

# 7th Heaven

Journal of the Aus7 Modellers Group Inc.  
No 60

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The Impossible Layout 6  
A 19 Class for The Great Outdoors  
Notes From An Old Bloke's Workshop  
O Scale Model Building Kits  
Dealing With Decals  
Not Sticking To The Plan  
Commercial News

Aus7

Modellers Group



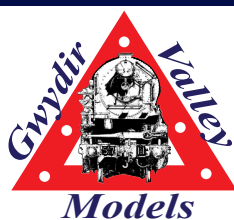
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## Saturday 30th March 2019

# O Scale Modellers Forum



**Venue North Sydney Leagues Club "NORTHS"**  
12 Abbot St Cammeray

9am to 4pm — Doors open — 8:30am  
**Specialist Trade supplier's attending**

### Presenters

James Dalton, Ray Pilgrim, Chris Lord and John Parker

### Topics Include

Modelling the End of the line  
NSWR Station Design 1855-1920  
Techniques for Modelling Signals  
What's New

**Show n Tell.** Bring your latest model to display and share the progress on your latest project

\$30 includes Tea/Coffee  
Lunch available in the Club  
Bistro  
Everyone Welcome





# Straight Down the Line - Opinion

by **Bruce Lovett**

## WHERE HAVE ALL THE O SCALERS GONE?

Looking around the attendees at the last Cammeray Forum in October, 2018, I was hard pressed to recognise a new face. Now, don't get me wrong as I really enjoy meeting up with the "old" faces twice a year.

This set me thinking about the future of OUR Aus 7 Modellers Group Inc.. So, I delved into my collection of 7 th Heaven magazines back to the first issue of the Aus 7 Group Newsletter dated July, 2004. These back issues provided some very interesting reading and facts which are listed below –

Formed in July, 2004. No details of membership numbers.

In October, 2004, 54 members had joined.

By July, 2005, the membership had grown to 88.

Then in January, 2006, 132 had joined.

However, in July, 2006, the membership had slumped to 80.

I could not find any details for 2007.

In July, 2008, there had been an increase to 98.

By July, 2009, the membership had slumped once again to 75.

Our current membership stands at 88

In 2004 when OUR group was just getting off the ground, we did not have a huge range of O Scale manufacturers from which to choose, BUT, we had a small dedicated and enthusiastic group of suppliers such as Berg's Hobbies, Century Models, Keiran Ryan Models, Kerroby Models, O Aust Kits and the Waratah Model Company.

Today, we are thoroughly spoilt with a host of, once again, dedicated and enthusiastic suppliers including Auscision, Berg's Hobbies, Big River Models, Gwyder Valley Models, Keiran Ryan Models, Kerroby Models, Model O Kits, Outback Model Company, the Signals Branch, the list goes on...

These suppliers have invested a huge amount of time, research and money to bring us, the O Scale modeller, quality models that rank with the finest in the world. Let us show our appreciation by supporting these suppliers with our purchases.

Yet, with all these suppliers we only see the occasional models on display at the Forums and certainly very, very few photos and articles about our models for publication in 7 th Heaven. The incredible Arakoola layout will, no doubt, be retiring from the exhibition circuit in time as the owner/operators have given up so much of their time and expense to entertain and showcase O Scale. However, there is a limit. Apart from Arakoola there has been little in the way of O Scale layouts at recent exhibitions to promote the scale.

When you look at the O Scale hobby in the U.S.A. where there are no less than three magazines devoted solely to O Scale, the O Scale hobby is increasing with both large and small manufacturers.

It is the same in England ( or Great Britain, the United Kingdom or Brexit ! ) where the 7 mm modeller has a plethora of ready to run exquisite locos and rolling stock at very attractive prices, plus, an increasing range of kit locos, rolling stock and buildings.

Yes, I can hear you say that in both countries their climate and population is more conducive to railway modelling. True, but when you look at some of the modelling in any scale at local exhibitions and at our own Forums, we have world standard modellers here in Australia. Take the reception that Arakoola received when it travelled to and was exhibited at the Gauge O Guild exhibition in the U.K. Absolutely amazing.

>>>> 18

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Quarter Page: \$32 Eighth: \$15

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Please contact the Treasurer to obtain back issues.

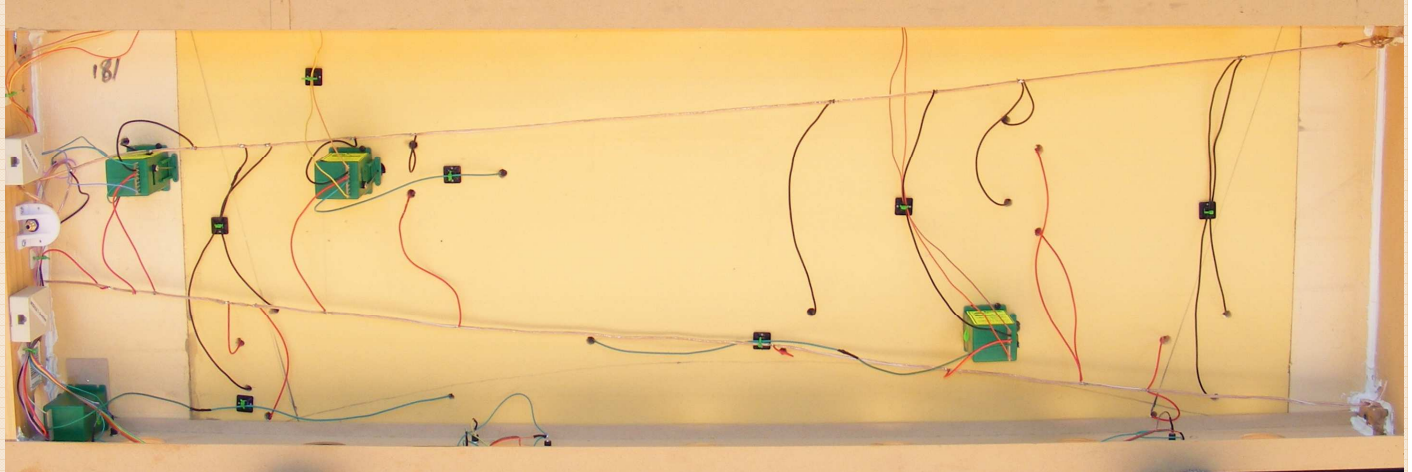
Issues 1-33 sold out.  
Issues 15+ are \$7.70 each  
\$1.50 p&h for one or two copies.  
\$2.50 p&h for three or more copies.

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**  
This cover has no connection to any content in the issue which is what I usually try to do. However no one sent a suitable photo so I just had to trawl through the photo archives for something that fitted. Besides, I just like it! Ed.

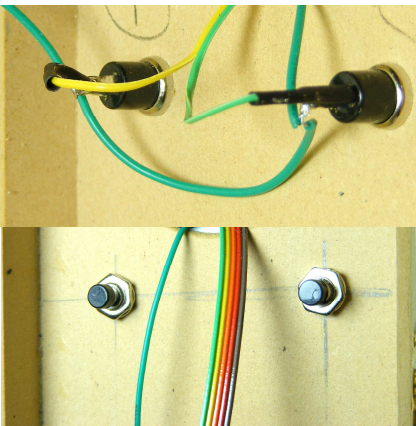


# The 'Impossible' Layout



## Part 6

With the first module's basic ground cover of fine gravel, ash and coal dust now in place it was time to start connecting all those loose wires that had been previously soldered to the rails. This is the part of layout construction that many dread as on a typical permanent layout it is often necessary to crawl under the structure and start soldering wires together above your head. No such problem on a modular layout such as this as the module can easily be turned on its side or end, and positioned on the work bench at a convenient working height.



I chose to use a similar approach for the wiring to that previously trialed on Valley Heights. It worked well then so I decided not to re-invent the wheel. Stall-type point motors and stationery decoders will be used to operate all points activated either directly from the DCC cab or localised push-buttons. In addition to the DCC system (in my case from NCE), the following will be used:

Tortoise or Cobalt stall-type point motors<sup>1</sup>  
NCE Switch-8 Accessory Decoder<sup>2</sup>  
NCE Mini Panel<sup>3</sup>  
Small Momentary Push-Button Switches<sup>4</sup>

These will be interconnected with a combination of soldered hard-wired connections within the three modules, and the

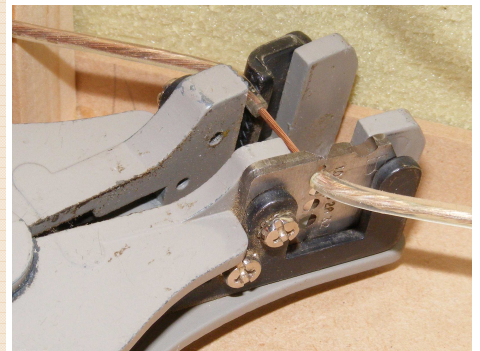
### Floquil Rail Brown

The previous episode concluded with me awaiting the arrival of a bottle of Vallejo paint which had been recommended as a replacement for Floquil Rail Brown. The suggestion was completely wrong! Vallejo #70-795 Green Gold may be beautiful but it is entirely unsuitable unless you want gold coloured rails. It seems the Micro Scale reference sheet I found was incorrect; the reference should have been Vallejo #70-783 US Field Drab. I ordered a bottle which was O.K. but I personally don't think it was much of an improvement on the Tamiya XF-72 Brown (JGSDF) which I had tried previously. As the Tamiya paint is both cheaper and more readily available. I will continue to use it as the Floquil Rail Brown successor. Maybe someone else has a better recommendation?

