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the

MainLine

magazine

the official journal of the

National Model Railroad Association Incorporated
Australasian Region

NMRA Inc - Australasian Region Directory

REGIONAL COMMITTEE

President:	Graham Young (07) 5479 0339 president@nmra.org.au
Vice President:	David North HLM (02) 9975 6436 vicepresident@nmra.org.au
Secretary:	Trevor Phillips 0402 926 930 secretary@nmra.org.au
Treasurer:	Geoff Chatwin 0414 702 755 treasurer@nmra.org.au
Pacific District Director:	Robert Peterson (02) 9871 4157 director@nmra.org.au

MEMBERS

Member	Peter McGuire (02) 4861 4032 peter@nmra.org.au
Member	Doug Wallace 0490 928 334 doug@nmra.org.au
Member	Al Harris 0412 608 817 al@nmra.org.au

PUBLIC OFFICER

Public Officer	Stephe Jitts MMR 0429 447 021 publicofficer@nmra.org.au

SUPERINTENDENTS

Division 1 QLD	Duncan Cabassi 0424 844 807 div1sup@nmra.org.au
Division 2 ACT	TBA div2sup@nmra.org.au
Division 3 VIC	Mark Bean (03) 9509 2462 div3sup@nmra.org.au
Division 4 WA	Frank Godde MMR (08) 9253 3155 div4sup@nmra.org.au
Division 5 NZ	Kelvin Sherson (04) 234 8577 div5sup@nmra.org.au
Division 6 SA	Jane Robinson (08) 8270 1002 div6sup@nmra.org.au
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Division 9 Mid North Coast	Chris Minahan (02) 6559 3516 div9sup@nmra.org.au
Division 10 Tasmania	Pat Britton 0417 625 278 div10sup@nmra.org.au

REGARDING ARTICLE CONTRIBUTIONS

All members of the Australasian Region are invited to submit articles of a railway nature for publication in the 'MainLine' magazine.

I would appreciate all articles to be sent to me in an editable format, such as 'Word, Pages, text, email, but not pdf, and high resolution photos sized between 1 to 5mb.

Please send your articles to editor@nmra.org.au

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(cont.)

REGIONAL VOLUNTEERS

A.P. Regional Manager	Gerry Hopkins MMR FNMRA (02) 4329 0242 ap@nmra.org.au
A.P. Assistant Manager ACT	Ross Balderson (02) 6238 1003 apviceact@nmra.org.au
A.P. Assistant Manager VIC (East)	Bill Black (03) 5968 309 apviceviceast@nmra.org.au
A.P. Assistant Manager VIC (West)	Peter MacDonald MMR (053) 67-360 apvicevicwest@nmra.org.au
A.P. Assistant Manager SA	Ray Brownbill 0417 849 630 apvicesa@nmra.org.au
A.P. Assistant Manager QLD (South)	Arthur Hayes MMR (07) 3345 7887 apviceqldsth@nmra.org.au
A.P. Assistant Manager QLD (North)	Rob McLear MMR 0418 773 048 apviceqldnth@nmra.org.au
A.P. Assistant Manager WA	Phil Knife MMR (08) 9948 1067 apvicewa@nmra.org.au
A.P. Assistant Manager NSW	John F Parker MMR 0415 841 000 apvicensw@nmra.org.au
A.P. Assistant Manager Coffs Harbour	Ian Phemister (02) 6658 2626 apvicech@nmra.org.au

Librarian	TBA librarian@nmra.org.au
Regional Contest Chair	Gerry Hopkins MMR FNMRA (02) 4329 0242 contest@nmra.org.au
Editor - MainLine On-Line	Merv Bagnall (07) 4125 2360 editor@nmra.org.au
Web Master	Wayne Eagle (02) 9627 9892 webmaster@nmra.org.au
Web Administrator	Lachlan McGuire 0432 468 566 updates@nmra.org.au
Education Chairman	TBA education@nmra.org.au
Social Media Manager	Martyn Jenkins 0407 637 607 ssm@nmra.org.au
Convention Chairman 2020 (2021)	Peter McGuire (02) 4861 4032 convention@nmra.org.au
Membership	Al Harris 7 Mahogany Avenue Sandy Beach, NSW, 2456, Australia 0412 608 817 membership@nmra.org.au

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New Articles

Regular Features

the Cover Photo

GM Streamline Locomotives 42110 and 4205 are double heading & crossing LiviJon Bridge with the mixed Up Train to Trevson on Merv Bagnall's Braidwood Division HO Scale NSWR Layout

Editor's Comments

We kick off the new year with high hopes that there is a possibility of a return to some form of normality in 2021 and that our NMRA events, meetings and conferences are not adversely impacted this year. There has been enough said by others and also in all forms of the media about last year so I am not going to add to it, other than to say that we need to look forward to the positives and for when we will again be able to mingle freely and regularly with our NMRA and other model railroading mates.

Our time in isolation however has had some benefits, if you can call it that, in that I expect for the vast majority of model railroaders, there has been additional time available each week to be involved in all aspects of our hobby. So why not let the members know about what you have been up to and send in an article or two for inclusion in the pages of MainLine!

In this edition of MainLine we cover a number of different subjects. We start off with a layout which posses the question, '*what if?* ', as for well over a century, a small township in the central highlands of NSW have wanted a railway to access their town. Although it has never become a reality in the real world, this wish has been made possible, albeit in model form. In the feature article for this issue, Merv Bagnall describes the motive behind and some of the methods used to make his 'Braidwood Division' model railroad a reality in HO scale. I am building my NSWR themed layout in two stages and I describe the first stage in part 1 of a two part article about the construction of the layout and some of the methods that I have used during the process.

Have you ever swapped out the plastic wheel sets for metal wheels to improve the running quality of your rolling stock and wondered what you could do with that box of discarded plastic wheel sets? Arthur Hayes - MMR had such a dilemma and came up with a solution by creating loads for some of his open wagons as well as constructing purpose built wheel set wagons. Arthur explains how he utilised his discarded plastic wheel sets to represent authentic loads on his HOn3.5 QLD themed layout, but the methods used could be easily adapted to any scale.

An Alco HH locomotive is one of the Diesel Electric locomotives built by Alco during the 1930's. Graham Prideaux had such a model stored in his collection for several years and decided it was time to complete this project of depicting his model as the Alco HH demonstrator model which was supplied to the Rock Island line in 1938. This was the only Alco HH purchased by the Rock Island line and Graham outlines a little of the history of the HH locos and how he modified his loco to represented locomotive number RI 730.

Stanford Florida is a major servicing depot for Amtrak's Auto Train which operates daily between Lorton Virginia and Sanford Florida, a distance of 855 miles. Arthur Hayes - MMR has visited the servicing facility in Stanford in recent years and explains how the facility unloads and reloads the automobiles that are transported on the train. Arthur also explains how the maintenance crew then carry out the servicing of the rolling stock and perform any necessary repairs. The trains have a 6.5 hr turnaround window between arriving at Sanford and commencing the return journey to Lorton, so there is no time for the crew to be idle.

During an operating session, have you ever caught clothing on a protruding switch or accidentally bumped a switch for a turnout and sent a train onto the wrong road? Well Peter Jackson - MMR had such an issue occur and so he decided to recess his panel mounted switches to prevent this problem occurring. Peter explains an easy fix which can be carried out in a short amount of spare 'train' time.

The year of the lockdown in 2020 has seen the birth of NMRAx Live Clinics being run and broadcasted regularly across the globe on Facebook and on You Tube. This great innovation has kept our members '*in the loop*' and allowed members to still be able to communicate regularly with other model railroaders during the trying times of last year. Laurie McLean - MMR outlines a little about some of the many members around the world who were responsible for getting these clinics up and running for members to enjoy.

We have our first 'Letter to the Editor' in this month's edition. This feedback is certainly welcomed, so if you you have anything to comment on, then let me know. Comments of a positive nature will always be included where practical to do so.

Hope you enjoy the read.....M

Merv Bagnall

Editor - MainLine On-Line

The 'Braidwood Division'

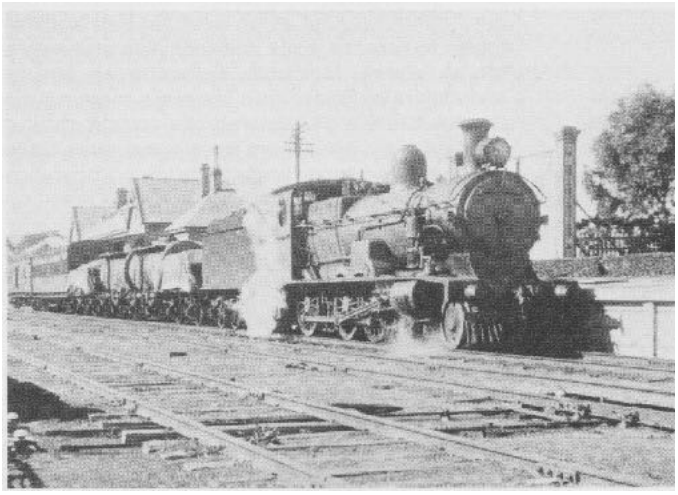
[*As it could have been*]

by Merv Bagnall

(*Stage 1 - Part 1*)

In the later years of the 19th century, there was a rush of activity to expand the New South Wales Government Railways (NSWGR) to the west from Sydney, and by 1869, the Main Southern Line reached the town of Goulburn **1** and then progressed onto Cootamundra by 1877.

In 1881 loan funds were made available for three separate contractors to build the 126 miles (*203 kms)* of railway track from Goulburn through the towns of Tarago, Bungendore and Queanbeyan (1) and in 1889, the line reached Cooma **2**.

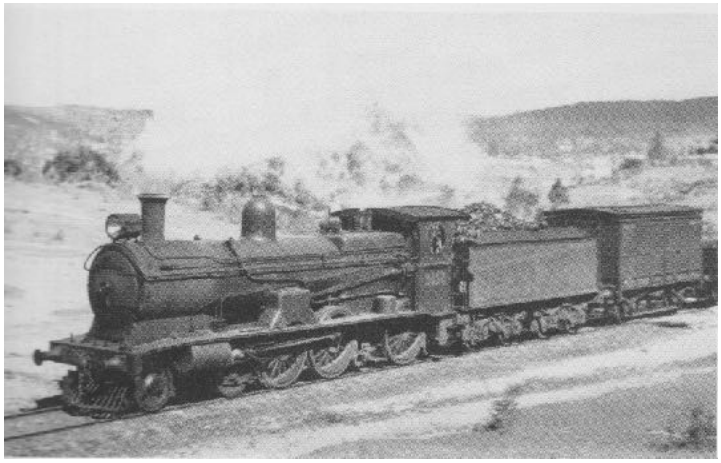


1 3316 with the morning Goulburn-Canberra mixed train in May 1940 (2)

The construction that resulted in the railway reaching Cootamundra to the west and Cooma to the south of Goulburn didn't go unnoticed by the good folk in the town of Braidwood, just 29 miles (*47 kms*) to the east of Tarago. They had lobbied hard to get a railway line into their town on four separate occasions from 1870, but to no avail. A final attempt in 1914 for Braidwood to be included in the new proposed railway line between Jervis Bay and Tarago was again rejected by the NSWGR, as was the entire Jervis Bay line proposal.

