

7th Heaven

Journal of the Aus7 Modellers Group Inc.
No 58

\$7.70 inc GST
Winter 2018

The Impossible Layout - Part 4
The Road Bridge at Gemalla
Another American 38
DCC Beyond Locomotive Decoders
Making 3827 Go
Albury Loco - A Work in Progress - Part 5

Aus7
Modellers Group Inc.

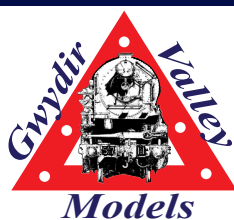
Gwydir Valley Models

EasyDCC The Easiest to use DCC system
Now with Zonemaster 7 Amp Boosters

FAST TRACKS Easy to build Turnouts

O Scale 7mm
sleepers &
point stock

Tsunami2 Digital Sound Decoders
WOW sound from TCS
DCC Accessories
Blackstone HOn3 Models
Hold & Fold Etch Tools
Irdot Infrared Detectors
Centreline Rail Cleaners
Micro-engineering HOn3 Track
Rail, Joiners & Points
Kadee Couplers



Ph: 02 6732 5711
PO Box 740 • Glen Innes
NSW • 2370
www.gwydirvalleymodels.com

Tsunami²

Game Changer

Soundtraxx continues their legacy of innovative products with Tsunami2, a brand new line of digital sound decoders that have more sounds, smoother operation and some completely new ways to do more with your trains. The word is "operation" with three braking methods, the best ever Dynamic Digital Exhaust for both Steam and Diesel versions, and oodles (yes oodles) of amazing new sounds and effects. The first Functional Brake, Equalizer – and a whole lot more. Soundtraxx has been leading the way in sound for your railway for over 25 years.

From
SOUNDTRAXX

Tsunami2 Features

- 32-Bit processor capable of 16 simultaneous sound channels
- Flex-Map technology allows mapping any function to any function key
- Hyperdrive2 motor control
- Adjustable Reverb
- Built in Equalizer
- 20+ Different Lighting Effects
- Steam Diesel and Electric versions with multiple selections in each decoder
- Over 60 whistles, over 40 horns, multiple prime movers, chuffs, bells and more.

Think you've heard it all?
Visit our
website
today.



CONTENTS

- 4 The Impossible Layout - Part 4
- 8 The Road Bridge at Gemalla
- 10 Another American 38
- 11 DCC Beyond Locomotive Decoders
- 15 Making 3827 Go
- 16 Albury Loco - A Work in Progress - Part 5
- 18 Commercial News

Saturday October 20, 2018



NORTH SYDNEY LEAGUES CLUB - NORTHS
12 Abbot Street Cammeray
9.00 am to 4.00 pm—Doors open 8.30 am

Featuring all the specialist O scale traders.
Guest speakers will include Jim Longworth, Trevor Hodges, Paul Chisholm and John Parker who will focus our emphasis on everything O Scale.

Topics will include:
Fences on the NSWGR
Track Laying Options in O Scale
Becoming Narrow Minded
What's New?

Aus7 AGM
Annual Silent Auction
\$30 including tea/coffee
Lunch available in club bistro

All are welcome - Come and share the progress on your latest project.



Straight Down the Line - Opinion

by Paul Chisholm

Seeing not just Looking

Whenever I travel away from home for an extended period, especially if overseas, a curious thing happens when I return. Familiar places take on a fresh identity; almost as if I am seeing them for the first time. Things that I would previously go past daily without paying any real attention to seem to take on a new presence and fresh detail springs out. I would describe this as "seeing rather than just looking" and some recent activity has made me think about this in relation to our modelling efforts.

The recent Epping Model Railway Club Exhibition at Rose Hill Gardens gave me the opportunity to take some new video of Arakoola to update the YouTube clips currently available as these are now a few years old and there have been quite a few subtle changes to the layout and the addition of lots of new locomotives and rolling stock. If you haven't seen it already this can be found at <https://www.youtube.com/watch?v=nz657V9UoXg>

After editing and viewing prior to uploading I was surprised to notice some features of the layout and the locos and rolling stock that countless hours of familiarity were causing to blend in to my subconscious impression of the layout. Then for some reason I turned the sound off and without that distraction the effect was even greater. The result was twofold. Firstly it made me appreciate how good the layout is. Yes, I am biased. But it also gave me some fresh ideas for improvement. Nothing dramatic but just a few enhancements that had never occurred to me before. Because the camera was getting in closer than normal viewing distance and it was focussing on a small section rather than the layout as a whole it was bit like that returning home after a trip effect.

Building on this I went back through my still photo files which go right back to the initial construction phase of the layout and when viewed at full screen and with a little time spent seeing rather than looking the same effect was apparent. Things that had been overlooked for years became noticeable such as a missing handrail here or there, a part that was crooked, an unsightly gap, a figure, tree or telegraph pole leaning at a drunken angle, vehicles without a driver and a locomotive manned by an invisible crew. Even if you don't use this exercise as a tool for improvement it can be very entertaining and give you a new appreciation of how good your models or layout already are.

This has all been made possible by digital photography and video and the ability to enlarge on the screen and really get down into the scene, almost as if you were there. But if you really want to take this a step further there are mini cameras available that can be mounted on a flat car and propelled around the layout by a locomotive to give a drivers eye view of things. This is where you really pick up on the standard of track and the realism or otherwise of buildings and scenery encountered along the way. I did this on one of the earlier videos of Arakoola and it is still up there on YouTube at <https://www.youtube.com/watch?v=uFLdcJ0-1Aw> even though it is not exactly high def.

Why not spend some time doing this sort of photographic evaluation of your work and be really elated at the standard you have already achieved or find a few tweaks that can only enhance what is already great? Remember to see, not just look!

Happy Modelling

Paul

Aus7 Modellers Group Inc
P.O. Box 3404 Asquith NSW 2077
<https://aus7.org/>

President
Trevor Hodges

trevorchodges@gmail.com

Secretary
Chris Lord

chrislord4401@yahoo.com.au

Treasurer
Anthony Furniss

anthonyfurniss@rocketmail.com

Vice President
John Parker

johnrbp@tpg.com.au

7th Heaven Editor
Paul Chisholm

paulchisholm1948@gmail.com

Advertisements
Full Page: \$125 Half Page: \$65
Quarter Page: \$32 Eighth: \$15

Please contact the Secretary or Editor for any advertising enquiries.

All advertisements must comply with the Trades Practices Act.

Back Issues
Please contact the Treasurer to obtain back issues.

Issues 1-33 sold out.
Issues 15+ are \$7.70 each
\$1.50 p&h for one or two copies.
\$2.50 p&h for three or more copies.

All opinions expressed are those of the respective authors only and do not represent any official view of the Aus7 Modellers Group Inc.

On The Cover
Freshly outshopped CPH 28 is about to take on fuel for a run to Wagga as the afternoon school train. A scene from John Reid's Albury diorama. More on how this is progressing in this issue.

Windows and Wiring

Who said men can't multi-task? My kit built Anet A8 3D printer can happily print away whilst I focus on other things. Printing the 700 or so windows occurred in the background whilst the initial wiring and track fixing got underway commencing with module 1.

John R B Parker

The 'Impossible' Layout Part 4

At the time of photographing this rather unusual perspective view the layout had progressed to the point that it was possible to place all the basic elements together ensuring the overall viability of the concept. Much of course still needs to be done; the sixth and final turnout had not at this stage been completed. Nothing is yet finally secured as all the track is still temporarily held in place with pins. Provided there are no operational problems these should be the final track positions.