John R B Parker

use of two-wire Bus Cables and eight-wire Cat 5 Patch cables<sup>5</sup> to join the modules together once again taking advantage of readily available and inexpensive Cat 5 cables for most of the connections between modules. The only exception was the DCC bus which uses RCA audio connectors for the short patch cables between the modules. The actual DCC bus uses medium quality speaker

cable; Jaycar #WB1709 Heavy Duty speaker cable<sup>6</sup> is ideal. This twin cable is easily separated into individual conductors so that two physically separate busses can be installed. In order to provide the connection points for those previously installed wire droppers the clear insulation was cut and moved to one side with hand operated "squeeze type" wire stripping pliers as shown.

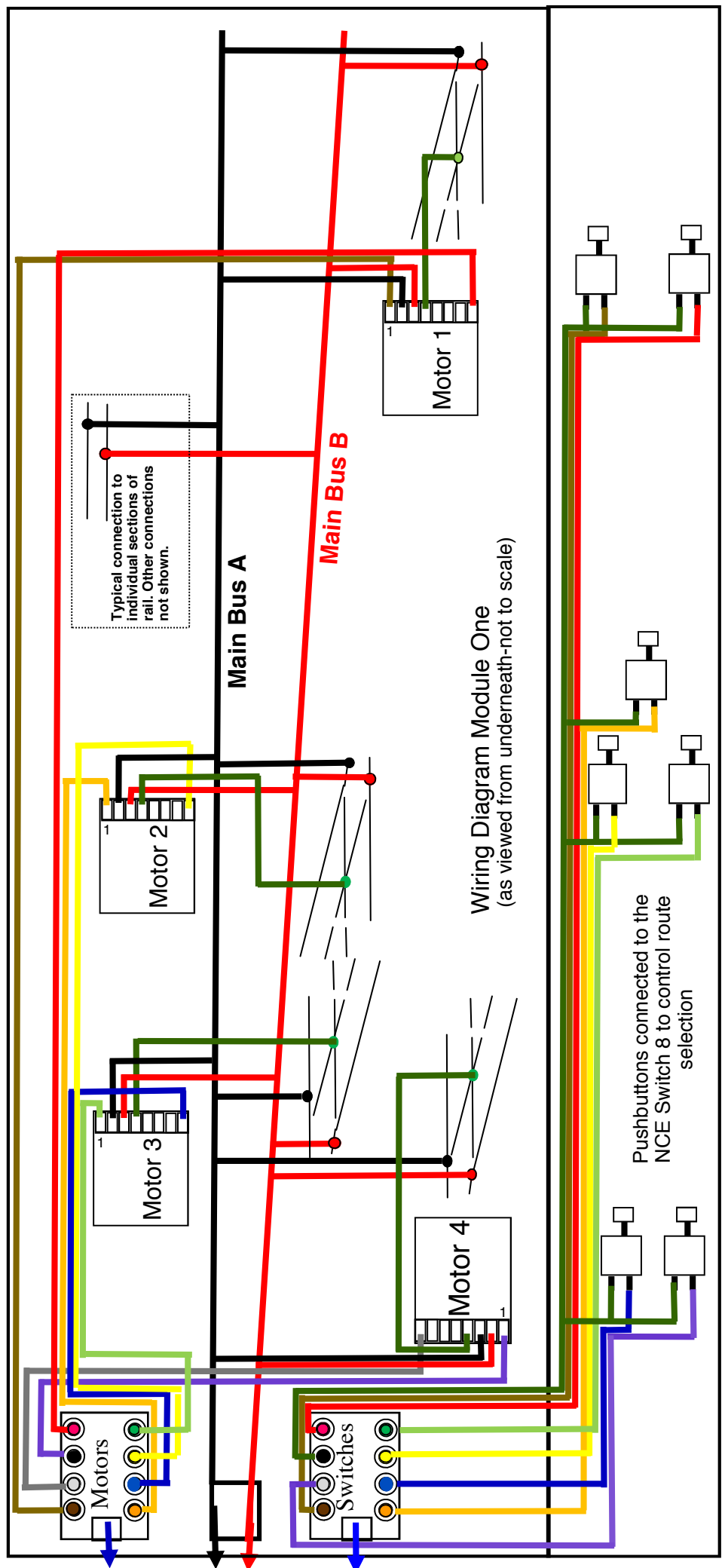
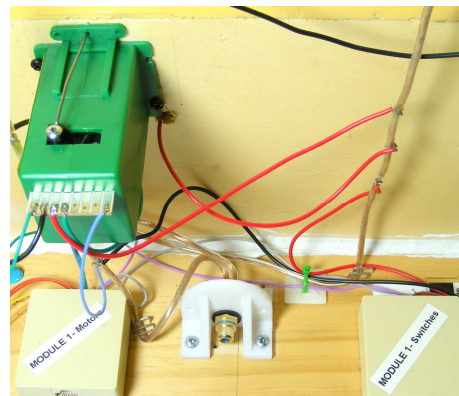
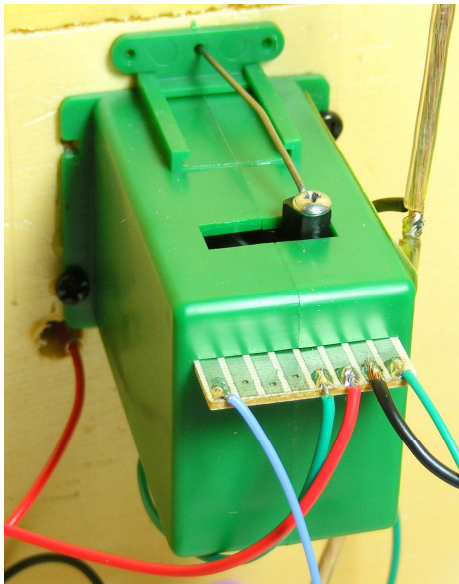


The previously installed wire droppers are simply cut to length, stripped and then wrapped around the bus and soldered in place. This simple process is also inexpensive as no special connectors are required. The ends of the bus were soldered to the RCA sockets on the 3D printed brackets which were screwed to the end panels.

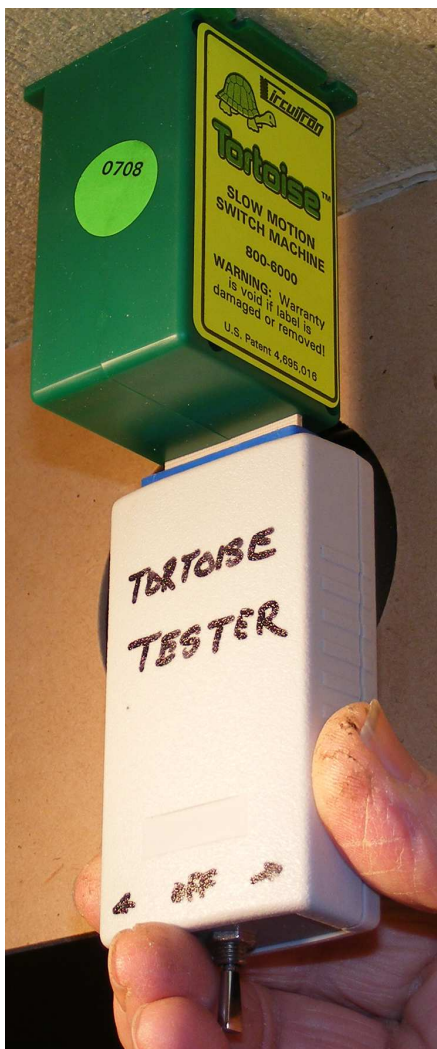




Conventional wire staples were used to physically attach the bus wires to the end panels. Insulated staples could have been used but they are not strictly necessary as the staple does not cut through the insulation, and even if it did it is not connected to anything which could cause a short circuit. Jaycar RJ45 side entry surface mount 8P8C boxes<sup>7</sup> were used for all other interconnections between the modules. I used ribbon cable<sup>8</sup> for all the wiring between the push button switches<sup>4</sup> mounted on the girder, behind openings in the fascia. For neatness most of this wiring will be constrained by the “cable duct” formed between the MDF girder and the yet to be installed fascia panel. Installation of the Tortoise Slow Motion Motors was greatly simplified by being able to work on the module placed upside down on the bench. I used a simple jig to identify the correct location and then glued the motor in place using the same acrylic construction adhesive used earlier. As the construction uses a 50 mm foam base, the operating actuators need to be longer, (and less flexible) than the wire supplied for this purpose with the Tortoise. They were fabricated from .047” hard piano wire and the hole on the actuator arm was enlarged slightly to accommodate the larger diameter wire.







A simple test box which was made some time ago using a 9 volt battery, connector and a DPDT switch was used so that the motor mechanisms and points could be checked for smooth operation. Although the tester can be used in either the normal or inverted position it can of course only be connected prior to hardwiring the unit.