Then, in my version of history, a consortium of wealthy landowners and miners who had all rallied with the locals in the vain pursuit to get a railway line into their town, decided to take matters into their own hands.

They submitted a proposal to the NSW Government to privately fund the construction of a railway from Bungendore to Jervis Bay through the eastern ranges of the Great Dividing Range. The proposal included having primary trackage rights and a



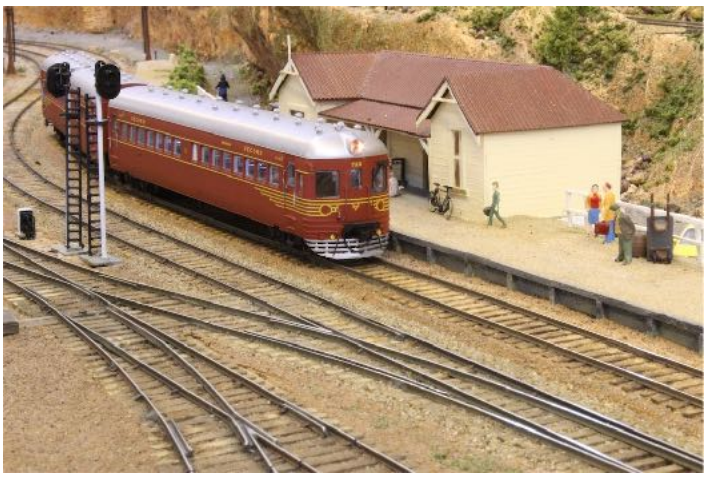
2 3350 Climbs out of Cooma with the Bombala Mixed in 1933 (3)

3 4823 arrives at Trevson Station with the local morning mixed

one hundred year lease.

The proposal was accepted and construction of the railroad commenced in haste. Within a short number of years the 2 dozen tunnels, 8 bridges, both a single and a double spiral and numerous culverts and embankments required to traverse the countryside from Bungendore in the west to Jervis Bay to the east were completed, with Braidwood finally having access to their own railway station.

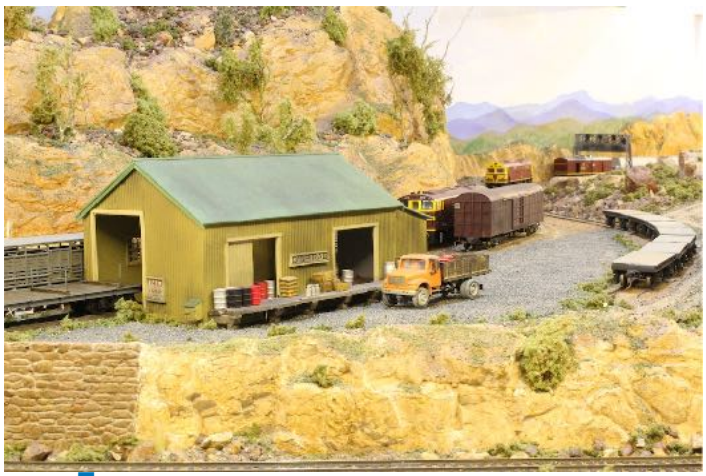
New railroading townships and sidings such as Trevson **3**, Helper **4**, D'Spiral **5**, Summit **6** and Creelle **7**, to name just a few, sprung up between the major towns. Some would cater for the maintenance and servicing of the steam locomotives and other rolling stock that would utilise the new line. Others would take advantage of the new transport corridor and use it to trade goods, minerals, crops and stock between other towns and the port.



4 622 and 722 Rail Motor service has stopped to pick up passengers at Helper Station

I like to think of my layout as being a Prototypically Freelanced HO scale railroad set in the 1970's and as such, I have a licence to model a small section of a railway that never existed, but one which could have been a reality if some circumstances were slightly altered.

I find that researching the prototype adds an interesting aspect to the design and thought process for when building a model railroad layout. I am very fortunate to have a wife who supports my passion, so with her as chief navigator, we set off for the three day drive down to the Braidwood area to research the location. I didn't need to wonder for too long as to why a prototype track through Braidwood was never built, as in reality it would have been a monumental and expensive task to



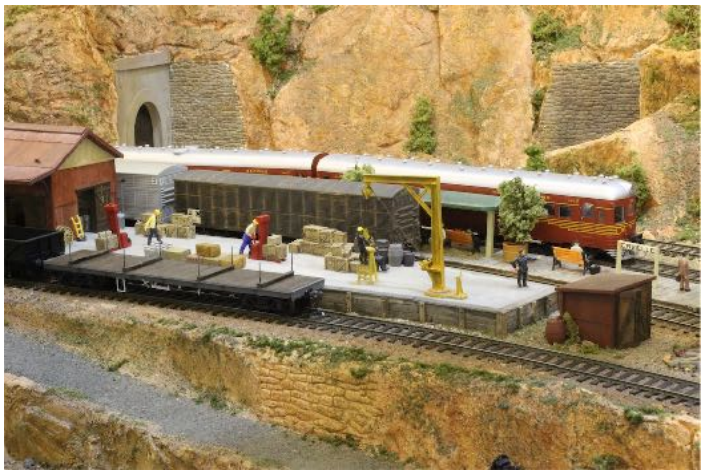
5 Cattle being loaded and freight being delivered at D'Spiral Siding

navigate a way through the numerous mountain ranges.

However this is a model railway we are talking about here, so to try and emulate what could have occurred, my layout winds its way through some very rugged landscape as the line cuts through the mountains and plateaus of the Great Dividing Range. The line is single track, but trains can pass frequently at numerous yards in towns and other passing loops.

6 Empty coal drag with 4203 & 4204 up front waiting patiently on the main for the daily loaded stock train from D'Spiral yard being hauled by 8003 to clear the section.

My Braidwood Division layout had its roots established during the 1990's in a previous layout. During a house and town move in 2010, the layout was disassembled and relocated. However, when it was reassembled in its new home, I knew that there was a better layout to be destined for the train room and so the old layout was again disassembled and a new layout was designed to fully utilise the available 6.0m x 5.5m train room space. I did however like a number of scenes and a couple of yards from the old layout, so they were retained and included in the design of the new layout.



7 It's a busy day sorting Freight at Creelle Station

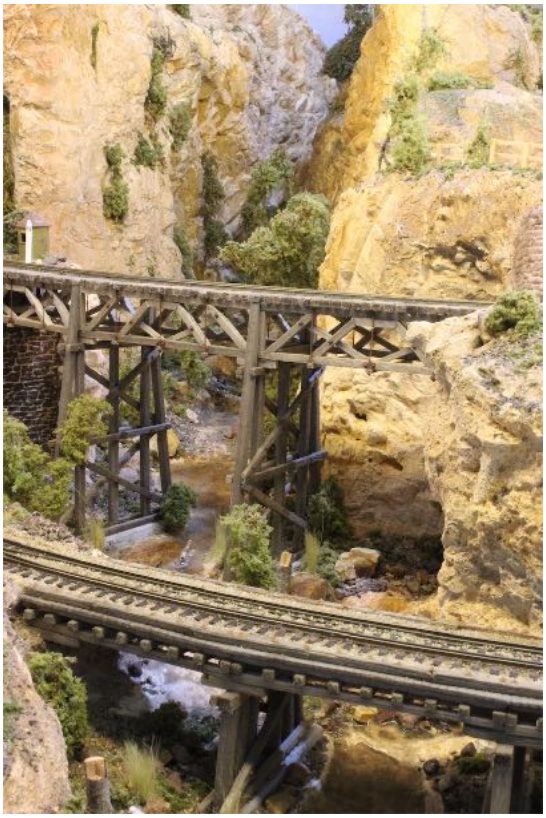
A big lesson was learnt here, retaining the favoured sections from the old layout for inclusion in the new sounded like a good idea at that time, but I would not do it again. I found it much harder and far more time consuming to integrate the old sections **8** into the new layout and experience has shown that

8 The farm scene is one of the sections saved from the old layout, but heavily modified and improved

it would probably have been much easier and quicker to just build everything from scratch. Additionally, my skills had improved significantly since constructing the original sections. This was quite noticeable and so the old sections still needed to have a fair amount of time spent to give them an update, hence my thoughts that it would have probably been more prudent to not use those sections at all.

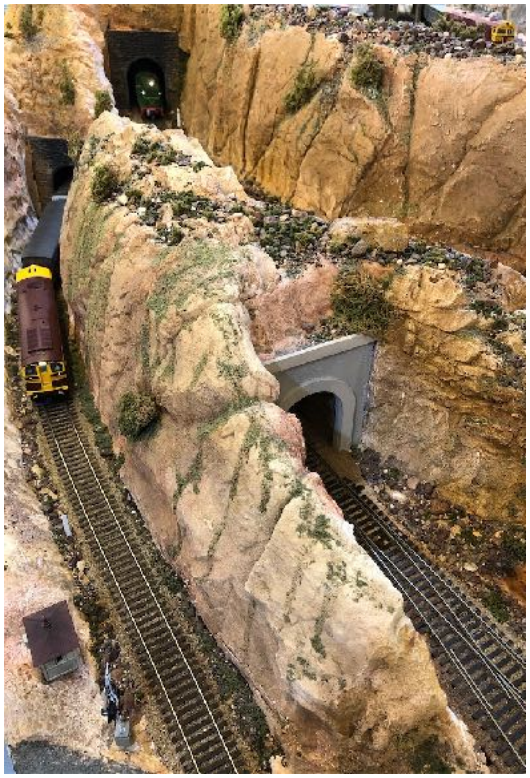
During the design stage of the new layout I made a conscious decision to change my thoughts on how to approach the completion of track work and scenery. The available space in the new train room ensured that I could build a good sized layout with multiple levels, but the down side was that it was going to take a long time to complete.

I decided to build the layout in two halves **9** with a plan to have the first half fully operational with completed scenery before commencing the second half of the layout. The completion of the first half is rapidly approaching now.



