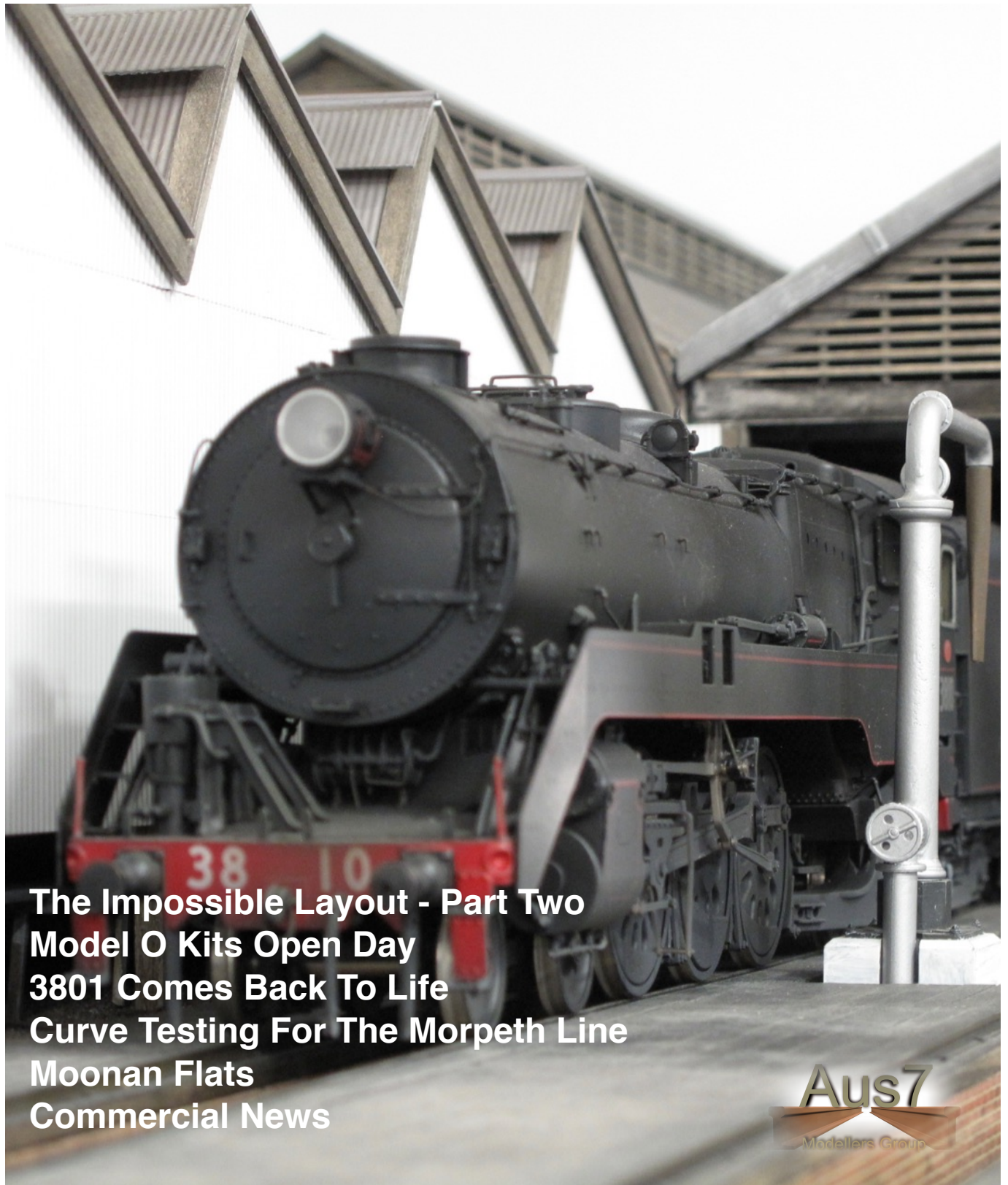


7th Heaven

Journal of the Aus7 Modellers Group Inc.
No 56

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Summer 2017 - 2018



The Impossible Layout - Part Two
Model O Kits Open Day
3801 Comes Back To Life
Curve Testing For The Morpeth Line
Moonan Flats
Commercial News

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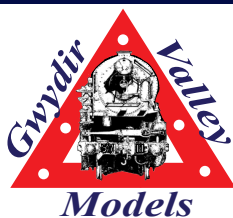
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Saturday March 24, 2018

O Scale Modellers Forum



NORTH SYDNEY LEAGUES CLUB - NORTHS
12 Abbot Street Cammeray

9.00 am to 4.00 pm—Doors open 8.30 am

Featured speakers at this forum include Brian Thomas, Ross Blunden, Jonathan Hilliard and John Parker. Topics to be covered will include the prototype and technology with the emphasis on building that O Scale model and layout.

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Come and share the
progress on your
latest project.



Straight Down the Line - Opinion

by Trevor Hodges

Exercising The Little Grey Cells

A couple of days ago I arranged to meet my modelling friend Phil for a coffee and a chat. As we sat over our coffees (which I reluctantly let Phil pay for), we talked about a wide range of topics, most of which had a modelling focus. Phil is working on a 7mm NSW 40 class so the axles for this model got a run, we talked about a local modeller I'd met recently that Phil knew and the subject of the increasing difficulty we were having finding a reliable source for numbered mini-drills also got an airing.

Eventually I got round to talking about my layout and some of the progress I was making and, as tends to happen in these situations, I found myself outlining a couple of road-blocks I was facing. One involved my CIL 75' turntable and the other was my lack of progress on a ship model I'm in the early stages of building for Morpeth.

Anyone who's been reading 7th Heaven for any length of time will be well aware that the performance of my turntable has been less than impressive and I've written about this in 7th Heaven. I've thought and planned out a number of possible solutions to this issue over about 5 years but it's only recently I feel I've come up with a robust, foolproof and DCC friendly answer to the problem. Phil, who is well aware of my frustrations over this model, asked an extremely pertinent question when I told him I'd come up with this solution. He asked "what are you going to do with it when you've fixed it?" He'd put his finger on the nub in that the current plan for my home layout does not include a 75' turntable. So what was I going to do with it once I'd fixed it? My first thought was "sell it" but once I arrived home it didn't take long for me to do some thinking and find a way to incorporate it into an operating scenario that located it near the coal branch.

The second major topic of our discussion on my home layout was my lack of progress on the ship model I've been working on. The many and varied reasons for this lack of progress are too convoluted to go into but the major reason is that I haven't been able to find a way to incorporate the pier module I'm half through building into my home layout. Every time I work on the ship it feels like I'm wasting my time on a model that may only ever be seen a couple of times if I ever exhibit Morpeth. To motivate me to finish it I need to have it incorporated into my home layout. Phil made a few suggestions about where it might be located and I responded that I'd thought about what he was suggesting and rejected the ideas. However when I got home and stood in the layout room an answer to this dilemma did suggest itself. I'm going to do a bit of work over the coming week to see if it will work and Phil's reward for prompting this solution is to come over and help me!

In the space of one hour over two coffees (I bought the second round by the way) I managed to come up with two pathways to solve long standing and frustrating problems. If you're stuck on a modelling problem my advice would be to find a friend to discuss it with. They may not come up with a solution but the simple act of airing the problem may suggest a way forward. If you can also find someone to buy you a beverage at the same time all the better.