Silicon hook up wire from Ali Express<sup>9</sup> was used for all the connections between the Tortoise point motors<sup>2</sup> and the termination boxes. These surface-mount side entry RJ45 termination boxes<sup>7</sup> come complete with a mounting screw and a self-adhesive foam mounting pad. Previous experience has



shown that the adhesive cannot be solely relied upon so I secured them in place with the both the pad and the provided screw. The boxes were placed on the timber end of the module with the RJ45 Ethernet socket facing downwards to permit the easiest insertion of the Cat cables which interconnect the modules.

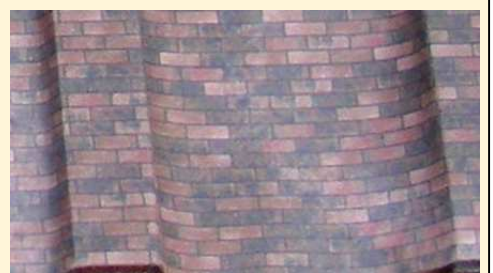
The wiring diagram for module one is shown on the previous page; the accompanying photographs should

assist anyone attempting to follow some of construction ideas outlined in this series. I then moved onto completing the wiring on the other two modules by following the same principles and methods. I will not bore the reader by describing those somewhat repetitive actions but a wiring diagram for module two is included on the next page. The wiring diagram for module three will be included in the next part of this ongoing saga.



It is now time to return to the construction of the front facades of the three major buildings which dominated this part of Darling Harbour. These distinctive buildings were first mentioned in parts 1 and 2 of this series. The front walls of the buildings were laser cut from 3 mm MDF and subsequently strips of the same 3 mm material have been used to add the additional depth required to represent the brick columns, concrete ledges and details which give the buildings so much character. All the widows have been 3D printed but still need to be painted and glazed. Previous experiments had convinced me that brick papers produced on my ink jet printer would give a sufficiently realistic appearance to these buildings which will form most of the backdrop. Unfortunately, all these tests were carried out by simply comparing the appearance of the printed sheets to those commercially available, including textured sheets from a number of suppliers. Problems arose when I attempted to glue the brick paper to the MDF. Prior to attempting to attach the brick paper I sealed the panel using an inexpensive pressure pack paint spray in an attempt to avoid the possibility of the MDF be-

ing affected by moisture; this was effective but what glue should I use? Elsewhere I had glued "brick paper" to retaining walls using spray adhesive applied to both surfaces and, after allowing the glue to "tack dry", simply pressing the sheets in place. This worked well as I had printed the image onto matt photo paper which is thicker than normal copy paper and as the surface was flat it was a simple matter to get a good result. The photograph above shows the result of the first test of attaching the brick paper to the Pitt Son & Badgery building, the smallest of the three warehouses. The brick paper on the right was glued in place using the spray adhesive but, as can be seen in the close up below, it was almost impossible to achieve a good representation of the brickwork edges as the contact glue makes it difficult to accurately position the paper.



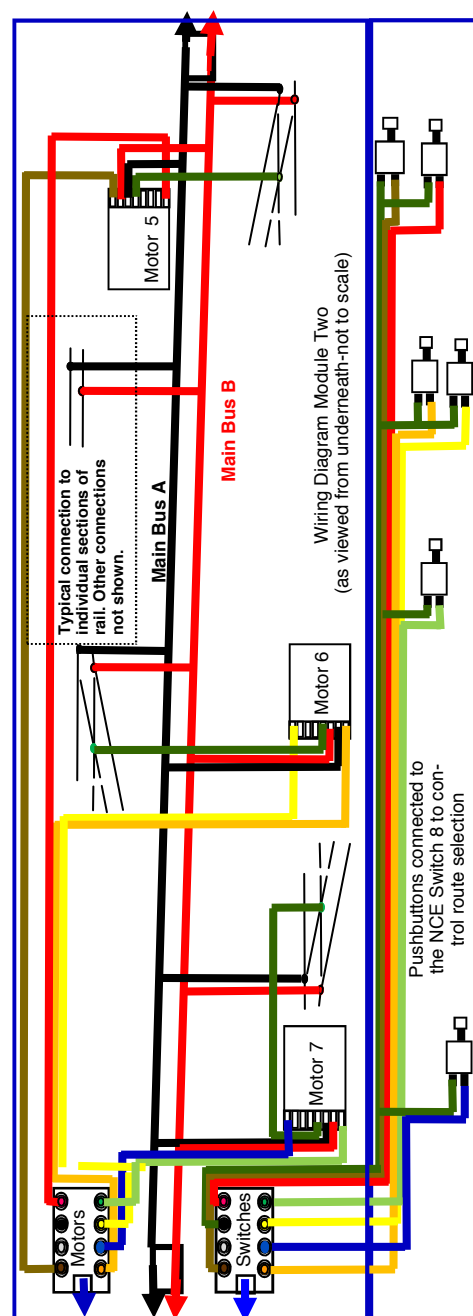




PVA glue, slightly diluted with water was then tried by applying the glue with a brush to the printed paper; a very poor choice as the paper became so wet that it fell apart with handling. I then tried again by applying the glue, with very little dilution this time, directly to the MDF panel making sure that there was a good even coverage of glue. The brick paper sheet was carefully applied by attaching the left-hand edge first and then, with aid of a plastic rule, gently folding the paper around the edges of the strips of MDF which represent the brick piers. This, although not perfect, was much more successful. In some spots the printed image was slightly affected by moisture seeping from the glue resulting in some brick discolouring. This might be an issue if this was a foreground mod-

el but as these buildings are intended to merge into the background it should be acceptable after appropriate weathering. The result can be seen above in the larger than real life photograph of the brickwork. The entire front portion of the building was covered with the brick paper with exception of the very top, which photographs of that time show as being painted. An Exacto hobby knife was then used to cut out all the window openings. After air brushing, all the windows and the letters which spell out the company name were installed. Glazing and weathering still needs to be carried out; the last photograph clearly indicates that this is still a work in progress.

...to be continued .



## Where do you get it?

1. Tortoise stall type point motors  
<https://modelokits.com/>
2. NCE Switch-8 Accessory decoders  
<https://modelokits.com/>
3. NCE Mini-panel  
<https://modelokits.com/>
4. Momentary Push-button switches  
Jaycar #SP0702 and various eBay suppliers.  
<https://www.jaycar.com.au/>
5. Cat 5 cables  
<https://www.jaycar.com.au/>  
and many other suppliers
6. Heavy Duty Speaker Cable Jaycar #WB1709  
<https://www.jaycar.com.au/>
7. Jaycar #YT6064 RJ45 Side entry 8P8C termination boxes  
<https://www.jaycar.com.au/>
8. Rainbow Cable 16 Core Jaycar #WM4516  
<https://www.jaycar.com.au/>
9. 50/Metres/box silicon tinned copper wire (5 x 10 metre.)  
<https://www.aliexpress.com>



# A 19 CLASS FOR THE GREAT OUTDOORS

## R. Comerford

I have scratchbuilt quite a few locos but this is the first tender loco I have done. Those who are members of AMRA will recognise my usual methods of construction as outlined in Journal in both S and O gauges over many years. This is not an exact representative of any particular 19 class. The number 1952 represents the year of my birth.

I first blew up my old Datasheet on the 19 to 7mm scale and printed off a few copies. The major parts I used for the project are these.

- Drivers - Slaters 7848E
- Tender - Slaters 7131
- Axle boxes/ springs - Slaters 7080 mr/lms
- Dome and stack - 20 class from Shapeways
- Buffers Col Shepherd
- Headlight – unknown
- Gears – Ultrascale 30:1 nylon worm
- Motor – Mashima 1833
- Pump – w/m casting maker unknown
- Safety valve – brass casting – maker unknown
- Whistle – brass Col Shepherd
- Generator – scratch from styrene bits
- Piping – Slaters handrail knobs and brass and copper wire.
- Siderods and other items – pc board sleepers and point timbers.

Some of the photos will show different chimney, dome and siderods used until I realised I could get more appropriate castings and the siderods were not fluted.

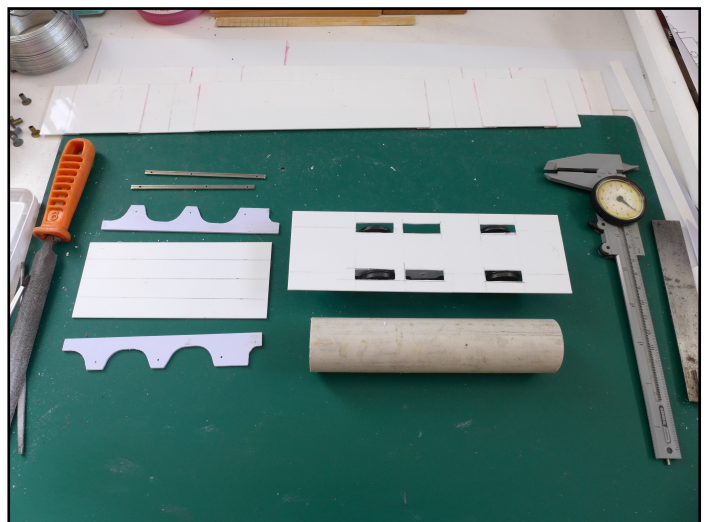
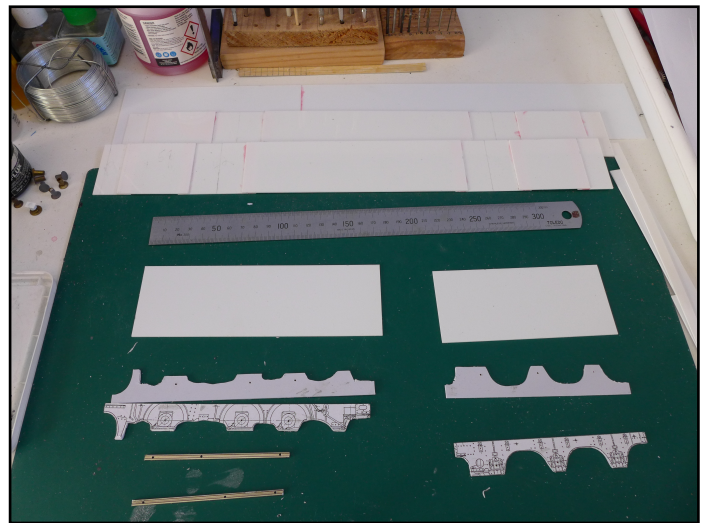
The frames are made from 60thou ( 1.5mm) styrene. Two pieces are tack glued together with three small drops of Selleys waterbased kwik-grip and a copy of the drawing attached with a smear of the same glue. The basic frame shape is cut and filed out. They are later separated by soaking in some warm soapy water and a hobby knife and fingernails assist in the process.

