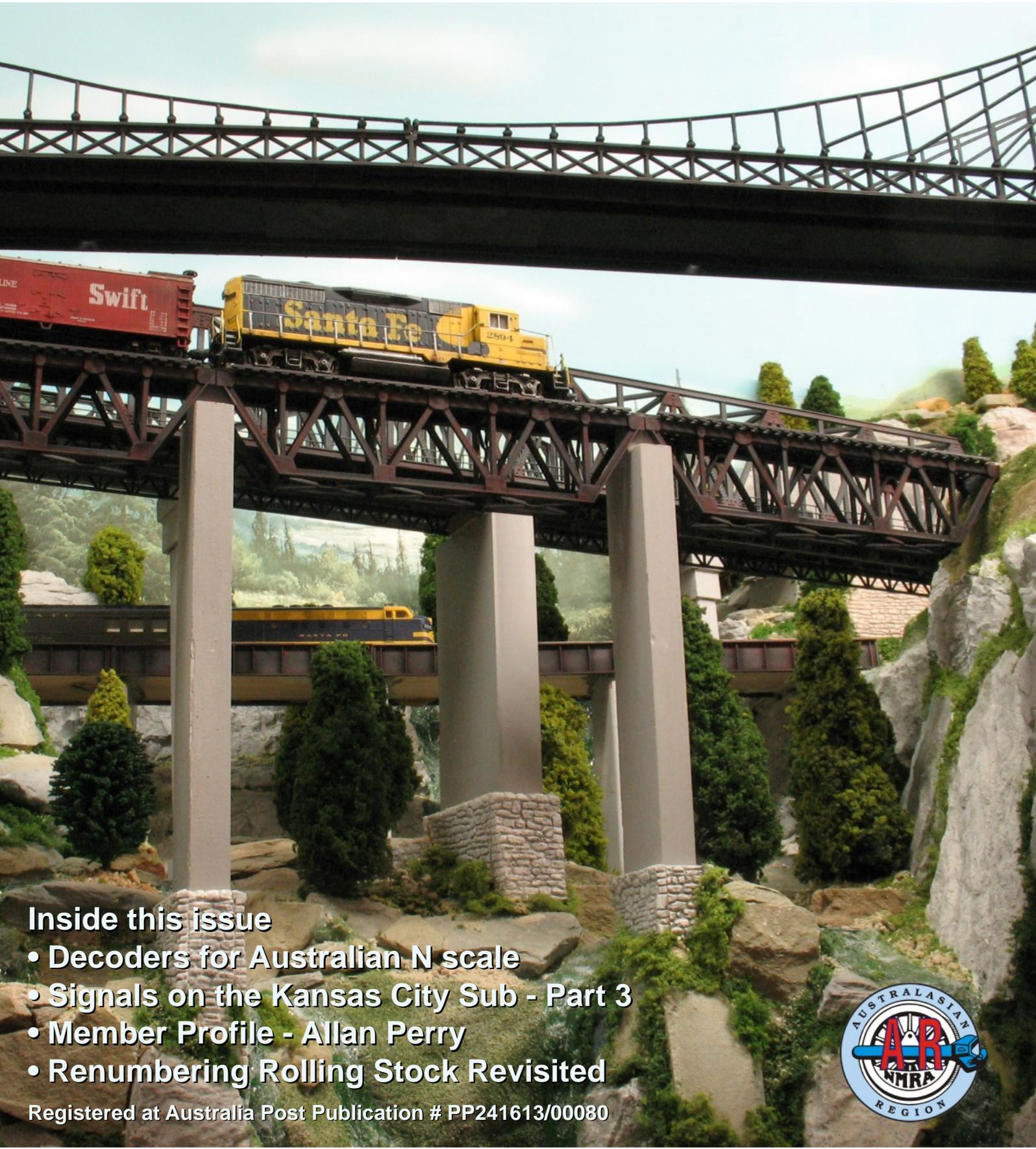


MainLine

National Model Railroad Association Inc - Australasian Region

Spring 2008
Volume 25 No. 3



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- Signals on the Kansas City Sub - Part 3
- Member Profile - Allan Perry
- Renumbering Rolling Stock Revisited

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Laurie Greens Scratchbuilt O scale Pickle Factory

2008 Rod Hutchinson Photo



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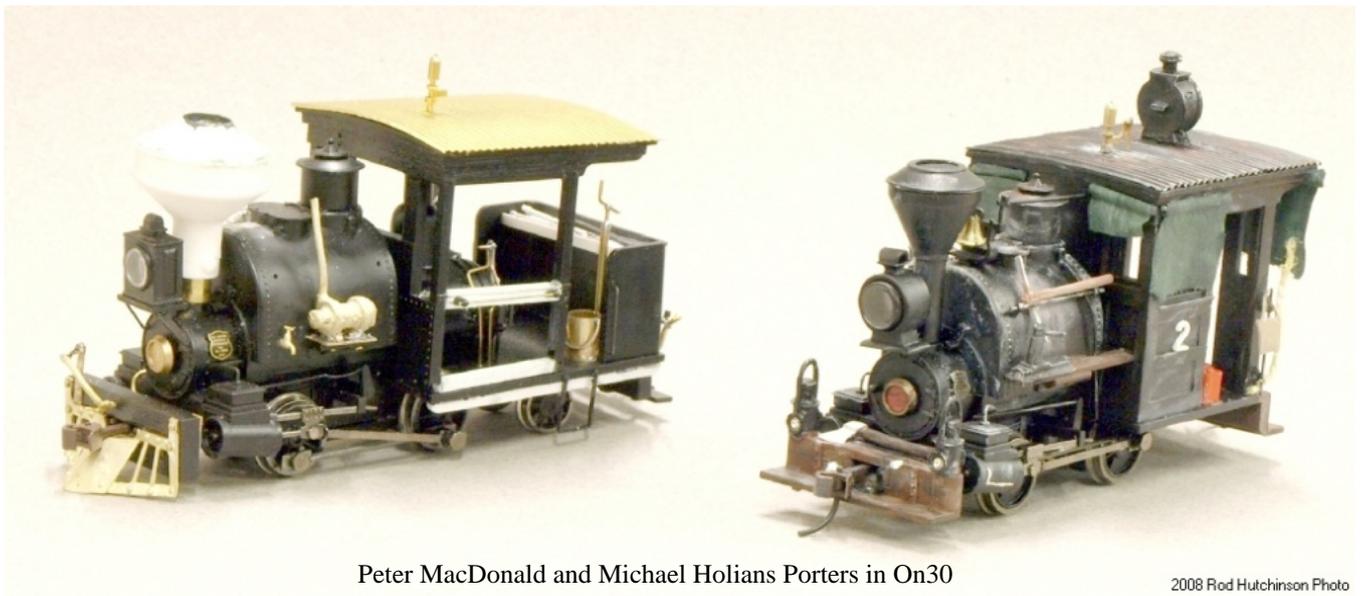
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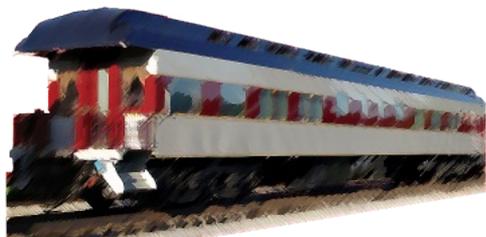
Centre photo - Durango and Silverton K36

photo by Sowerby Smith



Peter MacDonald and Michael Holians Porters in On30

2008 Rod Hutchinson Photo



From the Business Car

When you read this our annual convention will be over for another year and I am sure it will have been a great success. It is one of our most important activities that we organise and this year's is especially exciting as it is the first time that we have held one in Queensland.

Elsewhere in *MainLine* you will see a preliminary article about our 25th Anniversary Convention in October 2009. It may seem a long way off but the committee, led by Vice President David Howarth, have been hard at it since the beginning of the year. So though it is some time away please try and keep the weekend free and make the effort to attend. It will be well worth it. With Charlie Getz as our Plenary session speaker on the Saturday and also as our after dinner speaker we are assured of not just an informative time but a very entertaining one. Charlie is noted for being a great raconteur; just ask any of the narrow gauge members who have seen him in the flesh. We are also getting a great deal of interest from the US and will be hosting a good number of overseas visitors including the NMRA President if his health is OK and, if not, the Board has authorised the Vice President to attend.

This brings me back to the thing that we seem to be good at in the Australasian Region, that being hospitality and inclusiveness. Whenever we survey our members the fellowship aspect of our group is always one of the things that is appreciated the most. As next year is our 25th anniversary of the local Region we will be honouring all of our members who have been in the Region for 25 years or more. We even have a member in South Australia, Len Opie, who has been in the NMRA for 60 years. So long in fact that the Head office in Chattanooga did not have a 60 year Certificate! We modified their 50 year certificate and our Pacific Director, Peter Jensen, took it to the US and had President Mike Brestel sign it. Len will have had it presented to him by the time you read this. Previously we had arranged for our own Region 60 year certificate to be presented to Len.

As part of the celebrations next year we will be getting as many of our long term members as possible to attend the dinner and a special presentation ceremony. In the future, as members attain their 25 years of membership in the NMRA and local Region they will be presented with certificates at the annual convention and if they are unable to attend it will be presented at the next Divisional Meeting they attend.

This leads me to the other presentation that has taken place recently. At the Division 7 meeting in July I had the pleasure to present to Peter Berg a certificate, in commemoration, to honour his father George Berg's place in the Australian model railway scene as the "Father of Australian Brass". It is with regret that we were not able to present it personally to George before he passed away. It is important to recognise achievement within our group. Your committee cannot know about all the issues affecting our member's health and worthy recipients of honours may slip away before we know. Email me or any of the Committee if you know of any deserving members and, if appropriate, we will respond with the recognition that they deserve.

A couple of months ago I was fortunate to be in the US to attend a family wedding in Santa Fe. As luck would have it, I was able to get to Durango and ride the train to Silverton to fulfill an ambition I've had for many years. The train was pulled by a K36 2-8-2; narrow gauge but still a mighty big engine. A magnificent spring day was the icing on the cake and with luck there is room on this page for a teaser. If you log on to the NMRA web site, www.nmra.org.au there is a link to some of our photos. There are also some pictures from our brief visit to Chama on the Cumbres & Toltec, though it was not running on the day we visited. Their season started a few days afterwards. The weather was perfect for our visit but three days later there was a foot of snow and almost a whiteout for their first runs of the season! Later on I revisited the Le Mesa Club in San Diego and, with the editors permission, will have a small article for the next issue showing a little of their magnificent layout.

Sowerby Smith

Pacific Director's Report

By Peter Jensen

The Anaheim Convention 2008 has just completed and 23 Australasian Region members attended. The convention was, as usual, full of interesting clinics and tours.

At the banquet, Paul Hobbs, a New Zealand member, was awarded a President's Award for "devoted service as a member of the Convention Clinic Committee". Well done Paul and congratulations.

Both Pittsburgh and Atlanta submitted proposals to host the 2013 NMRA National Convention and National Train Show. Atlanta provided an innovative approach and was accepted to host the event. For all you northeast railroad fans, now is the time start preparing for Hartford 2009.

The Board's Convention Committee (Kevin Feeney, past director Ray deBlieck, and myself as Chair) presented the convention committee report. It will not be a surprise to anyone, but the hobby has become more segmented and specialised, with modellers becoming very focused on their scale, gauge, and prototype seeking their own publications and conventions. There is considerable competition for members' hobby and vacation time and dollars, making the delivery of high value at reasonable cost to members and their families increasingly important. As a follow-on to this report, look for an international survey in Nov-Dec asking both members and non-members what they believe the hobby needs in such a convention as the National.