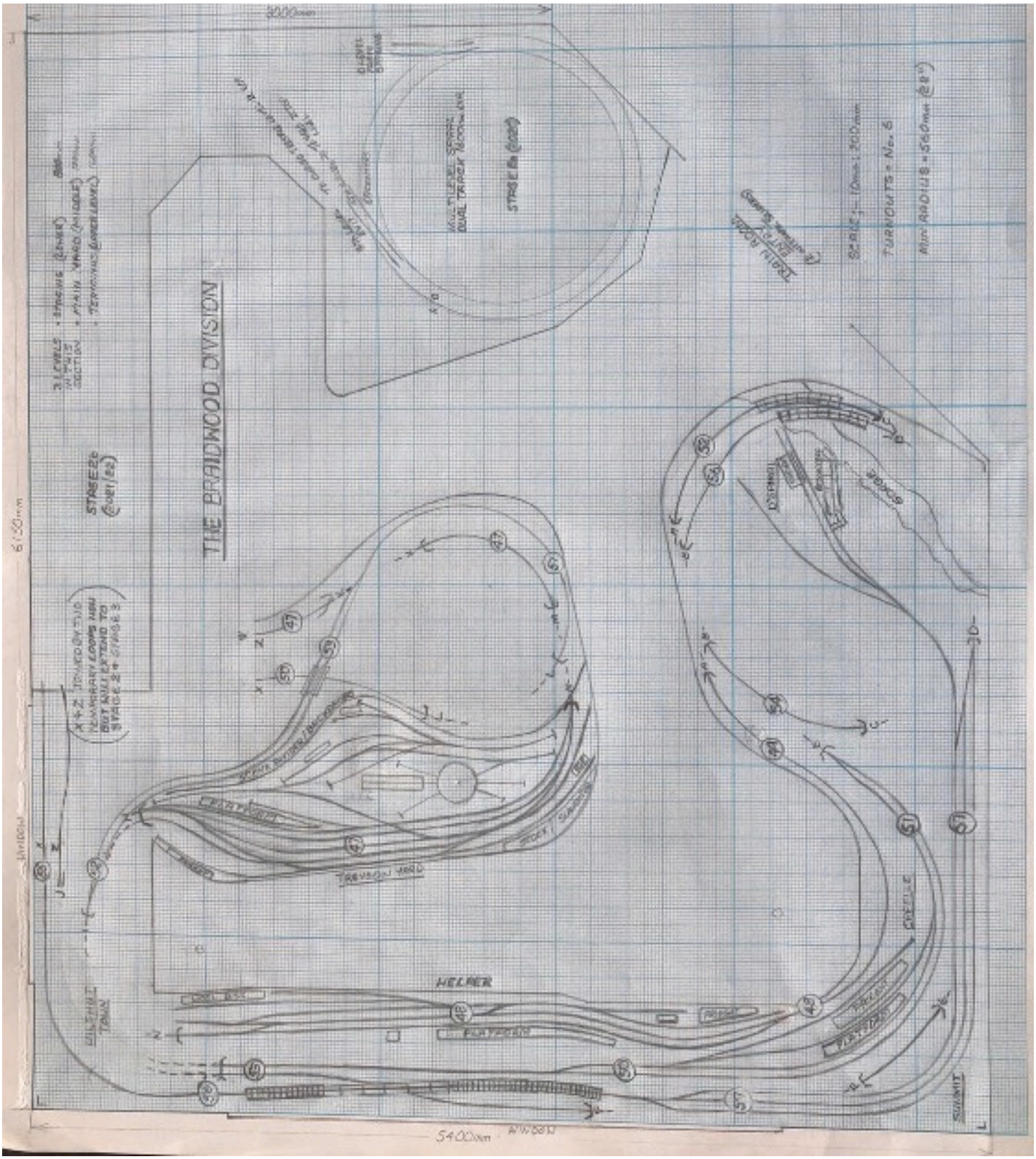
9 Jono's Canyon is the first scene that is seen when entering the train room & is the first scene to be completed on the new layout

Frame



10 The L–Girder method of frame construction allows for the easy transition of 4 separate levels of track to intertwine around the D'Spiral section.

There are multiple levels of track on my layout so the need to build the framework to cater for the gentle rise and fall of grades of the track was paramount. Wherever I could, I used the L-girder method of frame construction which allowed for easy adjustment for grades during construction. Tunnels are carefully placed to transition between scenes and hide parts of curves that would not be so prototypical. An example of this is in the D'Spiral area **10**, which is in the centre of a necessary helix in a small space that would often be hidden in other layouts, but actually features on the layout as a hill climb. A lesson from my previous layouts was to make the underside of the layout completely accessible to service tunnel track, another advantage of the L-girder system of construction.



11 Track plan of the 'Braidwood Division' layout showing Stage 1 of the Layout and as it is to date.
The allocation of floor space in the train room for Stage 2a and 2b is shown to the R/H side of the track plan and is scheduled for completion during 2022.
The 7 tier double track spiral as shown in 2a is completed and the construction method was outlined in an article in the last edition of MainLine (*Nov/Dec 2020*].
My apologies for the hand drawn track plan. I do not have a suitable program to draw an electronic version.

When the frame work was built and track laid and wired for the new layout, I fully tested the usability of the layout and made alterations where necessary by having a few good mates over regularly for a number of fault finding operating sessions. As every layout owner knows, the CEO can operate his or her layout without any problems occurring, but somehow the gremlins always seem to arise when friends are viewing or operating their layout, hence the need to have operating sessions to shake down the problems.

12 NSWR Beyer Garratt No. 6042 awaiting its turn under the water tower in Trevson Loco Depot

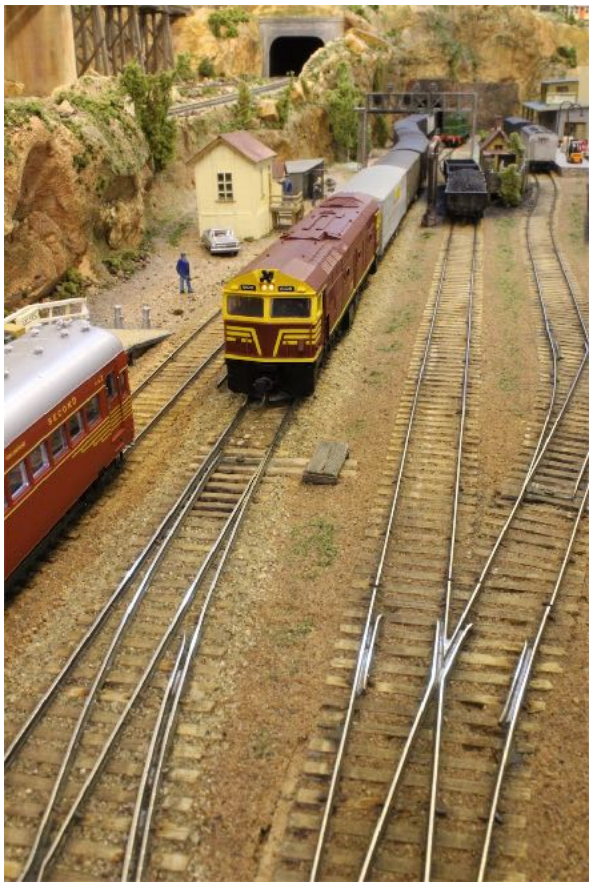
The Braidwood Division layout is a single track design **11** with multiple levels and passing loops. When a train is run at scale speed it will take just under 14 minutes to complete a circuit of the first stage of the layout without making any stops.

1972 is the year being modelled on my layout and the rolling stock is representative of that period, with locomotive power being predominately Diesel Electric but with a sprinkling of steam **12** operating in their twilight years.

Track

If this line had become a reality in the prototype, then the track work in this section prior to the 1970's would most likely have still been laid with lighter rail such as 94 or 107 lb rail. So in keeping with the light track theme for added realism, most of the track and turnouts are either hand laid with code 70 Micro Engineering rail or code 70 Shinohara track and turnouts, with some code 55 track **13** used in sidings to simulate the even lighter 86 lb track that was used in that era.

13 Code 55 track is used in the Stock and Processing siding in Trevson yard and other locations where there are light car loadings



14 Helper yard is fully hand laid with code 70 Micro Engineering rail.

I do get a lot of satisfaction from building track and turnouts from scratch. The method I use was shown to me by some talented members of the first model train club that I joined in Brisbane in the late 60's when I was 14 years old, that being the 'Sunshine Model Railway Club'. The method used for track & turnout construction is similar to the method shown by a prominent article writer for a major USA Model Railroading Magazine. No jigs are used and I use Micro Engineering code 70 rail laid on balsa sleepers that I cut and form from 1.5mm balsa sheets, utilising cutting jigs that I have made for that purpose. I use a 3mm cork roadbed under all track, whether hand laid or flex-track. The cork roadbed is glued to a 12mm ply base and sanded to a smooth finish. The sleepers are then glued to the cork roadbed with white glue. Once dried, I sand lightly to take out any imperfections between the height of the sleepers and then stain the sleepers with a diluted solution of either Indian ink or Potassium Permanganate, depending on the effect I am trying to simulate. I paint the sides of all the rail to represent the discolouration of rail due to rust, sand or oil etc, depending on the location of the track. I secure the hand laid track to the sleepers with small Micro Engineering track spikes, which I insert either side of the rail on every 5th Sleeper, while holding the track in place with a variety of track gauges. Ballast is then spread and when I am happy with the appearance of the profile, I wet the ballast with some wet water, (a teaspoon of dishwashing liquid in a jar of water), and apply to the ballast using a 180mm pipette. While still wet, I then secure the ballast in place with a diluted solution of white or latex glue by using the same method.

