

7th Heaven

Journal of the Aus7 Modellers Group Inc.
No 50

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Winter 2016

50th Issue



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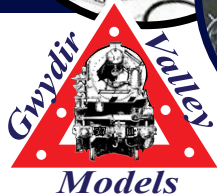
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CONTENTS

- 5 Albury Loco - A Work In Progress - Part 2**
John Reid continues his layout building as he starts to lay track.
- 9 Terrific Gum Trees**
Fran Thomas shows us how to produce good looking gum trees without fuss.
- 12 Let's get Rolling**
Ray Rumble constructs his own rolling road.
- 14 Modifying GP Wagons**
Lionel shows how he made a GP just a little different.
- 16 Waratah HG Van**
John Parker relates his experience with some of the new materials and techniques in this long awaited kit.
- 18 Commercial News**
Trevor Hodges

Notice of Aus7 Modellers Group Annual General Meeting

Venue: North Sydney Leagues Club, Saturday the 29th of
Oct 2016, 1:15 pm

Agenda Items

1. Election of officer holders
2. President's Report
3. Presentation of financial accounts
4. General Business
 - Aus7 and social media

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

Forum Bring & Buy

North Sydney Leagues Club, Saturday the 29th of Oct 2016

The Bring & Buy will allow attendees at the Forum to sell excess model railway items to others at the Forum. The conditions of selling or buying are detailed in full in the document "Selling and Buying Guidelines" available from the Aus7 Modellers Group web site. The following are the main details: Registration must occur before 9.30am with selling concluding at 12.45pm.

A \$7 registration fee applies to all sellers. This fee allows a seller to place up to 5 items on the table. A further 5% commission applies to all items sold with a value above \$20.

Sellers can choose to sell either by "buy it now" set price or by silent auction.

All sale items should be of general relevance and interest to O-scale modellers (1:43.5 & 1:48, SG or NG)

Please contact the President with any queries.

7th Heaven Reaches Its 50th edition.

When Paul Chisholm, our editor, pointed out to me that we'd reached our 50th issue with this edition of 7th Heaven he suggested we mark the occasion with some form of "presidential recognition", to use his words. He ignored my protestations that I don't need him to be giving me jobs, I have a partner who fills that role more than satisfactorily. So here I am faced with the task of marking this important milestone with some suitably profound insights into the significance of our little magazine reaching its half century. What can I say?

In broad terms I would quietly describe myself as a bit of a politics junky, especially of the Australian and US variety. It was recently brought home to me that not everyone shares the same level of fascination I have for this topic when my beloved better half, upon being informed that I was planning to settle in front of the TV to watch the recent federal election night coverage, responded with the question "Do people actually watch that stuff? I'm getting a DVD!" In spite of my best intentions, I found little to inspire my thoughts in our interminable recent election campaign so I fell back on the maxim that all politics is local. I feel the most appropriate way for me to mark the occasion of our 50th issue, and the continued growth of the group itself, is to pay tribute to the people who are directly responsible for running the group and the production of the magazine: the executive of the Aus7 Modellers Group.

Treasurer Anthony Furniss – I'm starting with Anthony because he is possibly the least known of the executive team and this is a shame because he does so much to support and foster the group behind and in front of the scenes. He's the bloke you see manning the door at every Forum and he's spent many hours over the years behind the Aus7 stand at exhibitions talking to members of the public and promoting the group. Aside from putting the group's financial house in order when he took over the Treasurer's duties (he's an accountant with an extremely busy practice in Sydney) he is one of the most quietly dedicated executive members I've ever had the pleasure to work with.

Secretary Stephen Reynolds – Stephen has been Secretary for a few years now and I had to do a bit of gentle arm twisting to get him to accept the nomination. He's one of those self-effacing people who tend to underrate their own ability and are a little reluctant to push themselves forward. I've watched over the years as Stephen has gradually developed the confidence to write about his modelling and share this in the pages of 7th Heaven. This is a good thing because I rate Stephen as one of the very best modellers I've ever met, on a par with the best this country has ever produced. If you doubt my words let me point out that Stephen has won just about every modelling competition the Aus7 Modellers Group have ever run that he's entered.

7th Heaven Editor Paul Chisholm – I've been lucky enough to get to know Paul through our mutual involvement in Stringybark Creek. He took on the onerous task of editing 7th Heaven after a change in personal circumstances of the previous editor Kim Mihaly which prevented him continuing in the role. Paul occasionally mumbles about relinquishing the editor's role and his thinning, grey hair seems to grow a little thinner and greyer every three months as he struggles to attract enough content to fill each issue of 7th Heaven, but we tend to put aside his pleas to be released from his bonds as a minor quirk of his personality. He brings dedication and passion to the editor's role and we are all the beneficiaries of this in the quality and especially the regularity of its production. You have to be involved in the production of a magazine to have any concept of how difficult it can sometimes be to get the issues out regularly and on time. In a previous life Paul was a school principal: if he put the same level of passion and dedication into the role of principal as he does into producing 7th Heaven, and in my mind there's very little doubt that he did, then the children who attended his school were very lucky indeed.

Vice President John Parker – What can I say about John? The guy is everywhere. If you're a member of the Southern Cross Model Railway Association you'll know he has a role in this organisation and writes the regular Booster column for their newsletter. If you subscribe to Magindex you may have noticed he's regularly thanked by Tony Soar for his work in checking the regular updates. Until recently I know he was a volunteer at the ARHS bookshop and then of course there was his leading role in organizing and staging our own Aus7 ExpO in 2013. The man is a marvel and all I can hope is that he lives to be 110 and retains all his faculties because I don't know what the heck I'd do without him. He's a clear demonstration that reliability and competence are their own reward... and burden. The man is a bloody marvel!

If you're still with me you're probably wondering, "so what is Hodges rabbiting on about with all this old flannel?" While the Aus7 Modellers Group has an extremely flat executive structure, it still does have a structure but we have no trouble at all in accepting offers of assistance if someone puts their hand up to take on a role. However the magazine, Forums and other activities we undertake don't organise themselves, they take time and the expenditure of a good deal of effort to bring together by the executive members.

However the point I'd like to emphasize is that the people who undertake these tasks are just ordinary members, people who happen to enjoy modelling in its many and varied forms and especially in O-scale but who have also put their hands up to go one step further and volunteer to take on a role within the group so we all benefit. Currently we have one accountant, one ex-coal miner and two school principals (one ex and one current) on the executive. I'm not sure what John did for a living prior to his present existence but if it turns out he worked for the diplomatic service, ran the Reserve Bank or worked for ASIO it wouldn't surprise me at all. However there have been many others who have taken on executive roles over the years and every single one of them is exactly the same: ordinary people from an enormously diverse range of backgrounds doing extraordinary things and probably making it look easy as they do so. Collectively they're responsible for getting us to the point where we're celebrating our 50th issue and they need to be thanked and acknowledged for this achievement. This little magazine and the Aus7 Modellers Group exist because, over the years, enough people have believed strongly that its aims and objectives are a worthwhile project. I happen to agree but, in the words of Christine Keeler, I would say that wouldn't I?

I'll close by taking the opportunity to thank everyone who has ever taken on an executive role over the years, all of our sponsors and advertisers (with a special mention of ModelOKits and Gwydir Valley Models for their ongoing support) who have helped pay the bills and thus kept the costs of production within bounds and, I suspect, with very little pay back for the money they pay to advertise and finally to everyone who has ever written anything to go between the covers of 7th Heaven. Without content there would be no magazine to produce and nothing to advertise in. Thank you all and here's to the next 50 issues. Is that a groan I hear from our esteemed editor?

Finally I'll quickly mention the two other ways we've chosen to mark the 50th issue of 7th Heaven. The first is a review of the past 10 issues of the magazine to take a detailed look at the content and who our main contributors are. You'll find this below. I think this quick overview clearly points out just how reliant we are on a very small number of authors. We want to hear from you if you are thinking of contributing, now! Secondly, we've put together an online survey of members to allow them to provide feedback on the magazine. You can find this at <https://www.surveymonkey.com/r/SXC7YXW>. Simply complete the 10 questions and submit it at the end by pressing the DONE button. Please go online and complete the survey, it will help guide the choices we make over the next few years. I'll keep it open till the middle of August and then collate the results for inclusion in an upcoming issue.