Fred Gill Honoured

The BOD meeting was adjourned on a motion in honour of the late Fred Gill MMR, who earned all eleven Achievement Progress certificates and was a charter member and vice President of the Australasian Region.

See you all in Brisbane



The 9th Australian Narrow Gauge Convention - Sydney

Easter weekend 10 - 13 April, 2009
At Tara Anglican School for Girls,
North Parramatta, N.S.W.

What's on offer?

- Presentations by narrow gauge modeller
and Gazette author **JIM VAIL**
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- View new layouts in several scales and gauges
- Browse the numerous Trade Stands in the main hall
- Participate in practical workshops - "Get your hands dirty!"
- Be entertained at the Saturday night Banquet and Show

--- SPECIAL FEATURE ---

If you enjoyed "The Red Stag Lumber Company" just wait until you see the spectacular release of "**Muskrat Ramble**" a new Louisiana Swamp layout.

"Narrow Gauge is more than just the distance between the rails"

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Highball! - Editorial

Department of Signals & Communications

The third and final part (at last!) of the description of the Kansas City Subdivision Signal System appears in this issue. This is the part that many find intimidating - Computer Programming. Don't be put off by this. I think you'll find that it is logical and easy to follow.

Conventions

By the time you read this, our 2008 Convention will be over and we will be looking forward to 2009. Next year has two great conventions planned starting with the Narrow Gauge convention in April and our 25th Anniversary Convention, 2nd - 5th October (Friday-Monday). I was fortunate enough to be able to attend the last Narrow Gauge convention in Victoria in 2007. It was a great event and even though I don't model 'Narrow Gauge' there was plenty of things to learn, and people to meet. I'm looking forward to the next one in 2009. The 25th Anniversary Convention will be bringing a few big names in from the U.S. and loads of layout tours and clinics. Make sure you mark your calendar for next year!

Letters to the Editor

From Ray Lucas;

Hi Kelly,

It's me again, thanking you for the recent MainLine articles. I've tried to remain quiet over the past few months but find myself to be outspoken enough to add my sixpenneth worth. With the Winter 2008 edition thank you for another informative coverage of a layout, namely Sam Mangion's. Sam's was a frank but informative assessment of the trials and tribulations associated with building a layout, with him I can sympathise with his comments. It's also good to have a modelling article like that which David

Latham presented. And of course MainLine wouldn't be MainLine without the regional roundup feature which I also enjoy. Again I thank you and former editors for their work. And just in case I forget thanks for the pics of layouts and personalities. MainLine actually means more to me because I am an isolated member of the NMRA. Fortunately one of my club friends in the area recently joined as well but it only highlights the need that country members have of informative material from this Australasian region. I personally joined the NMRA thanks to the openness of John Baker as I go to Sydney about twice a year to see my daughter and son-in-law and now new granddaughter as well. I have managed to get to know quite a few members up that way. I joined in 2003, but soon found being way in the sticks still leaves you isolated and thus about two years ago contacted David North about this problem I was having. David quickly got to work and set up a Modern-Era SIG [because that's my interest area] and an internet chat group quickly developed. This has gone a long way to help me feel connected with the NMRA and it's members, but in addition I am very thankful for the other helpful members I've met in Sydney and the Central Coast. Those of you who live in areas where this organization has a substantial presence may not appreciate how fortunate you are! Sometimes I wish that MainLine could make it possible for like minded members like myself to contact others with their specific interests in the hobby and thus to be able to get in contact with each other. I have been helped a great deal by our particular SIG, and I'm already contacting others by this means. Those with different interests and who are isolated may find the same type of thing beneficial for their growth and enjoyment in the hobby. Just a thought! I am greatly indebted to members of our SIG but cannot help thanking John Baker, Gerry Hopkins, and Marcus Ammann as well, they have been there when I've needed them.

Just in case you think that I'm an armchair modeller, my layout is in the NMRA DCC layout tours, Burlington Northern's Yellow Pass Sub. However, that layout at present is not functioning but is to become part of a much bigger expansion, still under the same name, its total size will be 27 feet by 35 feet approx 950 square feet area, incorporating much of the old as well with the continued tradition of plenty of mountain scenery and railroading. Yes despite isolation in the country it's possible to afford something big.

Regards Ray Lucas

PS your signaling articles have got me thinking! -----dangerous!

Thanks for the compliments Ray, it is great to hear that the *MainLine* helps our members with information and how-tos. In response to your suggestion and in line with some ideas I have, *MainLine* will now accept no-charge personal classifieds from our Members. These will be limited to 50 words or less and can be anything members are interested in. We will accept Wanted, For Sale, SIG, Announcements, etc. In our move to secure more paid advertising in the *MainLine*, we will now print a simplified list of retailers as a continuing service to our members. The format will change to allow more room in the *MainLine* for member submissions, photos, stories, tips and classifieds. Until next issue, Happy Modelling!

Kelly

Renumbering Rolling Stock Revisited

By A.C. Neilsen

I noted with great interest David Latham's article - "Renumbering Rolling Stock." Most enjoyable and informative. It is said, "Model Railroading is fun". Hmmm! Yes, and it can be frustrating too. I guess that is the challenging part of our wonderful hobby.

There are probably as many different ways to renumber rolling stock as there are different manufacturers of rolling stock. I have noted each manufacturer has their own painting technique and thus I could not apply a rule of thumb to all waiting cars.

Firstly, I assume there was a print error in David's Article, Second Column, Tenth Line. It should read, cars were made of "black" styrene, not "brown".

I recall the cries from modelers world wide for many, many years to rolling stock manufacturers, "please - please, do not number cars, put decal numbers in the box with the car." [Ed. - *My Milwaukee Road Ribside car and my Hiawatha passenger cars came with no numbers and a decal number sheet.*] What is the market ratio of model railroad rivet counters verses other model railroaders? Only 37% of us are "rivet counters" so the plea fell over. However, their desires did not go by totally unnoticed. Six-pack cars with individual numbers came on line - and after only some 182 years of model railroad manufacturing! [Started in 1826 by Mathias Hess in Nuremberg, Germany.]

However, if you have a 130 boxcar consist, it still leaves some 124 cars to renumber. If you are lucky, other manufacturers may add further numbers to your assortment of consist numbers.

I have noted that Athearn boxcars have a paint coating that is mostly very thin and therefore they may require delicate surgery. It was on this basis that I tried different decal re-numbering methods. After many, many (100 plus) successful Athearn procedures were completed, I concluded that the renumbering procedure of most other model freight car manufacturers would be less difficult.

I would like to assist railroad modelers with a "food for thought" alternative method of renumbering rolling stock, particularly if you have an Athearn consist.

- 1) Remove boxcar body from under frame.
- 2) Wash car body with lukewarm soapy water using shaving bristle brush. Rinse thoroughly. Do not handle car body with fingers (oil and salt deposits). Let car body dry till next day.
- 3) Lay car body flat on one side on a hard non-absorbent surface and apply Walthers *Solvaset* solution,

stock number (904-470) [Ed. <http://www.walthers.com/exec/productinfo/904-470>], Use the handy bottle cap brush and apply to the whole car number area. Turn car over and repeat on other side.

- 4) Five minutes later repeat same again.
- 5) Five minutes later after second application, use a Staedtler - Razor #526-61 to rub off the decal numbers.
[Ed. http://www.staedtler.com.au/Mars_razor_gb.Staedtler]

This is not a razor, it is in fact a pencil style rubber eraser with an integral rubber eraser core. One end has a brush head. Cut this off and do not use it on any decal. Sharpen the end of the eraser pencil to a long conical pointed tip with a sharp Exacto knife. With the not too sharp point just rub gently on each old paint digit (must be moist with solvent) within the digit's boundary, about two or three times then stop.

- 6) Reverse and do other side. Add more solvent.
- 7) Wait five minutes, reverse car, apply solvent to car body number digits. Using the eraser pencil at approx 10° - 12° angle to the car body face just rub in small circular motion over each digit for about a minute. Wash off worked area with a soft hobby paint brush using the *Solvaset*.
- 8) Reverse and do other side the same.
- 9) Turn car body over again and repeat chasing white or whatever paint remains. Gently rub, still at 10° - 12°, until the evidence is removed using *Solvaset* solution.
- 10) Reverse and do other side in the same way.
- 11) It may take three or four follow ups. Keep a sharp lookout for car body paint penetration. Go easy and be patient.
- 12) Lastly, with *Solvaset*, feather out using a finger lightly to 50% width of decal.
- 13) Do not use a scalpel blade.

14) If car body paint penetration has occurred, you may touch up by using paint on the tip of a Johnson & Johnson cotton bud stick. Test the colour on the car's end and let dry first before proceeding further. Once satisfactorily colour matched, use the end of an almost barely damp-with-paint bud and just dab on the wound. Do not use sides of the bud and then let dry.

15) Spray HiGloss to the area from the bottom to the top of the car and from its end to about the first sliding door. Spray both sides of the car body and let dry in an upright position.

16) With car body on its side again, apply two drops of Microscale *Micro Set* and smear with a small soft brush over proposed renumbering area. As you apply your chosen decal numbers you will find the *Micro Set*

allows the decal to float very easily into place. Do not use *Micro Set* too liberally. Soak up excess with a brush. Pick the car up and visually sight along it's body length to check the decal numbers are in line. Turn over and repeat. Do not use a cloth underlay. The decals will adhere to it and come off the car.

17) Beware - numbers will sometimes drift off slightly even when laying flat on the car's side whilst waiting for the *Micro Set* to dry. Do not stand the car up as the decals may creep down.

18) Allow two to three hours minimum for the *Micro Set* to dry. Then apply *Microscale Micro Sol* (red bottle). Use a very soft artist brush, semi-liberally. Do not back pedal at all with the brush. I recommend no second dab. The decal is now extremely soft and fragile. Its flexibility allows it to settle down over and into irregular surface bumps and dents. Let dry for five or six hours minimum. Pierce any bubbles and add more *Micro Sol*. Do not finger dab or cloth dab the bubbles as the decal is tacky. Repeat on other side. Let the car body dry.

19) The car body can now be stood upright and, with a hand wedged inside it, the whole car side can be sprayed with D.D.V or Dull Cote.

20) Weather the car.

21) Don't forget to check for broken stirrup steps.

Tip for Microscale bottles:

-They are lazy and always want to lie down at the wrong time! Get two plastic, cheap pencil sharpener units with a screw on top blade assembly. Remove and accommodate Microscale twins.

Cheers,

Christian Nielsen

Allegheny versus Big Boy

By David Howarth

I came upon a wonderful book called "The Allegheny Lima's Finest" by Eugene L. Huddleston and Thomas W. Dixon Jr. by Hundman Publishing. (ISBN: 0-945434-03-0) which shows the story of the development, construction and operations of this incredible 2-6-6-6 locomotive.

At about the same time I had the opportunity to purchase a wonderful O scale model of this locomotive, photographs of which I will share with you. Why on earth would a New York Central modeler buy this Chesapeake and Ohio locomotive? I think because it is a wonderful example of some of the very finest locomotive modeling available at this time in the O scale market.

What was highlighted in this book was no matter how magnificent the "Big Boy" was, it will have to relinquish a bit of its hold on the title "biggest" to the Allegheny. The Big Boy was not the tallest. It was not the heaviest. It did not have the largest boiler, and it did not boast an adhesion factor even close to that of the 2-6-6-6. However both these engines were superb and both design teams have created machines that should hold us in awe.