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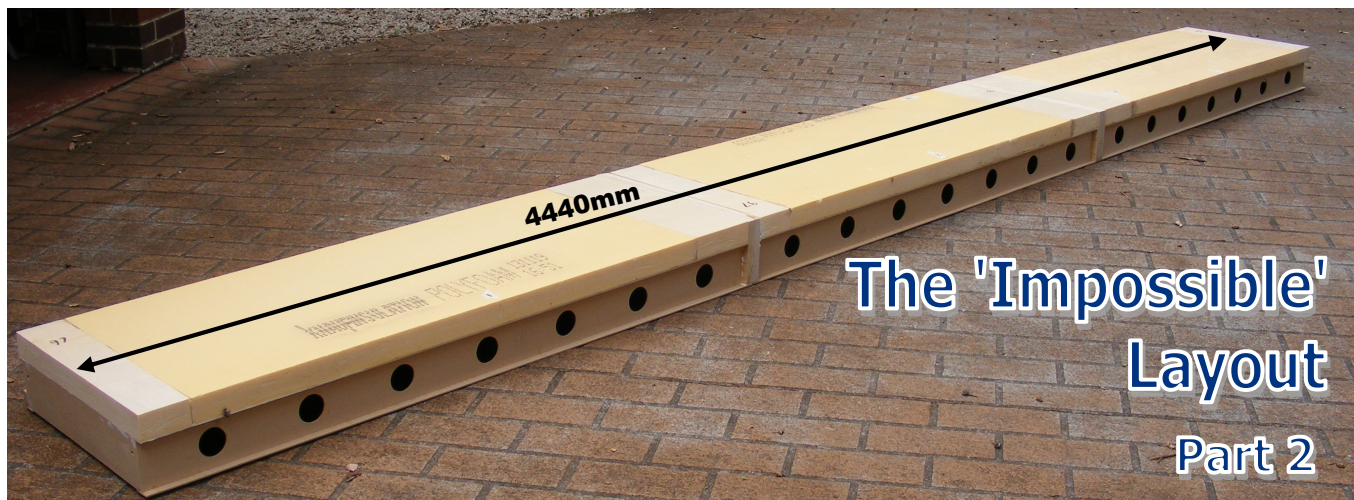
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On The Cover

Another photo from John Reid's Albury layout shows 3810 resting before its next run. More of John's work to come in future issues.

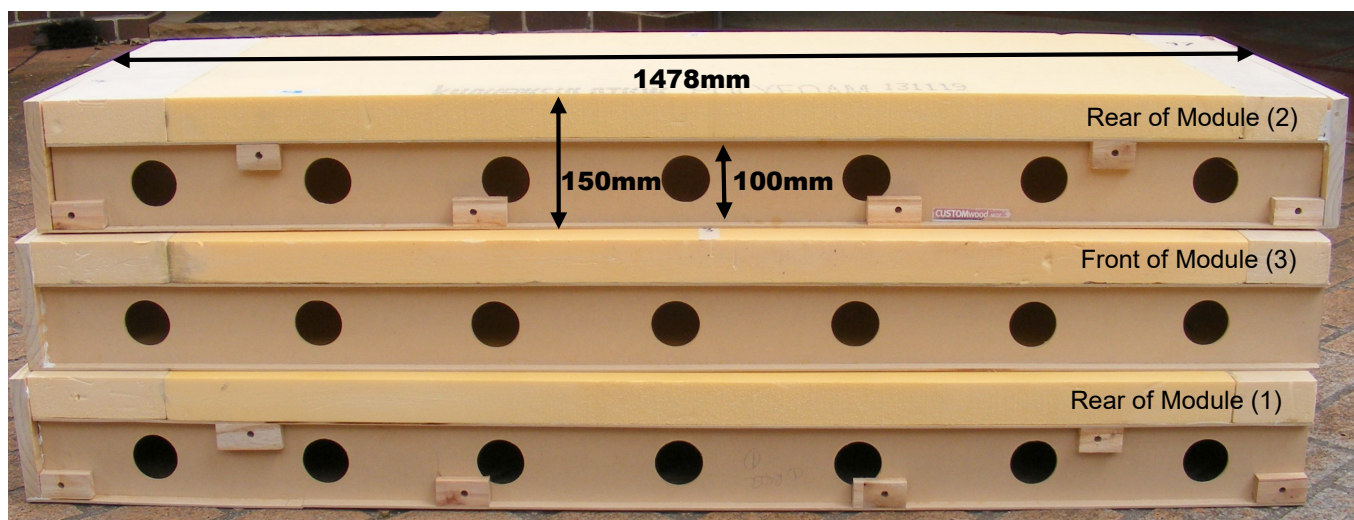
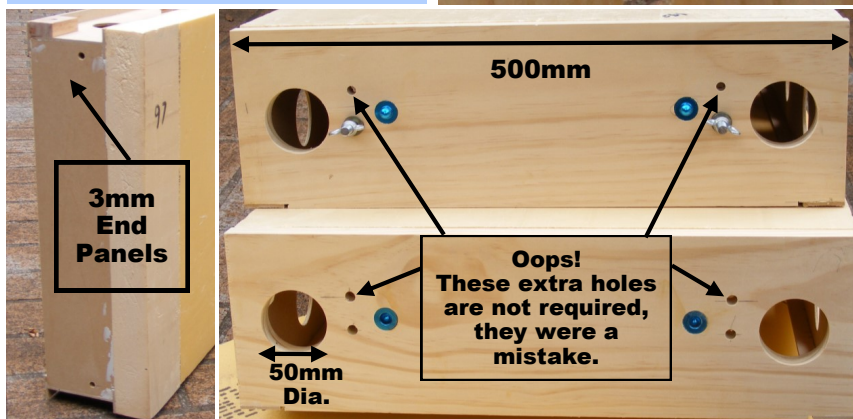


The basic individual modules have now been assembled by gluing the individual parts together. Although similar they are not identical, modules (1) & (3) are effectively mirror images of each other. To ensure stable track across the joints the middle module (2) is terminated at each end with a 19 mm pine panel which includes two 5/16 inch x 75 mm coach bolts. These provide the initial alignment and together with wing nuts, the clamping force between the connected modules. This module, viewed from the rear is the uppermost of the modules shown stacked for the photographer at the bottom of this page. The final accurate alignment to a similar timber panel on the right hand end of module 1 & the left hand end of module 3 is achieved with anodised Baseboard Alignment Dowels¹. The other photographs complete with dimensions, detail the construction methods used. The end result is a lightweight, relatively inexpensive road-bed designed to form the foundation for the entire layout which will incorporate back-drop, front fascia and framing complete with LED lighting.

Let's Build It!

Part 1 in 7th Heaven Issue 55 expanded on some of the ideas which led to the desire to build another layout. Whether or not it really was absurd to attempt such a project based on Darling Harbour will no doubt soon become obvious. Progress is underway but no tracklaying yet as it first necessary to sort out the terrain.

John R B Parker



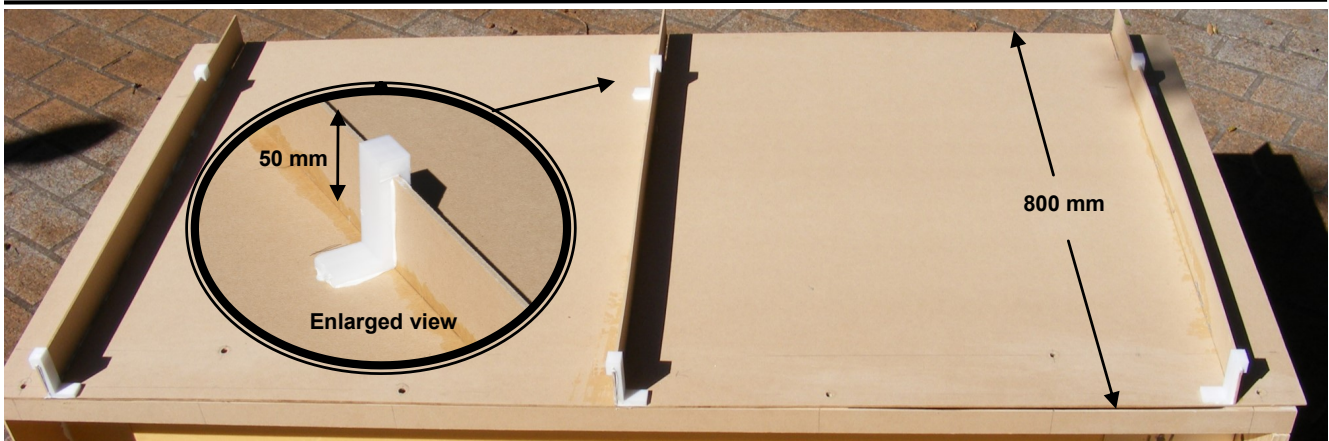
Many modellers might feel that now that the basic roadbed is in place it would be logical to commence laying the first piece of track. On this small modular, somewhat experimental layout I thought there would be a real advantage in first checking if the planned assembly of the entire structure is workable. One of the really great advantages of modular layouts is the opportunity they provide to consider each section of the layout as a model in its own right. It is possible to build the

module in a suitable location such as a workbench without being restricted by the limited space that will be available in the final location. The modules can be worked on from any convenient direction including upside down, ideal when installing the wiring. This will be so much easier than crawling under a fixed bench construction.

