

MainLine



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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.

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.

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Content submissions

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Content submissions

15 June 2017

Publish date on web

30 June 2017

Cover photo

One of Max Wright's scratch built street lights illuminates a scene on his O scale layout.

Photo by Max Wright

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From the President's Desk

Welcome to this edition of the electronic MainLine.

Every year the NMRA in the USA sends a copy of the February edition of their NMRA Magazine to all members. This is because there is usually an election each year but there are no elections involving Australasian members in 2017. Next year (in 2018), we will again vote for Pacific District Director and some other US NMRA positions. However, this year, enjoy your "free" magazine.

Our financial accounts reporting period coincides with the calendar year (not the financial year) so we have just completed our fiscal year. I am pleased to report that we have a moderate surplus of funds which means we should not have to review membership fees for some considerable period of time – this is good news! All of our financial results will be published in the Minutes of the Annual General Meeting on 11 March 2017. This year the AGM will be hosted by John Lee in Dee Why in Sydney during the regular Division 7 Meeting. The Minutes of the AGM will be published in the following MainLine for all members to see.

The Australasian Region of the NMRA banks with the National Australia Bank. The NAB have recently increased credit card transaction fees and have made the credit card transaction

process (Transact) very cumbersome for small organisations like the NMRA. Therefore, from now on we would like to encourage all members to use Electronic Funds Transfer for renewing memberships and paying for conventions and other transactions with the NMRA AR. Electronic Funds Transfer is much simpler to manage and



much cheaper for our organisation.

Our next Australasian Region Convention will be held in Adelaide on the weekend of 16-17 September 2017. The National N Scale convention will be on the previous weekend of 7-10 September. This means you can make a great visit to Adelaide and environs with the visit bookended by a couple of great conventions. Please mark your diaries and plan to attend these conventions.

You will have a great time and gain valuable knowledge in this great hobby.

Until next time,

David O'Hearn AR President

NOTICE OF ANNUAL GENERAL MEETING

The Annual General Meeting (AGM) of the NMRA (AR) will be held on Saturday 11th MARCH 2017 at the residence of Jeff Lee at 15 Summit Ave Dee Why NSW.

Meeting to commence at 3pm after the Division 7 meeting.

Agenda

- Present:
- Apologies:
- Minutes of 2016 AGM: Approved by the ARC.
- Significant Motions Carried by the ARC in 2016
- President's Report
- Treasurer's Report
- AP Chair Report
- Membership Officer Report
- No Australasian Region Elections in 2017
- No Proposed Changes to the Rules of Association.

Peter Burrows

Secretary

NMRA (AR)



Editorial Musings

Rod Tonkin Editor
MainLine

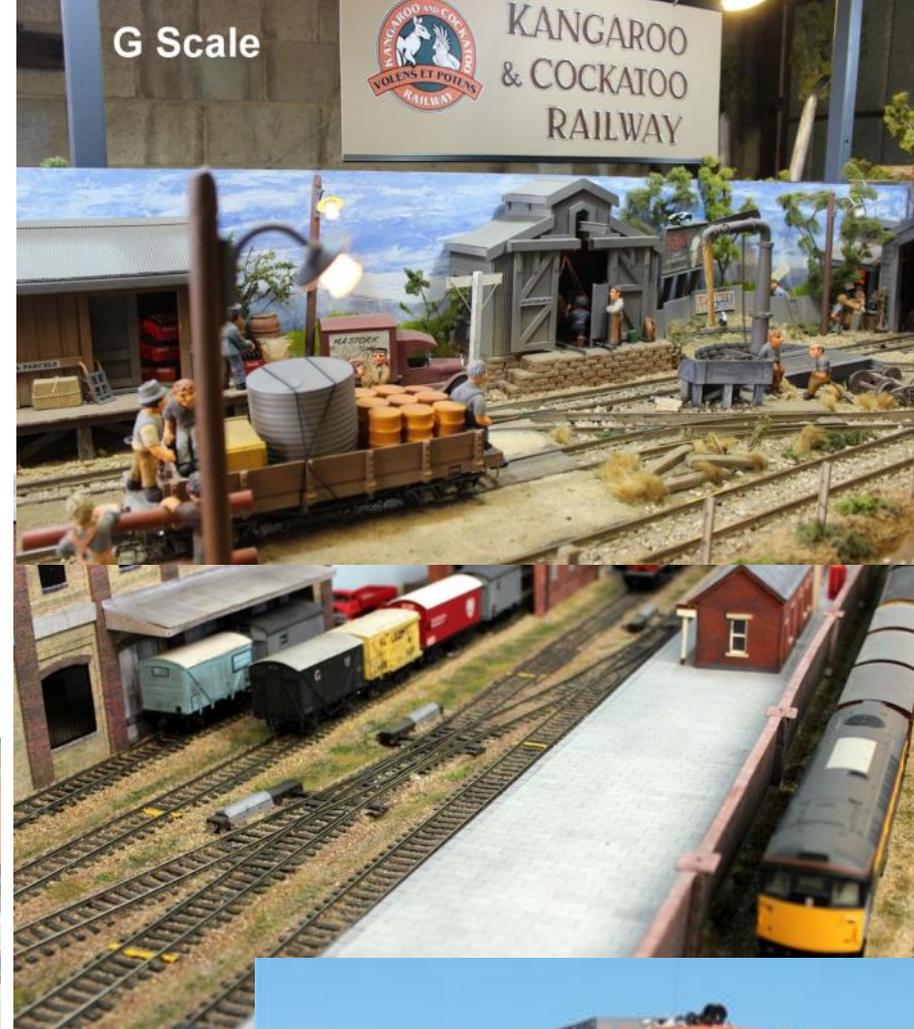
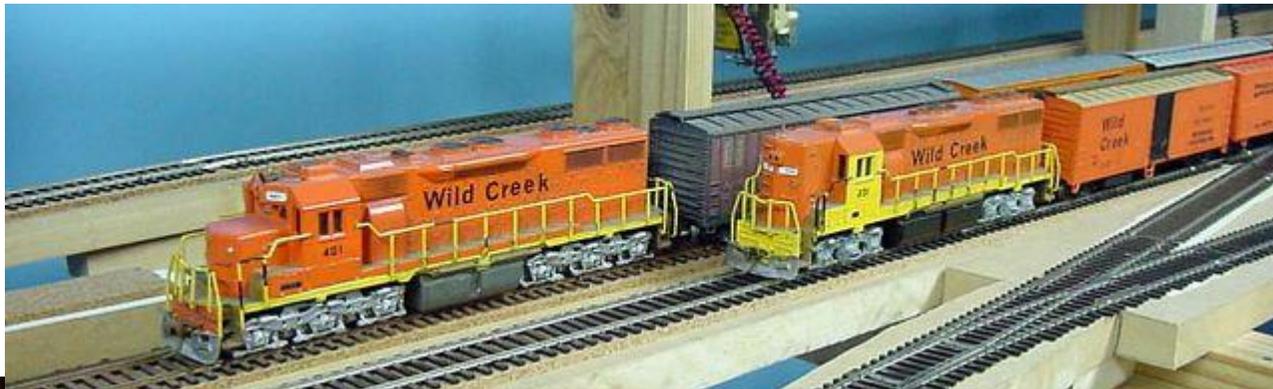
Readers may note the unsubtle hints through out this issue of MainLine as to the location and timing of this year's Region Convention.

This issue contains a number of articles by members of Division Six. These articles show the breath of modelling interests of our members in Division Six.

Members travelling to Adelaide for this year's Region convention will be able to experience the range of modelling interests of members of Division Six. In addition to seeing these layouts members will have the opportunity to be part of operating sessions at some of them.

Apart from using most of the disparate track gauges used in this country over the years, South Australia is also know for the production of outstanding wines. A trip to South Australia will enable you to sample railway modelling at its finest and some unique beverages.

Regards



Scratch built 0 scale street lamps

Max Wright MMR Division Six

I like to scratch build stuff - particularly when I can't find exactly what I like in the shops. People (including me 'till now), are put off making their own goose neck street lamps because of the perceived difficulty in bending the goose neck.



Photo GNL 01

Anyway, here is my process. It's not necessarily for everyone, but it might create a spark for others to try.

Here is the stuff needed for my project . . .

Photo GNL 01

Pretty much self evident. I included the rainbow wire, so everyone can see what I mean when I mention it.

There is the K&S pipe bending spring set, and a roll of 0.25 mm 30BS 26 gauge armature wire, which has a plastic coating for insulation.

I'm making eight lamps, so there are eight x 3 mm brass washers and eight 6 mm brass washers for the reflectors. There are eight 3 mm x 5000 mcd warm white super bright LEDs and eight 1 k Ω x 1.5 mm diameter resistors. The poles consist of eight 180 mm lengths of 2.0 mm OD x 0.45 wt (wall thickness) brass tubing and eight 60 mm lengths of 3.0 mm OD x 0.45 wt brass tubing.