The C&O Class H-8 2-6-6-6 Allegheny # 1607. This is a photograph of an O scale model which is over 800 mm in length and 6.7 kilograms in weight.



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A model of a 6 foot tall man adjacent to the driving wheels.

The Alleghenies were built between 1941 and 1948 by the Lima Locomotive Works, at Lima, Ohio. They built sixty locomotives for the C&O and eight for the Virginian. Like the Big Boys of the Union Pacific, these locomotives were built to haul heavy loads at high speed. For the C&O they were primarily used to haul coal trains over the Allegheny Mountains to the ports on the east coast of the USA.

A comparison of the two largest high-horsepower modern articulates - the Allegheny and the Big Boy - is of interest to anyone with a knowledge of steam. These locomotives were intended to move tonnage at speed.

Size – the maximum boiler diameter of the 2-6-6-6 was 109 inches.

The Big Boy's boiler was 106 and 5/16 inches;

Length – the Big Boy at 132 feet 9 7/8 inches beat the Allegheny's 125 feet 8 inches;

Height – the Allegheny was 16 feet 7 inches over the stack which was taller than the Big Boy's 16 feet 2.5 inches;

Power – Comparable test results are not available.



The unusual 6 wheel trailing bogie used to hold the massive firebox of the Allegheny.

Dynamometer tests recorded 7,498 horsepower for the Allegheny, and repeatedly proved that this was a legitimate figure. A figure for the Big Boy is 6,900 horsepower;

Boiler Pressure – Big Boy was 15% higher than the Allegheny

Tractive Effort – Allegheny achieved 110,000 pounds to the Big Boy's 135,000 pounds

Factor of Adhesion – Allegheny 4.61 vs. Big Boy at 3.99

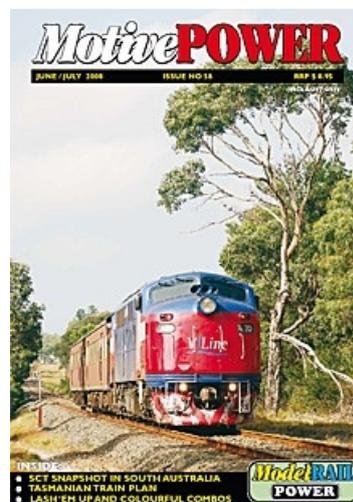
Weight – By weight the Allegheny was champion. It had 86,000 lbs on each the leading driver axles. The original order of the H-8 comprised the heaviest US locomotives. Even the last five UP Big Boys built in 1944 at 772,250 lbs were less if we take the word of a retired Lima engineer.

Though most weight records for the H-8 were removed from Lima before a lawsuit of 1944 by the C&O over the excessive weight of the Alleghenies, a few substantiating figures remain. These figures show the initial order 1600-1609 to be the heaviest locomotives ever built. According to James Cunningham, calculating engineer for Lima in 1941, the engines 1600-1609 weighed 778,000 lbs, which is higher than the above UP locomotive weight. Three locomotives, 1607 to 1609, had General Steel Castings Commonwealth trucks, which were heavier than the other tenders with Buckeye trucks. They weighed 437,600 lbs for an all up weight of 1,215,600 lbs which was heavier than the 1,208,750 lbs of the Big Boys.

These are the facts, if in a somewhat subjective fashion. If however you were considering which design had the most room for growth, the 2-6-6-6 design is the obvious winner. Both locomotives were beaten in obtaining their ultimate capability by the arrival of the FT diesel.

David Howarth

Check out Motive Power, available at your newsagent or favourite hobby shop!



Meet the Member

Allan Perry

By Frank Godde

A Life Long Ambition



I first meet Allan when I was asked to come to his house to look at a building problem. Going through the garage, I noticed a small N scale layout in one corner. Well, we got to talking, as you do, and that Friday night Allan joined the regular group of lads that made up the running team at my place. "Western Pacific and the Feather River Canyon" was the N scale line that Alan modelled.



Some time later the family moved house up to the hills. With a new house, more rooms and a workshop to boot, it wasn't long before I was told that he was moving up in size to HO. Now that's a big step, I thought, for I have also moved up into a larger scale! I found you have to think bigger and use the other side of the scale rule. You also use more material when scratch building.

Having a 3 by 9 metre room to work in, Allan took a considerably long time to come up with any ideas of what he should build in the way of a layout until the word "mushroom" reared its ugly head. That was partly

due to an article about the "Feather River Canyon Railroad". His life long ambition to build a split level layout based on a dry and arid part of the United States was about to come true. It was different and could work out in the space available.



[Allan had gone through the motions of being a four year old with a train set and had remained interested in the hobby largely because of the different aspects the hobby provides. Allan's main interest is now on the electronics side. In addition, he achieves a good finish with his wood working skills, this being an example of his fastidious modelling standards.]

It was a totally different concept than the usual layout in the room scenario, for as well as running along the wall, it raises itself quite high (well I ought to know for I built the floor section for him, 600mm off the ground). So, taking that off a standard room height, it doesn't leave much head room. Starting 300mm above the work bench, the layout, which is a continuous run, works its way along the back wall, turns and starts to rise 2.5% until it reaches the see-through helix, which is next to the door and is the first thing you see as you enter the room.



The total rise is to 1900mm off the floor leaving the top yard with 800mm of clearance from the ceiling. It came

together really well and is totally different to that which most of us are building. The helix has a double track mainline. You can't help but be fascinated when you see the trains in the helix - one going up the other going down. There is plenty of space for yards, industry and engine facilities. Using DCC, a steady stream of motive power and rolling stock have made their homes here. There is also "Down Town Deco" kits, soft rocks and an abundance of cacti that appear on the layout.



I think it was fitting to nominate Allan for the first president's award in our Division. His layout is so different to the usual layout and the amount of work and thought that he has put in to it in this last year makes him a worthy recipient of the award.



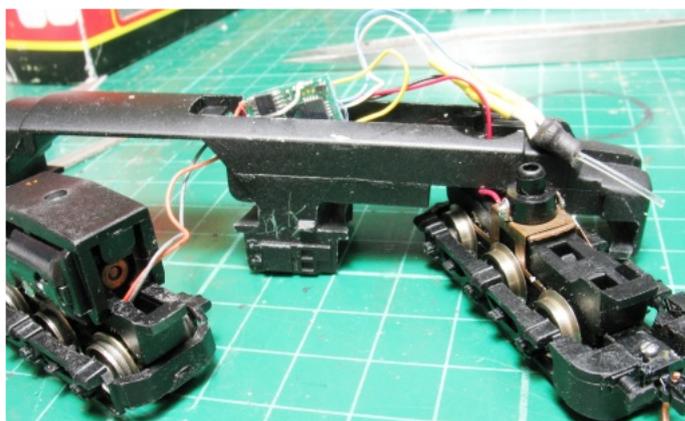
Fitting Decoders in Australian N Scale Locomotives

By Gerry Hopkins MMR

We have heard a lot of talk about fitting decoders, with and without sound, into HO scale Australian locos so I thought it was time to look at some N scale locos for a change.

First up, I used the TCS M1 decoder in all these locos for one basic reason - the wires attached to the decoder are long, fine and, most importantly here, very flexible. The fact that the decoder has BEMF was just a bonus not a reason.

I'll start with a loco that brings back memories for many of us. I had 2 of these - 30 years ago. The Locomotive is the Ibertren 44 Class from Spain. The loco has electrical pickup from the six wheels in the front truck. The trailing truck has six driven wheels all with traction tires.



Unclip the body and remove. You will see a printed circuit board on top of the chassis - two wires from the pickups on the front truck and then two wires going to the motor. The most important thing is the slot in the metal weight under the board. Place the decoder in the slot (with the wires facing forward) and place a small piece of sticky tape over the top to hold in place while you are working.

The Red and Black wires pass through the two holes near the front and are soldered in place of the old wires on the pickup. The Orange and Grey wires are soldered to the contacts on the bottom of the motor. If you only want to drive the loco then that is all there is to it. The three remaining wires are for lights and can be cut off. Refit the body and start programming.

BUT, if you want a little more, like a working headlight, then leave these three wires for now and you can work on the headlight.

Right in the centre of the headlight, drill a 1mm hole. Drill a 1mm hole down the middle of a 3mm Golden White LED. Stop before you get to the element about

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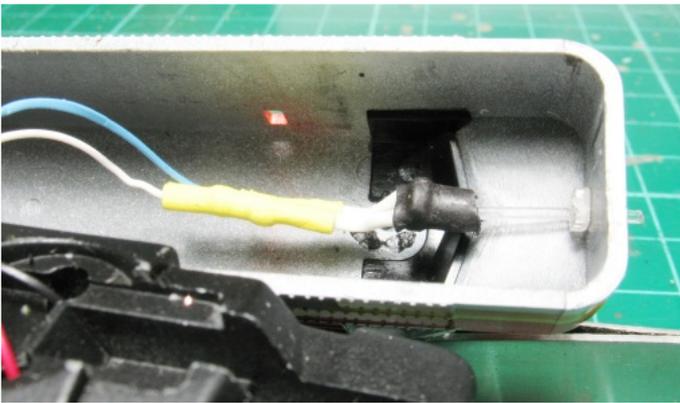
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half way. Cut a piece 1mm fibre optic (F.O.) about 25mm long and glue into the LED.



Fit the LED and Fibre in place. Bend the wires to follow the contour of the chassis. Fit the body to the chassis and trim the F.O. to sit just outside the headlight hole. Bell the end of the fibre by holding the soldering iron close – do not touch - to the end of the fibre. You will see the fibre change shape to look like a lens.

This part of this tirade deals with the latest offering for Australian N scale – the EL class, a 3300 hp, GE

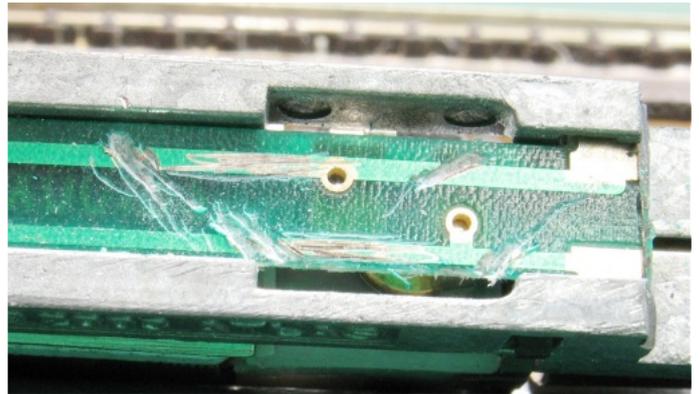


powered loco.

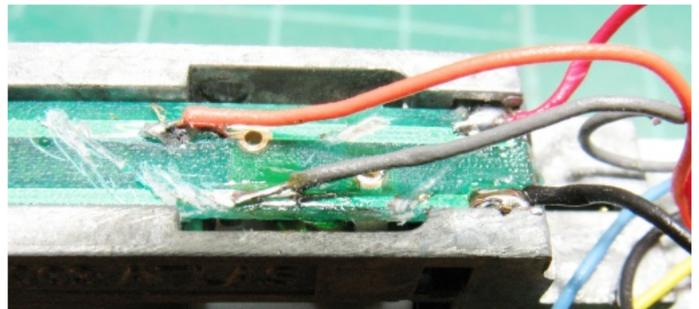
This particular model is powered by the Atlas SD chassis used on USA locos. It is split frame and a very reliable runner.

If this was an American loco I would use the drop-in AMD1 board complete with front and back lights. Because of the resin casting of the body, the LEDs would have to be removed in this loco so an M1 will do the job (and it is cheaper).

