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the

MainLine

magazine

the official journal of the

National Model Railroad Association Incorporated
Australasian Region

NMRA Inc - Australasian Region Directory

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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 up to 2MB in size.

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

NMRA Inc. - Australasian Region Directory

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New Articles

Regular Features

the Cover Photo

NSWR Steam Locomotive 3531, DCC equipped with sound, is hauling a load of sheep wagons headed downhill at D'Sprial and crossing the scratch built Howe Underslung Truss Deck Bridge, which crosses the K.A.P. canyon on Merv Bagnall's 'Braidwood Division' layout.

Editor's Comments

Well this is yet another bumper issue of MainLine, with 79 pages of reading material accompanied by close to 250 photos from members within our Australasian Region! Well done ladies and gentlemen for the reporting of activities within your Divisions and 100% Clubs over the last couple of months.

The question was asked in the last edition as to whether there was an interest in a Buy/ Sell/ Swap column in our MainLine magazine and I asked for some feedback from members. A very small number responded, which doesn't give me any confidence that it would be supported. Giving the subject a little more thought, I believe the right decision is that a bi-monthly magazine probably isn't the most appropriate medium to have such a column, considering the time lapse. As an alternative for those who are interested in selling some unwanted models, I would suggest utilising the 'Market Place' section on our web-site or to raise the subject at your next Divisional Meeting.

There is not a '*Feature Layout*' article in this edition, as I don't have such an article to include! We all know that there are many very nice layouts built by NMRA-AR members around Australia & New Zealand, but I also appreciate that not everyone can easily put pen to paper. One of our members (*thanks CP*) recently suggested that a way forward could be to ask within each Division, whether there are any retired English Teachers or Journalists amongst us, who enjoy writing and who could consider volunteering their time to be a '*Ghost Writer*', to write articles on behalf of our talented modellers, who may not have the necessary writing skills? Many professional model train magazines do this, so why not apply it to MainLine? Maybe this should be an agenda item to discuss further at your next Divisional meeting?

Although we don't have a *'Layout article*' to feature this month, we do have an excellent article from Arthur Hayes - MMR, titled '*Scratch Building in Styrene*'. This article starts on page 6 and will extend over two editions of MainLine. It will encourage even the novice scratch builder to have a go at building rolling stock or structures in styrene.

Malcome Jenkins enjoys scratch building freight wagons and he shows us what is on his work bench from page 17, in the second article in the '*What's On the Workbench*' series.

From page 29 we have the March & April reports from three 100% NMRA-AR Inc. clubs this month, the first club report is from Div 6 and is from the 'Adelaide Model Railroaders Inc', the second is from Div 2 and is from the 'Eurobodalla MRC', & the third is from Div 5 in NZ and their 100% NMRA club, is the City of Sails MRC. All clubs are very active and have provided some very good insight into their club's activities.

David O'Hearn has provided the 'Achievement Program Report' from page 43, where he recognises those members who have achieved an AP certificate during the last two months, including one MMR & one Grand MMR.

And don't forget to read the article on assembling O scale B.T.S. laser cut kits from the Grand MMR, commencing on page 19.

There are many pages of good reading about the activities that have occurred around the Divisions of the Australasian Region this month and those Divisional Reports commence on page 47…….. And if you are submitting reports, don't forget to check out the revised deadline dates on page 28. The revised dates are necessary to give me more time to meet my deadlines, as the magazine continues to grow. The dates will be adhered to, so that I have time away from the computer and can spend more time model railroading!……

Merv Bagnall

Editor - MainLine On-Line

Scratch Building in Styrene

Part 1

by Arthur Hayes - MMR

Why Scratch Build?

There will came a time in your model railway journey, when you will require an item of rollingstock or a structure that is not available over the counter in the hobby shop. Manufactures of kits and "Ready to Run" (RTR) items only produce big turn over items in order to recover their costs.

Station building built from photos. All structures were built using styrene

Scratch building can give you a large choice of items for your layout to the point where you can construct just about anything you need. Scratch building is not hard, look at the structures around your property, many small parts make one structure. Scratch building a wall from styrene only need to be one piece to make the whole wall, not board by board like many of the structures, which makes your model easier to build. If the side is not going to be in view, why add detail. Sometime down the track after a bit of practice you may like to go board by board to enhance your skills.

Plus, when completed it's your work, no one else has that item making it so special giving you so much satisfaction and sense of achievement, and as a bonus, you learnt some new skills. Once on the layout, it will surely be a talking point.

Materials like wood, brass etc. can also be used for scratch building your models. Today we are looking at using styrene.

What am I going to do with this Model? A couple of quick questions will help you decide how you will go about it.

Will it be a contest model? Will it be part of your AP journey? In other words, will someone be looking at your work to valuate it? If so, you will need to add all the bells and whistles found on the prototype. Yes, they will be looking for detail in your model.

Will it be a display model? Will all sides be viewed? If one side is out of view, why detail it!

Will it be an operational model? If so the wheels will need to turn and the model will need to function with other models and run on your layout.

Will the model be handled at lot? Fine detail may be broken off easily.

Wills, Slaters, Brawa embossed styrene sheet

What makes a good Model:- For guidance I will take a quick look at the Achievement Program (AP's).

Construction. Consider joints, alignment, attachment of parts, glue marks, etc.

Detail. Refinement of the model, detailing, gutters and down pipers, brake gear etc.

Conformity. Does it look like the prototype or fit with prototype practices at the time?

Finish. General appearance and application of paint, decals, weathering etc.

Styrene - What is it:- In one word, it's a PLASTIC type material. Real name is Polystyrene which is a by-product of the petrol refining process. You may find there are differences in some materials.

Advantages:- Easy to use, no special tools or skills required. Scope of what can be achieved, Availability, Detail that can be added, can be drilled and tapped for a thread, filed to shape, can be curved for roofs etc. Cost!

Disadvantages:- Light, can warp, doesn't like heat.

What's Available:- In the early days there was only plain sheets available, but today the sky is the limit. Sheets, .005 thou to .060 thou. Mainly white (Gloss or Satin), other colours are available in smaller sizes. Sheets are available for manufactures at the fraction of the price than that of the smaller sheets in hobby shops. A

1220 x 2440 x .5 mm sheet from Mulford Plastics, Archerfield, cost $15.50 (April 2021). This may sound good, the sheet needs to cut up into useable sizes and for storage. If you are like me, there is a good chance when

cutting such a large size, the strips will not be square resulting in some lost. Larger thickness over .060 thou can be found if required.

Many Hobby Shops stock easy to handle size styrene in sheet, scribe and embossed sheets (generally one side only), strips, angles, beams, channels, columns, tees, tube, rod etc. Look for the following brand names, Evergreen, A.M.R.I., Slaters, Plastruct (make sure it is styrene, they also make ABS products (grey in colour) that require different solvents).

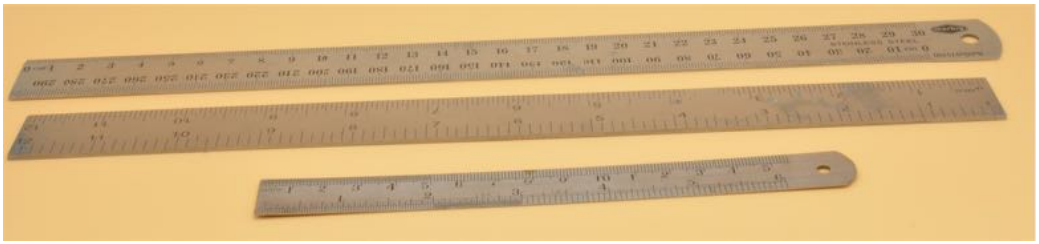
Detailing metal and plastic items can be purchased for adding detail to your model. Tichy Train Group and Grandt Line produce windows, doors, nuts, bolts, washers in various sizes, rings, rollingstock parts. Some brand names that could still be around with detailing parts are, Cal-Scale, Detail Associates, Campbells.

Many of these parts are interchangeable regardless of prototype modelled. I look at all prototypes and scales, it is surprising what opportunities will come your way.

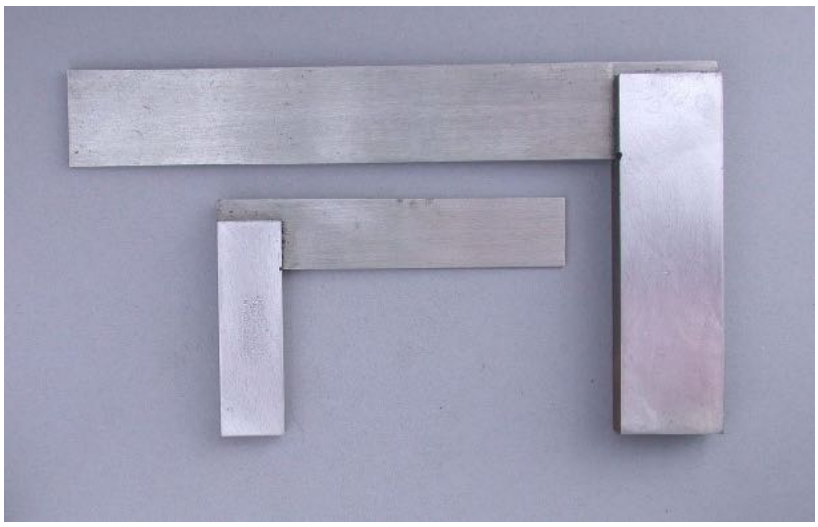
Tools:- At the start no special tools are required, as you develop your skills you may find some specialist tools may help to improve production and reduce time required on the project.

Cutting Tool; Use what you are comfortable with. X-acto blade, scalpel, single edge razor blade, Stanley knife. (Must be kept sharp). Styrene will blunt cutting edges quickly, change your blades regularly to maintain a good clean cut.

Straight Edge;



A steel ruler is OK for most applications. I find the thicker ones are better than the thinner rules. Less chance of the blade coming over the top and into your fingers tips.



Square; Small engineers / machine square are gold. Solid and easy to handle. Micro-Mark sell a thin bladed square that is great for working with styrene. Some squares the base blade finish off at 45° angle, this can be handy for marking that angle. However, if using this type of square for cutting strip ends square, be mindful that the strip is not supported along the bottom blade of the square as much as the engineer square.

Marker; Mechanical pencils with 0.5 mm leads are great. Refills are available in various grades, 2B/HB etc. Artline 220 super fine (0.20 tip felt Sharpie) work well to, lines can smear when first done. Remember to remove line marking before painting, they can show up through the paint.

Cutting Mat; Self-healing mats are great, they help keep a cutting edge longer and protect your modelling table. Shop about, they can cost an arm and leg, try the craft section of the cheap shops, they also have various colours.

Finishing tools; Jeweller's files or something similar to square up the cut for a good joint are handy. Nail Care sets or filing cards generally have different size grit on each side. Various grades of wet & dry paper can be used. Cut into strips it can be glued to a piece of timber and used like a file. The wet & dry can also be used just flat on the work mat.

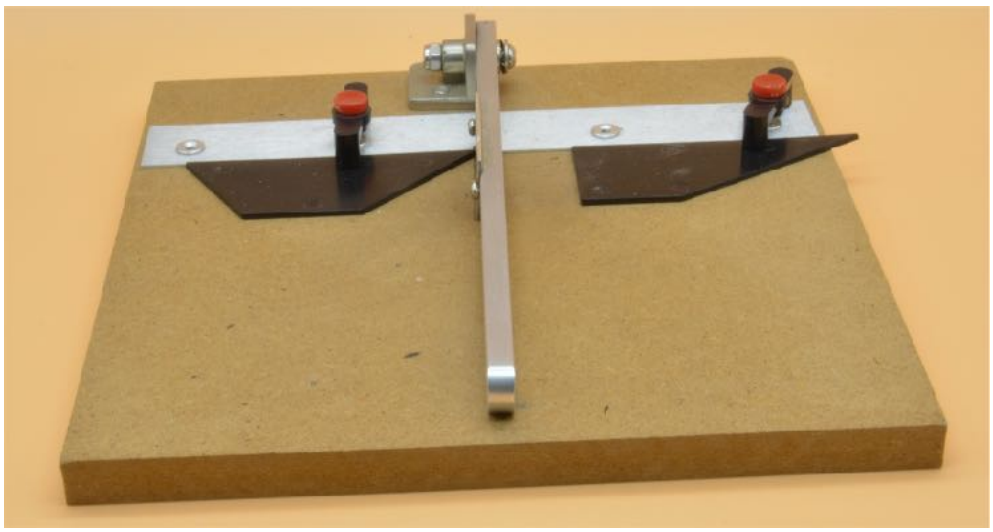
Tweezers; A couple of small tweezers are great for adding detail.

Measuring tools; A steel ruler is OK. I find a good pair of Verier Callipers are gold, just remember to use the locking screw. Scale rulers are available in various scales.

Drills; A set of small drills, a pin vice and threading taps if making rollingstock to fit bogies/couplings. Imperial, metric and number drills are available in sets. Different parts of the world use different measures. It's taken time, but I use metric these days.

Other tools; As you advance and grow in the hobby there are plenty of *"nice to have"* tools.

Chopper Boards: They are useful for cutting large numbers of the same length material. A similar tool can be made in your workshop at a small cost.



Micro-mark Chopper with angle plates.

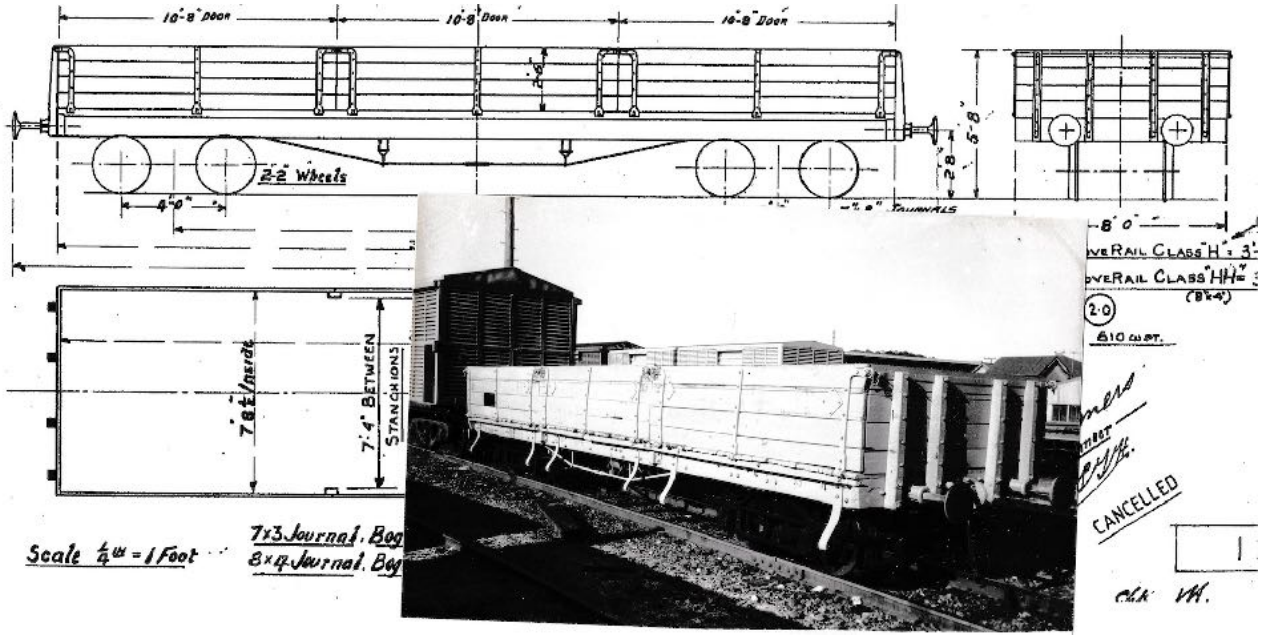
"P" cutter. A tool used to cut Laminex, cuts a "V" grove and can be used instead of a cutting blade.