The 2 mm tubing slides neatly into the 3 mm. You can see that I made four goose necks while I was developing the prototype, which has been painted green.

Bending the 2.0 mm tube using the K&S tube bending



spring to prevent the tube from kinking

To make the bends, I heated the 2.0 mm brass tubing over the gas jet in my (wife's), kitchen. I started about 20 mm from the end and worked back towards the middle for about 6 cm; heating the brass until it began to turn red. It doesn't seem to matter whether you quench it or let it cool. Once it's cold, it bends nicely in the spring. The K&S tube bending spring is slid over the softened brass tube, allowing you to create a smooth kink free bend in the tube. I then I cut the bends to size, allowing for the LEDs to form part of the curve, and then chamfer the tube ends.

I cut the legs off the LEDs like this. The (+) long leg I cut off just below the crimp mark, so it left about 3 mm. Then I cut the (-) short leg off half as long. Although the LEDs come tinned from the shop, I always tin them myself as well.

Then I filed the inside of the curve at the end to brighten it and tinned that as well.

Holding the LED in needle pliers, I soldered the long leg to the inside of the curve, and then pushed about 150 mm of the armature wire up the tubing until it appeared in the gap at the end.

The end of the armature wire needs to be tinned as well, for about 1.0 mm. To tin the wire, simply make a blob of solder on the tip of your iron and plunge the end of the armature wire into it. The heat from the solder will melt the plastic coating and the solder will adhere to the wire. It will look silver for about 1.0 mm if you have been successful.

Photo GNL 02

Here you can see the result of all that verbage above. The long leg is fixed solidly to the tube and once it is encased, nothing will move.

At this point I connect 3.0 Volts DC (-) to the end of the wire and the (+) lead to the brass tube. Test as you go. Very important.

Photo GNL 03

Here you can see the end of the armature wire protruding from the bottom of the 2.0 mm tube. I've soldered the resistor to it and soldered about 40 cm of black (brown is next to the red in the rainbow wire, so it will do), rainbow wire; to the other side of the resistor. The bare ends shouldn't be able to touch the inside of the 3.0 mm tube, but I always put PVA on them just to be sure.

Test again. This time using 12 Volts.

At this point you can turn the lamp upside down and fit the reflector (washers).

Photo GNL 04

The 3.0 mm washers fit nicely over the LED. Then I just sit the 6.0 mm washers on top and slide them around until they are central. Then I drop one large drop of CA on to the end of the LED. The CA will flow down and wick between the washers and between the washers and the LED.

Give it a good twenty minutes to set up before you touch it.



Photo GNL 02



Photo GNL 03



Photo GNL 04

Photo GNL 05

Outer tube cut ready for attaching the red wire

Photo GNL 05

This is one of the 6 cm lengths of 3.0 mm tubing I intend to use for the bottom section of the pole. I have taken a diamond Dremel wheel and cut a slot in the end of it. This is tinned and a 40 cm length of red rainbow wire is soldered into the slot. Once it is filed off, the pole will fit neatly into its hole in the baseboard without jamming on the soldered joint.

Photo GNL 06

If you've done it neatly the black/brown wire will pass it OK.

Photo GNL 07

Another shot of the washers being glued on. It also shows the development of the construction.

Photo GNL 08

Now the 3.0 mm tube has been slipped over the brown/black wire and is being offered up to the 2.0 mm tube.

Photo GNL 06

The red wire soldered to the outer tube.

Photo GNL 08
Assembling the outer tube over the 2.0 mm tube

Photo GNL 09
... and soldered in

place. The overlap will be down to your individual preference, so long as the resistor is safe inside. A piece of shrink tubing is installed to anchor the red wire to its mate.

Photo GNL 10

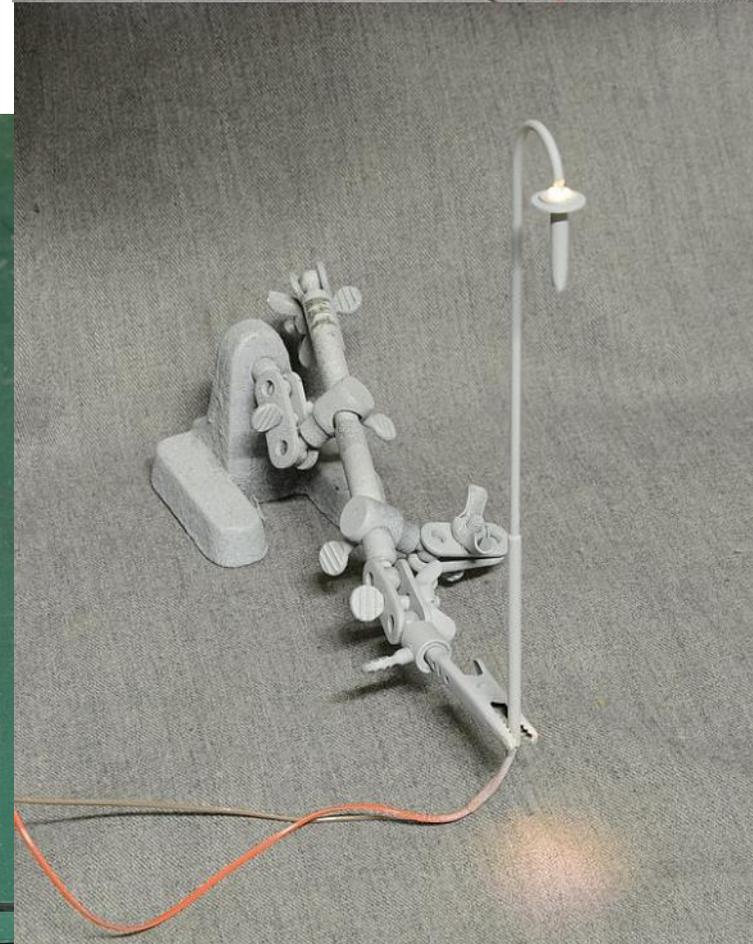
Using a Fine Tip Applicator (my most favourite tool), I filled in the space around the connections on top of the LED with PVA, which encases it and provides a fair moulding for the head of the lamp. It will take about an hour to set up. Here is the lamp prior to painting ...

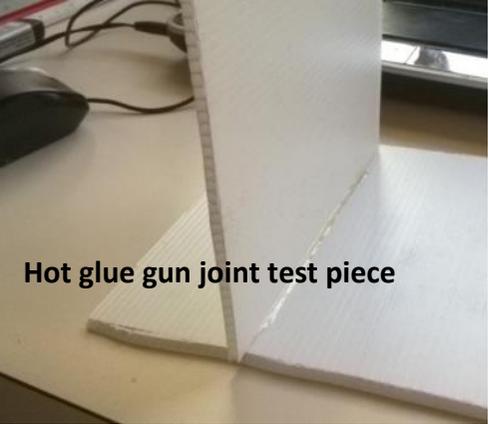
Photo GNL 11

Photo GNL 12

Using a piece of 3.0 mm shrink tube for masking the LED, the whole thing is sprayed with grey etch primer. Now you can see the light showing through the top of the LED. It will take a couple of coats of flat back to shut the light in, but it must be done before the final colour is applied.

Photo GNL 13





Hot glue gun joint test piece

Extruded plastic sheet building cores

Rod Tonkin Division Four

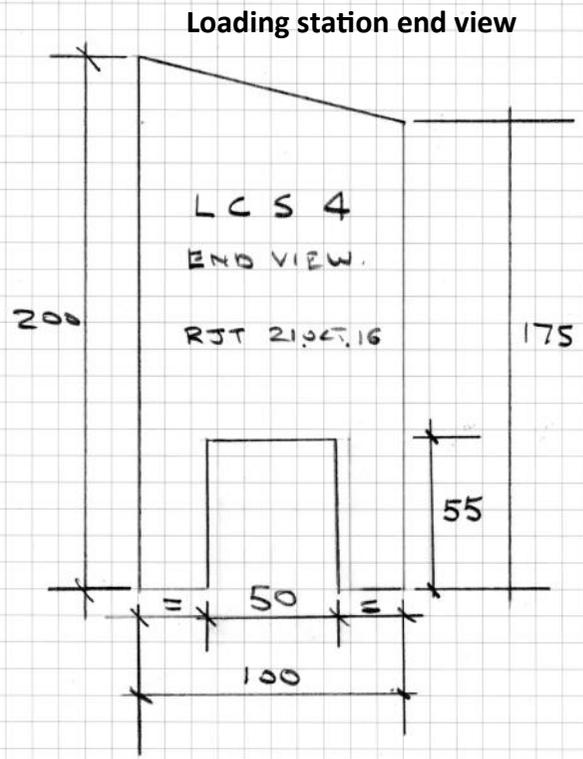
Extruded polyethylene sheet is readily available in major hardware outlets in a range of thicknesses and sheet sizes (sold by Bunnings in WA as "Corflute"). My first trial at using this product was for back scene sheeting.