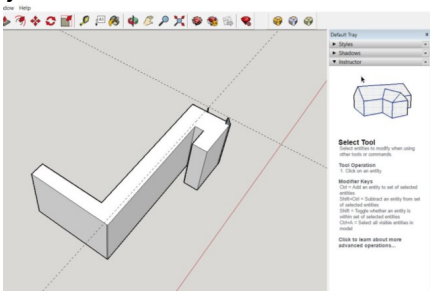
It is not uncommon to use 3 mm MDF for backdrops but on this occasion it is also planned to use the backdrop to support the upper front fascia and the "ceiling" or

"roof". Obviously it would have been possible to increase the thickness of the backdrop to 6 or 9 mm or even use plywood to get closer to achieving the rigidity required but that would be more expensive and would substantially increase the weight. As an experiment I wanted to see if it would be possible to achieve sufficient rigidity and stiffness by adding ribs to the panel.

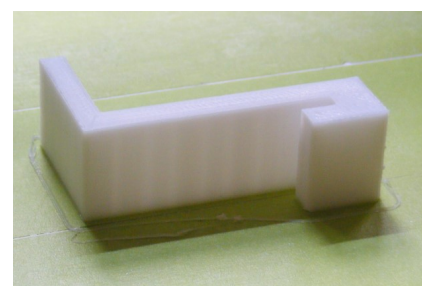
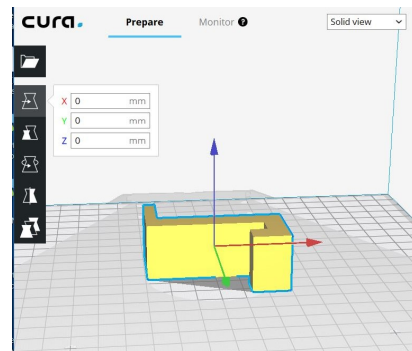
The first experimental backdrop panel for Module (3) is shown below.



The six holes at the bottom edge of the back-panel will align with the blind mounting nuts which were affixed to the rear of the rectangular mounting blocks. These are visible in the photographs of the stacked module sections on the previous page. The 50 mm wide reinforcing ribs have been glued in place with either the construction adhesive used earlier or PVA glue. Both work effectively in this application although the PVA glue does leave a neater looking joint.



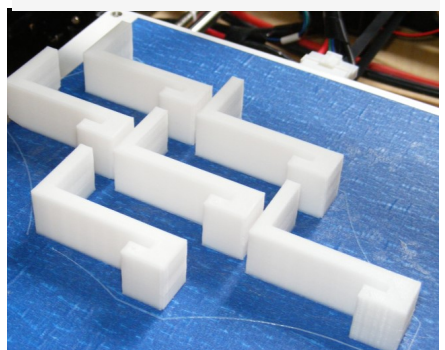
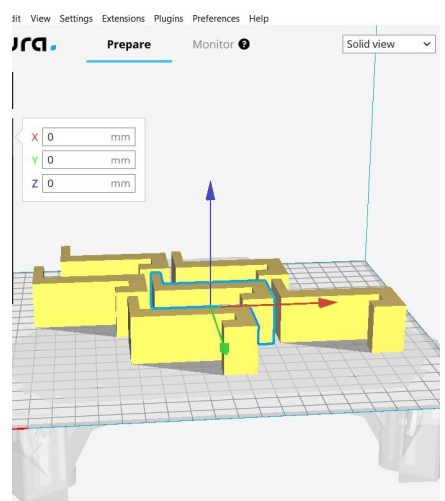
It was necessary to clamp the rib to the panel whilst the glue dried but it proved difficult to maintain the 90 degree angle required. The solution was to design a simple holding bracket using SketchUp.² Even though I had no real experience using this freely available 3D drawing program it was surprisingly easy to achieve the desired

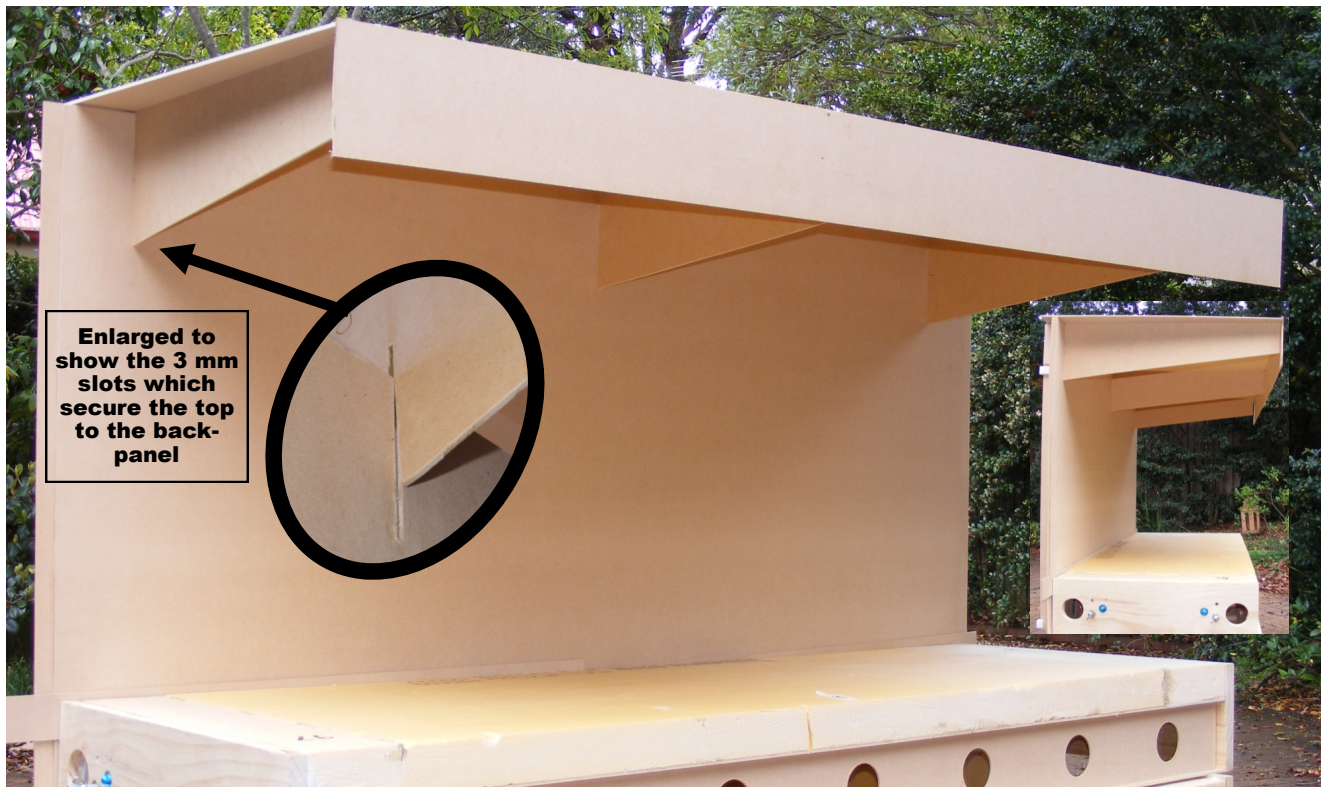


result. It only took about 15 minutes. The Cura 3.0³ 3d printer slicing program, also freely available produced the final file for use by my recently assembled Anet A8 3D printer⁴.