Sanding Tool. Assist with sanding and creating angles.

X-acto saw and mitre box.

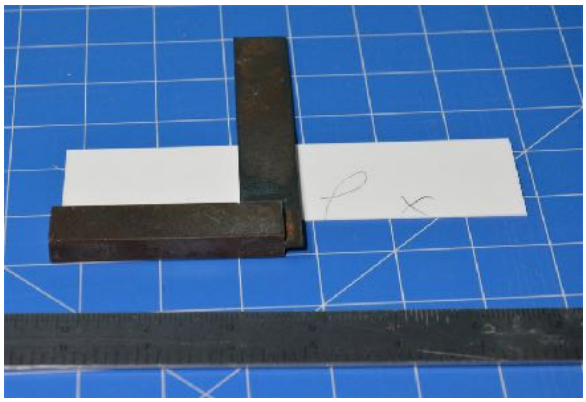
Application:- Most models are a number of boxes with bits and pieces added to give that special character. Modelling in styrene make that much easier to do. Be patient and have a positive attitude, until you try something you will have no idea what can be achieve. The more you do, the better you become. Don't be afraid to learn by your mistakes. I think you will be surprised at what you can achieve. Start with a small project.

Plans/Photos:- This is the starting point to constructing anything. Plans don't need to be all that great, as long as you have the basic measurements. Photos of the item you are

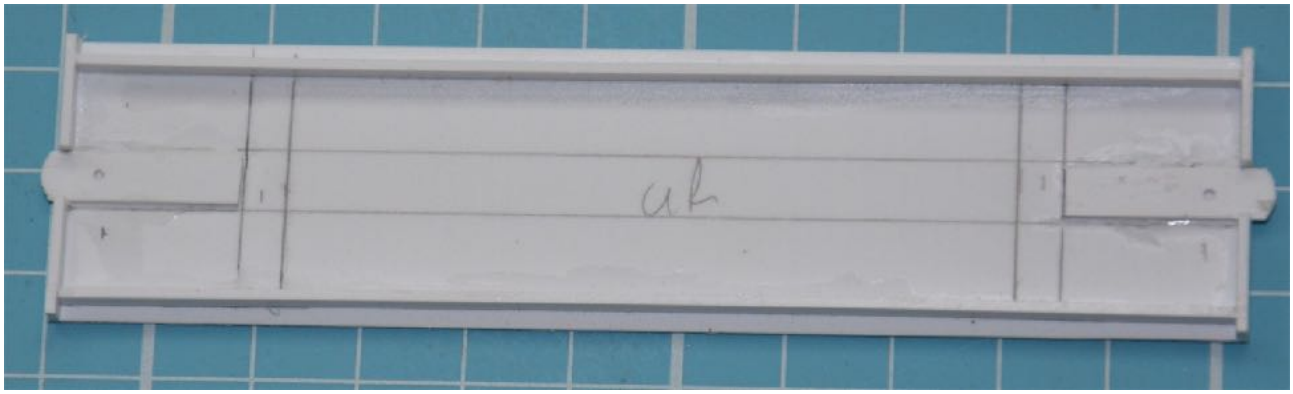


building in the era you want are gold. You may even notice a difference between the plan and the photos in some cases.

Marking out:- As much as possible, make out on the inside or underside of your model. Some marking may show up through light coloured paint. Stop for a minute and think about what you are hoping to achieve. Plan how you might go about it. It's hard to draw a line square from a side after attaching components to that side.

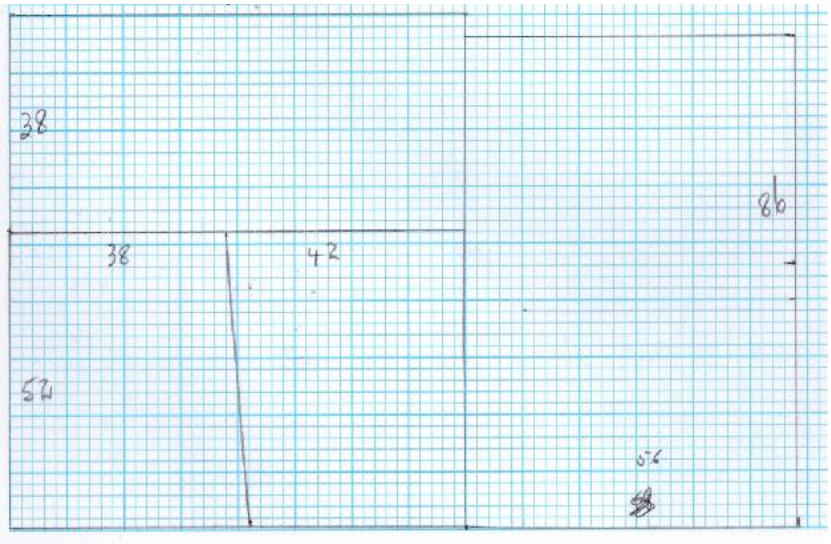


Start with a straight edge to work off, use a square on that straight edge for square corners. Mark that straight edge, just a small cross will do, if the phone rings, when you come back an hour later you will know where you are at.



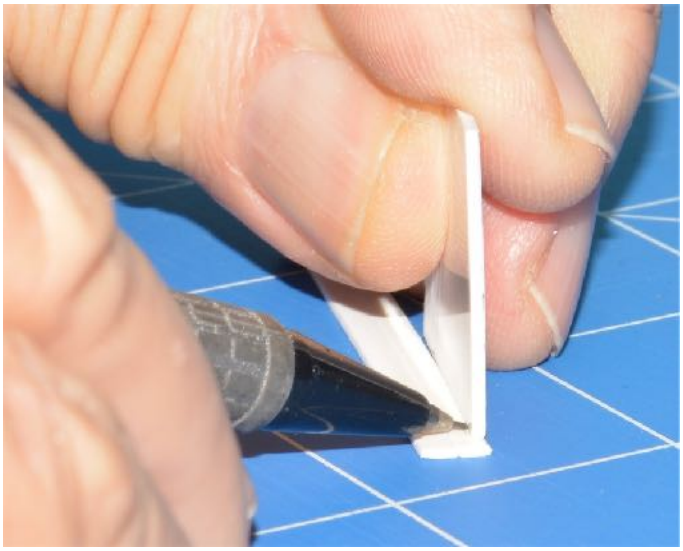
Underside of a wagon floor. Markings for sole-bars along the side, bolsters for mounting bogies, centre for couplings

It's also worth thinking about how best to cut the various components from the sheet of material. You could end up using less material by drawing it up on some graph paper. A4 Graph Pad with 2 mm squares is available from Officeworks. Scale plans are great for checking you have marked out the correct size.



Farm Shed; Two ends, back and roof.

When mounting bogies/coupling and the centre is required, measure across the body, divide it by two, set the Callipers .5 of mm less, measure and mark from both sides. The small gap between the two marks will give the centre.



A small strip of styrene of the required size makes marking small measurements easy.

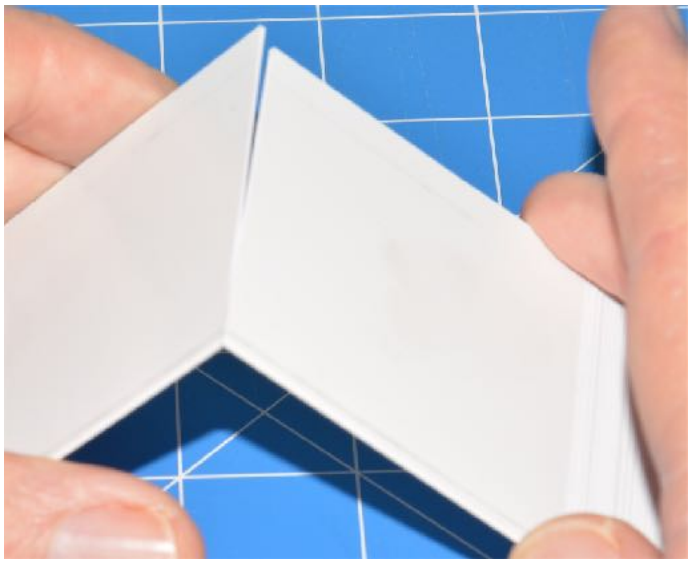
Strip styrene can be used in a similar way.

Measure twice and cut once is a good rule that can save you time and money. If cutting out a length of material to go between two other pieces, cut over length and file back to size, make a snug fit without forcing.

Cutting:- Mark out what you require using a pencil/sharpie. Sometimes the material may be turned for cutting for a stronger grip or comfortable position. If you do, think about how you made that mark, which side of the line do you need to cut on to achieve the correct size needed. Maybe, mark the waste side to save mistakes. Set up the job so you are comfortable and there is no need to over reach or reach across your body. To ensure you don't run the cutting blade into yourself, pull so the blade stroke runs away from your body to one side or across in front of you.

Use a steel straight edge for a cutting tool, make sure your fingers are not over handing the cutting edge. Anti-slip material can be added to cutting guide to give better grip and assist with accidental movement during the cut.

Make a number of <u>light</u> cutting strokes to score a grove into the sheet.



Bend the sheet along the grove and the material will snap along the grove. A light sanding along the cut edge will square up the edge ready for jointing.

Take care with sanding, it can be very easy to round the corners.

Ordinary twist drills can be used to drill holes in styrene, using a pin vice is best. Centre punching the location will make sure your drill will start where you want the hole. Power tools used on a high speed setting will melt the styrene, slow speeds are required.

Joining Parts:- There are many solvents available to use on styrene. The two part are held together, using a small brush or an applicator, apply a small amount of solvent along the join. Capillary action will draw the solvent into the joint. The solvent reacts with the styrene, welding the two pieces together. Always do this in a **<u>well ventilated area</u>**, I suggest you read a MSDS sheet on the product you are using so you develop an understanding of what you are playing with. Most, if not all solvents are **HIGHLY FLAMMABLE** and are **TOXIC**. I use a fan and have the bottle of solvent on the downwind side of me. Some may like to wear a mask, once again do your research, it needs to be fit for purpose.

When joining two pieces together, as much as possible try and place one on the top of the other ***(Photo 23)*** more so than to the side ***(Photo 24)***. Solvent will flow through the joint, if one piece is on the side of another, the solvent will flow through the joint and onto the back of the piece sitting on your work mat. There is a good chance your work mat will be embossed onto your new model. For some applications you will find that it is not possible, go easy on the solvent if jointing materials in this fashion. Keep your fingers clear to, if solvent comes into contact with your finger on the styrene, it will leave

Photo 23 - Preferred joint

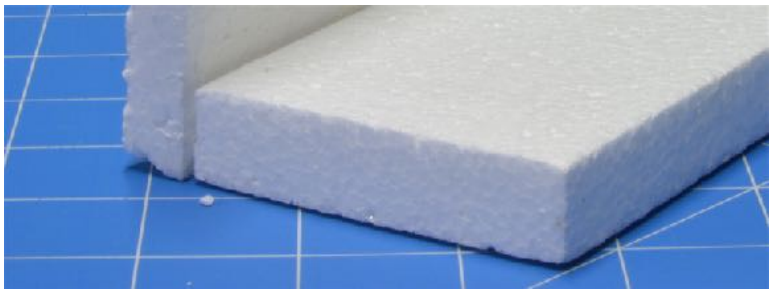


Photo 24 - Avoid this type of joint if possible

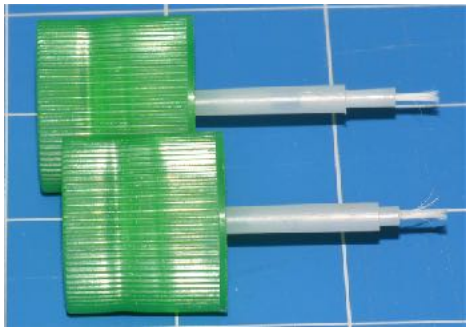
your finger prints on the side of your new structure. As much as possible, apply the solvent to the inside of your model.

For some jobs, a jig made from wood, brass, or styrene is worth a pot of gold to hold pieces in the required position. Blocks of wood or steel are great for holding parts up for gluing. Jigs can be purchased for setting your corners square.

Solvents:- Not all solvents are the same. For many years I used **M. E. K.** (Methyl–Ethyl-Ketone).

It has a very strong odour, everyone in the house knows you have the top off the bottle, I'm aware of a modeller poisoning himself with excess use. The product sets quickly. It's available in bulk from Paint Supply store. Most plastic solvents have it as part of their contents.

Solvent available in Hobby Shop vary considerable and most are different in some way. Some are made by companies who manufacture kits. Often the styrene in injected moulded kits can be a different material and their solvent is produced to work on their product. Recently I modified a kit by adding a different cab, the solvent I used for styrene sheet didn't work on the kit. Some time ago I was using a kit manufacture solvent on sheet styrene and over time the model became twisted and wrapped, maybe I used excess solvent adding detail. Solvents have various properties, thick to extra thin cement. The size of the bottle can also vary from short squat square to taller round bottles. I find the taller bottle are easier to knock over and the brush in the cap is longer making it awkward to use.



Some of the brushes in the cap came be extended as the level of the solvent become lower in the bottle. The size of the brush can vary from product to product.

Excess solvent can distort the styrene, only small amounts are required to fix parts.

Some brand names include Tamiya, SMS, Mr. Cement, and Revell. The Revell bottle has a capped fine tube which I found kept on blocking. Some manufactures make a quick setting solvent.

A holder can be made to assist in keeping bottles of fluid upright from accidental knock overs. A block of wood with a hole drilled in to fit the bottle is quick and easy and could save you a mess to clean up, not to mention the odour waffling around your work table for the next hour or so.

This one is made from an old stamp pad.

I keep my used empty bottles to decant full bottle into so when you leave the cap off you don't lose the whole lot. Plus, it helps to reduce the amount of solvent going onto the brush.

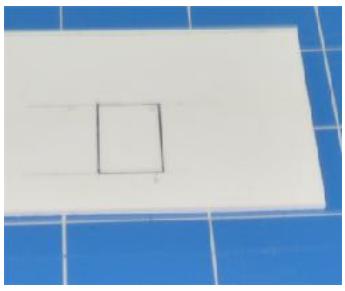
Beware, if using Plastruct components, check the material type, they also make shapes in ABS (grey) and that requires a different solvent.