15 4204 being sanded and S class coal wagons being unloaded at the coal stage in the loco depot at the Upper Trevson yard

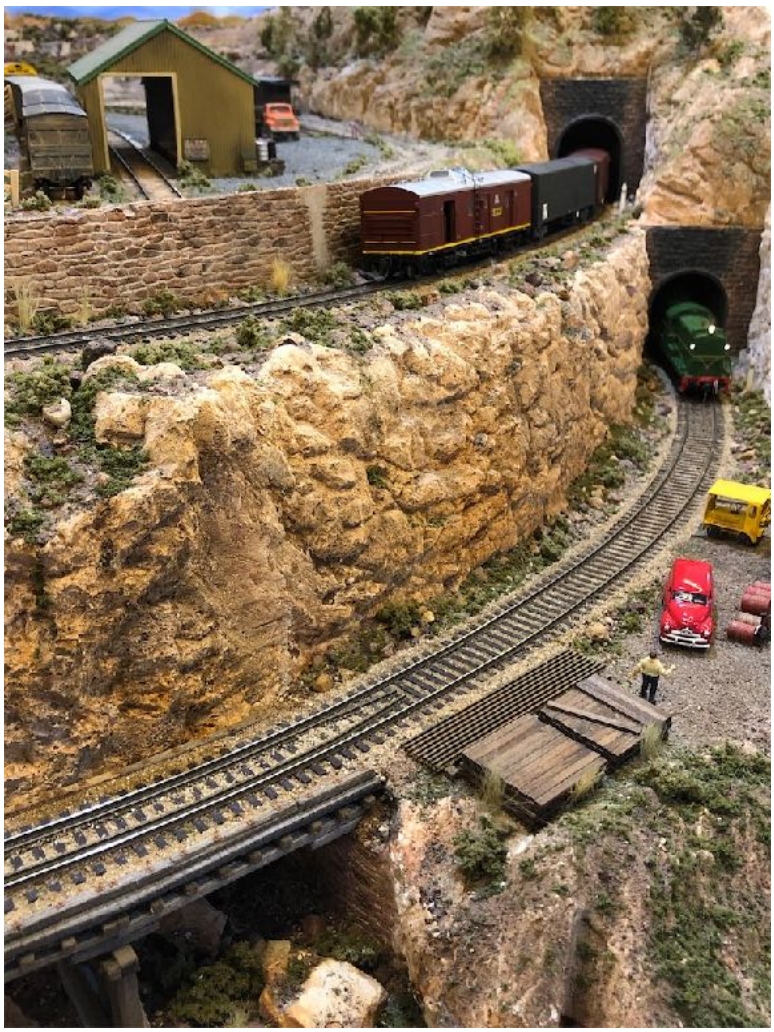
16 Customised Code 70 L/H Curved turnout hand laid between a modified Shinohara R/H curved turnout and a modified three way turnout.

The process for hand laying track is slow and time consuming when compared to laying commercially available flex track and turnouts, but there is of course a huge cost benefit for hand laying track, especially turnouts. In my opinion, once the track is down the 'timber' sleepers give a much more realistic appearance than the plastic sleepers found on commercially available track. However, I am not getting any younger and as it is my intention to complete my layout within the next couple of years, a compromise was necessary.

So I made the decision to fully hand lay only the lower deck areas such as all of the "Helper" yard **14** as well as the Loco depot and sidings in "Upper Trevson "yard **15.** The D'Spiral yard was one of the modules that I retained from my previous layout and it is also fully hand laid with code 70 rail. In the future I will probably only hand lay track where a special piece of track work is required that cannot be formed with commercially available track, such as when customised curved turnouts **16** or where a pair of diamond crossings **17** were needed at an odd angle with a curved approach in the Trevson yard.

Upgrades are always ongoing on a railroad and so the 94 or 107 lb rail used in the early 20th century on the Braidwood division now didn't cater to the needs of the heavier rolling stock and loads that were being hauled in the mid 20th century and so there was a need to begin upgrading the track due to higher track wear rates. The double spiral is the first location requiring a heavier rail **18** as this is a critical piece of infrastructure due to there being no other way of getting the track to rise the

17 The dual diamond crossings in Trevson yard needed to be hand laid as a curved entry was required and there were no commercially available crossings that would fit in this tight space.



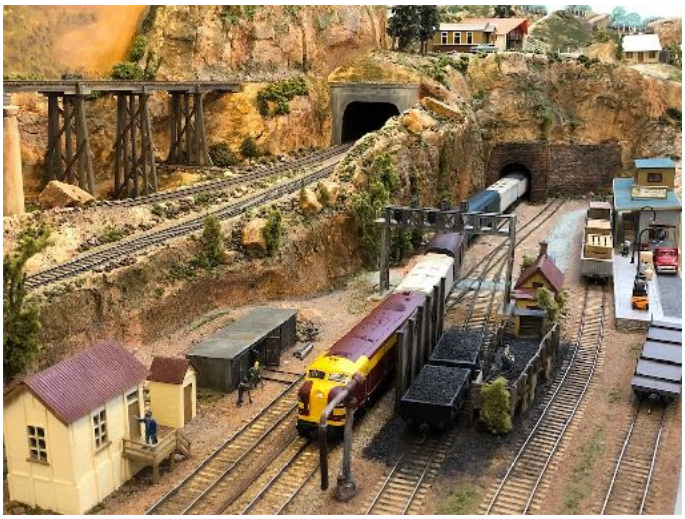
18 The track in the double Spiral section that runs through KickinAssPass, is laid with Peco code 83 Flex track

distance required into the mountains without traversing the double spiral. This section of track is laid with Peco code 83 flex track, representing 60kg (132 lb) track, which I glued to the cork roadbed formation with white glue. No track spikes are used to hold the flex-track in place. Once the glue has dried and the ballast was laid and glued, the track has never moved.

Scenery

Once I was happy with the track work, creation of the scenery commenced. Here there was another change to the way I approached this aspect of layout building compared to how I built scenery previously. In past layouts I tried to rush in and do all the scenery at once. With this approach of haste having precedence over detail, there was plenty lacking in realism in the scenery produced. I approached the completion of scenery on my new layout differently by having a starting and finishing point in approximately 1 to 2 sq m sections, and fully completing that section in a reasonable amount of detail before moving on to the adjacent section **19**. I then moved on to the next adjacent section, then the next, then the next etc., until all sections had scenery that I was happy to say looked realistic to me and was complete. Care was taken to ensure there were no visible transition lines between scenic blocks.

Along the way I learnt a new method of making realistic scenery as shown to me by my good friend and fellow model railroader Avon Aitchison. Avon showed that by using thick brown paper such as dressmakers paper,



19 The Transition between 4 sections of scenery in this scene was as seamless as I could make it

which is crumpled and formed to a desired shape and then stapled in place, it can be a base for a very solid scenery structure. Once the paper is in place, small strips of newspaper approximately 10 x 10 cm in size, are dipped in plaster and laid over the dressmakers paper. When dry, two layers of casting plaster are then 'painted' over the paper. Once dried, what you end up with is a very strong hard shell base, that doesn't need any prior reinforcing base such as bird or chicken wire etc for support, yet it is strong enough to accept any plaster castings that are applied. I use homemade latex moulds and spray the dried moulds with 3 or 4 basic acrylic paint colours that are used frequently by artists. This new method, in my opinion, is a far greater improvement in realism compared to conventional methods of scenery construction which I have used in the past and which have been around for decades. Maybe one day I will write an article to cover this method of scenery construction!

20 One of the Backdrops painted by my wife showing a storm over the canola fields and which in my view, blends in well with the scenery

Scenery is a huge subject and one that I have touched on briefly above, but I can sum up the subject of scenery quickly by noting that I have explored the use of most materials on my 'Braidwood Division' layout and I believe the combination of natural and commercial products can blend together very well.

While on the subject of scenery, backdrops deserve a good mention here, as a good backdrop will set the illusion of realism as much as most other methods **20**. Now I personally cannot successfully apply house paint to a wall, let alone paint a backdrop scene for a model railroad, but fortunately for me, my wife, Cheryl, has found in the last few years since we retired that she has a gift in being able to put paint on canvas. Cheryl has painted all the backdrops on the layout and we are very happy with the results.

In a future edition later this year, I will outline a little more on those areas of building my Braidwood Division layout that I have enjoyed doing the most, namely; Bridges, Power, Rolling-stock, Lighting, Operations and the future Signalling System, plus an outline of the plans for building and integrating the second half of the layout into the first and what is planned to dramatically increase the operational ability with the layout.....M

Acknowledgements:- (1) *Railways of the Canberra & Monaro Districts, by H.J.W Stokes*, (2) *Photo J.M. McMillan*, (3) *Photo J Grimwad*

Wheel Wagons

By Arthur Hayes - MMR

If you been modelling for some time you will most likely recall the good old days when rollingstock came with plastic wheelsets and your wagons didn't roll all that well. Metal wheels mounted in delrin/acetal plastic side frames came along and improved things dramatically including highlighting where your layout was not level. It didn't take long before most modellers changed out their plastic wheels for metal.

Modelling a 12 mm system, any wheelset was worth a pot gold and one took every opportunity to purchase them when they became available for future projects. After exchanging all my plastic wheelsets for metal, plus what I had for future projects and what I had been given, left me with a box of wheels no longer required. From time to time I would look at the box and ask myself "what are you going to do with them". I know what Kerrie would say, "toss them" and few other kind words. The box would go back on the shelf until next time I was looking for something.

Some time back I added a wagon maintenance depot to the layout **1**, to set the scene this gave me an opportunity to use a few on the wheelset.

1 This is the back side of the scene, the detail of the workers etc. are out of view in this photo.

Recently I was researching a project and looking through various photos when the penny dropped what I could do with the plastic wheelsets. With the introduction of a wheel lathe at Redbank Workshops, the life of wheelset could be extended. This called for special wagons to carry wheels between workshops and maintenance depots. Over the years that followed lathes were installed in other workshops which lead to wagons being allocated to carry wheels around in their division. Over time older wagons were replaced with newer wagons, drawhook wagons were replaced with auto coupler wagons, all were converted from wagons no longer require for the purpose they were built for.

The first wagons to be converted for this traffic were 4 wheeled open wagon, entering service in 1970. The wagon could carry 13 wheelsets with 33½" wheels, 9 on the floor and 4 on top. Wooden blocks were required for smaller wheelsets.

As I often put loads in wagons, I find the information on the carrying capacity of the 4 wheeled wagon was interesting. 13 wheelsets on a wagon that can carry 11½ tons, that makes a wheelset just under a ton, or around 18 Cwt an axle. I understood cast bogies were around 4 tons with the wheelsets being about 1 ton each. I had an 8 wheeled open wagon looking for a load, the wagon didn't have inside detail. I would think wheelsets were moved around the network before the introduction of the wheel wagons **3**. An open wagon would be suitable for the job. The wagon I was going to use **2** had can carry 12 tons plus an allowable 1½ ton overload, 13 wheelsets as above would give a full load within the carrying capacity. The wheelset would have been chocked with old sleepers making the loading process a bit messy and time consuming, with extra wheelsets moving over the network as a result of the lathes would be a good reason for a special wagon. The open wagon would better suit my era. The black plastic wheelset were given a coat of burnt umber to give a more realistic used look.