The first test print proved successful so it would have been possible to print the 18 required one at a time. However using the Cura 3.0 slicing program again a new print file was produced which would instruct the printer to pro-

duce 6 brackets at the same. Only one button press was required to achieve that result, I think this 3D printer is going to prove to be a very useful tool.





In the above photographs of the trial assembly the centre module can be seen with the backdrop together with the cantilevered roof supports to which the upper fascia has been temporarily attached. Although perfectly secure it was noticed that the rear panel was not at exactly 90 degrees to the foam road-base, the panel had also flexed slightly forward suggesting that additional ribbing of the rear panel might be desirable. As a consequence of this trial two additional ribs were glued in place on the backdrop panel together with a 50 x 3 mm strip on the rear edge of the foam road-base.

SketchUp was again called upon for the design of a simple 35 x 5 mm right angle bracket to reinforce the junction of the upper front fascia with the cantilevered roof supports. The Cura software mentioned earlier was again used to produce a final 3D printing file which would print 6 brackets at the same time. After this final assembly this first back-panel plus roof and front upper fascia was left overnight for the glue to dry. The following photographs of the centre module now complete with back-panel, roof and upper fascia illustrates the final configuration. The roof section is slotted in place

with additional security provided by screws and blind nuts, similar to those used to attach the back-panels to the basic modules. The lower front fascia has not yet been fitted in place; its final profile will depend on the roadbed levels. Not shown at this time are modules (1) and (3) which have been similarly configured. The roof sections and the back-panels were then put to one side so construction could commence on modifying the foam road-base of the basic modules to match final desired contours what will become the road-bed.

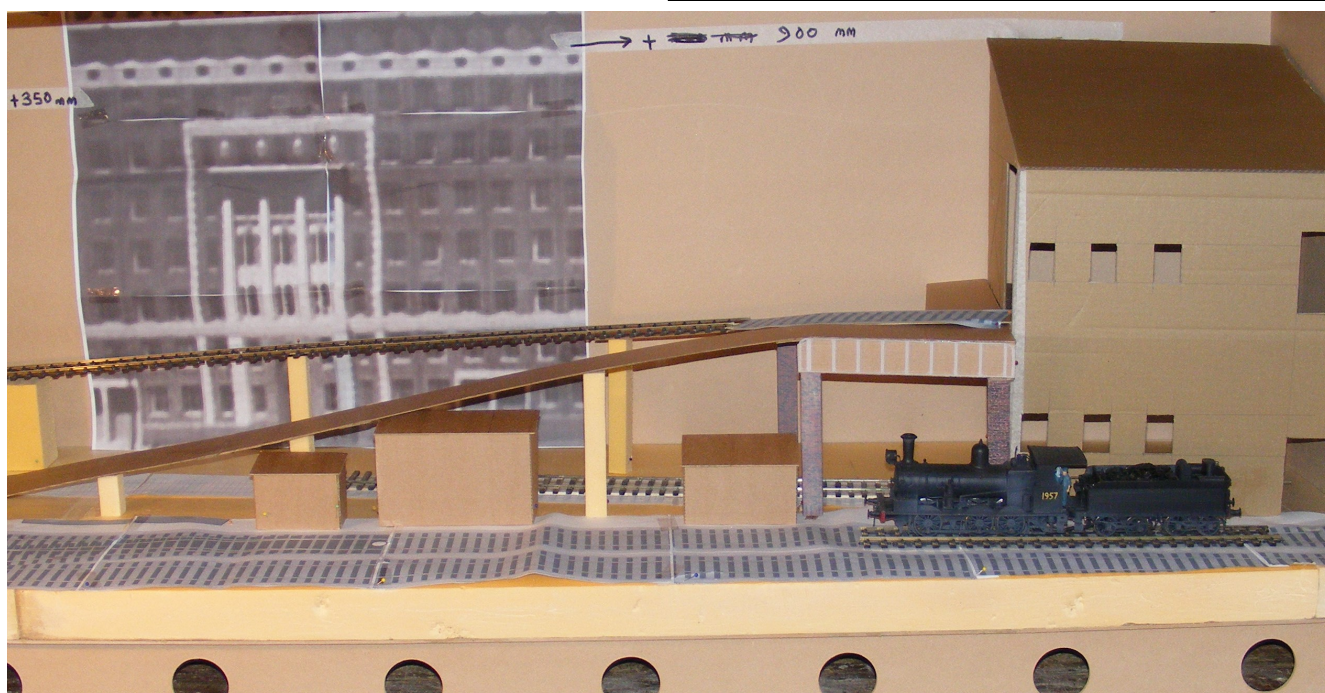
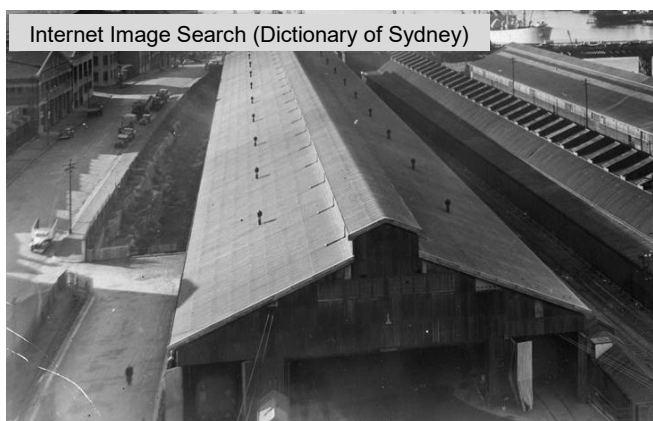
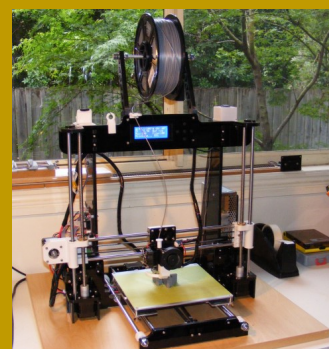


One of the great challenge of this project was the desire to produce a layout which would at the very least contain some elements to remind the viewer of the enormous goods yard which once existed at Darling Harbour. I am a great believer in the "Wow!" factor. Is it possible to create a scene that has real impact? The portion of Darling Harbour which I am attempting to model, with liberal application of "modeller's license," contains some very large buildings and significant infrastructure. The scale is however mind boggling, the iconic double deck goods shed was 1000 feet in length, that is 7 metres in O scale, almost twice as long as this entire under construction layout, so obviously some interpretation is necessary. The most obvious complication is caused by the restricting the depth of the layout to only 500 mm. As a consequence there is insufficient space to even include the full

width of the goods shed. It will be modelled as an effective view block at the left hand end of the layout and will be half the normal width and including one lower and one upper track rather than the two that existed in reality. There were some very large buildings in the area including the Goldsbrough Mort and Pitt Son & Badgery Ltd wool stores and the Pyrmont Power station. They will be modelled only in profile and in attempt to force the perspective, i.e. make the scene appear to be deeper than it really is they will be scaled at approximately two thirds the normal O scale of 7mm to the foot. The final photograph in this episode of the ongoing saga indicates the application of rough cardboard replicas and track templates. These are being used to work out the final placement and elevations for module (3) located at the right hand end of the layout. ...to be continued.

