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Koola
Albury Loco - Part Four
Some Very Useful Advice
Dad's Cruiser
The Impossible Layout - Part One



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Minutes of Aus 7 Modellers Group Annual General Meeting Saturday 28th October 2017

Attendance Anthony Furniss, Fran Thomas, Brian Thomas, Dave Pallas, Ray Rumble, Chris Harris, Peter Berg, John Parker, Terry Smith, John Lee, Stephen Reynolds, Roger Porter, Michael Chapmen, Derrick Cullen, Paul Chisholm, Trevor Hodges, Lionel Pascoe, Bryan Gawthrop, K Ryan.

Minutes of 2016 AGM No matters arising. Accepted: Moved S. Reynolds, Second R. Rumble - carried.

President's Report - T Hodges. Carried: Moved T. Hodges, Second D. Pallas - carried.

Treasurers Report - Anthony Furniss Moved; Anthony Furniss Second; B Thomas - carried.

Election of Officers President: Trevor Hodges. Nominated J. Parker, Second D. Pallas.

Vice President: John Parker. Nominated T. Hodges. Second F. Thomas.

Treasure: Anthony Furniss. Nominated R. Rumble, Second J. Parker

Secretary: Chris Lord. Nominated S. Reynolds, Second J. Parker

7th Heaven Editor: Paul Chisholm. Nominated A. Furness, Second J. Parker

General Business Ray Rumble suggested that contact be made with ex`members with the view to see if they are interested in rejoining.

Stephen Reynolds suggested that a 7mm promotion stand be at the new exhibition at Rose Hill Race Course in 2018.

Straight Down the Line - Opinion

by Paul Chisholm

Be There Gremlins?

I am not a superstitious person but sometime this hobby causes me to seriously consider the existence of those mythical creatures called Gremlins*. Here are some of the events that have recently led me toward this position.

After working on a 36 class kit from Model O Kits for most of the year and making every effort to have it running on Arakoola at Liverpool I tested it in the days prior and it was running perfectly. Place it on the layout on day one of the exhibition and no go. Checking for shorts and pick up problems by me and at least one other failed to find the problem so the loco sat on the cripple road for three days. With time for a thorough look after the exhibition the culprit was found to be a single soldered wire detached in the tender pickups. Resolder and away she went. But the gremlins ensured this couldn't be found until after the show.

Meanwhile they were at work on the layout too. Anthony and John, our signal engineers are plagued by them. Detector modules and signal mechanisms which work perfectly at home are set upon with glee by the Gremlins as soon as they sense the attention of an exhibition audience.

They love to cajole us into a false sense of security by such things as having a long passenger train travel around the layout 99 times but not on the 100th where it will derail for no apparent reason, mostly when your attention is diverted so as to cause maximum mayhem. They can be guaranteed to do this as soon as someone in the crowd asks you a question and always when the audience is three deep, never during a lull.

Why does a reliable loco run smoothly for two days but on the third begins to stutter and jerk like some sort of demented break dancer? The wheels and track are not dirty. Only the Gremlins know. Day after at home it is fine.

Even before the models are finished and operational the Gremlins have to have go at them. Why is it that if you have to make multiple copiesof some small part, say twenty, the first nineteen will go swimmingly but for some reason things will go wrong for the last one so that it takes almost as long as all the others put together? Has to be Gremlins.

Then there is the dreaded carpet Gremlin who loves to get at you by making sure the smallest and most critical part of some assembly, of which you always only have one, gets flung off into obscurity into the shag pile or even worse down behind the cupboard or bench. With parts you have spares for this never happens.

I could go on but by now you get the idea and are probably coming up with a list of your own examples. But what to do? Is there any way to defeat them or should we just accept them as an inevitable part of the hobby. A bit like flies at a summer BBQ. I am inclined to that view but please if you have come up with a solution don't keep it a secret. My blood pressure needs it.

* Gremlin - an imaginary mischievious sprite regarded as responsible for unexplained problems or faults, especially of a mechanical or electrical nature.

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On The Cover

A brand new 4520 rests in Albury Loco after its first trip down South. See part four of John Reids reconstruction of this facility in this isuue.

KOOLA - the rebirth of a 7mm 3 rail layout " Ron Fox

In 1979 I moved my O gauge manufacturing from Sydney to Queensland. Around that time I met a fellow NSWGR O scale modeller and customer Col Bartlett living in Redcliffe, a beach side suburb of Brisbane. I met Col at the 1980 Brisbane model train exhibition and he invited me to his house for a running day. That led to a 38 year friendship which is still going. Col was a collector of O Gauge House and live steam





models and he had started to build a layout under his old Queenslander house. At that time he was running tinplate, but it wasn't long before he changed to NSWGR models only. I also had a large collection of OGH and scratch built NSWGR.

Over the years the layout was expanded to half of the bottom of the old Queenslander; giving long runs for the 38s to stretch their legs. Most of the layout was Austral bronze track with stud contact pick up except for one siding that was laid in three rail. We had many years of happy running days till 2016 when Col retired and was forced to downsize. In October of that year we had the last run, then the layout was closed and most of it dismantled. I asked Col if I could have the three rail siding. He agreed and I kept four of the six boards and in February this year I assembled them on one side of my garage. Some of

the boards needed some TLC and the rail repinned down but after rewiring them trains ran again.

Later I added a siding to one end to house one of the original engine sheds, a coal bunker and water tank and also added was a short platform with shelter for trains to stop at. I named the platform KOOLA after my street name; not

a real place. I converted the line that once connected to the Redcliffe mainline into a goods siding with shed and a wheat silo opposite. Although the line is only end to end it will keep my now 60 year old locos in running order but I will always remember them running round Col's layout pulling full length coaches and long freight wagons to time tables back in the days when three rail was the norm.

I hope you enjoy these photos of the way O scale was in "the good old days".



ALBURY LOCO - A Work In Progress

Part Four John Reid

daylight at the far end. (**Photo 1**) I was considering replacing the entire back drop at that end of the layout with a large mirror to make the running shed look as long as the prototype, but after some experimentation, and re-reading a Model Railway Journal article on the subject, had to concede that using such a large mirror would create too many unwanted and distracting images to be effective.