The board that sits in the top of the chassis is shown above. Cut the tracks as shown to isolate the motor – the 2 round pads connect to the motor.



Solder the four wires as shown, the Red and Black for pickup and the Orange and Grey for the motor. Use double sided tape to fit the decoder to the chassis.



You can finish here if you wish, and just cut the 3 other wires short and refit the body. I chose to add the head lights using the same method as for the 44 class. This time I used 2 x 0.75 mm fibre optics from the one LED.

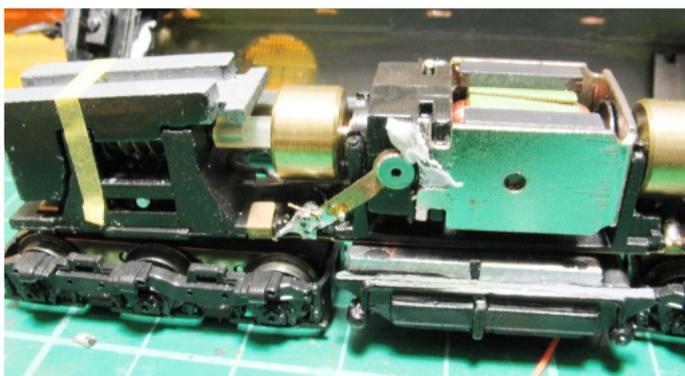


In all cases I use 820 ohm resistors for this type of application. Remember the longer lead on the LED goes to the Blue wire from the decoder.

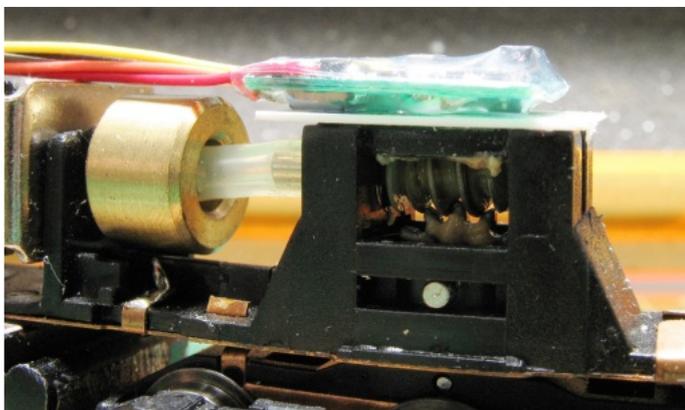
The Atlas chassis is used in a number of the Australian locos. In the photo above you can see the X class body

in the background. I did not receive any of the locos in their original boxes so I do not know who makes the Australian part of them.

The other chassis that is used is the Life-Like chassis.



The motor is turned on its side because of height restrictions but still fits in the wide body locos such as the BL class, GM class and the 442 class.



There is not enough room above or below the motor to mount the decoder, so, the next best thing is to remove one of the weights and place the decoder above the gear tower as shown in the next photo. I use a piece of 5 thou' styrene as a mounting pad.

Again the Red and Black go to the pick ups and the Orange and Grey go to the motor. It does not matter which way round the wires go to the motor, if the direction is wrong it is very easy to tell the decoder to run the other way.

This loco is a GM so there is plenty of room for the headlight as you can see below. I used the same method



as shown for the Ibertren 44 class above.

The Bachmann powered loco was the 81 class as shown below.



The decoder fits in the little recess at one end and the wires fit between the two halves of the chassis. You have to take the chassis apart to solder the wires to the motor terminals. Make sure the brush posts do not touch the frame – a little grinding may be called for here. There was no way of fitting lights to this loco as there is a lot of resin on the wall behind the lights – it is just not practical.

Some of the locos were way under gauge and wanted to derail on my turnouts. I have a HOn30" section on my layout so testing is not a problem. Once regauged, I checked the pickups.

The Life-Like needed an adjustment to keep them in contact with the plate on the underside of the chassis.

The Bachmann has curved "bits" that rub the underside of the chassis. These were re-shaped to give good contact.

The Atlas contacts all looked good.

Now, time for the programming. All the locos ended up with similar settings so I will list them here. Your systems will vary but the setting should be about the same – at least you have a starting point.

You can enter the loco address as you would normally with your system. I like the KISS system so the number on the side of the loco is the address. The two exceptions so far are the 44100 which becomes 4100 and the 44239 which becomes 4239.

CV2 (motor start voltage) = 15

CV3 (acceleration) = 5

CV4 (deceleration) = 5

CV5 (top speed) = 160

CV6 (mid speed) = 80

The above settings are a good starting point for all the locos. The top speed setting of 160 gives 60 scale miles per hour which is plenty of speed for most layouts. I have done 10 locos so far – just another 14 to go.

Have Fun.

Gerry Hopkins MMR
gerrymmr@bigpond.net.au



Centre Photo - Durango and Silverton K36
Photo by Sowerby Smith



Here is the official press release regarding the Patent Challenge with Real Rail Effects.

-Albeit a little delayed due to our quarterly format, this is still good news for the model railroading hobby.

FOR IMMEDIATE RELEASE

June 6, 2008

NMRA Patent Challenge Update: Real Rail Effects fails to respond to NMRA DCC-sound patent challenge

The deadline for Real Rail Effects, Ltd. (RRE) to respond to an NMRA patent challenge has passed, with no response from RRE.

RRE was granted a patent by the United States Patent and Trademark Office (USPTO) based upon a claim that the technology for using sound with DCC was invented by RRE. The NMRA, with the technical and financial support of a number of DCC manufacturers and hobbyists around the world, filed a challenge to the RRE patent.

The NMRA filed the challenge because we believe that the claims in the RRE patent application were not supported by the facts. The NMRA was aware that prior art and other evidence existed which negated RRE's patent.

The NMRA felt that, should it remain in force, the RRE patent posed a threat to modelers and manufacturers of DCC equipment because it would both increase the costs to modelers and unfairly restrict manufacturers who provide decoders with sound. Therefore, the NMRA coordinated an industry and hobby-wide effort to have the patent overturned. The NMRA submitted evidence from a number of sources raising substantial questions about the validity of the patent.

On February 11, 2008, the USPTO issued a ruling granting the NMRA's patent re-examination request. The examiner stated in the ruling that there was a substantial likelihood that a reasonable examiner would consider the prior art important in determining the patentability of the application of RRE.

After the examiner at the USPTO determined that the position of the NMRA had merit and compelled a new analysis of the patent, RRE had two months to respond to the re-examination request. The deadline for a response has come and gone, and RRE made no reply. The NMRA is now very hopeful that a favorable decision will be announced and that the position of the NMRA and its supporters will be vindicated.

The NMRA considers this a clear triumph for the modeler and the model railroad industry. We are proud to have led the challenge team that has made this victory possible.

www.NMRA.org

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(314) 353-9131 (Telephone)
(314) 754-2688 (Facsimile)
nmrlegal@charter.net

Region Roundup

Division 1 Queensland

By Ian Venables

Congratulations

Congratulations to two of Division 1's members, Grahame Davis and Laurie McLean. Both have gained accreditation as Model Railroad Authors. I know they are both very close to being inducted as full MMRs and this award might just give them the honour they deserve.

Exhibition Layout

The layout went to the Toowoomba Train Show and was quicker to erect than previously due to the many detailed changes made by Paul Skehan and his team. The layout performed well all weekend and recent improvements by track supervisor Graham Emery have proved to be worthwhile. Disassembly was also quick and the layout was on the road just after 5pm. After a short break now we will begin work on the scenery in earnest and make the odd adjustment so that the layout will perform even better.

NMRA Patent Challenge

Our Association goes to great lengths to ensure that we enjoy equipment compatibility. In doing this it is able to bring about great advantages to the most number of hobbyists. Some of our fees go towards the cost of this and it is therefore only natural that the NMRA defend the work and expense it has incurred to make you happier in your hobby.

Recently there has been an attempt for one company to usurp the NMRA's intellectual property to its own advantage. Consequently the NMRA has defended its property and that must have cost it some really unavoidable expense. The press release is elsewhere in the MainLine.

Comment

It seems that almost everything we do in this era is dictated by fashion. Amazingly, even a scientific interest I have is governed to some extent by fashion. At least fashion changes here are not as random as they might be in the dressing world!

Even our thrusts and interests in model railroading are dictated, to some extent, by fashion. And once again there are some good reasons why we make changes to the emphasis we put on various aspect of our hobby. We conduct ourselves in our hobby in a more scientific way than the clothing mob seem to do in their fashion world.

When I first became interested in model trains everyone seemed to be frantically sourcing scratchbuilding bits and pieces to make rolling stock. Many of the manufacturers of the items we needed back then are no longer in business. The truth is partly that many pieces were made in backyard factories and the

individuals helping us along have long since passed on.

I remember buying from Americas Hobby Centre such things as cast white metal dreadnaught ends, reefer hinges, roof ribs, etc. What the heck are they I hear some of you ask. One of my greatest acquisitions was the Kemtron catalogues of brass investment castings. I've kept editions 4 and 5 because they are still great sources of information when I scratchbuild a part. Another great reference was the early Walthers Decal catalogues. Yes, I still have a couple of these as they too contain some good reference material. I'm talking the 1950's here.

Suddenly there was a fashion for brass locos. The first to come to Brisbane was an Akane 2-8-2 in 1955 and it didn't work. It belonged to the Scientific Hobbies stock and Ian Carver, the then manager asked Ross Evans and myself to try and sort it out for him. The fault turned out to be one reversed driver. But the impression that brass loco made on us three was indelible. It seemed far superior in detail than anything we had seen until then, the peak was probably what Hornby issued. Suddenly everyone wanted to buy or become an agent for brass. I wonder where all that brass finished up because for a while Brisbane seemed to be awash with it.

Then came a craze for getting American plastic rolling stock. Varney, MDC, Roundhouse and Athearn were brands of note.

For a while there was an outside fashion which slowed down the import of model railway gear for a while. In the mid 1950's Alban Adams of M.R.R.C. in England told me I was his first Australian customer. He was the first manufacturer of slot car parts. A lot of us tried slot cars either alongside trains or some ditched trains at the time. The slot car fad disappeared when a complete disregard for models that looked like real racing cars became to norm. A lot of us with a foot in both camps returned to trains exclusively.

The advantages of DCC brought in a another new craze. As people become used to the new jargon and methods of DCC it became just a normal part of the model railway scene and is less of a craze.

A recent fad with Division 1 AR modellers is that with passenger trains. At Toowoomba recently, it was wonderful to see so many superbly modelled passenger trains running on the NMRA display layout. There were KCS' colourful trains, AT&SF Chiefs, GN Empire Builders, NYC 20th Century Limiteds, SP Daylights, UP Cities and several others. Maybe nearly as many as there were in real life!

However one fad that Division 1 has sadly not taken up in a big way is the American craze for authentic freight cars. The NMRA has published its classic "The Post War Freight Car Fleet" and *Railroad Model Craftsman* run their regular "Essential Freight Car" series, yet there seems to be a reluctance for people to become involved in super-detailing their fleets. At Toowoomba there were more passenger trains run than freight trains. Now

that is an imbalance! The passenger stock is certainly eye-catching but the freight train can be too.

I would love to see a full reefer hotshot or a NYC Pacemaker set. Or even a freight train with cars all from the one period and geographically adjacent.

I wonder what the next model railroad fad will be?