This is the 50th issue of 7th Heaven and while this should be celebrated perhaps it is also timely to reflect on how we have come this far and what the future may bring; so I have compiled this snapshot of content and authorship over the last ten issues to see who the writers are and what they are writing about. This forms the basis for Trevor's survey to help us have a better idea of what you the members want from the magazine and to encourage more of you to send in articles.

Analysis shows that we have published 45 articles across the following categories.

Garden Railways - 1 Reviews - 6 Layouts - 12 DCC Installation - 8
General Interest - 7 Kitbashing - 3 Scratchbuilding - 3 Kit Building - 3
Tools and machinery - 2

These articles have been written by

John Parker - 9 Trevor Hodges - 7 Paul Chisholm - 5 Stephen Reynolds - 5
Ray Rumble - 2 Peter Krause - 2 Bruce Wood - 2 Jim Longworth - 2

A further 11 authors have contributed one article each.

This means that almost 60% of the articles have come from just four contributors and another 18% from four others with one time contributors making up the other 22%. So from our membership which sits at a steady 110 less than 20 have written anything at all for the magazine. The reasons for this may be many and varied and we have discussed these before but regardless it does not bode well for another 50 issues or perhaps even the next 10.

If you are one of the authors mentioned above I thank you for your contribution. If you are not then please consider making the list for the review at issue 60 so that we can then report a far greater proportion of members actively sharing their modelling with fellow O scalers.

Don't let your membership lapse

Membership of the Aus7 Modellers Group costs just \$AU35 per year. Memberships are due for renewal by June 30th no matter what time of year you joined. Please forward payment to the Treasurer, Anthony Furniss at PO Box 3404 Asquith NSW 2077. You must be a financial member to vote at the AGM in October. For renewal and new membership forms follow the link on the Aus7 Blog at <http://aus7.org/2014/10/12/welcome/> If membership is not renewed this is the last issue you will receive.

Renewals can now be done through online banking. Deposit directly to the Aus7 account BSB 062-233 Account Number 1017 2076 Be sure to supply your name. Note that if you took out a multi year membership in the 38 promotion you may already be financial. Email treasurer for confirmation.

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Advertisements

Full Page: \$125 Half Page: \$65

Quarter Page: \$32 Eighth: \$15

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All advertisements must comply with the Trades Practices Act.

Back Issues

Please contact the Treasurer to obtain back issues.

Issues 1-33 sold out.

Issues 15+ are \$7.70 each

\$1.50 p&h for one or two copies.

\$2.50 p&h for three or more copies.

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

On The Cover

To mark the milestone of 50 issues the cover this time is a composite of some of those that have come before. It is a reminder of the great articles that have been presented and the range of topics covered.

ALBURY LOCO - A Work In Progress

Part Two

John Reid

It may have been possible to build Albury Loco 'in situ' had I not intended to hand lay track directly onto the baseboards but attempting to do this, as well as build scenery and large structures in such a confined space, would have been very awkward, to say the least. An alternative, I had read about, was to erect a sub frame to support the layout and to build baseboards which could be removed and worked on elsewhere. For this to work the baseboards would have to be compact and light enough to move safely during various stages of construction and a convenient place would have to be available to work on them. Fortunately I had a workshop with easy access to the train room and a bench which could be modified to hold several short base boards at the same time. The advantages of keeping base boards small, as outlined by Gordon Gravett in the publication referred to in the first part of this article, convinced me that short baseboards mounted on a sub frame was the way to go. Admittedly the extra baseboard joints made more work but this was more than compensated for by being able to work on them at a comfortable height and being able to turn them around, or even clamp them vertically, to suit the work in hand. Confining carpentry, cutting and shaping foam, applying grass fibres and other dirty jobs to the workshop also eliminated the risk of



Photo courtesy Train Hobby Publications by Euan Stevens

making a mess of the HO layout and the other contents of the train room.

All the baseboards have 19 x 42mm frames and are topped with 6mm ply. There are seven boards, the first four, from the loco shed end, are 1,200 x 680 mm. The next board is 1,400mm long and increases to 850mm wide over its length. It was made longer than the first four boards to enable the sixth board, which was to carry the turntable and was likely to be relatively heavy, to be reduced to 900mm. The 7th board is only 500mm long but is

900mm wide. This board needed to be short as it has to be disengaged and stood on end to provide the wriggle room required to remove any of the other boards. The use of such shallow baseboards did impose some restrictions on how turnouts could be operated and put paid to any lingering thoughts of motorizing or remotely operating the turntable. Neither of these issues caused me much concern as I had already decided (but had not worked out quite how) to operate the points mechanically using DPDT switches and I had also come to the conclusion that if it was good enough for the NSWGR to turn 38s by hand, it would be good enough for me.

The installation of loco pits in HO scale was pretty straight forward and rarely involved any more than cutting and lining slots in the 12mm sub road bed I used. It wasn't that easy in O scale as the pits are, of course, twice the depth and I

had no sub road bed to cut into. On reflection I probably made a rod for my own back by integrating the pits with the base board framing. Apart from the extra work, and the severe test imposed on my very limited carpentry skills, this approach left very little room for error in the alignment of the tracks in two of the most critical parts of the layout. At the loco shed end space was very tight leaving no flexibility in the location of the structures, and at the other end of the layout, the inner end of the ash pit had to be curved

slightly to align with the curved ash road which was already a bit tight. I didn't get the alignment of the pits exactly right but at least the resulting fudges are well hidden. Hindsight suggests that I should have recessed the base board top in the vicinity of the pits and made each pit as a separate item whose alignment could be adjusted before permanently fixing in position - next time.

The base boards were all built and track laying was almost complete before any serious attention was directed to the sub frame. I considered using aluminium or Dexion framing but in the end decided to use wood and to utilize a pair of bookcases and an old pine roll top desk, that I wanted to retain, in the structure. The bookcases were cut down to suit the intended baseboard height of 1,350mm and heavily reinforced to support the sub frame at both end walls. The roll top desk was also reinforced and fitted with bearers at the same height to act as one of two intermediate sub frame supports. The other intermediate support is a purpose built box. Three 'ladders' span the gaps between the four supports. Girders, formed from three lengths of 19x42mm pine, separated by cross members of similar material, make up these 'ladders' and support the side frames of each base board over the length of the layout. With the baseboards removed the 'ladders' can be lifted off their supports to provide access to the back scene and to the windows behind.

When I started thinking about building an O scale layout I was not aware of any contemporary standards other than fine scale or Scale 7 and although I have always been impressed by the appearance of the models and particularly the track in S7 I didn't seriously consider following anything but fine scale standards. I thought no more of it until a friend, Mark Laidlay, who provided a lot of useful advice on all matters to do with track, asked if I had thought about working in 31.5mm gauge. He suggested that the improvement in the appearance of the track would make up for any extra effort involved. I was interested enough to look into this 'non standard' gauge but could not find out as much about it as I would have liked. As I had become quite keen to adopt modified fine scale I had little choice but to work out the details for myself. What I arrived at was a gauge of 31.4mm which resulted in flange ways of 1.2mm. Apart from a set of US standard wheels I have had no problems with running and am very pleased with the appearance of the track.