The second improvement involved the car shed cleaner's platforms. Because the platforms could not be fixed to the baseboards, for reasons outlined in a previous part of this article, I found it very difficult to place the car shed sections on the layout without knocking the outside platforms out of position. The near side platform sections were not a real problem as they could be clearly seen through the gap under the The subject of this article is the area of Albury Loco extending from the main sheds to just short of the ash pit and turntable. This section of the layout includes the coal stage, the repair siding, the diesel loco refuelling facilities and the Dean St road bridge. But before describing these features I will back track a little to cover a couple of improvements (I hope) made to the loco and car sheds since writing the previous instalment.

The first involved the fitting of acrylic mirrors to the inside of the loco and carriage sheds. The mirrors, in the form of self adhesive tiles purchased from Bunning's, were cheap and easy to work and although more brittle than styrene, could be scored and snapped in the same way. They were shaped to fit the internal profile of the sheds and applied directly to the backdrop. The reflections are not meant to be too obvious, or looked at too closely, but they do create a convincing illusion of a longer shed and more importantly, of daylight at the far end. (Cover Photo and Photo 1) I was considering replacing the entire back drop at that end of the layout with a large mirror to make the running shed look as long as the prototype, but after some experimentation, and re-reading a



Photo 1.The difference the reflection makes can be clearly seen if this image is compared to one taken in the same location printed on page 10, Issue 51 of this publication.

Model Railway Journal article on the subject, had to concede that using such a large mirror would create too many unwanted and distracting images to be effective.

The second improvement involved the car shed cleaner's platforms. Because the platforms could not be fixed to the baseboards, for reasons outlined in a previous part of this article, I found it very difficult to place the car shed sections on the layout without knocking the outside platforms out of position. The near side platform sections were not a real problem as they could be clearly seen through the gap under the side wall of the shed and easily moved back into position. But those on the far side could not be seen, nor corrected, with the shed in place. The issue was resolved by reducing the number of sections in each row of platforms, from four 12" sections, to two 24" sections, and fitting some hooks along the back wall of the shed to hold the platforms upright, and hard against the inside wall, during installation.

At some time in the 1940s the wooden coal stage between number 1 and 2 roads was replaced by a

steel and concrete structure. By the early sixties (the period I am modelling) the new structure was no longer used for its intended purpose and locos requiring coal at Albury were refuelled directly from S trucks stored on the short elevated coal road at the southern end of the running shed. The few steam locos still running on the main south would normally work from Demondrille or Junee and return, without refuelling at Albury. As the signal diagram, which I relied on for other aspects of the layout, did not provide any information on the coal stage I had to rely on the position of turnouts on number 2 and 3 roads to determine the position and length of the structure. I suspect it is a little shorter than the prototype but not by much. The width of the model was limited by the distance between the track and the baseboard edge and is therefore 4 or 5 scale feet too narrow. I decided that truncating the coal stage at the baseboard edge, rather than modifying its proportions, was the least of two evils.

I found the prospect of building a 1.3 metre long model of the concrete coal stage, which had to allow

access to three turnout operating switches lying underneath and cross a baseboard joint, more than a little daunting and spent some time looking at other options. I thought seriously about building a model of the older wooden structure, which I thought would be less of a challenge, or not modelling the coal stage at all. In the end I realized there was no easy way out and that I needed to find a practical way to build the concrete structure. The plan I came up with was a compromise based on my belief (at the time) that only the outer ends of the coal stage really mattered as the track side of the coal stage could not be seen from any normal viewing position. It involved replicating a short group of rail piers at each end and supporting the rest of the deck on two strips of 30 x 12 mm wood fixed to the baseboard. Gaps could be left where required to accommodate the turnout operating switches and baseboard joint terminal blocks. I was satisfied with the impression created by this dodge until seeing, when my HO layout was photographed, how developments in digital photography proved my understanding of what could and couldn't be seen on a model, outdated.

The piers are fabricated from code 125 rail and held in sets by a kerb rail soldered across the track side bearers and a discrete 1mm wire soldered across the bottom of one

leg of each pier. The pier sets are not fixed but are located in rebates along the baseboard edge to ensure they line up with fixed deck supports. The deck is constructed from 1mm styrene sheet and is reinforced at joints and edges with similar material. Additional strips of plastic engage lock into the fixed wood support strips to ensure the deck is accurately aligned with the rest of the structure. The rail kerb and bearer ends along the front edge of the stage are fabricated from styrene and painted to match the metal kerb rails and bearers at each end. (Photo 2) The concrete slab and rail end walls are separate components fabricated from styrene and, to reduce the risk of damage if bumped, simply rest in place. Rather than paint the deck to represent old concrete (I have never been satisfied with the colour of paints that are supposed to represent aged concrete or succeeded in mixing my own) I rubbed down the surface of the styrene with fine wet and dry emery paper to achieve a matt surface and applied a very dilute mix of a tan/beige matt enamel and turps which seems to act more like a stain than a paint. When the surface was thoroughly dry I applied several washes of Indian ink, water and isopropyl alcohol. I had to adjust the amount of alcohol in the mix by trial and error. Too little and the wash failed to wet the surface properly too much, for reasons that elude me,

resulted in a high gloss finish. I have since read in a US magazine that a solution of ink and alcohol, without the water, works well but am yet to try it

Judging from the amount of maintenance equipment and the extensive stacks of what appear to be wagon parts, visible in photographs from the 1940s and 50s, the repair sidings must have been well utilized. However later images suggest that maintenance activity declined over the years and that by the time represented on my model they appear to have been used for little more than general storage. As space is as tight on the model as it was at the real depot the repair siding will be a convenient place to store the odd ash or coal truck and the rail motor when it is in town.