Snippets

How prototypical is your freight car mix? Many of us model the transition period to allow use of both steam and diesel power. In 1949 the freight car mix was:

Boxcars incl. auto	36.4%
Hoppers incl. CH	27.1%
Gondola	16.5%
Tank	7.1%
Refrigerator	6.7%
Stock and Poultry	2.7%
Flat	3.5%

Another useful table is the ages of freight cars. You can have some quite old cars in your fleet and still be prototypical. In 1947 the ratios for years of service were:

		<=34yrs	>35yrs
Boxcars	58.9%	4.5%	
Hoppers	45.4%	19.7%	
Gondola	53.6%	18.4%	
Stock	73.8%	19.9%	
Flat	47.0%		21.5%

So you can see that railroads kept their freight cars going for a long time wherever possible. If we consider boxcars, then think back 34 years with 58% in the 16-34 year period, you will appreciate that there are a lot of different models covered by that grouping, e.g. X-29's, AAR '34's, PS-0, etc.

DCC Problems

A couple of issues back I recommended that DCC users consider carefully the article in *Scale Rails'* February, 2008 edition, page 17, concerning H.F. frequency filters. Regarding some of the problems I now hear, it is time that users re-read this insightful article.

Ideas Wanted!

Geoff Aldridge has recently shifted house and the layout room is as, of now, vacant, needing his ideal model railroad. He is still looking for ideas, druthers, do's and don'ts. These could be profitable for us all. We will publish the best of them in the *Newsletter* or some other way so that all will have your ideas.

So far Geoff hasn't been overwhelmed with responses yet I know many of you have heaps of ideas. So please get in touch.

Division 3 Victoria

By Rod Hutchinson

Report for June 2008

The June meeting for 2008 was held on Sunday 15 at the home of your reporter and wife, Rod and Julie Hutchinson.

Rod is very slowly (some say close to death) building an HOn30 logging line based loosely on West Gippsland lines centered around Erica titled Regnans Tramway (from E. Regnans).

Pictures of the layout may be found at <http://users.tpg.com.au/bhutchin/HobbyPages/MainPage.html>. A cool, but sunny Melbourne winters day ensured a pleasant indoor meeting was had by the 14 people who signed the attendance book. As the cool winds blew, guests enjoyed pumpkin soup and a warm heater.

Models on display

Rod Hutchinson – Scenic Express Super Tree material (bulk pack), some trees made from Sedum Autumn Joy plant and Super Trees material, Roco HO Ford look-alike, and Barry Norman's DVDs on scenic modelling;



Rod Hutchinson's Roco Ford look alike.

Michael Holian – O scale scratch-built Tractor Repair Shed, and SEM HO scale VR AW class passenger car;



Michael Holian's Tractor Repair shed.

Laurie Green - a scratch-built Pickle Factory featuring homemade pickle-vat resin castings & samples of resin wheel castings; Peter Sutton – HO Bar Mills 'Wicked Wanda' kit and D&RGW 2008 calendar; Peter MacDonald - O scale Redfern Models O scale VR NQ open wagons with various loads, slightly modified; Lyn Cracknel - OO scale die cast model cars; Grant McAdam – Hand painted O scale figures.

Reading matter



2008 Rod Hutchinson Photo

Michael Holian's Tractor Repair shed.



2008 Rod Hutchinson Photo

Grant McAdam's O scale people.

Grant McAdam - Slate from Glyn Ceiriog by J. Milner; Michael Holian - Willamette Loco Book; Rod Hutchinson - Tuning for Beginners by Ron Lafever, Sierra Railway Machine Shop by Western Scale Models, HOn30 Locomotive Handbook by Chris McChensey, Nn3 Handbook by Ted Brandon.

Our Superintendent, Grant McAdam advised that new system of borrowing videos is now in place. DVDs borrowed from Sydney last year are now being returned. Grant closed the meeting by thanking Rod and Julie for their hospitality in opening their home, presenting them with an NMRA thankyou plaque.

Report for July 2008

The July meeting for 2008 was held on Sunday 20 at the Mooroolbark & District Miniature Railway & Steam Club (MMRS)



<http://home.alphalink.com.au/~koyli092/>, with host

Bob Mitchinson, supported by society members who made it a most memorable day. The MMRS members are involved in a number of activities that includes Model Engineering, Way and Works and lots of fun. The MMRS caters for three gauges:- 3½", 5" and 7¼". A cool to cold Melbourne winters day ensued, but did not stop a pleasant mix of indoor and outdoor activities. 13 members signed the attendance book, and MMRS provided around 8 or so members and partners.

Paul Shopwood (MMRS) gave a talk on building a 5"



gauge live steam model. Discussions regarding the similarities and difference in tools and methods scale/gauge combinations appropriate to the larger and smaller scales were aired. The talk segued into plastic molding injection techniques, which has similarities to etching and casting needs of the smaller scales. Outdoors, NMRA members were treated to rides pulled by pseudo diesels that were powered by lawn mower motors through an oil filled drive box. A few intrepid NMRA members were allowed to drive the locos with many perhaps contemplating a change in scale.

Items on display

Michael Holian - Book, The Cudgewa Line, On30



2008 Rod Hutchinson Photo

Porter and Redfern Models NQR wagons, HO CW Passenger Van; Peter Sutton - Durango Car Barn; Peter MacDonald - Bachmann On30 Porter conversion; Grant McAdam - Hand painted OO & HO scale figures, and coal load castings to suit Redfern Models O scale NQR wagons

Our Superintendent, Grant McAdam, closed the

meeting by thanking Bob and the MMRS for their hospitality in opening up their club rooms, and providing the talk, rides and driving lessons in live steam modeling and then presented him with an NMRA thank you plaque.



Division 4 Western Australia

By Frank Godde

Superintendent Profile - Frank Godde

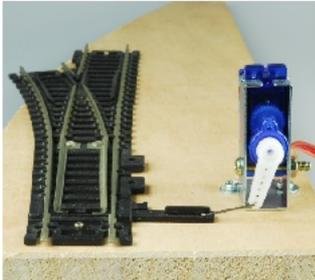


I am 61 a semi retired builder with two grown children, two granddaughters and three dogs. I have been interested in trains since I was seven years old but particularly from 1972. My passion is North American railroads but I am not a rivet counter.



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Originally I modeled in HO scale, but this last year I have moved into On30. I have pulled the HO layout down to build a much better On30 one.

Meeting Geoff Knott has been a real highlight for me as Geoff has a unique understanding of detail which is above the norm. This passion has stirred me into aiming for a higher standard of modeling, which hasn't previously been seen in WA before.

I became Division 4 Superintendant in August '05 and have really enjoyed the challenge of keeping the NMRA alive and thriving in WA. Monthly meetings keep all the members in contact and the real excitement is in introducing a new member to the group.

But the best thing about being Division 4 Superintendant is the fact that my computer skills have improved by leaps and bounds. For this manual worker the new skills have kept the gray matter thinking.

Division 7 New South Wales

By John Montgomery

June Report

The June meeting included the AGM for the Association. It was held at the residence of the late Fred and Jean Gill in Winston Hills. The meeting was also used for the purpose of selling Fred's model railroad detail parts, rolling stock, books, buildings, equipment and other model railroad paraphernalia. Although the weather had been dreadful leading up to the day Saturday turned out to be a beautiful sunny day. This allowed many of the items to be displayed outside where there was more space available for the members and visitors to peruse what was on sale. Approximately 50 members attended the meeting with most of them purchasing something for their own model railroad.

The sale was interrupted briefly in the early afternoon for the monthly meeting and the AGM.

During the course of the meeting Gerry Hopkins was presented with the President's Award for his service to the Association. The Christmas party in December at the Waterview restaurant was promoted with advice that tickets would be available from the July meeting.

I would like to thank Dawn Gill for opening her house to the Association for the meeting, John Saxon, Gerry Hopkins and Ken Scales for the time they spent organising and managing the sale of the items and to all the ladies who gave their time to provide a luncheon and afternoon tea for those who attended. I would particularly like to give Gerry Hopkins a special thank you for devoting so much of his time to updating the web site with details of the sale items prior to the day of the sale.

July Report

In July the meeting was held at the home of John and Natalie Montgomery in beautiful downtown Shalvey. The meeting included a clinic on how to use an airbrush presented by Gerry Hopkins and his able assistant, yours truly.

Fortunately the weather turned on a magnificent day and those that attended early for the clinic were treated to sausage sandwiches for lunch. Both Gerry Hopkins and myself conducted the clinic which attracted about 20 people.

The clinic included demonstrations on airbrushing using both enamels and acrylic paints. These were performed on DPM building fronts that were donated by the NMRA. After these were painted, Gerry then showed us how to put these building fronts onto backboards decorated with background scenes. He also showed us how to use junk mail to produce realistic signage for the buildings eg Woolworths, Century 21 etc.

At the conclusion of the clinic the formal part of the meeting was conducted. During the course of the meeting Peter Berg, of Berg's Hobbies, was presented with a posthumous award for his father's 50 years work supporting the model railroading hobby.

Gerry Hopkins presented a number of Golden Spike awards. People were reminded that the Christmas party is fast approaching and that they should purchase their tickets as soon as possible. A reminder was also issued of the impending Convention in Queensland and members were asked to support this NMRA event.

John Saxon advised the attendees that a cheque for \$1000.00 was received from Fred Gill's family as a thank you to the Association for handling the disposal of his layout and other model railroading articles and equipment.

The meeting was then closed and afternoon tea was served by the ladies.



Where the Editor was in July instead of being at the NSW meeting -The Zig Zag Railway in Lithgow. .

And now for something completely different!

A report from the field

By Lyndon Spence

[Ed. It's a travelogue!]

CHIHUAHUA - EL PASO - AMTRAK

03-07-2008 - Thursday

Up at 5:00am. Bags out at 5:45am. Breakfast at 6:00am and departure at 6:45am.

Another repeat performance of last Friday's departure from El Paso.

This morning, we're going to have a long run back to the USA. Pedro introduced us to Carlo who will take us from the US border to the airport.

Pedro has been great and has arranged for the USA side driver, Luis to take us and another passenger from Palm Springs, Jim, to the Amtrak station in El Paso to catch the Sunset Limited.

Great stuff, we were concerned we would have to get a taxi and pay a big fare.

The weather now is pretty nice, sunny and not too hot. It was a great stay in Mexico.

Once again, we have to do this in two stages. The Mexican bus to just short of the border in Juarez and then change everything over to the US bus which they call the "border jumper".

On the way they showed two DVDs. The first one was by Reader's Digest and showed the Copper Canyon train.

Interviews with our own guide Pedro, no less, only a lot younger.

The second was RV with Robyn Williams. We had already seen it, but it was still good to watch and while away the miles.

The change of bus was closer to the US border, only about a mile away. They chose a toll bridge today. By now, it is about 11:30am.

A long queue of vehicles has formed. To save time, Pedro and Carlo get off and walk into the Mexican officials office to present our Mexican forms and the alleged \$US2 each visa cancellation fee. Hmmm, another bribe?

Finally after about an hour we get to the border. The whole bus has to be off loaded and we have to walk through the check points. Even though we were warned the US officials would be otherwise, they were actually polite, though formal, and there was only a token random bag check; one of the roll-a-way cabin bags and Marie's hand bag. A courteous female agent and through we go, back on the bus.

This is where Pedro says good bye and goes back by foot, across the border where our first Mexican driver, Abelardo will be waiting for him in Mexico. Pedro will be going back to Chihuahua. Carlo will be picking up the next Copper Canyon tour in El Paso. He tells us there are only 14 people on the next one.