Originally intending to model a branch terminus of some sort, and being aware of the time it might take to obtain the rail I wanted, I placed an order for a couple of bulk packs of Micro Engineering code 100 weathered rail. I know that code 125 would have been more appropriate for the model I ended up building but I am happy with the appearance of code 100 rail and think the smaller section disguises to some extent the narrower than scale gauge. Not

knowing any better, I had cut several hundred sleepers from 3mm ply before some kind soul told me that Gwydir Hobbies sold 7mm scale sleepers and point timbers made for the NSWGR modeller. This was very good news as I'm not sure that my ambition to hand lay my own track would have survived having to cut 2,500 sleepers and pre-drill holes for five or six thousand spikes. I used Shinohara spikes (sold for HON3), because they had a smaller head than the other brands I had looked at, and 6mm natural cork floor tiles for the road bed. I had also spent some time trying to produce a paper template for a NSWGR number 6 turnout before Peter Krause asked why I wasn't using the plastic template sold by Kieran Ryan. You could be forgiven for thinking that I didn't know what I didn't know! One of the things I did know was that I would need a set of roller gauges, but try as I might, I could not find a commercial source here or in the UK. I couldn't turn a set myself so I made some using brass screws and nuts soldered together at as close to the required dimensions as I could manage. They weren't perfect, mainly because the nuts were not a particularly good fit on the screws, but used in conjunction with a Vernier calliper they did the job. I now know that roller gauges for modified fine scale became available in the UK shortly after I had settled on 31.4mm gauge and started laying track.

When I finally got all the materials and tools together and had made a couple of practice turnouts, which worked far better than I had any right to expect, I felt ready to start laying track on the layout. Strips of 6mm cork were glued either side of the track centre lines which had been marked out when building the base boards. Five millimetre balsa, instead of cork, was used in the switch area of the turnouts to provide the extra depth required to fit slide chairs. Narrow strips of cork were laid either side of the loco pits and 20x8mm strips of pine were attached to both sides of mating baseboard edges into which rail anchor screws would be inserted. The turnout template, with thin spacers taped underneath to stop it being accidentally glued in place, was used to locate stained point timbers on the cork and balsa road bed. With the point timbers fixed in place lines were drawn on the road bed to assist



in locating sleepers for the plain track. Some latitude was allowed to create the small irregularities in the line and spacing of sleepers found in real track. Long lengths of turnout timber were laid along the sides of the loco pits to represent the timer baulks sometimes used on the prototype.

Rail spiking commenced with the crossing vee of one of the turnouts in the centre of the layout and proceeded outwards. Full lengths of rail were temporarily held in place to allow the position of droppers, point blades(if required) and baseboard joints to be marked. The rail was then lifted to allow all filing, tinning and soldering work to be carried out at the bench. Anchoring screws for the rails crossing baseboard joints were screwed in position, filed to the required height and tinned. After the rails had been spiked in place, and everything double checked, they were soldered to the anchoring screws and then cut through with a razor saw directly over the joint.

Although the test turnouts I constructed performed satisfactorily with check rail gaps of 1.2mm, I wasn't confident enough to solder the check rails to the stock rails, as seems to be the normal practice, before spiking them in position. I also wanted to be sure that the turnouts would work without check rails, which I had read they should - if they were built properly, and to test them with a wider range of rolling stock and locos than I had at that time. Retro-fitting the check rails was a bit fiddley but not difficult. I filed rebates into the foot of the check rails to allow them to clear the spikes holding the stock rail and to sit close enough to obtain the required 1.2mm gap and soldered tags under the check rails which would slide under the stock rails to keep the check rails upright when spiked on the outside only.

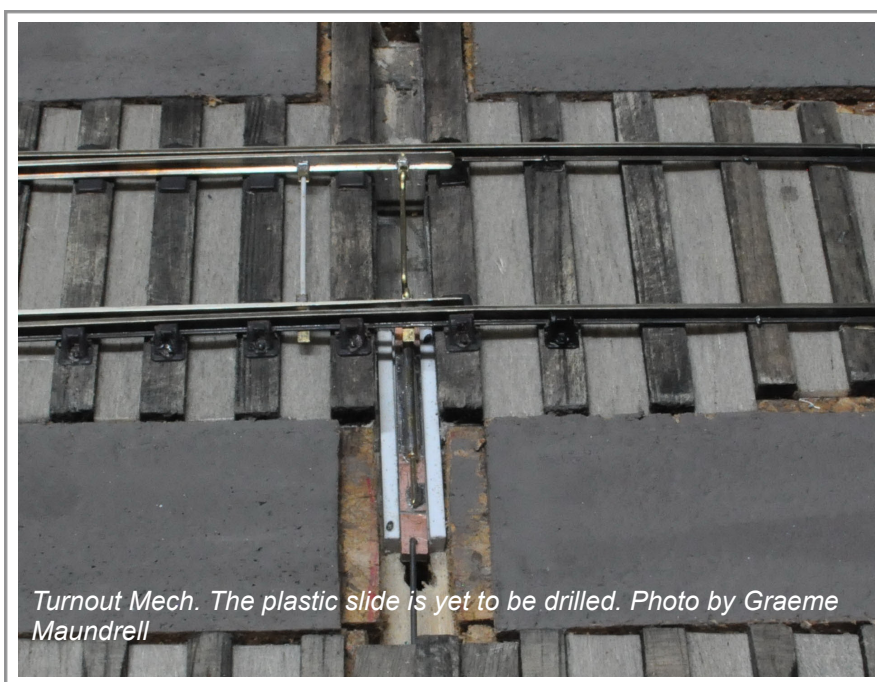
C&L plastic slide chairs were used to support the stock rails and point blades. These are designed for bull head rail but a wipe with a thin hacksaw blade allowed flat bottom rail to fit. Holes drilled through the bolt head on the outside of each casting made provision for spiking. The stock rails could not be spiked to the slide chairs and while this may not be good practice it has not caused any problems to date and hopefully won't given the low speed of movements around a loco depot.

Point blade heels are located in shortened rail joiner 'heel blocks' and droppers are soldered to the foot of the point blade on the non viewing side. Tie bar brackets are fabricated from 1.6mm square section brass tube soldered to the point blades. The brackets closest to the toe are filed to form a channel and are drilled 1mm to take the 0.8mm wire 'tie bars'. These brackets also have a tongue which slides under the stock rail to prevent the blades from lifting. The second pair of brackets are left as sockets to accept cosmetic non conducting tie bars. The cork road bed between the point lever timbers was cut out to make room for the tie bar slides which are channels fabricated from various widths of 1mm plastic strip to suit the width of the double sided PCB tie bar assemblies. Two 0.8mm wires, shaped to represent the prototype tie bar, are attached to the PCB strip. The wire attached to the far point blade is soldered centrally under the PCB strip. The wire operating the point blade on the viewing side of the turnout is fitted into a piece of 1.6mm brass tube on top of the PCB strip which allows the point throw to be adjusted. The end of the PCB strip is gapped on both sides and a hole drilled to take a piano wire operating rod. A retaining wire bears on the top of the brass tube to prevent the 'tie bar' lifting out of the point blade brackets.

The operating rods run through slots cut in the cork road bed to DPDT slide switches on the side of the

base board. As nearly all the rods followed relatively short and straight courses the usual metal guide tubes were not necessary and drinking straw conduits were sufficient to prevent the rods being glued in place during ballasting. The piano wires were threaded through holes drilled in the switch knobs with brass tubes soldered either side to provide the required throw. As a matter of good luck rather than good design, the throw of the DPDT switches was exactly twice that of the point blades. This allows the DPDT switches to left in the centre-off position, isolating the crossing vee, relieving stress on the points and the operating mechanisms and allowing trailing movements through the points without derailments(usually) or short circuits. The operating mechanisms were hidden from view with lightly ballasted removable strips of 1mm ply which are slotted to provide clearance for the 'tie bar' legs.

Ballasting was not started until the whole layout had been set up on its sub frame and thoroughly tested. As more than half of the surface of the layout was to be ballasted I was conscious of the amount of ballast I would need and concerned about the amount of water that would have to be used to lay it. I decided to address these issues by filling the spaces between the sleepers and adjacent tracks with sheet balsa which would reduce the amount of ballast required and, I hoped, reduce the risk of getting the sleepers, roadbed and base boards too wet.