Materials & Suppliers

1. Baseboard Alignment Dowels
www.docconcepts.com
2. SketchUp Make 2017
www.sketchup.com/
3. Cura 3.0
3D Slicing Software
<https://ultimaker.com>
4. Anet A8
3D Printer Kit
www.gearbest.com





It really wasn't a secret. It had been advertised on the yahoo chat group for Australian O scale modeller's; 7mmAusmodelling@yahoogroups.com. Many had also received an invitation to attend by email. Perhaps it was the timing; maybe December 9 2017 was just a little too close to the Christmas holidays. Whatever the reason those who enjoyed the day were somewhat surprised by the relatively small number who accepted the opportunity to run their new models on Moonan Flats, Valley Heights or Arakoola. One person who did attend said in a subsequent email, which is quoted in part.

"Today was organised and set out very well. Glenn and everyone helping him must be congratulated for putting on a wonderful day. It was amazing to see that more O scale was present at Yagoona than the largest model railway exhibition in Australia."

Thanks Andrew, just a little hyperbole but we are glad you enjoyed the day.

Model O Kits Open Day December 2017

John R B Parker

Some took advantage of the day by running their own or other models on both Valley Heights and Moonan Flats. Arakoola was also set up in a separate area in its "naked" form. All the track but no buildings or backdrops, the perfect opportunity to allow that new model to "stretch its legs" with a substantial continuous run.

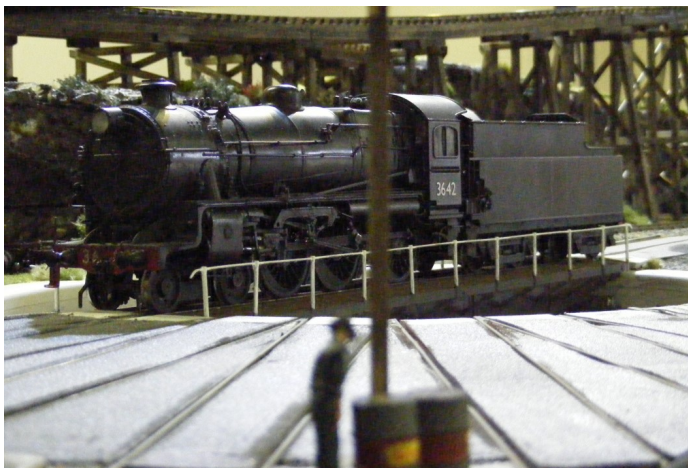
Multiple models ranging from the 19 to 60 class were seen running as both pilot engines and with scale length trains. There was also time to enjoy a chat over a light lunch of perfectly cooked sausages, rolls and an excellent salad.

Glenn has advised that there will more opportunities in the future to see and run trains and purchase those much desired O scale items. Future Open Days will also be promoted at the twice yearly forums. Don't miss the next one in 2018.





Valley Heights and the Model O Kits station scene are featured on this page whilst Chris Lord's 'Moonan Flats' appears on the previous page. All the photographs were taken on the day by your scribe.



3801 Comes Back To Life

Paul Chisholm

A few months ago I received an email from an American O Gauge named David Argent who specialises in the restoration of early examples of O scale locos and rolling stock. He had somehow acquired on Ebay in America two O Gauge House 38 class locomotives: one streamlined and one standard and was seeking some information both about O Gauge House and the models before attempting a restoration. I was able to provide him with some history on O Gauge House and put him in touch with a few people here who had more knowledge than me about these model locomotives. From the photographs he sent me I thought he had a real challenge ahead of him and I didn't expect to hear much more about it for quite some time so I was surprised to get another email recently with some photos of the first finished restoration. What a contrast to the previous ones! David has done a magnificent job and the engine looks like it has just been built for the first time. I thought readers might appreciate seeing the results of David's skill and workmanship. If you are even more interested he has posted video of the loco running around his test track at <https://youtu.be/7PCHuLwjg10>

Another part of the story is how these locos ended up in David's skillful hands. I was intrigued by this and keen to find out more about how these locos made it from O Gauge House in Ashfield Australia to South Carolina U.S.A. so I asked David for some history as far as he knew it and this led to an even more surprising outcome. He told me that last October he purchased them from a seller in California who had intended restoring them, perhaps by using MTH or Lionel drive systems but this never happened. This person told him that he had bought them from an Australian seller about seven years earlier and surprisingly he still had a name and house address which I was amazed to find is about ten minutes drive from me. He was still there!

I was able to show him these photographs and give him the video link and he was amazed that his prized locos had travelled so far and were being brought back to life by someone who appreciated their history and value. He said he sometimes regretted selling them but needed to at the time.

I was really pleased that I was able to trace this journey which certainly demonstrates that with the help of the internet this hobby has no boundaries.







Curve Testing For The Morpeth Line

Trevor Hodges

Over the past year or so I've written in both 7th Heaven and AMRM about planning for the building of a new mid-sized (8.5m X 6.8m) 7mm, FS scale home layout. Further it will probably come as no surprise to many of you that this layout incorporates both of my small, portable layouts Queens Wharf and Morpeth. This layout will essentially model the three stations on the Morpeth line and will incorporate a "what if" scenario that sees Queens Wharf become a junction for a main line extension which bypasses the terminus of Morpeth, allowing an alternative route for the NSW to cross the Hunter River. As there was an early 20th century plan to extend the Morpeth line and cross the river a little downstream which never got built I feel I can justify this piece of modellers licence. In my alternative history the authorities revived the extension plan during WWII, after the Japanese submarine attack on Sydney Harbour. This new crossing of the Hunter would allow an alternative to the crossing via Maitland and help ease traffic congestion during the exigencies of war. I've also "imagineered" that this would have allowed the Morpeth line a longer life span than it achieved in the real world, being closed in 1953. These two enhancements to reality, the extension of the line and the continued use of the line into the 60s will allow me to run a selection of diesels and larger steam power that would never have traversed its rails in the real world. Important for what comes later is the fact that I didn't alter history to allow 38s to operate on the main Northern line. I'll go into the issue of the (C)38 later in this article.

I've read a fairly large number of articles about 7mm layouts in the UK hobby press over the years and I've also pored over Gordon Gravett's two books on 7mm modelling. However the vast bulk of the descriptions I've read for 7mm layouts have been for small, exhibition type layouts, similar to Queens Wharf and Morpeth, which are terminus to fiddle yard configurations. Very few of the descriptions of layouts I've read have many curves, so guidance as to what radius is suitable for a NSW, 7mm FS layout where the track needs to curve to accommodate an approaching wall is thin on the ground. What is a practical curve radii in 7mm scale for an indoor, home layout? I set out to find out before I started to build my new layout.

There are two particular examples of 7mm FS layouts that I used as the starting point for my curve radii evaluations. The first of these is Arakoola and the other is the UK modeller David Jenkinson's NER layout which he described in a series of six articles (starting in issue 85 and running through to issue 106) of the magazine Model Railway Journal. Some of you may be familiar with Jenkinson's book Carriage Modelling Made Easy. The inside end curves on Arakoola, which bring the trains to and from the rear storage sidings, have

radii of approximately 1.8m with the outside line being slightly larger than this at just under 1.9m. From all reports these curves have served the layout and its operators well over the years, however the problem of trying to apply the lessons learnt on Arakoola to my situation is that Arakoola is an exhibition layout, not one primarily built to fit into a specific home layout space. The radius of the curves for its precursor Stringybark Creek and the later Arakoola were set so as to ensure that the trains would be sure to get round them rather than to fit a specific footprint. While they couldn't make the layout any size they chose, the builders of Arakoola never-the-less weren't quite as constrained in their planning decisions as a home layout builder who has to work within a very specific space. From Arakoola I knew that 1.8m radius curves would allow me to run just about any NSW outline loco I was likely to include in the roster, however I didn't have the room for curves of this radius. I needed to know how low I could reasonably go with my layout's curve radii and still run the stock I wanted on the layout.

