

7th Heaven

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Bring Your Model O Kits 36 To Life
How To Fill Your Tender With Coal
New York Central In The Hills
Review: GW Universal Rivet Tool
Commercial News
A Simple Pick Up Device



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Straight Down the Line - Opinion

by Trevor Hodges

New Year's Resolutions

Call me the Grinch of New Year but I refuse to make New Year's resolutions. If I want to give up the grog or lose weight I see no reason to put off till the start of the following year something I probably need to do immediately. However, because it's that time of the year I've been listening to a lot of chatter on radio and TV about the psychology of resolutions and the reasons that some work while others fail miserably. One piece of advice I've heard repeated at least three times in the past week is to set yourself attainable goals and not ones that will almost certainly see you fail.

So instead of setting completely arbitrary New Year's resolutions I've been trying to follow this avalanche of good advice and put some thought into modelling projects I wouldn't mind completing before 2016 comes to a close but have a reasonable prospect of succeeding. OK, I'll admit that this probably qualifies as setting New Year's resolutions but I'm holding onto the distinction between specific goals and broad directions.

I think the most obvious project I would like to see completed is my scratch built (Z)20 class. For those of you who don't already know, I have a wager on the completion of this loco with Aus7 member Bruce Wood and that probably should be incentive enough to see it completed. However a project completely unrelated to railway modelling has diverted my attention recently and I've left the 20 virtually untouched for well over two months. The 20 needs to be finished and I think if I put my mind to it I could be earning my free lunch by the end of March. If I do finish first it will be a bit of payback for Bruce winning the PSM (C)38!

A second project that is very high on the "to do" list is the completion of Morpeth. For those of you who saw Morpeth at the Aus7 ExpO in March, 2013 it may have seemed virtually complete but that was just a thin veneer layered over a large number of jobs that need doing before I can declare the layout complete. I've decided that when the 20 is done (in a couple of months or so Bruce, so get your money ready) Morpeth is going to be the sole focus of all my modelling efforts till it's complete. I estimate there's probably two more years work on the layout before it's finished and these include a completely new pier scene with ship model, a continuous run with new storage sidings out the back and a lot more trees. There's always a need for more trees! I'm glad I don't have a wager on the completion of the layout.

Finally I'd like to make a start on my new layout room before the end of 2016. That's the room I'm going to be building my new permanent layout in that happens to have a house attached. Don't tell my missus I said that!

So that's my list, what's on yours?

A MESSAGE FROM THE EDITOR

ONCE AGAIN THE FUTURE ARTICLE FILE IS GETTING VERY SLIM. I WOULD LOVE SOME FIRST TIME AUTHORS TO SUBMIT SOMETHING AND IT'S NOT HARD. I PREFER WORD FORMAT TEXT AND JPEG PHOTOS OF AT LEAST 250KB BUT CAN WORK WITH JUST ABOUT ANYTHING. EVEN HANDWRITTEN HAS BEEN DEALT WITH IN THE PAST! IF YOU HAVE SOMETHING IN MIND WHY NOT CONTACT ME AT THE EMAIL IN THE GREEN BOX TO DISCUSS IT AND I CAN HELP YOU OVER ANY UNCERTAINTIES. PLEASE THINK ABOUT IT AND GIVE OUR REGULAR AUTHORS A BREAK.

Aus7 Modellers Group Inc

P.O. Box 3404 Asquith NSW 2077

www.aus7modellersgroup.org

President

Trevor Hodges
trevorhodges@dodo.com.au

Secretary

Stephen Reynolds
spotsreynolds@iprimus.com.au

Treasurer

Anthony Furniss
anthonyfurniss@rocketmail.com

Vice President

John Parker
johnrbp@tpg.com.au

7th Heaven Editor

Paul Chisholm
paulchisholm@bigpond.com

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On The Cover

John Parker's Valley Heights features on the cover as some form of recognition for his continued support for this magazine with his articles on DCC/Sound installations and a range of other topics.

Earlier articles on this layout appeared in issues 34 and 38.



Bring your Model O Kits 36 class to Life

Photographs by the author and courtesy of Model O Kits

If you were fortunate enough to attend last year's Model Railway Exhibition at Liverpool you might have seen and heard the pilot model of 3642 running on Arakoola or on the Model O Kits display layout. This model included a true 36 class sound file researched and developed over many hours by Linton Towell. Thanks Linton. The model attracted many favourable comments as it really did look and sound like the real thing.

To achieve those results I was able to squeeze in both the speaker in its enclosure and the decoder, but limited access to the completed model prevented the inclusion of any lighting. Power pick up as designed is from plunger pick-ups on the 6 driving wheels. This was O.K. on most of the track but clearly this was an area where additional power pick-ups would be desirable.

If built exactly to the DJH instructions the locomotive should operate perfectly but without any sound or lights. Whilst admitting my own bias, I feel that sound together with operating lights has become an essential part of this hobby; part of the appeal of O scale is that it is just that little bit closer to the real thing.

So apart from the sound what are the essential minimum extras that we need to be able to control? The number of separate functions required is one of the key parameters to consider when deciding what decoder to use. This kit comes complete with a very efficient modern motor and gearbox so there is no requirement for the larger Loksound decoders such as the

Loksound XL 4.0 or the new Loksound L V4.0.

The standard Loksound V4.0 is fine but it does have the limitation of only 4 functions, headlights plus Aux 1 and Aux 2. This can easily be extended to 6 with the addition of the Loksound #51968 adaptor board which also provides the additional benefit of making the decoder pluggable. But is six functions enough?

Generally no, let's look at what is normally required;

Front and rear headlights = 2 (Only 1 on this model as there is no requirement for a rear headlight).

White marker lights = 2

Red marker lights = 2

Simulated firebox, minimum = 1

Cab lighting = 1

That is a total of at least seven functions so some compromise would be necessary unless we add an additional lighting decoder. If this was an HO model there might be a temptation to place the decoder and speaker in the tender. Clearly there is

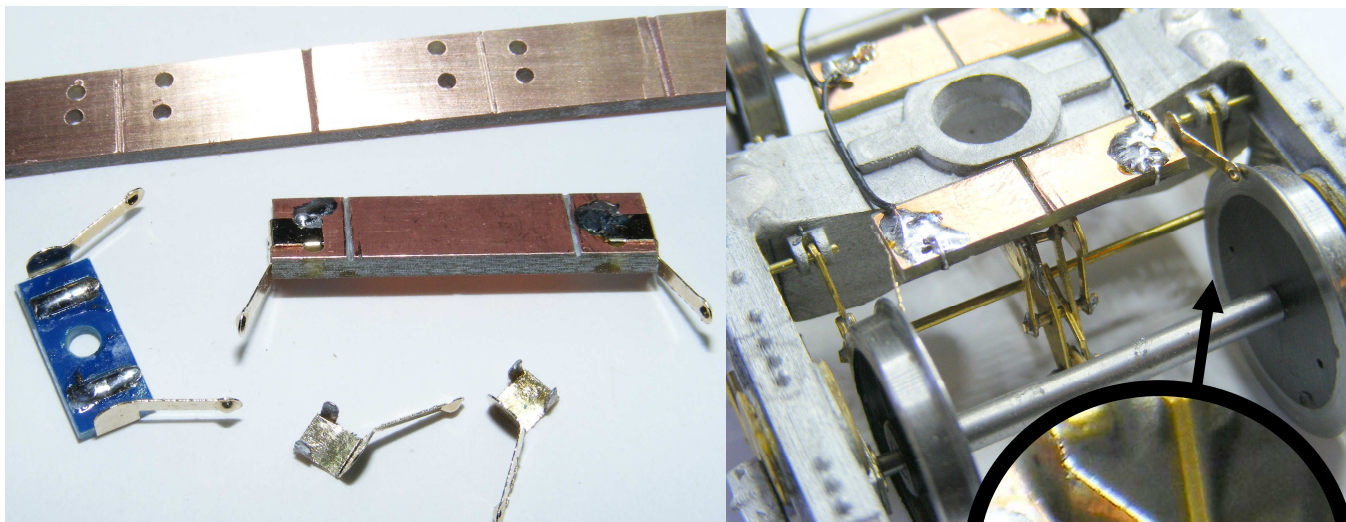
plenty of space and it would permit the use of the largest possible speaker however as of course it is an O scale Model I would urge you to resist that approach. Obviously the sounds of a steam locomotive originate in the loco not the tender, so the best location for the speaker is in the boiler.

The intention is to mount both the speaker and the decoder in the boiler. The smokebox front will be left removable to permit access for the decoder installation. So the recommendations for this model do also involve the installation of a small inexpensive lighting decoder in the tender solely to take care of the rear marker lights. This will be connected to the new power pickups added to the modified bogies. A pluggable two wire connection will be installed between the locomotive and the tender resolving the criticism mentioned earlier of the original design restriction of pick-up only from the 6 driving wheels.