The sheds at the northern end of the siding are based on photographs. dating from the late 1940s, in the Byways of Steam article. These images aren't very clear but they do show the general features of the sheds and that the centre one was a grounded covered van body. Later photographs are not very informative but it does appear that the sheds survived into the early 60s. (Photo 3) The van body is represented by an O Aust CV kit. A replacement roof was made by gluing thin strips of styrene to curved formers attached at intervals along the body. These strips are intended to represent battens which will be allowed to show through gaps in the disintegrating roof covering when the model is painted. The other sheds are MDF carcasses clad in Model O Kits weatherboard and Slaters corrugated styrene. The roof covering for these buildings has been formed from styrene corrugated sheet, strip and rod, using the models as a former. These will not be fixed in place until painting and weathering have been completed.

The steep bank and the fences along the back of the repair siding did not exist at Albury but have been added as the baseboards are much too narrow to allow the extensive area that really existed between the siding and the railway boundary to be modelled. The fences have been constructed using corrugated styrene or strip wood glued to 600mm lengths of MDF cut to follow the profile of the bank. Vertical strips

Photo 2 The deck of the coal stage has been turned over to show how the main components of the coal stage relate to each other.





Photo 3 The repair siding sheds and the loco servicing facilities on No 2 engine road occupy the centre of the layout.

of MDF, attached to each length of fencing, slide behind the heads of button headed screws embedded in the rear of the profile boards. A piece of 12x12mm pine, drilled 1mm every few centimetres, is glued to the rear of each length of fencing as a stiffener and to allow low relief trees to be inserted where required. The siding terminates at a sleeper built ash stop. This is a Model O Kits kit with the timber buttresses on the viewing side replaced with rail posts as appears to have been done on the prototype to provide clearance for the diesel oil pipeline.

The diesel refuelling facilities represented on the model appear to have been established at Albury sometime in the 1950s. One refuelling stand was on the turntable road just north of the road bridge, convenient perhaps for the single ended diesels in use on the main south at the time. The other was located at the down end of number two road, between the coal stage and the water column, where diesels were regularly stabled. Bulk fuel tanks, enclosed by bunds, and other related facilities were located near the Dean Street bridge embankment. Fuel was delivered to the dispensing stands by a low level pipe line running alongside the repair sidings and a gantry, across the loco roads, to the down end of the coal stage. The fuel dispensing points and the pipe line have been modelled but, due to space constraints, the bulk fuel storage facilities have been

omitted. The pipe line to the refuelling points is intended to emerge from a culvert set into the bank at the end of the repair road implying that the bulk fuel facilities lie behind the high corrugated iron fence next to the Dean St bridge.

The posts used to support the low level pipeline are lengths of code 100 rail with a 'j' shaped brass strip attached to hold the pipe about two scale foot above ground level. The pipe is 2mm styrene rod. Flanges were formed from short sections of styrene tube glued over the end of the rod and filed back as far as possible. Larger diameter flanges were enhanced with small squares of plastic to represent bolts. Detachable joints have been made by drilling 0.5mm holes in the end of each section of pipe and gluing a pin in one side. I would have preferred to use brass tube for the pipe line as it would have been easier to join and less prone to sagging however, 1.6mm brass tube looked far too fine and the next available diameter (2.4mm) looked too heavy.

The gantry masts are back to back styrene channels joined with styrene strip spacers. The horizontal girder is constructed of smaller section channel with spacers which also form up-stands to support the fuel pipe. The girder rests in recesses in the top of each mast. The ends of the fuel pipe are bent down to line up with the pipes

attached to the side of each mast. Bends in the various pipes and the two delivery hoses were formed with the aid of some simple jigs, boiling water and scalded fingers. Difficulty in producing multiple bends in a single piece of plastic rod forced me to fall back on 1.6mm brass tube in a couple of places. I am aware that Plastruct make a wide range of pipe elbows and stop valve bodies but unfortunately none were small enough for this application. The ends of the gantry diagonal braces sit between the sides of the horizontal girder and in sockets attached to the side of each mast. The masts, cross beam and braces are not glued together to allow the structure to fall apart, rather than break, if bumped. This has probably saved the gantry on several occasions however, I would not be telling the truth if I said the braces are easy to install and not prone to falling out at the slightest provocation. The masts are mounted on foundations, weighted for stability, which sit in recesses cut into the 6mm cork baseboard surface. The foundation of the mast on the coal stage side is set into a sheet of plastic, representing a concrete slab, and is extended to fit the refuelling equipment. Interestingly there is no sign in any of the photographs of the refuelling facilities of drains or any other arrangements to deal with spilt fuel.

The models of the refuelling equipment (Photos 4 and 5) are based on a single photograph, published in one of the late R.G.Preston's books, of a 44 class

Photo 4 The turntable road refuelling stand in pristine white primer.





Photo 5 The refuelling stand post is yet to be fitted with its lamp in this view taken at the down end of the coal stage.

standing beside the refuelling facilities installed on the turntable road at Albury. The photograph provided a good end view but would have been of limited value had the shadows not provided equally good clues to the side elevation. The loco standing alongside also allowed the principal dimensions of the refuelling equipment to be determined. Another photograph, showing parts of the refuelling equipment on the coal stage road, indicated that the two sets of equipment were of similar design. This photograph also showed a pair of fire extinguishers mounted nearby on the end wall of the coal stage but as the definition was too poor to identify the type of extinguisher, I based the models on the types that were commonly used on liquid fuel fires in the early 1960s. The stop valves, filter bodies, meter boxes (at least that's what I think lurked under the lids of the boxes) and lamp posts that make up the refuelling apparatus are made from styrene sections, bits of ladder stock, HO scale brake components and Campbell's HO scale lamp shades.

As mentioned in a previous article a decision was made while planning the layout that the board that would carry the Dean St bridge would have to be larger than the other base boards and that it would be difficult to handle unless the embankment and the road bridge abutment, that would be located on it, was built as

a separate module. Of course the size and shape of this module could not be settled upon until the alignment of the track and the leading dimensions of the bridge had been determined.

Unlike the prototype bridge which crosses parallel tracks at a right angle the model crosses curved tracks and had to be set at an angle to optimise running clearances between the bridge piers and each track. A foam core and wood mock up was made of the bridge

components (and a cut out of the plan view of a 38 to predict the likely overhang at the front and cab of the engine) to help determine the centre line of the bridge and the position of the piers. I was relieved, when the 38s finally turned up, to find that the clearances were OK and that I did not have to scrap and redesign the whole thing.