This was simply screwed to timber uprights to frame the scenes on my model railway. This worked well and was around half the cost of the three mm plywood I've previously used for this purpose.

Emboldened by this experience would I wondered, this material be suitable for the internal supports of structures for my layout? I would need a reliable method of bonding this material together. Solvent type cements such as MEK don't work with polyethylene. I've had good results in the past bonding sheets of foam core board together using a hot glue gun. Would this work on extruded polyethylene sheet? I tried using a hot glue gun to bond a couple of

pieces of extruded polypropylene sheet together. After the hot glue had cooled I load tested the test pieces. Fully bending the test joint flat did not rupture the hot glue joint or the extruded plastic sheet. With my fabrication technique proven reliable I could now embark on a trial structure.

The new Lehane Crushed Stone gravel loader at Wallaby Falls seemed a reasonable place to start. I laid out the structure to suit the space available. I find five millimetre ruled graph paper ideal for laying out structures for my layout. This is not a drive through continuous motion train loader so the doorways the hopper cars pass through are only sized to clear a



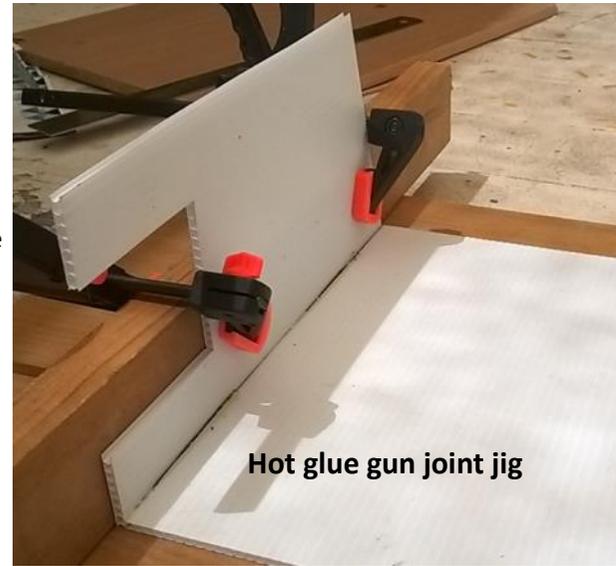
loaded hopper car. The roof slope is fifteen degrees to suit the asbestos cement roof sheeting I intend to use to clad my train loader. The sketch shows the end elevation of the gravel car loader. The dimensions are full size for a HO scale model without the cladding installed.

I laid out the wall panels of the gravel loader on a sheet of three mm thick extruded polyethylene sheet. I used a square to ensure each wall panel was laid out true. The wall panels were cut out with a sharp modelling knife on a cutting board using a steel ruler as a guide. To allow for the thickness of the extruded polyethylene sheet, the side wall panels are shortened by twice the thickness of the extruded polyethylene sheet I used.

To aid in assembling my gravel loader I built an assembly jig. I've found clamping the pieces to be joined in place and then using the hot glue gun gives a neater joint and I don't burn my finger tips too often. My jig consists of a sheet of melamine coated chip board salvaged from an old flat pack book case with a length of 42 by 19 mm pine screwed to it. The combination of the flat chip board panel and the milled length of timber gave me a 90 degree angled jig.

I used the pieces of sheet cut out of the access doorways to make internal stiffeners. The internal keep the assembled model square. The stiffeners will be out of sight on the completed model when it is installed on my layout. The internal stiffeners need to provide access for the hot glue gun to secure the roof panel in place from the inside.

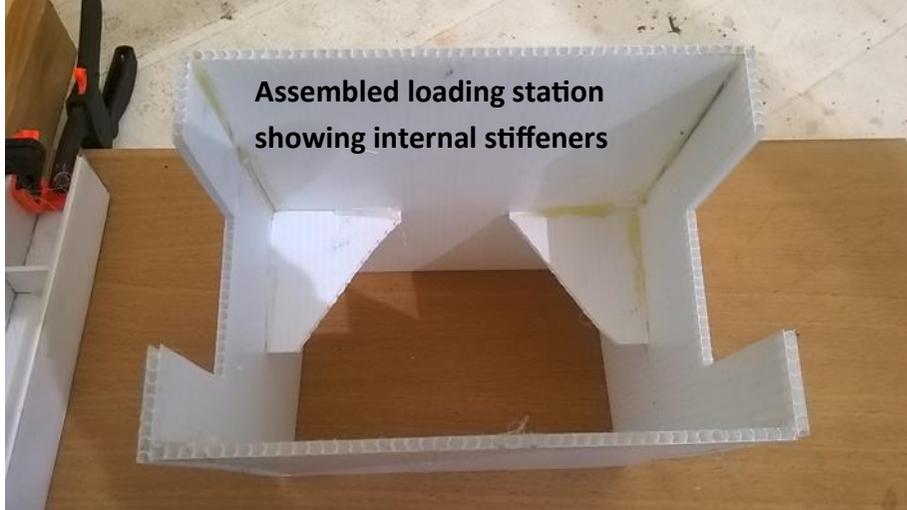
Once the four walls and wall stiffeners were assembled I measured and cut out the roof panel to fit flush with the top of the walls. This was secured into place by hot glue applied from inside the assembled structure.



Hot glue gun joint jig



Wall panel joining in assembly jig



Assembled loading station showing internal stiffeners

The feed conveyor required some thought. I finally decided to cut a hole in the rear wall of the train loader building to allow the conveyor gallery to fit into the building.

I made the con-

veyor gallery long enough so I had some room for adjustment to suit the train loader location.

I set the conveyor gallery in position into the train loader building on the layout. When I was happy with the set up I pinned the conveyor gallery to the train loader building. The conveyor gallery was secured in position by hot glue gun from inside the train loader building.

Now I had the structure of my train loader assembled I could clad it. To suit the pre 1970s era the train loader represents I'm cladding my train loader in corrugated asbestos cement sheeting. I cut the corrugated card sheet, obtained from a craft supply store to size for the walls and roof. The card

cladding was secured to the extruded polyethylene sheet with contact adhesive. The contact adhesive secures the card sheeting to the extruded polyethylene sheet without distorting the extruded polyethylene sheet. I made the capping strips from 80 grams per square metre paper and contact cemented them into place on the roof ridge and corners of the walls. There are no gutters and consequently down pipes on the building as in my experience of industrial structures they cause more harm than good.

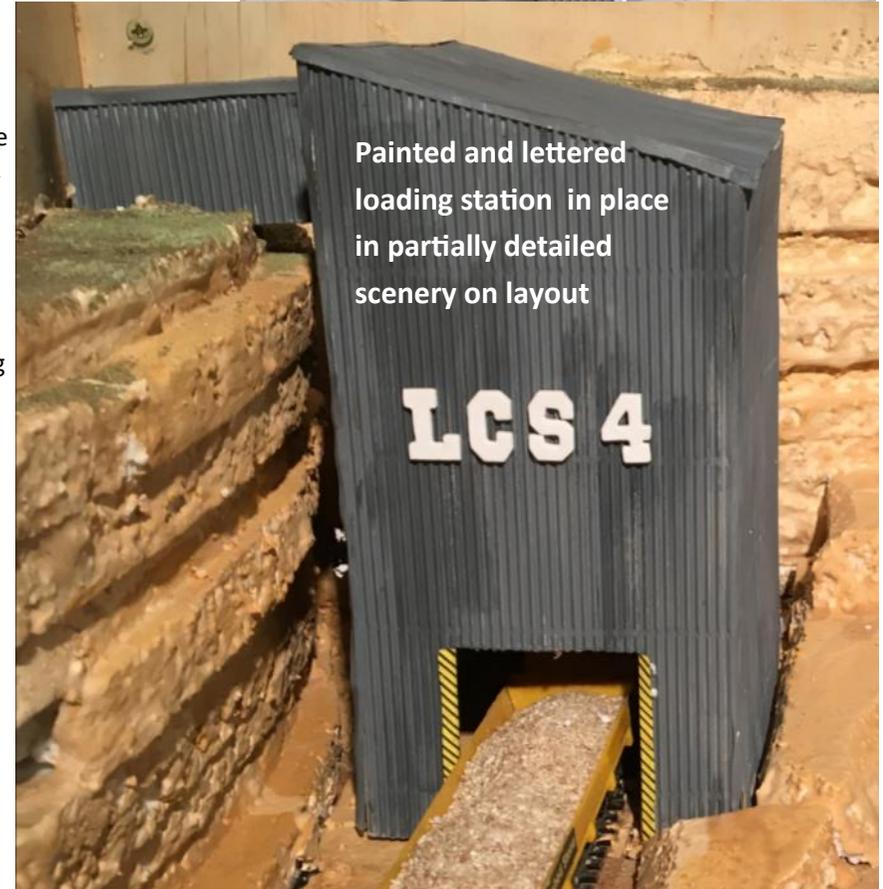
I painted the clad structure grey using a colour mixed from white and black PVA artistes paints. The door clearance warning zebra stripes were made by ruling parallel black stripes using a felt marker pen on yellow 80 grams per square metre paper. The "LCS 4" lettering is peel off and stick on foam letters from the local two dollar shop.