Goo:- Styrene off cuts can be placed into a bottle with solvent to form a paste (goo) for filling gaps, adding strength to joints etc. Apply to the inside of your model. The more solvent, thinner the goo will be, play around to make the consistency you need. Of late I have using this to add rivets to rollingstock. Shake the bottle, remove the top, dip a pin or small object into the goo in the cap and convey the goo to the location that requires the rivet. The small drop of goo on the pin can do four or five rivets with practice. The method is quicker than cut out and adding rivet decals. Mostly, I use a small length of 8 thou brass rod, the goo will build up on the end and will need cleaning off as you go. Goo in the cap will dry quickly, this too will need to be cleaned out with paper towel from time to time.

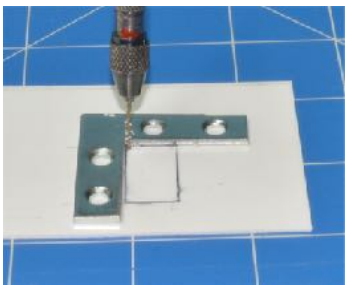
Acrylic paint can be added to the goo to help show up your work, otherwise it is white on white and is harder to see what you are doing.

Putty:- I mainly use putty for bogging up poor joints on resin kits, however it can also be used when modelling in styrene. Many manufactures produce putty in various sizes and colour, some popular names you could see in hobby shops include Tamiya, Testors, Vallejo and Miliput. Most putties do shrink a little and may require a number of applications.

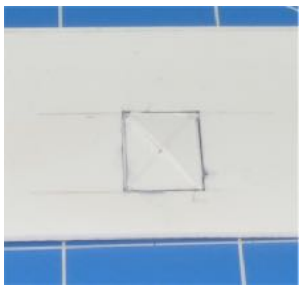
Windows/Doors:- As indicated in the intro, various manufactures make windows and doors. The range is huge and a lot of time came be saved by using them. Mark them out before assembling the sides on the inside, use a square, otherwise they may not look right. Measure the back of the window for the size of the hole required. Mark it out where the widow is required. Drill a small hole in each corner, I use a corner bracket to position the drill in the corner. The hole helps not to overrun with the cut, it acts as a stop. Diagonal cuts can assist in popping the unwanted material out. Use a file to square up the cut, insert the window frame to complete the job. Window frames can be scratch built using styrene strip. You may find in different parts of the world, framing of windows can vary considerably.



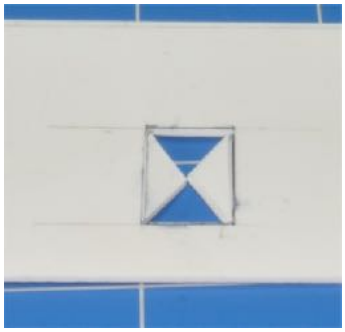
Windows /doors, - Step 1



Step 2



Step 3



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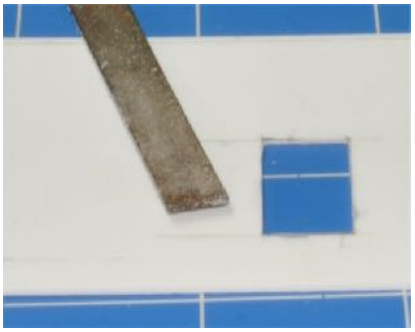

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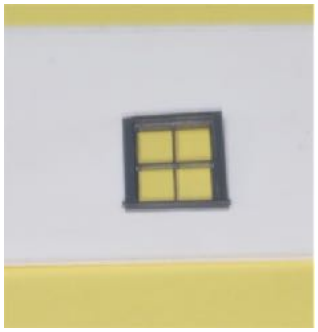


Step 6

Ed; - Part 2 of this excellent Article by Arthur Hayes - MMR, will conclude in the next edition of MainLine, being the July / August 2022 edition. .....

What's on the Workbench

By Malcolm Jenkins

In response to Arthur Hayes - MMR article on "What's on the Workbench", I looked at my workbench and thought that for once there may be something of interest. Certainly a major production run is underway, reflecting, I suppose, my true passion, which is building rolling stock.

For my Belair layout, I am building a fleet of SA grain hoppers of the SHBX/AHGX type with a couple of the longer, four-bay AHHH hoppers. Years ago, I made a fleet by chopping down some Bachmann hoppers, making a pretty good representation except for the hopper bottoms, which were completely different from the distinctive SAR style, so I decided to upgrade using 3D printed bodies and custom etched walkways.

The first photo shows the overall view of the bench, dominated by the hoppers, but also showing the typical blend of semi-completed projects that crowd the space – including

General view of workbench showing usual chaos, multiple projects underway including the fleet of grain hoppers

an attempt at repairing what I hope is the very last of the lightning damage from 2020 to my turntable drive electronics, plus several steam locomotive projects at the conceptual design stage. The collection of hopper bodies can be seen, with all but one fitted with the walkways and a couple of the longer AHHH version which suffered a painting disaster in the spray booth. The moral of that story is: don't mix up your thinners – use the type recommended by the brand of paint.

The AHGX bodies were printed by Shapeways, while the larger two were printed on a resin printer by a friend and fellow-modeller in South Australia. I drew up the walkways and had them etched by PPD in Scotland. The wagons are completed with MicroTrains bogies, which are painted to suit the particular colour scheme of the wagons – I get to enjoy at least three because I model the period (mid-1980s) of the SAR/ANR/AN transitions. Then the final touch will be the ladders to the walkways, which cannot be fitted until after the bogies: to push in the bogie pivot pins it is necessary to lie the wagons on their roof to resist the force to push in the pins. All wagons are weighted to the full NMRA recommendation with two 7 gm weights in each, three in the longer hoppers.

A rake of AHGX hoppers at Caltowie in 1991

They will be detailed with custom decals drawn up by me and printed by Ted Freeman in Toowoomba.

Photos 2 & 3 show the prototype, photographed during a visit to SA in 1991.

These photos plus the SAR line drawing were used to develop the 3D model... ……..

Close-up of wagon ends, used for modelling purposes

Constructing the B.T.S Complex

by Paul Morrant - MMR

Some time in Oct. 2013 David Howarth rang and invited me to come and have a look at his newly constructed '*shed*' that was to house his dream layout, the 'New York Central'. The train room, with crew room & workshops etc is approximately 75 x 55 feet and is the size of approximately 6 car garages.

On the tour David showed me a rather large stack of boxes which contained craftsman kits by B.T.S. I have long admired the McCabe Sawmill kits by B.T.S. which are one by one magnificent kits, but placed together in a complex scene they really are fantastic.

The sheer size of the area needed to display the finished sawmill complex puts it out of reach *(area wise)* of the average modellers space, as the approximate area needed in O scale is 11 feet x 6 feet. Over a cup of tea the construction of the B.T.S. kits was talked about and after much careful thought and weighing up all the pros and cons, (*approximately 10 seconds*), I offered my help which David accepted and gave me the Small Office Building for starters.

He liked the finished Office Building (*phew*) other kits followed, and to date I have put together:- The office :- Power House :- Transfer Shed :- Sawmill :- Planing Shed :- a large Tramway with series of drying racks :- and the Log Unloader. There is still a substantial amount of kits to be constructed and I am looking forward to putting them all together and placing them in their final positions and then doing the most enjoyable part of the project, being the landscaping.

The Saw Mill main building is a real whopper of a kit comprising of approximately 2,000 pieces with the log chute to carry logs from the log pond to the saws.

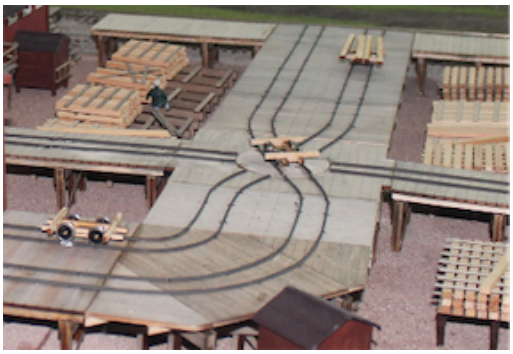
The kit builder made no provision to view all the interior detail. David (the owner) did not want a wall missing on a permanent basis so I had to do a little kit bashing to make the wall removable and add a couple of cover strips to hide the gap needed to remove the wall

section. The next thing to address was some lighting, having plenty of floor joists supporting the upstairs Filers room I had little trouble finding places to put small strips of LED's with very fine magnet wire for power. Several outside warehouse style lights were installed at points at building corners, over doorways and landings.

The Saw Filers room is situated directly above the main floor with chain hoists to lift the heavy band saw blade and large size circular saw blades up to be sharpened. A considerable amount of detail bits are on this floor with tables, rollers, racks, chain blocks, lifting slings, chain, band saw and circular saw blades.

The planning shed was the next part of the process. Dried timber was moved to the planning shed for the final dressing and sizing of the timber prior to going to market. The large shed doors were constructed from scribed basswood with metal hinges for effect.

The Tramway and Turntable is a very important part of the complex in as much as it connects most of the buildings with the aid of the turntable. Starting with the main sawmill, the yard, the drying kiln, planning shed and the transfer shed for loading timber onto the waiting rail cars to go to market. A problem arose when I was transporting the tramway module down to David's place. On arrival, to my horror the whole thing had buckled due to the heat of the car.



Thankfully I was able to rectify it by giving it a light spray of water placing it on a flat surface and applying some heavy weights, I then left it to dry. The problem was the kit builder had cut the support legs across the grain instead of with the grain which in the plastic container the heat built up and warpage occurred.

The Log Pond as the name suggests is the storage area for the logs before being taken to the log chute and the saws in the mill. To add effect "the water" is a clear resin material. This log pond also had a floating pump house which could be used in case of fire, an ever present danger in the sawmill industry. There was also a mobile crane on rail tracks which was used to unload the logs when they arrived by rail. A spillway at the end of the pond controlled the water level.

The Church was a special project for me and was something I was really looking forward to constructing. To my dismay when I opened the box containing the parts for the building the first thing I noticed was the green colour sheets of paper. I soon discovered these were for the roof material and were meant to simulate the patina of a copper roof. I thought the kit deserved better so I purchased some thin gauge copper sheet made a jig to put some ribs in the sheet for strength. I then had to come up with some way of getting the copper roof with a patina (*years and years to occur naturally*). I looked up Doc. Google and found several formulas using a mixture of mainly garden fertilizers which I experimented with and got a fair quality finish after about a week. (**See note#1)**

The next thing was some lead-light windows with a religious theme once again Doc. Google came to my rescue. I found and resized to my needs on Word and printed them on the thinnest paper I had and thinned them further by sand papering the back side of them, put them on the window "glass" to great effect. (**See Note#2**)

I installed some strip LEDs and I had a model with a nice couple of details.

NOTE # 1 As construction of these models was some years ago I have since found a much simpler and better result to patina copper sheet, **BUT A WORD OF CAUTION,** use eye ,face, gloves, breathing mask protection prior to using this procedure.

First clean the copper with fine steel wool then a liberal coat of **MURIATIC ACID (this acid can be very harmful)** and cover it with garden soil while the acid is still wet and in 24/48 hrs a very nice patina will form. What I cannot tell you is if the P.H. level of the soil has a bearing on the outcome.

NOTE # 2 Since construction, I now go with the same procedure except the print stage. Now I print on **WHITE DECAL PAPER (**available on ebay) in place of the thin print paper. With inkjet prints you must seal the decal sheets after printing prior to placing them in water.

The Power house and Water Tower go hand in hand. The power house was the building the whole complex relied on to keep things running , a nice structure with its twin smoke stacks and with the water tower on its timber trestle it is a pleasing structure. I used combination of plastic tubing and wire guy ropes for the smoke stacks. The water tower featured a nice trestle with the timber that was supplied in the kit.

The B.T.S. Kits are a real joy to construct. The odd filing of a joint was all that was necessary to fit pieces together. Super Glue Gel is my first choice of adhesives except when I need a little more time to position some of the bigger parts, I then use p.v.a. glue.

Painting was done with a good quality artists brush and acrylic paints thinned with approximately 40% water and given four coats allowing time to dry between coats. (I *have never quite mastered the air brush*). The paint was purchased from Bunnings, tinted to your requirements in sample pots at a fraction of the cost of hobby paints, (*250 ml $5 to $6*).

The kit sizes varies from a few hundred pieces (the Office) to 1250 (the Power House) to the

Sawmill kit a real monster with 2000 separate pieces in the building and over 1000 pieces going to make up the interior detail with Band Saws, Table Saws, Docking Saws, Thicknesses, Roller tables/benches etc, making up a real gem of a kit.

My only negative comment on the whole series of kits is the lack of any working lights. I had to spend a considerable amount of time sorting out where and how to install lighting. I was mainly a scratch builder prior to this project and I would like to think this project has made me a more experienced modeller, a huge difference between the Run Down Barn/

Stables to Laser Cut craftsman kits by B.T.S. and I thank David for the opportunity.....

DCC & Sound for a Tenshodo Loco

By Graeme Prideaux

The photo depicts HO scale Great Northern Railway (GNR) Q1 class 2109 a Baldwin 2-10-2 awaiting coupling to its train at Yallambee Road on the Wayne sub division of the Queensland NMRA modular layout during an operating session in June 2021.

The model is the pride and joy of long standing member Bob Cuffe. The unit was manufactured in brass around 1967 by Tenshodo of Japan. Only 160 of this type were ever produced, originally selling for US $110. Today the notional estimated value is in excess of US $600 for a unit in fair condition. At some stage this example of GNR 2109 was damaged. It was restored and painted in the glacier green livery by the late Col Barnett.

Bob has added super details like bell cords, safety chains, air lines, cab backhead and footplate, and steam lines on the tender. Originally representing an oil burner, this 2109 was converted to coal fuelling and now also has an ash pan and hopper. The next project for Bob is to include the stoker firing equipment.

The engine is operated on DCC and has a LED in the front headlight and a LED flicker in the firebox. The Tsunami heavy steam sound system compliments the sight of 2109 and features bells, air pumps, safety (pop) valves, brake squeal if stopped quickly, and whistle sounds including two pops for forward and three for reverse.

Bob's GNR 2109 2-10-2 is a lovely model and looks and sounds great.

The prototype 2109 emerged from the Baldwin Locomotive Works in 1923. According to "The Great Northern Railway" by Charles Woods (1989), the thirty Q1 2-10-2s were good looking engines and well liked by their crews. They were rated at 76,000 pounds of tractive effort and were notorious "rail pounders", spending most of their working life dragging freight at 25 to 35 mph up and down the hills and around the curves in the mountains of the Butte, Kalispell and Cascade Divisions. The GNR Q1 fleet was worn out by the early 1950s and were replaced by new diesel electric power. .....