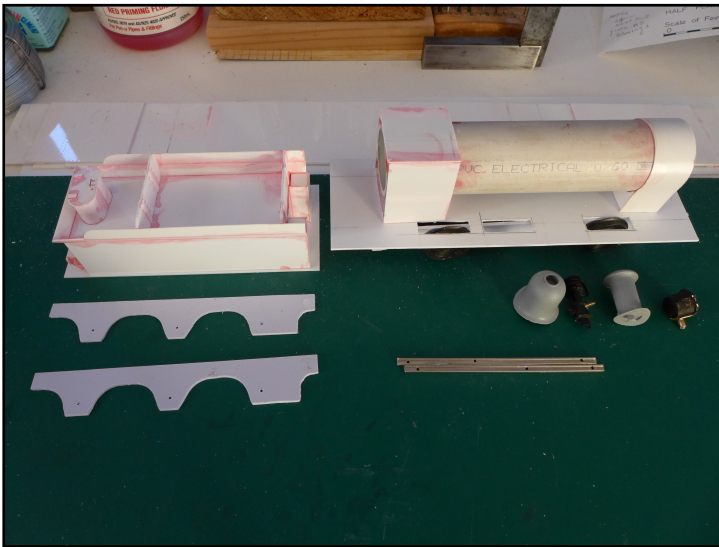
Two lengths of pc board timbers are used for the drive rods. They are temporarily tack soldered together at the ends and drilled to receive the crank pins. Here is where I made my first mistake, forgetting that the 19 class did not have fluted side rods and starting with bullhead rail.

The axle holes are drilled using the side rods as the template. A drill press is best for doing these operations. The spacing between the second and third axle will have to be increased slightly to accommodate model flanges. Best determined when the wheels have arrived (ask me how I know). Mine was made at 31mm and really is a little close, I would make the spacing at least 32mm if doing another. The axle holes are then drilled 3/16" and reamed to give a running fit for the axles.

I make a strip of 60 thou to the desired width and the spacers for the frame are cut from this as required. The exact width will depend on your use of top hat bearings and how much sideplay you want. 25mm will give 1mm sideplay if not using bearings. I haven't included the bearings in the last few models I have built as an experiment and so far their absence has not been an issue. A little oil occasionally keeps the axle holes lubricated.

The footplate was made from 40 thou (1mm) and the rest was mainly made from 20 thou. The boiler was a piece of 32mm electrical conduit. To glue the styrene to the





electric conduit I used some plumbers primer, which is MEK and a little more aggressive than the Tamiya.

The round window holes and the smoke box door were cut out using my old high school centre wheel compass with pointy bits on both ends, one used as the cutter. The smoke box door was made from 60 thou and filed and sanded to shape.

The top corners of the firebox are filled with Tamiya putty and sanded to shape. The putty also was used to fill any gaps when needed.

The splashers are made much wider than scale to allow for the overwidth wheels and sideplay needed for model curves.

Rivets were added to the smokebox and tender using small dollops of the kwik-grip applied with a sharpened kebab stick.

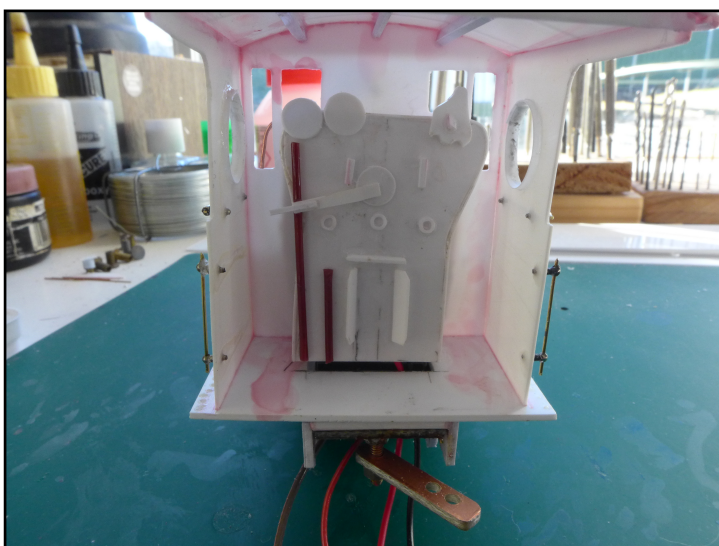
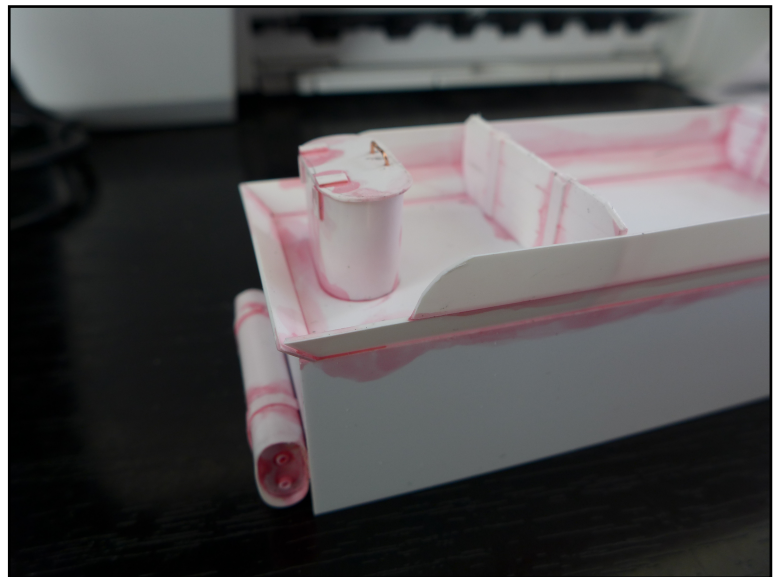
I made a hollow backhead from 20 thou to hide the motor and added a few basic details from pieces of pipe and strip.

The tender was built in a similar manner with the frames from 60 thou, the floor from 40 thou and the body mainly from 20 thou.

The Slaters axle box castings had the springs removed. The axle boxes were glued to the frames and the springs to the upper side of the floor. The plastic used with these castings seem to need a more aggressive solvent than the usual Tamiya thin variety I do most assembly with. Plenty of the thick variety was applied as each casting fell off over time and for good measure some superglue was also applied! The photos as usual will tell more than words about the construction.

The most finicky job was the manufacture of the water hatch and air tank. These were both made from two pieces of tube glued side by side and then the wrappers in 10 thou were carefully glued around them being careful not to use too much solvent. The air tank had the ends from 10 thou glued on before the addition of the wrapper as it overhangs them. The various other details as seen in the photo were made from pieces of styrene strip and rod. The water hatch lid handle is a piece of telephone jumper wire.

The tender body is attached to the frame with some screws to allow installation of the decoder and speaker. A sugar cube speaker is double sided taped to the floor and provides more than enough volume outdoors.



I made a couple of mistakes in the construction and had to redo things. One of which was the use of bullhead rail for the side rods until I realised they were not fluted on the 19 class. They were then fashioned from some strips of double sided pc board intended for point timber construction.

Some more of the pc board was superglued into the base of the tender and the inside of the loco frames to attach the phosphor bronze wire used for pickups. Running outdoors I pickup on every available wheel. The loco pickups and motor wires both attach to the tender via a home made plug and socket arrangement.

When it came time to install the motor I realised I was out of gearboxes. As an experiment I decided to try the method I had used in smaller scales and simply glue the motor to a plate using silastic. This was



where I made another mistake. I did not weight the motor down while the glue was setting and the result was a gear not fully meshing. I discovered this when it wore out rather rapidly. Second attempt had the motor well weighted down and left for a few days to cure again. The loco has now done many miles without issue.

The tender coupling was made from some more of the pc board with pieces superglued into the loco and tender and an 8BA bolt soldered to the loco with a nut used to hold the coupling in place and a piece of brass rod used for the tender connection.

Couplers are short and long versions of Kadees. Not planning to double head it at the moment but if longer ones are needed for the front they can be installed.