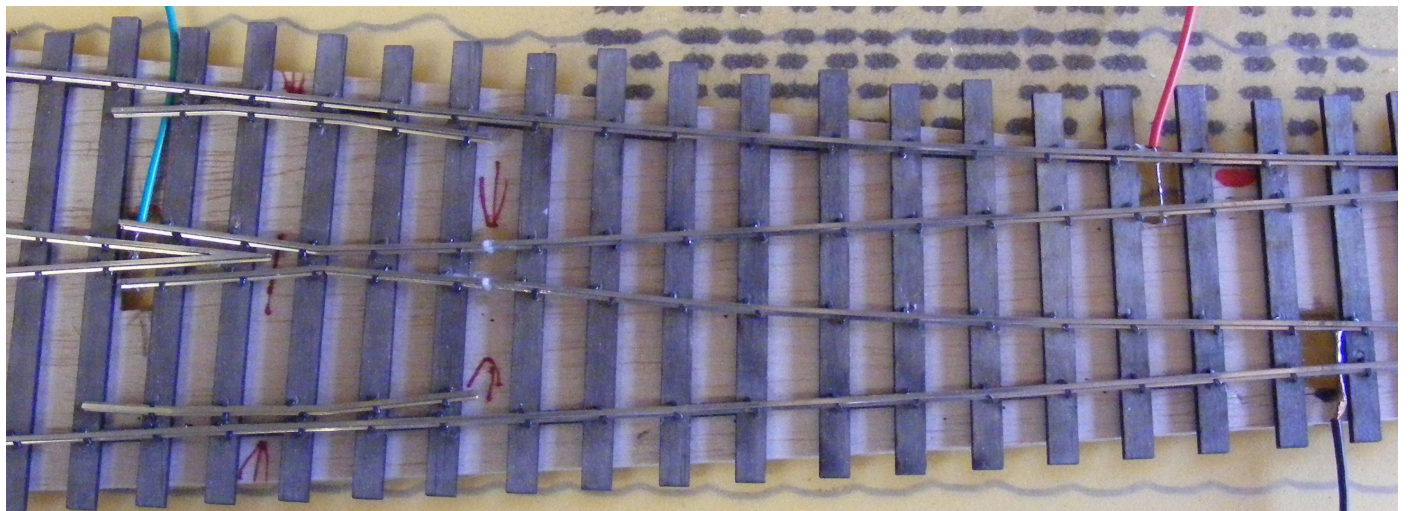
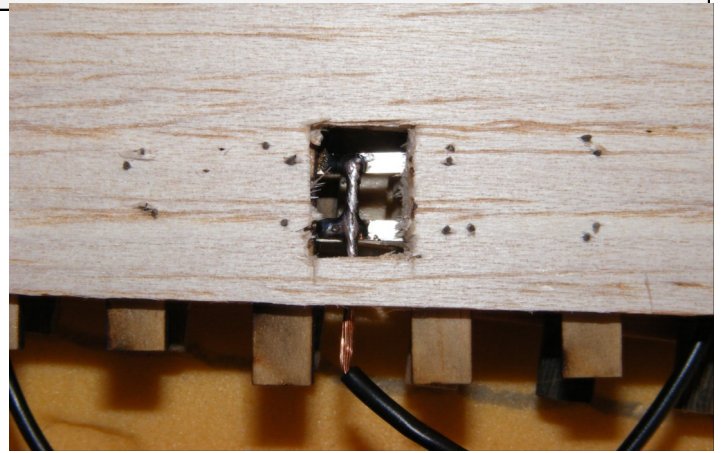
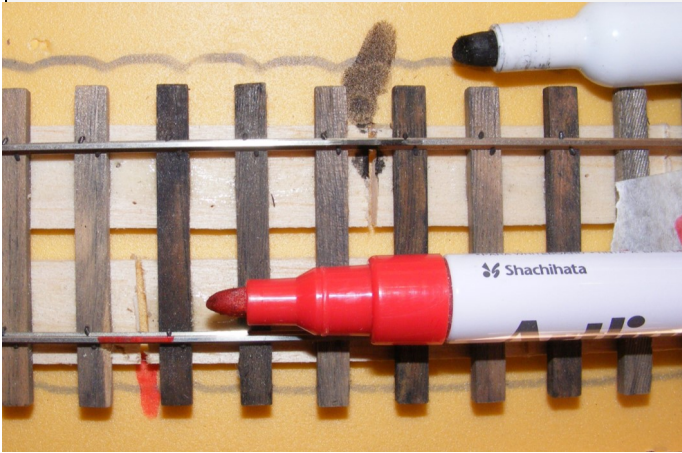
I mentioned in Part 3 of this series that I was unwilling to accept the challenge of building a double slip. The beautifully designed Peco double slip¹ which will be used instead can be seen here. For convenience I used a couple of lengths of Peco code 125 track that I had at hand, to provide the connections to the double slip at the "Central" end of the layout. The "Harbour" end conveniently finishes at the junction of modules 1 and 2 thus reducing any problems that might otherwise occur when connecting the code 125 rails to the code 100 used for all the hand laid rail and turnouts. The difference in appearance between the Peco and hand laid track will ultimately be disguised by the ash and gravel ballast that covered all of the goods yard.



One of the main advantages of building a modular layout is that it is possible to work on individual modules on the work bench. Having now satisfied at least myself that this "Impossible Layout" is in fact possible, track installation has commenced on module 1. Experience

gained from the construction of earlier layouts has convinced me of the importance of ensuring that each individual section of rail is connected directly to the main DCC bus. A simple way of achieving this end result is gained by first laying out the sections of rail and turnouts in their desired final location.

Red, black and green, (or some other colour) markers are used to mark both the foam road bed and the rail in each of the wire dropper locations. (Red and black for the two rail DCC bus, the third colour is used to identify the turnout's frog and switched rails.)

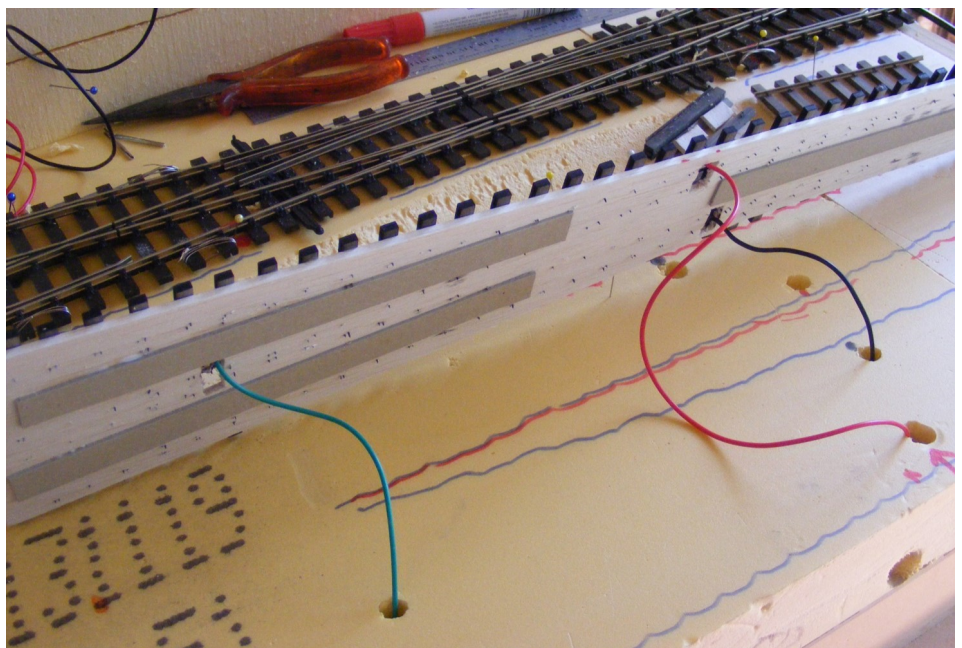


The rail sections and turnouts were then removed from the layout. After inverting each section the coloured dropper wires were soldered to the underside of the rail. It is a very simple task to drill clearance holes in the foam roadbed for the dropper wires as well as the clearance hole for the turnout actuator. Short sections of cardboard were first glued to the underside of the turnouts to compensate for the 0.5mm difference in thickness between the sleepers and the laser cut turnout sleeper bases. The wires were then fed into the holes and the turnouts and rail sections fixed into place. No attempt was made to terminate the other end of the droppers at this time.

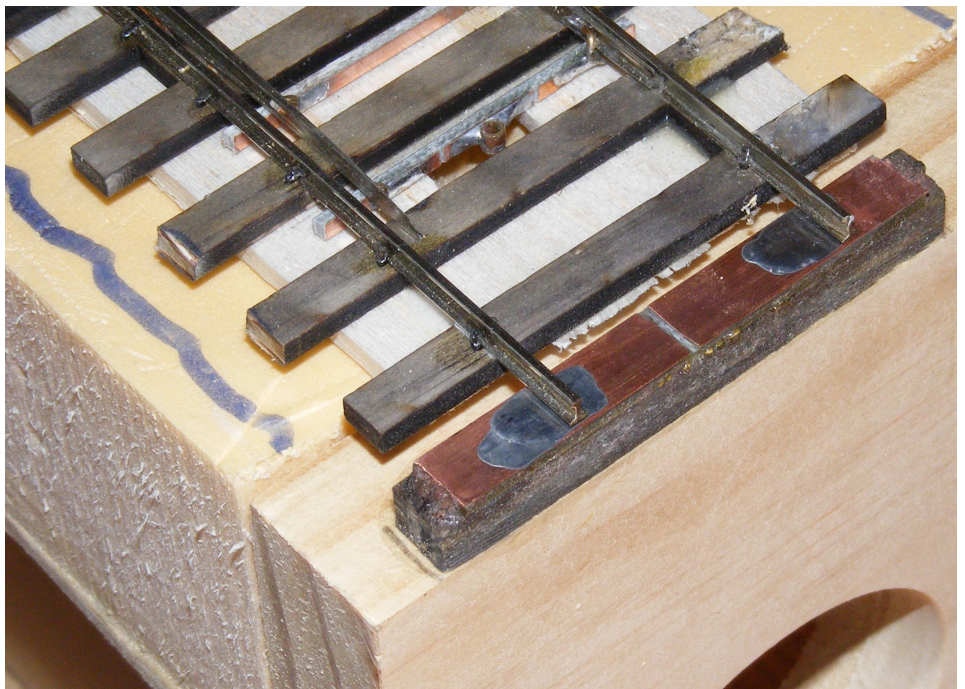
For most layouts it would be necessary to install some form of foam or cork underlay underneath the track to represent the prototype's road bed. This was not required on this layout as the entire area will be covered in an ash and fine metal bal-

last replicating the original location. After temporarily securing in place with dressmaker pins the track sections were finally fixed in place with small applications of the same acrylic

construction glue as used previously. Very little is required as the track will be ultimately be held securely in place by the ballast.