Trestle Over Marsh's Swamp

By Marcel van Eck

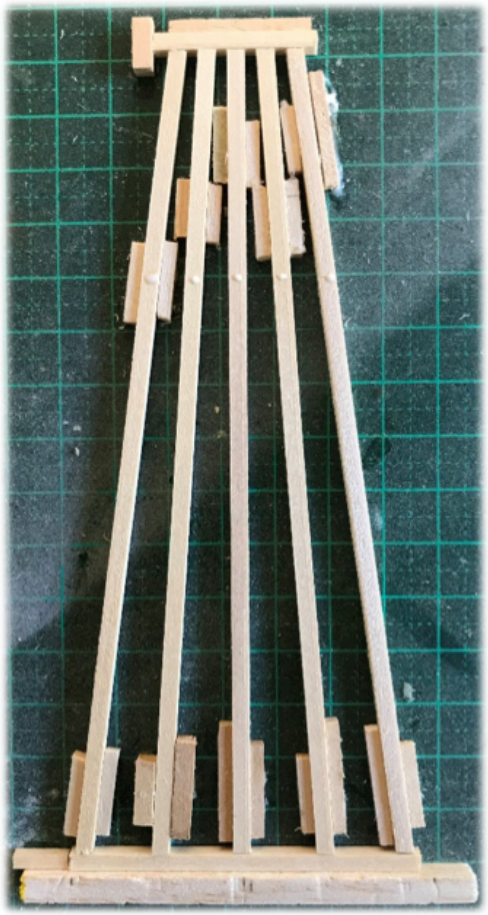
The Story Begins

Marsh's Swamp (yet-to-be-completed) forms a significant physical barrier to the operation of the Muzzby Summwair Narrow Gauge Railway (MSNGR). To cross the swamp, a wooden frame trestle bridge is under construction with a span of around 60 scale metres (or 200 feet, in old money). The basic trestle (sans concrete footing and track support timbers) is stands around 13.5 metres (44') high.

Kalmbach's 1992 publication "Model Railroad Bridges and Trestles" has an informative chapter on wooden pile and frame trestles. I took my cues from the frame trestle diagrams with some hope of a believable outcome.

The materials, tools, and construction steps below, outline the methods and measurements I used. Your own materials, methods and measurements may differ, depending on your requirements.

A partially completed trestle is shown opposite. The use of a jig is definitely not new, but one as daggy as mine probably is!



A 40 Minute Project?

Construction Materials:

- Northeastern 10" square scale timber
- Northeastern 8" x 4" scale timber
- Northeastern timber scrap pieces for jig

Tools Used:

- Kalmbach Publications "Bridges and Trestles" (1992)
- An old cutting board with a centimetre grid
- A very sharp blade with handle
- 600 grit sandpaper
- Selleys Quick Set Aquadhere wood glue
- Helmar Tacky glue for jig pieces
- Pin (to apply wood glue)

Construction Method

1. I lied about the time (at least for the first frame)!

2. Since 14 full-height frames would be needed to build the bridge, a jig had to be made. Each trestle is composed of five 'uprights' (one vertical and four angled), and a top and bottom plate (both horizontal). All seven pieces are scale 10" sqaure timbers. The top plate is 30mm long and the bottom plate 65mm.

3.I used the cutting mat's grid to set the base jig piece with tacky glue (yes, directly onto the cutting mat). Then, using the central vertical upright (146.5mm) and the two horizontals, I set the top jig piece. Unfortunately, this takes some planning. Apparently it helps to know the height of your trestle, and also how far to spread the angled uprights against the upper and lower plates.

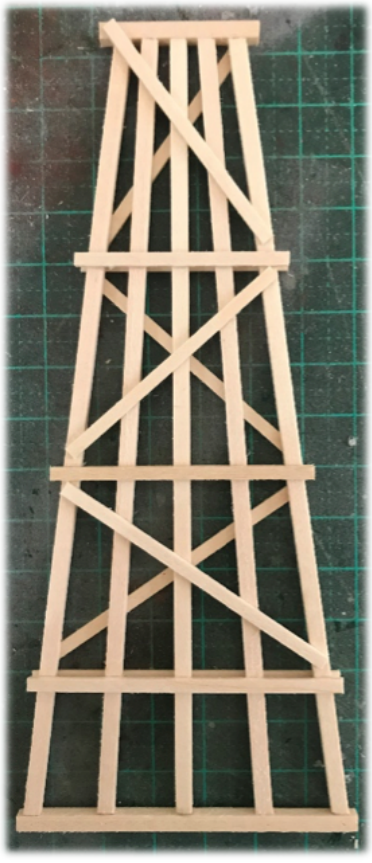
4.The vertical upright was aligned along a cutting mat grid line and centred on the upper and lower plates. The jig pieces were glued in place near the top and bottom of the upright.

5.With the upper and lower plates and the vertical upright still in place, each of the angled uprights was prepared individualy. The top of each was bevelled very slightly with a sharp blade to provide a neat fit against the upper plate. The angled upright was then held in its correct position and cut to size. With some minor trimming, the angled upright will fit neatly and snuggly against the lower plate. The jig pieces were glued in place one set at a time. Jig constuction took around 25 minutes, including the cutting of the trestle timbers.

6.With the jig in place, the process to construct the trestle will take around 30 to 40 minutes. This includes sanding each strip of timber with 600 grit paper before the varous pieces are cut.

7.Again, I start with the upper and lower plates, followed by the central vertical upright and the angled uprights. Each is cut by hand with the relevant bevels "eye-balled".

8.Each side of the trestle has three 8" x 4" horizontal braces. These are also hand-cut (30, 40 and 50mm long) and aligned with the cutting mat grid. I chose to have the horizontals aligned on a 10mm grid line. A small drop of Quick Set Aquadhere on each upright is sufficient. Don't forget to remove any excess glue before it dries.



9.There are also three diagonal braces on each side. Again, these were hand-cut such that they left sufficient clearance for the longitudinal bridge supports that will rest on the horizontal supports.

10.Once the glue has dried, the upper and lower plates are removed so that glue can be applied at the appropriate locations to secure the relevant uprights. Slide the plates vertically into position. You may wish to do this step as you systematically set the uprights by applying the glue to the uprights rather than the plates.

11. When the glue dries, remove the frame from the jig and as shown opposite and add the horizontals and diagonals to the other side of the frame.

12.Job done!

Beyond 40 Minutes

To add a hint of realism to each frame I decided to add nut-bolt-washer castings. Perhaps I should have counted the required numbers of NBWs first! How many did you say? 100! Another hour…….

Added Details:

- Grandt Line "small" Nut-Bolt-Washer (NBW) castings (Part No. 5066)
- Grandt Line "large" NBW castings (Part No. 5096)

Tools Used:

- Pin vice and drill bits for NBW castings
- Square-ended tweezers
- Tacky glue for NBW castings
- Lots and lots of patience

1.Start wherever you want, but be systematic. Using the "small" NBWs I chose to start on the uppermost diagonal brace and then onto the horizontal brace. Don't forget to place NBWs directly onto the angled uprights on the reverse side of the angled braces.

2.Each NBW site was pierced with a thick needle to provide a starting point for the pin vice bit. You only need to drill down 2mm maximum.

3.Using a scalpel blade, I cut only as many NBWs as I needed for the uppermost diagonal brace. By cutting off more NBWs you risk playing hide and seek with these sub-microscopic critters. HINT: Cutting off the NBWs on a piece of white card (*shown above*) helps to keep a visual track of the few you cut. You can easily rotate the card to a convenient position to pick them up with your tweezers.

4.One by one, the stems of the NBWs were dipped in tacky glue and placed into the drill holes. Any excess glue was wiped away.

5.An angled NBW was placed near the foot of each upright to simulate a connection to the lower plate.

6.Four "large" NBWs were positioned onto the lower plate to suggest connection to the trestle's concrete footing. Three were placed on the upper plate.

7.One down, 13 to go!

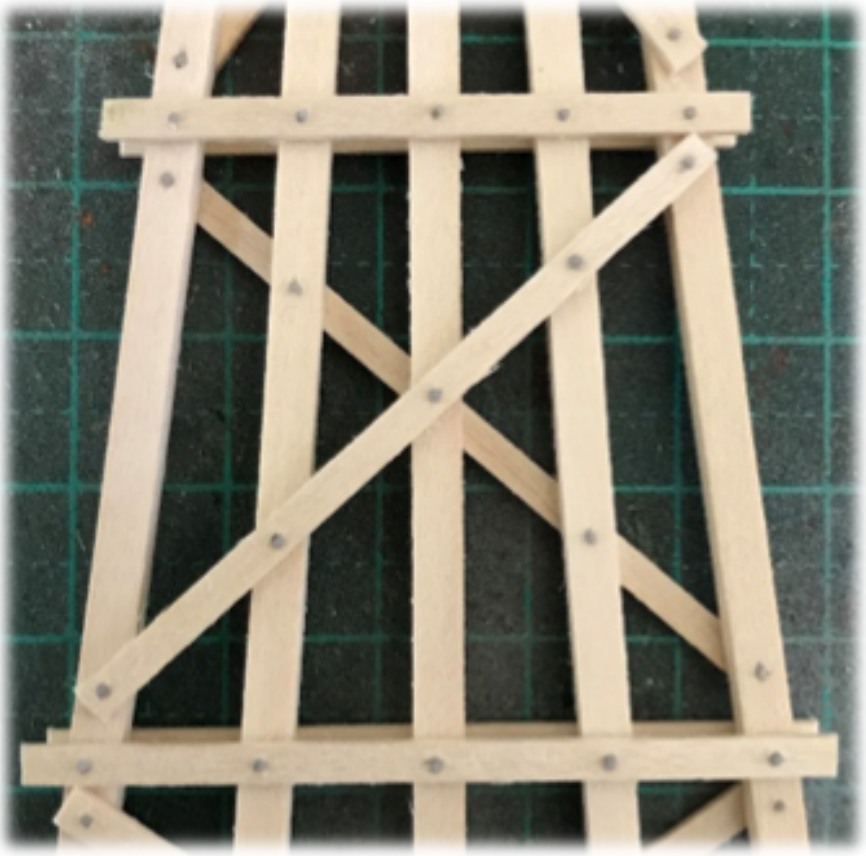
Hindsight (or, lack of planning):

1.Pre-paint the timbers after sanding and before cutting

2.Pre-paint the NBW

3.Drill holes for the angled NBWs near the foot of each upright before the lower plate is glued.

Add the large NBW castings to the lower plate before gluing it to the uprights; or at least drill the holes for the NBWs before gluing. .....



Magazine Publishing Deadline Dates

If any member wishes to submit **An Article** for publication in MainLine, your article may be submitted at any time and it will be included in a future edition, where the subject matter will allow for a balanced number of differing subjects to be included, and where the number of available articles will allow for that to occur.

If you are providing any type of report, then **All Report Types** can be submitted at any time with a deadline date being as shown below, which is 10 days prior to the end of the month of publication.
This criteria is requested to ensure that the editor has sufficient time to complete the bi-monthly edition of MainLine in the required time frame.

If you are providing a **Divisional Meeting Report**, please submit your report as soon as possible after each monthly meeting, with the deadline date being as shown in All Report Types below. If your meeting is scheduled after the deadline date, then the cut off date is three days prior to the end of the month as shown.
This criteria is requested to ensure that the editor has sufficient time to complete the bi-monthly edition of MainLine in the required time frame.

File Types:- For all submissions, text files saved as MSWord, Pages or Open Office files are preferred with limited text and page formatting. Please don't send pdf files, they are unsuitable for use in this publication.

Photo Types:- For all submissions, photographs are preferred as jpegs or png file types and to be under 2MB in size. Should you prefer to send larger photo files, then please consider sending them via Dropbox or Google drive or a similar 'Cloud' storage program, or alternatively send a disk or flash drive via a postal service.

The following are the deadline dates for the next two editions of MainLine;-

July / August 2022

Deadline date for All Reports Types = 20th June, 2022
Date for Reports of Div Meetings that occur after the Deadline date = 27th June, 2022
Publish Date on Web = < 5th July, 2022

September / October 2022

Deadline date for All Reports Types = 21st August, 2022
Date for Reports of Div Meetings that occur after the Deadline date = 28th August, 2022
Publish Date on Web = < 5th September, 2022

100% NMRA Inc.-AR Club News

Adelaide Model Railroaders Inc.

A 100% NMRA Club in Division 6

Club News - Running Night **March** 2022

By Ken House (AMR Newsletter Editor)

https://adelaidemodelrailroaders.com

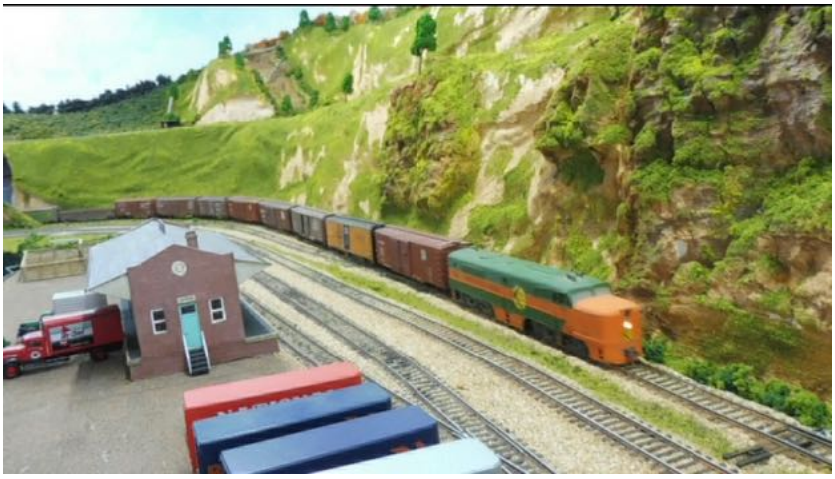
The March running night was the best we have had for a long time with a good number of enthusiastic members running trains, testing their skills, testing locos and rolling stock and testing the layout.

All members were up to scratch with their operating skills and knowledge of the layout even though I did notice one or two instances of trains not observing the right hand running rule. But, hey we are not running the Pennsylvania RR four track high speed mainline, it is just a model railway and once we begin operating sessions in June operators will soon know when to apply the right hand running rule and when operational needs require it to be disregarded.

Ippinitchie Creek Alco FA is passing through Holland Jn crossover heading to Redman while Unicorn Timber and Mining RS1 is heading to Jeremy Jn.

All of the club locos and rolling stock run performed well.

Most of the layout ran well. The main concern is an on going problem around the crossovers at the western end of Houseman. I laid those crossovers and put in more than enough insulated joints to give the signal department plenty of options when it came to placing signals. Trains do not seem to short the track when going through those crossovers but trains do slow very noticeably possibly due to my over use of insulated joiners. I think I



An Ippinitchie Creek Alco PA has come down Cooke's Cut Off with a long freight and is about to use the troublesome Houseman crossovers to observe right hand running on the double track mainline.

On the lower level Warwick Graham's loco with club rolling stock is departing Houseman eastward while on the upper level the FA has departed Phillips and is heading toward Werkendam.

could add a few more power droppers to the track and crossovers to get better continuity of voltage through those crossovers.