I had no dimensions for the Dean St bridge, or any similar bridge, so I had to rely on a few photographs and vague recollections from a few visits many years ago to draw a plan. You can probably guess how much notice I took of the bridge when there was so much to see from it. I do recall however that the deck was narrow, pot holed and that it only had a footpath on one side. I also remember having to watch out for traffic when standing on the other side which, of course, offered the most interesting view. I set the height from the rail to the underside of the bridge at 115mm. This is more than the NSWR structure gauge requires but less than the prototype as I did not want the bridge abutment or its approaches to be any higher, and therefore more dominant, than necessary. Estimating the depth of the 'I' beams and the rest of the deck from photographs established the height of the roadway. The width of the deck was set by playing with some 1:43 vehicles and adding a bit more for the footpath and the kerb

Photo 6 The end of the repair siding and an unfinished model of a NSWGR 3" standpipe can be seen in this view of the Dean St road bridge



on the other side. The total width is probably a little less than the prototype but, as it is long gone no rivet counter is likely to prove it. Establishing these dimensions allowed me to draw up a plan for the abutment which I hope got the slope and angles of the wing walls right or close to it.

MDF was used for the base and back and side profiles of the bridge abutment module. The ground work was formed using MDF and expanded foam covered with Chux soaked in PVA glue. It was painted in an earthy brown acrylic paint and then had an 'undercoat' of short grass fibres applied. The abutment was as an integral part of the module and was constructed using MDF and hard wood mouldings.

In the absence of any prototype dimensions construction depended more on trial and error, rather than planning, to produce a pair of piers that had at least a passing resemblance to photographs of the prototype. In the first instance I purchased some lengths of 1/4 inch Plastruct ABS 'H' beam but soon decided these were way over scale and swapped them for 4.8mm material. This too looked too heavy so I exchanged it for the same nominal size in styrene. The thinner section of the styrene looked better and had the additional advantage of being easier to work and glue. I built there were more than four beams a jig on a piece of MDF to hold the top beam and columns square and to allow the mid height crossbar and some of the diagonal bracing to be added. The other components were added when the piers were rigid enough to be removed from the jig. Not learning from my previous error I used angle for the bracing that looked far too heavy when compared to images of the prototype. Luckily I noticed this before the joints had fully set and was able to remove the offending bracing and replace it with a smaller size. I thought that job was done - until I found a previously unseen photograph which indicated that I should have used an 'I' beam across the top of the piers rather than a 'H' beam. Another rework perhaps. (Photo 6)

An unavoidable feature of the bridge is that it is truncated above the front edge of the baseboard. I will be installing a thick Perspex abutmentlike guard to protect the end of the bridge deck but regrettably, that won't do anything for its rather odd appearance. It was my understanding when planning the bridge deck that it would have been supported by four 'I' beams, one directly over each of the four columns in the piers, and built it accordingly. I am now wondering if the use of a deep 'I' beam across the top of the real piers suggests that

under the deck. I may not be moved to make a new deck for the bridge but if any reader can enlighten me on the design of steel girder bridges I would appreciate it. The bridge deck is fabricated from styrene. A 3mm MDF insert forms the road surface and fits into a 5mm trough between the footpath and the kerb on the other side of the deck. The insert will be left loose so I won't have to build a new bridge if I make a mess of surfacing the road. Channel section hand rail posts, fabricated from styrene, except for the outer post on each side, are let into the deck kerbs on both sides. The outer posts are made from square section brass, filed to create a channel of similar proportions to the other posts, to improve their chances of surviving a bump. The hand rails were made of galvanized water pipe in the period I am modelling however I have used styrene strip, representing the original wooden rails, which should make it easier to neatly attach 'wire' mesh if I can find some suitable material.

I am now working on the structures beyond the Dean St bridge, as well as a pig (C36) and some rolling stock to help populate the layout, and hope to contribute another part in this saga in six months or so.

SCALE FORUM

The second Forum for the year was held on Saturday 28th October at the usual North Sydney Leagues Club venue and as always it was an informative and entertaining day as well as a great time to catch up with friends and spend more than we should with the traders who not only supply us with a seeming never ending flow of enticing items but who enable days like this to happen through their sponsorhip and financial support of the scale and Aus7.

The first presentaion of the day was by Brian Peacock who showed how a computer could not only assist with the design of a layout but could be programmed to operate it as well. This is an area that seemed new to most of the audience and while not something that everyone felt was for them they could certainly appreciate that this technokogy brings a fascinating new aspect to the hobby.

After morning tea Stephen Reynolds talked us through the history and construction of his superb model of the art deco garage building Virtue Motors. Stephen continues to amaze with his innovative use of materials and eye for detail and artistic placement.

The Aus7 AGM was held after lunch (see seperate report) and this was followed by Trevor Hodges explaining his experiments into the curve rounding capabilities of a range of common O scale locomotives. This was a very thorough exercise designed to give an insight into what curvature would need to be provided in the building of a layout to guarantee that our desired locos would negotiate it. This will be the subject of a future article by Trevor.

The afternoon concluded with the usual "What's New" session from John Parker who seems to spend much of his life on the internet and haunting certain electrical parts and hardware stores to come up with obscure devices, parts and materials that will assist in our hobby.

As always some lucky attendeees left with a door prize from our traders.

The next Forum will be held on March 24th 2018 and if you have never been to one of these mark the date and make the effort. It's worth the trip and I know one of our regular attendees travels several hundred kilometres twice each year to be there.

Some Very Useful Advice

Intellectual Content by David Petereson

Plagianised by Paul Chisholm

Recently I had reason to skim through the instruction folders for the 12 class kit produced by David Peterson. I was not building one of the locos myself but the two instruction folders came into my hands some time ago and I thought they would make interesting reading before I was due to pass them on to someone who had recently purchased a kit less instructions and badly needed them. I know I need to get a life! How glad I was that I had taken the time to look through them because I found the preamble in particular to be a wealth of practical information applicable not just to this kit but to most of the current crop of etched/whitemetal type kits coming onto the market or for scratchbuilders. I know I would do some things differently now after reading these. How come you never find out some of these things until after you have already done it the wrong way?