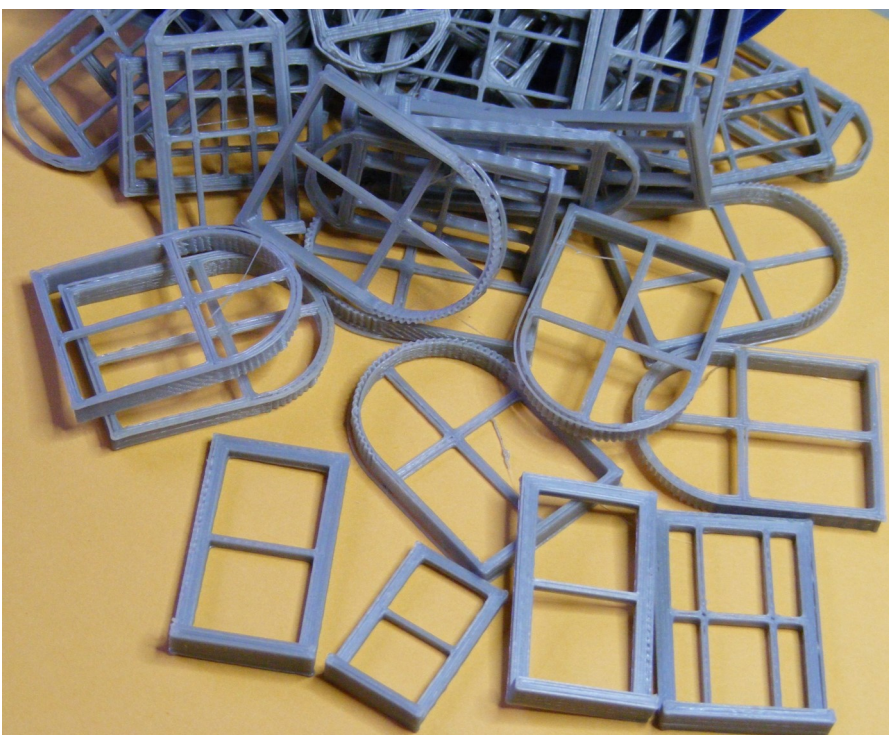
The method used to ensure that the rails are securely held in place across the adjacent modules can be seen in the adjacent photograph. Two of the standard sleepers were turned on their edge and then glued back to back. A sleeper sized piece of printed circuit board material was affixed to the top. Gluing this assembly to the timber end of the module provided the correct height for the bottom of the rails which will be soldered in place to the pre-tinned PCB. A narrow slot cut through the copper layer ensures that the rails remain insulated from one another.



In part 2 of this series there was a brief description of the Anet A8 3D printer which I purchased in kit form. On page 5 of 7th Heaven Issue #56 there was a description on how the printer was used to produce a number of 'Z' shaped brackets which were used to stiffen the backdrops. The closing words on that page read, "... I think this 3D printer is going to be a very useful tool." Well that certainly proved to be a prophetic statement as I now realise that this project might not have been possible without it. The single biggest reason: windows, and lots of them. The 3 significant buildings, there was a glimpse of one of them in part 3, 7th Heaven Issue #57, require 10 different windows totaling a little over 500, just for the front walls, the only part that will be visible. Working in the background whilst I have been building turnouts and laying track the printer has produced in total around 700 win-

dows, unfortunately about 200 were unusable because I made an error in the dimensions, but we won't expand on that!

3D printing is not the solution to all our problems, but there is no doubt in my mind that this inexpensive printer was a worthwhile investment. None of the windows I needed were available commercially and it really was an enjoyable exercise to design and then print these very simple windows. They are not exact replicas of any windows but I believe they are more than adequate when you consider that they will become part of the background with the closest possible viewing distance being about 450 mm. The single window shown here is ap-

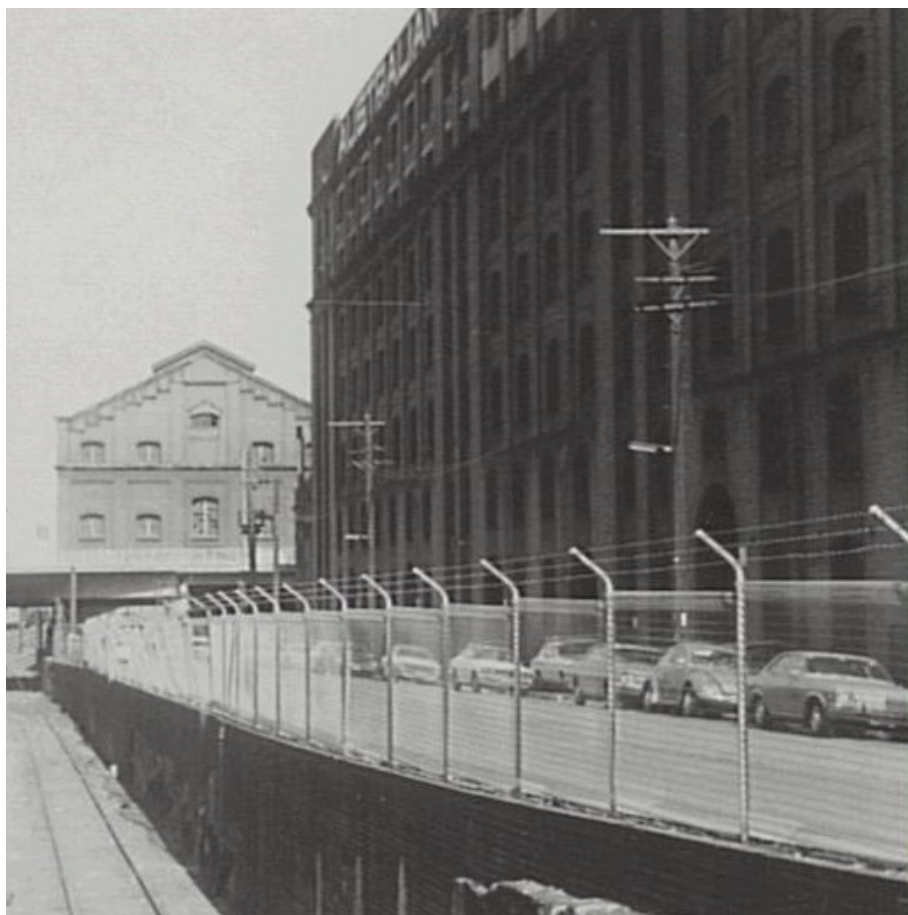


proximately twice the actual size. It is possible that this comment will offend some but I think in this case "near enough is good enough." Any other option would have been prohibitively expensive.

With all of "ground" level track now in place on the three modules it would be possible to commence the under layout wiring. However as the point motors are not yet available it made more sense to turn my attention to the scenic requirements at the rear of the layout. 3 mm MDF was used for the three significant backdrop buildings; a good friend being kind enough to assist by laser cutting of all the window openings. A number of narrow strips were also cut from the same material. These were then glued to the façade to provide all the additional detail.

During an internet search I stumbled on what many would probably describe as a fairly ordinary photograph. However from my perspective this was a most useful piece of information. This view clearly shows that the goods area being modelled was below the adjacent street. The building is the Australian Mercantile Land & Finance Co, Ltd, premises and the William Henry Street bridge in the background will be used as the view block at the left hand end of the layout. Other photographs have helped confirm that the retaining wall was constructed from dark red bricks topped with a "cyclone wire" fence about 8 feet high. The wall is easy enough to model but the fence might be a little more challenging.

The forced perspective that is being applied to this layout puts the retaining wall much closer to the low relief building than is shown here. It is formed from the same foam as the rest of the construction and faced with printed brick paper. It would have been possible to have used a commercial self-adhesive brick paper but all the examples I have seen had texture and detail more suited to being the focal point rather than the desire of having the wall blend into the background. An online search found Paper Brick² a U.K. based small business which provides the opportunity of selecting from an extensive range of brick patterns which can be printed after selecting the desired scale and colour of both bricks and mortar. I chose to print on Matte photo paper which, as it is thicker than normal A4 paper is slightly stiffer, more like a light card. Spray on glue was used to adhere it to the sanded smooth foam base. The top of the wall was capped with a coping cut from the same 2.5 mm balsa that was used during track



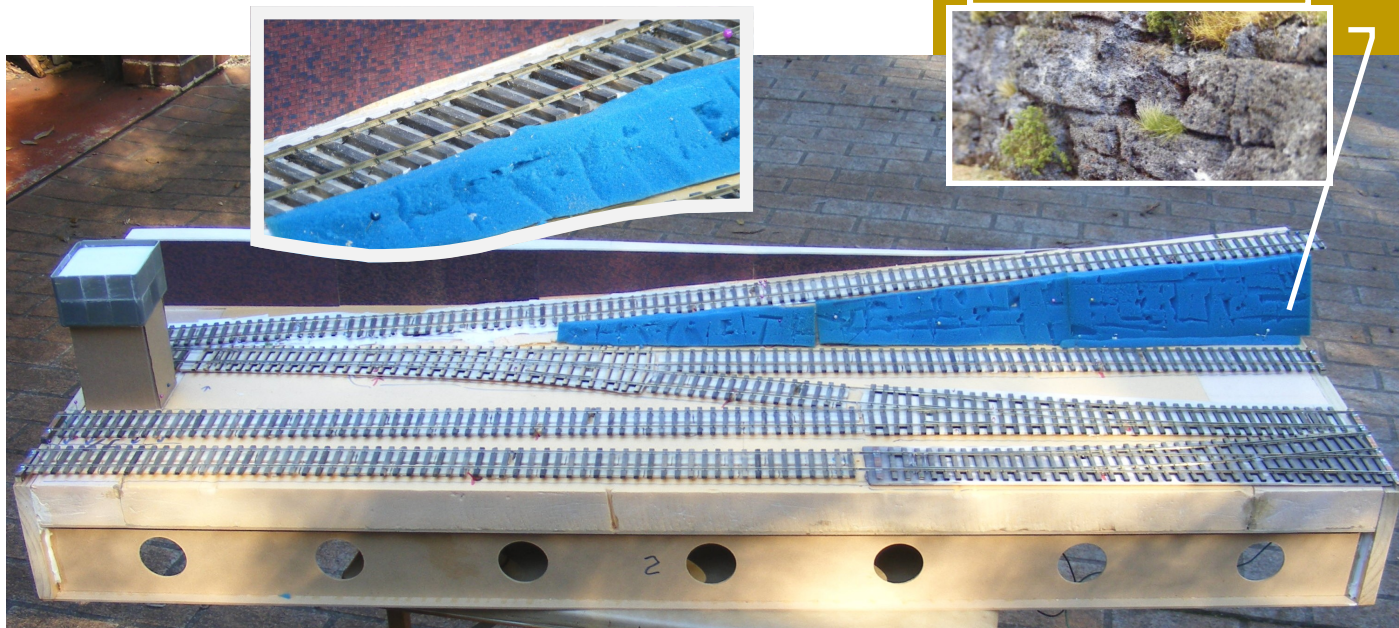
construction. This will later be painted to represent weathered concrete. Also on view in the photograph below are the first steps taken in finishing the embankment which is part of the rising grade for the track which will continue to the upper deck of the two level goods shed. The "soft rocks" technique, based on regular Polyurethane soft foam is the favoured method as it was used successfully on Valley Heights. It is also very light and durable unlike plaster which might have been used, more details will follow.