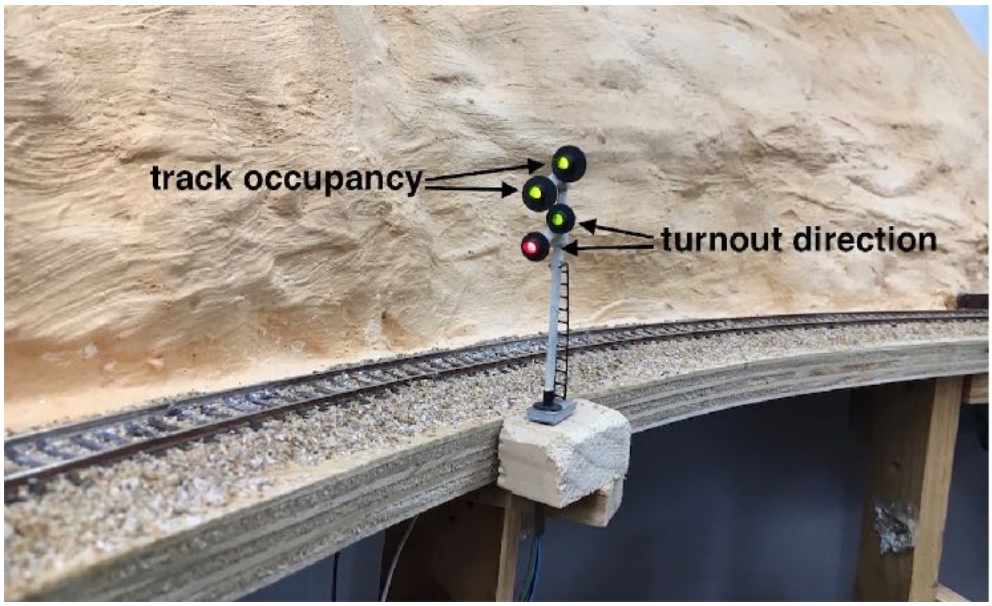
The March running session on You-tube.

https://www.youtube.com/watch?v=mIKDPlsUngs&t=1s

WORKING ON THE SCRR

While Tony Mikolaj's attention lately has been on installing the three new boosters, signals have progressed to as far as the entry to Yorsen Mine. The dwarf signals at Yorsen mine indicate turnout direction.

This set of signals are the first signals that an eastbound train will see as it approaches Haynes and it controls access to the left hand track (switching track) and the centre track (passing siding). The upper green lights are indicating that



both tracks are unoccupied while the red and green lower lights are indicating that the turnout is set the the centre track (passing siding). So the train is clear to proceed into the passing siding. To help remember what to do when faced with this type of signal is to remember that you need a green over green to proceed.

While Christiaan Werk has been making great advances in getting scenery done along the roadside wall and onto the peninsula in room four, the former ladies waiting room, he has had problems with keeping the ground cover in place on the steep slopes. It was somewhat loose and tended to roll downhill and wind up landing on the track below.

Now this is where belonging to the NMRA becomes very helpful. The NMRA has members with a wealth of knowledge on most model railway subjects. I e-mailed the question around division six members and received replies from Vern Cracknell and Marcel Van Eck saying that the best idea would be to thoroughly wet the area with hair spray. I tried that on a small area and it worked fine, keeping the ground cover in place nicely. However John Prattis found that by spraying the area with water containing a few drops of dish washing liquid then dropping PVA diluted with 3 parts water and a few drops of dish washing liquid added, from a plastic bottle fixed the ground cover to the slopes nicely.

The next problem that I thought we had was how to weather the plastic Walthers Glacier Gravel kit that we have re-purposed as the plant at our iron ore mine, Yorsen Mine. I received the following replies from NMRA division 6.

Vern Cracknell Concerning Iron Ore.

Here is what I would do

1. *Use my computer to see images of locos, rolling stock, equipment and particularly items like tippers at Pilbara Iron Ore (Western Australia), (type in Pilbara Iron Ore) in order to note the colour of the loads, the dust on all the equipment, and the general dustiness of everything.*
2. *Spray the plastic kit with a plastic air can spray which will ready the plastic for accepting paint.*
3. *Air brush the structure in the tan/red dust although don't overdo it. The dust builds up on the horizontal levels of steel beams, but it also settles on vertical panels. The colours of the structures still can be seen.*
4. *Air brush all the surrounding ground and the locos and rolling stock with the same tan/red dust colouring. 5 Swathe it all with dust*!

Marcel Van Eck

Ken, Is that the mine (with benches) in the background? I assume the building houses a crusher, and the loading bins (your 'tipples').

I guess you will eventually have dark reddish iron ore (although it can be black).

First thing would be to spray the building in your desired colours. A Matt acrylic paint will do. This will provide a base for the weathering powders I would think of using. Powders won't adhere to bare plastic.

Dust from the mine and more concentrated dust from your crusher and loading bins will be blowing around (unless you are modelling modern day mines where dust is minimal - in this case you would get more dust from the mine itself depending on your wind direction). What you choose will determine the amount of weathering (dust accumulation). Would you expect any dust coming out of the area where the wagons go through the building?

I have used Humbrol and Vallejo weathering powders. Humbrol has both rust (red) and iron oxide (yellow-orange). Have found it best to use a soft flat brush to apply the colours, especially if you have a large area to cover. Go gently at first and make sure you have a selection of brushes. Some fine pointed brushes can be useful.

If the operation is not quite up to environmental code, the rooves would be dusted with a similar colour to the ore but with an added brownish or slightly darker dust. Don't go too heavy initially. If it rains in the mine area then you can make streaks in the roof dust with a damp pointed brush. The loading bin chutes would then be heavily dusted especially in their lower halves. Don't forget to dust the vertical support posts more heavily on their downwind faces. Any walls sheltered from the main dust direction will most likely be only lightly oxidised and possibly more dusty than oxidised.

Try the methods on a painted scrap piece of plastic first.

I know that others will spray with a dull coat when complete to fix the dustings but I have never done this. Marcel

Some great advice from Marcel and Vern. Thank you guys.

Christiaan did weather Yorsen Mine by painting it with a slurry of the red sand that he used to simulate the open cut iron ore mine. When dry it was possible to brush off the sand using a stiff brush leaving the water stains in place. The stains were blotchy on the smooth concrete part of the structure but by drawing down on the area with a damp brush Christiaan was able to turn the blotches into more natural reddish brown streaks.

The same structure *(right)* , unweathered, is Penstone Quarry on my home Layout. I have brush painted the bins and conveyors with Humbrol rust colour paint.

Warwick Graham and Peter Kirkland are continuing on with the building of Port Douglas. Paul Wright is working on the scenery between Yorsen Mine and Haynes. Matt Redden has been tidying up and sweeping up and generally keeping the place looking nice. Thanks Matt.

Christiaan Werk has uploaded a You-tube video showing how the whole of the SCRR looked on Wednesday March 9.

https://www.youtube.com/watch?v=uMRk6onpC8g .....

100% NMRA Inc.-AR Club News

Eurobodalla Model Railway Club

A 100% NMRA Club in Division 2

By Ian Barnes

March, 2022

The Eurobodalla Model Railway Club (EMRC) is an informal group of model and prototype railway enthusiasts based in the Eurobodalla Shire on the South Coast of NSW. The Club was formed in 2001 and over the intervening years has maintained a membership of 15-25 enthusiasts.

In 2017 individuals began joining the NMRA and by 2021 the EMRC became a 100% NMRA membership Club of Division 2.

EMRC members model most scales, Z, N, HO, OO, O and G, but Australian railways in HO scale dominate. Bimonthly meetings and a bimonthly newsletter keep members informed of upcoming events and activities.

The Club has a modular point to point HO scale layout available for Club member use and for public exhibition. In January this year the layout, Eurobodalla, was exhibited for two days at the Moruya Agricultural Show where it won the Supreme Exhibit of the show ribbon. The NMRA Division 2 display banner was also on parade.

For further information on the Club, contact Ian Barnes on 04 1577 4810.....

100% NMRA Inc.-AR Club News

Eurobodalla Model Railway Club

A 100% NMRA Club in Division 2

By Ian Barnes

April, 2022, Eurobodalla – an NMRA Club exhibition layout

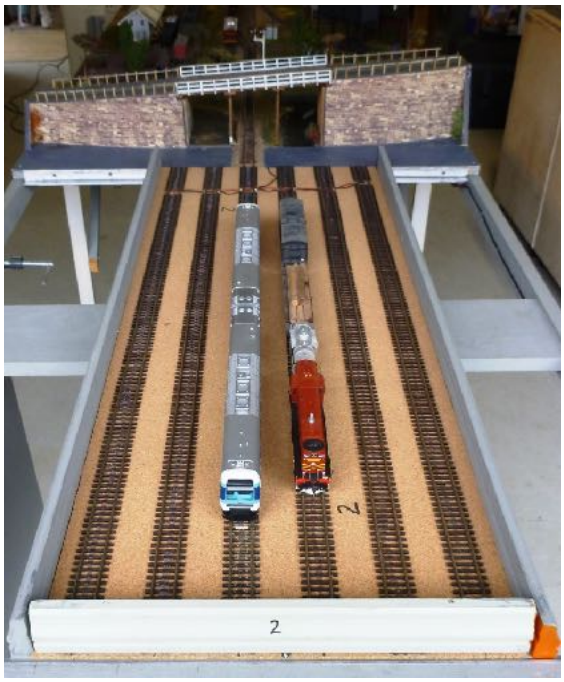
Eurobodalla is a small HO scale exhibition layout of the Eurobodalla Model Railway Club, a 100% NMRA Club on the South Coast of NSW within Division 2. The layout was designed in 2018 mainly for Club member use but with a prospect of possible exhibition. Members agreed it had to be:

- Portable and modular, so it can be readily moved from site to site
- Small enough that the modules can fit inside preferably, a Landcruiser, or, if necessary, a box trailer
- A maximum length, so it can be set up in a small room or garage
- Have operational interest
- Expandable, either with "fingers" of new trackage or to create a continuous run

The resulting design has the following features:

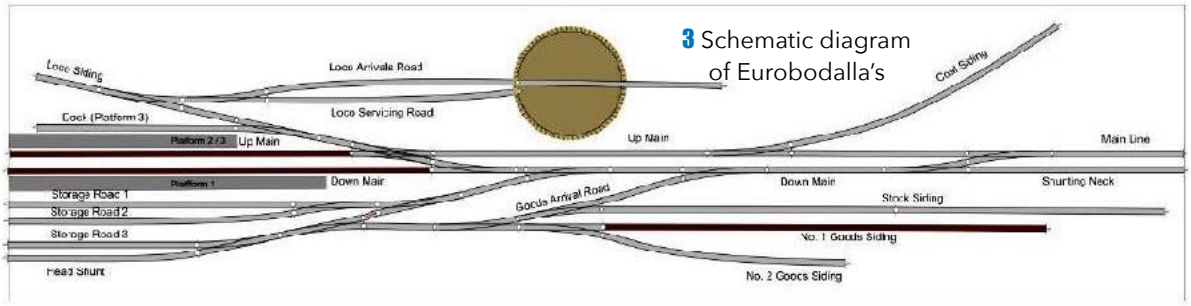
•A point to point terminus with "fiddle" facility **1 & 2.**

1 Eurobodalla, viewed from station to fiddle yard



2 Eurobodalla, viewed from station to fiddle yard

•It is operationally interesting **3.**



3 Schematic diagram of Eurobodalla's

4 Two modules boxed

•With minimal modification, each end of the mainline, and one siding have potential to considerably expand the layout

•Lightweight construction

•With care, it is easy to set up by two or three people within 30 minutes

•There are four modules, three being scenicked

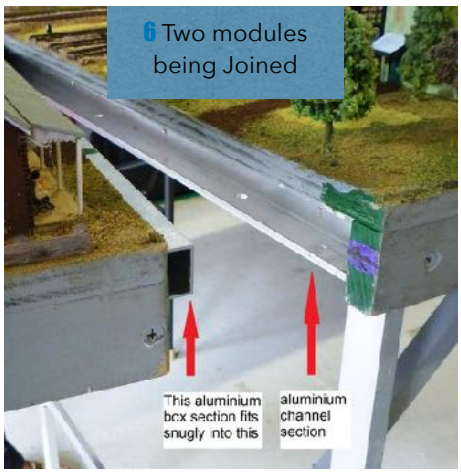
•Each module is 1.2 metres in length x 0.8 metres in width; creating a layout length of 4.8 metres

•Maximum train length is one metre, the capacity of the "fiddle" module

•In storage, each of two pairs of modules are held face to face by endplates **4**. The resulting two "boxes", plus associated paraphernalia, can be transported in a large 4wd vehicle **5.**

5 Eurobodalla ready for transport

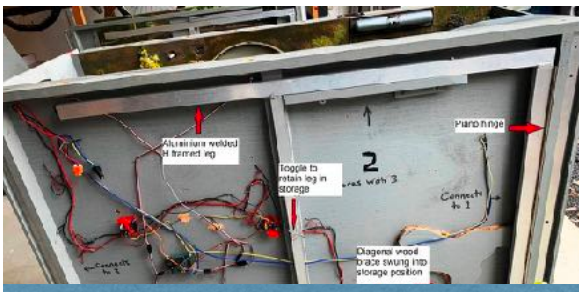
The modules are of conventional grid framing construction – 40x19mm dressed pine supporting a 15mm thick plywood deck. Each module join is vertically aligned with mating aluminium channel and boxing 6, and horizontally aligned with a simple flat head nail inserted each side of the module through both aluminium pieces 7. The mating and stability is good enough that no special fixings are required for each track joint because the rails automatically align.



6 Two modules being Joined

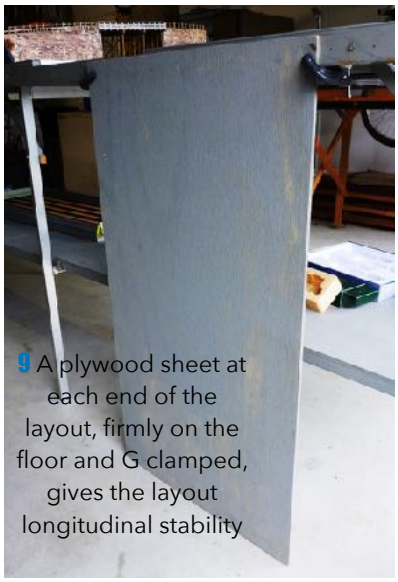
7 The module join locking nail in position

The first module erected has two swinging aluminium H framed leg supports which allows that module to be free standing. The other three modules are then sequentially joined and supported by a similarly constructed single leg swung down to support the unjoined end.



8 Module 2 with leg and bracing in the storage position

The leg structures are swung from the module on full length piano hinging and once in place are stabilized in two ways. Firstly, to prevent the modules coming apart, with a flat head nail vertically inserted on each side of the joined modules and secondly, to minimise lateral movement, with a small diagonal wood brace fixed to the leg and swung up, again, held in place with a flat head nail inserted through a hole in the module's timber framing 8.