The first stop with our USA driver, Luis, is the El Paso airport where half of the group get off. The second stop is the Wyndham Airport hotel where we started from one week ago. Some are staying an extra night or two. Others are picking up their cars in the Wyndham Hotel where Caravan Tours had arranged free parking for their respective drives home.

That just leaves the three of us to be dropped off at the Amtrak station which is a reasonable distance away between the Mexican border and downtown.

We gave Luis a \$US20 tip. Well deserved it saved us a heap - both in taxi money and hassles.

Now the time is about 2:10pm. We have a 3 hour wait for the train to Los Angeles.

We checked our bags with the Amtrak officials. Very hungry since our last meal was 6am. No eating facilities anymore at the station. The station was built in 1904 and has obviously been built for better days. It now shares space with the local bus company. No restaurants here so we had to be content with two bags of chips at 50 cents each and two drinks at \$1 each out of the vending machines.

The time went very quickly with photo opportunities in both directions of Union Pacific freights. It would appear that all if not most of the East bounds stop to be refuelled still attached to their trains. Most of the trains have end of train helpers.

Then at 5:10pm the Amtrak Sunset Limited train #1 arrives right on time.

Plenty of time to let people off and for us to board. The scheduled departure is 5:55pm.

Our car is 130 and is named "Montana". It is the second from the front behind the two locomotives.

Then comes the dining car, lounge car and haven't yet investigated what follows. Maybe just a couple of sleepers and coaches?

Went up front took some photos. Doesn't seem to be any restrictions on the railroad photography here. I asked the conductor and he said "sure, just don't climb up into the cab, OK?"

Our roomette is room 02. Just across the corridor from the car attendant, Lisa, who is a younger version of Whoopie Goldberg and proves later on to be pretty laid back if not el slacko.

The roomette is a little cramped with single seating opposite each other, but still beats flying.

George, the dining car manager, calls last call for reservations for dinner. So up I went and the best he could tell us was that they were real busy and would try to get us in towards the end of the serving.

Starving now, except for the packet of chips at El Paso Amtrak station, we haven't eaten a meal since 6am.

Finally George called us at 7:45pm.

Dinner was great - we sat with Jim. Steaks all round with mashed potatoes and a side salad. For desert, M had a cheese cake with strawberry sauce and L had a vanilla ice cream. This was accompanied by a small bottle of Merlot from Chile for \$12. We were served by a very dry 'Myrna Loy'. "Eat ya greens Honey, otherwise ya ain't gettin' any dessert!"

After coffees we went up to the lounge car and just sat watching the trucks and cars on the adjacent Interstate barely keeping up. The freeway speed limit was 75 mph and the train was certainly doing at least that. Very smooth and not much sensation of speed. Another surprise considering all the criticism of Amtrak there is these days.

Very tired, so we had Lisa make up the room which only took a couple of minutes and into bed we got.

Two bunks top and bottom. M tried to settle down in the top bunk, but within 5 minutes could not handle the claustrophobia so swapped with L.

Not a problem with L. The rock and roll of the train and the sound of the horn whistling for the grade crossings and I was out to it within several minutes.

---oOo---

Decoders for Dummies

– Part Two

By Gerry Hopkins MMR

Fine Tuning your Decoders

In the last issue, I went over the basic CVs and how to use them. This issue, I will go over some of the more advanced setting – nothing heavy just a few things people have asked for.



For more advance settings on your sound decoders you are advised to use a programming aid such as Decoder Pro loaded on an old PC.

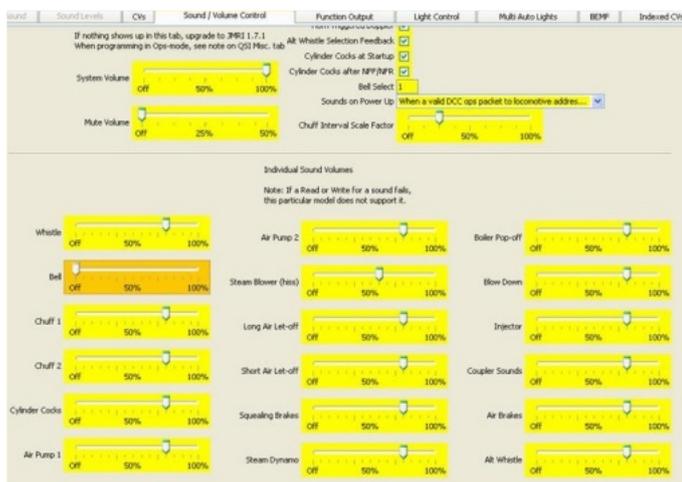


Figure 1. The Volume Controls

The program is free to download, is always up to date, and has a terrific support network. More on that subject a little later.



I will start with a popular loco the Eureka AD60. It has the QSI V7 sound system so is state of the art for QSI. Out of the box the AD60 is too fast for most layouts so I set the top speed to 132 (of 255). To do this, enter a value of 132 into CV5. You can play with the speed table but don't waste your time – yet.

QSI also recommends a minimum value of 8 for CV3

and CV4 so I entered a value of 10 for both. (CV3 and CV4 are for momentum). These values give you a top speed of around 40 mph (64kph for those with a bad memory). Run the loco at half throttle (step 64 or 50% - depending on the system) then press “Heavy Load”, you will get a short blast on the whistle. This is normally on F9.

Now the best bit – turn the throttle to the lowest speed position, the chuff will die down as the loco “coasts” it will stay at the same speed until the moon turns purple. As you get to a hill (I hope you have one), you can turn the speed control up to maximum – do it slowly. As you turn, the chuff gets harder and deeper as though the loco is under heavy load. You can turn the knob to get the best sound for that hill. When you get back on the “level”, return the knob to its original position (half way) and press F9, you will get two short blasts on the whistle and the loco will come back to normal control. Simple so far?

There are other things to change on the AD60 but I will leave those until we get to Decoder Pro. Fig 1. shows the volume controls available for the AD60 – three CVs for each control or just move the slider on the screen.



While on Australian Locos. Are you driving your 630 Railcar correctly? When you enter the number on your throttle, does the engine sound start straight away? If so, you did not park it correctly. Enter the loco number, the loco starts – OK now press F9 twice then turn the throttle up. The railcar should not move but the engine revs up – it is now in neutral.

Press F9 twice again – the engine volume will now drop to a ‘quiet’ idle. Press F9 twice again and sit back and listen. The engine sound picks up to normal level, then the engine will power down, hear the compressor go off, see the interior light go out, Claude opens the compartment door then closes it, he then opens the outer door and climbs down, he then shuts the door. All you can do now is sound the horn.

To restart, you press F6 twice. Claude will check the compressor, open the outer door, climb the ladder, close the door, walk to the compartment door and open it, close it, turn on the interior lights, start the engine – it fires up the second try. Now you can drive the railcar.

No more toy trains!

As there are no experts reading this page – just us normal people – I will now do some basic setups of the most common sound decoders, the Soundtraxx DCD101 series. These are a good cheap decoder and have all the common engine sounds you need.

US diesels before 1963 were either General Motors EMD 1st Generation or Alco. You can tell the difference when they are idling, The EMD is a smooth 2 stroke diesel while the Alco is a rough sounding 4 stroke diesel – something like “bucket of bolts - bucket of bolts - bucket of bolts...”

Now the EMD 1st Gen unit has a distinctive “transition” between notch 4 and notch 5. At low speed the windings in the traction motors are coupled in series to reduce the current in the circuits. As the loco speed increases the current can drop back and a bunch of relays change the windings back to a parallel connection. When this happens the engine drops back to an idle and then revs back up.

Remember the engine is not like the one in your car that revs between 750 rpm and 6000 rpm, the loco revs between 600rpm and 1100rpm - there is only a difference of 80rpm for each notch. The Alco engine behaves in a very similar way, but much less noticeable.

In about 1962/3 the 2nd generation EMD units came on the scene with the GP30. The sound of this engine is much like the 1st Gen unit but there is no distinctive “transition”. The GE locos are also 2 strokes but they have a distinctive throb but are much quieter. The Australian NR class is a perfect example.

Well, now we have established a difference in sounds for the Soundtraxx units, let us play with them. There are non sound and some sound adjustments. The non sound was covered last issue (max speed, start volts, momentum) so I will just deal with the sound.

The LC series decoder has been a mainstay of sound decoders for over 8 years, the steam version is still around but is being 'replaced' by the Tsunami which I will cover later.

There are 5 sound adjustments for the sounds, four of these sounds are operated by the Function Buttons, the Auto notching works with the throttle control but can be set up for use by 2 function buttons. I have only seen this on two layouts in 8 years and then only as a 'test' or 'gimmick'. The five settings are:

- . Exhaust
- . Horn
- . Whistle
- . Dynamic Brakes
- . Auto Notching

The Auto notching is the setting for the engine revving up as you turn the throttle knob. This setting is tied in with the number of steps set up on your command station. 14 steps set to 4, 28 steps set to 7 and 128 steps set to 14. Soundtraxx recommends 128 speed steps for their decoders.

Exhaust Volume varies with style of loco (speaker size) and age of the driver – very young like them loud, very old like them loud – no need to explain this. Speaker size can make things difficult, not so much the speaker but the enclosure behind it.



Speaker box made from 1mm styrene, the back cover will be added. No technobabble – your speaker needs a box! The volume should be set so that you can hear the loco from no more than six feet away (500ft, 160m). So adjust CV1xx to 150 for starters, then up or down by 10 until you have the right volume.

There are 2 adjustments for the horn, 1, 3 or 5 chimes (trumpets) just look at the top of your loco – what you see is what you program into CV1xx. The other setting is the volume. Again set to 150 for starters and work from there.

The bell also has two adjustments, the ring rate and the volume. The bell gets to you after a while so I suggest starting at 110 and working from there.

The last one is the Dynamic Brakes. First, check that your loco has dynamic brakes. On the prototype the volume is totally independent of the rest of the sound volumes. Example, on the NR class (Aust) the brakes are louder than the exhaust (but quieter than a teenager's car stereo). I set mine to 200 in CV1xx.

One loco will sound a little lost but when you have an operating session with 4-5 operators the sound can start to build up. I also set the sound shut down to about 2-3 minutes by setting CV11 to 30.

A comment I get is “At an exhibition, you cannot hear the sounds unless they are turned right up”. I agreed, but how many people take their locos to exhibitions every week or even once a month?

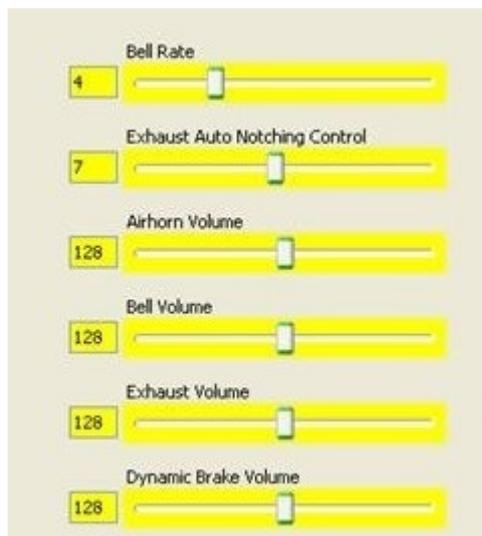


Figure 2

Now to the easy part. In the time it took me to write the above adjustments, I could have set up 10 locos using Decoder Pro AND it keeps a record of ALL CV's in the decoder. No writing each change on a piece of paper or in a book. See Fig. 2.

Figure One at the head of this article shows the volume adjustments available in the AD60 using the QSI Ver 7 Decoder – there are 21 of them and it takes 3 x CV's to adjust each one. With Decoder Pro it is just a case of moving a slider across the screen and clicking one button.