I contacted David and asked if he would consent to some of these hints being summarised into an article and he graciously agreed. Many thanks to David for allowing this knowledge to be passed on to the benefit of all those who are currently building a kit or may be about to start one.

Essential Tools

Most of these will probably be found in your tool box anyway but just in case.

- *side cutting pliers (small)
- *small vise
- *good quality needle files and some cheaper ones to use on white metal
- *fine pointed nose pliers
- *a variety of tweezers
- *craft knife and spare blades
- *small engineers square
- *steel rule or straightedge
- *ivetting device
- *fibreglass brush and supply of refills
- *selection of jewellers/watchmakers screwdrivers
- *pin chuck and selection of small drills 0.5 to 1.5mm dia.
- *selection of jewellers tapered reamers ranging from 0.5 to 2.0mm
- *tap 1.0mm
- *magnifying glass or visor
- *soldering iron (at least 60 watts)
- *solder
- *piercing saw and blades
- *scriber
- *abrasive paper.

Etched Components

Many of the etched components in this style of kit are designed to fit together accurately by the slot and tab method. However many modellers may find it difficult to

insert the tab into the slot and it may help to file a very slight taper on the outer tips of the tabs (not the full depth). Don't enlarge the slots as the accuracy of the alignment may be affected.

Only those etched components needed for assembly at the time should be removed and tabs should be cut as far away from the component outline as possible. Once removed from the sheet they can be trimmed back using fine side cutters and draw filing with a fine file to the intended outline. Some cusping of the edges may be found and a light trimming needed.

For brass use a sharp craft knife or piercing saw to remove parts from the fret. For nickel silver or steel use a piercing saw or a parting disc. Do not use side cutters or tin snips as you could easily damage or deform the components.

Some components will require bending for forming before assembly. Most bend lines are etched so that the folds are on the inside of the bend and will be at 90° unless otherwise stated. Exercise caution when bending nickel silver on the etch lines as this material will not stand repeated bending.

As a reminder it is stressed - DO NOT CUT OR REMOVE ETCH COMPONENTS FROM SHEETS UNTIL THEY ARE REQUIRED.

Rivet Detail

Components may have fully etched rivets or half etched impressions where the rivets will have to be embossed. There are several methods by which this can be done; the best being the use of a rivet tool. Alternatively a blunt scriber and an anvil of styrene or other similar semi hard material. Practice on some scrap first and use as little force as possible to avoid distortion of material surrounding the rivet.

Metal Forming and Finishing

Some components will require preparation and or finishing.

For edges:

A flat and stable surface such as glass plate can be used as a backing plate for abrasive papers. Aluminium oxide (red) paper of 600, 800, 1000, 1200 grit can be hand held to the plate and components drawn over the paper to achieve a straight finish to the degree of polish required. This is a dry process and the paper will not require lubrication.

Where filing is required two techniques may be employed: transverse or draw filing but for either the component must be held firmly in a smooth jaw vise or jig. Only file over the supported area to avoid distortion

of the edge. When transverse filing only cut on the forward stroke with the minimal downward pressure needed. Never use pressure on the reverse stroke as this will damage the file cutting edges. For draw filing the file is held across (transversely) the work piece edge and drawn along the edge. Forming of the edges of laminated connecting and coupling rods is a draw file process.

For surfaces:

Finishing of sheet metal surfaces will probably only be required for assembled components where soldering has been carried out and careful soldering techniques will minimise the need for this. Residual solder can be readily scraped from the surface of brass or nickel silver by scouring or scratching the surface provided scraping tools edges are straight and sharp and are held at the correct angle. A fibre glass pencil may also have some effect Quality abrasive mops and wire wheels in a jewellers handpiece can also be used.

For Holes:

Most holes should be formed by hand drilling using a pin chuck and quality drills. There may be some instances where a tapered reamer may be needed following drilling to achieve clearance.

For Thread Forming:

A quality tap used in a pin chuck should be used for this. The chuck should only be tightened enough to allow slipping if binding starts and a cutting fluid such as kerosene or bees wax can be used. Use small cuts and back off regularly to eject swarf.

Cast Components:

Brass and nickel silver castings will require the sprue to be removed. This can be done using a piercing saw or side cutters but don't break the sprue off as the casting can be damaged. Surface blemishes such as mould lines can be removed using emery paper and/or fine needle files.

Soldering

The use of 60/40 tin/lead multicore solder is recommended in conjunction with phosphoric acid based fluxes. Low temperature low viscosity solder will be found useful in places.

Do not use conventional hydrochloric acid based fluxes as rusting of the steel used in wheel rims and axles is most likely to take place. This is extremely difficult to neutralise. Phosphoric acid is a rust inhibitor. A light smear of an oil such as Whaal on wheel rims or steel componenst is a good preventative.

Solder using the lowest practicable temperature found by reducing settings on an adjustable iron until the solder becomes difficult to melt and flow and then reset to a point slightly above this setting. This will likely be in the vicinity of 280°C for low temp solders and 320°C for 60/40 solder.

Soldering using the pre tinning process is not recommended. Also soldering using an open flame. Either can result in permanent distortion of the etched metal surface if great care is not taken.

Soldering etched laminates to the base structure requires solder to be applied only at the edges the laminate. The solder should wick into the joint area sufficiently to provide a secure bond.

Remember

- a) use a clean iron
- b) keep the joint area clean
- c) use the recommended flux
- d) clean the iron tip regularly on a wet pad and into a brass shaving cleaner bowl
- e) if using an adjustable temperature iron, use the lowest tip temperature practicable
- f) turn the iron off if not being used for extended periods

If you have read through all this without learning something new then you probably don't need any help but speaking for the rest of us I can't thank David enough for allowing me to plagiarise his instruction folders.