9 A plywood sheet at each end of the layout, firmly on the floor and G clamped, gives the layout longitudinal stability

When all four modules are joined, the whole structure is stablised in two ways. Firstly, by a 1030x560mm sheet of plywood G clamped to the side of the module at each end of the layout, making sure the bottom edge is firmly on the floor 9. Secondly, the legs are

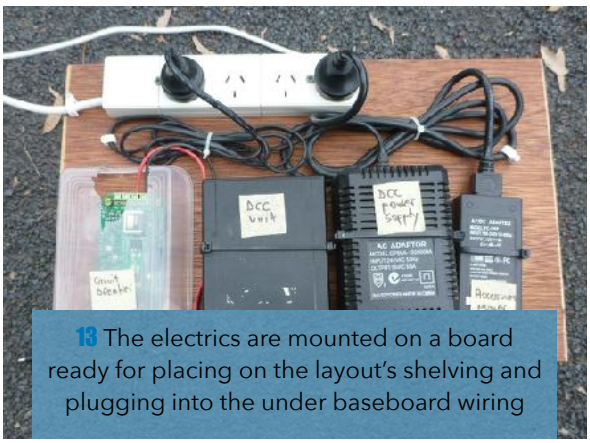
10 Overlapping and interlocking plywood shelving on the H portion of each module's leg further stabilizes the layout

11 Detail of the shelving interlocking. Note the colour coding to assist operators in layout erection

constrained of their lengthwise movement with interlocking shelving placed on the crossbar of the "H", midway from the floor **10 & 11**. The shelving also provides convenient storage during operations for the control electrics, empty train boxes, junk, operator refreshments etc **12**.

The layout is wired for DCC with an NCE UTP outlet for potentially two controllers on each side of a central module. An NCE SB5 with a single circuit breaker provides track power and control **13**.

12 Apart from curtaining, the layout is ready for operation

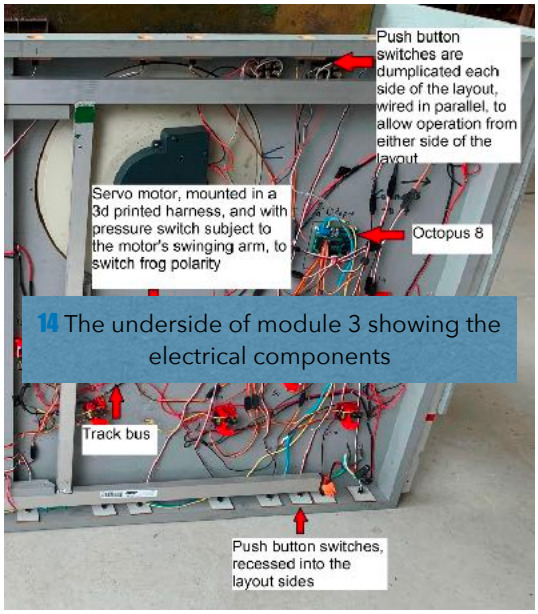


13 The electrics are mounted on a board ready for placing on the layout's shelving and plugging into the under baseboard wiring

Each module join has a simple 2 pin plug for power bus (16VAC) and a similar (but different so they don't get mixed) plug for the accessories bus(12VDC).

With the exception of a single double slip, all points/turnouts are live frog Peco medium radius. They are servo controlled from Tam Valley Octopus 8 units. The servos are mounted on a 3D printed frame which has a simple pressure switch mounted on it to switch polarity of the live frogs. To throw the points/turnouts, the Octopus units are activated by push buttons duplicated each side of the modules i.e. wired in parallel. This allows the points to be activated from either side of the layout **14**.

The fiddle yard module (unscenicked) accepts one of two interchangeable cassettes which sit in, and slide within, aluminium angle sections. These sections, with only a light greasing, allow smooth lateral action and also supply track power to the cassette.



14 The underside of module 3 showing the electrical components

The buildings are a mix of kits, scratch build and some 3D printing. Detail is still being added by members.

Each cassette holds six tracks allowing a maximum train length of one metre. With care and with the gates at each end installed, the cassette can be either replaced or lifted and turned 180 degrees for return train movements 15.

The scenery, themed as an outer city suburb in NSW, is of traditional construction technique.

15 A fiddle yard cassette ready for operation

Although the layout is quite functional and full of operational potential, members have recently decided that, for exhibition purposes, a continuous run is desirable. Therefore, the Club is currently designing and constructing two semicircle ends and, utilising the cassette module on the "fiddle" side, will complete the resulting oval with hopefully minimal additional storage space required.

A selection of photos below is provided for general illustration…..

100% NMRA Inc.-AR Club News

City of Sails Model Railway Club

A 100% NMRA Club in Division 5 - New Zealand

By Philip Sharp

January Meeting

The January meeting was held at James Kelso's layout. James models part of the Montana Rail Link (MRL). The MRL is privately owned Class II railroad that stretches from Billings, Montana west across southern Montana to Spokane, Washington. The railroad has 900 miles of track.

James' layout has three decks and is of a mushroom configuration. The main part of the layout is 20 feet by 20 feet and has one helix. A second helix adjoins this main part. The layout is very much work in progress and should provide James with a good many more years of enjoyment.

At the start of the meeting, we welcomed Pono Rangi from Christchurch. Pono was visiting Auckland and was Paul Hobbs' guest at the meeting.

The meeting began with Paul Hobbs giving his new clinic entitled "Belt Lines and Terminal Railroads". As I have come to expect from Paul, he had researched his clinic very well. The presentation was held outside on a 32-inch TV screen, one of the perks of a mid-summer meeting.

After the clinic, the members moved to James' train room to run trains. The session provided James with a valuable opportunity to highlight faults in his layout when several trains are running. James found the east side of the loconet bus was causing errors on the network. Similar errors had occurred on previous running sessions. James believes he is closer to fixing the errors.

James emailed me after the meeting with the comment "almost no talk about Covid!"

February Meeting

The February meeting was cancelled at the last minute. The presenter we had arranged for the meeting was held up by a traffic accident on the Northwestern motorway. He realized he would be very late for the meeting and called to say he would not make the meeting.

March Meeting

The CoSMRC members participated in two meetings in March.

First there was the Division 5 virtual meeting held mid-March. This was organized by the Division 5 Superintendent Kel Sherson. Duncan Cabassi attended the meeting, He gave part of his vision for the future of the Australasian Region and discussed specific topics.

The topic that received the most attention was ARC's decision to opt out of the NMRA's digital magazine. Duncan explained the reasoning behind the ARC's decision.

The second meeting in March was the CoSMRC's monthly meeting. This was held at the clubrooms of the Western Districts MRC. The meeting began with an informal presentation by Gary Snow on the work he and other members of the WDMRC are doing to convert the club's layouts from DC to a combined DCC / DC system. This conversion makes extensive use of arduinos.

Paul Hobbs followed on from Gary's presentation with his well-known clinic on Kadee couplers. Paul has been giving this clinic, with updates, for over a decade. 1. shows Paul at the start of his clinic.

Paul Hobbs at the start of his clinic.

Our most distant member, Alex Shephard from Hamilton, then asked the other CoSMRC members for advice on the track plan for a new part of his layout. Alex showed a selection of track plans he had found on the internet and invited members to give their opinion on what were the good features of each track plan. By the end of the meeting Alex had a good idea of what he wanted for the track plan.

All in all, a very productive meeting……

Adelaide Model Railroaders Inc.

A 100% NMRA Club in Division 6

Club News - Running Night - **April** 2022

By Ken House (AMR Newsletter Editor)

https://adelaidemodelrailroaders.com

At the April running night, Tony Mikolaj and Ken House were the only ones to run trains on running night this month. The layout seemed to run well but two operators was hardly a test. Ken did identify a couple of small faults that he will repair before the next running night.

Tony's double headed English goods train at Werkendam.

For video https://www.youtube.com/watch?v=pV3xxttVM_g

WORKING ON THE SCRR

During the last month members have been keenly working on the layout and around the clubrooms

All turnouts on the SCRR are powered by Micro Mark switch tenders which are operated by PMG telephone toggle switches. The PMG toggle switches have many contacts, allowing us to power the turnout frogs via the toggle switches and, where necessary, signals are also activated by these toggles. The toggles have been fixed into the layout fascia (below) directly in front of each turnout.


Ken successfully ran the Ippintichie Turn seen here crossing the Joliffee Jump trestle bridge.


PMG Telephone toggle switches

Now track diagrams and labels have now been placed on the layout fascia so that train operators can more easily tell which toggle operates which turnout. The labels were made using the club's Dymo labeller. The labels did not stick very well to the fascia and needed to be stuck down using Sellys Multi Grip. The lines were done using acrylic paint markers. Given the problems with the labels doing the lines with paint markers proved to be our best option for the diagram lines. The diagrams lines are colour coded as follows, Mainline - red, Passing sidings - yellow, Branch lines, reverse loop etc - white, Yard tracks - blue, Industry tracks - orange.

Warwick Graham has put shelves in the club lockers. This will make finding stuff in our club lockers much easier. Tony Mikolaj has now completed the booster upgrade so now the AMR has eight 5 amp boosters powering the SCRR. He installed three new boosters and has changed the power districts accordingly.

Warwick Graham and Peter Kirkland are progressing Port Douglas.

(Left): John Prattis now has the rail-car spur at Houseman complete. One of the club's three Doodlebugs is in the spur. Rail cars will soon be able to run Houseman to Kingston, Pt Douglas, or Barclay and return.

Christiaan Werk continues scenicing King Yorsen mine iron ore mine. Paul Wright supplied some iron ore rock from the Pilbara. Christiaan has placed Paul's rocks along the back drop behind the processing plant. The rocks and red sand give the scene an authentic look.

Also Christiaan has taken over the Yorsen mine / Haynes scenery from Paul Wright. The creek running down the hill will empty into a pond.

(Left): The coal unloading trestle for Kirland Coal, an industry at Zieglersdorf, is at the eastern end of the Yorsen mine / Haynes scenery but on the lower level.

Here Christiaan is installing the trestle and is now laying track on the trestle. Kirkland coal is a supplier of coal to local residents and commercial properties for heating during winter. The trestle has room for three two bay hoppers.

Many thanks to those members, who together, have put in many hours of work to get the Southern Central to where it is today. They have all enjoyed spending time working on the SCRR and have learned lots while doing the work. It is very satisfying to see their work which is appreciated by all club members and I feel privileged to be able to report their progress. Ken…..

NMRA Inc.-AR Achievement Program Report

May / June 2022

by David O'Hearn - MMR

Judging of Achievement Program Categories

When I engage in conversation with members about trying to attain their AP's, many people say that they are nervous about judging. This is a fallacy in many ways.

Firstly, only four of the eleven AP's require your work to be evaluated and for several items to achieve a merit score of greater than 87.5 out of 125 points. These AP's are:

- Master Builder – Cars where four out of eight cars must achieve a merit score
- Master Builder – Motive Power where three out of three models must achieve a merit score
- Master Builder – Prototype Models where the overall diorama must achieve at least a merit score or greater
- Master Builder – Structures where six of the twelve structures must achieve a merit score or greater.

The remaining seven AP's simply require a member to undertake some tasks, document them and have the tasks witnessed. Some of these AP's require you to validate that what you have done works as described. These are electrical and civil where trains must run unassisted to prove what you have done works.

For the AP categories of Cars, Motive Power, and Structures that require judging, I recommend you have a close look at the judging criteria involved. I have provided the link to the judging guidelines in the last issue of MainLine. The judging criteria are:

CATEGORY	DESCRIPTION	POINTS	SCORE
CONSTRUCTION	Workmanship	0-40	
DETAIL	Quality & Amount	0-20	
CONFORMITY	Prototype Practice	0-25	
FINISH & LETTERING	General Appearance	0-25	
SCRATCHBUILT	Amount of Parts Built by the Modeler	0-15	
		Total	

Let us look at each of these categories and how to maximise your evaluation score in the following paragraphs. The Prototype AP is slightly different so I will address it in future issues of MainLine.

Construction

Construction is the biggest score category as it is worth up to 40 points. The number of points awarded depends on the complexity of the model and the quality and workmanship shown. Looking at the judging guidelines, a simple model of exceptional quality and workmanship will only score a maximum of 25 out of 40. A moderately complex model of exceptional quality can only score a maximum of 35 points. Conversely, a very complex model with outstanding but not exceptional quality also can score up to 35 points. This means that if you're not a skilled craftsman, use complexity to leverage the points. There are also various hints to ponder during construction listed on page 2 of the judging guidelines. These include ensuring the model is square, there are no fingerprints or glue runs, glue on windows, etc. If you have problems with construction, seek advice from your Divisional AP Manager or colleagues who can tell you how they approach that aspect of modelling.

Conformity

Conformity is the next biggest score area at 25 points. Conformity is how well your model reproduces the prototype or if there is no prototype, is the model logical. This means IT IS ESSENTIAL that you provide a photo of the prototype as well as your model with both photos ideally taken from the same angle/perspective. As shown in the Table on page 6 of the judging guidelines, you gain maximum points for getting your model as close to the prototype as possible.

Finish & Lettering

Finishing and lettering as two complexity dimensions: namely the complexity of the finish and lettering; and the quality and skill of its application. This means a two-tone paint job is more complex and scores better than a single colour model. The number of colours, the difficulty in achieving colour separation and the complexity of the model all count in achieving a high score.

Detail

Detail is how many detail parts are added or incorporated into the model and how complex was the detailing job. Maximum score is achieved for the more complex detail applications. For example, a coupler cut lever represented by a length of bent wire will score less than a coupler cut lever with a small length of chain going from the lever to the top of the coupler box.

Scratch built

Scratch built is how much of the model is built from scratch and how difficult was the work. For example, a weatherboard structure built using scribed Evergreen siding would score less that a structure built with board-by-board construction.

Conclusion

For the AP's that require judging and achievement of merit award scores, read the AP requirements AND the judging guidelines. Aim to maximise your score by building more complex models or adding some complexity to your simple models. Ensure there is a prototype and document it with a photo. An outhouse will not score as highly as the house because it is not complex but add lighting, door hinges, internal details, etc and the model will gain a lot more points! You can add complexity by adding detail and by adding scratch built parts. Make sure you list all the detail parts and scratch built bits in

the paperwork. I tell members to take photos as you go so you have a record of all the added parts that can be reviewed when you do the paperwork. It is surprising how often members forget a detailed or scratch built part after the model is completed. Look for multi-coloured models with signage or decals to add to your score.

I wish you happy modelling. If you have a modelling issue, talk to your AP Manager or others who can provide helpful modelling tips on how they do such work.

Over the next few issues of MainLine, I will address each of the 11 AP's in more detail with helpful hints on how to achieve the AP awards.