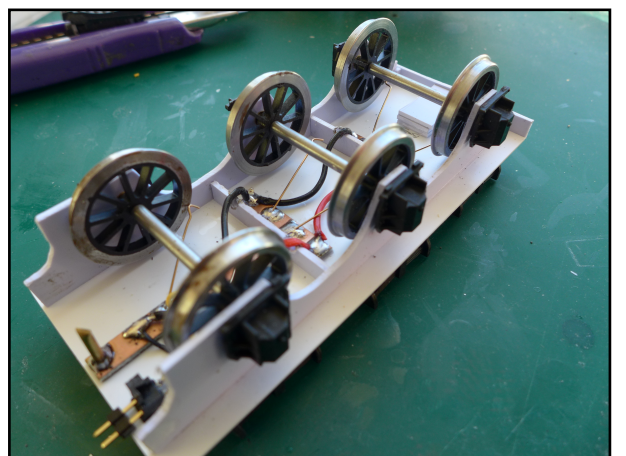
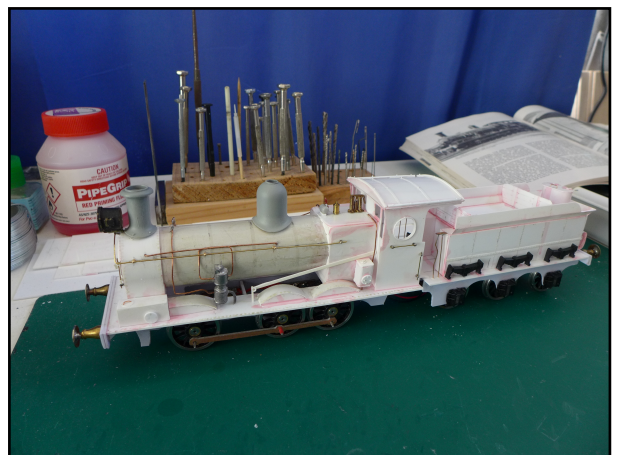
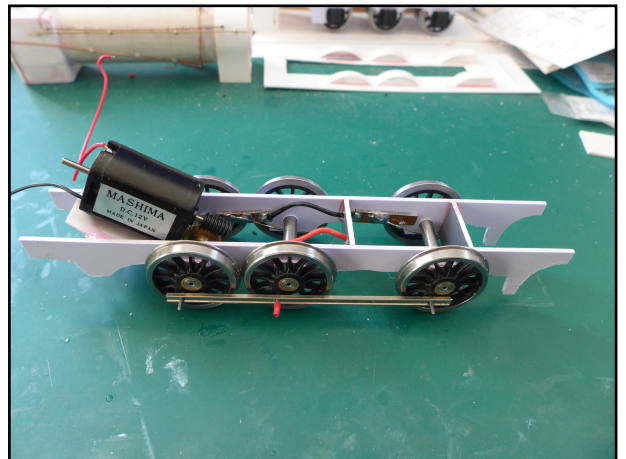
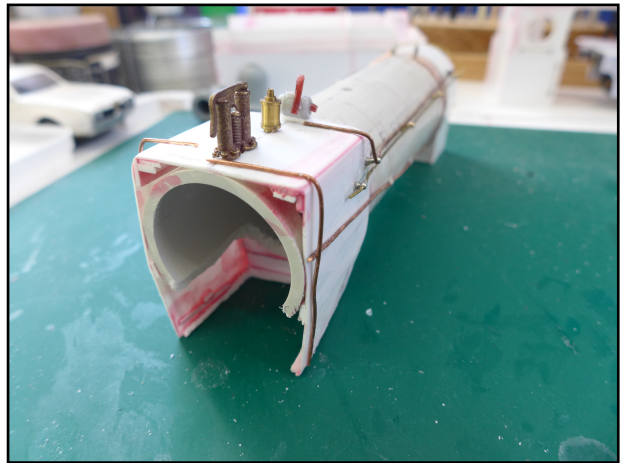
The model was first given a coat of Stynylrez grey primer then was painted with gloss Vallejo black and flat red then oversprayed with some semigloss clear after the addition of the decals. The decals are once again made for me by Ted Freeman. A light dusting of Tamiya XF59 and XF66 was added with the airbrush for some initial weathering.

The cab sheet was made from a tea bag and its position was taken from a couple of photos of 19's in use. Coal was added to the tender with some PVA and a crew glued to the loco with epoxy and the boiler was filled with lead scraps.

Given the conditions faced outdoors I did not bother with adding brakes and sanding pipes. These locos work hard and long for their living.

If there is anything that is not clear then you can find me on RMweb (7mm section) or on The Guild site if a member. Phone calls are OK too.

Cheers  
Bob







## Notes From An Old Bloke's Workshop Bruce Lovett

Some useful tips and devices gleaned from Bruce's many years of modelling experience

### Pin Vycs.

Most O Scalars would have at least one of these open end Pin Vycs. Yes that is the correct spelling. How often have you tried to put a small drill or tap into the collet chuck and have it shoot out the other end onto the floor and under the bench never to be seen again. Go to Bunnings or Clark Rubber and buy some rubber tips of the right size and fix them in place on the open end with a drop of superglue. Also, in use the rubber tip is a lot softer on the palm of your hand.

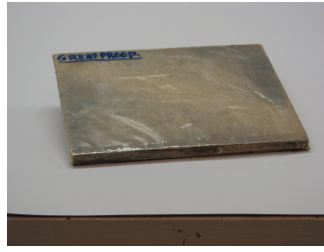
### Flat sander

This is made from a length of 3" x 1" x 12" pine timber with fine abrasive paper glued on one side and medium abrasive paper on the other side using contact cement. For sanding smooth the edges of plastic kit sides, ends or roofs etc. it is invaluable as you can be assured that the edge is straight, far better than a file. Afterwards just give it a clean with a brush.

not adhere to the grease proof paper. A gentle push will then release the parts from the grease proof. When it looks a bit tired, buy another box of Vita Brits.

### Knitting Needle

No, the old bloke is not around the bend and taken up knitting. See the next 'photo for it's use. The majority of O Scalars use Kadee couplers and their between the rails magnets are great, however, there is always a place on your layout where you forgot to fit one or the train is too long. By putting slack into the couplers and pushing the knitting needle down between the jaws, with a little twist the couplers will uncouple. Easy peasy! A little practice may be required. Go to your local sewing shop or some variety shops and buy 2 .5 mm diameter plastic knitting needles. I hold mine in place on the edge of my layout in convenient places held horizontally in two white plastic cable brackets.



### Scungy MDF

This piece of scungy MDF is covered with the grease proof inner wrapping from a box of Vita Brits. Bend it tightly over the edges and hold it in place on the underside with clear tape. It is used for assembling plastic wagon sides and ends etc. as the plastic glue will

### Tweezers

A suitable size glass jam jar is ideal for holding all your different types of straight and bent tweezers. You can see at a glance the one that is best suited to the job. I prefer glass over plastic as it is heavier than plastic.



### **Stand for Wheel Sets**

When you are working on wheel sets, rather than having them rolling all over the bench and on the floor, take a piece of 2" x 1" pine, drill holes to suit the axles about 35 to 40 mm apart and slightly countersink the holes. The diameter of the holes needs to be a snug fit on the axle.

### **Painting Wheel Sets**

To paint wheel sets without getting paint on the treads, use O rings of a suitable diameter fitted tightly on the treads. A little tape or even plastic insulation stripped off hookup wire will keep paint off the axle ends. Once again try Bunnings or Mitre 10 for a kit of various size O rings.

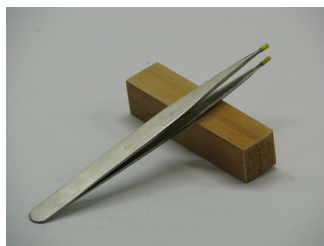


### **Stand for Miniature Tube Spanners**

These are Tube Spanners, not Nut Spinners. Once again take a piece of 2" x 1" pine and drill holes for a snug fit of the various diameter Tube Spanners. As you can see Metric are on one side and Imperial on the other. Once again you can see the right one at a glance.

### **Tweezers with Plastic Tips**

For picking up delicate items like transfers, you need tweezers with plastic tips or plastic tweezers. If you don't have plastic tweezers, strip short lengths of plastic insulation off hookup wire and force these onto the ends of the tweezers.



### **Stand for Miniature Screwdrivers and Kadee Tool**

This stand was made by a late friend with a brass plate on top with the necessary sized holes drilled. You can do the same and mount in on a piece of pine, or do a similar stand as for the tube spanners. Having these screw driver and tube spanner stands in front of you on the bench saves so much time.

### **Pencil Holder**

This is a distributor cap off an older six cylinder car engine which makes an ideal holder for lead and clutch pencils. NO, you cant have mine. Try your friendly garage or car junk yard. They are also a good talking point.



### **Wet Sponge for Transfers**

How many times have you had a transfer, or if you like, decal, float off the backing paper in your saucer of water and it has been ruined in trying to put it back on the paper. This method of placing the transfer (decal) on a wet sponge eliminates this disaster. Buy a packet of sponges about half an inch thick from your supermarket, cut one to size to fit a plastic box with a lid. I prefer a plastic box as they do not rust. A lid is essential so that the water does not evaporate and keeps out the dust. Fill the container with water until the top of the sponge is just wet. Do not overfill otherwise you are back to the old problem. Depending on the age of the transfer (decal) it should take less than a minute before it is ready for mounting.