2 A 12 ton wagon can carry 13 wheel sets without being overloaded

3 BSW 31035 Clapham. February 2000.

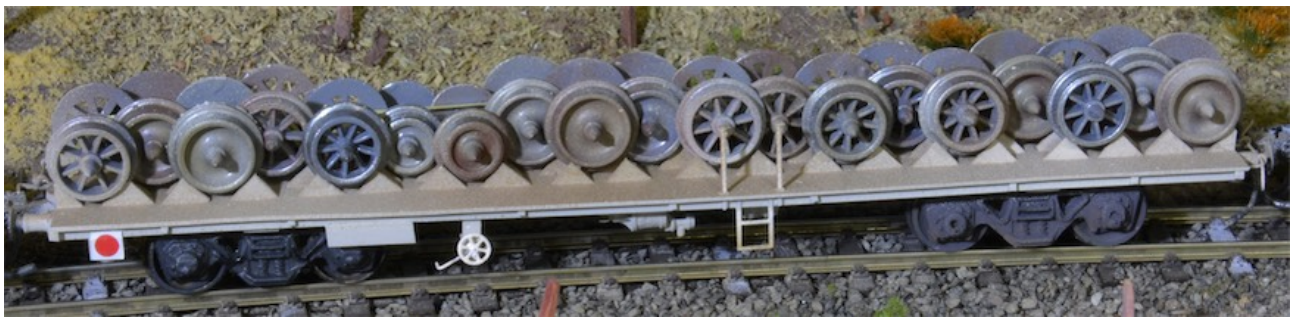
In later years, the loading configuration was alerted on the wagons working out of Redbank. Wheelsets were loaded across the wagon **4**, I guess this was to allowing loading/unloading using forklifts.

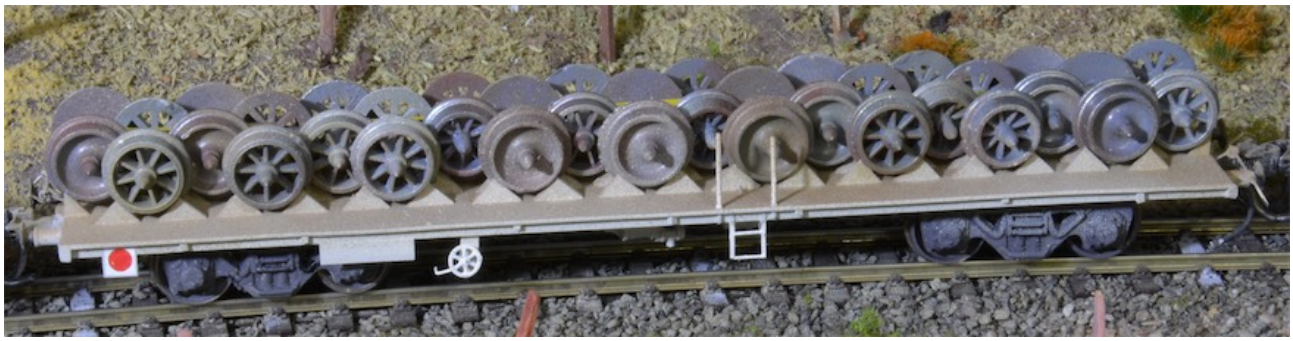
4 WHW wagon with alter loading position. Acacia Ridge 2011

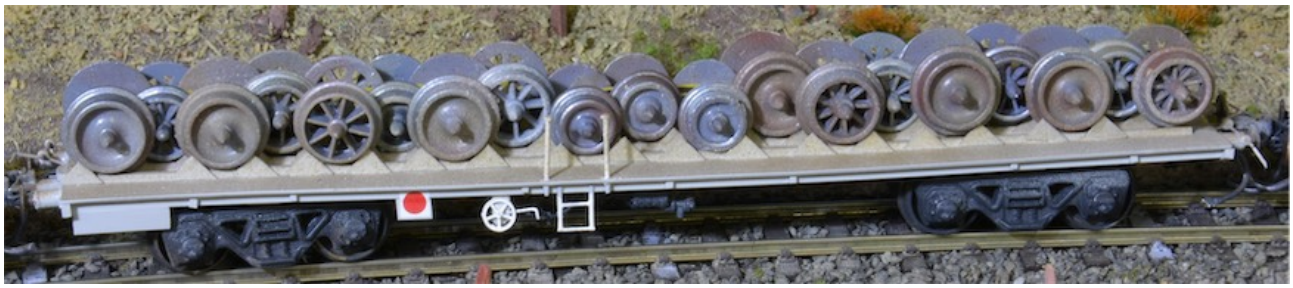
To put my box of wheels 5 to good use and to use other bits (bogies) in the cupboard, WHW wagons were built. The wagon were scratch built from styrene similar to other platform wagons on the layout. The plastic wheels are black and would not look right if placed on a wagon.

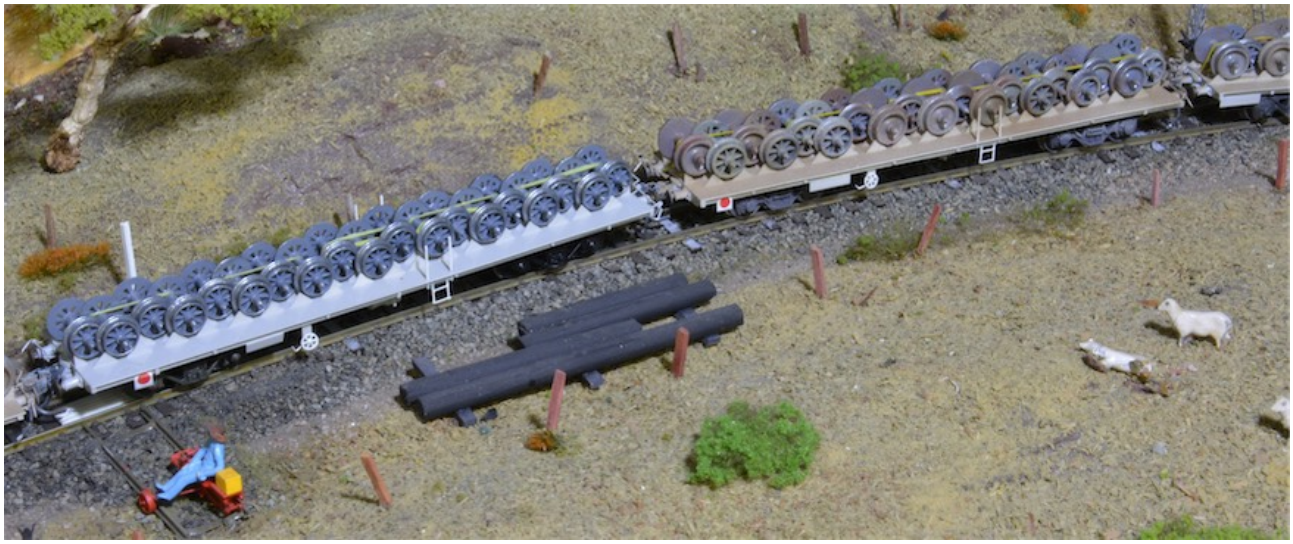
The wheelset were sprayed with a grey etch primer. The tyres were hand painted with "Model Color" gunmetal. Some weathering was added using earth colours and rust. Wheelsets are secured with web straps on the prototype, my straps are cut from a yellow plastic shopping bag, the bag was cut into 1 mm strips, and the strips were glued into place over the axles with super glue. I use wheelsets of a different size and a mix of disc and spoked for most of my loads. Looking at later periods and certain areas, wheels going and coming from the coal fields etc., the wheelsets would all be the same type and diameter.

5 Old Wheelsets used for loads









Buffers were added to the models, plans for the wagon show buffers fitted. I would think given the period that WHW wagons entered service these wagon may of entered service without buffers.

Trust the article has inspired you to do something "out of the box" for your railway.....**M**

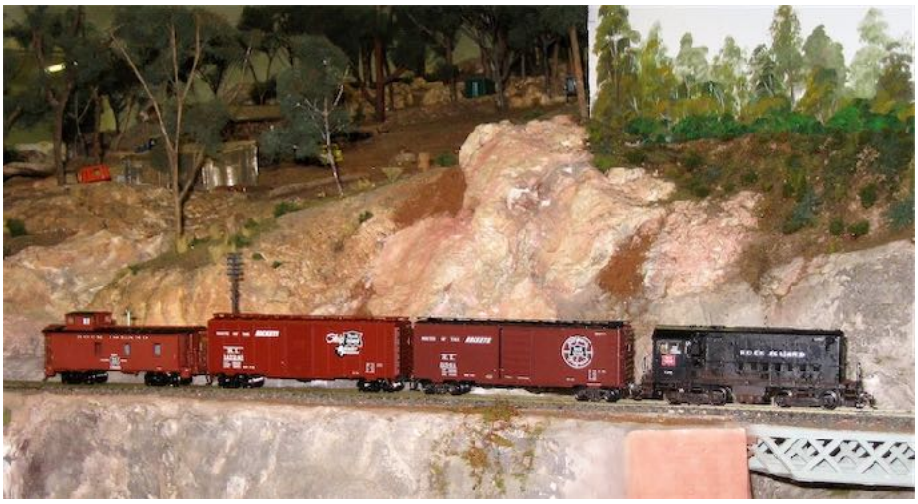
Acknowledgements.
QR Plan books.
Aurizon Wagon data information.

Chicago Rock Island & Pacific

Alco HH 730

by Graeme R Prideaux

Several years ago at a modeller's "buy and sell" event I purchased an Atlas Silver Series HO scale model of an Alco HH diesel electric locomotive. The model's plastic shell was undecorated and the finely moulded plastic detail pieces, including handrails, horn, bell and several other pieces were in a small sealed cellophane bag. In a similar separate bag were metal grab irons, lift links, and truck chains. Everything was packed in a purposely designed extruded polyfoam open top box which neatly fitted on top of a folded comprehensive exploded diagram of the model locomotive into a cardboard box. This box was kept firmly packed by the Atlas silver and black cardboard box top and folded sides.



My intention in acquiring the unit was to depict the model as RI 730, the Alco HH demonstrator unit that the Rock Island purchased from Alco in 1938. In the week after acquiring my unit, it was given an extensive test run hauling some model RI rolling stock on a local model railway association's large and complex model railway amid questions from onlookers as to why it was white and comments that it looked like a QGR 1600 class DEL The test was satisfactory with the mechanism demonstrating its endurance and sweet running capabilities over a couple of hours.

Following the test running the model was placed back into the box and laid in the "things to be done box" on the workbench. The model remained there until last February when it was taken out and work commenced.