Recent Awards

I would like to congratulate the following members who have attained awards in the Achievement Program since the last issue of MainLine:

Golden Spike

Division 1: Phillip Flynn, Pottsville, NSW
Gary Sardoni, Toowoomba, QLD
Division 7: Eric Coughlan, Sydney, NSW

Model Railroad Author

Division 4: Dennis Turner, Greenfields, WA
Division 7: Paul Morrant, MMR, Belmont, NSW

Master Builder – Structures

Division 7: Peter Jensen, Narara, NSW

Model Railroad Engineer – Electrical

Division 7: Peter Jensen, Narara, NSW

Chief Dispatcher

Division 1: Anthony Palmer, Wakerley, QLD

Master Builder – Scenery

Division 7: George Lane, Warragamba, NSW

Master Builder – Motive Power

Division 7: Paul Morrant MMR, Belmont NSW

Master Builder – Cars

Division 7: David O'Hearn, Belmont, NSW

Master Model Railroader

Division 7: David O'Hearn, Belmont, NSW

Special Recognition

Special recognition should be given to Paul Morrant, MMR. Paul has now completed all eleven APs and he is only the second Australasian Region member to do so. The first was the late Fred Gill many years ago.

Completing all eleven APs is a magnificent effort. In life we all have different strengths and weaknesses. The Achievement Program only requires 7 of 11 APs to be completed because it recognises that some areas will be a real "stretch" of a persons capabilities

and will take them deep outside their comfort zones. Paul had to travel outside his comfort zone on a couple of these APs but he persevered and worked through all of his frustrations to meet the AP requirements. Well Done!

(Ed: - David was asked by the parent body in the USA to write a BIO about himself for the national magazine, after David qualified as an MMR. So here is a little bit of an insight about our AP Manager.)

David O'Hearn MMR # 702

I am retired after 42 years working in the RAAF and the Defence industry. Roles have included being an Aeronautical Engineer, pilot, Logistics Manager (focussing on Operations Research), Project Manager and Proposals Manager.

I was widowed with three adult children and four grandchildren but I have recently remarried and moved with my new wife to Belmont, NSW.

Although I had a model railway layout and was keen on trains in high school, I didn't get really serious in the hobby until my first son was born in 1978. I have been a member of numerous clubs as I have moved around Australia and overseas with my job. I have been President of the Canberra Model Railway Club and the Epping (Sydney) Model Railway Club as well as being the immediate past President of the Australasian Region of the NMRA.

Over the years I have built and exhibited several model railway layouts, including Fish River (NSW HO Modular Layout), Great Falls (BNSF/UP HO Layout), Summerfield (Ohio River & Western On30 Layout), Black Stump (G scale Layout) and Nicholls Siding (NSW HO Layout). With hopefully no more moving, I am now building the "ultimate" home layout in a 6m x 5m room in the house. This layout is on two levels with a HO NSW layout on the upper deck and an On30 layout of the Puffing Billy Tourist Railway on the lower deck.

In the NMRA, I have had two terms as Australasian Region President, one term as Secretary and I am currently the Australasian Region AP Manager. I wish to share my passion for the model railway hobby by working with others and encouraging them on their AP journey and by building a great home layout using the latest and greatest that the hobby has to offer.

I have APs for Cars, Structures, Scenery, Civil, Electrical, Official and Volunteer. I aim to work on other APs in the future and I am well on the way with Author and Motive Power APs about 50% complete……..

Divisional Reports

Division 1

From Paul Rollason (NMRA Inc.-AR Division1 Superintendent)
March meeting:-

ARC Report:

- Duncan Cabassi has been elected to the position of President of the NMRA Australasian Region (AR) – congratulations Duncan.
- The AR Committee (ARC) will be embarking on developing strategies to help strengthen the role of the NMRA in generating greater participation in our hobby.
- The new national IT platform is in the final stages of development and testing. The new platform should enable simpler and more reliable access to NMRA information, meetings, workshops, videos.
- The ARC continues to liaise with the National NMRA group (USA) to resolve access to the proposed digital magazine and related fees.

Awards:

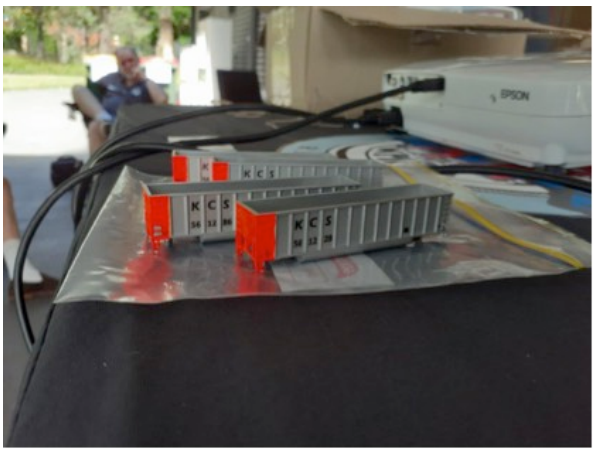
- Merv Bagnall Received his Certificate of Achievement "Author". This is Merv's fifth Certificate, and he is well on his way to MMR status. Merv has done an outstanding job with his management of the "MainLine" magazine. Congratulations Merv.

Layout Inspection:

- Paul Rollason showed attendees his under construction layout.
- The layout is a major extension of the layout Paul and his father built.
  - The layout:
    - HO Scale, two levels connected via a 1.5% grade helix
    - Rolling stock – Fleischmann/Roco
    - DCC layout but DC option

- The above image shows the Lower Level Staging. 17 roads 4.5m long.

Show and Tells:



- Trevor Philips – Progress with resin cast N scale hoppers
- Charles Clarke – Southern Downs Steam Railway, based in Warwick, is proposing a three (3) day trip to Thallon, staying for two nights in Goondiwindi. Other trips are proposed from Warwick/ Toowoomba to Wallangarra overnighting in Stanthorpe. Check the SDSR website

  www.southernqueenslandcountry.com.au

- Paul Rollason – Showed an operating HO scale rotary hopper car unloader
- Paul Rollason – Paul provided a review of the acquisition process he undertook for the

two NSWGR cars (FAM2386 and PHN 2361), and guided attendees on an inspection of the cars. The images below show the Sleeping Car at front and the Power Car to the rear.

- Merv Bagnall – Merv is an early 1970s NSWGR modeller. He is currently working towards his Prototype AP Certificate. As part of this, he is modelling the Bombala station yards which includes: freight house (see following photo), station building, detailed signal room, footbridge (*totally scratch built*), freight crane and freight unloading docks and fettler's shed. The modelled Bombala will be included in a new section purpose built on Merv's layout.

Clinics:

- Craig Mackie – Planning for Structure Building.
    - ✳ Craig outlined his approach to researching structures for his Casino based model railway.
    - ✳ His techniques include personal photographic visits to the Casino station area over different periods of time, Google resources, archives.
    - ✳T he intent is to understand how buildings have altered over time, and to then decide how best to model that building to suit the particular needs of the layout era being modelled.
- Arthur Hayes – Modelling Tarpaulins
    - ✳ Arthur presented a PowerPoint clinic illustrating the use of tarpaulins for the various loads carried in different freight wagons, both old and modern.
    - ✳ The different types of materials, both benefits and constraints, that can be used for modelling tarps were reviewed
    - ✳ Arthur's experience with QGR and its use of tarps was very informative.

Materials were provided for attendees to model a tarp:

NMRA Regional Feedback:

- New website in Beta testing phase
- Only general admin matters
- New board member elected – Adam Wuiske

NMRA Division 1 Feedback:

- Div 1 Super Handover

  Duncan Cabassi handed over Div 1 Super role to Paul Rollason in February 2022. Thank you, Paul, for taking on the role and thank you Duncan for the effort you have contributed to building the numbers and focus NMRA Div 1 during your tenure as Div 1 Super.
- New Div 1 Committee:
    - ✳ Paul Rollason – Superintendent
    - ✳ Duncan Cabassi – Immediate past Div 1 Super and AR President
    - ✳ Les Ellen – Treasurer
    - ✳ Glen McCarley – Media Co-ordinator; Meetings Co-ordinator
    - ✳ Trevor Phillips – Committee member
    - ✳ Garry Paper – Clinics Coordinator
    - ✳ Arthur Hayes – AP Co-ordinator
    - ✳ Bob Tisdall – Assistant Div 1 Super – TBC
    - ✳ John Ballantyne – Minutes Secretary

Treasurer's Report:

- New account signatories are being arranged – four (4) signatories with any two (2) signing.

New Members:

- Alistair Wright - Bribie Island
- Allan Wilson - Townsville:

AP Matters:

i. Arthur Hayes is currently undertaking most AP reviews for Div 1 MMR applicants.

ii. The Committee will discuss with Arthur his ideas on the role and whether he would like to develop a panel to provide assistance with AP assessments. The Committee is grateful for the hard work Arthur commits to the role.

iii. Subject to discussions with Arthur, a strategy will be developed regarding AP assistance.

iv. It is not necessary to be an MMR to participate in AP reviews.

v. Further information on this matter is to follow.

Information Distribution:

vi. **"Mainline"** – delayed due to the flooding in northern NSW. Should be issued in the week of 21st March. Merv Bagnall advised that it is intended to start a regular "What's on the Workbench" section in Mainline. All will be encouraged to contribute to this new section.

vii. **General information Distribution** – problems are being experienced with email distribution. This is being investigated and is most likely to be resolved with the new IT platform coming online. The problem is being addressed.

viii. **Monthly Meeting via Zoom** – The 19th March meeting was available via Zoom to all members not able to attend the meeting in person. The meeting was recorded but will not be edited. A link for the meeting will be issued.

Future Meetings and Activities:

- ***New England Model Railway (Armidale) mini convention*** – this is a weekend event to be held in 22-23 October 2022. This is a very highly regarded and well-run event. Div 1 will be manning an NMRA information booth. More information to follow once the dates are confirmed.

DIV 1 Activities planned:

• Clinic Weekend – to be held every 2nd year. Next Clinic scheduled for early 2023.

• It is intended to hold meetings with regional clubs at least once per year, e.g. Toowoomba, Gold Coast, Lismore, Bundaberg, Gladstone.

• It is intended to hold meetings with 100% clubs at least three a year, e.g. Action Model Train Club in April 2022, RMCQ November 2022.

• Balance of meetings to be held in the Brisbane region with those who generously offer their homes/buildings as venues and layouts for inspection.

Social Events – two per year. Mid-year function is proposed to be held at the Kedron / Wavell RSL Club. The Christmas function may be held at the Monier Hotel. Members are encouraged to attend with their partners. Details will be circulated closer to time.

Shows:

• AMRA – 30 April/1st May Brisbane Show Grounds

• Redland – 27/28th August 2022

• Pine Rivers – 9th October 2022

• NMRA DIV 1 information booths are proposed for all shows. Volunteers will be called for closer to time.

NMRA Div 1 Buy and Sell:

• This is a new proposed activity for Div 1. Details are being discussed and information will be provided in future Minutes

DIV 1 Display/Operating Layout in Shopping Centre – this is an initiative being explored to help promote the hobby. Could include hands on activities for younger modellers as well as promote the hobby to 40-50 year cohorts.

Future Social Weekend:

Future Social Weekend – potentially Warwick with bus organised, partners included, winery for lunch, Southern Downs Model Railroad Club and steam train trip to Wallangarra. More to follow and only in planning stage.

Planned to have all NMRA AR Div 1 meetings have a Zoom option and the meeting will be recorded:

Clinics and meeting can be uploaded to the website for others to view at a later date. Under trial at the moment. The weakest point is internet access to stream 2-3 cameras. Trialling AV gear. Will also depend on uptake from members. If little or no interest then hardly worthwhile and certainly not worth the large outlay in purchasing equipment.

Next Gathering:

Saturday 9th April 2022, Action Model Train Club, 18 Silverleigh Court Woodhill (near Jimboomba).....

Division 1

From Paul Rollason (NMRA Inc.-AR Division1 Superintendent)
April 9th meeting:-

Meeting Attendance and Apologies:

39 attendees
3 attended via Zoom
12 apologies

Meeting Venue:

Action Model Railway Club Inc, 18 Silverleigh Court, Woodhill

Meeting Chair: - Paul Rollason:

- Thanked the Action Model Railway Club (AMRC) for their hospitality in hosting the month's gathering
- Thanked members for the strong turnout


Attendees at Meeting of 9th April at Action Model Railway Club

Meeting Report:

- History of Action Model Railway Club - Colin Leibke and Bill Schmidt
- Reviewed the history of the AMRC, with initial development focussing on an HO layout


View showing HO layout in foreground, N scale Layout centre rear and Staging to back left


HO Scale Layout and Dispatchers Panel


HO Scale Harbour scene at Action Model Railway Club

- Layout expansion included N Scale layout new staging and industry areas.


N Scale Layout


HO Staging and Industry

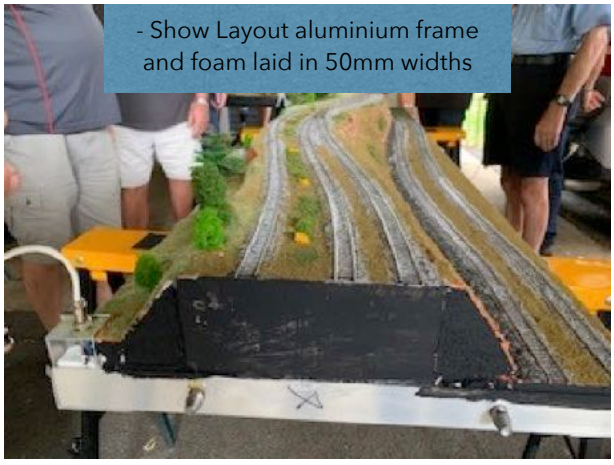

N Scale Coal Tipple and Loadout

- AMTC has developed a Show Layout (7.2m x 3.0m) based on aluminium frame construction and a base board of 50mm thick high-density foam – light weight, easy to handle and simple storage in a purpose-built trailer.


Show Layout Trailer


Assembling Show Layout Modules

- The Show Layout was developed using pre-cut foam layers for grades/risers – AMTC used CoolFoam P/L at Slacks Creek.


- Show Layout aluminium frame and foam laid in 50mm widths


Connecting two Show Layout modules

- Leigh Craig noted that CoolFoam use steam not gas for its foam manufacture. The foam is made in Australia and is less costly than similar products from major hardware chains.
- Attendees adjourned to the Show Layout storage area to see the assembly method. Modules are joined using machined metal pins.

Clinics:

Garry Paper showed the range of plywood and MDF materials available for use in structural and landscaping components of layout development:

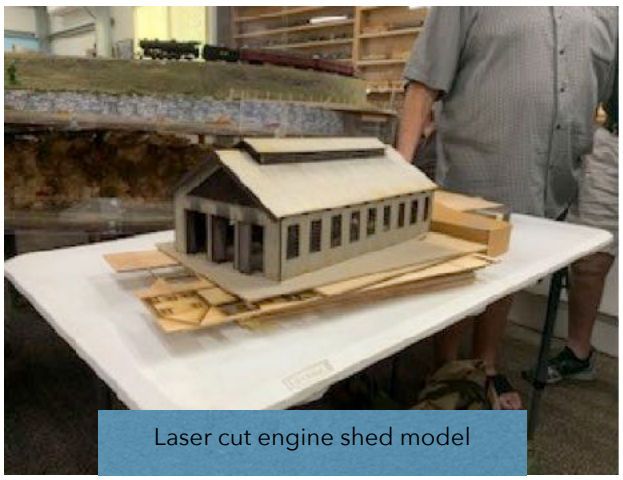

Garry Paper explains the benefits of different types and widths of plywood and MDF.