Clad loading station ready for painting



Assembled loading station and feed conveyor trial installation on layout



Painted and lettered loading station in place in partially detailed scenery on layout

Is a model railway a theatre production?

Charles Page Division One

I recently went to a live theatre production, performances in three dimensions instead of on screens. As seems to be the trend these days there wasn't a curtain concealing the set, all was visible, just awaiting the actors to bring it to life.

However, it was interesting as to how much insight the director was giving the audience even before the play began. In this case the social context, historical era and the country in which the story was set.

I once worked as a volunteer at a theatre helping with set design and construction, so as I sat waiting for the start of the play I had a good idea of what a cunning illusion the set really was. What we were looking at was basically styrene and dabs of paint interspersed with a few real objects, and yet when the actors take their places we accept it as reality. When the play begins our focus is on the actors and the set becomes, as it should, simply the background.

The principles of theatre and movie set design readily transpose into the principles of building model railroads.

I believe that while model railroads draw on various art forms, as an independent art form they are closer to theatre in concept than any of the others.

I'm being a little self-indulgent with this article because I enjoy building scenery, including painting backdrops and tying everything together to create a believable piece of theatre, where the scenery is the set and the trains the actors; although some of the actors can at times be real pains in the derriere.

There are lessons to be learnt from set design:

Blocking. It simply means choreographing when and what the audience sees by the placement of props and actors; in model railroad terms it means placing scenery elements purposefully rather than randomly.

Perspective Set designers are masters of forced perspective and the techniques they use work extremely well with scenery. I've read about using models from a smaller scale to force perspective, but it wasn't until I made a mistake and ordered some N scale autos. instead of HO ones that I tried it. I have a road that disappears into the background and does have some forced perspective because the road has been made narrower to change its perspective. Put two N scale cars on the narrow end and the effect is quite startling.

Lighting As with stage lighting we light our layouts to create the effects we want, soft or harsh, cool or warm. We can also move the lighting from daylight to night. You can now buy a lightning and thunder generator to add yet another dimension.

After visiting numerous layouts it seems to me that they fall into one of three scenic categories, all of which are quite valid, I'm not making value judgments or proposing how things should be done:

- Little or no scenery, perhaps simply a station or a loco or shed.
- Scenery used to fill in the spaces between the tracks and where open grid construction was used to stop the trains hitting the floor in case of derailment. Scenery including backdrops installed.
- Occasionally you visit a layout that like the theatre set instantly places you in a recognisable environment, from deserts, mountains, pastures and forests, it is simply a theatre set. Even the time of year can be identified, autumn colours, snow, crops and animals. The created environment tends to anticipate the trains that will travel through it.

The architecture may also be an indication, Australian corrugated iron or English thatched cottages tend to quickly locate the layout and the interests of its creator.

Establishing an era is an interesting exercise. Of course the trains can set the era quite specifically and architecture does to a certain extent, but it is really the props such as vehicles, signage, styles of street lights, power poles, farm equipment, road surfaces, bridge design, stations, loco. depots that flesh out the illusion. It really is a lengthy list when you think about it. Interestingly most of this is evident before the trains even begin moving! If it's done well the trains and the scenery simply make sense.

For a long time our layouts were like silent movies or actors that couldn't speak. The first time I heard a sound equipped loco I realised that our actors finally had a voice and the illusion could be complete. Of course there are also all of those wonderful sound effects that can be added, seagulls around your waterfront scene or cows in the stock cars.

When the trains are running all layouts are theatre performances; the production created is solely dependent on the objectives, resources and vision of the director. We create the sets while also controlling the lighting, sound, and the actors; we should all have a chair with DIRECTOR on the back.

Electrics for a DCC turntable

Rod Tonkin Division Four

In the past my home made hand operated turntables used the pit rails to power the turntable bridge rails. The pit rails were electrically separated into two semicircular sections. Sliding current collectors beneath each end of the turntable bridge connected the turntable bridge rails to the pit rails. As the turntable bridge rotated 180 degrees the sliding contacts automatically reversed the bridge rails electrical connection. This arrangement eliminated the need to use reversing switches to electrically connect the turntable bridge rails to the correct polarity.

With DC power the only time the pit rails are live is when a locomotive is moving onto or off the turntable bridge. Simply gapping the pit rails worked well with DC power.

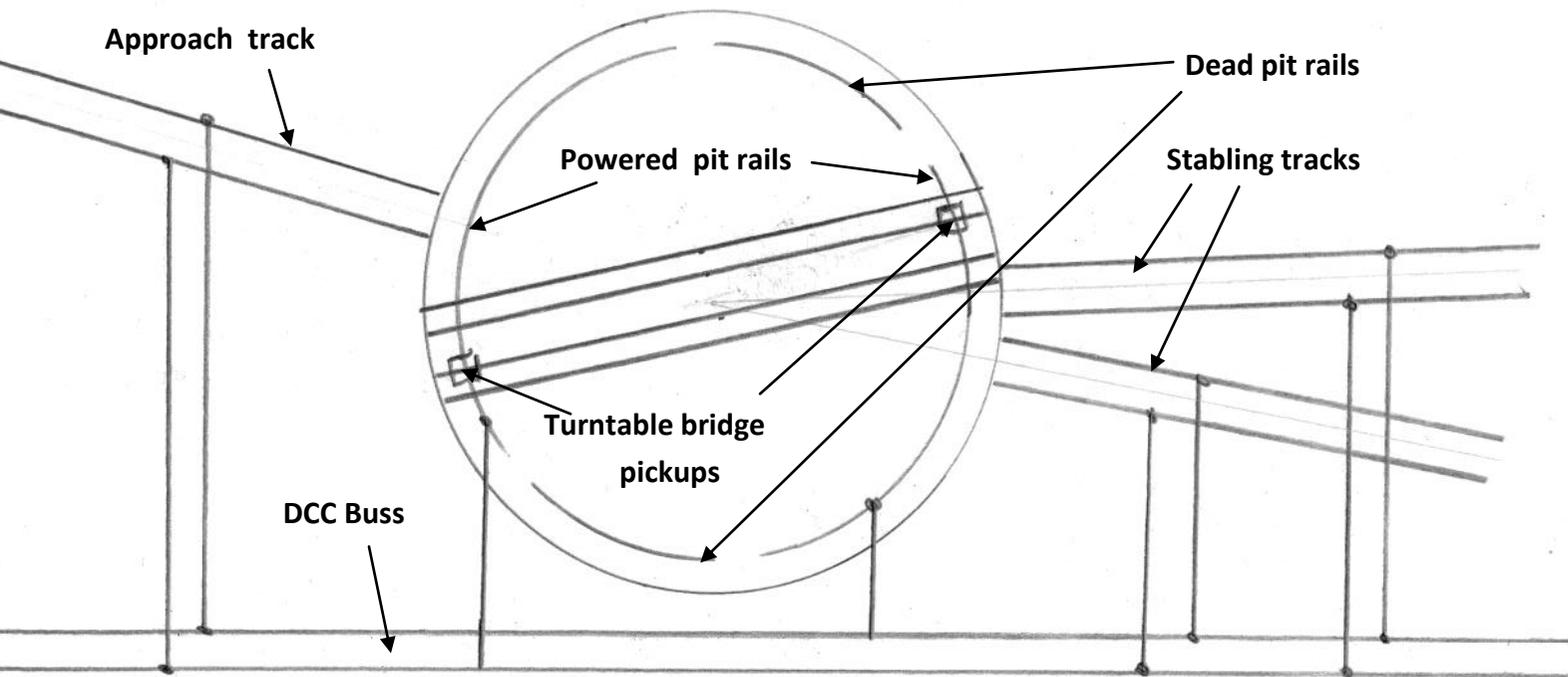
DCC complicates the issue slightly. The track on a DCC layout is always powered up. The current collectors beneath my existing turntable bridge would short out the pit rails. By double gapping the pit rails I was back in business. As long as the dead sections of pit rails were



HO Scale Santa Fe GP30 3232 riding the manually operated scratch built turn table loosely based on a Santa Fe prototype on the authors layout

longer than the sliding current collectors on the turntable bridge my DCC system was unaffected by the operation of my turntable. The wiring for the turntable approach tracks, fan tracks and bridge tracks are shown on the attached wiring diagram. A big plus for DCC is you don't need switches to isolate each track around the turntable from the power supply. With DCC unless you address a specific locomotive to move it will happily sit inactive on a live track.