Turnout Mech. The plastic slide is yet to be drilled. Photo by Graeme Maundrell



Viewing Side. Photo by Graeme Maundrell



Tie Bar. Photo by Graeme Maundrell

prototype and the clinker brown paint quite well. The addition of small quantities of unstained beige and very dark brown ballast further improved its appearance. I made a large quantity of the ash ballast, knowing that I had no hope of being able to match the colour if I ran out half way through the job, and a smaller batch of a lighter and earthier tone for the less often used and overgrown wagon repair siding and the way and works extension off the turntable. The area to be ballasted was given a generous but even coat of paint and a liberal sprinkling of ballast which was tamped down with a small block of wood. I have tried this technique with PVA in the past only to make a sticky mess of everything and to produce anything but a smooth surface. Using paint did seem to make a difference. After the paint had dried the surplus ballast was brushed off and saved for reuse. The ballast that remained was treated with a weak mix of PVA and water (about 20% glue) and left until thoroughly dry. It was then sanded to a fairly smooth finish which also exposed the light brown interior of some of the granules of ballast which, in my opinion, further improved its appearance.

In spite of a number of false starts, attempts to re-invent the wheel and a very steep learning curve, laying the track for this layout has been a very rewarding experience and I am very grateful to those who inspired me to have a go and helped along the way.

I also hoped that the relatively thin layer of ballast to be laid would make it easier to create relatively smooth well trodden appearance of ash ballast which was evident in photographs of the prototype.

I recalled reading in an article, some time ago, that paint, being thicker and slower drying, was more effective than PVA for fixing gravel to model road surfaces and wondered whether it would be an effective way to simulate a smooth ash ballast surface. As it was bound to show through the ballast in places, the colour of the paint would have to be very close to that of the ballast and, of course, dead flat. I spent some time trying to capture the colour I wanted by mixing acrylic artists paints but I had little success. As a last resort and expecting to be disappointed I went to a local paint shop and found to my surprise that they had an off-the-shelf colour called 'clinker brown' which, as the name suggests, was very close to the colour I wanted and although not available in a flat finish it could be flattened with the addition of a flattening agent. None of the commercially available ballasts came close to this colour and most were a light blue-grey that looked far

to clean to be convincing. In an attempt to get closer to the colour I wanted I mixed indian ink, Tamiya XF 10 brown paint with isopropyl alcohol and stirred it into a quantity of Woodland Scenics fine grade, light gray ballast. The first attempt turned out too dark but the next batch, rather than going dark acquired a 'dirty' brown tinge which matched photographs of the



Ballast

Terrific Gum Trees

by Fran Thomas

This article is about making suitable Australian trees for model railway layouts. Australian trees usually have a more open structure with visible branches and leaves at the end of their branches. This article is only concerned with one of the many methods available. I started making trees this way as I found the plant that provides the basic structure growing in my garden. See [Photo 1](#). The rest has evolved with trial and error and may still be improved.

The plant, 'Nandina Domestica' originated in Japan or China and is sometimes called Japanese Sacred Bamboo. It is not a bamboo but an evergreen plant with bamboo like stems growing to about six feet. The female plant has branch like stalks covered with small white flowers, followed by red berries appearing at the end of autumn and beginning of winter.

These berry covered stalks can be cut off at their base at any time after the flowers have formed to when the berries are at their largest and drooping. They can also be harvested well after the berries have dropped off naturally and the stems appear dry. They are just a bit less malleable.

The beginning.

I start by gathering and keeping close, a long piece of sewing thread, a small paint brush and some PVA. I then pull off any berries and leaves still attached. See [Photo 2](#) Being aware of what scale the trees are to be, I group the stalks into their lengths and start putting two or three together at the stems and rearranging them until I am happy with the combination. What I want is a balanced form that can be pruned to the type of branch structure required. It is best to leave at least one of these stems longer than the others. This makes it possible to place the tree in a large slab of polystyrene foam.

This longer piece can also help later with the permanent planting of the finished tree into the scenery.

Making the tree trunk.

I use the common sewing thread, which I have ready, to lash the stems together. Winding it around (and around) until it is secure and looking more like a trunk. See [Photo 3](#). The PVA is used to help hold it all in place when the thread is secured.

When dry, I start to paint the trunk and lower branches with No More Gaps.

I have emptied my tube of No More Gaps into a plastic container with a good air tight lid. With a suitable artists brush, I paint directly from this container on to the 'trunk' and also onto the lower branches.

I paint layer upon layer of the No More Gaps, allowing some drying time between, until I am happy with the

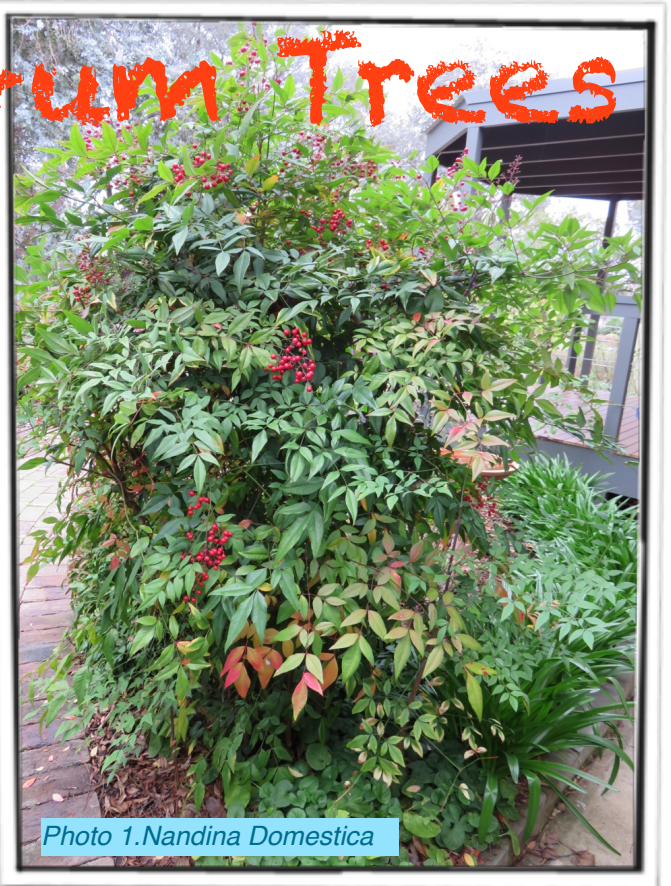


Photo 1. Nandina Domestica



Photo 2. the berries removed

thickness and shape. Old trees tend to be thicker at the base than young ones.

I secure the tree in the large polystyrene foam slab to dry between coats, using the stem protruding from the trunk.

Pruning the tree

This is where you need to have some idea what sort of tree you want. Is it an empty tall dry area eucalypt with leaves at the end of long branches or a more thickly leafed eucalypt from a temperate or sub tropical area? Look at the trees growing, or find photos of the trees from the area you want to model.

Take your time over this part. Rotate the tree frequently to check your work as you go. I also find a side cutter is easier to use than most scissors for this operation.

Firstly remove any branches crossing and touching in the middle. Also remove the part of any large or small branch that interferes with another. This makes it easier to put the foliage on later. Next remove any bits sticking out where you don't want them. The very top might also need a haircut.

If your tree is to have that empty look with all its leaves at the very top, the smaller side branches will need to be removed from the base of your larger branches. If your tree is a lush sub tropical one you will need to keep all your side branches and some of the inside ones as well. If it is a naturally drooping tree, all the upward pointing small side branches need to be removed leaving only the outward and downward branches.

Painting the trunk and branches.

When the tree is pruned to the shape wanted, it is time to paint the trunk and branches to suit the chosen tree type.

Any type of paint that will stay on No More Gaps will do. I use small artists tube acrylic paints, so that the colours can be mixed to suit. Tree trunks are not ever all one colour and sometimes the branches, especially the top ones, are a different colour from the trunk. [See Photo 4.](#)

Leave the tree to dry. Again, I secure mine using the long piece of trunk stuck in a large polystyrene foam slab.

Putting leaves on the tree.

As this can be a bit messy, I use a large shallow lid from either a cardboard or plastic box to provide for the collection of the ground foam that escapes during these next steps.