After examining the parts to be affixed to the shell, I commenced painting the hood portion of the shell before tackling the fitting of the detailed loose parts. One packet of parts includes the truck chains that limit the truck swing through connection from each top end of the truck side frame to the carbody above. The chains are readily discernible in pictures of the prototype, however I decided not to fit them to the model as from experience with models of other prototypes fitted with similar chain fittings these chains and their securing points are quite fragile and tend to drop from their anchor points when operating and cause derailments.

Fitting and securing the detailed (and tiny) parts was not difficult but did require the assistance of a magnifying device when placing of the lugs etc. into the correct locating holes. I also attempted to fit the many grab rails. These tiny metal items once carefully lifted from the bench generally escaped the grasp of the fine tweezers and flew away never to be again seen !

I painted the remainder of the shell a day after fitting and glueing the handrails and other fittings. Testors satin black was utilised having regard to the sheen on the prototype displayed in a photograph in a book in my library. The road name, herald shield and numbers came from a sheet of Microscale Rock Island decals which I have had in my storage boxes for decades. Application of the decals was quite a challenge because of their age.

Several decals 'shattered' in the process which was undertaken strictly in accordance with the printed Microscale instructions. When dry I applied a coat of Micro Flat to the entire model and also covered the 'useage' areas like walkways, door handles and steps with Humbrol matt black from a nearly dry brush. I then stood the model outside in the sun sitting on a length of track for a few hours until a curious magpie landed and perched beside it.

I allowed all paint, decals glue, etc. to 'cure' for a couple of days in the safer environs of the workshop. The model was then dusted in appropriate places with rust and dark mud weathering powder. RI 730 will now replace the existing standard gauge switcher, RI 429 a Proto 2000 EMD BL2 afflicted with cracked plastic gears, on my home layout.

The protype RI 730 was the only Alco HH unit owned by the Rock Island and held a long-time assignment to the El Reno (Oklahoma) yard. She was retired in 1965 still in the plain black livery, apparently never having worn any "Route of the Rockets" lettering, and remained basically as built although the company welded up a number of hood vents and installed atop the car body an ugly rectangular box shaped exhaust stack which I have not modelled as I prefer the cleaner lines of an almost smooth car body roofline. Alco's HH units were an early attempt at a steam locomotive replacement diesel switcher away from the earlier box and steeple cab style units derived from straight electric and gasoline powered units. The first Alco HH unit was constructed in 1931....M

Sources:-

ROCK ISLAND DIESEL LOCOMOTIVES 1930-1980 by Louis A Marre; Railfax, Cincinatti Ohio: 1982: ISBN 0-942192-00-1

RAILROAD MODEL CRAFTSMAN magazine November 2008

SCALE RAILS magazine November 2009.

All have extensive detailed information, including plans, of the Alco HH type diesel electric locomotives.

Amtrak Auto Train

by Arthur Hayes - MMR

Since 1983, Amtrak has been operating the Auto Train between Lorton, Virginia (near Washington DC) and Sanford, Florida (near Orlando). The service departs daily from both ends, departing at 4:00pm and arriving at 9:30 am the next morning, a total distance of 855 miles.

1 The Samford Mechanical Facility

The Sanford Mechanical Facility **1** dispatches one passenger train (#52) and receives the inbound train (#53). The facility is responsible for Maintaining 127 items of rolling stock. The fleet consists of long-distance, bi-level Superliner II Coaches (12), Diners (8), Lounges (1), Sleepers (18), Transitions **2** (3). Superliners Lounges (5), Auto Carriers (80) **3**, and Diesel Locomotives (10) **4**. A total of 119 personnel are employed at the facility.

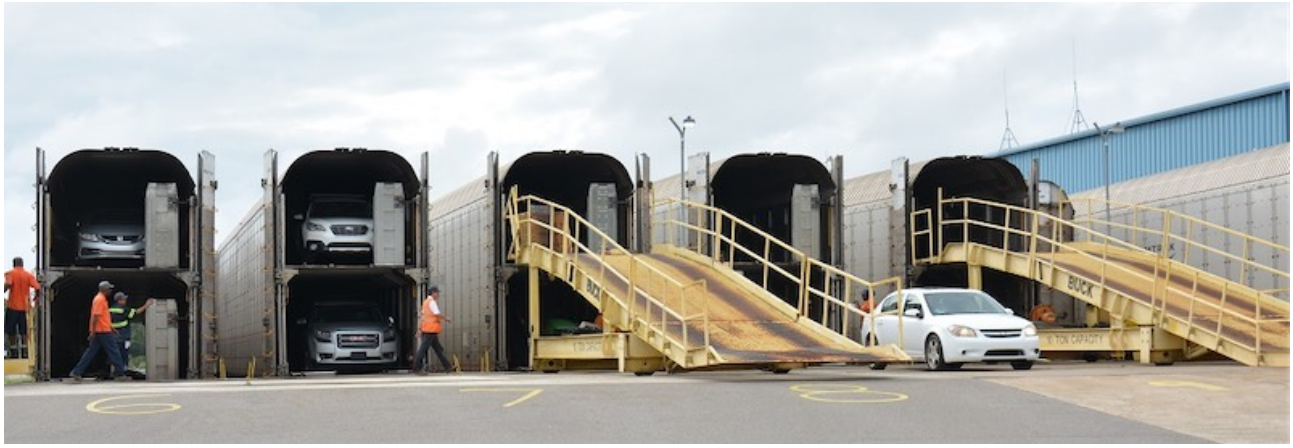
2 Transition Carriage

3 Switching Auto Carriers

To service the train, the property has a locomotive shop with 2 tracks under one cover, an E-clean facility with 2 tracks under roof and 3 outside tracks **5**, 7 tracks for auto carriers to load/unload **6**. 2 locomotive tracks under roof, 2 B/O repair tracks, 1 pit repair track under roof **7**, 1 covered drop table **8**, 1 mechanics building, a Car Wash facility, DAF Facility, Passenger Station **9** and other associated support structures **10**.

4 Various Diesel Electric Locomotives assigned to Service and to be serviced & maintained at the facility

5 Two Under Cover Carriage Servicing Tracks plus three outside carriage Servicing tracks



6 Seven Tracks to Load & Unload Vehicles and Motorbikes

7 Pit Repair Track

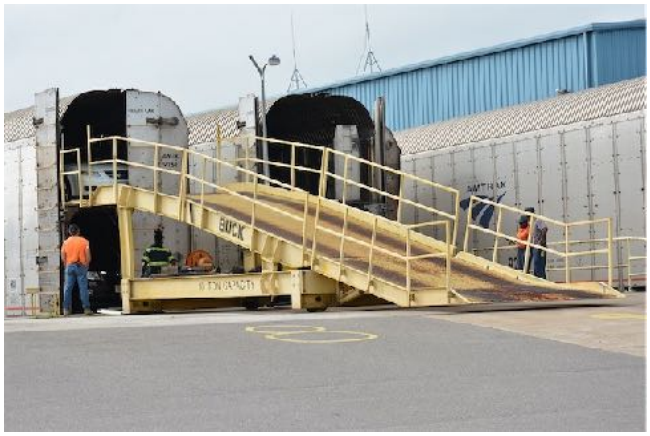
Currently the train consists of 2 locomotives, 1 Coach Diner, 1 Coach Lounge, 4-5 Coaches, 1 Business Class, 3-4 Sleepers, 1 Sleeper Lounge, 1 Sleeper Diner, 1 Crew Car and 30 plus Auto Carriers. 50 vehicles is the current limit and is the longest passenger train in the world, being over ¾ of a mile in length. It transports over 130,000 automobiles and 250,000 passengers per year.

8 Covered Drop Table

Recently, all passenger cars have been fitted with LED lighting which will allow for 3 additional cars to be added to the train with current head end power arrangements.

9 Sanford Station and Waiting Room

Unloading Motor Bikes



Car Loading & Unloading ramp

Switchers Hut

Specialised Coach Equipment

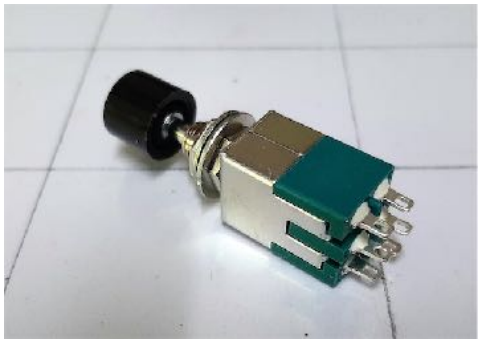
10 Supporting Structures and Equipment at the Sanford Facility

On the train arrival at Sanford, the train locos are used to cut the passenger consist into 2 platforms. The local switcher breaks up the auto carriers into 6 tracks. Cars/motorbikes are unloaded by a contract crew and takes approximately 90 minutes. At about 11:30 am, loading commences for the return trip……M

Recessing Push Button Switches

by Peter Jackson - MMR

My Eureka Valley Narrow Gauge Railroad (EVNGR) is an On3 layout and has been developed over about 25 years - modified and expanded from time to time as we model railroaders are prone to do.

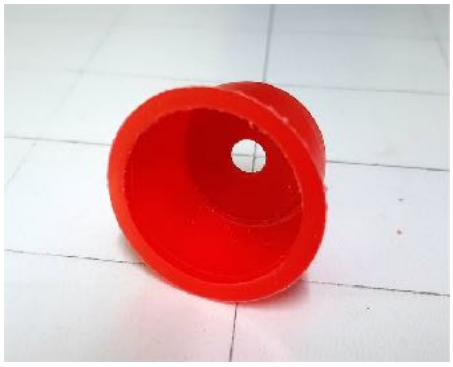


1 A DPDT (constant on) Push Button Switch used to switch the Turnouts

I started using Switchmaster motors for operating my turnouts and found them quiet, reliable and relatively easy to install. To-date I've got 34 of these motors around the layout. Being a 'constant on' 12v motor, I wanted to use DPDT (constant on) push button switches **1** to operate them. These simple – but somewhat tricky to wire – switches were located in the layout fascia in close proximity to the turnout that they controlled. The idea being that engineers can follow their trains around the layout using radio throttles (I'm using an EasyDCC system) and 'throw' the switches as required as their train approaches the turnout.

The thing that I was never quite happy with was that the push button switches protruded from the fascia **2** and occasionally a shirt, jumper, etc would get caught on a black button. Things came to a head recently when one of my operators recommended that a number of turnouts in the town of Eureka (set in a peninsula) really needed dual operating capability – meaning that the engineer could operate the turnouts from a (quite narrow) adjacent aisle – as well as from the existing set up. This aisle is a major choke point for operators and I did not want to have more black buttons protruding out into this aisle space. What to do?