....to be continued.

Additional Items

1. Peco SL-E790BH Double Slip (8 degree angle) Electrofrog
(Various stockists)
2. Paper Brick
Brick paper download
<http://www.paperbrick.co.uk/>

The foam will ultimately look something like this.





Twenty one years ago I constructed an HO model road bridge from some basic measurements and about five photos. Now living in Bathurst and into O scale I realised I could gain more detail reconstructing the same bridge.

The 42' single lane road bridge spans Stony Creek at the quiet locality of Gemalla between Tarana and Bathurst on the NSW main west line and can be seen on the rhs from a train heading west about 100m before passing the 208km peg.

I returned to the bridge in April this year to obtain more detailed measurements and photos. Thankfully I didn't spot any wasp nests or snakes however they could have laid low after spotting me trudging through the bush wearing only t-shirt, shorts and thongs!

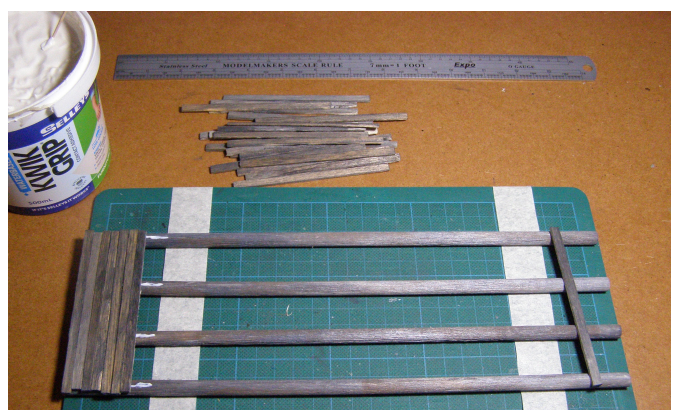
Being a little thrifty, for the timber I used about 40 paddle pop sticks. I grouped half a dozen at a time with flat sides together in a vice and removed the round ends with a razor saw.

Using an 18mm snap off blade knife I sliced each stick in half length ways holding them still with fine wet and dry sandpaper glued to the back of an old steel ruler. This gave a 9"x3" scale decking plank and sheeting for the abutments.

They were then roughed up using a file (or old hacksaw blade) and stained to give an aged weathered look using about 5% black drawing ink 90 to 95% Isocol depending on the shade. Drying time was 2-3 hours. It's best to stain or paint before gluing.

The girders, piles and corbels varied on the prototype between 12" and 14" in diameter and took a lot less roughing up because God forbid it was 8mm balsa rod from Spotlight. I would not normally use balsa but after a few tests found it was ok as long as it was handled gently and given a light rub with fine sandpaper to remove any fuzz prior to staining.

I started with the deck making it 42' long, 14' wide and 8' high to the deck and used Selleys acrylic white glue along the girders, placing the planks a little staggered to give a prototypical appearance. This was then left overnight to dry. If choosing to use nuts/washers on



the deck now is the best time. I used a 2" size, predrilling holes with a pin vice in a rough "straight line". After brushing over with a little red/brown Tamiya XF64 I inserted them into the holes, almost flush into the decking planks, with a very fine drop of Super Glue Gel. For the rest of the bridge 3" nuts/washers were used and some on the viewing side were left proud.

Assembling the abutments was the next stage of the build and I then realised the measurements had to be more exacting – so much for rough. As mentioned previously the same 9"x3" planks were used behind the 12" poles cutting the angles with a razor saw.

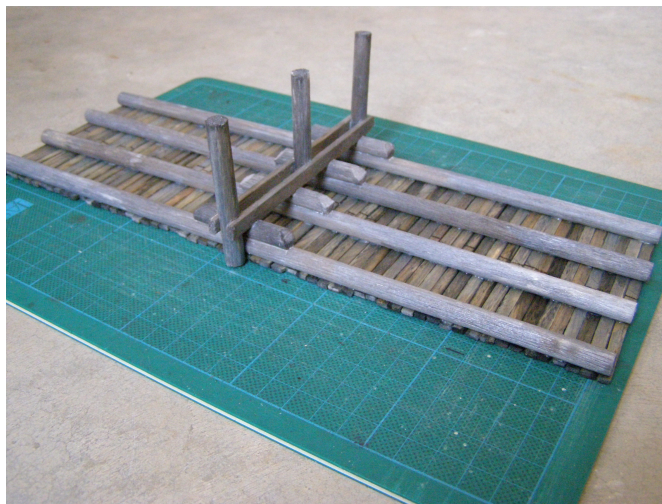
The next step was to glue the white 12" square beams (balsa) either side of the deck and the handrails (purchased Northeastern Scale Lumber), 6"x4" upright posts, 3"x4" mid rail recessed into the posts and 4"x4" top railing also set into a v cut into the top of the posts.

I shaped a piece of foam to fill in behind the abutments to simplify landscaping when positioned on my future layout. I've yet to decide whether the bridge will look better in front of or behind a parallel running rail trestle

but in the meantime it's a great spot to display my earlier conversion of "Dad's Cruiser".

Hopefully my bridge won't have to cope with heavy loads like the one below.

Building the bridge was challenging but still enjoyable especially the field trip to obtain more measurements and photographs.



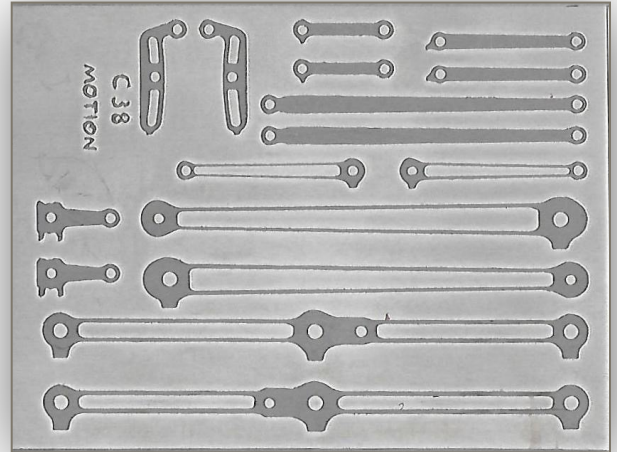
Another American 38

Paul Chisholm

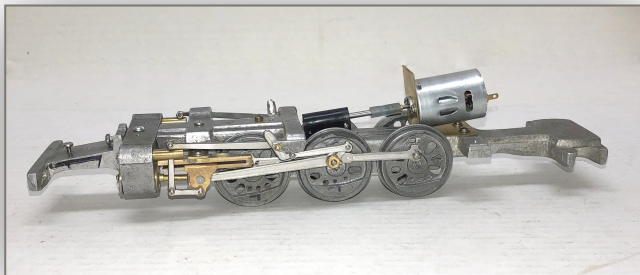
Readers may recall an article in issue 56 about the restoration of an O Gauge House streamlined 38 locomotive by David Argent who lives in South Carolina U.S.A. David also had a non streamlined loco awaiting attention and he has now completed work on this as well. Here is a brief photographic outline of the steps involved. David's latest project is an OGH C36 which I look forward to being able to show you later.



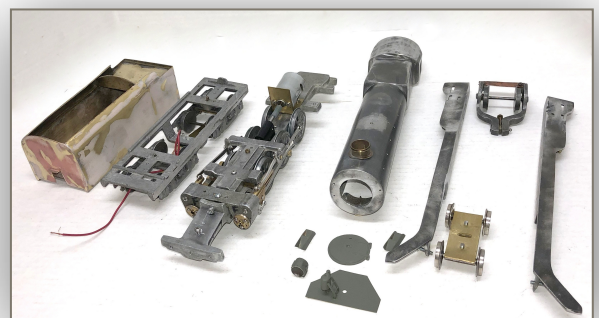
Starting point as purchased on Ebay USA. No motor. No motion pieces. No front truck or pilot wheels etc. etc.



C38 side rods etched in nickel/silver plate. Supplied by Colin Shepherd, via Graham Larmour in Australia



Finished Chassis NWSL Gear box. Mabuchi Motor. The original was tender driven due to large size of available motors.



Restored and remade pieces ready for assembly.

Restored, painted, lined and numbered. Together again a long way from home.



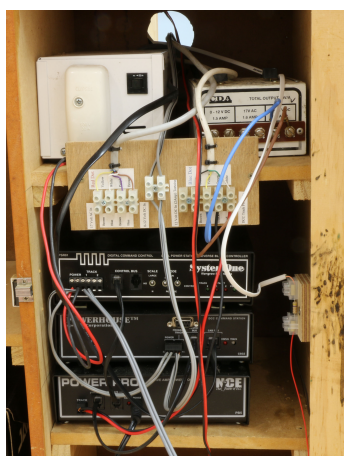
DCC BEYOND LOCOMOTIVE DECODERS

TREVOR HODGES

I purchased my first DCC system around 1994, approximately 24 years ago. As such, having owned a DCC system for this length of time, I'm bound to be an "expert" aren't I? Well think again! I consider my knowledge and ability to get my DCC system to do what I want it to do to be *developing* at best. As someone who has spent the past 20 years or so building layouts that never got much bigger than a few meters long, I can tell you from current experience that building a large layout is not just like building a small layout times six or seven. A whole world of new adventures await the neophyte semi-large layout builder and this applies in spades to DCC when applied to the layout rather than locomotives. I've been installing decoders into locomotives for years and I've actually managed to follow a couple of John Parker's articles and install them in the way he outlines and the results have been excellent. However installing decoders into locomotives does not begin to scratch the surface of what is possible with DCC and this experience did little to prepare me for the realm of stationary decoders and the other gizmos that lurk beneath the 12mm plywood that forms the sub-roadbed of my new layout.