### **Mitre Box**

Your Mitre Box will last a lot longer and so will your saw if you cut a piece of quarter inch plywood for a tight fit in the box. If you need to cut a number of items the same size, place a mark with a red pen on the plywood. It is easier to see than on aluminium.

### **Kitchen Tongs**

Why would you want a pair of kitchen tongs in your workshop ? I have picked up a 10 BA screw off the floor with these tongs. And it saves a lot of bending. Also, for reaching under the layout or things off the top shelf etc. etc. etc. DO NOT pinch the one out of the kitchen, buy your own or put up with the consequences !

Well, that's all from the old bloke. Some of these ideas are mine, some I have read about in magazines and the wet sponge item is from the owner of AR KITS the HO Scale manufacturer. Incidentally, I do not have shares in Bunnings, Clark Rubber or Mitre 10, unfortunately.



# O Scale Model Building Kits

Ray Rumble



It all started when I had the bright idea of building a model of my late father-in-law's Woodenbong Driveway service station for my new layout "Mount Lindesay" where my wife spent her formative years pulling petrol in the family business.

The net served up this little Queensland model building kit publisher who designed and supplied paper cardstock kits [www.rakememp@hotmail.com](mailto:www.rakememp@hotmail.com) and lo and behold there was a Mobil kit almost identical to my relations 1950's/1960's petrol station in the northern New South Wales town on the Mount Lindesay Highway. With a few small changes (toilet doors on the right side, an extra mechanical bay and no covers over the bowers) there it was. After contacting the graphic design owner, Robyn May, she suggested she could rescale to O gauge 1:43.5.

Because of pressure of other parts of her business a wait was required but the parcel arrived in the post at a very reasonable \$35 including postage. A whole packet of laser printed sheets ready for paste up if needed including lots of logo variations were supplied and detailed instructions. Being the pedantic modeller I have become I felt I needed a little more detail for O gauge and decided I would use the accurate measurements instead to scratch build the basic four walls and roof myself out of 2 mm readily available board used in most building kits. The Mobil design was a standard country service station design and colour scheme of that era.

After consultation with my wife's eight siblings, it appeared recollections were vague and often contradictory even from my wife but the basic shape and fittings were roughly agreed. Then came the problem of the Mobil bowers in O scale which are non-existent. After research I found the petrol bowers were model 1000 Gilbarco units of the 1950/1960's. Thought I might have a 3D printer chap to print the three units but time factor was out so settled for American style 1:50 bowers from Model O kits along with Berkshire Valley petrol station bits and pieces (seen on my model) from Glenn. It surprised me how much difference there is between our 1:43 scale and American 1:48/1:50 scale. The bowers should have been another 5mm in height so the plinth I added has raised them up to look closer to 1:43.5.

It needed fourteen extra detail items around the service station plus the three bowers from Berkshire Valley to complete the model. It took well over four months of cutting, painting, printing signs, the painting of the building and the extras that took most of that time. I even had a model of my wife's Red mini minor (up on the hoist for servicing) when I met her in 1969 so really nostalgic.

Heading photo is of the business today showing that mostly only paint changes have occurred in those sixty five years. The model will sit nicely beside the Mount Lindesay pub, the non-existent railway station and Anzac day cenotaph in the centre of my imaginary town.





*Recently I was asked by a modelling friend how he could improve the appearance of the decals he had been applying to his rolling stock projects. While no expert in this area I did have some ideas about what he was doing wrong and was able to give him some hints but this prompted me to look back through my collection of magazines, convention notes etc. for some more comprehensive advice on the topic. I found the following article in the notes of the Modelling The Railways of New South Wales Convention of 1993 and I thought that it might be of value to other Aus7 members looking to enhance their skills in this area. I have also added few footnotes and observations of my own based on personal experience and lots of mistakes and tears over the years. Unfortunately I am unable to give full acknowledgement to the author as the article is anonymous and my memory of who it was doesn't work too well after twenty six years. Ed.*

You have spent many hours constructing and detailing a model. You then apply the decal, a job you have performed many times. This is the easiest part of the project, just cut out the decal, soak it in water and put it on the model. No problem. But wait, one decal is peeling off. No problem, just wet it and put it back on the model. But it won't stick. You try again and again until the decal breaks up into tiny pieces. What about the other decal which looks shiny. Continual wetting has no effect and the application of a clear matt lacquer does nothing to hide the sheen. This is supposed to be the easy part of modelling. What have I done wrong?

How many of you have been in that situation? Most modellers have experienced these problems at some time, generally leveling blame at the paint. They are however usually caused by incorrect decal application. The following may help.

#### Application Techniques

##### Preparation

a) Decals don't stick well to bare plastic due to release agents which have been sprayed on the moulds. These agents are difficult to remove. Washing the model in warm soapy water can help but is not always successful. It is best to apply decals to painted surfaces. \*1

b) The water soluble adhesive left on the carrier film after separation from the backing paper is generally sufficient to fix the decal to the model. However most modelling paints produce a flat finish and the rough texture of the finish prevents the decals from completely snuggling down onto the surface.

Most modellers use a decal settings solution to remedy this. These solutions soften the decal and draw it down into the paint. However this may not be good enough for a proper finish. The decal may not conform to all the valleys in a rough finish. A decal which is not properly fixed to the surface will exhibit a shiny appearance as the carrier film will be just as visible as the decal. This appearance is called silvering. To eliminate silvering decals should be applied to glossy smooth surfaces. If using flat paint a coat or two of clear glass lacquer should be applied before decalling. \*2

c) Cut the decal as close as possible to the image by using light strokes of a sharp blade. Do not cut through the backing paper in the first stroke as the image may crack. Many light strokes will prevent this happening.

##### Application

a) Soak the decal in luke warm water until the decal slides on its backing paper. Don't leave it in the water too long as all the water soluble adhesive could dissolve. Only soak one at a time or you could find lots of decals floating in the water, losing their adhesive, before you have been able to apply them. \*3

b) Apply decal setting solution to the surface before the decal is positioned. This helps eliminate air bubbles which can become trapped underneath the decal. \*4

c) Using tweezers position the decal (still on its backing paper) on the model. Slide it off the backing sheet by holding the decal in place with a soft instrument, such as a cotton bud or paint brush, and slipping the backing paper away. To help prevent creasing the decal always slide the backing paper along the longest axis of the decal.

d) Slide the decal into its final position and blot away excess water. Any air bubbles should be worked out from under the decal with a fine soft brush.

e) Apply decal setting solution over the decal and leave it for a few minutes. Don't touch the decal as the solution will cause the decal to soften and tear apart. As the setting solution starts to snuggle the decal down into the paint it will probably cause the decal to wrinkle. This is normal and the wrinkles will disappear as the solution dries.

f) Blot away any excess setting solution.

g) Leave the decal to dry then wipe away dry solution or stains with a damp cotton bud. Rinse the cotton bud regularly during this process.

h) Check the decals for air bubbles. If they are present prick them with a pin and apply more setting solution. Repeat steps f and g.

i) Leave the model for at least twenty four hours and then, if necessary, apply another over coat of clear lacquer in the finish you desire i.e. flat or semi gloss.

#### Common Problems

a) Silvering: Clear areas of the decal appear shiny or milky. Cause: Decal not in complete contact with paint.

Solution: Overcoat model with gloss lacquer before redecaling and use decal setting solution.

b) Air bubbles under decals

Cause: Decal applied to dry surface or decal moved too much before it is in its final position. Solution: These should be worked out from under the decal while it is still wet. If the decal is dry prick the bubble with a pin and apply more setting solution.

c) Tangled decals

Cause: Decal starting to float free of backing paper when being soaked or decal moved too much before it is in its final position. Solution: Remove decal from model and float it in water. It will straighten out after careful manipulation. Float it back onto the backing paper and reapply it to the model.

d) Stains

Cause: Decal setting solution and adhesive still on the model. Solution: Wipe over area with a damp cloth or cotton bud.

e) Cracked decals

Cause: Cracked when cutting from sheet. Decal affected by heat and humidity. Backing paper too thin. Solution: Make a lighter cut when removing decal from sheet. Store decals in a cool dry place. \*5

f) Decal doesn't stick to model or peels off when dry.

Cause: Greasy fingers handling model before decalling. Setting solution not strong enough. Old decal will not be affected by any setting solution.

Solution: Wash model before decal application. Try another brand. Dilute white glue (PVA Aquadhere) in water and brush onto mounting area. This will make the decal stick but will not make it conform to the models shape.

*\*1. This applies to polyurethane as well.*

*\*2 It is not necessary to apply gloss to the whole model. Just where the decals are going to go.*

*\*3 A wet sponge can be used here and makes it easier to manipulate small decals. See tip by Bruce Lovett in his article on page 12.*

*\*4 I haven't found this to work well. It can cause the decal to break up before it is positioned.*

*\*5 Decals have shelf life. Older decals are very prone to breaking up.*



# NOT STICKING TO THE PLAN

TREVOR HODGES

For anyone who follows my AMRM column "In The Loop", you may have read the February issue with a certain degree of interest as I spent that column speculating about the possibilities of a change of scale and gauge. The President of the Aus7 Modellers Group advocating a change of scale? Blasphemy! Well, if I'm being blasphemous then I'm in good company because our esteemed editor spent about 45 minutes at the October (2018) Forum discussing his excursion into narrow gauge modelling. If Paul can do it, why can't I? ☺ To add a little clarity to this rather fuzzy picture, what I'm actually doing is contemplating the addition of a small section of narrow gauge railway to my home layout. I've had the rolling stock kits and r-t-r items for just such an endeavour into narrow gauge modelling in my kit cupboard for many years and the prospect of a bit of a wander down a slightly narrower path has become far more compelling as I've settled into retirement. So much so that I've been making some very real changes to Morpeth's track plan to accommodate the possibility that a small length of narrow gauge line will not just reside on a couple of modules in my work room but can take up some real estate on the permanent layout in the train room. We'll come back to the accommodations being made for the inclusion of a little NG track later.