Scissors are needed to firstly cut the foliage into strips and then into pieces. I mostly cut into triangles about an inch in diameter. Odd shapes are more interesting than just squares and give you more choices when you are positioning them on the trees. These shapes are stretched out to thin the pieces to look more like leaves. I usually do quite a few and leave them in a pile at one end of the lid. [See Photo 5.](#)

At this stage use the large polystyrene foam slab as much as possible to hold the tree upright. To put the foliage on the tree, it is best to locate and start on a low branch on the inside of the tree and work your way up and out to the end of the branch. This procedure will require patience, but you get better at it with practice. Try to do a small area at a time and if your fingers are too large try it with forceps.

I firstly coat the chosen branch using straight PVA with an artists brush. This is only the first contact with glue. Final sprays will be needed later.

Next I select a piece of the previously stretched foliage, big enough to cover the few small branches and shape it as necessary to fit. Place this foliage over the branch newly covered with PVA and press it down gently. Do not try to cover too much at once. One branch may need several pieces, but a certain amount of overlapping and or overhang is appropriate. [See Photo 6. and 7.](#) Other small bits of foliage can be used to hide the tops of any small branches that



Photo 3. collection of stems tied together



Photo 4. pruned and painted

protrude through this foliage. Just paint a bit of PVA on them and stick them in place. Repeat the procedure until the whole tree is covered to your satisfaction. See [Photo 8](#).

Finishing spray

Using a bottle with a very fine spray, mix full strength PVA with approximately 70% to 80% warm water and a little detergent then shake very well.

Spray the tree gently about three times on all sides and underneath, with the freshly shaken liquid. Too harsh a spray or too large a spray outlet, may undo all your good work. I do not use hairspray as I found it has not got a firm enough hold and it attracts dust causing your tree to go grey very quickly. Allow it to dry between sprays.

Rinse the spray nozzle through immediately afterwards with warm water to prevent blockages.

The list of requirements.

1. Tree structure. If you don't have 'Nandina Domestica' you may find something else suitable.
2. Sewing thread or equivalent.
3. No More Gaps in an airtight container.
4. Artists brush for No More Gaps.
5. Scissors and side cutters.
6. Paints - I use Artists Acrylic tubes.
7. Another small artists brush for the paint.
8. Foliage -I have found the foliage 'Heki-flor' to be most effective and it has a reasonable range of colours. For an O Scale tree 2 packets are needed. The 'Woodland Scenics Foliage' is nearly as good.
9. A lid to contain the loose 'leaves'.
10. A very fine spray bottle.



Photo 5. stretching the foliage



Photo 6. glue foliage onto branches



Phot 8. the finished tree



Photo 7. start foliage from the bottom

Lets Get Rolling

by Ray Rumble



Some of my Arakoola colleagues suggested that as my model train fleet grows I would need a ROLLING ROAD something I had never heard of. On Googling I found a number of manufacturers made them but at a cost of anywhere from \$A160 up to magnificent machines for \$A300 plus postage.

A little more homework on the web and I found a very interesting article by Howard Moutray at Heywood Model Railway group and I thank him for his contribution. BY following his methods and for a few small dollars you can manufacture a rolling road yourself. You will need to procure the following items:

One 530mm L x 140mm W x 19mm thick pine base board

One 1m length 19mm W x 1.5mm thick aluminium angle

12 x 13mm dia ball races 6BA centre hole

8 x 30mm 6BA bolts and nuts (holds angle to baseboard)

8 x 16mm 6BA bolts (axles for ball races)

8 x 6BA nylon lock nuts (holds ball race axles to angle modules)

24 x 3/16" machine washers (spacer washers between ball races and angle modules)

2 metre length of twin electrical cable (fitted to two 6BA bolts holding the aluminium angle in place)

The only tricky item to obtain locally was the ball races. No problem, as there are a number of manufacturers (all Chinese) on eBay. I found a company selling the 13mm diameter ball races in Hong Kong item number 2C023, ten for \$A6.95 INCLUDING postage. At that price I ordered two sets in case there were any duds. They duly arrived a week later. More details and a link to the web site are at the end of this article.

The first step is to cut up the base board from 19mm pine and give it a coat of paint. I gave mine six nice

stick-on base legs underneath to provide stability on most surfaces. Next, cut the two main aluminium angle pieces that will become your basic electrical rails. The length you can vary but for mine I wanted to accommodate at least a 38 class Pacific locomotive so made it 500mm on the 530mm base. As I proposed two sets of ball races to accommodate two electrified sets of driving wheels as well as the tender, this meant a cut out on one angle wall of 150mm for the ball race sets to sit. If you choose you can produce three sets of ball race modules as if you purchase two x 10 ball race sets from Hong Kong you'll have plenty for this.

Next you make up the ball race modules 34mm long (in my case 4 angles as per photo) and drill the 6BA axle holes 6mm from the top edge of the angle with the centres 16mm apart. The 6mm distance from the top edge of the angle I found more comfortable than the 4mm suggested by Howard Moutray in his article. These modules can be moved as required for different models and you may decide to have six modules or more depending on how many rotating wheels you wish to support. Note that this arrangement is for a steam locomotive but a variation with suitably placed rollers could be built to accommodate a diesel..

A little tricky are the brass spacer washers providing the axle for the ball races. You would normally think you would use brass 6BA washers but I found 6BA brass washers are unobtainable and the outside diameter of the washers interferes with the outer edge of the ball races. I found easily obtainable 3/16" brass machine washers that are 10mm outside diameter where as 6BA washers are 12mm. By placing two 3/16" washers up against the angle between the ball race inner diameter this locks it securely and provides enough space for the wheel flange to sit nicely in the gap once you position the module under each driving wheel.

Next you need to router out a slot on the base under the ball race modules so that the modules sit easily under the remaining angle piece. A trench of about 25mm wide is ideal and routed about 1mm deep. The eight 30mm deep 6BA bolt holes then need to be drilled in the pine base as shown in the finished product photo to

lock in place the two angle pieces. Of course for O gauge you need to have these spaced 32mm apart inside measurements. I used spare wheels to perfectly locate the angle pieces.

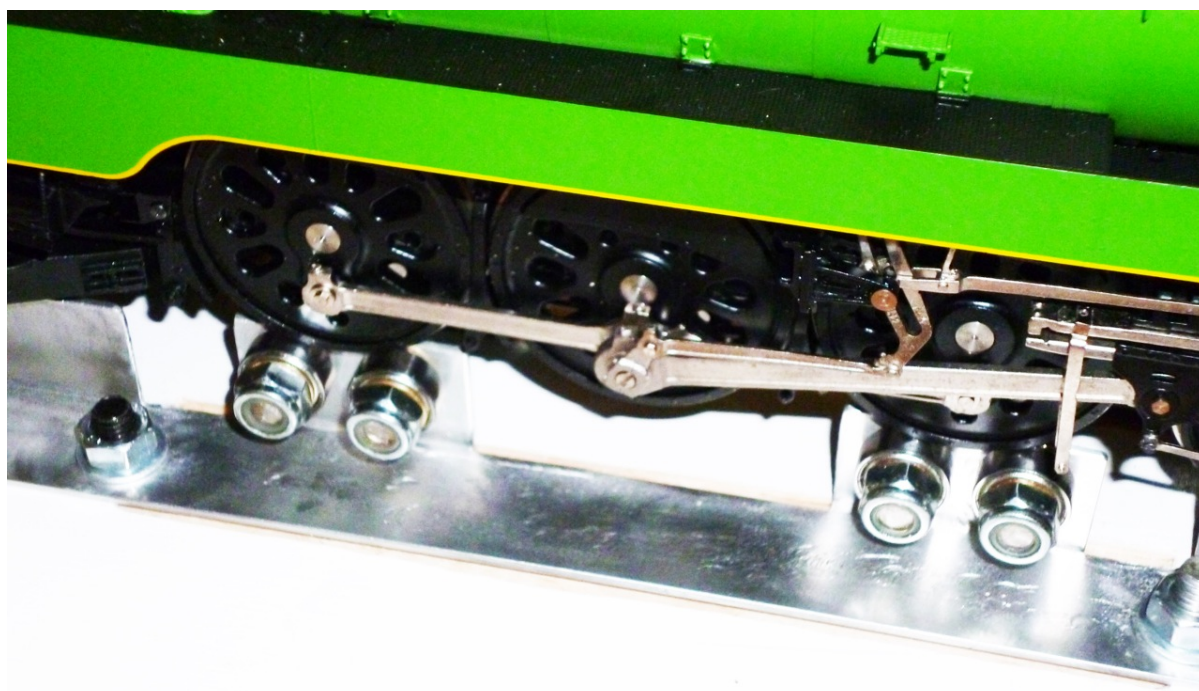
The final fitting is a length of twin cable attached at the far end for electrical connection to both angle pieces. In my case I also fitted small alligator clips to the other end of the cable to connect to whatever power source you

propose using. This can be adjustable 12 volt DC or 14 volt AC DCC power for a DCC fitted locomotive.