Building the Model O Kit

The Model O Kits NSWGR 36 class kit from DJH follows the pattern set with the AD60 Garratt by including in the box, in lieu of any printed instructions, a CD containing a wealth of information including 28 pages of high quality photographs of the various steps required in the assembly of the model. Everything is included in the box to build an O scale DC version of this popular locomotive. I am sure that you, like me, will be keen to start construction. Building a DCC version complete with sound and lights does however require some additional parts. Hopefully this article will assist by identifying what extras are required and how to fit those variations into the construction process.

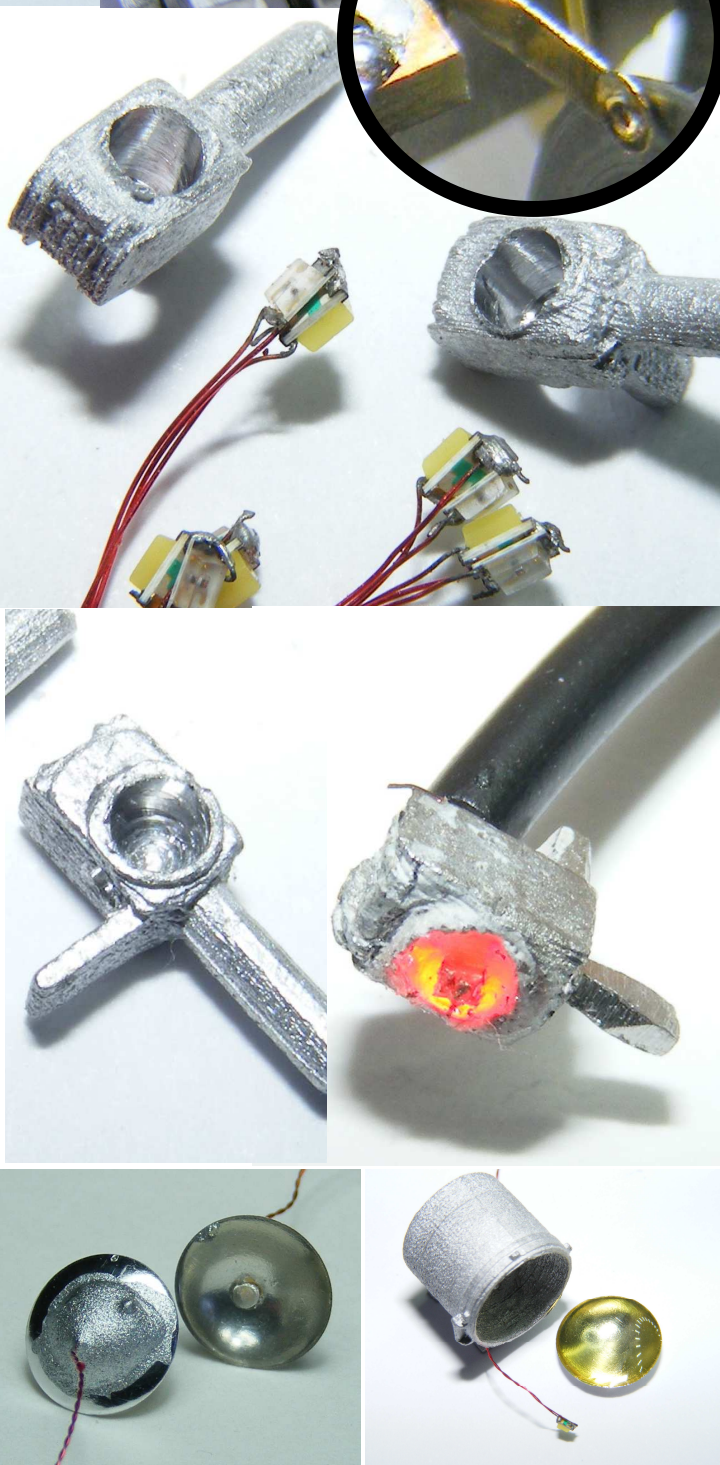
John R B Parker



Obviously in the limited time available I have not yet assembled my 36 class, but I have started, at least in a limited way, as it was necessary to build the two tender bogies to check what method of power pick up would be effective. There are many different ways of achieving this but I am happy with results I achieved based upon the HO pickups available from DCC Concepts. These consist of two shaped gold plated contacts mounted on a small piece of PCB. I found that I could, with care, remove the contacts and re-assemble them into an O scale version fabricated from a length of O scale PCB sleeper in place of the original material. The assembly was then glued in place as shown. Connections are then made to the isolated copper pads associated with each contact.

The kit includes 3 different white metal castings for the marker lights. The two marker lights mounted on the rear of the tender use the same casting which could be lit from inside the tender using two colour red and white tower LEDs. The two front marker lights are "handed", both left and right, and because they are mounted slightly away from the boiler on brackets represent a slightly more difficult problem. I chose to illuminate them all using the twin red and white Nanolights thus avoiding the problem associated from the slight difference in colour of the more rugged tower versions. The holes for the Nanolights were drilled by hand, starting with a 0.7mm drill and then progressively larger drills up to a #48 drill, about 1.9mm diameter. The large sprue extending from the bottom of the casting was reduced in size to represent the hand operated shaft which on the original moved the red lens in place. Two coats of white paint were applied internally to resist the possibility of short circuits. Finally the cavity was filled with 5 minute epoxy glue and the LED was embedded in place. I found it necessary to top up with additional epoxy the next day to give the best looking result.

Headlight: If you still have access to a #408 MV lens, unfortunately no longer available, it can be partially drilled from the rear to take a white Nanolight and then mounted in the headlight casting otherwise the "glass" can be fabricated from clear styrene.

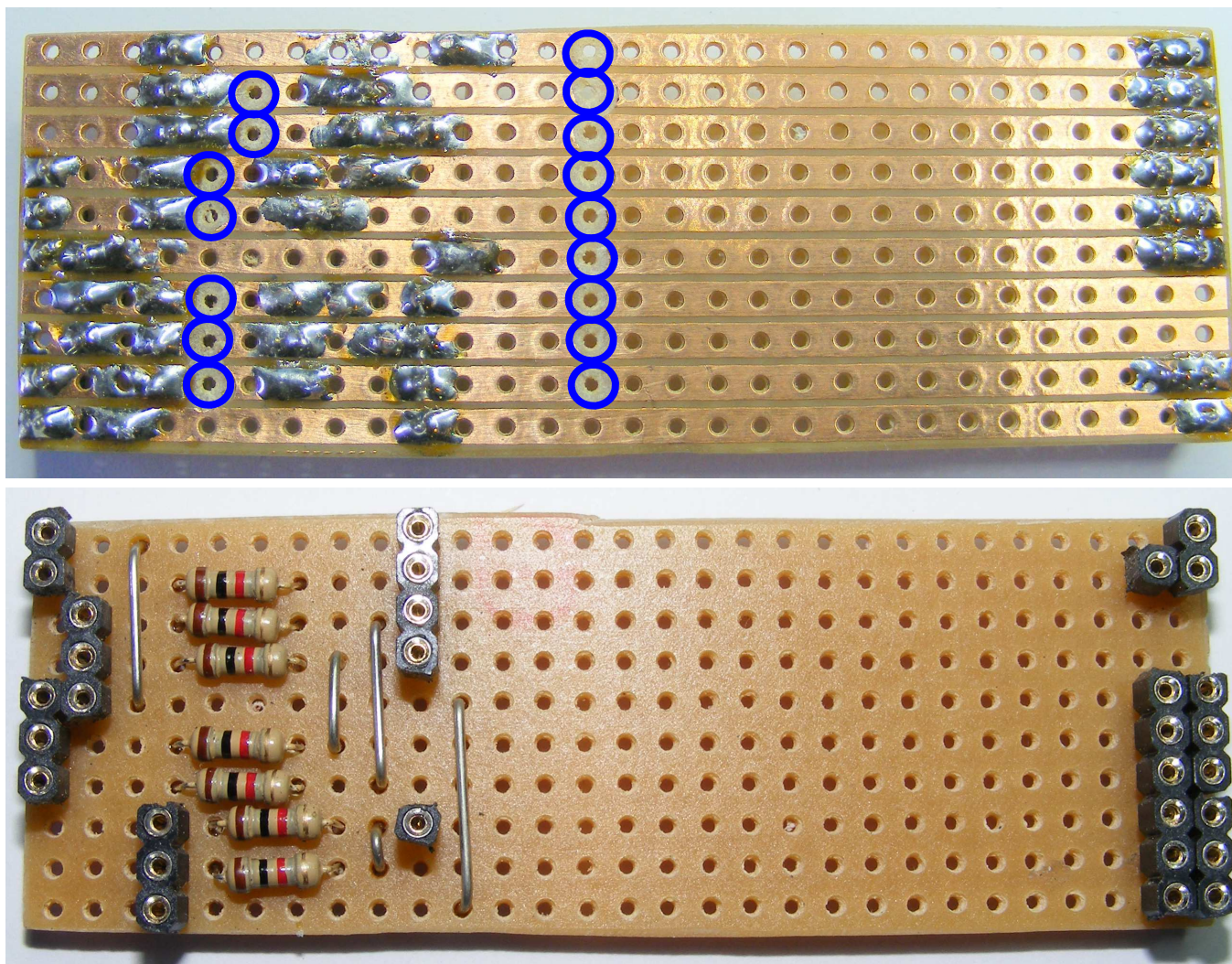


Those of you familiar with previous articles will not be surprised to read that once again Vero style printed circuit board material is used as a basis of each of the various assemblies:

1. The main loco assembly will be mounted in the boiler. This includes

the 21 pin plug-in Loksound V 4.0 decoder and the Loksound #51968 adaptor board. 2. A second significant Printed Board Assembly is mounted in the tender. This assembly includes a TCS FL4 lighting decoder which controls the rear red and white marker lights. 3. There is

also a small PBA mounted in the fire-box to simulate the illumination provided in the prototype by burning coal. The construction of these assemblies is relatively straightforward; the enlarged photographs of both sides of the completed boards should be easy to follow.



The Vero type matrix board is best cut to the desired size with a razor or coping saw. It can also be handled in a similar way to styrene using the score and snap method, provided you score along a line of holes. The rough edges produced by breaking the board can easily be finished off with a file. The Main Loco Board is 29 holes wide and 10 holes high (approximately 75 mm x 26 mm). It is generally best to cut the tracks where

indicated by the blue circles before adding any of the components. Check the position, (by counting holes), carefully before using a Spot Face Cutter or a 3mm drill hand turned between the fingers. You only need to ensure that the track is cut, do not drill through the board. This board has 16 locations where tracks are cut. Turn the board over to the component side and

add the 5 wire links using tinned copper wire. The 7 x 1K ohm resistors can then be soldered in place.

The last items to add are the sockets cut from Jaycar PI-6470 I.C. socket strip. The lengths required include 2 x 6 way, 1 x 4 way, 3 x 3 way, 2 x 2 way and 2 x 1 way sockets. They should all be soldered in place. We will return to this PBA later as it also requires the addition of the #51968 adaptor board.

Decoders

ESU Loksound

1 x Loksound V 4.0 Decoder (21 pin)
1 x #51968 21 pin Adaptor Board

TCS

1 x FL4 Decoder

Model O Kits

1 x Round Speaker Box
or 1 x AS 3030 Speaker Box

EBay

2 pin Micro JST plug and socket

Jaycar

1 x AS3028 40mm 4 ohm speaker

or 1 x AS3030 36mm 8 ohm speaker

1 x HP9544 Vero type PC board

4 x PI6470 32W I.C. Socket strips

1 metre x WM4516 16 way rainbow ribbon cable

1 x pack of 8 x 3K3 Resistors RR-0584

DCC Concepts

1 pack Prototype white Nanolights (6 LED's in each pack with resistors)

1 pack Red/White Nanolights (6 LED's in each pack with resistors)

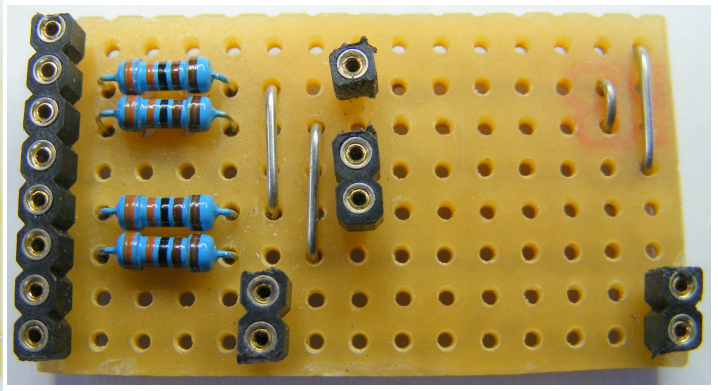
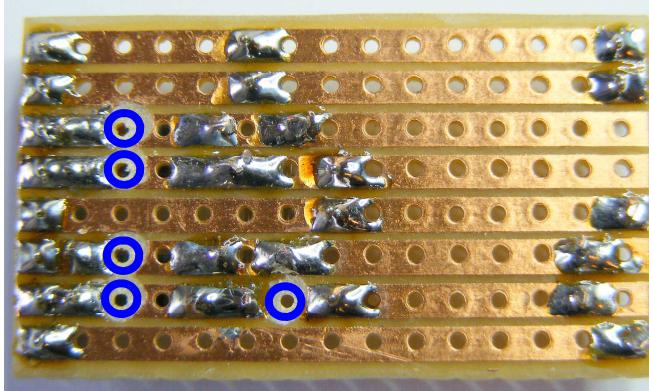
1 pack Protowhite MicroDot 1.8 mm LED (6 LED's in each pack with resistors)

1 pack LED-YL3 (6 LED's in each pack with resistors)

1 pack LED-RD3

(6 LED's in each pack with resistors)

**Additional Parts
Required**



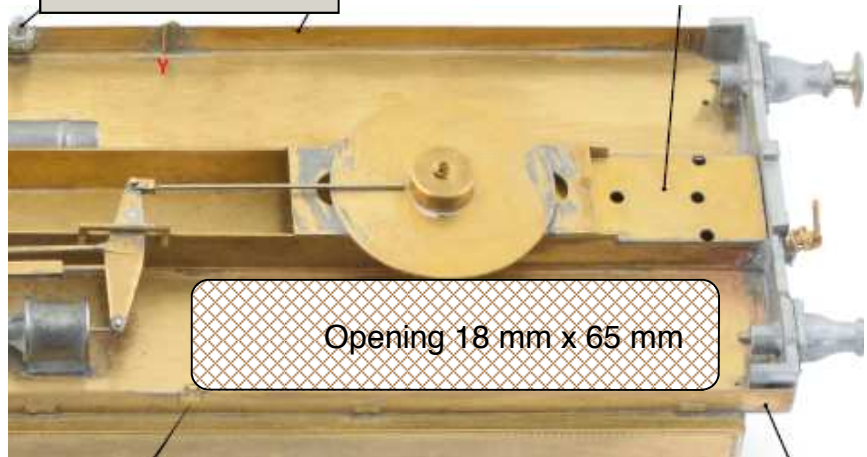
The smaller Tender Board can now be tackled. It is 15 holes wide and 8 holes high, approximately 40 mm x 22 mm. As indicated by the blue circles there are 5 track cuts to make and 4 wire links to insert and solder in place. The 4 x 3.3K ohm resistors can also be soldered in location. Note that these resistors are 3.3K ohms not the more common 1K ohms, which if used will result in overly bright rear marker lights. The last items to add are the socket strips, cut as before from PI-6470 I.C. socket strip. This time 1 x 8 way, 3 x 2 way and 1 x 1 way socket is required.

Follow the wiring diagram to terminate the FL4 decoder with a 4 pin and a 2 pin plug. Neither the pink or brown wires will be used so they can be shortened. Due to its design it does not appear to be possible to build the tender as two parts permitting internal access. As we need to mount this assembly inside the tender I would suggest an opening in the floor of at least 18 x 65 mm. This will also permit access to the rear marker lights as this board is attached to the inside wall with 3M double sided tape.

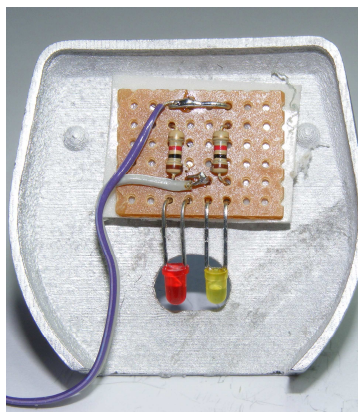
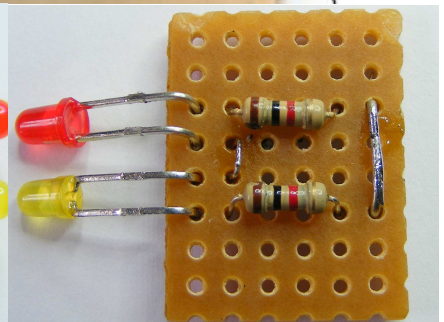
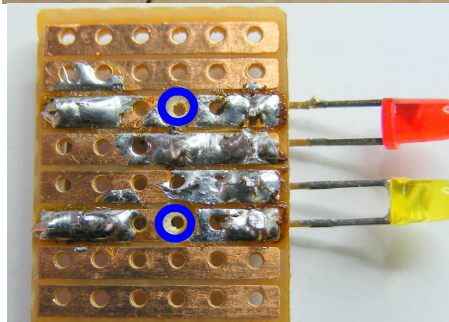
The smallest and simplest of the three PBA's will be mounted behind the firebox casting to simulate the operation of the firebox. Similar construction methods to the other assemblies are used. This board is 6 holes wide by 8 holes high, approximately, approximately 17mm x 22 mm in size. Only two tracks need to be cut as indicated by the blue circles. Two wire links are inserted from the component side and then two 1K ohm resistors. Two LEDs, one red and one yellow are soldered to the board but no sockets are required as will be terminated in a lead with a two pin plug for ultimate connection the main board mounted in the boiler.