When I suggested to our esteemed editor a couple of topics I might write about for an upcoming issue of 7th Heaven he said that he thought "a lot of us" would benefit from a little more knowledge about what can be achieved with DCC on a layout. This article isn't going to give you a comprehensive understanding of all the options available in terms of stationary decoders and other electronic devices, far from it. I know very little about how these devices work and have only a passing interest in such matters anyway. In addition I only use the products of one or two companies therefore this examination could hardly be described as "wide ranging". What I'm aiming to do is pass on to the reader a short tour of some of the devices that I've employed in building Morpeth and how these have helped me get the trains running in a (relatively) trouble free manner. I'm also going to aim to do this in plain English, as far as is possible, so there will be no discussions of data packets, sine waves or rice bubbles (I put that last one in to see if you were paying attention). As with many others in this scale my standby in matters DCC tends to be John Parker. When I strike a problem I send him an email and unfailingly I find him helpful and patient. However I will admit that while there are few things that really frighten me when John starts a sentence with "now Trevor this is really quite simple" I get a sinking feeling in the pit of my stomach and a shiver up my spine. I'm going to try to avoid giving you that feeling so I hope you find this helpful.

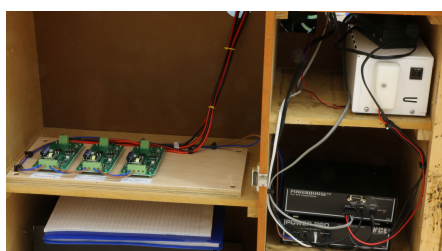
Photo 1



I included this photo to demonstrate where I started this journey and the way things looked when I first set up my two small, portable layouts (Queens Wharf and Morpeth) in the new layout room. I'd had my DCC system stored in a plastic and aluminium toolbox for something like 10 years. The toolbox contained two power packs, the DCC system and a couple of leads that plugged into sockets under Morpeth (the portable Morpeth, not the new, permanent one I'm currently building). I carried this toolbox around with the layout and when the time came for a show I'd plug the leads in and the layout would be ready for trains. Once the opportunity to build a large, permanent layout presented itself I basically moved everything from the toolbox into a cupboard. The small piece of wood in the middle of the photo, the one with the wires leading to it, has labels on it that applied to Morpeth but were no longer of much use on the new, much expanded layout. This small piece of MDF which acted as a kind of distribution board for the DCC system "floated" in the toolbox. The cupboard you can see in the photo had been built for the express purpose of housing my control system and used to sit under my last HO layout Trundlemore quite a while before this layout had to be dismantled and everything ended up in the toolbox. However the layout I'm currently building is something like 6 or 7 times larger than the portable Morpeth, even with little

Queens Wharf thrown into the mix, and its requirements are orders of magnitude beyond those of my portable layouts. It wasn't just the labels on that piece of MDF that were redundant. Setting things up like this worked for approximately six months but I very quickly found that the mess of these arrangements was causing me a lot of problems. Something had to change.

Photo 2



This is how things stand at the time of writing. As you can see, the wiring is a good deal neater than the previous photo and one of the DCC boxes now resides on the other side of the aisle, underneath the section of the layout it provides power to. Aside from the neater, simpler wiring I've made a habit of keeping track of what's what by applying paper labels I print using my PC. You can see some of these in front of the three circuit boards on the left. Those printed labels on that small square of MDF was probably the most important lesson I carried over from the building of Morpeth and has already

helped me to keep track of things and saved me time allowing me to avoid having to track back on the wiring I've already installed with an electronic test meter. Taking the time to keep things relatively neat and applying some sort of colour coding to the wiring has also helped a lot. Labelling things clearly (not just scrawling some hieroglyphics under the layout with a black felt tip marker pen) might seem an obvious step to take but aside from my small square of MDF on the previous Morpeth this is the first time I've bothered to label things under a layout in 35 years of building layouts. I find I need to do this as I wire the layout up. In spite of saying to myself on numerous occasions that I'll "get around to it" later, it's never happened in the past.

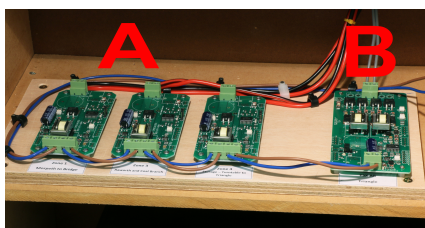
Photo 3



My layout room is located in a hot part of the world, and with all the lights on and the layout running it gets even hotter. After getting the messy wiring sorted in the cupboard that houses the DCC system I noticed that there was a significant amount of heat being generated in that small space and felt it would be advisable to address this. While strolling around a Jaycar outlet I noticed that a small DC powered cooling fan intended for use with computers could be had for approximately \$25. I purchased one, cut a hole in the back of the cupboard and screwed the fan into position. I will eventually hook it up permanently to its own dedicated power supply, but for now it runs off the outlets of the DCC system's power-pack. And if you're wondering, these fans are intended to be installed so that the air flow is travelling in the opposite direction to the components creating the heat. So the fan isn't blowing air into the cupboard but drawing hot air out. Cooler air is drawn into the space through the gaps around the cupboard door and the holes I've drilled in the back. As these little fans are supplied with no instructions

I wasn't sure which way to mount the fan so I Googled it and discovered that drawing air out is the way they're meant to be mounted. Evidently if you have two fans one should be mounted so it draws air out of the hot space with the other blowing in, however they need to be mounted far enough apart so that they don't just circulate the same hot air.

Photo 4



Now we come to the area that demonstrates the greatest development between my small layouts and this new, much larger one. If you've ever run a train on a DCC controlled layout you'll probably have experienced someone running a loco onto the frog of a turnout and the whole system shutting down. I have a feeling that I experienced this for the first time in 1994, about 15 minutes after I hooked up my first DCC system and tried to run a train. This particular peccadillo of DCC systems is well known and has been addressed in a number of ways, not the least of these

being the installation of small light bulbs in between the DCC system and the track to give overload protection from this type of short and an indication of where on the layout the short might be occurring if it has been broken into zones. I purchased a switch (sometime around 1996) to overcome this problem on Trundlemore (more on this in the text for photo 5) but things have moved on since then by the introduction of integrated circuits that do the same job in a highly flexible and sophisticated way.

What you can see in the photo (labelled A) is a line of three circuits (these happen to be DCC Specialities PSX units but there are any number of similar units available from other manufacturers) that protect both the DCC system from short circuits and the locomotive decoders inside the loco by cutting power to the section of the layout where the short circuit is happening. The first thing I did was to make decisions about how I was going to break the layout into zones (hence the labels having the designation Zones 1, 3 & 4) and ran the power from the DCC system to each of these zones but first of all routing the power through these PSX units. The power then heads out to the far corners of the layout from these with each zone having its own dedicated PSX unit. I have four zones on Morpeth and these approximately correspond to the three stations on the layout (plus their surrounding approach tracks) and the storage sidings. The four zones are electrically isolated from each other by insulated rail joiners. When the PSX unit detects a short (say from an operator running a loco onto the frog of a turnout) it automatically cuts power to its zone and will try to reconnect every two seconds till the problem is solved (eg by the operator realizing he's been a dill and pushes the loco back off the frog). What is achieved by this arrangement is that by breaking the layout into zones power is only cut to the single zone where the short circuit occurs with the rest of the layout (ie the other three zones) remaining unaffected. You can be a goose in Raworth yard (a station on my layout) by running a train onto the frog of a point and I will remain blissfully unaware of what you're up to as I shunt wagons at Queens Wharf.

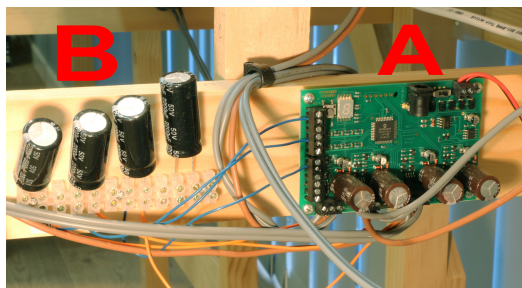
The larger circuit on the right (labelled B in the photo) is a PSX AR. This unit has a similar role to the PSX units (namely detecting short circuits) however it has one extra function. Its role is to supply power to specific areas of the layout where short circuits are an inevitable part of the design of the track plan such as on turntables, triangles and return loops. When it detects a short on this part of the layout it quickly switches the polarity of the power to the rails under the locomotive. It does this so fast that you aren't even aware that it's happened. It's absolute magic! I have two turntables and one triangle on Morpeth so I need two more of these units which will eventually be installed on a second level over the top of these circuits.

Photo 5



As mentioned in the text for the previous photo, way back in 1996 I purchased a switch that essentially did the same job as the PSX units that now sit in the cupboard under my layout to detect short circuits and cut the power to the part of the layout that this occurs in. This switch was called a Power Shield, produced by Tony's Train Exchange in the US, and is designed to be spliced into one side of the track bus wires running between a layout's track and the DCC system. I purchased my Power Shield by writing a letter to the US (1996 being well before you could buy things online) after seeing a review of it in *Railroad Modeler* and installed it on Trundlemore. After that layout was pulled down the Power Shield sat in a box of bits and bobs for about 20 years but as I started to construct Morpeth I wondered if it still worked, so I tracked it down and installed it under Queens Wharf as the short circuit protection for that part of the layout (QW is designated as Zone 2). The photo shows it hooked up temporarily to the benchwork under Queens Wharf. When I get around to installing the fascia on the layout I'll mount it permanently on the layout. The Power Shield looks very old school but it worked perfectly the first time I tested it and it makes a nice loud "clunk" when there's a short circuit as the switch clicks down and cuts the power off to the track. When it shuts the power off the operator needs to clear the short, walk over to the switch and flick it back on. Simple, effective and somehow very logical to my mind but unfortunately they're no longer available. The fact that it sat unused in a box for almost 20 years and still works as well as the day it arrived in the mail speaks volumes about the quality of the component and besides using it allowed me to avoid the cost of buying a 4th PSX unit.