Ball Races - Description 10PCS 686Z, 6mm I/D x 13mm O/D x 5mm thick Metal Shields Sealed Deep Groove Ball Bearing. Can order on ebay by email address @ \$7.92 and free post from Hong Kong.



<http://www.ebay.com.au/itm/10Pcs-686Z-6-x-13-x-5mm-Metal-Shields-Sealed-Deep-Groove-Ball-Bearings-/391241599908?hash=item5b17d10ba4:g:vL4AAOSwI7VWrbx>



Modifying the GP Wagons.

Part 1 – The reversed dreadnought ends or an exercise in soldering.

by Lionel Pascoe

While reading some reference articles about the GP fleet, they mentioned that some wagons had different modifications over their life, most were different types of bogies and position of ladders and shunter steps but what caught my attention was the two styles of end modifications, enter the dreadnought reversed end. They mention for HO to use ends from another wagon kit. What to do in 7mm?

One photo was very clear as basically they turned the end so the pressed ribs were now on the inside of the wagon instead of on the outside with the end plate riveted back in place. OK now let's have a look at those ends - so if we saw down either side between the angled rivet line and the pressed ribs then along the top of the bottom sill (we'll call this the cutout) and as its white metal we'll just solder it back together, possible? After comparing for a while - yes it is. Now try to remember that when looking at the existing ends both sides present a smooth surface which we are trying to achieve once we have soldered it back together.

So to clarify our new end when it's put back together we'll see the rivets with rib hollows and gunwale overhanging the rivets.

First - It's out with the Zona blade to cut parallel just under and up against the gunwale from both sides to remove it, file it smooth and put aside.

Second - Draw reference lines showing the angle between the ribs and the rivets so we'll have a guide to follow for our cutting on both sides. Next, it's out with the deep Zona saw (23mm blade) and holding the end in a swivel vice with a little exposed, cut along the line. lifting a little and sawing each time will help stop its distortion.

About two thirds down it's the bottom of the saw so to go the rest of the way we'll need to angle the Zona to get to the bottom sill. Near the sill don't forget the angle sawing comes in from both sides so we're not left with a large angled piece to break off in the corner bottom. Cut the other side along the angled line a little at a time repeating the process. See Pic 1

Third - We'll swivel the vice still holding the end around to allow us to use the tip of the small Zona to score a line along the bottom sill. Place the non sawing hand to rest on the vice with thumb to support the blade as a guide and use the index finger as a front blade stop while using a back and forth scoring motion. Try to

remember not to score into the area where the rivets are in front of the blade, or under the back teeth of the blade when sawing. Keep scoring using the saw tip till we have an elongated hole, then we can start to saw along the top of the bottom sill in the scored hole. Don't forget that near the rivets we will cut from both sides at an angle to help when breaking the 'cutout' out. Use the swivel vice to swing it around to allow sawing without taking out ends while still holding it reasonably steady. Note - watch out for the blade stiffening support when sawing at an angle so it does not destroy the rivets.

Fourth - Remove the centre 'cutout' piece by gently rocking to remove it, then file up and clean both parts of the end including removing burrs but being careful not to touch the rivets. See Pic 2 and Pic 3

With the outside U end part make sure that it is dead flat and square and check if there are any distortions after sawing. Using a combination square level across the bottom, check if both outsides of the U piece are square with bottom, then in the middle of the upright to ensure the end sides are flat and then do same with combination edge on each side checking across the top and bottom and then eye it across and along the diagonal as if bowed or warped it won't go together flat or look great. Repeat process for the 'cutout' part to ensure its flat and level.

Place both parts onto a flat surface and insert the 'cutout' into the end opening so we have the rivets and pressing hollows away from us. Remember that across the tops of the U part and the 'cutout' need to be kept level. I used a thick steel rule.

We need to measure to ensure the cutout is centred from both outside edges while keeping it aligned at the top. I used a dial calliper as it's very easy to use instead of a rule. I used a rib on the end on the cutout and measured to the outside edge then the other side to get it equally spaced. Just keep measuring one side and then the other and if needed do some filing to get it centred.

Five - So now that the cutout is centred in the middle from both sides and the tops level, we need to ensure that it is level and flat with the end piece on the four corners as when we solder it we don't want it at different levels. It has to be flat. I found using a piece of 3 ply tissue paper folded on itself three times slightly smaller than the cutout size lifts the cutout so it can be adjusted

when inserted into the U end piece on a flat surface. Extra little piece's of tissue helps in those corners that won't stay level.

Have a play with going over these procedures just to see how it goes. Remember it needs to be flat and aligned left to right, in height and at the four corners. Just a little practice and it gets easier to achieve.

Six - I used 100 degree low melt solder with a Jaycar Duratech variable temperature soldering iron and Carr's yellow flux. Don't forget your P2 vented mask to stop breathing in fumes. Also a fan helps. Set the iron to around the middle setting and wait for it to heat up.

Hold the tip onto the solder to let some melt onto the iron's tip, a little bit of flux in one corner of our end and bring the iron with the solder on it to tack and hold it. Now just tack the diagonally opposite corner checking that the insert is still flat and level with the end piece. Finish with a tack to the other two corners after adjustments. Is the end the right way around?

We want to heat up the work OK, not melt it and with the aid of the flux, flow the solder into the crack because when we finish up we will file and sand most of the solder on the surface away. Start filling in along the bottom, first some flux then by placing solder in a corner and then adding more solder to the tip while moving it along. Try to build up the solder on the white metal edge if too big a hole, moving the iron back and forth a centimetre or two as it melts and flows in to the crack, slowly adding solder each pass as necessary to finish without hollows. Finish along the bottom and do the sides. Turn it over and we should see the solder has flown into the crack almost to the bottom. Turn back over and check if any voids are now cooled and if you see any just build it up to level or above as the solder sinks into the crack. Keep the solder flowing with a back and forth motion and adding solder to fill it up.

Turn the end over and solder the rivet side now if there are any hollows with same action and flux to help solder

flow. Not too much solder and be careful of those rivets as we don't want them covered in solder. Remember it's easy to add solder in small dabs BUT once we cover those rivets - they're gone and I didn't want to drill and add rivet detail. See picture 4.

On the non rivet side of the end start filing taking the solder down to make it level and have a flat surface. Try not to leave gouge marks or filing marks, use a nice file that takes it away without leaving gouge marks then use emery cloth to sand down and then a very fine file or sandpaper. If you find any hollows or gouge marks just fill it with solder and file and sand again.

Turn over to the rivet side and being very careful file the solder away, may have to use the bottom sill and use your fingers as a guide while filing. Watch those rivets. See picture 5.