Two LEDs will be positioned under the cab roof by gluing in place. A three wire connection will link it back to the main board in the boiler. (See the wiring diagram). To reduce their visibility the resistors for these LEDs are mounted on the main board rather than in the cab.

Decoder secured in place with fishing line



Opening 18 mm x 65 mm



Function Allocations

F4 and F5 operates both decoders

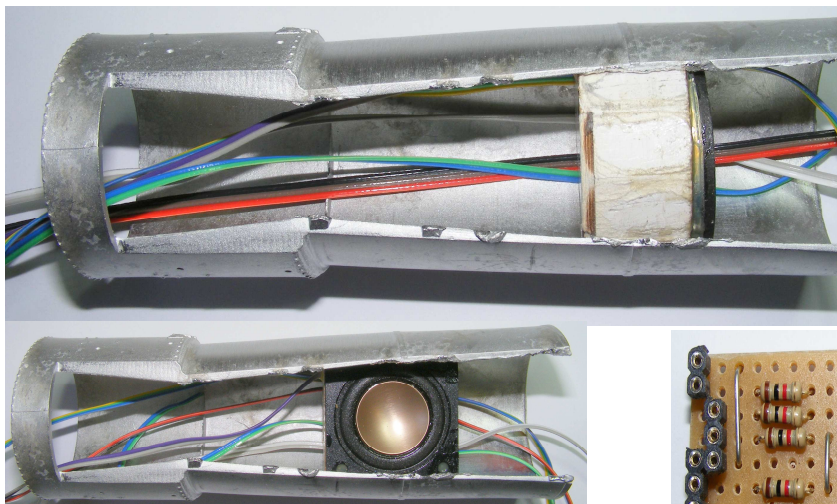
F0	Headlights + Dynamo sound (directional)	
F1	Start sound sequence plus firebox (Aux 4)	
F2	Whistle	
F3	Cylinder cocks	
F4	White marker lights on/off (Aux 2)	
F5	Red marker lights on/off (Aux 1)	
F6	Cab lights (Aux 3)	
F7	Blowdown	
F8	Sound fade	F9 Dim Cab lights
F10	Coal shovelling	F10 Coal shovelling
F11	Injector	F12 Water Fill
F13	Grate clean	F14 Dampener Clean

The Round Speaker Box from Model O Kits is used as the enclosure for the 40 mm 4 ohm AS3028 speaker, the best choice for your 36 class. This simple laser cut kit includes a notched piece used for the back and second piece, without notches which should be modified but cutting out a 25 mm diameter hole from the centre. (It is possible the future versions will include a third piece with this cut-out.) The box is assembled with PVA glue with the modified piece inside at the rear of the box. After the glue has dried the box should be finished by "rounding off" all the angular edges with a file or sandpaper. Test to ensure that it will fit in the boiler casting so that the rear of the box is 90 mm from the front edge of the casting. You will find that a reasonable amount of the cardboard will have to be removed. The holes in the side of the box should be sealed with glue and a new hole

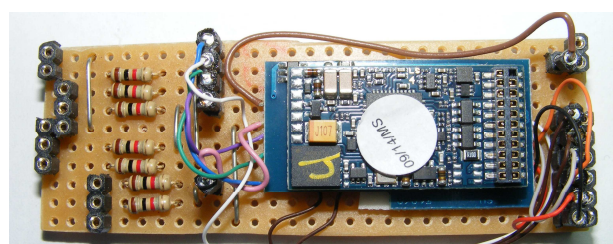
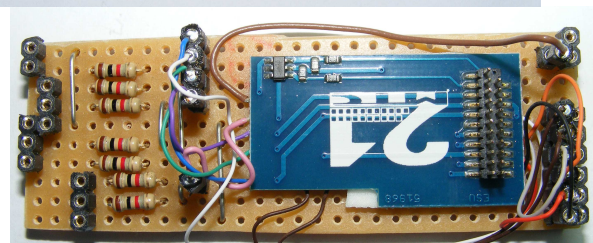
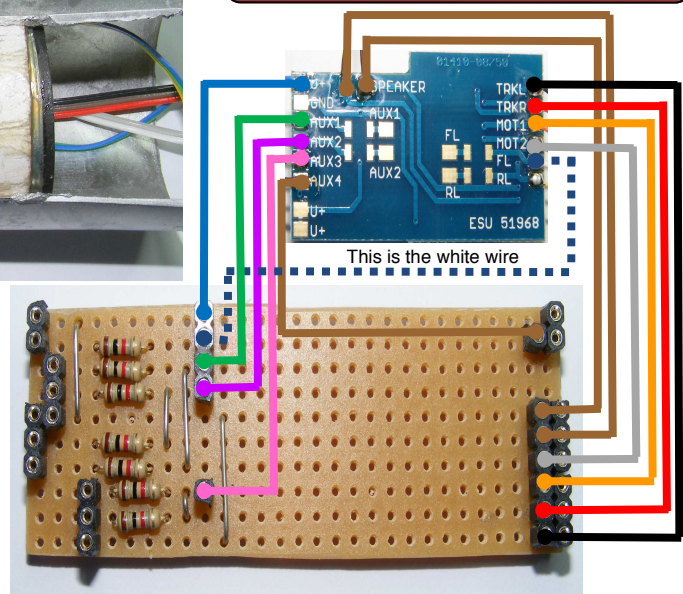
made in the rear for the wiring which will terminate on a two pin plug. Pull the wires through the rear of the box, solder to the two connections on the speaker and then glue the speaker in place using acrylic Kwik Grip, or similar, to ensure there are no air gaps. The finished speaker box including the speaker as well as the necessary wiring will be a fairly snug fit. A small amount of glue will hold it in place. It must be installed as part of the assembly process, it will not be possible to add it later after the boiler and footplate assembly has been completed. If you do not have a AS 3028 speaker, the 36 mm 8 ohm AS 3030 mounted in the square AS3030 speaker box can be used. It will fit in the boiler in a similar location but this time the speaker will be facing downwards. Ideally in this case two speakers should be wired in parallel but I doubt if there is sufficient space for the second speaker.