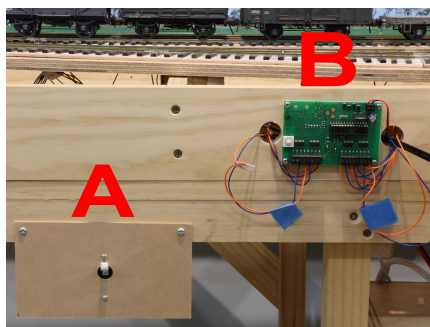
Photo 6



This photo shows one of the three QSnaps installed on the layout which I use to throw my Peco turnouts and their associated solenoid point motors. QSnaps are an NCE product and again, there are quite a few alternative products available that do the same job. This unit (labelled A in the photo) is a stationary decoder (namely one that is mounted under the layout rather than inside a locomotive) which allows an operator to call up a number on their hand controller (throttle) and throw the turnout which has been programmed with that number. Which number is applied to which turnout is up to the layout owner because you program this into the decoder by punching the buttons on the QSnap. Programming these decoders is simplicity itself, and believe me I don't say that lightly. The QSnap allows up to four turnouts to be controlled from the one circuit (hence the Q, which

stands for quad). A unit also from NCE called a Snapit is designed to throw a single solenoid point motor and costs a good deal less than a QSnap. The Snapit and the QSnap both come with capacitors that store a charge and release it all very quickly, thus giving the solenoid point motor a harder thump but I found that these weren't sufficient to throw my O-scale points. I've added larger capacitors (labelled B in the photo), one for each of the outlets on the decoder, in an attempt to beef them up but I'm still finding that they aren't very reliable and at the time of writing I'm in the process of uninstalling this particular QSnap and have swapped out the solenoid point motors for Tortoise stall motors. Both the QSnaps and Snapits come with screw terminals installed on the decoder to allow for the use of push buttons to actuate the points thus allowing you to install control panels on the layout with no extra cost. You can see these terminals running down the left hand side of the decoder in the photo where the blue wires are emerging.

Photo 7

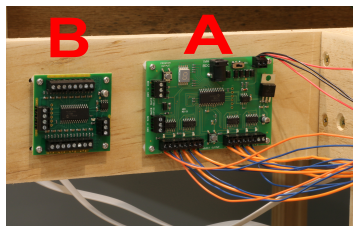


When I started work on Morpeth I *had* used stationary decoders before: one was under Queens Wharf and another was under (the portable) Morpeth. These NCE decoders were Switch8s and they are designed to throw the Circuitron Tortoise point motors that are standard on my portable layouts. While I'm sure the electronics are quite different, as far as the user is concerned the Switch8 decoder essentially works the same as a QSnap in that you install it under the layout, hook up some wires to each point motor and then program it. I've always found them reliable and had every intention of using them on the new layout where I was installing Tortoise point motors. The small section of MDF (labelled A in this photo) is the front of the Power Shield mentioned in the text for photo 5. The circuit labelled B in this photo shows the original Switch8 Mk 1 (which allows control of, you guessed it, 8 stall type point motors) that was originally installed under Queens Wharf when

it was a portable, exhibition layout. When I started work on the new layout I pulled the Switch8 out from under the layout and mounted it on the front of the bench-work to make it readily accessible while I wired it up. Eventually it will be hidden behind the fascia. It had always been my intention to make and mount a control panel on the front of each yard on the layout (there are four on Morpeth if you include the storage sidings) and planned to hook this up to

the Switch8 on both Queens Wharf and Morpeth. That is until I discovered that the Mk 1 version of this decoder had no provision for the use of switches and hence they couldn't be used to connect up to a control panel. D'oh! So at the moment this Mk 1 Switch8 is in use till I can afford to buy a replacement Mk 2 Switch8 which can be teamed up with a button board which allows the use of switches or buttons mounted on a control panel. While operators can still use their DCC hand controllers to change a turnout's route I've decided that for the visual learners a local control panel will be a good inclusion.

Photo 8



The Switch8 Mk2 (labelled A) is essentially the same stationary decoder as a Mk 1 but it can be teamed up with a separate "button board" which can then be hooked up to a control panel. This will allow operators to throw turnouts using buttons or switches and I feel will be much easier on those visitors to my layout who might only operate on it occasionally. There will eventually be something like 5 or 6 individual control panels scattered around the layout and the majority of these will be connected to a Switch8 and its associated button board (labelled B in this photo and not yet connected to the layout or the main circuit).

Conclusion

The installation and use of these pieces of technology are not mandatory if you're planning on using a DCC system on your layout but I've had enough experience with larger layouts over the years to come to the conclusion that their use really helps maximise and accelerate operations on a larger layout. Being able to throw turnouts after the installation of the stationary decoders with the selection of a number on the throttles, but prior to the enormous task of making and wiring up 5 or 6 local control panels, means I can run a couple of test operating sessions many months or even years before I would have been able to do otherwise. Also this allows me to gradually add control panels as time and motivation permits and means I'm not tied down for many months slogging through such a huge task all in one go. If I'd been wiring up these point motors using conventional DC power I wouldn't have been able to run an operating session until essentially all the points were hooked up to one of the control panels, delaying the start of operations for a long time.

Notice of Aus7 Modellers Group Annual General Meeting

Venue: North Sydney Leagues Club, Saturday the 20th of Oct 2018, 12.45 pm

Agenda Items

1. Election of officer holders
2. President's Report
3. Presentation of financial accounts
4. General Business
 - Yearly membership fee

Note: If members have an item they wish to add to the agenda please contact the Secretary at least 2 weeks prior to the AGM. Any financial member of the Aus7 Modellers Group is entitled to vote at the meeting. Proxy voting will be allowed. Any member wishing to vote by proxy should contact the Secretary.

Please

Don't let your membership lapse

Membership of the Aus7 Modellers Group costs just \$AU35 per year.

Memberships are due for renewal by June 30th no matter what time of year you joined. Please forward payment to the Treasurer, Anthony Furniss at PO Box 3404 Asquith NSW 2077. You must be a financial member to vote at the AGM in October. For renewal and new membership forms follow the link on the Aus7 Blog at <http://aus7.org/2014/10/12/welcome/>

Forum Bring & Buy

North Sydney Leagues Club, Saturday the 20th of Oct 2018

The Bring & Buy will allow attendees at the Forum to sell excess model railway items to others at the Forum. The conditions of selling or buying are detailed in full in the document "Selling and Buying Guidelines" available from the Aus7 Modellers Group web site. The following are the main details:

- Registration should occur before 9.30am with selling concluding at 12.45pm.
- Selling on the Bring and Buy table is **free** to all members.
- All sale items should be of general relevance and interest to O-scale modellers (1:43.5 & 1:48, SG or

If membership is not renewed this is the last issue you will receive. To receive all four issues per year you need to renew before September.

Renewals can now be done through online banking. Deposit directly to the Aus7 account BSB 062-233 Account Number 1017 2076

Be sure to supply your name.

*Apologies to anyone waiting for Pt. 2 of John Lee's article Locomotive Speed Matching as promised in the last issue. This has been held over due to space limitations.
Paul (Ed.)*



Making 3827 Go

Paul Chisholm

After quite a long wait the PSM 38 Class models were delivered to purchasers in late ??? and one had to be impressed with the level of detail and overall authenticity of the models. Unfortunately there seemed to be some variability in the quality control; particularly in regard to the running qualities. Some operated perfectly straight out of the box while others required some work to bring them up to an acceptable level of performance. Unfortunately my 3827 was one of the latter group! Perhaps some of you out there experiencing the same issues might find it helpful to see what I had to do.

Before I install decoders in my locomotives I always try to get a new model running well under DC first as it's a lot simpler to eliminate glitches without the added complication of possible decoder faults, wiring mistakes and programming errors. With 3827 it did not go well. See the following

The first problem was a knock in the motion that caused a slight lock up with each revolution. This was caused by one of the rods being slightly bent and making contact with another. A gentle straightening was all that was required.

Next was an intermittent short-circuit. This occurred as the loco was twisted from side to side or lifted slightly on one side and after much prodding and poking and the sliding of styrene sheets down into the area of the pickups I discovered that the phosphor bronze strip section between the pickups on each wheel was making contact with the side frames. To solve this I decided to remove the pickups, cut out the bronze strip between them, connect them up again with a wire and reinstall on the loco. The wire was then routed through the firebox area and soldered to the track power pins coming from the tender and then on to the decoder via a couple of mini connector plugs to allow the body to be separated. No more shorts.

While working on the pickups I discovered that three of the axle box springs had become displaced. Two of them on the front driving wheels were completely out of position as was one on the centre drivers. I found it impossible to poke them back into position. The

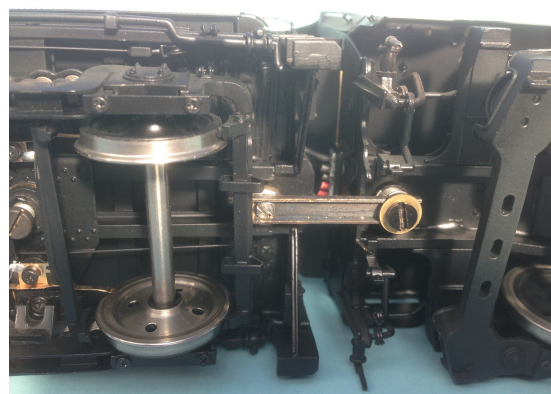
only way I could see to do this was to unsolder all the brake rigging, take down the motion and remove the wheels. This was never going to happen! So if you look under 3827 now you will see some styrene blocks that replace the springs and this seems to work fine making me wonder how effective the springs were anyway.