Progress on the building of the Morpeth line had been rapid in the first half of 2018, so much so that the track laying was essentially complete by June, 2018. About 90% of the track was laid except for that part which had been loosely designated as the "coal branch" on the original plan, marked as "Branch" on the accompanying track plan. There were two main reasons that track laying came to a halt at this time; one being a rethink of what I wanted on this part of the layout and the other being a lack of

time to get this phase completed. On the plan there's only one spot where the track rises and crosses over another length of track and this is where the "coal branch" crosses the throat of the storage sidings. As is usual in these cases this is one of the more critical and complex parts of the layout. I'd used two Peco curved turnouts as the yard leads into the complex of turnouts that distribute trains to the storage lines. I'd also used this type of turnout at two other spots on the layout and I'd had trouble with one from the start. The problematic one formed one of the legs of the triangle that forms the junction of the main line. The very first time I ran a train into this turnout a couple of my wagons derailed and upon investigation I discovered that the track gauge widened to 33.2mm at the heel of the closure rails and these wagons just did not like this particular spot. Interestingly they traversed the other curved Peco turnouts on the layout, there were a total of six in all, without the same problem happening. I tried to repair the troublesome turnout but eventually pulled it out and constructed a replacement from scratch. Problem solved, maybe. The issue for me arising from this experience was that if this single turnout suffered from this problem what would happen if I permanently restricted access to the yard throat by building a fly over of track for the coal branch which crossed two of the same type of turnout? What if the same problem emerged later on these turnouts? I would have to pull the coal branch down to gain access. I'd have to rethink the bench work at this spot.

It was about at this point in time that a series of commitments I'd made to deliver talks at various model railway forums and to exhibit the portable part of Morpeth started to rush up on me. With the layout on public display I felt I really needed to put some time into the ship model

that was supposed to be sitting next to Morpeth pier (photo 1 and marked as A on the plan) as this was to be part of the exhibition layout. I didn't get the ship model completed in time for its appearance at the New England Convention in November 2018 but at least it was recognisable as a ship. As the turnouts on the permanent layout were causing me headaches that would take real time and thought to solve and because I had no less than four model railway conventions to attend and either show the layout or deliver talks at from August to November of 2018, I decided to simply put work on the permanent layout on hold for the duration.

As Christmas and the New Year rolled around I started to work toward getting back into layout construction but I had a couple of other commitments to attend to first, not the least of these was working on an SAR S class locomotive for long time Aus7 member Brian Thomas. I'd also agreed to hand make a few turnouts for another Aus7 member and as I commenced work on these it dawned on me that this would be a good time to build and install a couple of turnouts for my own layout to solve a separate problem that had emerged as soon as I'd run trains. As I'd built the bench-work and laid the track for Morpeth I'd made some minor additions and alterations to the original track plan to take advantage of opportunities that revealed themselves as construction commenced. One of these was a small "alcove" formed at the entrance to the room by a window that sat in a shallow recess in the wall (Photo 2 and marked C on the plan). I decided that this spot would make a perfect spot for a rural supplies siding and have designated this as the superphosphate siding for no better reason than I have a wagon numbered and lettered for a well known brand of this farm product. The siding is extremely



small and it's on a trailing turnout so will be a pain to shunt but I'm sure my operating crew will relish the challenge!

While some minor changes to the original track may have come about to take advantage of unforeseen opportunities that weren't apparent on a 2D plan, there was a major problem in Queens Wharf yard that wasn't going away, no matter how long I ignored it or sought to work around it. The simple fact was that the loop at QW was too short and had resulted from my decision to use the crossover on the original QW instead of making some new track and using the full space available to me. Photo 3 shows the original crossover at the southern end of QW yard. Once again using a pre-existing layout module, what I thought would be time and energy saving exercise, had turned out to be anything but. The first time I ran a train round the layout it became all too apparent that the loop was inadequate to accommodate even my modest collection of rolling stock. The shortest loop on a layout (in most circumstances) dictates the lengths of trains and the loop at QW simply wasn't long enough for the trains I wanted to run. So as I was in the process of building some points for a friend I decided to make a couple for myself to allow the installation of a new crossover further along the line and also connecting up what was going to be a dead end siding and turning this into a goods loop. Luckily there was about 1.2m of plain track beyond the original QW loop that would accommodate the required point work. I did contemplate lifting and removing the original turnouts however these had been laid on 3mm mdf and this had been glued to the sub-roadbed. To remove them would have been a major challenge and would have required me to relay the entire section of track including the turnout to the Morpeth dairy which you can see in Photo 3 (Marked as B on the plan) so I took the easy route and simply left them in place. I may do what the prototype did and pin them open but at this stage I'm going to see if an

operational use can be found for them. Photo 4 shows the new arrangement of the track-work at this end of QW yard with the as yet unfinished turnout I'm in the process of making. The result of this work will be a loop that is in the order of 1m longer than the previous arrangement.

The final section of the layout that is undergoing changes from the track arrangement envisaged on the original track plan is the area marked as D on the accompanying plan. My original intention was to make this the a short coal branch line. There was a small, exploitable coal deposit at Raworth that had been worked by a local company that also operated a brick works from the same site. Some of the coal was used to fire the brick kilns but there was enough excess from the deposit to allow it to be shipped out in S wagons which were presumably hauled to the coal tipple at Queens Wharf and loaded onto barges for shipment down the Hunter River. This tipple was the reason Queens Wharf was in fact called a wharf even though for most of the 20<sup>th</sup> century the tipple was long gone.

I "imagineered" this scenario as being larger and more intensively worked than it was in reality to the point where the deposit was acquired by the South Maitland Railway Co in the 1940s and had assigned one of their 10 class locomotives to haul the coal out and down the line. I'm planning to scratch build a member of this class of locomotives as my next scratch building project. However I've spent the past 6 months thinking about what might fit into the space I've allocated to it and the track plan at this stage consists of a plain run around loop under a coal loader. Not the most exciting modelling prospect in the world. So I've been toying with the idea of a narrow gauge interchange in this spot where the SG meets the NG in a yard that modestly mirrors the G&D in the 20s in the highlands south of Sydney. If you look at photo 5 you might see a length of Micro Engineering NG track sitting on the ply wood to give me a sense of scale next to the SG line. Nothing is settled yet and I'm yet to commit to anything approaching actual track laying.

Watch this space.

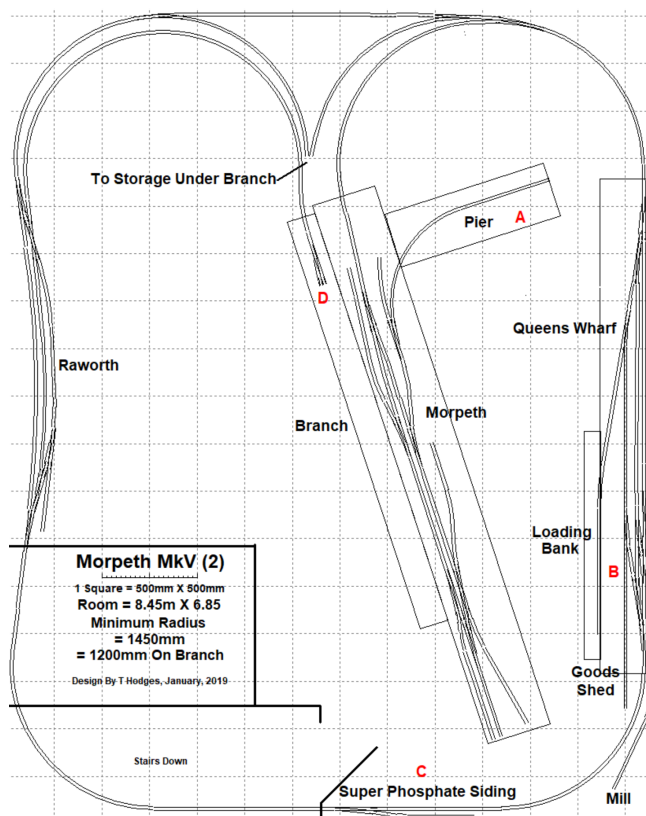






Photo 1.



Photo 2.



Photo 3.



Photo 4.