Thanks Warren and Kathleen

It's one of those things that is so familiar you may not notice it but tucked inside the first page of every issue is a half page ad from Gwydir Valley Models and it has been there for as long as I care to remember. Now it is probably fair to say that the custom Warren and Kathleen, the proprietors, receive from our small readership would not be be huge but regardless they have kept up their advertising over the years because they believe in supporting the hobby in all its diversity. I know because every now and again I give Warren a call to see if he wants to make changes to the ad and I ask if he wants to keep it going. The answer is always yes.

I am mentioning this because over the last twelve months I have had to contact Warren a couple of times as a customer with some difficulties I was having with some decoders. The problem is not important and most of it was my own fault anyway but the after sales service provided was outstanding, even extending to a couple of evening phone calls to me at home, replacement and repair of some items and recommending someone to me who could be of assistance and lived closer to me than Glen Innes.

If you haven't looked recently at their web site I recommend that you do and if they can supply you with your needs return some of the support they have given Aus 7 over the years.

Paul Chisholm



Roger Porter receives the 2017 Aus7 Award from President Trevor Hodges

Long standing member and past treasurer of the Aus7 Modellers Group, Roger Porter is the recipient of the 2017 Aus7 Modellers Group Award. The award is given to persons who the committee feel are deserving of recognition for their contribution to O scale modelling and to the hobby more broadly.

Roger has been an outstanding supporter and advocate for O scale for over twenty years and was one of the very first to join the Aus7 Group upon its founding in 2003, serving as treasurer for a number of years. In that time he has supported and encouraged new and experienced modellers alike by his articles for 7th Heaven on a variety of topics, as well as a number of presentations at Forums. He has also inspired scratchbuilders and kit bashers with his beautiful railcar models and the enhancemeent and upgradinging of many kits to a very high standard.

In addition Roger has been a mentor to many, always willing to share his knowledge and experience. I can attest to this personally as I have lost count of the number of times I have sought his help and ended up either at his house or with him at mine solving some glitch in a kit or scratch project. Fortunately we live close by!

Roger has also contributed to the creation of two significant layouts on the exhibition scene - Stringybark Creek and later Arakoola with the construction of buildings, hand built points and the curved end modules behind the scenes. He was also part of the group that took the layout to the Gauge O Guild Exhibition at Telford in the U.K. last year.

The Aus7 Executive were unanimous in the selection of Roger as an outstanding candidate for this years award.

Paul Chisholm

A Win For 7mm Scale and Friends
At the AMRA LIVERPOOL EXHIBITION LAYOUT JUDGING 2017 the BEST LAYOUT trophy was awarded to Arakoola with the judges commenting that "This iconic layout has matured, moving closer to perfection in portraying the atmosphere of the old NSWGR in its late-steam glory."

The layout was also awarded AUSTRALIAN STYLE PRIVATE BEST LAYOUT, with the beneat comment to standout this year is the continuous development of familiar layouts, particularly in the blending of layout and backscene."

Also our good friend and O scale supporter Bergs Hobbies took out the BEST COMMERCIAL STAND award for the fourth time in five years.

COMMERCIAL NEWS Trevor Hodges

ModelOKits ModelOKits, PO Box 379, Sydney, NSW, 1700, (02) 97073390, 0404935663, http://www.modelokits.com & sales@modelokits.com have passed on the news that the NSWGR 13 Class kit and RTR version will be the next locomotive to be released. To be manufactured by DJH in the UK the price will be \$1375 for kits and \$2590 for RTR. RTR includes lights, numbers, painting, couplers and DCC 8pin interface. Closing date on pre-orders is 31/12/17. Order forms can be downloaded from the ModelOKits web site.

The 59 class kits arrived in October and are available for those who have pre-ordered. There are only a small number of kits available at \$1795. 59 Class RTR first batch of ten are expected prior to Xmas. The rest will be progressively delivered over the course of February/March.

Kits for the 442 class will be in stock by end of December, price \$1450 per kit. An SAR 700 Class version will also be available.

The LFX and BX carriage kits are now in stock priced at \$495 per kit.

Planned rolling stock project progress are as follows; TRC pilot model will be available at the end of February; and the LHG is still in progress. It is hoped that both of these kits will be available by the time of the April Forum.

Three new laser cut kits available; A1 station kit at \$45 per kit, A2 station kit at \$65 per kit; the line-side fettlers hut with water tank at \$39. Plans are in train for a kit of a G3 goods shed, A4 station building and Taree North and South Signal Boxes.

Laser cut No 6 and No 7 point sleeper layouts should be available by the time of the April forum. The sleeper layouts and jigs will be sold separately separately.

ModelOKits now stock: Peco flex track and points, Evergreen styrene profiles, K&S brass profiles a slect range of Testors, Tamiya and MIG paints, weathering lacquers and weathering powders. Including Dullcoat and thinners, Noch and Faller scenery material, Zapa-gap glues,Proses building jigs, rolling roads and Badger airbrushes.

Dad's Cruiser

Brendon Griffin

In December 1984 my father putty and sand became the proud owner of a Toyota Land Cruiser FJ40 short wheel base diesel for the princely sum of \$4,660 to use on the steep rocky hills of the 2,000 acre property and once a fortnight my parents would travel the 90km round trip into Tamworth for house and farm supplies. It served its purpose very well considering it bounced around like a rubber duck in a bath tub. To wind up dad's estate it was sold in 2013 for \$8,000 after travelling only 42,000 kms . {Photo 1}

smooth with a fine file. Finish off with fine wet and dry paper.{Photo 3}

Gently slice off the mirrors at the door. Re-open the holes in the door with about a 0.7mm drill bit (after the body is removed from the chassis).







It was always my intention to include an FJ40 in my layout so I searched on the "dot com machine" for a 1:43 model and purchased a close replica in the form of a blue police vehicle from the Ukraine. I bought two for \$15 each and they arrived well packaged including layers of a Ukrainian tv guide that I straightened out and put under the tv remote to watch the very funny responses from the family. {Photo 2}

After stripping the models I resprayed the body shell using some left over Tamiya spray cans: the first fawn TS-68 with a white roof (same as dad's), the second red TS-86 also with white roof and hand painted all seats and inside door panels grey.