2 A DPDT Push Button Switch protruding from the Fascia



3 Plastic Plug used to house the recessed switches

Fortunately the wiring diagrams for recently purchased Switchmaster motors showed how a 'remote' push button switch could be connected to the existing motor.

Previously I'd bought all Switchmaster motors and the

required DPDT switches from Builders-in-Scale in the USA. Knowing that in these COVID times mail deliveries between the USA and Australia had proved somewhat problematic, I searched for another (closer) supplier and found one in Singapore at www.monotaro.sg/g/1003667390.html.

4 A 25mm hole drilled into the Facia for the plastic Plug

Needless to say, I bought a few extra push buttons because the postage was a much as the cost of the switches!

So, back to the problem at hand – how to best recess the push button switches so that they were flush with the fascia and would not catch on operator clothing?

After a number of internet searches, I came across various plastic fittings called tapered plastic plugs – used to plug pipe ends - that might do the job. I contacted one supplier and was sent several sample plugs of the size that I thought would best meet my needs – and they did. However, when I went back to that supplier and asked for just 40 plugs, they wanted far too much for postage and shipping and would only supply a much larger quantity anyway. More internet searches later and I found a NSW supplier who would sell me a bag of 100 plugs of the required size **3** and I ordered them from www.stockcap.com.au/shop/category/styles-protective-plugs-tapered-plugs. Cost including delivery averaged about 40c/plug. The plugs arrived in about 4 days – pretty good – and they were a very close match size-wise to the original samples that I'd first received and tested.

5 The completed job with switch recessed into the facia

6 A Closer view of the recessed switch

The back of the plugs needed to be drilled with a 6 mm drill bit to make the hole to accommodate the push button switch. The plugs are a red plastic finish, so after drilling all of the plugs I sprayed them with a flat grey automotive primer as a base coat and let them dry overnight. I was able to find a spray can of Tamiya green which closely matched the dark green fascia colour on my layout and then gave the plugs their final coat, let them dry and the paint finish harden over a few days before installing them in the layout fascia.

The installation process was relatively straightforward – remove the black cap, unscrew the existing push button switch, drill a 25 mm hole **4**, fit the switch into the plug housing and then push fit the plug (with switch installed) into the opening. The new plug housing is slightly flexible and I found that it was a tight push fit into the 25 mm fascia hole, **5 & 6,** no glue or other fixing was needed.

So, with a little help from a friend all push button switches have been recessed into the fascia and I'm happy with the much neater look and, of course, less opportunity to catch clothing as operators walk around the layout and navigate my relatively narrow aisles….**M**

Letters to the Editor

In the Nov/Dec issue of Mainline a photo on page 32 is captioned as a Santa Fe locomotive in the Warbonnet colour scheme.

The model pictured is in the "Super Fleet" colour scheme of the 1990s. This colour scheme was applied to all new locomotives acquired from 1989. The only existing locomotives to wear this colour scheme were the surviving FP45s.

The "Warbonnet" colour scheme was in use from the late 1930s until passenger service was handed over to Amtrak in 1972.

From 1972 until the railroad merged with Burlington Northern the "Yellow bonnet" colour scheme was used on all locomotives as they came up for overhaul.

There was a short period in the late 1980s when some locomotives got the "Kodachrome" colour scheme for the failed merger with Southern Pacific.

Hope the above is of some help.

Regards

Rod Tonkin

[*Ed - Thanks for the clarification Rod*]

The NMRA x Live Clinics

by Laurie McLean - MMR

The pandemic saw us isolate and not being able to attend regular meetings. There was a member who had a great idea to overcome this by using technology and the internet to give all of us clinics.

His name is Gordon Robinson and he lives in the UK, goes by the nickname "Gordy". He has travelled to NMRA Conventions both in the UK and USA and has done a lot to encourage fellow modellers in our hobby. But the best thing he has done is to instigate the NMRAx Virtual Model Railroad Convention during this pandemic so that all of us can partake in the "live" clinics he and a small team working with him produce.

These NMRAx Live presentations are also on Facebook and YouTube for those who can't watch live. Gordy has been able to provide us with many of the very best railroad modellers around the world who have already or plan to share their clinics and layouts with us.

Just thinking about getting something like this "off-the-ground" and happening is a mammoth task yet Gordy did it for us and what a great success it is. He was not alone, his idea needed assistance and from his meeting with Gert "Speed" Muller (USA) and Martyn Jenkins and Brad Anderson (Australia) who have IT backgrounds he got the help needed to make NMRAx a reality. Others too.

Without any money from the NMRA these gentlemen took it upon themselves to share with us a new way to attend meetings "live" with a chat room Q&A working to ask the clinic presenters questions and get answers. This provided members from all around the world the opportunity to participate and share which has been a total success.

For me I saw how much time and effort the NMRAx Team led by Gordy were doing from the earlier on-line live clinics in 2020 with more to come about in 2021. They don't get anything out of it but to share, and sharing is what the NMRA is all about providing a platform for all of us to become better modellers. We also get to see many layouts around the world in the layout tours that we would not normally see.

What Gordy and the team he has put together have done is changed my views of the NMRA organisation. He is attracting younger members to participate and to show "old feller's" like myself where the future for the NMRA is. Gordy is bridging the gap between the talented modern younger modeller and the older modellers using the on-line means to connect. At some time we need to have younger members to take over the running. It's time for the NMRA to get some fresh blood with fresh ideas and for the younger modellers to see what can be offered to them to join. The future is technology and the younger know how it works and how to use it and are doing so in their modelling, let's share it.

As a way of showing my appreciation I made these four gentlemen immortalised as O Scale figures animated doing what they do so well – presenting and sharing virtual conventions on a gondola car.

My YouTube channel shows a video of them animated, just enter Laurie McLean MMR in "search". ……**M**

Bundaberg Model Train & Hobby Expo

11m •

Planning for the 2021 Bundaberg Model Train & Hobby Expo is progressing forward towards the planned dates of 20 & 21 March 2021.

The Bundaberg Multiplex Sports & Convention Centre has been booked and confirmed for the planned dates, and we are now preparing to send out application forms to exhibitors in the next few days.

Announcements last week by Queensland Health of the easing of Covid-19 restrictions for public events are encouraging, and we are optimistic that there will be further easing of restrictions early in 2021. These requirements will be monitored carefully by our Club in the coming months to evaluate how they will impact upon the 2021 expo.

100% NMRA Inc.-AR Club News

City of Sails Model Railway Club

By Phillip Sharp

AMRA mini-convention

The American Model Railroaders Association (AMRA) in New Zealand typically holds a national mini-convention in even numbered years and a full national convention in odd numbered years. Three CoSMRC members attended the 2020 mini-AMRA which was held November 6 – 8 at the Glenview Club in Hamilton. Several other members wanted to attend but were short on hobby time after crewing a large layout at an Auckland pop culture expo two weekends before.

The event began Friday evening with an informal '*get-to-gether*'. Saturday was the main day. There was the official opening, two clinics, lunch, the layout tour, free time, the convention dinner and more free time. The trade tables were open much of the time outside of the layout tour. Sunday was pack-up day and a final trade table session. This session was busy.

Both clinics were given by CoSMRC members. Alex Shepherd gave a summary of the state of LCC. The clinic included a practical demonstration of LCC. The second clinic was a late replacement and given by Philip Sharp. He described his modelling of a branch line in nineteenth century southern Ontario. Both clinicians had good interactions with the audience.

The mini-convention was successful by at least three measures: a good attendance of 80, a layout tour that enabled visiting six layouts in four hours without rushing, something you cannot do in Auckland, and five trade tables offering a good selection of new and used items. Not surprisingly, the schedule for AMRA and mini-AMRAs over the next three years looks secure. Auckland is hosting AMRA 2021, a group in Waikanae (near Wellington) will host the next mini-AMRA in 18 to 24 months' time, and AMRA 2023 will be in Palmerston North.

November Meeting

As described in a previous report, the CoSMRC aims to have a hands-on clinic at least every second month. This month's meeting was a hands-on clinic about making and using washes for weathering freight cars. The clinic was given by Philip Sharp. An underlying theme was the question 'Can I do this type of weathering using cheap products and equipment?'. The cheap products were acrylic paint from a two dollar store and a householder glass cleaner from a supermarket. The cheap equipment

1 Some participants at the November meeting

was brushes from an assortment of non-specialist shops. The conclusion of one member was that cheap brushes were not a good idea. **1** is a table top view of some participants, no product placement is intended. Left to right are Michael Hill, Stephen Colemen, Craig Mayall and Paul Hobbs.

December Meeting

The December meeting was a first for the CoSMRC for three reasons. The first meeting in the weekend, the first meeting that was not predominantly about model railways, and the first time a meeting was held in December. The meeting also involved a longer drive for most, if not all, members than previous meetings.

2. Class D locomotive

The club visited the Helensville Railway Museum. Helensville is 40 kilometres northwest of Auckland and close to Kaipara Harbour. This harbour was an important entry point for early settlers to New Zealand. Helensville is on the North Auckland line. This line runs from Westfield Junction in Auckland to Otiria north of Whangarei. The line is currently being upgraded. The upgrades include replacing five bridges and lowering 13 tunnels.

3 Helensville Railway Station

2 is of a D class locomotive which is on long-term loan from the Museum of Transport and Technology in Auckland. The locomotive is outside and the wall behind it stops the salt air from the Tasman Sea corroding the locomotive. **3** shows the Helensville Railway Station. A café occupies part of the station; the rest of the station is largely unused.

4 James Kelso viewing the large layout

The museum has a large Sn3½ NZR layout that models Helensville Railway precinct, the yard at Kaipara Harbour, and other track in a bygone era. James Kelso on the left is seen viewing the layout in **4**. The museum also has a small layout. This, along with a collection of railside signs, is shown in **5**. **6** has Craig Mayall posing in front of a uniform display.

Other Activities

Three CoSMRC members are on the organizing committee for the 2021 AMRA convention. This convention will be June 4-7, 2021 at the Northcote Birkenhead Rugby Union and Sports Club on the North Shore in Auckland. The organisation of the convention is well in hand. The venue is booked, the layout tours decided and two newsletters emailed out. The committee is now seeking clinics and trade tables.

5 The small layout and railside signs

Paul Hobbs is on the organizing committee of the NMRA's 2021 national convention in Santa Clara. He is in charge of creating the timetable book. Paul recently built a list of potential advertisers and demonstrated the format he plans to use for the clinic listings with the clinic chair.