The David Jenkinson articles are very comprehensive and well worth tracking down and reading. In one of the articles he specifies that he used 5'3" (1.575m) as the minimum radii for the curves on his layout and he was satisfied that this was a good compromise between the need for the broadest possible curves and the practical constraints of building a 7mm FS layout indoors. It was tempting to say to myself "if it's good enough for Jenkinson then it's good enough for me" but the differences between his situation and mine were numerous. Firstly, he was modelling an era and a system that had much smaller locomotives than I was planning on running and secondly, he was starting from scratch whereas I was trying to shoehorn two small, pre-existing layouts into my available space. The decision to include both Queens Wharf and Morpeth in my planning had a surprisingly constricting effect on my plans. If I'd started with a completely clean slate I'd have simply drawn a plan that had the curves I felt I needed and got on with building it. However trying to fit in these two layouts meant that I was making decisions around them to get them to fit and while they were both quite small they were big enough to significantly impact on the plan. This constriction due to fitting two pre-existing layouts into the plan was the final element that pushed me to decide to run my own curve tests before commencing construction.

It's probably worth stating up front that the locomotive these curve trials were primarily run to test was my Precision Scale (C)38. I'd managed to convince myself several years ago that a 38 was a worthwhile thing to own and so I'd purchased one. However, as 38s didn't really run very far north of the Hunter River, this class of loco was already on thin ice on my planned layout. A 38 was very unlikely to have run through Queens Wharf

even if the real world had conformed to my enhanced version of history. Secondly, in my opinion it's a bit of a misnomer to suggest a kit built loco (where the modeller is building the loco himself rather than it being constructed by the manufacturer) will or won't go round a particular curve before it's been built and actually tested on that curve. From past experience in constructing locomotives there are quite a few tweaks and small alterations a builder can incorporate into a loco's construction to assist it traverse tighter than ideal curves. However a brass (C)38 that cost a motza and already had paint applied is not really a candidate for such "tweaks" by a modeller, well not one who is wholly rational. I was already struggling with the idea of applying weathering to my 38, I wasn't about to take to the back of its cylinders with a grinding bit in a Dremel. So if I couldn't get my (C)38 to round a curve somewhere in the region of Jenkinson's suggestion of 1.5m-1.6m radius (much tighter than the Precision Scale's recommended 1.8m) then I would have some thinking to do. I have kits for the D59 and AD60 classes and I'm well aware that both of these locos (being long wheel base, four coupled locos) will present their own special challenges. However I will be the one building these kits so I will apply my tweaks and enhancements as I build them and keep working until I manage to get them to round the curves on my layout if this is humanly possible. If not there's always eBay or Gumtree.

The curve tests were run on two sheets of 1.2mX2.4m, 12mm ply wood in my shed. I built temporary frames for the sheets of ply from 3X1 pine and put several screws through the surface of the ply to hold these frames in place. These box frame sections lasted less than 24 hours after the tests were completed as I dismantled them the next day. The ply and pine now form part of the structure of my new layout. These frames were held off the floor on five saw horses and butted together in a rough capital L shape. This allowed me to draw four curves on the surface of the ply with a trammel; curves of 2.1m, 1.8m, 1.5m and 1.2m radii. I temporarily laid some Peco flex track at 2.1m radius and waited for some friends to arrive the next day to help me run the tests. We started with this large curve so as to provide a datum for the curves that followed. While the manufacturer of the (C)38 had suggested it could get round a 1.8m radius curve I had not actually seen this loco run round curves of any size so I considered it worthwhile to check that it could actually traverse this size curve.

Between my loco collection and those belonging to my friends we had examples of almost every NSWRL outline locomotive available to the market at the time of the tests which were run in the second half of 2017. Unfortunately we were unable to get examples of an AD60 and a 59 to test. We simply didn't have access to an AD60 and at the time of the tests the only example of a 59 available was the pilot that was located in Sydney. Other than these two locos we had examples of just about every steam and diesel locomotive which we duly tested through the four curves I'd chosen to draw out on the test bed. After we tested all the locos we had on hand we lifted the track and re-laid it at 1.8m radius then at 1.5m and 1.2m. The reason for choosing these particular radii was that they roughly match 7', 6', 5' and 4' radius curves. The results from the tests are in the chart that accompanies this article.

Conclusions

After we'd run the tests I think my feelings are best summarized by saying I was pleasantly surprised at the results. We were all happily surprised that the ModelOKits 36 sailed round the 1.5m curves, although as the notes that accompany the chart remind me, the 36 we tested was only a chassis with no body attached as the loco was still under construction. However Peter Krause, the owner and builder of the 36 we tested, assured me that nothing that would be added later would have altered the performance. The reason I was happily surprised was that I plan to build two 36 class locomotives for Morpeth it being just about my favourite locomotive class. So the fact that it got round the 1.5m curve provided me with the assurance I needed to go ahead with my plans and build my layout with 1.5m minimum radius curves on the main line although I had to include a 1.35m curve on the branch to Morpeth.

What also surprised us was that the 38 got round the 1.5m curve (with a bit of protest) in reverse but not running forward. Perhaps this suggests that with a bit of light tweaking it may be persuaded to round a 1.5m curve forward as well as reverse. However we were all agreed on the day that this radii was at the absolute lower limit of this particular loco and that anyone wishing to run 38s on a layout would be well advised to consider curves of considerably larger radius than 1.5m. As I couldn't realistically conclude from the tests that my 38 would manage to reliably traverse a 1.5m radius curve and as the location of my layout means that a 38 is an unlikely resident anyway I've since sold my 38. I'm not a huge fan of the 38s anyway...

The other failures that are marked on the chart are for the 32 class, of which we had two examples. Peter, who was the owner of both, explained that both his 32s have been "playing up" recently. Both got round the 1.2m radius curve in reverse but not forward which confirms my theory that a loco with outside cylinders which is being a bit temperamental is almost always going to behave better going backwards than forwards. A front bogie leading into a curve is under far more tension than a trailing bogie and if the loco class has outside cylinders then this is almost always where contact is made with the outside faces of the bogie's wheels. Different methods of dealing with this issue can be implemented but this is obviously far easier if the loco is being built by the owner and not by a factory on the other side of the planet. However a discussion of these solutions is well beyond the scope of this article. Finally it should be noted that the Ixion Hudswell Clark didn't fail to round the 1.8m and 1.5m radius curves but rather I just didn't bother to run it through these curves. It was more than capable of getting through these curves but we had a lot of locos to test and I wanted to save time. It sailed around the 1.2m curve and it's traversed a 1050mm curve leading to the pier on Morpeth.

Acknowledgements

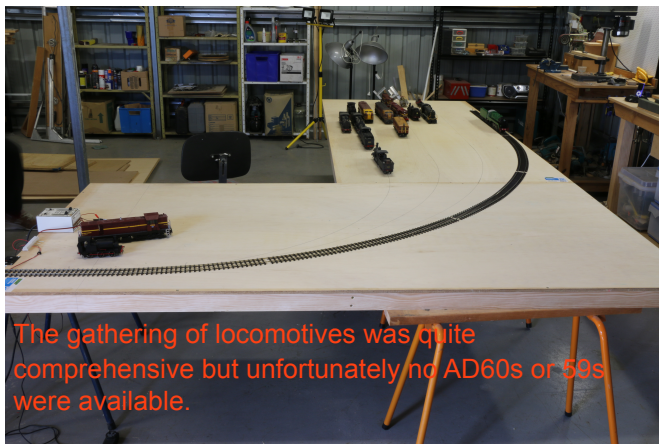
I'd like to thank both Peter Krause and Phil Flynn for their help in conducting these curve tests. Peter supplied a wide range of locos that I don't have examples of and this made the tests far more comprehensive than they otherwise would have been.