Preparation:

Remove the blue light on the roof using a sharp blade, fill any hole with

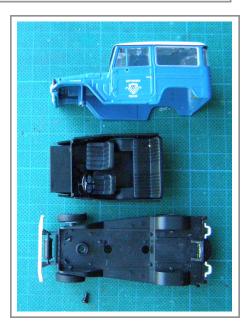
Remove the only screw underneath the truck to drop the front part of the chassis then jiggle it forward with some firm persuasion to release it from an internal tab attached to the rear number plate.

The cabin and the seat assembly should drop out. (Photo 4)

Lift out the front blinker lamps with a slight twist using smooth faced long nose pliers.

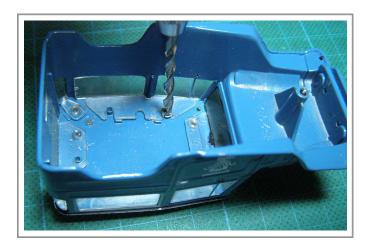
Remove the front grill / headlight assembly by slicing the plastic spigots inside the body. Remember to set aside all bits in a small container so they aren't lost on your "tidy" work bench!

Using a 3mm drill bit in a pin vice carefully ream out the rivets holding the roof, which is easier to remove



first, then the rivet holding the plastic window assemblies enabling them to

pop out. Side windows will pop out <u>Cab changes (optional):</u> into the cab. {Photo 5}



To replicate Australian models swap the front bucket seats, steering wheel and gear stick to the opposite side. It's a fiddly job made easier by bending the door panels outward first to give better access for the removal process with a blade.



Painting:

Using a retired toothbrush, wash the parts in warm water with a small amount of dishwashing liquid added.

When dry, spray a dusting of etch primer and allow to dry overnight. Spray the roofs and the bodies and let dry for about 24 hours. Of course you can choose any colours. {Photo 6}

The inside door panels and seats can be repainted grey (by hand). {Photo 7 and 8}

Refit:

Refit all windows on the inside of the roof using small amounts of water based glue. I used Selleys Kwik Grip contact adhesive because Superglue will turn the windows foggy.

Use the same glue to refit the roof and seats etc.

The wheels press onto the axles without glue.

Number plates are a personal choice and I didn't bother attempting to construct a roo (mouse) bar. {Photo 9}

That's it yet another addition to the layout happy modelling.



With a very small brush and thinned black paint carefully run around the window frames using the side of the brush to replicate rubber seals. Then with silver, touch up the fuel cap, door handles, bonnet release clips and door mirrors (best painted before refitting).

The chassis can be left as is, but my choice was to paint the wheel rims grey as the tyres are easily removed. I found it easier to remove the rims from the axles with a pair of pliers.

Cut the spare from under the chassis and glue to the passenger side of the rear door.

The front and rear bumpers can be repainted by hand.





As a member of the Aus7 Modellers Group you will possibly recall the series of articles that appeared in earlier issues of 7th Heaven which were written during the construction phase of Valley Heights. That was my first attempt at an exhibition layout, this series will be slightly similar but rather than describing the construction of an exhibition layout, this time I will be concentrating on a home layout designed as a replacement for the 1 metre test track in my study.

Incredibly some 6 years have passed since after a lengthy consideration of two prototype locations, the Valley Heights series covering the construction of my first exhibition layout began in 7th Heaven Issue 29. Prior to laying the first piece of track I had considered both Darling Harbour and Valley Heights. At the time Valley Heights was selected as it was thought that it would be easier, with a little selective compression, to achieve a more faithful representation of the prototype. Even though I was fascinated by the complexity of Darling Harbour and the opportunity it would provide to model an urban environment it was considered at the time that it might be a step too far. How could such an enormous location be modelled with any possible chance of success?

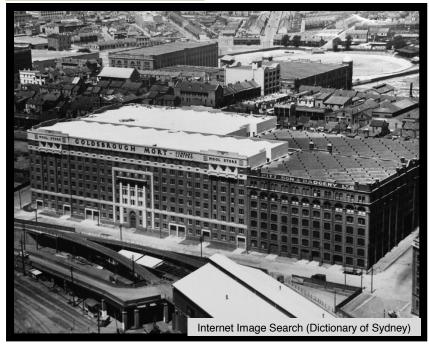
There is another motive for commencing this new series; the editor has reminded us all of the need for an ongoing flow of content for 7th

How absurd!

In an opinion piece recently written for another publication I briefly hinted at my plans for a new small home layout based on a very large prototype location. The whole idea of attempting an interpretation of at least a portion Darling Harbour (circa 1950) within an envelope of only 450 mm x 4500 mm could easily be described as absurd!

John R B Parker

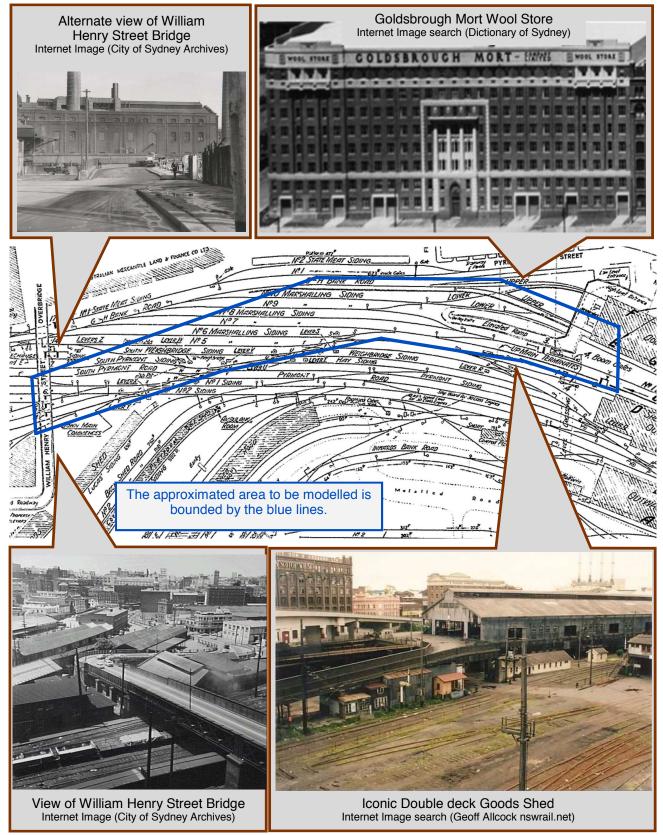
Heaven, essential if we are going to be able to continue our regular publication schedule. Hopefully this contribution will be of some assistance. Similar to last time, at the time of writing this project has not been completed so there are no photographs vet of the finished layout to inspire you, but hopefully you will find it interesting and motivating as I document the use of some proven methods but also try out a number of new techniques. The intention will be to record the process in some detail which should act as a stimulus to others to build their own layout, even when space is limited.