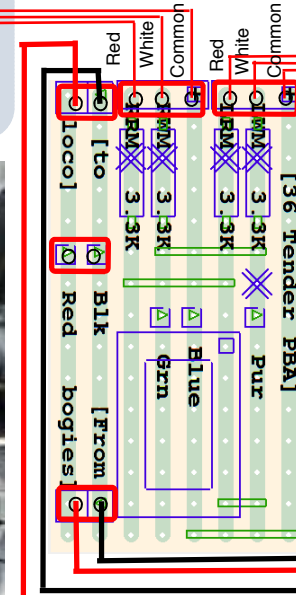
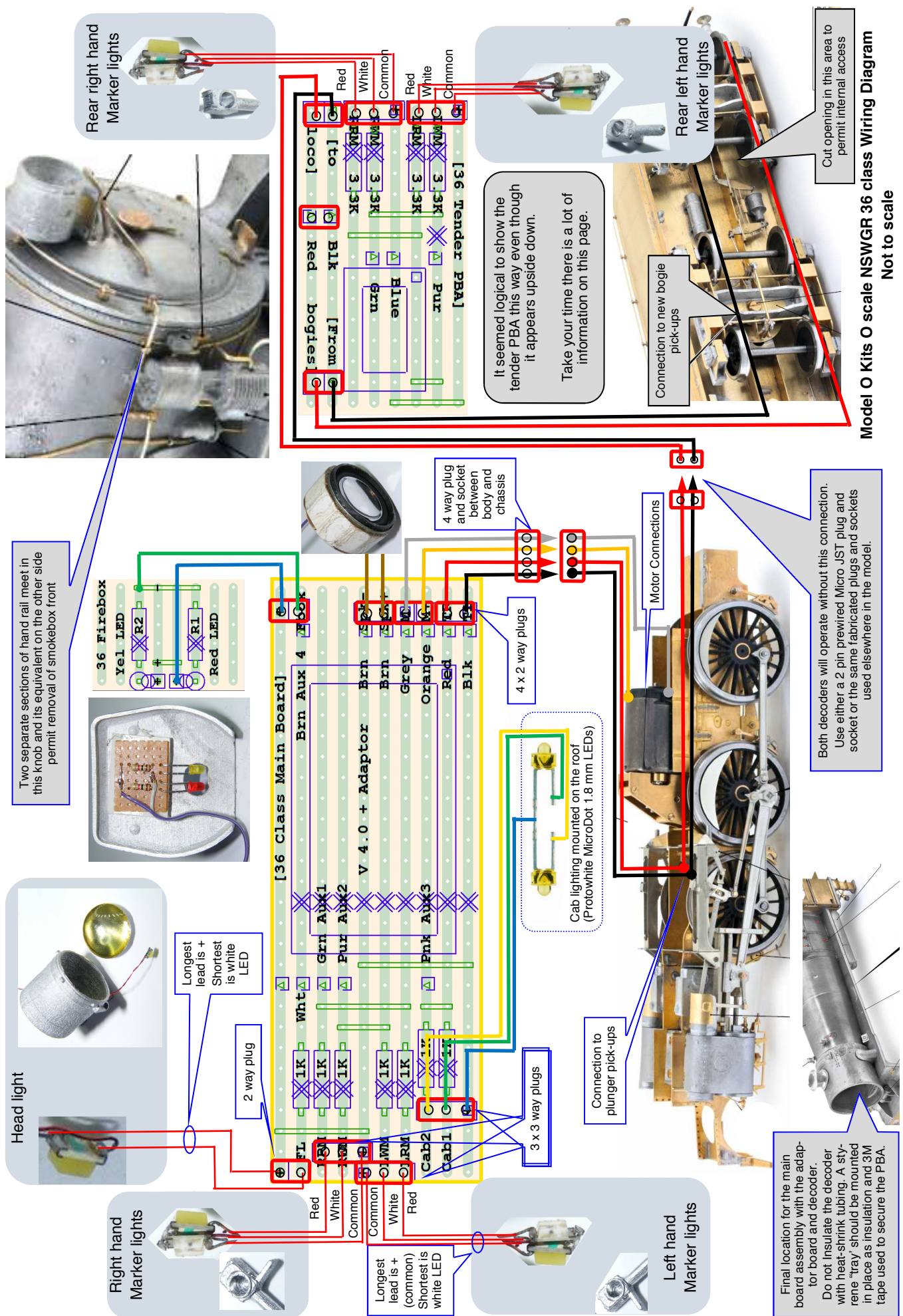


Programming the two decoders will be covered at a future workshop



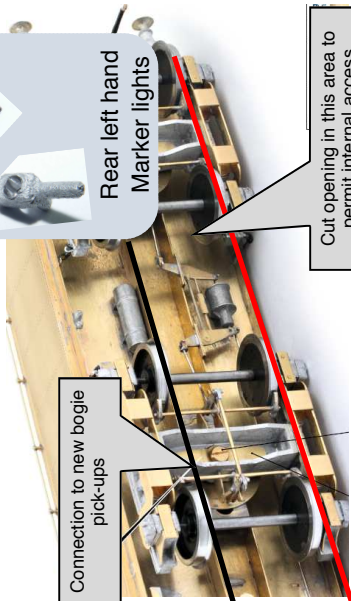
We can now return to complete the main loco PBA by making the necessary connections to the #51968 adaptor board. Although sockets have been provided on the main board to permit the use of plugs for all the connections from the adaptor board, I chose to solder directly to these sockets. It is unlikely that it will ever be necessary to remove the adaptor board. Just follow the diagram shown here. *These connections are not shown on the main wiring diagram.* The adaptor board comes complete with most of the wires but you will have to add both the pink and brown wires for Aux 3 and Aux 4 respectively. The yellow wire, (rear light) is not used on this installation. The two brown speaker wires can be cut from the Loksound 4 decoder and re-connected where shown. This will ensure that the decoder remains pluggable without any soldered connections. The adaptor board is then turned over and secured in place with 3M double-sided foam tape. Ultimately the decoder will be plugged in place as shown.





It seemed logical to show the tender PBA this way even though it appears upside down.

Take your time there is a lot of information on this page.



Cut opening in this area to permit internal access

Model O Kits O scale NSWGR 36 class Wiring Diagram
Not to scale



In this article, I will explain with step-by-step instructions how I approach the job of filling my tenders with coal. The supporting photos provide an illustrated coverage of the job.

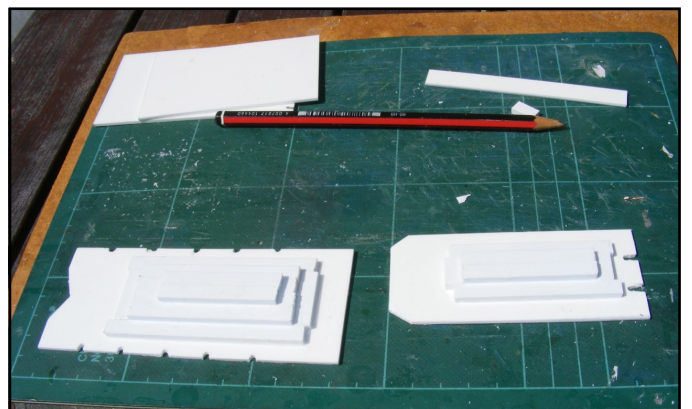
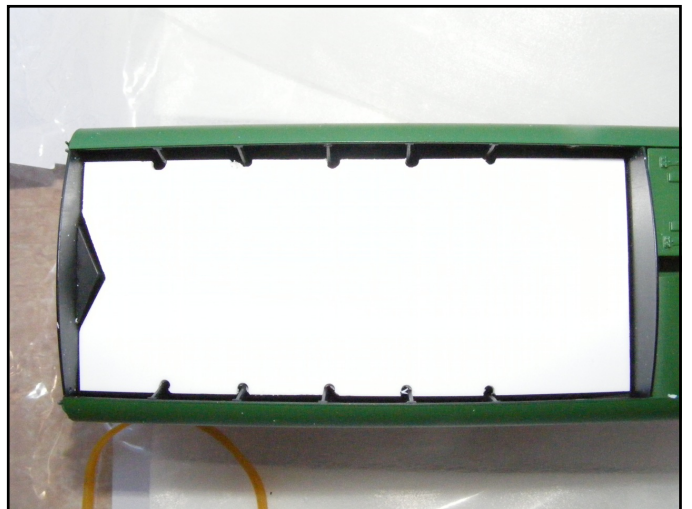
Metal constructed tenders typically will have internal reinforcement ribs, which can be handy to support the styrene coal support base. The two tenders I am working with in this article will be the Precision Scale Models (PSM) 38 class, (3805) and the PME Morts Dock tender (5132). Both these tenders are constructed of brass.

For polyurethane tenders I generally use styrene supports to enable the coal support base to sit level.

The first step is to cut the styrene coal support base. I use 2mm styrene. I do a lot of scratch-building in styrene and buy large sheets from a plastics supplier. It is a lot more economical buying these large sheets and the styrene material used for these bases cost about 20 cents each. I cut the support bases so that they fit within the tender and are supported on the internal reinforcement ribs. It's probably best to allow a gap of about 0.5mm all around to enable the base to be easily fitted.

The indentations along the side of the support base should align with the reinforcement ribs. These indentations were cut using a motor tool, either with a cutting disc, or milled (sideways) with a 2mm drill bit. These cuts do not have to be very big. What is important is that they are relatively equal in size, so that the base will sit level in the tender.

Next step is to fix some pieces of styrene to assist with the formation of the "coal heap". I used some Evergreen styrene strips. For styrene adhesive, I use the Simply Glues brand we see at exhibitions, and Tetra is their recommended adhesive. I pour a small amount over the job and let the solution run into all the gaps and create a strong bond.



The Tetra is high in vapours and will dry very quickly, especially if it is a warm day. I then get the caulking gun and apply some No More Gaps over the piece and use an ice cream stick to mould it into a suitable looking coal heap. How you want to make your coal heap appear is up to you. You may want the coal lower at the loco end and higher at the rear.

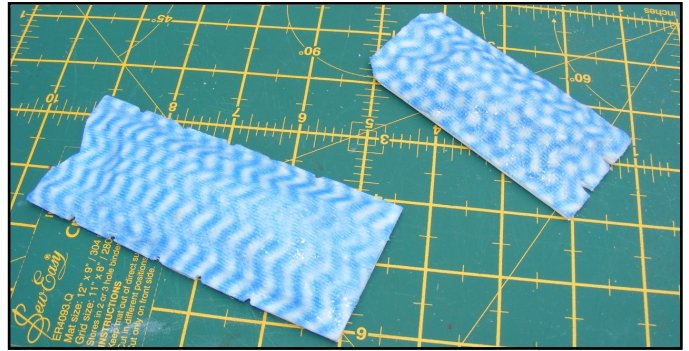
I generally allow the No More Gaps a day or two to harden, depending on the temperature. When it is hard, I coat it with PVA white glue (Aquadhere), and cover it with some Chux Superwipes. I also coat the top of the Chux with PVA.