DP can be connected to the main brands of DCC system - Digitrax, EasyDCC, NCE, Lenz and even System One. NCE and EasyDCC have the socket built in but you would need to check the others in case you need to buy an interface. Check the information on this web site for all hardware advice. There are 18 systems supported at <http://jmri.sourceforge.net>

Decoder Pro is a computer program than runs on a normal PC (mine is a Pentium 3 733mh 8 years old) and on the rich man's Mac. The program is FREE and is updated regularly by a large team of programmers. You can buy a unit that can be used for testing and programming your locos if you do not have your own system. Many of you take your locos to the club to run them but would like set up your own locos at home – a more favourable environment. This unit is called a Sprog II and is available from the UK for about \$100.00.

With your loco on the program track and PC connected select the decoder and “open programmer”. The first page lets you fill in all types of detail as shown in Fig. 3 below.

The screenshot shows a software window with the following fields and content:

- ID: <new loco>
- Road Name: (empty)
- Road Number: (empty)
- Manufacturer: (empty)
- Owner: Gerry Hopkins
- Model: (empty)
- DCC Address: (empty)
- Comment: (empty)
- Decoder Family: QSI Articulated Steam Ver. 7
- Decoder Model: Eureka NSWGR AD60 Beyer-Garalt
- Decoder Comment: (empty)
- Filename: (empty)

Buttons: Save, Reset to defaults

Figure 3

How you enter the ID: is up to you, but I would enter NSW 6042 or UP 6935 or GN569 for easy identification. With that done the next page lets you identify the loco.

Once you have gone this far you can save the page and

The screenshot shows the following settings:

- Active DCC Address: 3
- Address Format: One byte (short) address
- Normal direction of motion: forward
- Speed steps: 28/128

Figure 4

close this part of the program. Now you move the loco to a bit of running track (mainline) for all the rest of the settings. There is no need to read any of the settings in the decoder- the default values are already shown on the screen. You can now click on each of the pages – Speed, Volumes, Function buttons and all the other settings. You can move the sliders for the volume of each item and press “write changes”. These take place in less than a second so you can hear the result straight away.

If you are happy with the results you can save the page and go to the next page. If you think you have 'stuffed it up' (technical term) just close the page without saving, then reopen the page, and click “write full page”. This will write the earlier default settings to the decoder and you are ready to start again.

If you get things totally wrong, to quote the great book “Do Not Panic”, just do a decoder Reset and start from the beginning. After your first ten locos it becomes second nature to fire up DP and set up your locos.

The Locomotives with QSI decoders are pretty straight forward. The engineers at QSI have done all the hard work by setting up the “default” for a particular loco. The Tsunami can be fitted to ANY loco so it requires tuning to get the best out of it for individual types. N scale, HO, HO_N3, Sn3 and On3 are all very different. I will cover the TSUNAMI in the next issue.

Gerry Hopkins MMR



Signals on the Kansas City Subdivision

Part 3 – A Lesson in Logic

By Kelly Loyd

In the past two parts of this series, I described the Research and Design of my signal system for my layout, The Milwaukee Road Kansas City Subdivision. I have included the diagram of the control panel for reference when you read along with the article.

Hardware connections

As previously discussed, every piece of hardware in the system is connected to a SMINI node. The CTC panel switches are connected to inputs on two SMINI nodes (behind the CTC panel), and all of the indicator LEDs are connected to SMINI outputs. The block detectors are connected to 9 SMINI inputs on a single SMINI card. Tortoise switch machines are used for all mainline turnouts and the switch on the Tortoise machines is also connected to SMINI inputs. Each Tortoise motor is connected to outputs on the SMINI cards. Each signal head is connected to an SMINI output. Full details of these connections are described in Bruce Chubb's book *C/MRI User's Manual*.

Basic operation of the software

The software is written using Microsoft Visual Basic. Bruce Chubb provides a library of ready-made routines

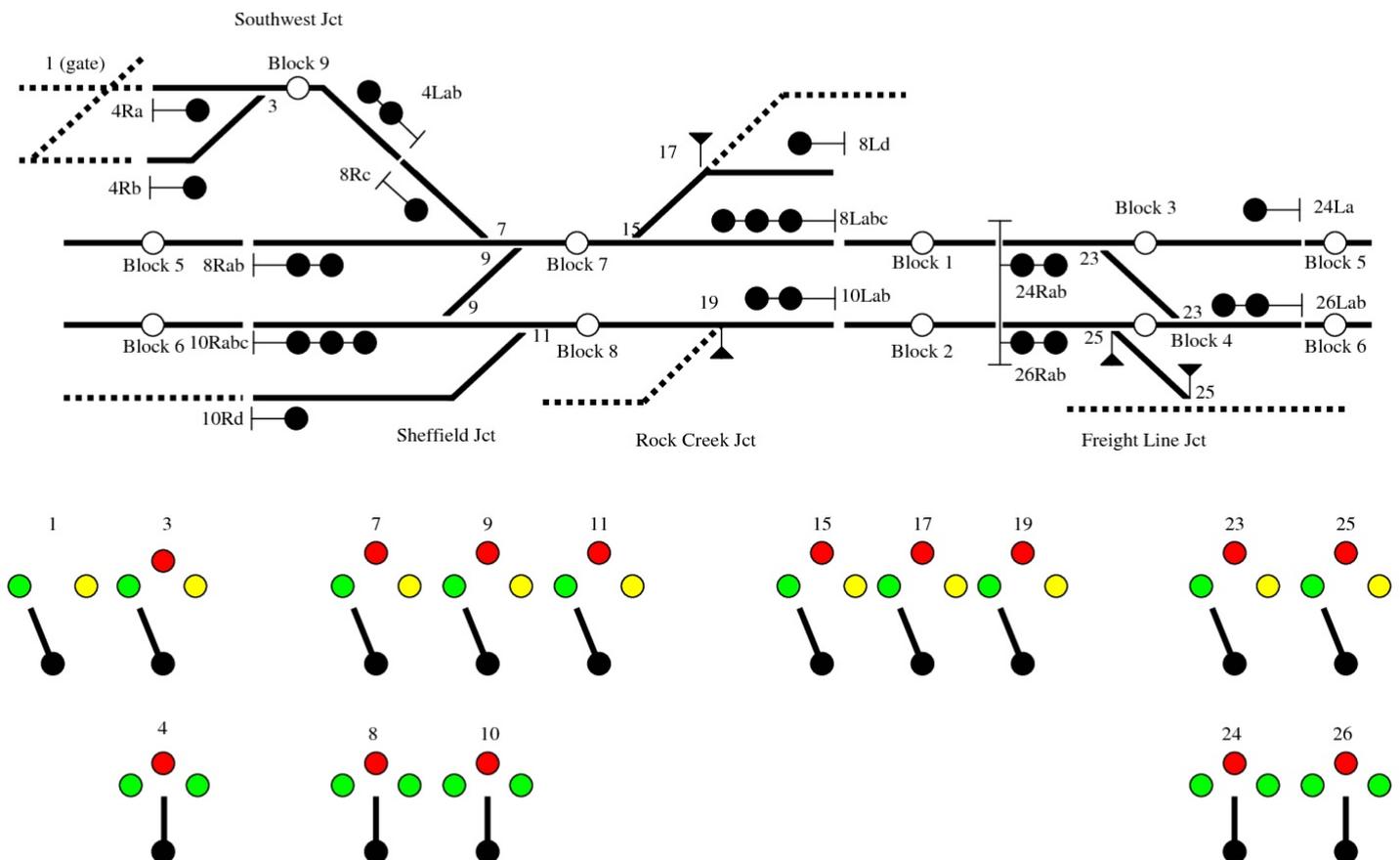
to perform reading and writing to and from the SMINI nodes. All that is required in my program is to specify which node I want to use, then call the C/MRI library routine.

All of the devices have meaningful names. These names are called 'variables' in programming terminology. It is easiest to think of a 'variable' as a place in the computer's memory to store a bit of information. We can put something into a variable and we can read something out of the variable later. Since variables are part of the computer's memory, their values are lost when the program finishes. All of my variables are set by inputs from the railroad (SMINI nodes) and by the program logic, so it doesn't matter that the variables 'disappear' when the program finishes.

The turnout motors are named TurnoutOutput1, TurnoutOutput3, etc up to TurnoutOutput25. The Tortoise switches are named TurnoutPosition1, etc. The Block inputs are named Block1, Block2, etc. The Signals are named Signal4RightHead (which controls both Signals 4Ra and 4Rb), Signal4LeftHead, etc.

The Turnout Levers on the CTC panel are named TurnoutInputLever1, TurnoutInputLever3, etc. The Signal Levers are named SignalInputLever4, SignalInputLever8, etc.

The Block Panel Lights are named BlockIndicator1, BlockIndicator2, etc. The Signal panel lights are named Signal4Indicator, Signal8Indicator, etc, and the Turnout indicator lights are named Turnout1Indicator, Turnout3Indicator, Turnout5Indicator, etc.



By having symbolic names for the different things you want to test, you can have very readable computer code. We will see this as the article progresses.

The computer software that controls the CTC system does the following basic operations:-

- A. Read all of the inputs and assign them to meaningful names.
- B. Decide what to do using the inputs.
- C. Write all of the outputs to the railroad.
- D. Go back to A and repeat.

Doing block detection

For block detection, the program reads the 9 block inputs from the railroad and assigns them to variables BlockInput1, BlockInput2, BlockInput3, etc. Blocks can have the value 'OCC' for occupied or 'CLR' for clear. The blocks are then set to occupied or clear depending on the value from the detectors. The block status is used when I check turnouts for locking and when deciding if signals should be set to stop. Example:-

```
If Block3 = OCC Then
  Signal24Right = Stop
  Signal24Left = Stop
  Turnout23Lock = Locked
  BlockIndicator3 = On
End If
```

In English, If block 3 is occupied, then make signal 24 left and right show 'stop' and lock turnout 23 so it cannot move.

My code is a little more compact than the above. Here is how we set the turnout lock on number 3.

```
SwitchLockIndicator3 = Abs(Block9 Or
(SignalIndicator4 <> SignalIndicatorStop))
```

This is simply short cut code for:-

```
IF Block9 = OCC OR
  SignalIndicator4 <> SignalIndicatorStop THEN
  SwitchLockIndicator3 = Locked
ELSE
  SwitchLockIndicator3 = Unlocked
END IF
```

In English again, if block 9 is occupied or signal 4 is not at stop then lock turnout 3.

Controlling turnouts

Mainline turnouts are interlocked with the block detectors and signal indications. It is not possible to change a turnout that has a train sitting on it or has a signal cleared across it. Here is the code for Turnout #3:-

```
' Turnout 3, protected by signal 4 and block 9
' Ignore switch lever input unless it has
changed.
If SwitchLeverInput3 <> SwitchLeverState3 Then
  SwitchLeverState3 = SwitchLeverInput3
' Switch Lock logic taken care of by
TurnoutLockCheck
  If SwitchLockIndicator3 = 0 Then
    Turnout3InTransit = Timer
    If SwitchLeverState3 = SWN Then
TurnoutOutput3 = TUN
    If SwitchLeverState3 = SWR Then
TurnoutOutput3 = TUR
    End If
  End If
End If
```

Since I model an interlocking machine, it is possible that the operator has changed the lever position when it is not allowed to change. So the first part ignores the

input unless it has changed. To do this, you need two variables, one to keep track of the Input and one to keep track of the last state of the input. The Input (SwitchLeverInput3) is set by reading the SMINI node that the panel switch is connected to. The State (SwitchLeverState3) is set by the program.