My manually operated turntable is a length of 42 by 19 mm pine. The arrangement of the girders on my turntable are based on the Santa Fe turntable at San Bernardino. The girders are three millimetre plywood. The plywood is faced with thin card. The vertical stiffeners are match sticks. The flanges of the girders were made from the same card used to face the plywood



ANTI-FLICKER FEATURE for LED

LIGHTING Part 2.

Anislie Brittain Division Six

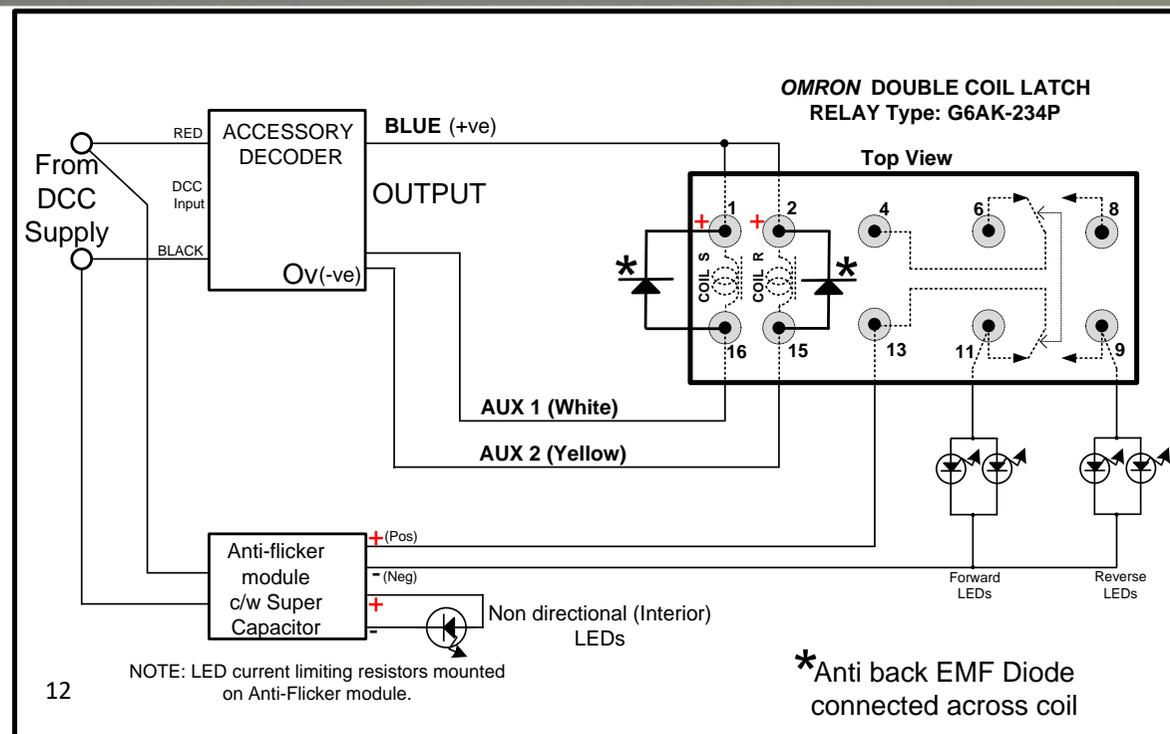
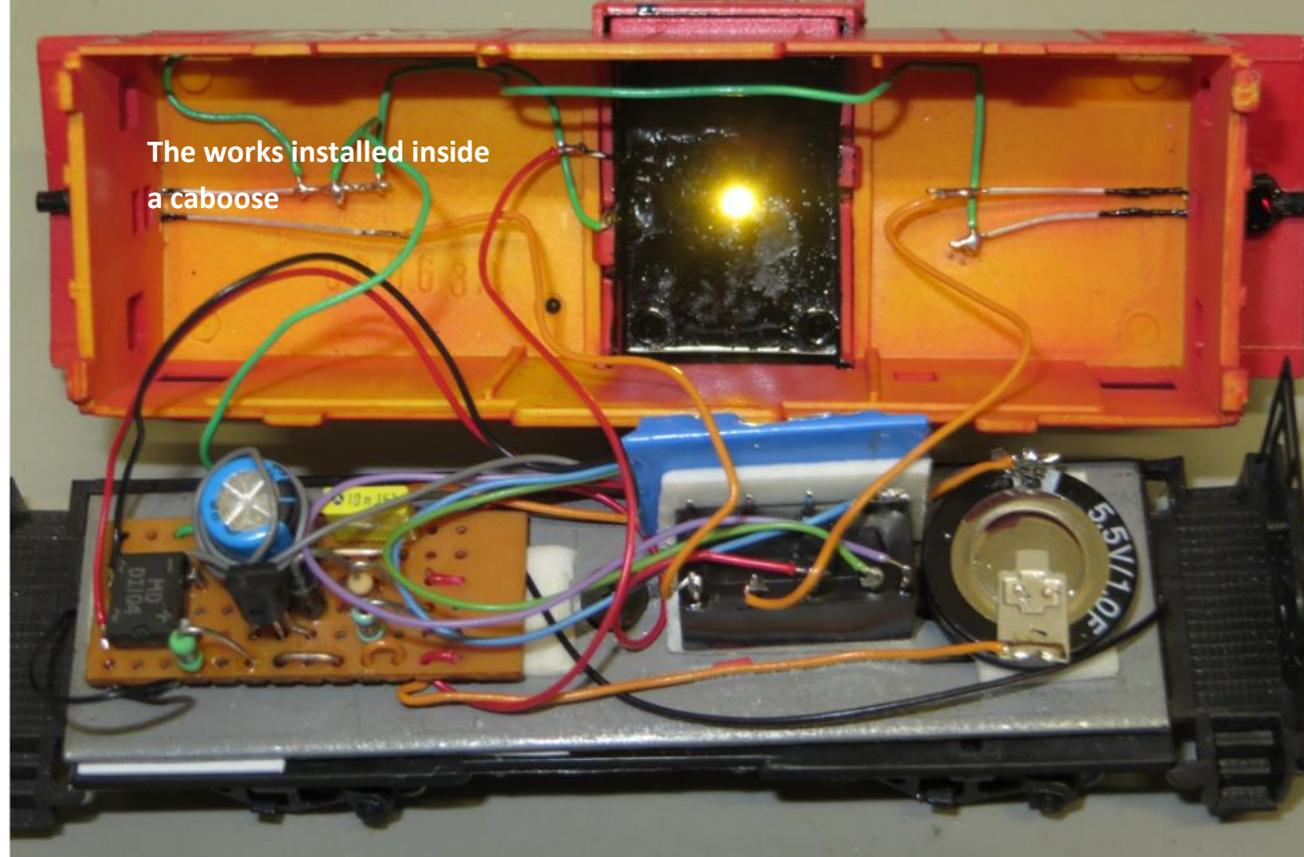
Part 2 was not originally contemplated, but has been developed because some members running DCC were interested in using the hand-controller in conjunction with an accessory decoder, to remotely select either forward or reverse direction lighting. A caboose fitted with lights at each end is a typical example.

After some testing, the following approach using a LATCH relay gave the best result in my opinion. This type of relay was chosen because internally the contacts remain closed in one of two positions if power should be switched off, unlike a normal relay that reverts to the 'at rest' position; this is a relay with a memory! LATCH relays are available with one or two internal coils. With only one coil to effect contact movement, the supply polarity to the coil must change to toggle the internal contacts. Using an accessory decoder, it is easier to use two different outputs of the same polarity to power either of the two coils. The relay is an "OMRON" unit, RS stock No: 369-602 described as a DPDT PCB mount Latching Relay, 2A, 12V dc unit costing approximately \$16 50 each.

PLEASE NOTE WELL: This model Latch relay is a Polarized device; meaning the coils **MUST** be powered with 12V dc (approximately) correctly connected according to the legend visible on the top of the relay enclosure.

IN ADDITION, only ONE coil should be powered at any time! If both are powered simultaneously the relay will most likely be destroyed (burnt out!). To make sure this requirement is satisfied, program the Function buttons to be **MOMENTARY**,..... **NOT** toggle on, then pressed a second time to toggle off.

If children are involved as operators, I understand some DCC control units allow the function buttons to be **LOCKED**, so preventing undesired actions to be performed! Finally, take care when testing the relay on the test bench that the above advice is observed.