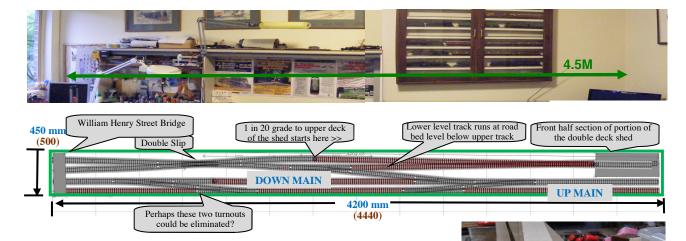


The Darling Harbour Branch was perspective, was that it was very nating location, from a modelling ic double deck goods shed.

spread across a very large area. busy yard consisting of many fasci-Any studied assessment of the nating individual scenes most of multiple track diagrams will quick- which would provide an ideal startly convince most modellers, in- ing point for the design of a small cluding me, that it might have layout. The very large goods made a great deal more sense to sheds, including the curved wool select another location. However shed were significant pieces of one of the strengths of this fasci- infrastructure, particularly the icon-

Obviously any attempt to model Darling Harbour forces the modeller to be very selective so perhaps in part because of previous modelling efforts, I was drawn to the area immediately ahead of the large double deck goods shed. The two views on the previous page together with the following will give some idea of the plan.





Does all this still sound impossible? The photographic montage heading this page indicates the planned location for the new layout. The final dimensions will be 500 mm deep and 4440 mm in length, 50 mm deeper that my first thoughts. The plan has been designed primarily for visual impact and is 'bookended' by the William Henry Street Bridge and a portion of the double deck goods shed. The Up and Down Main are at the front of the layout and will be slightly curved as they pass in front of the goods shed. It will be populated mostly by the 19 class and goods rolling stock, most of which I still need to build, but the main lines will permit the test running of all NSWGR locomotives in

addition to passenger rolling stock which did occasionally pass through this portion of the yard. The layout, (maybe it is just a glorified test track?), will be constructed from three modules with self-contained LED lighting in a fairly traditional staged proscenium arch configuration, not a "slice of the world" construction this time. The actual modules will be



constructed from 50mm extruded polystyrene foam¹ and 100 mm deep girders fabricated from 3 mm Craftwood (MDF)².

Fabrication of the girders using acrylic construction glue³ is underway in the adjacent photographs.



I happen to have a radial arm saw, which was very useful for cutting the individual girder components from the sheet of MDF. An inexpensive table saw or even a hand saw could also be used. The sheet of MDF was first cut into strips 180 mm in width and 1500 mm in length. Each strip will produce a girder by firstly rebating the 1 mm deep grooves at 113 and 151 mm from the left hand edge. Conveniently the saw blade is the same width as the MDF thickness, 3 mm. Once again, measuring from the left hand edge, the strip is then cut into three pieces with cuts at 170 mm, 132 mm and 96 mm. These provide the main portion of the girder, 96 mm wide and the top and bottom web, each 35 mm wide. A 50 mm hole-saw was used cut seven openings in the main section of the girder, their purpose will be explained later. The resulting pieces were then glued and clamped together as shown in the photographs. Incidentally the slot in the top and bottom sections is not essential, it just makes it slightly easier to glue everything together. The end result is a lightweight girder, which in my case is 100 mm high, 1500 mm long with 35 mm wide flanges. This girder is very light and is considerably more stable than one might imagine, vertical deflection at the centre of a girder supported only at the ends was less than 2mm.

Seven small timber blocks were glued to the rear girders as shown and drilled to take the threaded inserts⁴ which will ultimately permit the attachment of the 3 mm MDF back panel. So far so good, we will leave the basic assembly of the complete modules until Part 2. The various buildings including a small signal box shown below will feature in future episodes.

Materials & Suppliers

- 1. 50mm thick Foam Austech-Goldboard 50mm (various sizes) Bunnings 600x1200 mm
- **2**. 3mm MDF Bunnings 1800 x 915m
- 3. Water based Construction Adhesive Selleys Liquid Nails or Sikabond Instant Nails Bunnings & other stockists
- 4.30 x M6x10mm Thread Insert Nut for Wood T6F4 Ebay Seller: Colortop9 (\$2.70)

Supplier Details





DJH Modelloco UK

- Fine Detailed Brass & White Metal Kits 1:43.5 (7mm) O Scale kits





ModelOkits are pleased to announce the production of the

NSWGR Z13 Class Tank Locomotive

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

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

Delivery timings to be confirmed Pre-orders by 31st December 2017

Kit Price \$1375 RTR Price \$2590

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



ModelOkits are pleased to announce the production of the

NSWGR D59 Class Locomotives

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



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

Pilot model available for viewing

Production kits arrived &now available (limited stocks)

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- Detail includes: slow running, real coal, detailed back head. Specific paint requests may/will incur additional charges. - Minimum radius: 6'

Kit Price \$1795 RTR Price \$3200

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

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- -Testors Paints, weathering products and materials
- MIG Paints and weathering products
- Slaters Wheels, parts and Accessories.
- Slaters Plastikard sheet and strip
- K&S Metal
- Evergreen
- Zap-a-gap glues
- Proses tools, Jigs and rolling roads
- Range of Tools
- Noch and Faller Scenery Material
- Badger Airbrushes

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