When the Aquadhere has dried and there is a strong hard surface I use a craft knife to trim the excess Chux from the sides. I then paint the piece with black automotive primer.

After allowing the paint 24 hours to cure, the final step is to add the coal. I have bought my scale coal from Chuck's Ballast, who used to appear at all the exhibitions. However I think Charlie has now retired and another supplier has now filled this position. I have not tried the product from the new supplier however I assume that it would be much the same. Just make sure the scale coal you buy looks right for O scale.

I coat the pieces with Aquadhere and sprinkle the scale coal all over the piece. I also use diluted Aquadhere (5 parts water to one part Aquadhere) and use an eye dropper to apply the diluted adhesive from the top. I don't apply a lot of coal, however it is important that there is a total coverage and you cannot see the Chux underneath. Diluted Aquadhere will take significantly longer to cure, and again the temperature will impact the curing time. I generally allow 2 – 3 days, and then your coal load is ready to be installed in your tender!

I trust the header pictures will show these two locos now have very authentic looking coal loads!





As soon as you have turned off the country lane leading into the property of David Howarth you know that the experience is going to be a good one. The gates at the entry way confirm this. They are a full size representation of a set of railway crossing gates.

Once through the gates we descend to the Crew Room and Train Building. Notice I have referred to this as a building and not a shed! For that is what it is, an engineered 75x55 feet, air conditioned structure where the concrete floor holds the roof in place, hence there is no need for internal supports.

But first the Crew Room. It consist of a double garage of which part is the workshop and storage. Off this is the office, the crew lounge and ensuite. Most of us would just like the double garage for our train layout but the main building is just across from the Crew Room and it is here that David is building his O scale 1/48 layout based on the New York Central. The Boston and Maine also has running rights and there is a small 3 foot narrow gauge section.



generation diesels as well as steam will be running but at times modern diesels will be seen in service.

The layout is double deck in parts with 7 foot radius curves and a double track mainline. The plan of the layout was painted on the floor and gave one a good idea and feel of how the railway would look before bench work was commenced .

The bench work incorporating view blocks is conventional, 4x2 inch radiata pine. Plywood is used for roadbed with cork underlay and MDF for fascia and pelmets. David is constructing his own points and intends to have a fully working signal system.

Some special features of infrastructure that are already installed and operating are a 135 scale foot indexing turntable, constructed by Robert Shoesmith, an automatic rotating coal dumper and an exact scale model of Troy Station building. A BTS saw mill complex, with interior detail, constructed by good friend Paul Marrant is in the process of being installed in the upper level loop, occupying an area of over 13x6 actual square feet.

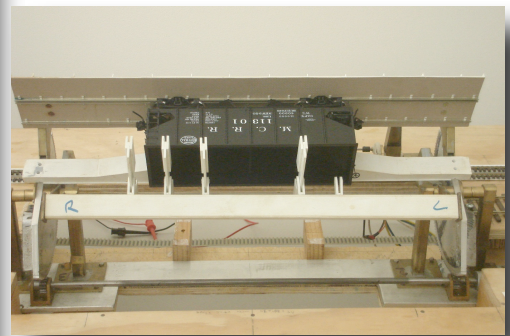
By the time you read this the main line track will be completed. Turnouts running off the mainline have been installed and these sidings will gradually be completed along with the yards. Scenery will be starting soon along with bridges and buildings, some of which have already been built and are waiting to grace the layout.



The prototype setting is of course in the New York State and in particular the West Shore Railroad River Division with parts of the area around the Hudson River wharfs and their infrastructure. First and second

David has set himself an ambitious task but if the progress so far is any indication then he is well on his way to achieving it.

Photos by Stephen Reynolds and David Howarth.



News From the 2015 AGM

Aus7 Awards

For the first time since 2006 the executive of the Aus7 Modellers Group decided in the lead up to the 2016 AGM to present the Aus7 Award to some worthy recipients. The award has been handed out three times in the past and there was never any intention to make the award an annual event every year but it probably has been too long since it was last given. The three previous recipients were Graham Holland in 2004, Peter Berg in 2005 and Trevor Hodges in 2006.

There have been some significant changes in the manufacturing side of the hobby in NSW O-scale in the past 19 months with no fewer than three of our stalwart manufacturers retiring and selling their businesses. The executive was unanimous in deciding that all three of these individuals had made a significant contribution to the promotion of O-scale modelling in Australia and therefore it was appropriate to award all three an Aus7 Award for 2015.

The 2015 Recipients of the Aus7 Awards were:

Peter Krause – former proprietor of O-Aust Kits.

Dave Morris – former proprietor of The Waratah Model Railway Co.

Chris Harris - former proprietor of The Waratah Model Railway Co.

PSM 38 Class

The draw for the C38 class promotion occurred at the April Forum with Bruce Wood being the winner. John Della from Precision Scale Models was on hand at the October Forum to present the 38 to Bruce. We'd like to thank John for his support of the group and congratulate Bruce on being the lucky prize winner.

Information Sheet

The Aus7 Modellers Group has produced its first information sheet which is available for download from the web site at <http://aus7.org/information-sheets/>. This sheet is on recommended heights for couplers and buffers.

Election of Office Bearers

All positions on the executive were declared vacant and at the subsequent election the 2015 office holders were all re-elected for a further 12 months.

President - Trevor Hodges

Vice President - John Parker

Secretary - Stephen Reynolds

Treasurer - Anthony Furniss

7th Heaven Editor - Paul Chisholm



Saturday April 2, 2016


O Scale Modellers Forum



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

Specialist O scale traders
Featured speakers with an emphasis on
building that O Scale model and layout plus
Prototype Information. Complete list of top-
ics not yet finalised but will include..
A Different Approach
Is there still Time?
What's New

\$30 including tea/coffee
Lunch available in club bistro
All are welcome - Come and
share the progress on your
latest project as part of our
"Show and Tell".



Review: G.W. Universal Rivet Tool

Trevor Hodges

I've been reading the UK railway modelling magazine the Model Railway Journal for something like 20 years. Ever since I read a review for the G.W. Models Universal Rivet Tool in the same magazine quite a number of years ago I've occasionally glanced at the G.W. Models advertisement but never got around to actually making a purchase. I was impressed by the review and have contemplated purchasing one of the tools over the years but have never done so because G. W. Models don't have an email address where they can be conveniently contacted and don't accept credit cards. So actually making an enquiry or a purchase is much slower and more difficult than it should be in this day and age. In spite of these hurdles my recent move into scratch building a locomotive has demonstrated to me just how inadequate my pre-existing capacity to rivet sheet materials really was. So I finally made did something about actually purchasing the 7mm version of the G.W. Models tool and have been extremely happy with the outcome, in spite of the hassle.

An international money order or cheque made out for UK pounds will be required to be sent by mail or by your financial institution if you wish to buy one of these tools but be warned, while the price of the tool is listed as £95 in the MRJ advertisement the postage for mine was £85 so just getting the tool into the country cost me well over \$500. Of course if I'd been sensible I'd have made this purchase when the Aussie dollar was a lot higher but I wasn't scratch building a locomotive two years three years ago.

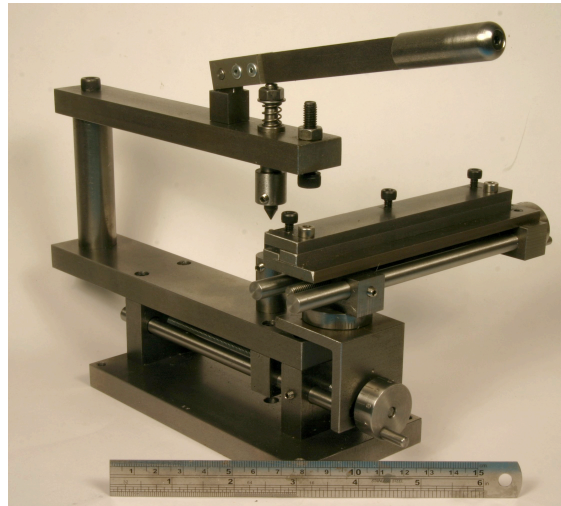
The tool arrived in a small cardboard box, encased in white bead polystyrene which had suffered some punishment in transit but the tool itself was undamaged and required only one minor adjustment after assembly before it was ready to be put to work. For me this rivet tool has three significant advantages over the riveting tool I'd been using for many years (a NWSL model):

- It is calibrated in metric divisions of exactly one millimetre. This is a significant improvement for me over the imperial measures of the NSWL model as I measure everything I do using metric tools; not having to convert my rivet measuring into an imperial equivalent is a real boon.
- The riveting tool comes equipped with a clamp along its front edge (a length of mild steel held in place by three machine screws) which allows the work piece to be held securely while the riveting process is being carried out. This clamp is perfectly parallel with the riveting

head so producing a straight line of rivets is a breeze. I used to hold my work pieces on my NWSL press in place with lengths of masking tape. To call this a less than satisfactory arrangement would be an understatement.