I programmed my controller to use either F1 or F2 function buttons but other buttons can of course be chosen. The relay then directs the power from the Anti-Flicker unit to either the forward or reverse direction lights. I also illuminated a central light which is normally on in either direction, directly from the Anti-Flicker unit as shown in the circuit diagram. It could have been connected to a spare decoder output and powered directly; this would allow switching on and off during running but should power fail, will probably extinguish very quickly as this method by-passes the Super capacitor power.

With a 270 ohm resistor fitted as discussed below, the unit will take a little while to fully charge the Super Capacitor but once charged will power the load, in my case LEDs, without any noticeable change in output intensity for some minutes if power is interrupted!

INSTALLING the LATCH RELAY:

I first bench tested the relay by temporarily connecting hookup leads to ensure correct terminals were being used and that the unit was working correctly.

While still on the bench I shaped the two 'Back EMF' diode leads and after tinning all the relay terminals, soldered them directly across terminals 1 and 16, the other being 2 and 15. (Refer to photo 1). Note that the K lead of the diode connects to the Positive terminal of the relay (reverse connected). The lead of one diode can connect to the two Positive coil terminals (1 and 2) as the Blue decoder lead is common to both. Bench test the relay again to check diodes have been installed correctly. (The diodes prevent "spikes" generated when the coil field collapses at power off, from possibly damaging the output of the Accessory Decoder).

I used double sided tape to secure the relay to caboose floor and attached pre-tinned cables as required to the relay terminals.

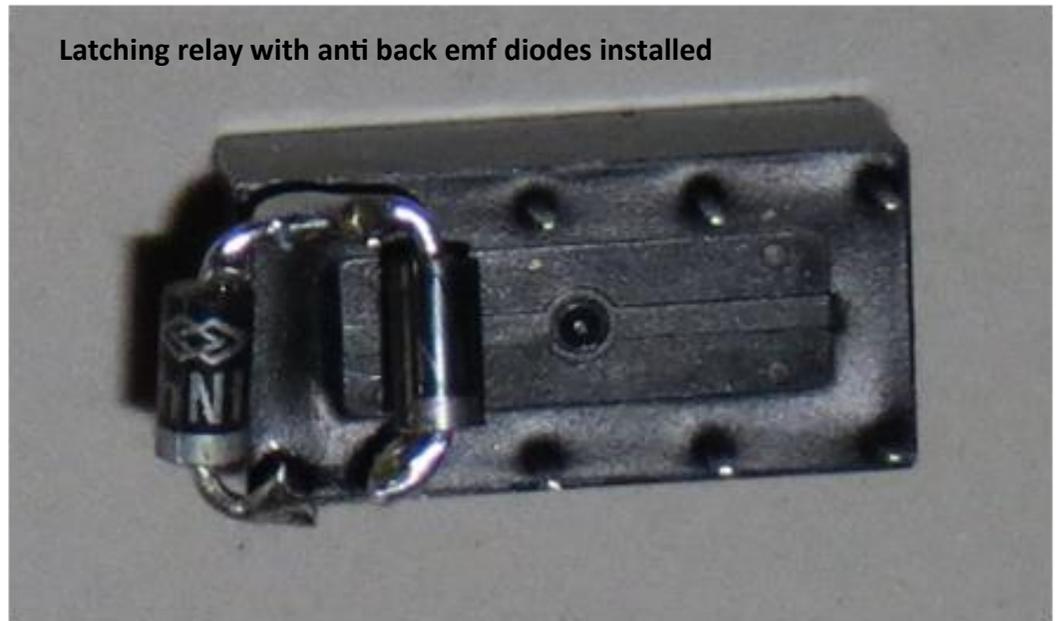
Now is probably a good time to position the **accessory decoder** (after having bench tested and programmed to the desired address number) into the particular rolling stock.

The **Blue (positive) accessory decoder** cable is soldered to the positive terminals of the relay (1 and 2) and the positive output cable from the **Anti-Flicker unit** connects to terminal 13 (or 4).

The cable from terminal 11 (or 6) now solders to the Anode side of the forward direction LED(s), similarly cable from terminal 9 (or 8) goes to the Anode of the reverse direction LED(s).

At this stage the vehicle can be placed on the track and powered up and correct operation

of the decoder and relay checked. Assuming everything checks out OK, the body can now be checked for clearance etc. and be offered up into position. It may be a good idea to place some insulation over the relay terminals just in case they foul some of the uninsulated LED leads when the body is fully in position!



Latching relay with anti back emf diodes installed

Cathode (K) silver band end of Diode is soldered to Positive coil of Relay.

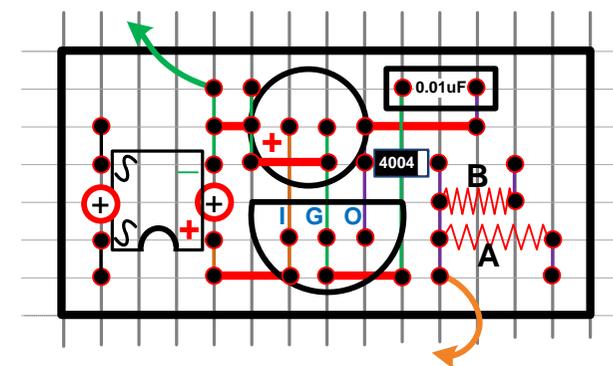


Diagram 2: Link replaced with 270 ohm, 0.6 watt resistor.

ADDENDUM/CORRECTION: to anti flicker article in Volume 33 Issue 5

In Part 1 of this article the circuit drawing does not show a resistor installed between the bridge rectifier positive output and the incoming supply terminal of the voltage regulator. If greater protection is required for the regulator and downstream components, the wire link connecting the two components could be removed and a 270 ohm, 0.6W resistor be installed. This would limit regulator current to 45mA (at 12 volts) should a fault occur downstream from the regulator. Please refer to Diag: 2.

If using this Anti-Flicker approach to power interior carriage LED lights, and the time period before dimming is not long enough, then two Super Capacitors could be connected in parallel. This would allow for a greater current draw but still maintain the light output for a satisfying length of time.

In the photo of the installation of the unit within the caboose, I made mention that I placed the Super capacitor within a side cut-out used to house one of the two lead weights. Bad idea! I later had to reposition the Super capacitor and replace the lead weight in its proper place because the caboose ended up with a severe lean to one side!

Kerosene Fuel Wagon

G Scale

Built by Vern Cracknell MMR

This is a generic style fuel wagon, scratch-built. The tank is made from PVC 8cm down-pipe, fitted with PVC ends. The base is 7mm ply, with 7mm by 20mm beading timber used for the side beams and sole bars. The journals are from Ozark Miniatures having brass bearings fitted by drilling out and inserting a 3mm length of brass tube. The wheels are solid metal LGB (item 67343) and couplings are LGB (item 64707). The securing rods and attaching plates use strip brass and 1/16 diameter brass rod, soldered to size. The ladders are 1/16 brass rod soldered and shaped to the correct curve. They are anchored by glue at the top and split pins at their base. The brake wheel is from a set bought from a model store but the brand is not known.

The turret is cut from a broom stick, and the air vent, and the handles and fittings are from styrene and sprues from kits. A snap fastener is used for the outlet tap at the base. The platforms at the top of the tank have been taken from a second hand caboose wagon

(manufacturer unknown - amongst items added to the bits and pieces box for they could be useful one day!). Nails have been used to simulate bolt heads on the sole bars.

The unit is painted and weathered to simulate long use resulting in its dirty exterior. The lettering is achieved through waterslide transfers made on a home computer and printing onto decal paper from Micro Mark (USA). The Shell logos on each end were made by scanning an advertisement in Time magazine, enlarging the image on the computer, and then making waterslide transfers. The applied lettering and logos when dry were sprayed with Testor's Dul Cote numerous times.

Kerosene was required both for lighting and heating in both domestic and working situations, and thus fits well in the era of the Kangaroo and Cockatoo Railway.

The model's dimensions are: length over buffers 150mm, width 85mm, height above rails 165mm.