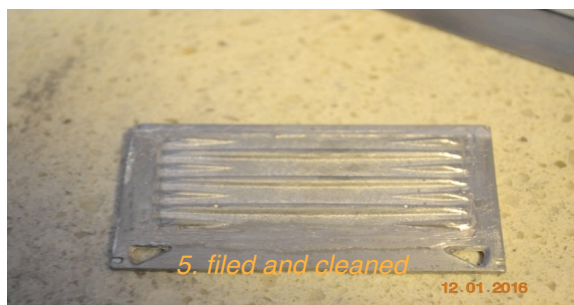
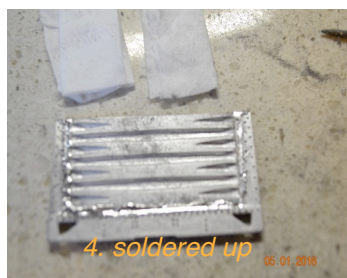
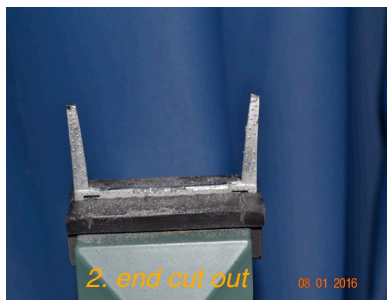
Seven - It's time now to re attach the gunwale to our end but make sure that it is the correct way around with the overhang on the side with the rivets and it's square with the end.

We should end up with a nice smooth end now to use on our next GP wagon being assembled thus making it a bit unique to all those other GP's on our ore train. See picture 6.

As in the reference articles, the ladders and shunter steps can also be varied on a few.

Soldering is learnt by doing. Practice on some scraps. Don't forget your safety first - a P2 vented mask so you don't breathe in the solder or flux fumes. A P1 is not good enough.

Part 2. will be on the other type of end, the channel ends when they ran out of dreadnought ends while doing repairs.





John R B Parker

Waratah NSWGR HG Van from Model O Kits

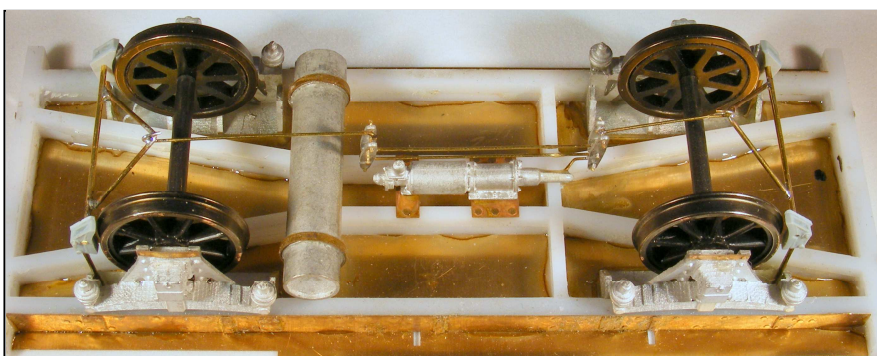
The kit includes all the components necessary to build an excellent model with the exception of the couplers, the choice of which is left to the builder. Included in the "pizza" style box are comprehensive instructions provided, as is now becoming common practice, on a CD. It is of course possible to print out a complete set of instructions but many will find it convenient to have a computer as an essential part of their modelling work area. The ability to enlarge any of the CAD based assembly drawings when necessary can be very helpful.

A close inspection of the components in the box highlights the different ideas incorporated in the design of this kit in comparison to the more familiar approach based upon epoxy castings. The body will be constructed from etched brass components. That isn't that surprising, many U.K. designed kits have used this technique for years. What is unusual is the laser cut cardboard parts; these accurately represent the tongue and groove timber construction of the prototype and provide all the inner walls of the brake-van. This results in a very strong model with an etched brass skin. It might appear unusual but it is very effective as can be seen from the photographs.

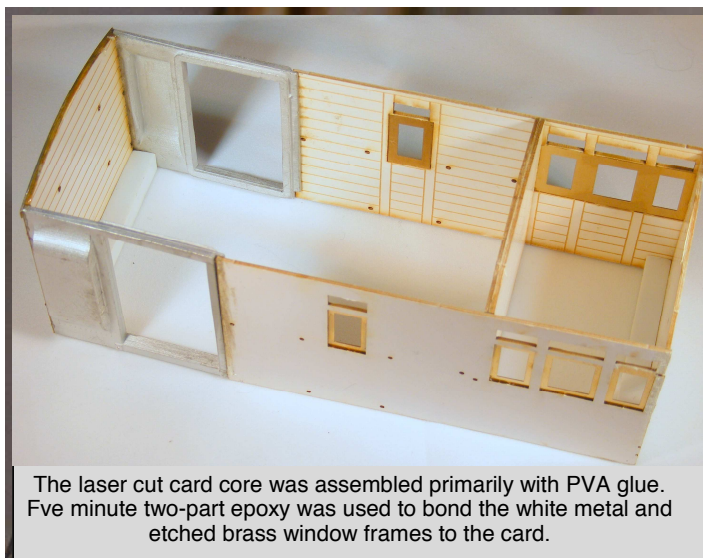
NSWGR HG 4 wheel Guards Van

The impending release of an HG composite brake van kit was first announced some years ago and most have probably been expecting a fairly simple kit based upon a cast epoxy body. Model O Kits now have the kit available in three different versions, each an accurate representation of the prototype. This is a true mixed media kit which most will find easy to build. It might also challenge your traditional ideas on construction materials and techniques.

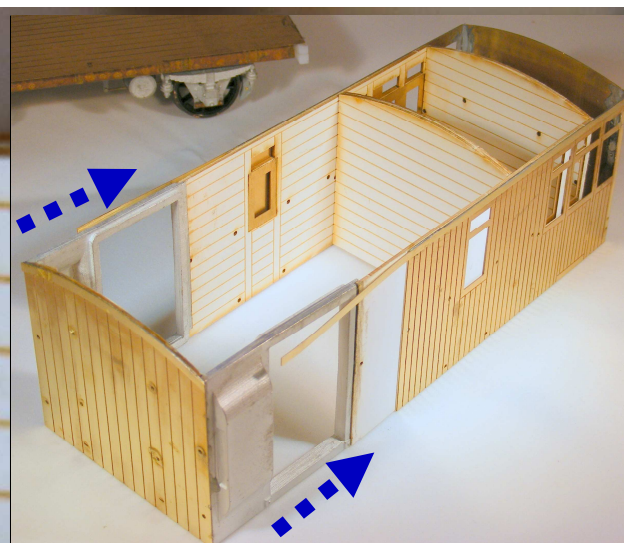
I found that the instructions were particularly helpful, making only minor variations to the suggested assembly sequence. Most of the etched brass components were soldered together, PVA glue was used for the laser-cut card components and five minute two-part epoxy adhesive used elsewhere. In fact if soldering is not your thing the entire kit could be assembled with two-part epoxy. The extra setting time available to accurately reposition the components before the glue hardens gives the modeller a distinct advantage during the construction process. This kind of construction also lends itself to short building sessions spread over of a number of days.



The two halves of the laser cut acrylic chassis are easily glued together with two part epoxy. The instructions do leave some room for interpretation regarding the brake detail. My choice was for a somewhat simplified version.



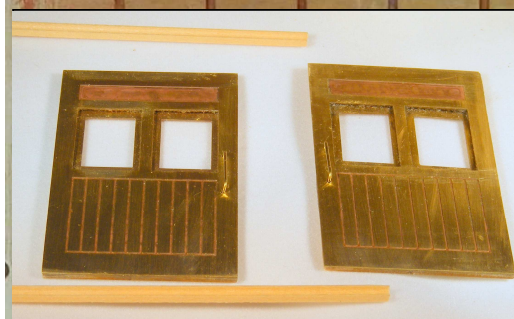
The laser cut card core was assembled primarily with PVA glue. Five minute two-part epoxy was used to bond the white metal and etched brass window frames to the card.



A test fit is underway prior to soldering the roof in place. The end brass wall has been laminated to the interior card wall.

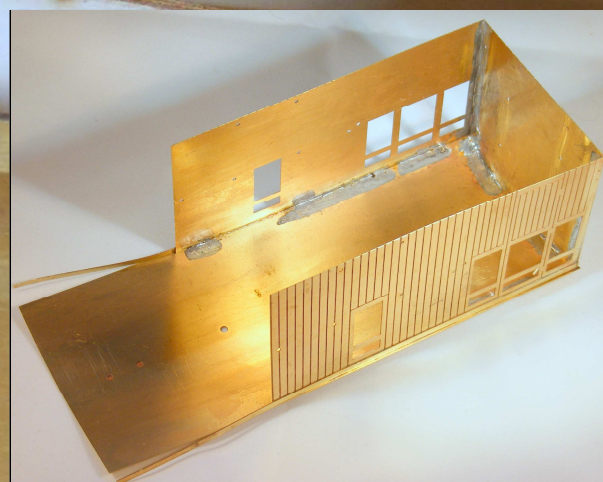


The curved strips were soldered after clamping in place. A little flux together with the capillary action of the solder ensures a neat finish which requires little cleaning.