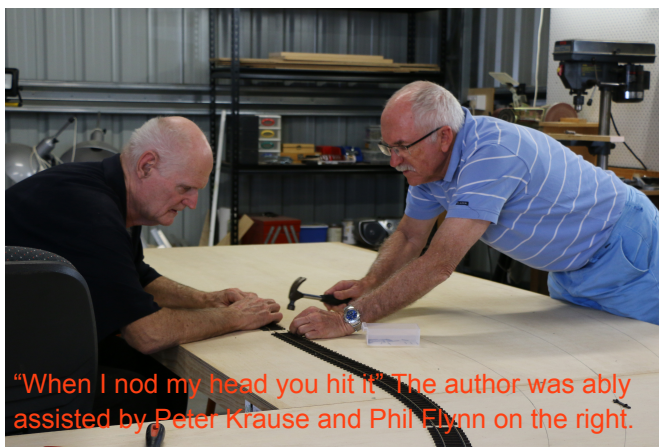
3810 eases it's way round a 1.5m curve.



A view of the test bed. The trammel used is a piece of 20mmX3mm aluminium bar with holes drilled in it at strategic locations.



The gathering of locomotives was quite comprehensive but unfortunately no AD60s or 59s were available.



"When I nod my head you hit it" The author was ably assisted by Peter Krause and Phil Flynn on the right.

1:43. Scale Locomotive Curve Tests - 9.7.17											
Locomotive	RTR	Scratch	Kit	DCC	DC	2.1 (7)	Reverse	1.8 (6)	Reverse	1.5 (5)	Reverse
Diesels											
NSD 4/5 (40)	Y			Y		*	*	*	*	*	*
44 (KHAC)	Y			Y		*	*	*	*	*	*
44 (O-Aust/Belgs)	Y			Y		*	*	*	*	*	*
45						*	*	*	*	*	*
48 (O-Aust/Belgs 48136)			Y	Y		*	*	*	*	*	*
48 (O-Aust/Belgs 4886)	Y			Y		*	*	*	*	*	*
49	Y			Y		*	*	*	*	*	*
CPH				Y		*	*	*	*	*	*
Steam											
ixion Hudswell Clarke	Y				Y	*	*	NA	NA	NA	*
19			Y	Y		*	*	*	*	*	*
20 (Scratchbuilt)		Y		Y		*	*	*	*	*	*
30			Y	Y		*	*	*	*	*	*
30T			Y	Y		Y		*	*	*	*
32 (3214)			Y	Y		*	*	*	*	*	*
32 (3245)			Y	Y		*	*	*	*	*	*
36			Y		Y	*	*	*	*	*	*
38	Y				Y	*	*	*	*	X	NA
50 (5163)			Y	Y		*	*	*	*	*	*
Legend	Y = Yes		N=No		* = Successful Test	X = Unsuccessful Test		NA = No Attempt			

Chassis only. Problems with front bogie unconnected with curves. Scratch Front bogie derailed on 1.2m curve forward. Ran smoothly however. Rear driver derailed forward.

Chassis only. Failed on 1.2m because of a lack of play in the bogie. Some minor light flicker on 2.1m. Failed forward on 1.5m. Ran at speed in wheels touching back of the cylinders clearly the culprit.

Separately powered bogies

Separately powered bogies

Quite a lot of noise from the mechanism on all curves but smooth enough just a little tightness on 1.2m curve but it still ran smoothly around the cu

This loco had a little trouble on the 1.2m curve. Some problem either with



Moonan Flats

An Achievable Model Railway in "O" scale.

Part 1

Chris Lord

We all like to have grand plans re our model railways. However, especially in O scale, most never get past the dream of "I'm gunna do that double track section of the Main Northern line" etc. There's always an excuse. it's too big, it costs too much, I don't have the room yet etc. etc. and it was hearing these excuses time and again at exhibitions and forums that prompted me to construct Moonan Flats - the "no more excuses that I can't Model in O scale layout."

Requirements. It was to be for demonstration/display, transportable in the back of a station wagon, had to have operational interest, small enough to fit along a modern single car garage wall, be able to accommodate (train wise) more than a loco+guards van and be a believable scene.

To achieve this a scenic section of 2.4m x 45cm was chosen on two sections of 1.2m and it was decided that a diorama box style would be the best way to get the best look for the display with its own internal LED lighting and for train storage in an off scene fiddle yard of 1.5m.

A basic track plan was described to my friend Ian who is a wiz with track planning software and within five minutes he had drawn from my description the plan you see here. It

ended up being exactly what I had in my mind and how the track plan of the layout would be in its final form. Even after the boards were up and positioning of track to try and get the most out of the space I kept coming back to this plan and it just works and it was budget conscious with only two points if having to buy proprietary.

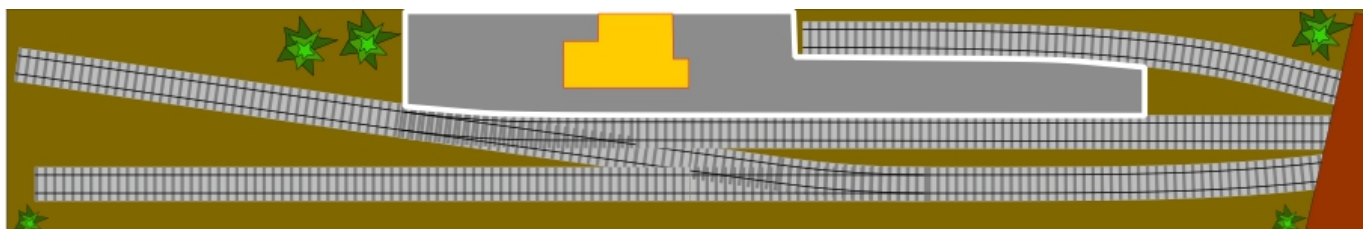
I wanted to Model the end of a small station yard with some key elements - main platform, run round loop, bay platform, a general goods siding with loading bank and a loco release that had to be big enough for a 4-6-2 tender loco, I really like 38's so I had to have space to run them around a train.

Making a start. Everything that went into the base boards is all thanks to Bunnings Warehouse dressed pine framing topped with the, top grade 9mm marine ply to form the basic platform This was topped with a pelmet, built so as to be removable, also from marine ply but in 5mm thickness. Leg assemblys x4 in to support the layout are 1.2m lengths of dressed pine from the \$2 stacks at Bunnings. Three legs fold into the base of the boards for transport and the last is attached to the top of the fiddle yard. All joins and legs use bolts with wing nuts for easy set up. Starting with the track I built 2 points using micro engineering code 125

flat bottom rail with the intention to hand spike all the rail to individual sleepers.

It was at this point I had a slight problem that turned out to be a plus in the end, with only 2-1/2 lengths of rail left after building the points. No problem to just order more but after placing the order a message came back that it was nil stock and on back order likely to take two months. What to do? A friend suggested that as it's a demonstration layout why not use straight Peco code-124 bull head as it is readily available plus fitted with the idea of the layout purpose to encourage people that modelling in O scale wasn't out of reach of the "average modeller", and it was also decided at this time that hand built track whilst looking great may put some off as being unattainable, so Peco-124 bull head it was - two points and a box of track and yes there is a full box of track used even in this small layout, I think it was the right choice in the end. Just means I have plenty of sleepers and rail now for another project. (Crabs Creek).

Presentation of the layout for display purposes was also an important part. I find for my eye a black border visually highlights what's beyond in a picture box style, thus the outermost surfaces are all a satin black and the pelmet front itself is



50mm forward of the base boards. This gives a wing at each end and allows the lighting rig in the top to start forward of the modelling to reduce the chance of a forward shadow. The inside of the box area was painted a sky blue as a base before the back scene was installed.