- The G.W. Models rivet tool has calibrated dials in both the X and Y axes so producing lines of rivets at 90° to each other is also a breeze. The NWSL rivet tool only had a calibrated dial in the X axis so you have to lift and turn the workpiece 90° if you wanted a line of rivets at 90° to your first line.

The G.W Rivet tool is a professionally built tool of robust, all steel construction. The rivet head is brought down on your choice of up to three different size rivet anvils by the use of a sprung steel lever. The movement of the workpiece is carried out by turning one of the two calibrated dials through the X or Y axis



with one complete turn producing movement of exactly 1mm. This makes producing evenly spaced rivets very easy because the only thing that can really go wrong is if you miscount how many turns of the dial you've made. I used .25mm, .4mm and .7mm thick sheet nickel silver as a way to test my rivet machine and was very happy with the results, although the .7mm material was pushing the edges of what the machine could handle. Producing rivets in other materials is very possible and I'm sure that it would be relatively easy to use thicker material in a soft material like styrene. What impressed me

most was how easy it was to produce long lines of rivets both in simple straight rows and at 90° to another line. The machine comes with instructions on how to produce circles of rivets and the workpiece clamp can be swung at an angle to the riveting head so that sloped lines of rivets can be produced. All changes and adjustments to the tools set up can be made using Allen keys.

In this day and age, it comes as a bit of a shock to come across a company which can't be contacted by digital means and doesn't have some way for payment being made that doesn't involve expensive bank cheques. However, in spite of this, I consider the G.W. Models Universal Rivet Tool has been well worth the inconvenience and would recommend it to anyone aspiring to build locomotives from scratch in either metal or styrene. Its robust construction should mean it will see me out and I can't see how I will ever need to purchase a replacement.

G. W Models can be contacted at 11 Croshaw Close, Lancing, West Sussex, BN15 9LE Tel (01903) 767231.

ModelOKits

ModelOKits, PO Box 379, Sydney, NSW, 1700, (02) 97073390, 0404935663, <http://www.modelokits.com> & sales@modelokits.com have passed on the following information about their range of products:

O-Aust – work is continuing on the LFX and BX passenger carriage kits and these should be available in time for the next Forum, March 2016. The relaunch of the 50 class and Commonwealth tender has been put on hold for a period of time but the plan to relaunch the R cars later in the year with etched components is on track. The MLV, MRC, FME, UME, MHG and BCW kits are planned to be updated so there will be no stock of these kits available until this upgrade work has been completed. Details of the progress on these kits will be announced when it comes to hand. The 32 class locomotives, 3,000/5,000/10,000 gallon tankers, ACM, HCX, SRC, BHG and LLV are all back in stock.

Waratah - The injection moulded S truck project is underway. Plastic components for the kit will be all high pressure injection moulded on a single sprue in high impact polystyrene. Model O believes this is a first for the NSWRR outline 7mm market. All detail items will be from the existing Waratah range in brass and white metal. Etched brass external corner plates to cover the corner joins as per the prototype, a pair of Waratah prototype wheels and bearings manufactured by Slaters, decals and etched brass builders plates are all included in the kit which are designed for the fitting of Waratah couplers. The aim is to have the kits in stock for end of March 2016 with a price \$85.00 per kit.

There are only a few CPH's remaining. Running numbers available are No 1 with match board sides and Nos 13 and 33 in Masonite sides. The pilot model for the HG guards van is now complete. The kit will have etched brass external sides with laser cut internal walls. The kit is designed so that the builder will have the crisp detail of etched brass without the need to solder as this kit can be assembled with glue. Brass and white metal details will be included with the kit. Kits will be available March 2016. The planned releases for this year are the TRC, BBW, LHG and FS/BS kits.

DJH – (C)36 Class (\$3700) and (AD)60 Class (\$5700) professionally built ready to run models are now available in limited numbers. The models are painted and numbered but exclude lights, weathering and DCC decoder installation. All these options are available, pricing on application.

Laser Cut Kits - G2 Goods Shed comprising card and birch timber decks/frames and styrene scale corrugated iron. Kits available early February at \$185 per kit.

Showroom – Opening times are first and third Fridays of the month (10am to 2pm) and the last Saturday of the Month from 1pm to 5pm. Please check our website or call us prior to visiting just in case we are not able to

open. Showroom openings will commence from 3rd Friday of February.

Pioneer Models

Pioneer Models 42 Robinson Ave, Lambton, NSW, 2299, 0412 574 151, <http://pioneermodels.blogspot.com.au>, & pioneermodels@optusnet.com.au have advised that the brass 32 crowd funding experiment was unsuccessful.

Pioneer models would like to pass on their thanks to those who backed the project and offered their encouragement. As outlined in the promotional material early in the project this was a trial of the funding model; as the project was unsuccessful there will be no repeat of the exercise at a later date.

Signals Branch

Well known HO modeller Ray Pilgrim is selling a range of NSWRR signal items via his Shapeways shop web site at <https://www.shapeways.com/shops/signalsbranch> and at rpilgrim@bigpond.net.au and by phone at 02 9543 0970.

On show at the recent Branchline Modellers Forum was a NSWRR catch-point indicator. This small signal is designed to be thrown by a rod from the catch point blade and is also designed to be lit by placing a warm white 3mm LED below the base. The indicator is in the development stage with a few technical issues yet to be sorted out. Further details can be found on the Signals Branch blog.

Available now from the Signals Branch Shapeways shop are packs of NSWGR A frames designed to support the point rodding from the signal box/lever frame to the point. The A Frames are designed to use 1mm square Evergreen styrene strip for the point rodding. The A frames can be purchased from the Shapeways shop in 1, 2, 3 and 4 A Frames wide by 20 sections and should soon be available in 5, 6, 7, and 8 wide arrangements. Bell-cranks, compensators and some interlocking components are currently in development. The price is in US dollars so depending on the conversion rate the Australian dollar cost will vary.

Assembly instructions can be found at his Signals Branch blog at <http://signalsbranch.blogspot.com.au/>.

Big River Models

Big River Models, 1/30 Todmorden Rd, Buttaba 2283, (02) 4975 5501, johnhalcrow3@bigpond.com, have passed on the news that they now have three bus kits available for the 7mm modeller representing many of the early styles found in Australia. The available options are the forward control bus body for \$150, a bonneted front 42 Dodge bus for \$140 and a bonneted front 42-46 Ford bus for \$140.

The BRM passenger carriage kit development has progressed well, with the NSWGR MCE 12 wheeler parts nearing completion of the test build. Also at the test parts stage are versions of the NSWGR L cars with crown lights. Adjustments to the design of these kits continue to be made to assist with ease of kit construction.

Brass tabs with pickup wire soldered to them are then fitted onto each nut and another bolt added and tightened up to hold everything in place.

Any misalignment is easily corrected after which taking up the nuts should assure trouble free pickup and if any do work loose it is a simple matter to tighten up.