The brass etched doors were laminated to the laser cut card interior before affixing the handles in place.

Wood (or styrene) "U" shaped channels will permit operable sliding doors.



The correct roof profile was achieved by rolling with a length of dowel on a pad of newspaper. The slightly curved roof was then soldered in place. To permit the fitting of the interior walls a minimum amount of solder is used.



The outer brass shell complete with the roof was slipped over the inner core and a limited amount of epoxy adhesive was applied to the lower edge to permanently attach the two sections.



Final check before painting. Keen eyed readers will notice that in this photograph the body is unintentionally reversed on the chassis.

Commercial News

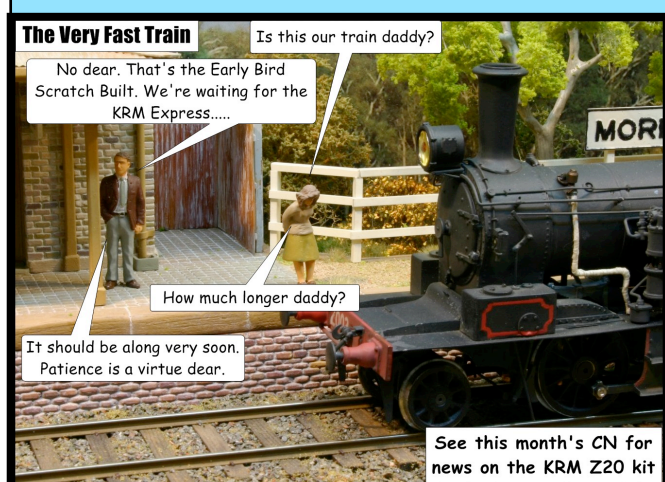
Trevor Hodges

Big River Models

Big River Models, 1/30 Todmorden Rd, Buttaba 2283, (02) 49755501, bigrivermodels@gmail.com, have passed on the news that their precision "Made in Australia" NSWGR Wheel sets are available with three prototype injection moulded wheel centre options, precision machined axles and wheel rims. Good progress has been made on the MCE 12 wheeler passenger car and the three versions of passenger parcels/guards vans are also occurring side by side to complement the 12 wheeler range. Pattern making for the Big River L series passenger carriages is also well under way. Big River Bogies are now being produced in house, along with many other parts. The BRM range is being developed to include several common bogie types that will be available separately to the carriage kits. A second run of bus kits are now available.

Keiran Ryan Models

Keiran Ryan, Keiran Ryan Models, 39 Coachwood Cres, Picton, NSW, 2571, (02) 46772462, krmodels@gmail.com & www.7mmkitsnbits.com have announced that the release date for the Z20 class locomotive kit has been put back to late July or mid August, 2016. The kit has been listed at http://www.krmodels.com.au/krm_7mm_001_page.html. Many of the pewter parts, bunkers and tanks are in hand and the etches were at the factory being produced at the time of writing. The instructions have been started and will be updated as parts come to hand so photos can be taken for inclusion. The photos will also be posted on the web site. The pilot build is about to commence and photos of this will also be posted on the web site. Those who have paid deposits should have received these photos by the time of publication.



ModelOKits

ModelOKits, PO Box 379, Sydney, NSW, 1700, (02) 97073390, 0404935663, <http://www.modelokits.com> & sales@modelokits.com are pleased to announce that their next locomotive kit will be for the NSWGR 442 diesel. The kit will consist of a cast resin body with brass, white metal and etched detail parts. The

mechanism will be similar to the one supplied with the 48 class kit in its final form with two motors, one in each bogie. The work is being carried out by the same supplier who produced the 48 for the O-Aust range of kits. It is hoped to have this kit available for purchase by October, 2016. Price to be confirmed.

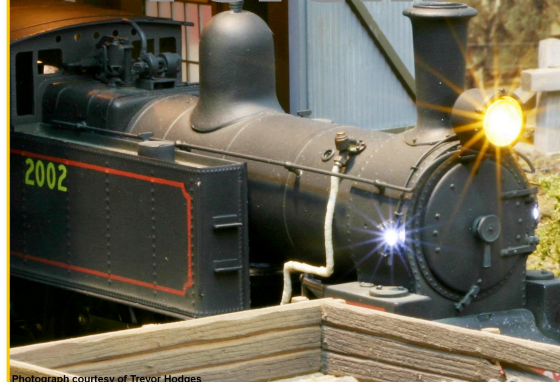
The injection moulded "Ultimate" S Wagon kit has been slightly delayed due to tooling modifications. The expected release date is hoped to be September 2016. The range of line-side detail kits is progressively being added to. Introduced recently have been banner signals and concrete buffer stops with platform signs, lamps and scales, stationary boiler, stationary pressure vessels, diesel line-side tank, farm gates and level crossing gates to be available soon. The LHG is progressing steadily and it is hoped that the pilot model will be available for viewing in August. Kits will be available at Liverpool. It is hoped that the FS/BS carriages and TRC should be available in early 2017.

Signals Branch

Signals Branch via its Shapeways shop web site at <https://www.shapeways.com/shops/signalsbranch> and at rpilgrim@bigpond.net.au and by phone at 02 9543 0970 has passed on the news that the range of 7mm Scale signals has expanded at their Signals Branch shop. Left and right bracket signals as well as left and right offset bracket singles have been added. A sprue of acrylic arms and parts for the bracket signals is also available for those modellers wanting higher detail clarity. Ladders for the signals are also available.

Saturday October 29, 2016

O Scale Modellers Forum



Photograph courtesy of Trevor Hodges

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 including Ross Blunden,
Trevor Hodges, Paul Chisholm and John Parker
with an emphasis on building that O Scale
model and layout. Topics will include..
My O scale story
Planning the Layout
The Telford Adventure
New trends

Annual Silent Auction
\$30 including tea/coffee
Lunch available in club bistro
Aus7 AGM
All are welcome -
Come and share the
progress on your latest project.

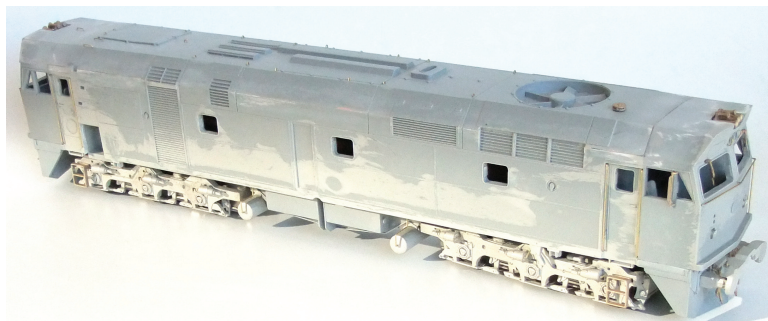


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- Dual motor (Mashima 1833)
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- laser cut internal scale structure
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Photos of pilot model



See website for more photos!



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The Waratah Model Railway Company

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



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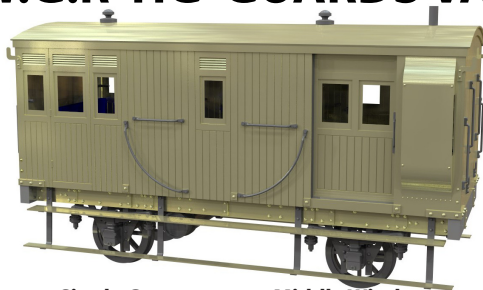
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Twin Compartment



Single Compartment Middle Window



Single Compartment



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

LHG Kit under development.

- Kits available October 2016.

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