So, if the lever is in a different position than it was last time we checked, then we need to do a further check to see if we have to change the turnout position.

We then make the State the same as the Input (so we can check the State next time around - remember this code is executed every .001 seconds forever).

The next part says 'If the turnout is NOT locked, then change its position.' If SwitchLockIndicator3 = 0 (if it is not locked) Then Set the position. This is accomplished by looking at the SwitchLeverState. If the state is 'SWN' (which is Normal), then the TurnoutOutput is set to 'TUN' (which is Normal). If the state is 'SWR' (which is Reverse), then the TurnoutOutput is set to 'TUR' (which is Reverse).

So we only change the turnout when it is safe to do so. The lines beginning with apostrophes (') are comments and are there to remind me what the code does.

Controlling signals

Signals are controlled by the operator using panel levers. The Union Switch and Signal design used opposing signals as Left and Right. One lever controls both signals. This works because the signal can only be cleared in one direction. Another feature that I chose to implement is 'Running Time'. This is a feature of signal systems that helps to prevent problems when the operator has cleared a signal and needs to put the signal back to stop in the face of an approaching train. Before the operator can change turnouts or clear a different signal, they must wait for 5 minutes before the plant 'unlocks'. Here is the code for Signal 4.

```
If Signal4RunTime = 0 Then
  If SignalLeverInput4 <> SignalLeverState4 Then
    ' if signal was dropped by operator, then
begin running time.
    If SignalLeverState4 <> SignalLeverStop _
      And SignalIndicator4 <>
SignalIndicatorStop Then
      Signal4RunTime = Timer
    End If
    SignalLeverState4 = SignalLeverInput4
    If SignalLeverState4 = SignalLeverStop Then
      SignalIndicator4 = SignalIndicatorStop '
put Signal 4 to stop
    Else
      If SignalLeverState4 = SignalLeverLeft
Then
        Signal4LeftLogic
      Else
        Signal4RightLogic
      End If
    End If
  End If
Else
  SignalLeverState4 = SignalLeverInput4
End If
```

Lets take a look at the outermost IF statement.

```
If Signal4RunTime = 0 Then
  code
Else
```

```
SignalLeverState4 = SignalLeverInput4
End if
```

This is a check for 'Running Time'. A value greater than zero means that the signal is locked from being changed. If it is running time, then we just record the lever state. If it is not running time, then we will perform the rest of the checks.

Now lets look at the code inside the first IF statement.

If SignalLeverInput4 <> SignalLeverState4 Then
(This is the same as the turnout lever check earlier) We will only perform this code if the operator has actually changed the lever.

The next part checks to see if the operator has put the signal to stop and starts the running time timer. I use the built in timer function in Visual Basic. There is another part of the program which checks the timer to see if the time limit has expired – I have it configured for 30 seconds.

Next we record the lever input state (SignalLeverState4 = SignalLeverInput4)

If the signal lever is at stop, then we put the signal indicator to stop. Other code reads the signal indicator to decide what to display on the signal on the railroad.

If the signal lever is anywhere else but stop, then check if it is Left or Right. In order to make this code more readable, I have the logic for each Left and Right signal in its own routine. These are the Signal4LeftLogic and Signal4RightLogic routines. When the operator requests the Left signal to be cleared, this is the logic that is performed:-

```
Sub Signal4LeftLogic()
  If Block9 = CLR Then
    SignalIndicator4 = SignalIndicatorLeft
  End If
End sub
```

This is pretty straight-forward, if the block that the signal protects is clear, then go ahead and set it to Left. Other code will actually set the signal head based on the SignalIndicator4 and the turnout position. The code for the Right signal is more involved, as we should check block 9 and if there is a signal already cleared in the opposite direction.

```
Sub Signal4RightLogic()
  ' can clear if block9 is clear
  If Block9 = CLR Then
    ' if turnout 7 is normal, then okay to clear
right
  If TurnoutIndicator7 = TurnoutIndicatorNormal
Then
    SignalIndicator4 = SignalIndicatorRight
  Else
    ' turnout 7 is reverse, check if signal 8
is left (against 4)
    If SignalIndicator8 <> SignalIndicatorLeft
Then
      SignalIndicator4 = SignalIndicatorRight
    End If
  End If
End If
End Sub
```

First, only clear the signal if block 9 is clear. If turnout 7 is normal then there can't be a conflicting signal cleared (If signal 8 Left is cleared, it won't conflict because the train for signal 8 left will be going 'straight'

through turnout 7 and turnout 7 is protected by signal 8 Right.) So it's okay to clear, again setting the SignalIndicator4.

However, if Turnout 7 is reversed, then we have to check if signal 8 has been cleared left. This could cause a collision! Only if Signal 8 Left is not cleared (SignalIndicator8 is not equal to SignalIndicatorLeft), can we clear Signal 4 Right.

We can see on the diagram that there are 4 signal heads in Signal 4. These are 4Ra (Signal 4 Right A), 4Rb (Signal 4 Right B), 4Lab (Signal 4 Left A and B). These designations are also a Union Switch and Signal standard that I chose to adopt. Notice that the Signal 10 Right has 4 heads (10Rabc 10Rd). Once we have determined that it is safe to give a proceed signal, we then need to decide what indication we will show. Again, I have defined symbolic names for the numbers that will make the signals the right colour. The information on how to do this is in the C/MRI users manual. The routine is Signal4HeadLogic, which looks like this:-

```
Sub Signal4HeadLogic()
  ' Signal 4 Left Head logic
  ' A (GRNRED) if turnout 3 is normal
  ' B (REDYEL) if turnout 3 is reverse
  If SignalIndicator4 = SignalIndicatorLeft Then
    If TurnoutIndicator3 = TurnoutIndicatorNormal
Then
      Signal4LeftHead = GRNRED
    Else
      Signal4LeftHead = REDGRN
    End If
  Else
    Signal4LeftHead = REDRED
  End If
  ' Signal 4 Right Head logic
  ' A = turnout 3 normal
  ' B = turnout 3 reverse
  If SignalIndicator4 = SignalIndicatorRight Then
    If TurnoutIndicator3 = TurnoutIndicatorNormal
Then
      Signal4RightHeadA = GRN
      Signal4RightHeadB = RED
    Else
      Signal4RightHeadA = RED
      Signal4RightHeadB = GRN
    End If
  Else
    Signal4RightHeadA = RED
    Signal4RightHeadB = RED
  End If
End Sub
```

This is not too difficult to understand. First we check for the Left head. If the Signal Indicator for 4 is set to Left then we will check the turnout next. If the turnout is normal (we are going straight through), then we want to display a Green over Red (GRNRED) signal. If the turnout is reverse (we are taking the diverging route), then we want to display a Red over Green (REDGRN) signal. If the Signal Indicator for 4 is Stop, then we will display a Red over Red (REDRED). These are simply symbolic names for the actual values that will be written to the railroad.

Next, we will check if the Signal Indicator for 4 is set to Right. If it is then we check turnout 3. When the turnout is normal, Signal 4 Right A is set to GRN and

Signal 4 Right B is set to RED. When the turnout is reverse, Signal 4 Right A is set to RED and Signal 4 Right B is set to GRN.

If the Signal Indicator for 4 is at stop (the Else part), both Signal 4 Right heads are set to RED.

In conclusion, all of the decisions made on the system are very much like the proceeding code. There is more code for performing traffic direction monitoring and running timers for 'running time' locks.

Once all of the logic is completed, then the outputs are written to the railroad and we go back to the beginning and do all of it again. It looks like a lot of code to get through, but it is all running at very high speed. The time between the operator moving the lever and the panel lamp coming on to confirm the lever input is less than 1/10 of a second. The most important thing that has been done is to give every part of the system a sensible name so that the code is easy to read and understand. If you would like assistance, further information or a live demonstration of my system, please contact me. My contact details are on page 2 of the MainLine.

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Open everyday except public holidays

Model Railroad Craftsman

Shop 2 - Level 1, 64-70 Main Street, Blacktown NSW 2148

Ph: (02) 9831 8217

Fx: (02) 9831 4132

Email: sales@mrrc.com.au

Website: <http://www.mrrc.com.au>

Tue-Wed 10am-5pm Thu 10am-7pm Sat 9:30am-3:00pm

Mountain Blue Miniatures

PO Box 287 Blaxland NSW 2774

Email: keith@mountainblueminatures.com

Website: <http://www.mountainblueminatures.com.au>

Full range available at: The Railcar (NSW), Model Railroad Craftsman (NSW), Buffer Stop (VIC), Cyanotic Hobbies (VIC), Brunel Hobbies (VIC), Christmas Every Day (QLD) Trains & Track (QLD)

The N Scaler - N Scale By Mail

PO Box 254 Rydalmere NSW 1701

Ph/Fx: (02) 9832 8913

Mo: 0407 217927

Email kerr43@ozemail.com.au

Website: <http://www.ozemail.com.au/~kerr43/nscaler.html>

The Railcar

17 The Breakwater, Corlette NSW 2315

Ph: (02) 4981 0668

Fx: (02) 4981 0668

Email: railcar@hunterlink.net.au

Website: <http://www.railcar.com.au>

Contact: Herna or Paul Ward

The Signal Box Model Railways

8/15a Gt Western Hwy Blaxland NSW 2774

Ph: (02) 4739 1799

Mail & Phone Orders Welcome

Open Tuesday-Saturday

Tom's Hobbies

1001 Victoria Rd West Ryde NSW 2114

Ph: (02) 9809 0530

Fx: (02) 9809 0650

Email: info@tomshobbies.com.au

Website: <http://www.tomshobbies.com.au>

Mon-Fri 8:30am-5pm Sat 8:30am-3:30pm

Vic Barnes Cycle & Model Train Centre

213 Lambton Road

New Lambton NSW 2305

Ph: (02) 4952 1886

Woodpecker Model Railways

8 Joyce Street Pendle Hill NSW 2145

Ph: (02) 9636 3855

Fx: (02) 9631 4204

Email: wmr@zeta.org.au

Mon-Fri 10am-5:30pm Sat 9am-2pm



Sydney Convention October 2009 Information Update

Celebrate our 25 Years of Model Railroading

We are pleased to announce the NMRA Australasian Region's 25th Anniversary Convention will be held in Castle Hill, Sydney on the weekend of Friday 2nd to Monday 5th October 2009.

The Convention will be held in the wonderful facilities of Oakhill College, on Old Northern Road, Castle Hill.



Oakhill College from the air

In celebrating our twenty five years, we intend to **SHARE** the experience and expertise of railways and railway modeling accumulated by our group throughout the years.

The Convention has already attracted leading modelers from the USA who will **SHARE** their expertise to all who attend. We anticipate many Interstate and International visitors will join these celebrations, and also enjoy Sydney and its wonderful environs.



Special Highlights

- Attendance and Address by NMRA President Mike Brestel
- Opening Plenary Clinic by Charlie Getz, NMRA Director at Large, Raconteur and our Dinner Speaker
- Multi-stream Clinics on Saturday & Sunday 3rd & 4th October 2009
- Acknowledgment of the Regions founding members
- Gala Dinner in the Grand Foyer, the picture above shows the building.
- Layout Tours on the Central Coast on Monday 5th October 2009
- Great socialising opportunities throughout the Weekend and at the Gala Dinner
- Photo Competition, Model Contest, General Knowledge Quiz, & more:

Note the dates in your diaries, check the NMRA Australasian Region website for additional details as the months go by, and we look forward to welcoming you in October 2009.

David Howarth, 2009 Convention Chairman