Once I got it going I found that the tender would not stay coupled to the engine. This was because the pin on the tender only just fitted down into the hole in the drawbar and as soon as there was load or a slight track undulation it just popped out. I also thought that the tender was located too far away from the engine and the fall plate just managed to bridge the gap. To solve this I replaced the drawbar with a new shorter one made from brass section with a brass nut soldered on to provide more meat for the pin to fit into. This solved that problem and made the engine/tender interface look a lot better.

Good, I thought. All problems solved. It ran on the rollers really well and after the decoder was fitted and programmed and it sounded great. But you should never be complacent. I put it on Arakoola the evening of setting up for the Rose Hill exhibition, coupled it to the mail train it was going to take charge of for the next few days and away it went. Until the first dip or rise in the track. Yes Arakoola does have

them! Then the drivers started to slip and forward motion ceased. Surely the pride of the fleet could manage this train that a humble 32 class had handled before. But this was the easiest one to solve of them all. I found that the spring on the front bogie was so strong that it was exerting enough downward pressure to lift the front driving wheels ever so slightly off the track. As I was time short I simply removed the spring altogether and the loco now had no trouble with the train and the bogie tracked faultlessly all weekend. In fact all of my engines have no springs on the bogie and this has never caused a problem.

You may be lucky and have no 38 glitches at all but if you are struggling with some and the above seems familiar to you I hope my experiences assist you in overcoming them a lot more quickly than I did.



ALBURY LOCO - A Work In Progress

Part Five

John Reid

I had intended that Part 5 of this article would complete the description of the remaining Albury Loco structures however, as I have not made anything like the progress I would have liked since submitting Part 4, this instalment will focus on the area around the ash pit and the sand plant leaving the turntable and the pedestrian bridge till later.

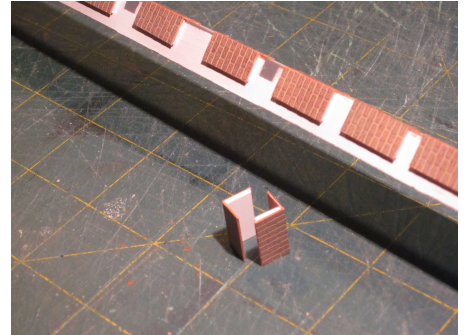
Narrow base boards and the need to fit in a scale 75' (525mm) diameter turntable meant that the alignment and spacing of the tracks at this end of the layout could not faithfully follow the prototype. Issues with space also meant that the pedestrian bridge, that served the northern end of the station platform, had to be a couple of car lengths closer to the turntable than it was in reality. In spite of these restrictions it was still possible to squeeze in all the features lying between the road bridge and the pedestrian bridge in close to their correct relative positions (reversed of course).

A very useful colour photograph of the ash pit at Albury was found in the Train Hobbies Publications 50 Class book. It captures the details within and around the pit and allowed the depth of the pit, and the dimensions of the steps, to be determined by counting brick courses. The photo also shows curved perforated steel sheets (perhaps from scrapped fireboxes) fitted between the rails for thirty or forty feet beyond the end of the pit. These sheets were made by gluing 2mm grid graph paper to pieces of 0.25mm styrene with acrylic contact cement, 'centre popping' at each grid intersection with a pin and then drilling each hole 0.5mm after all traces of the graph paper and glue had been removed by soaking in metho. The sheets were trimmed to 30x40mm and then shaped to match the curvature in the photograph. Small styrene tags were added underneath the ends to keep the sheets in alignment with each other.

Another photo, appearing on the cover of Byways of Steam 11 and in Steam Locomotive Depots of NSW Part 2, shows most of the loco servicing facilities on the southern side of the road bridge. Along with a

host of other details this photo shows the timber decking and the colour and texture of the ground around the pit. The decking is almost obscured by ash and dirt but the position of the individual timbers is still clear. I simulated this effect by laying three rows of heavily distressed ply sleepers (discarded after my first attempt at track laying) at the same level as the baulks supporting the ash pit rails. I then applied a slurry of a powdered wood filler (Agnew's Water Putty) to fill the gaps between the timbers but not hide the joints or the distressed surfaces. I also used the filler between the ash pit and the adjacent track to replicate the even appearance of this area in the photo. After the filler was thoroughly dry I applied a coat of the 'clinker brown' paint mentioned in Part 2 of this article. The area has been dry brushed in light colours to highlight the surface texture but still needs some finishing touches. Having two printed versions of the same photograph highlighted the sometimes difficult issue of colour. In isolation both images looked fine but when compared the difference was striking. One was warm with a strong purple/brown tint to the ground and timber work while the other was much cooler and brighter with shades of grey predominating. I had no way of knowing which rendition was accurate, perhaps they were both wrong, but when deciding on the dominant colour for the track on the layout I preferred the former.

Like the prototype, the ash road continues passed the turntable and a gang shed before terminating just short of the pedestrian bridge. The end of the real siding was protected by no more than a timber baulk bolted across the rails but I have substituted a standard timber buffer stop in the hope that it, along with other devices, will make the wall at this end of the layout less obvious. I did not have a photograph of the front of the gang shed when I built the model so I based it on a plan, of a similar sized shed published in the first issue of Branchline Modeller, assuming the one at Albury would be similar. Soon after I had completed



The six piers were made from twelve identical right angle sections which were assembled then fixed to a length of 12mm square wood until cured. Having no success with mitred joints I settled for butt joints, reinforced with styrene, and completed the mortar courses with a file.



The 3 inch stand pipe. The chain and loop will be chemically blackened and the blocks holding the pipe to the post will be filled to represent wood.

the model a photo turned up, as they always do, which proved me wrong. The model is built around an MDF box with recesses behind the openings in the front wall to provide deep gaps around the doors and to allow them to sit in other than the same plane as the wall. The walls and doors are clad with styrene corrugated sheet and hinges and so on are made from plastic strip and rod. The shed spans a baseboard join and is positioned so that the

sleeper trolley crossings in front of the two main doors sit either side of the joint and help disguise it.

In addition to the 9 inch water columns, located at the southern end of the running shed and at the down end of the coal stage, a 3 inch stand pipe was installed just south of the Dean St bridge between the turntable and ash roads. This standpipe was an example of a standard NSW design used all over the system for various purposes. As they were so common it was easy, for a change, to find good photographs. An image of a 38 standing beside the standpipe at Albury allowed the leading dimensions to be estimated. The water pipe, angle iron post and the valve body were scratch built using appropriate brass sections. Brass lace pins were used to represent the rivets holding the angle iron post together and an etching from the scrap box was used for the stop valve handle. All attempts to form the stand pipe jib from brass tube or styrene failed so I resorted to raiding the scrap box again for suitable pieces of plastic sprue to form this part. The hose was made from styrene tube squeezed and filed to shape. The drain installed under the stand pipe at Albury appears to be about the same size as those installed under larger water columns, that is, about 4 to 5 foot square. The base was cut from 1mm styrene and a square hole made in the centre. Kerbs were fitted around the edges and a narrow 0.5mm strip was added against the inside of these. To form the sloping floor a square of 0.5mm styrene was cut to a tight fit between the kerbs and deeply scored from corner to corner. Solvent was applied around the hole in the base and to the strips inside the kerbs and the floor persuaded to adopt a dished shape until the joints were fully cured. The drain was finished off with a grate made from 0.5mm brass wire.

The sand plant at Albury Loco was as far as I know a 'one off' built in the 1940s to replenish the boiler mounted sand boxes on 38 class locos. It was one of the features of Albury Loco that caught my attention and made it an attractive modelling subject. Old mortices on the canopy posts, the use of a condemned van body and, in particular, the awkward way in which one of the canopy post rests on (or is let through) the platform stairs suggest that the structure was a local initiative cobbled together from whatever

material was at hand. However it came about, it has the look of something out of Mr W. Heath Robinson's 'Railway Ribaldry' rather than the NSW design office responsible for such things. (To be fair maybe it was the best that could be done in hard times to meet a pressing need.) I doubt that anybody photographed the sand plant on purpose but luckily it does appear in the background of a few photographs of locos either on the turntable or over the ash pit. A real bonus was the inclusion of a covered van body in the structure which provided enough known measurements to produce what I thought was a reasonable plan and set of elevations to work from. Unfortunately the top of the air tank, in all of the photographs I found, was shaded by the canopy making it impossible to pick out much detail.

Construction started with the heavy timber frame, which supported the van body, and the front platform I cantilevered from it. Hollow brick piers were made using Slaters



The sand plant has some issues that will need to be rectified but I am happy with the way it turned out.

embossed sheet reinforced with styrene sheet. These were fixed to the main frame and fitted over plugs glued to the base board to locate the structure. I would have been happy to purchase a set of stairs but as I could not find anything suitable they were built, in conjunction with three sets of similar stairs required for the carriage shed, using styrene strip. The next job was the canopy which I decided to cantilever from the van body as I did not yet have a clear idea about how I was going to fit the canopy posts to the platform bearers and stairs. I did however fit sockets into the canopy frame to accept them. The canopy roof was left loose as it would have to be slid into place once



This overview of the loco servicing facilities at Albury shows how basic they were for such an important railway centre. It also shows how little attention the scenery has been given to date.