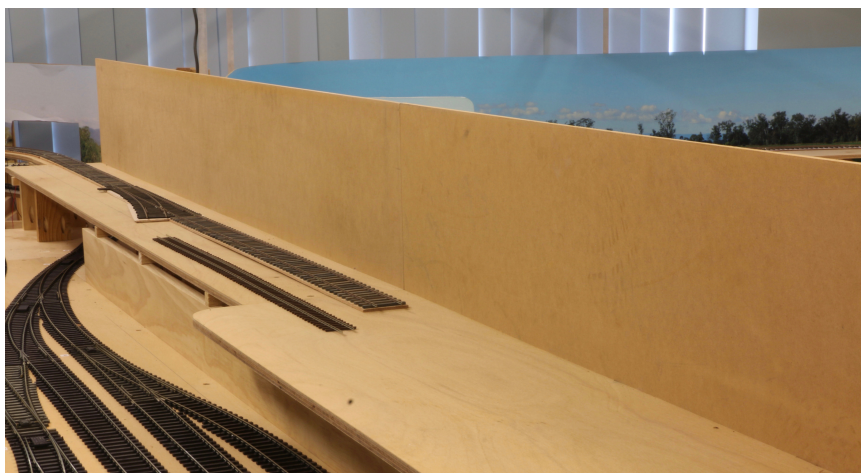


Photo 5.

Do you want YOUR organisation the Aus 7 Modellers Group Incorporated to prosper and grow or will you be complacent, don't care, like so many Australians in all walks of life and see YOUR organisation wither and die ? If your answer to the first question is YES, there are many ways you can help.

1. Assemble some of the kits in your cupboard, take photos, write an article and send it to the Editor. You don't have to be a literary giant as he can help pull it together. Then display these models at one of our Forums and give a short talk. Don't let these kits end up being disposed of on ebay at a later date by your family which happens too often. In our ranks are some of the best railway modellers in Australia or for that matter, the world. If you think you do not have the experience to assemble a kit or have a problem, email the secretary who will put you in touch with one of our members who can help.
2. Contact past members that you know and invite them to rejoin. Point out that they are missing out on a lot of pleasure and friendship.
3. Build a small portable layout for home use and maybe display it at local exhibitions or at one of our Forums. In the past we have seen several examples at our Forums. You could even contact the principals of your local primary or high schools to show your layout and promote our hobby. There have been articles in past issues of 7th Heaven on building small portable layouts. Alright, I will "put my money where my mouth is". I have a decent sort of a workshop, so, if you want help in building a small portable layout, email the secretary who will pass on my details.
4. Contact people you know in other model railway clubs or associations who model in a different scale and invite them to a Forum. Remember, YOUR association is not restricted to modelling the N.S.W. Prototype and it does not matter if they model in ON2, ON3, ON 3.5 or standard gauge, it is all O Scale.
5. We have two excellent Forums each year. Have you thought about contacting the Australian Model Railway Association and the National Model Railroad Association – Australasian Region to organise a joint O Scale / O Gauge get together in, say, a centrally located Scout Hall or similar in Sydney for a Saturday in July or August. Both of these organisations have O Scale/O Gauge modellers in their membership. This would be a golden opportunity to exchange ideas, meet new friends, promote O Scale and a chance to build and show a portable layout or test track. Of course this would provide an opportunity for those modellers without layouts to run their locos and rolling stock. With three organisations involved in the cost of hiring etc. it could be split three ways. If it was organised for a whole day and the venue was a Scout Hall, the scouting mothers could be asked to provide a light lunch with all proceeds going to the scouts. Attendees could be charged a small fee to cover costs. As our association and the N.M.R.A – AR do not have permanent club rooms, this could increase interest in O Scale particularly for an O Scaler who does not have room for a layout and needs somewhere to run his locos and rolling stock. Naturally, our band of dedicated and enthusiastic O Scale suppliers would be invited to attend.

Of course, the age old argument of modelling in O Scale rears its ugly head with the "don't have the space or time". Look at some of the back issues of 7th Heaven where you will find articles on building small layouts. As for time, spend an hour less time in front of the TV three times a week to do some modelling. You will be amazed at how much you accomplished and how much pleasure you experienced at the end of the week. No excuses, just do it !

I can hear the muttering amongst the ranks. "What right do you have to lecture me on what I do or don't do with my hobby". Since the early days I have been a member of OUR association who supports our hard working committee who work very hard to support you. Therefore I have every right to stand up and be heard, the same as you have that right, when I see a lack of support for OUR association which could lead to its downfall. If I have any friends left in OUR association after this is published I will be very grateful. The fate of our association is in your hands.

## Commercial News

Trevor Hodges

### ModelOKits

*ModelOKits*, PO Box 379, Sydney, NSW, 1700, (02) 97073390, 0404935663, <http://www.modelokits.com> & [sales@modelokits.com](mailto:sales@modelokits.com), shop open most Fridays between 10am to 1pm at Unit 4/61-71 Rookwood Rd Yagoona NSW 2199, have passed on the following news:

- The NSWGR (Z)13 4-4-2T locomotive pilot model has arrived and is available for viewing and the ModelOKits store. Only a few corrections are required. Kits will be available at the end of March/April 2019. RTR to follow progressively.
- The Minerva Models Manning Wardle K will be available from ModelOKits in March. For anyone who pre-ordered at pre-order prices from Minerva, MOK will be handling the delivery to Australian customers. There will also be stock available at after delivery prices. The Manning Wardle K's were used on the Camden Tramway, later on the Carlingford line and towards the end of their lives on some private colliery lines. There are a few modifications to make to bring the models in line with the two that ran on the NSWGR. If it turns out that there is enough interest in this conversion MOK will develop a conversion kit. Please let us know if you are interested.
- TRC kits are now available at \$275 per kit.
- FS and BS kits should be available in April 2019. Price \$425 per kit.
- New Dapol stock has also arrived, with some newly released wagons.
- We will shortly have stock of the O scale Parkside range of kits from Peco.





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



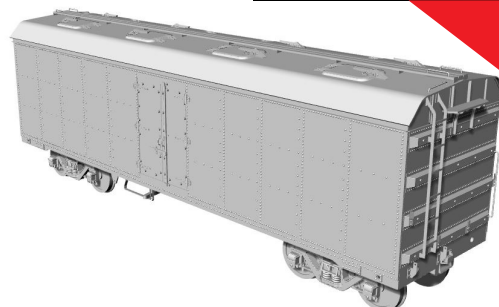
## "TRC" WAGON KIT

### Kit Includes:

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

**Available NOW!**

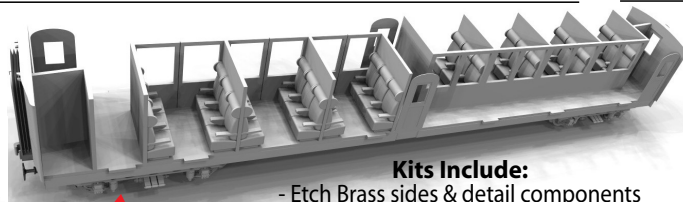
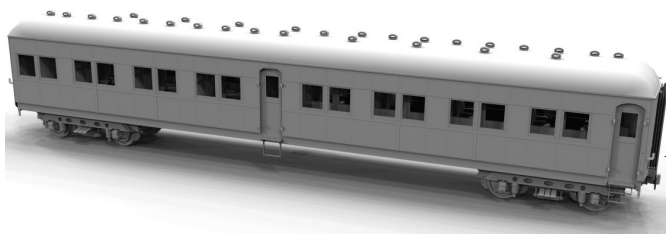
**Price: \$275.00 per kit.**



**AVAILABLE NOW**



## NSWGR FS & BS CARRIAGE KITS



### Kits Include:

- Etch Brass sides & detail components
- Laser cut acrylic chassis
- Single piece styrene roof
- 3D printed ends, bogies and detail components

**Available End of April 2019**

**Price: \$425.00 each.**

**COMING SOON**



**COMING SOON**

## NSWGR RUB CARS

Available in individual passenger cars or sets  
Pilot models available for viewing end of March 2019

Kits available: SFS, SBS, OFS/OBS, RS, & PHS

Available by order only  
**Expected September Qtr 2019.**  
**(Prices TBA)**



**COMING SOON**

## ModelOKits are pleased to announce

We have taken over the On30/On3 and O Scale product ranges from "The Railcar" following the announcement by Paul and Herna Ward that they are closing. We are also stocking a number of ranges carried by the Railcar that will cover all scales including:

Evergreen Plastics, K&S Metals, Mt Albert Lumber, Clover House, Micro Fasteners

**AVAILABLE NOW**

**ESU**

- Loksound V4 decoders \$165
- Loksound LV4 decoders \$230
- Other ESU accessories available
- Lokprogrammer, decoder testers, cabling, Powerpack (stay alives).

**British O Scale RTR**

**dapol**  
Model Railway Company

**Dapol Now in Stock**

**HELJAN**

**Heljan Now in Stock**

**MINERVA**  
MODEL RAILWAYS

**Minerva Now in Stock**

**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
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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 here December 2018

Kits Available - March/April 2019

RTR to commence delivery April/May 2019

**Kit Price \$1500**

**RTR Price \$2750**

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**Kit Price \$1795**

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BELPAIRE LOCOMOTIVE**



Photos of pilot model  
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**COMING  
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**Minerva Manning Wardle K Class**

**Versions available:**

Black Lined Yellow/Red  
Dark Red, lined Yellow  
Deep Blue lined red/straw

These locos saw service on the NSWGR as engines 292 & 293 under P(127) class (Later 532 & 533) on the Camden Tramway, Clyde - Carlingford Line and Private Industrial Lines. If there is enough interest we may put together a conversion kit.



**Prices: DC-\$495 DCC-\$595 DCC Sound-\$725**

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