6 Craig Mayall posing in front of a uniform display

The CoSMRC president had planned to attend the club's December meeting but ended up driving ride-on locomotives for Manukau Live Steamers. MLS had a public day and was short of driver….M

Magazine Publishing Deadline Dates

If you are submitting An Article for MainLine, your article may be submitted at any time and it will be included in a future addition where the subject matter will allow for a balanced number of differing subjects in MainLine, where the number of available articles will allow that to occur.

If you are providing a Divisional Report, it needs to be submitted prior to the cut off date of the 5th of the month of MainLine issue, to ensure the editor can complete the edition in the required time frame prior to release.

100% Club & SIG Activity Reports can be submitted at any time but preferably well before the cut-off date of the 1st of the month of MainLine issue, to ensure that their report is included in the next MainLine edition.

The following are the deadline dates you may need to know for the next two editions;-

March / April 2021
- For 100% Club & SIG Activity Reports = 1st March, 2021
- For Divisional Reports = 5th March, 2021
- Publish Date on Web = < 15th March, 2021

May / June 2021
- For 100% Club & SIG Activity Reports = 1st May, 2021
- For Divisional Reports = 5th May, 2021
- Publish Date on Web = < 15th May, 2021

Divisional Reports

As the restrictions for having Divisional meetings start to ease, we may soon again be able to attend Divisional Meetings around the country. Just for now though, meetings have been restricted due to the pandemic and activities to report on have been limited. Those Divisions who have been able to have meetings and who have sent me their activity reports, have their reports recorded below.

Division 1,

November 14th Meeting:-

Division 1 held a meeting on the 14th November. No minutes of the meeting were available at the time of writing.

December 12th Meeting:-

An end of year break-up Lunch was held with around 34 members and wifes/partners in attendance……M

Division 2

I have not received any report of Division 2 meetings having been held during the months of November & December……M

Division 3

I have not received any report of Division 3 meetings having been held during the months of November & December…..M

Division 4

I have not received any report of Division 4 meetings having been held during the months of November & December…..M

Division 5

Please refer to the report from the City of Sails 100% MRC on page 32 for some detailed information on all the activity the guys and girls across the Tasman have been up to in model railroading ……M

Division 6

From Jane Robinson (NMRA Inc.-AR Div6 Superintendent)
November 14th Meeting:-

Hoping all of you and your families are all staying well.
Thank you Ray for hosting our November meeting. Ray was presented with his host plaque **1**.

1 Ray Brownbill being presented with his host plaque

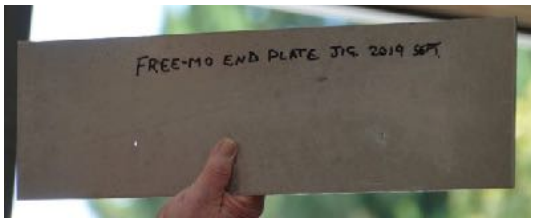
Members in attendance were 20 in number and 2 visitors.

The raffle was drawn and Ray Brownbill won it.

Business:

1. Finances – Ron Solly reported on our statement.
2. AP- Ray Brownbill presented Peter Jackson with his Chief Dispatcher award **2** and Ray explained how he recycles his old calendars.
3. Library- Michael Robinson reported that we had received the November NMRA magazine which was available to borrow. He would like to encourage members to borrow and critique some of the DVDs to encourage better use of the library.
4. Social- Trevor Seddon had something else on so Hutch told us how it went.

2 AP- Ray Brownbill presented Peter Jackson with his Chief Dispatcher award



3 Sample frame and a plate for Joining modules

5. Modules- Ray Brownbill and John Prattis reported on how they plan to join the modules and insurance should a non-member wish to join with their own. We decided that they will need to join NMRA-AR to be covered by our insurers. They had a sample frame and a plate **3** with match up holes to show us.

6. David Teague **4** reminded members to contact him if they wish to have their shirt/jumper embroidered with the NMRA logo. There is a choice of two logos.
7. December meeting will be held at Jane and Michael Robinson's home. Unfortunately we are back to Covid19 restrictions since last night. We plan to commence the meeting at 1pm with a light lunch if possible. We can only wait and see at present.
8.Ron Solly who is the Official Coordinator reported about the future plans for AMRE. We decided that we as a group will not be attending unless all restrictions are lifted and I notified Ron accordingly.
9.A decision made at last ARC meeting that they will refund the cost to us for our Len Opie award.
10.Voting reminder to all members for the Pacific Director position and amendment to the Rules of the Association.
11. Future Suggestions -
Swap meet table at our meetings and a joint swap meet table next? March at Windsor Gardens for our members depending on the Covid19 situation.

4 David Teague and his new NMRA-AR shirt.

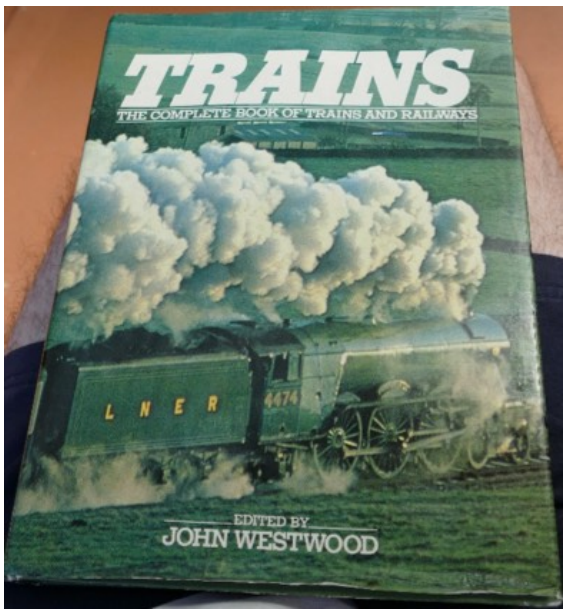
Bring and Brag.

5 Vern Cracknell

1. Vern Cracknell **5** explained to us how Marklin LGB club he belongs to sends out a gift to members and then runs a competition to see how they use it. This years is a lineside telephone box which Vern has built a diorama to fit it and told us a story about the event which led up to the use of the telephone.

6 Brian Hutchinson working toward his Author Certificate

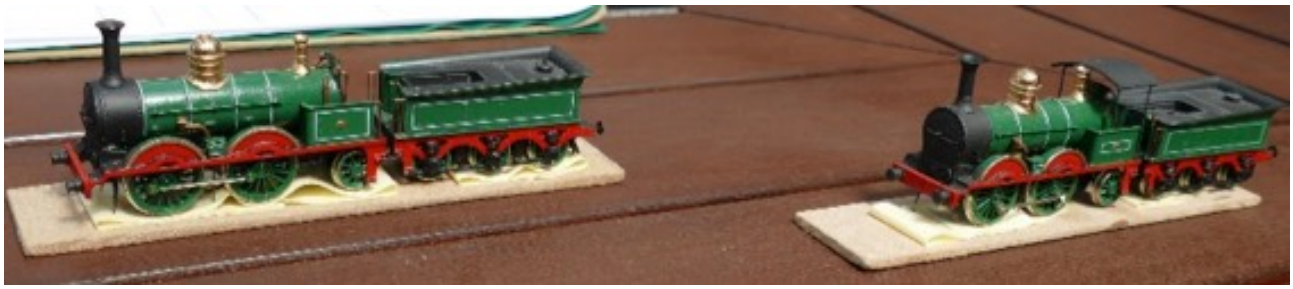
2. Brian Hutchinson explained he had sent his article on "How to make signals" to the Mainline Editor. He is working on his author award **6**.
3. Casey Tonkin showed us her train book and her Navajo wagon and container **7**.
4. John Prattis showed us his two latest engines he has been building **8**. They are 1855 NSW first locos. Originally they were wood burners and then converted to coal. The kits are made from white metal.



7 Casey Tonkins Train book and Navajo Container Wagon

5. Scott Taylor showed us his scratch built Dolly 4-6-0 South Australian Railways F class Steam locomotive **9** which he had 3D printed in China. He used the design program called Sketch up.

6. Peter Jackson had some cardboard, foam board etc. to give away and he then showed us how he used plug-in caps **10** to place his switchers in to make them flush with the fascia.



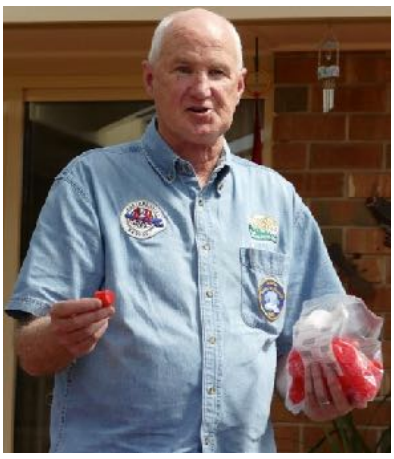
8 Two 1855 NSW first Locomotives built by John Prattis

9 Scott Taylor with scratch built Dolly 4-6-0 South Australian Railways F class Steam locomotive frame

7. Marcel van Eck showed us his diorama **11** he made from part of his previous layout especially the interiors of the buildings he had built.

After our business finished we had afternoon tea which was most welcomed and admired Ray's Wild Creek layout **12** and the new work he has done since our last meeting at his home.

We also checked out the swap meet items members wished to sell or give away. We all headed home after saying our thanks and goodbyes after a very pleasant afternoon of catching up with each other.



10 Peter Jackson showing plugs for recessed switches

[*Ed - Refer to page 27*]

11 Marcel van Eck showed us his diorama and building interior

Ken House has videoed Ray Brownbill's layout and those members who were unable to attend our meeting can view it on Youtube. We plan to do this for future meeting with the host's permission. Here is the link to Ken's channel: https://www.youtube.com/watch?v=TGsFRTI_rno

12 Ray, Casey, Michael and Neil. Photo taken by Ken House

Thank you to Michael Robinson and Ken House for taking the photos and video……M

Division 7

I have not received any report of Division 7 meetings having been held during the months of November & December…..M

Division 8

I have not received any report of Division 8 meetings having been held during the months of November & December…..M

Division 9

I have not received any report of Division 9 meetings having been held during the months of November & December…..M

Division 10

I have not received any report of Division 10 meetings having been held during the months of November & December…..M

What's in the Next Edition

- ***Belair:*** Modelling the prototype is always a challenge, but one which Malcome Jenkins is up to as he describes the methods he used in achieving his goal of modelling Belair Station, which is located in the Adelaide Hills.
- ***Is It Progress:*** Gerry Hopkins looks at the differences between DC & DCC and the advantages for realistic operation and having a great deal of fun with locomotives fitted with DCC Sound Decoders.
- ***D&D Red River:*** Dave Whibley is new to the hobby but has implemented some new and interesting alternative methods when building his new Layout.

And So Much More ……