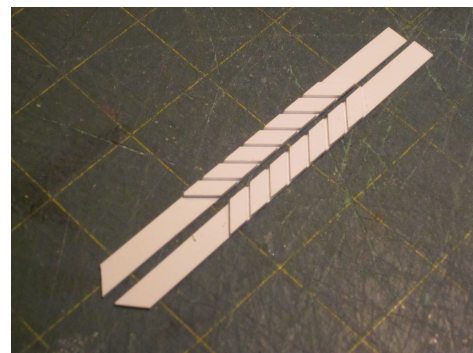
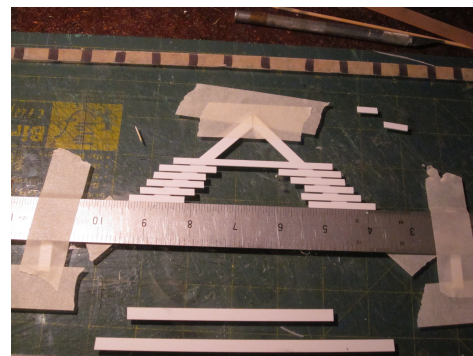
the air tank and sand delivery gooseneck were lowered into position through the canopy sides. With the main components of the structure temporarily assembled the canopy posts could be cut and shaped to suit. Both were rebated to accept the platform bearer extensions and, while one was adjusted to rest on the ground, the other had to rest partly on a stringer and partly on a tread of the stairs. The base, van body, canopy sides and post will be permanently assembled after painting leaving the canopy roof and air tank assembly as separate items.

The air tank was constructed around a hard plastic pill bottle. Several layers of 0.5mm styrene, were applied to increase the diameter and to provide a skin which other styrene parts could bond to. Top and bottom plates were formed by laminating styrene discs. These were attached to the base of the tank and to a styrene plug, made up of smaller discs, which formed the removable top of the tank. The semi-circular sand delivery pipe (gooseneck), its bracing and air lines and the thin extension protruding from the other mast are brass tube and wire fabrications mounted in 1/8" styrene tubes. The air tank inspection hatch was produced by drawing an ellipse the size of an A4 sheet of paper and marking out the position of 18 equally spaced bolts within it. The drawing was reduced to the required size and glued to a 0.25mm styrene sheet. Holes were drilled for the bolts and the ellipse cut out of the sheet.

After cleaning up, the ellipse was glued to the side of the air tank. The holes in the ellipse were used as guides to drill the 1mm holes required to accept cast styrene bolt heads.

With all the main components of the sand plant sufficiently advanced to assemble it was placed on the layout and photographed to allow it to be compared to photographs of the prototype. The model did not fare well. The main problem was the canopy, it looked too wide in relation to the wagon body and the posts looked too bulky and too close together. In addition the sides of the canopy appeared too deep and the slope of the roof too shallow. A new canopy was produced, in a lot less time than the first, which I think better captures the look of the prototype. Detail on top of the air tank is sparse as I have only included what I could see - maybe another photo will turn up which will allow me to fill in the blanks. In the meantime I will have to make sure that any photographs taken of the model have prototypically deep shadows.

Modelling the sand plant took a lot more time and presented more challenges than I expected but it was an interesting and eventually, a satisfying project. Painting and weathering the sand plant is going to be just as interesting and will, because of the mix of materials used on the prototype, call for most if not all of the weathering techniques described in Martyn Welch's *The Art of Weathering*.



These images show how the stringers for the sand plant stairs were set out and the completed left and right hand items. Several sets of stringers can be made simultaneously by placing additional strips of styrene close to the sides of the triangle. To ensure the stringers remain parallel the treads were cut from a single piece of styrene that had been cut to the width of the treads. Care was still required to produce a rectangular set of stairs rather than a parallelogram.

Commercial News

Trevor Hodges

ModelOKits

ModelOKits, PO Box 379, Sydney, NSW, 1700, (02) 97073390, 0404935663, <http://www.modelokits.com> & sales@modelokits.com have passed on the news that the tooling for the 13 Class is underway and that a pilot model should be available by October for viewing at the Liverpool exhibition. Kits should be available by December 2018 with ready to run models to follow. This 2018 release will be closely followed by the 12 class kits and ready to run models. In other locomotive news there are a small number of ready to run D59 class locomotives (coal and oil) available off the shelf, as well as kits also being available. Orders are still being taken for ready to run 59s. A small number of AD60 Garratt kits are in stock with the price unchanged from 2013 at \$2599. ModelOKits are now stocking the Dapol, Minerva Models and Heljan ready to run O-scale British locomotives and rolling stock.

The NSWGR TRC wagon kit should be available for purchase at the October Liverpool exhibition. The kit is a composite kit of brass etch sides and roof, 3D printed and laser cut components. As a part of the ModelOKits laser cut range a workbench tool caddy is now available and they have recently increased the range of products now being carried, including Circuitron Tortoise point motors, Xuron tools and Kadee couplers.



Fine Scale 1:43.5 (7mm) O Scale kits



442 Class Locomotive

- Dual motor
- Resin/White metal/brass kit
- Price \$1450



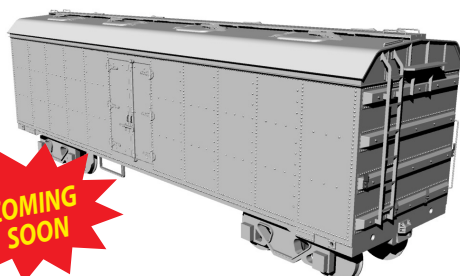
LFX & BX "Dogbox" Passenger Carriages

Now Available Price \$495 per kit.



The Waratah Model Railway Company

Fine Scale 1:43.5 (7mm) O Scale kits



"TRC" WAGON KIT

Kit Includes:

- Etch Brass sides/Roof/detail components.
- Laser cut acrylic chassis,
- White metal bogies,
- 3D printed ends and detail components.

Available October 2018

Price: \$275.00 per kit.



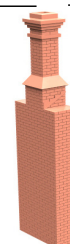
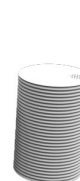
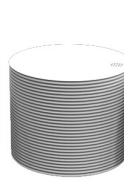
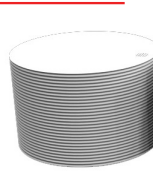
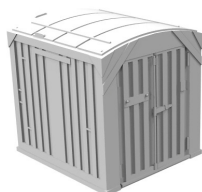
ULTIMATE "S" WAGON KIT

Introducing our high quality, highly detailed S wagon kit with injection moulded body components, our brass and white metal detail items and Waratah prototype wheel sets. Quality, detail and easy to assemble. (Excludes buffers and couplers)

Price \$85 per kit

Price 10 Kit Pack: \$800

3D PRINTED ACCESSORIES



British O Scale RTR

dapol
Model Railway Company

Dapol
Now in Stock

HELJAN

Heljan
Now in Stock



Minerva
Coming Soon

We are now stocking in our Yagoona showroom a range of modelling products including:

- Peco O Scale Track and Accessories
- Micro Engineer Track and Accessories
- Testors & Tamiya paints, weathering products and materials
- MIG Paints and weathering products
- Slaters Wheels, parts and Accessories.
- Xuron Tools
- Slaters Plastikard sheet and strip
- K&S Metal
- Evergreen plastic profiles
- Zap-a-gap glues
- Mininatur Scenery Materials
- Mount Albert lumber
- Tortoise Switch Motors
- Proses tools, Jigs and rolling roads
- Range of Tools
- Noch and Faller Scenery Material
- Badger Airbrushes
- Woodlands Scenery Materials
- Kadee Couplers

Visit our new website & online store at www.modelokits.com Telephone: 0404 935 663 Email: sales@modelokits.com
Now incorporating the full range of Waratah MRC, O-Aust Kits & Model O Kits products

**COMING
SOON**

**ModelOkits are pleased to announce the production of the
NSWGR Z13 Class Tank Locomotive**

In fine scale 7mm kits and Batch Build Ready-to-run by DJH.

- **RTR locomotives** are fully built/running/tested, Includes number plates, decals, standard paint (black), working lights, 8 pin DCC interface (plug-in).
- **Detail includes:** slow running, real coal, detailed back head. Specific paint requests may/will incur additional charges. - **Minimum radius:** 6'

Delivery timings: Pilot Model - September/October 2018

Kits Available - December 2018

RTR to commence arrival from February/March 2019

Kit Price \$1500

RTR Price \$2750

- Order forms available from our website or call us to order over the phone or we can post/email you an order form.



**NOW
AVAILABLE**

ModelOkits are pleased to announce the production of the

**NSWGR D59 Class
Locomotives**

In fine scale 7mm kits and
Batch Build Ready-to-run by DJH.



Kits and RTR loco available in either Oil Burning or Coal Burning formats.

- **RTR locomotives** are fully built/running/tested, Includes numbers, decals, standard paint (black), working lights, DCC interface (plug-in).
- **Detail includes:** slow running, real coal, detailed back head. Specific paint requests may/will incur additional charges. - **Minimum radius:** 6'

Kit Price \$1795

RTR Price \$3200

- Order forms available from our website or call us to order over the phone or we can post/email you an order form.

**NOW
AVAILABLE**

**N.S.W.G.R 36 CLASS
BELPAIRE LOCOMOTIVE**



Photos of pilot model
See website for more photos!



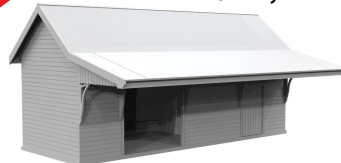
**Limited Extra Stock
available at \$1,799**

Kit builds available for \$3700 (including kit)

**NOW
AVAILABLE**

N.S.W.G.R A1 & A2 Station Kits

Quality Laser Cut Kit



Price: A2 - \$65

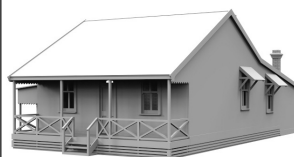


Price: A1 - \$45

**NOW
AVAILABLE**

NSWGR Station Masters House

Quality Laser Cut Kit
Includes 3D Printed Chimneys
Sheet Styrene Corrugated Iron



Price: \$165

Visit us at www.modelokits.com Telephone: 0404 935 663 email: sales@modelokits.com