A Simple Pick Up Device

Paul Chisholm

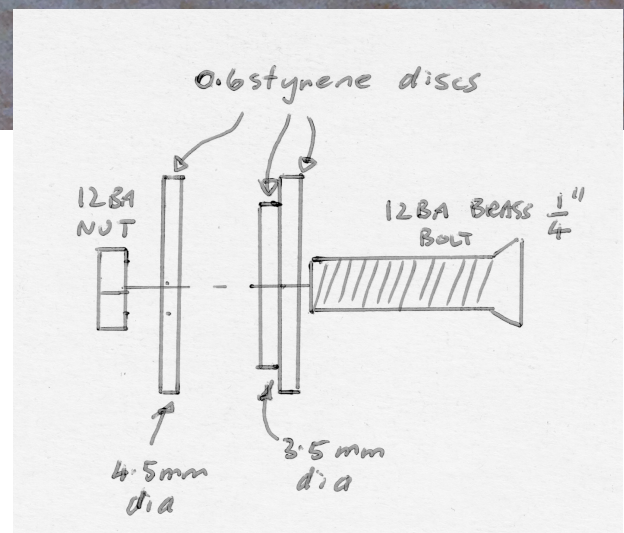
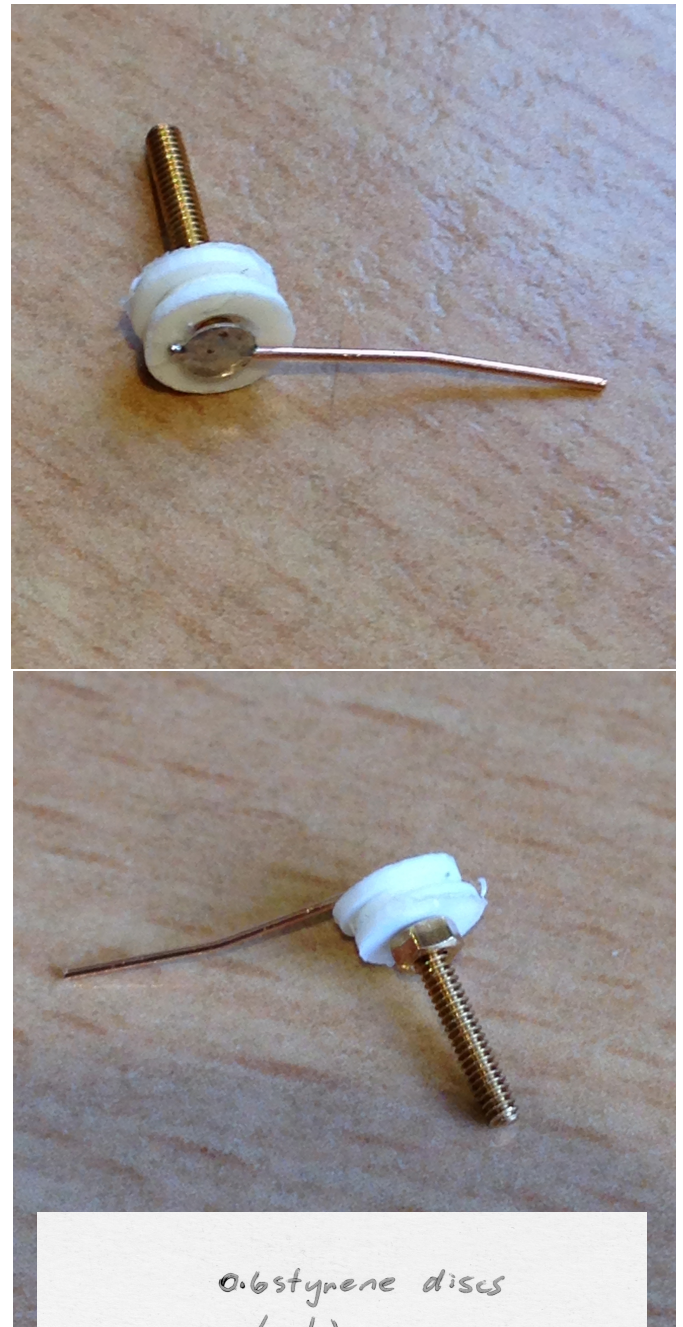
It would probably come as no surprise to hear that building the Model O Kits/DJH Garratt loco is a challenge. No criticism of the kit is intended as most of the difficulties encountered are down to my own lack of experience but there have been a few instances where I had to scratch my head and wonder why they did it that way. One of these was with the supplied Slaters plunger pickups. I am not a fan of these anyway based on previous useage but decided to use them as specified when to my consternation I found that the holes in the sideframes were too small to accept the plastic body of the pickups. Of course this is only discovered after the frames have been assembled and consequently too late to open out the holes as could be done while still a flat etch. What to do? Well this gave me the excuse to try an alternative pickup that I had been experimenting with for some time but never actually applied to a loco. You might find it useful for your AD60 or use it on other kits or scratch built models you may be working on. I have fitted these to my Garratt and although it's not up and running yet bench testing shows that they are very effective and reliable.

These pickups are a simple assembly of three laminated discs punched from styrene with a standard adjustable hole leather punch available from Bunnings or any one of a number of other suppliers. The exact dimensions can be adjusted to suit your particular requirements but the dimensions given in the diagram are those for the AD60.

The outer disc and the smaller middle one are glued together and when set all discs are drilled through to accept a 12BA 1/4" CS brass screw and the outer disc assembly countersunk to allow the bolt head to sit almost flush. The middle disc should be the same thickness as the sideframe. In this case 0.6mm but the thickness of the outer discs is not critical provided it still gives plenty of clearance to the wheel.

A length of 0.15mm phosphor bronze wire is soldered to the head of the screw and cut and bent to length and shape so that it contacts the rear of the wheel tread and exerts just enough pressure to be effective and deal with wheel sideplay but not so much as to act as a brake.

Once inserted into the side frame the nut is tightened to locate and lock the assembly in just the right position in relation to the back of the wheel. Trying to get those tiny bolts onto the end of the nuts in the confined space between the frames is the hardest part of the whole process. Some Blue Tack on the end of a skewer helps.



10,000 GALLON TULLOCH TANKER WAGON

Now Available!
- Price \$350



New Items - Early 2016

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Now In Stock

19 Class Locomotive - \$1600



32 class Locomotive - \$1700



BWH Bogie Wheat Hopper \$295



ACM Passenger Carriage \$450



GSV Sheep Wagon - \$185



30 Class Tank locomotive - \$1500



FO Passenger Carriage - \$490



BSV Bogie Sheep Wagon \$350



LLV Bogie Closed Wagon \$225



HCX Passenger Carriage \$495



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NEW

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

Limited Extra Stock available at \$1,799

Kit builds available for \$3700 (including kit)



Photos of pilot model



See website for more photos!



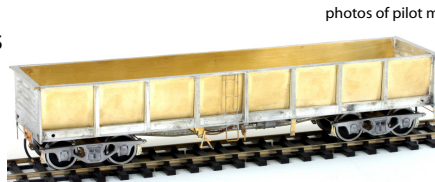
N.S.W.G.R (AD) 60 CLASS BEYER GARRATT

- Price \$2,599
- limited additional kits in stock and available
- Kit builds available \$5700 (including kit)

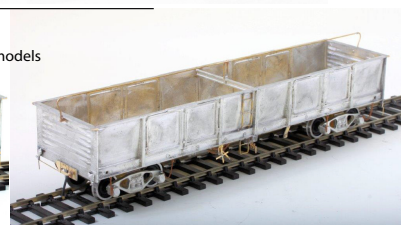


N.S.W.G.R G/GP WAGONS

- GP Wagon includes 2AS bogies with wheels
- G Wagon includes 2BP bogies with wheels & tarp support pole
- Price \$179

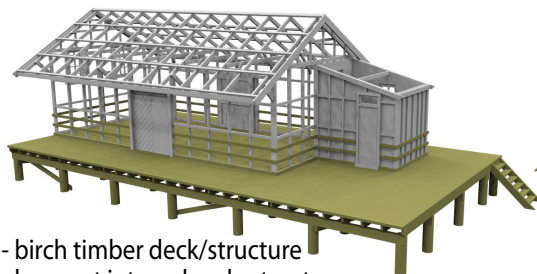


photos of pilot models



Quality scale cut kits and building materials for O scale (7mm/1:43.5) modellers

NSWGRG2 - GOODS SHED



- birch timber deck/structure
- laser cut internal scale structure
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Available February 2016 - Kit Price \$185

NEW

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New Products

Petrol Station	\$89.00	Speaker Boxes - To suit Jaycar AS3030, AS3028 speakers	\$6.00
General Store	\$89.00	C2 Toilet Building	\$38.00
Workshop Building	\$79.00	C2 Toilet with Lamp Room	\$49.00
Weatherboard House Front Only	\$59.00	Shop Front	\$49.00

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



The Waratah Model Railway Company

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Limited Numbers Of - No. 1, 13 & 33

Still Available

Price \$1649

- Improved running - Modified height over bogies



2 Types Available

Matchboard Side - No. 1, No. 18 & No. 31

Flush / Masonite Side - No. 13 & No. 33

(all in Tuscan)



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 at a reduced price of: \$85.00. (Excludes buffers and couplers)

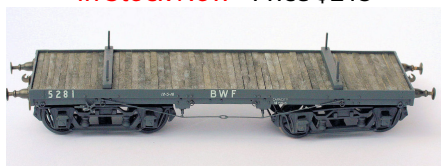
Price \$85 per kit

Available Q2 2016



NSWGR BWF Wagon

In Stock Now - Price \$215



NSWGR RU Wagon

In Stock Now - Price \$165



N.S.W.G.R HG GUARDS VAN

- expected delivery March 2016

- Price to be confirmed



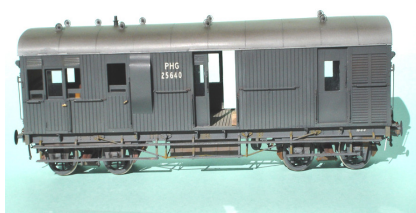
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NSWGR BD Wagon

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