Vern's G Scale Kerosene tanker



Division One highlights

The Learning Curve Revisited

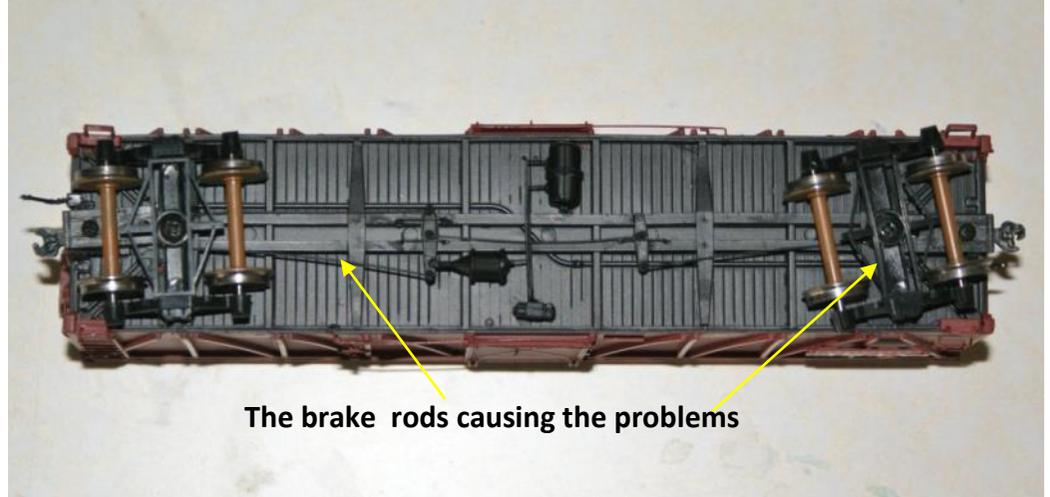
I had recently changed over to Code 88 semi scale wheelsets and was running a freight that was continually coming off at a curved turnout. The old rule of thumb used to be that if multiple cars, derailed at the same place the problem was the track, if only one car derailed then the problem would have appeared to be the car. At least that was the rule.

The train I had been trying to run which was continually derailing was a Santa Fe Stock Express which has in its consist some 24 Intermountain Stock Cars of Santa Fe prototype, there was also one or two resin cars in this consist. On reflection they, the resin cars, never seemed to come off at the point, more on this later. The supposedly offending curved turnout was replaced with a shiny new Shinohara Code 83 number 8 left hand curved turnout. Imagine my surprise when the stock train derailed at the new bright and shiny curved turnout again. Not only that, imagine the subdued (or maybe not so) and somewhat colourful comments that would have issued forth at that time.

What the heck was going on? Clearly this required more investigation. The turnout was clearly not the problem, at least not now; I had previously run the Fast Mail with 60 and 70 foot baggage cars over this section of track and the Super Chief with 85 foot passenger cars with no trouble.

What the Sam Hill is going on here? Clearly more investigation was needed to find out what the heck was going on. With a mate helping so we could run the train and watch, as two sets of eyes are better than one, we tried again. So back and forth it ran, and after a while I noticed that it was only certain types of cars that were coming off, the ones with AB Brakes fitted to the underside. The vertical handbrake K brake equipped cars seemed to stay on the track going through the inner route of the turnout, strange to say the least. Then we tried it on the outer route of the turnout with the same result for the AB equipped cars. The K brake cars went through fine, strange indeed!

On further inspection of the cars with AB brakes the problem was revealed.



The brake lines on the top of the picture were fine, but the brake lines at the bottom have had to be bent in and relocated. As delivered the brake rods went straight from their locations on the brake hangers to the underside of the bolster near the truck. This was just enough to prevent the trucks swivelling enough to go round the turnout, so what I had to do was to bend the brake lines away from the outside of the car to the centre sill until the truck had room to swivel freely. You well may ask why the resin cars, as noted earlier performed without problems? They had been built by yours truly and the AB brake system on those cars had been built to ensure the trucks swivelled freely.

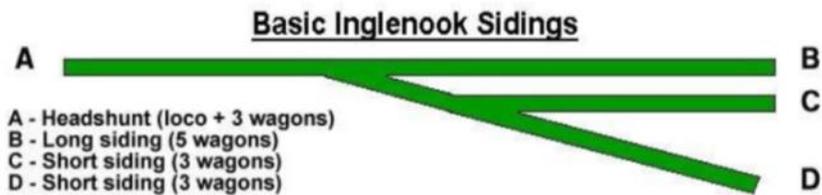
Rob McLear. NMRA Division One



Ted Freeman's coal hopper commemorating Model Railroader's 1000th issue operating on MR's Milwaukee Racine and Troy layout

Division Two Highlights

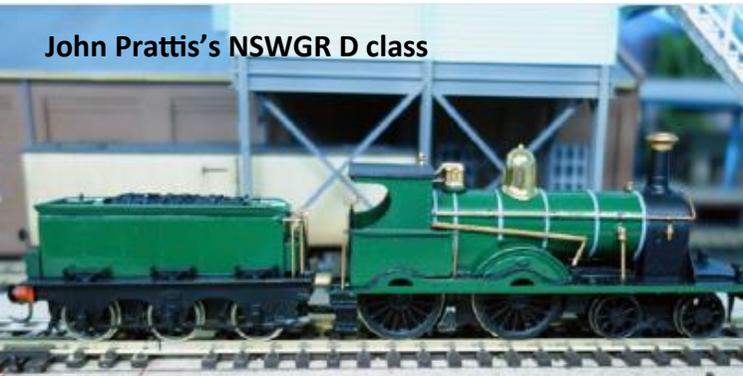
Wal Pywell hosted the November 2016 Division Two meeting. The main topic of the meeting was ideas for switching layouts. Wal showed us drawings of some of the classic switching layouts featured in the model railway press over the years, including the “Inglenook” design developed in the United Kingdom by Alan Wright



An Inglenook style shunting layout

John Prattis visiting from Adelaide showed us a couple of his pre 1900 New South Wales Railways models.

John Prattis's NSWGR D class



Rob Nesbit showed us the mock up of the two deck HO Scale layout he is planning to build. The lower deck will be a representation of the NSWGR mainline though Wagga Wagga. The upper deck will be a representation of the Tumbarumba branch line

Key points

- Room size 9m x 6m
- Two decks linked by a helix
- 1/33.3 scale layout mock-up in card to visualise design (see photo at right)
- Timeframe is approximately 1970 with some allowance for flexibility either side
- Design for operations and prototypical train movements



Division Three Highlights

The January 2017 Division 3 meeting was held in the rural city of Warrnambool in SW Victoria at the home of John Droste and Andrea Lane. The meeting was held on the Saturday evening of the weekend of the Warrnambool Model Railway Exhibition.

Allan Ogden presenting our host John Droste with his thank you plaque

Rod Hutchinson Copyright © 2017

14 members & guests attended. Our new Superintendent Allan Ogden presided over the meeting and presented the host, John Droste, with his thank-you plaque.

John's partner, Andrea, looked after attendees with both hot and cold fare and a congenial meeting was enjoyed by all.

Gene Deimling's scratch built O scale tanker

Rod Hutchinson Copyright © 2017



Rod Hutchinson Copyright © 2017

John Droste's O Scale logging



Rod Hutchinson Copyright © 2017

Division Three members enjoying the meeting





Alan exercising his skills in decorking a bottle of wine

superb wines Peter had on offer.

Division Four Highlights

Due to New Year's Day landing on the last Sunday of December, we held our Christmas function on the 8th of January 2017. As is customary the event was held at Peter Scarfe's. The weather for the day was a pleasant 30 degrees. We enjoyed good fellowship and the



Yours truly presenting Alan with the Hopkins Bone award

Peter our host, was offered a choice of a 2016 or 2017 meeting host plaque. He considered the 2016 plaque more appropriate.

Alan Burrough was presented with the Hopkins Bone award for his efforts deciphering the grammar of contributions (especially the editor's) to MainLine.

Peter showed us the HO scale chemical tank car he received as part of his membership of the Atlas Gold Club.



Peter's tank car



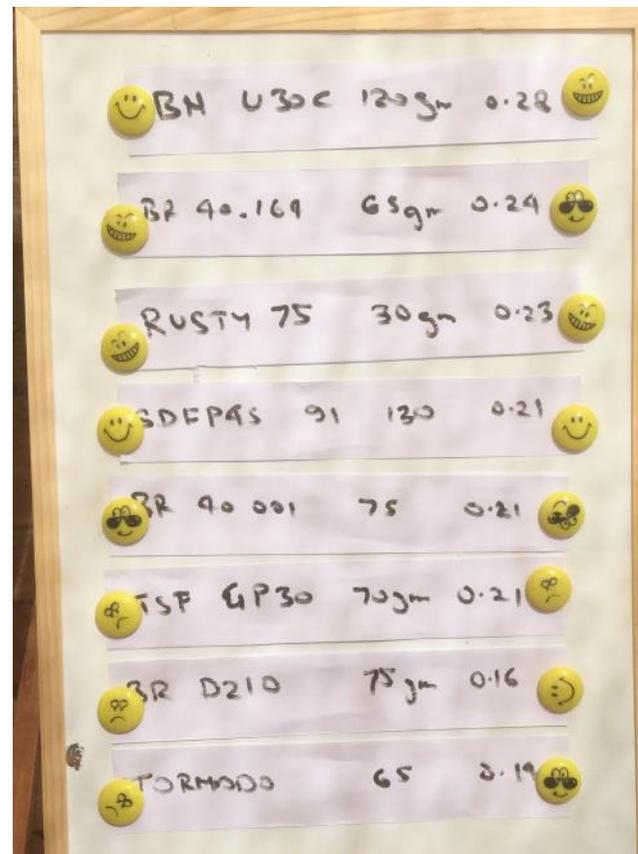
We've put some more thought into our upcoming locomotive performance competition. The contest is open to all two rail 16.5 mm gauge models up to 500 mm long. This means HO scale models will be pitted against OO, Sn3.5 and On30 models. The extra size of these models provides more space for ballast and hence potentially gives these models a higher tractive effort. This could unfairly advantage OO scale and narrow gauge models over HO scale standard gauge.