I thought track laying would be quick now after the decision to go with Peco and before I started I mocked up the scene with some scrap wood and some buildings and rolling stock to see if it all fitted and looked right. No point laying the track then finding something doesn't fit and you have to pull it all up.

The Ffex track Peco SL700 rail is laid on 5mm thick cork tiles which allows for some below sleeper scenics on an otherwise flat board. In the yard sections I removed the plastic joining web between the sleepers so it didn't have to be fully ballasted to cover the web and this helps give the not so well kept look. The sleepers can be a little random as well and at board joins gap master PC sleepers are used.

Peco track is good quality but it had to be suitable for DCC, exhibition suitable and operator proof and Peco points aren't that electrically. I choose to have live frogs powered by Tam Valley Frog Juicer and the entire point live so no using the blade to conduct. The links were soldered in place, plus the peco snap springs removed and Tortoise point otors installed under the layout. This allows an operator to trail through a point without causing a short if it isn't set in the correct position and no dead spots that may catch a little 0-4-0 like 1021.

As the track layout is quite basic it was easy to keep the wiring neat. There is a pair of DCC bus wires with droppers from each section of track and a pair of accessory power wires currently set at 6v to power point motors or any lights that may be added, a frog juicer and a six way connector between the sections using five pins, two DCC, two accessory, one frog polarity for the adjoining boards point. Having a small layout section was handy for setting up on its side on a table to do any under board work.

The control of the Tortoise motors is via two push buttons mounted on the front of the layout. These illuminate when set away from the straight position so the operator doesn't have to look at the point to know how it's set.

Lighting is all LED strip, with two x 5m lengths used, of two colours in four rows: warm white, cool white and these have worked well. They are mounted to coreflute sheets which t also form the top of the pelmet. It's light weight plus when the layout is on display there are no weird shadows produced by outside room lighting.

The LED strips are available in 300 or 600 LED' per strip and the 600s are worth the extra \$3. I purchased an LED strip and power supply

package via a Sydney based eBay seller for \$38 all up with a 8amp power supply: good value. With 1200 LED's drawing several amps the 8 amp option supply is a must. This set up has proved extremely reliable and has done countless hours of illumination so far.

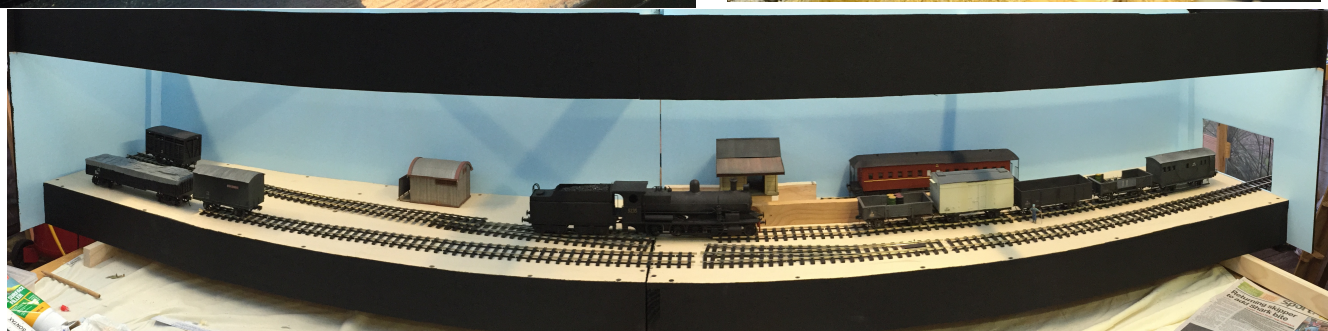
The fiddle yard is the key to the interesting operation of a small layout and there were so many options here to choose from. Having grown up with the British Modelling group I've had experience with just about every type there is, from the traditional point fans (takes up a lot of space) to the motorised sliding deck with 12 tracks. But what did I want in my small space? Basically no lifting, no model handling, quick and easy operation especially at exhibition time, plus could be used as a turn table that didn't fit into the station scene. I chose a turn table sector plate that could be rotated fully, it has three tracks that each line up with each of the tracks on the layout or any combination of each track.

To help with reliable alignment I used a tongue and groove arrangement at the layout join end and a large bearing assembly in the centre that's rated at 340kg so 15kg of O scale models is well within its



capacity. As a test I stood on it and it rotated effortlessly. The bearing takes all the load and the table can be rotated with light finger pressure. A small amount of bees wax on the tongue gives enough friction that it won't move when trains are running on and off plus a locating pin (drawer knob) for safety if your at a show were it may get bumped. Power to the sector plates three tracks is via a DCC auto reverser unit so no manual switching when turned, just run on, turn, run off and no power down for sound locos.

In part two we will look at setting the scene, scenic's, structures, operation and adding character to Moonan Flats. All part of turning a model train layout into a model railway!



ALBURY LOCO - A Work In Progress Part Four Corrected

In the last issue the Gremlins written about in Straight Down The Line took their revenge by mixing up the first few paragraphs of John Reid's article. The first two paragraphs should read as follows.

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. **(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

A Note From The Editor

I am gradually catching up with the regular publishing dates. This issue is only about five weeks late. As always the cause is simply a lack of content so once again I appeal to you the members to put finger to keyboard and press that camera shutter and send me something. Don't worry if your spelling is not great or you have no idea where the apostrophe should go. I can deal with all of that. I look forward to a flood of material to get the next issue back on schedule.

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 announced at last Aus7 Modellers Group Forum has so far generated insufficient interest to proceed. If the 13 class does not go ahead, the planned 12 class will also not proceed. ModelOKits have extended their decision on proceeding until after the March Forum. If sufficient orders are received by this new date the project may proceed.

The 59 class RTRs continue to arrive in batches and are distributed when received. Both kits and RTRs are available for purchase. A limited number of 442 kits are available (price is \$1450 per kit). More will arrive mid-2018.

ModelOKits plan to have #6 point sleeper layout bases available at the March Forum. These are yet another item in ModelO's widening range of track laying materials. ModelOKits now stock Tamiya products, Woodlands Scenics scenery materials and Mininatur scenery products.

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 of several new additions to their line. To complement the previous standing sheep grazing sheep have been added.

A NSWGR sleeper built take off for track maintenance equipment often found alongside the main line where equipment may need to be taken off the track to allow trains to pass has also been added to the range. A NSWGR signal relay hut used to house signal relays and accompanying batteries is now available as is a steel trestle that was designed by scaling some photographs and a number of measurements of the steel trestle at Tamworth NSW.

Signals Branch hope to get to the March Forum with displays of signals and other products. All the above models are printed in white strong and flexible material and can be ordered direct from their online shop

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Photos of pilot model
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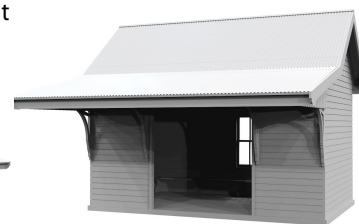
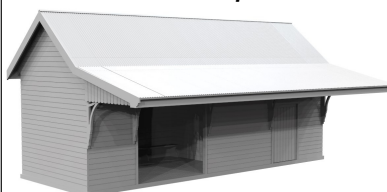
Kit builds available for \$3700 (including kit)

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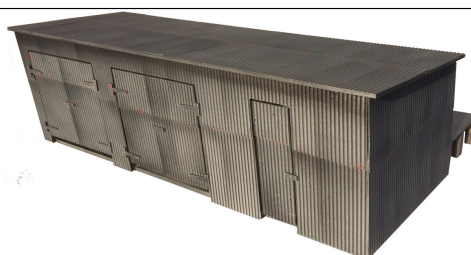
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