With this in mind we've revised the judging criteria to give every 16.5 mm gauge model an even chance. The winner will be the model with the highest tractive effort to overall weight (including tender in the case of steam locomotives). In the case of a tie, the model with the higher tractive effort will be declared the winner.

To eliminate any unfair practices, models' driving wheels will be inspected prior to test runs. Models with gunge build up on the driving wheels will need to have the wheels cleaned prior to their test run.

We've trialled a score board allowing us to adjust the rankings of the performance of contestants models as the competition proceeds. (If it looks familiar to one used by a certain testosterone fuelled BBC TV show you're on the money.) The model performances shown are from previous trials held by Division Four. The rankings shown in the photo are using the new judging criteria.

It is worth noting while "Tornado" has the lowest ranked performance on a tractive effort to overall weight basis, it has pulled a fourteen coach passenger train up a two percent gradient while negotiating 1,200 mm radius curves.



Division Six Highlights

January 2017 meeting

It was a big day for Division 6 on Saturday 14th January. At 12.30 p.m. the Convention Committee met before the 2.00 p.m. meeting at Jane and Michael Robinson's place at Flagstaff Hill. The planning for the Convention is well under way for September.



Division Six January meeting

Manager gave a short report on those members proceeding through upcoming Certificate assessments.

Max presented Ray Brownbill with the 2016 Hopkins Bone award which missed the Christmas function last year; in recognition of Ray's many years of commitment to the NMRA and Division 6 in particular. It's clear that without Ray's support and encouragement, many of us wouldn't have succeeded as we have in the Achievement Program. Ray's award was acclaimed by the members with a healthy round of applause.

After General Business, Show and Tell got under way. Hutch brought a new compact variable regulated power supply device. David Orr showed us a mag-

netic/extendable/flexible neck torch for those hard to get places. Vern Cracknell MMR brought along the latest copy of Narrow Gauge Down Under magazine, in which his layout filled many pages of story and photos. Congratulations, Vern. James Tate had his usual grab bag of items which can be used for other things in modeling – including some soft bristle paint brushes which make excellent reedbeds. Scott Taylor brought a sack of goodies, including his scratch built coaling tower and his excellent two axle SAR van, which is close to completion. David Orr made a return appearance with some Bachmann locos he'd secured at bargain basement prices from the Closeouts site on www.trainworld.com.

Ray Brownbill produced our new digital projector and laptop computer, and encouraged members to prepare some productions of their layouts or some clinics. The projector also has a camera which can be set up to show close up shots of members making things in clinics.

Jane had hot cross buns, coffee, tea etc, and other tasty morsels ready for us and then we repaired to Michael's train room (AKA the Taj Mahrail), to see his excellent progress.



Max presenting Ray with the Hopkins Bone award



Ray displaying the new digital projector



Operations on the Taj Mahrail

Division Six February meeting

We gathered at midday at the Yum Sing Chinese restaurant in Old Reynella, for lunch. The food was great! During the meal we covered: a report from the SIG Coordinator Ray Applebee, describing repairs to the layout to make good damage which flows inevitably from exhibitions. Ray Brownbill reported on the AP. He's still waiting for some Certificates and a couple of members have inspections pending. General business included a report from Ray B on a DVD set called Railroads Australia, which documents track building and infrastructure. We agreed to purchase one for our library. In show and tell, John Marsh produced photos on his 'phone of his on-going layout construction. We passed the 'phone around; and a couple of members made urgent calls to the US as well. A Convention Committee meeting followed. Progress on the planning and advertising of the convention was reported on.

At 2.00 p.m. we adjourned across the road to the Noarlunga Model Railroad Club for an interesting visit and fellowship.



Division Six's February repast



Some views of the Noarlunga club layout





Photo courtesy Gavin Thrum

**Torrens Valley Christian School
1227 Grand Junction Road
HOPE VALLEY 5090**

Convener: John Prattis
email: convention@nmra.org.au

- Operating Sessions
- Clinics
- Bring/Buy Sellers
- Model Contest
- Photo Contest
- Partners Day Tour
- Layout Tours
- 3 Course Dinner Saturday night
- Guest speaker

<http://www.nmra.org.au/Convention2017/convention17.html>

Convention Registration Fee	\$80.00
Members	\$75.00
Non-members early registration to 20.08.17	\$70.00
Members - early registration until 20.08.17	\$65.00
Family member (each)	\$10.00
Operating Sessions (39 positions)	\$3.00
3 Course dinner (excluding drinks)	\$30.00



Photo courtesy of Ken House

Coming Events



MODEL RAILWAY BUY/SELL & DISPLAY

18th MARCH

Model Railway Museum & Display Building
Toowoomba Showgrounds

Sellers: \$20 per Table-\$10 Half Table

Sellers set-up 8am till 10am

Buyers 10am till 1pm

BBQ Sausage Sizzle,

Tea/Coffee/Cold Drinks available

For information

Email: info-ddmrc@ddmrc.com.au

Model Railway Discussion Group

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

Division Four's 2017

Model Locomotive

Performance Contest

The contest will take place at the 2017 AMRA WA Branch's Perth Model Train Exhibition. on the 3rd, 4th and 5th of June 2017.

Entry to the contest will be free to modellers attending the exhibition.

The contest is open all 16.5 mm gauge models up to 500 mm long. .

There will be a prize for the best performing model and prizes for the best models entered by junior (under twelve) modellers. The prizes will be presented at the June 2017 Division Four meeting.

The 2017 Model
Railway Exhibition
June Long Weekend.
June 3, 4 and 5.

Where: Claremont Show-
grounds Exhibition Centre

Opening Times: Saturday and Sunday - 0900-1630,
Monday - 0900-1600



Division Four



**AUSTRALIAN MODEL RAILWAY
ASSOCIATION WA BRANCH (INC)**



Coming Conventions

15th N Scale Convention

7th – 10th September 2017

Modelling Competition

Locomotive	Kit built or Modified kit
Locomotive	RTR Modified
Locomotive	Scratch built
Rolling Stock	RTR / Kit Modified
Rolling Stock	Scratch built
Structure / Non-rail Vehicle	Scratch built
Structure / Non-rail Vehicle	Kit Built or Modified Kit
Diorama	A4 size

T-Track Module

Entry Forms for the Modelling Competition will be available through the web site early 2017.

T-Trak meet

We are holding a T-Trak meet at the Convention, so if you want to bring along a module to fit into a layout you are quite welcome to do so. It can be a single, double, triple, or even a corner.

All T-Track modules must comply with the T-Trak guide lines – available at <http://t-trak.nscale.org.au/>



This 13th edition of the Australian Narrow Gauge Convention is being hosted in Geelong, Victoria (approximately 1 hour south-west of Melbourne). This is a registration only event, offering clinics, workshops, prototype presentations, layouts and modelling displays, trader stands, modelling and photography contests, and preservation railway tours. We look forward to seeing you there!

April 14th-16th, 2017

So far, a broad variety of subjects is being organised to be part of the schedule for the 13th Australian Narrow Gauge Convention. With a range of presentations on prototype narrow gauge railway operations from Australia and around the world, plus a variety of modelling topics, such as casting, weathering, 3D printing, model construction, scenery methods, DCC and electronics, and model photography, there will no doubt be subjects of interest on offer for all who attend.

CONTEST CATEGORIES

1. - **Locomotives - Steam**
2. - **Locomotives - Traction & Diesel**
3. - **Rolling Stock - Passenger Cars, including Cabooses**
4. - **Rolling Stock - Freight Cars, including M.O.W. Cars**
5. - **Structure**
6. - **Diorama**
7. - **Model Photograph**
8. - **Prototype Photograph**
9. - **Best in Show**

Prototype Observations

3026 approaching the Lake Road level crossing on its way to Ladysmith.

A sample scene for Rob Nesbit's proposed layout

based on the Tumbarumba branch line. (Photo: Rob Nesbitt)



Would this track work gain a merit certificate in the Model Railroad Civil Engineer Achievement Program Award ?