- Materials varied from 3 mm ply and MDF up to 19mm structural ply.
- The Queensland Hoop Pine plywood was noted as being of very good quality and finish (*Plywood and Panel at Darra – bring your cut dimensions and they will cut accordingly, as will Bunnings*).
- Of note was the bendable plywood – 8mm thick and very "bendy". Excellent for facias.
- Garry noted that he faced the bendy plywood with a 3mm MDF sheet (*using Selley's Kwik Grip*), off set at the top so that it could be easily sculptured for landscaping purposes.

Samples of all materials were distributed for review.

Richard Kontos showed his range of CNC Laser Cut boards and how it can be applied to different modelling uses:


Laser cut building models


Laser cut engine shed model

- Richard noted that the board profiles are cut by the laser providing a very distinctive finish with good relief.
- Products include weatherboard, random stone wall, VJ board and random board
- Boards can be machined up to 2.4ms in length.
- If a modeller needs a specific building or material design and provides that design to Richard, he will cut that design and provide it at no cost if the modeller waives IP rights to Richard for his general commercial use.
- A range of boards and cut building designs were distributed for review.
- Richard noted he was producing a model of the Beenleigh Rum Distillery with over 100 parts including the building, canopies, barrels, cogs and ancillary equipment and bits and pieces.

Contact details – Richard Kontos; 0457324475; web address – richardpeasville.com

ARC Report: - Duncan Cabassi (AR President) updated attendees.

- "e" magazine – the distribution of this magazine by NMRA is under discussion. In the interim, those wanting access to the NMRA printed version of the magazine still need to pay the supplement and it is only available until 2024 when it will cease to be printed. Note that "Mainline" is the AR electronic magazine (and it is part of your membership) and it is available to all members now, with back issues available on the website. The ARC continues to liaise with the National NMRA group (USA) to resolve access to the proposed digital magazine and related fees.
- New Web Site – this site will be tested and commissioned over the next 4 weeks.
- Emails – it was noted that some members are still having difficulty receiving email communications. The AR is moving over to a Microsoft 365 system, and this should assist in alleviating email issues.
- If any member is having trouble receiving emails, please contact any Committee member to try and solve the problem.

Div 1 Report:

- Paul thanked Brad Anderson, attending via Zoom from Lismore, for his assistance in developing the new IT platform.
- DIV 1 is contributing to the AR strategic plan development – more to follow.

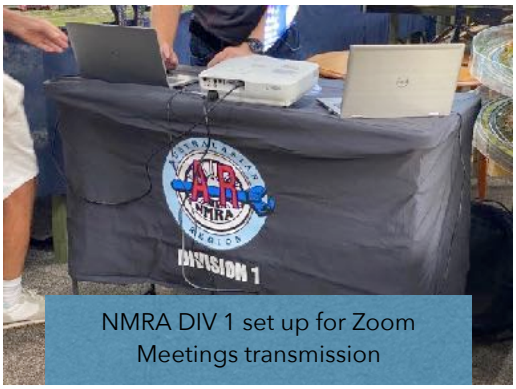
Trips, Visits and Shows:

- A group to travel to Gladstone to meet with local members – all are welcome to participate. Date to be advised/organised with Gladstone MRC.
- AMRA Show over May Day weekend (30 April – 1st May). DIV 1 has a booth at the show. Bod Tisdall co-ordinating DIV 1 booth volunteers – please advise if you can assist. Volunteers for Sunday 1st May needed. Clinician also required for the AMRA show to work at the booth – contact Garry Paper. 2-3 volunteers are needed at the booth.
- Pine Rivers Show – 9/10 July. DIV 1 has a booth at the Show and volunteers are required.
- Redlands Show – 27/28 August. DIV 1 has a booth at the Show and volunteers are required.
- New England Convention, Armidale – 22/23 October. NMRA ARC is looking to have a booth at the Show and volunteers will be required.
- Proposed Weekend Gathering – Warwick. Bus, or private transport. Schedule – Stanthorpe lunch on Saturday; Warwick Model Railway Club on Saturday afternoon; overnight Warwick Saturday night; Southern Downs Steam Railway trip Warwick to Wallangarra on Sunday. Attendance can be for either day or the full weekend. Dates and details to be advised. Please advise if you are interested in attending.
- Mid-Year Function – 18th June 2022. Venue – Kedron-Wavell RSL. Time 1100. Member and Partners. Details to follow.

- Christmas function – 10th December 2022. Venue – Monier Hotel from 1100. Members and Partners. Details to follow.
- NMRA DIV 1 Buy and Sell – January/February 2023 – details to follow. This is a new initiative, and all input is welcome.
- NMRA DIV 1 Clinics Weekend/Mini Convention – February/March 2023 – details to follow.
- Fraser Coast visit – 21st October 2023. Weekend visit includes meeting local members and visiting local layouts. The meeting decided to make it a 2 day trip rather than just attempting to do it in one.
- Gatherings Calendar for the balance of 2022 is attached for reference.
- Gathering Hosts for 2023 – please contact Glen McCarley.
- Clinicians for all gatherings and clinics weekend – please contact Garry Paper.

AP Awards:
Arthur Hayes – no AP awards this month.

NMRA Regional Feedback:
Appreciation was expressed for the Zoom meeting recording of the March meeting.



NMRA DIV 1 set up for Zoom Meetings transmission

Show & Tell:

Craig Mackie – Track Cleaning Car.

- Uses a machined metal roller covered with CHUX cleaning cloth.
- Roller is placed in a weighted wagon with hole cut to fit the roller.
- Craig has a limited number available for sale.


Craig and the Track Cleaning Roller - machined metal with Chux cloth cut to size


Track Cleaning Car with Chux covered Machined Metal Roller

Rod Travis demonstrated how he used cut bobby pins as fixings between SD9 body shells and new chassis – fast and simple connection technique that securely holds the body and prevents rattling and vibrations.

Peter Marsh showed a major timber trestle that he built using a jig to cut bridge members and then small pins to fix the timbers. All attendees were very impressed with the trestle bridge.


Reverse curve timber trestle by Peter Marsh


Peter Marsh's timber trestle bridge


Close up of Peter Marsh's beautiful timber bridge

Next Gathering: - Saturday 21st May 2022, Bob Perren's residence, 39 Norbiton Street, Zillmere. Gathering from 10am……

Division 2

Stephen O'Brien (NMRA Inc.-AR Division 2 Superintendent)
March meeting:-

Meeting Attendance and Apologies:

11 attendees

3 wives

18 apologies

Division 2 held it first meeting for 2022 in Tumut NSW. Our hosts, Martin, Alex, Nico, Lulu Canteros-Paz. Tumut turned on a great day of sunshine with the bulk of our meeting held outdoors.

Martin arranged a webcast tour of the Colorado Model Railroad Museum in Greely, Colorado. Our host was Michele the manager of eleven years and who would not want a job like hers.

Mathew Waterreus was our interface with Michele and did a great job fielding questions from the members. This museum who have to be on anyones bucket list if visiting the USA.

www.cmrm.org is the museum's website and videos are also on Youtube.

A great day was had by all who attended where members were able to enjoy the social gathering and the hospitality of our hosts. A successful meeting does not have to be judged by a large attendance of members.

Next Meeting:- 23/4/2022 Queanbeyan Railway Station NSW…….

Division 3

From Peter Kendall (NMRA Inc.-AR Division 3 Superintendent)
March Meeting:- (*Report Supplied by Rod Hutchinson)*

Meeting Attendance and Apologies:

14 attendees

7 wives / partners

18 apologies

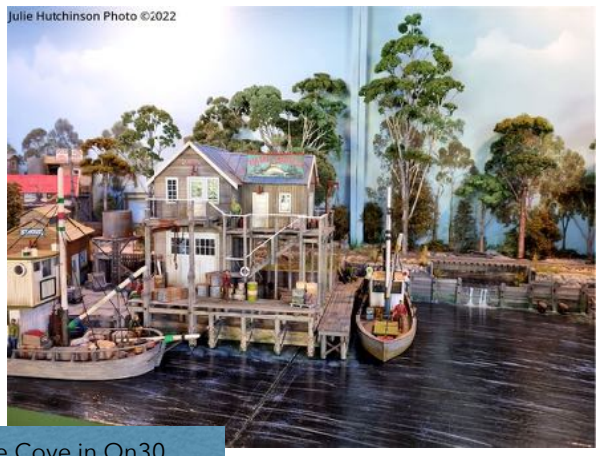
ARC Report:

- Apologies from Bill Black, Ron Bennell, Dan Pickard, Paul Richie.
- Reminder of next exhibitions at both Diamond Creek and Bendigo over Easter 16/17 April.
- We have hosts for all our monthly meetings except June, July & Sept. Please contact PK if you would like to host.
- Reminder that the DVD library is available to all members. Over 100 titles available.

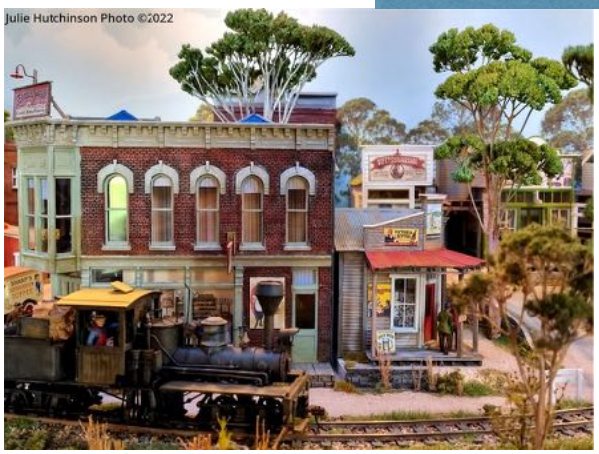
A beautiful Autumn day led to a number of members & guests enjoying the pleasant backyard of Div3 Superintendent, Peter Kendall, and his wife, Julie. Peter has a beautiful HOn30 home layout and a number of exhibition layouts in HOn30 and On30. Pictures included in this report are of his latest creation, Apple Cove. Like much of Peter's modelling work, Apple Cove has a whimsical flavour, and in this case, the apple produce industry cultured in On30.

Most of the meeting consisted of various confabs in small groups of which clusters changed through the day. Barbecue and salad followed by sweets, provided by the hostess, meant a very enjoyable day in the sun ensued.

There was an array of reading material too numerous to list but demonstrates the wide interest there is model & prototype railway within Div 3.

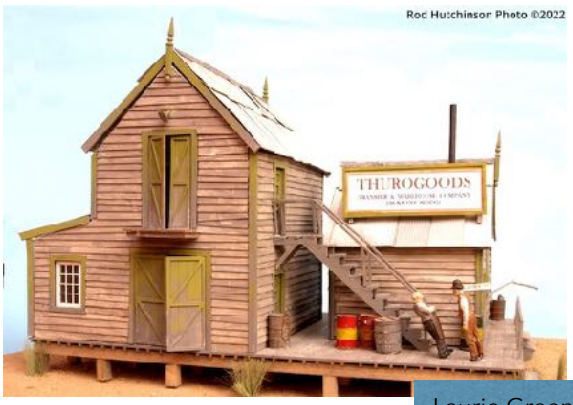


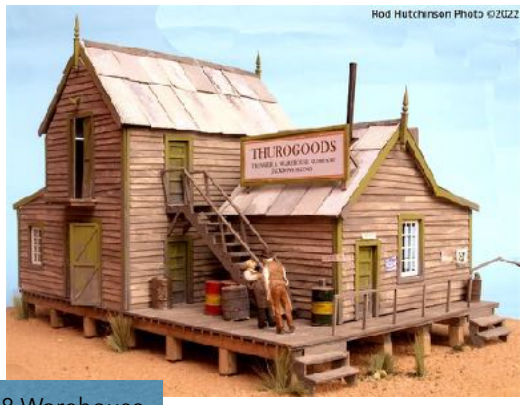
Peter Kendall: Apple Cove in On30



Grant McAdam: 1:48 1924 Ford ModelT Truck by Inter-Action Hobbies, Canada

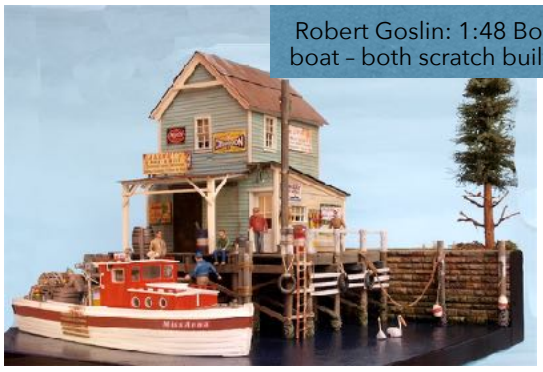
Members



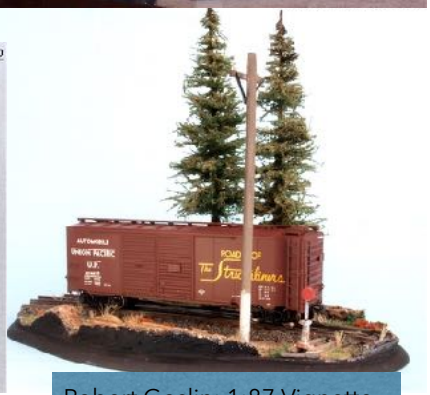


Laurie Green: 1:48 Warehouse by Outback Model Company

Robert Goslin: 1:48 Boat Shop & boat – both scratch built in timber



Rod Hutchinson: 1:87 (resin) and 1:48 (white metal) Queensland Rail Motors built from kits



Robert Goslin: 1:87 Vignette – Box car on display stand

Div 3 tends to focus on modelling skills, in particular structure and fleet construction either as kits, scratch or kit bash. This meeting was no exception and a number of 1:48 and 1:87 pieces were on show.....

Please find the Div 3 April Report from page 76 of this edition.

Division 4

From Frank Godde - MMR (NMRA Inc.-AR Div4 Superintendent)
March Meeting:-

Meeting Attendance and Apologies:

5 attendees
1 apology

Show and tell:

There was no show and tell at this meeting, Dave Whibley had set up his portable G gauge layout outside under the new patio and invitations were handed out to his son's school friends to come over for the weekend and view the running of trains in his HO room and the much larger one. There were quite a few families that did come to take part of his invitation. While at the meeting the members discussed the cancellation of the AMRA WA show and how Frank had started to build the display and the ideas he


Admiration


Dave with his Layout

had to produce an eye opener display to attract people to view Div 4's work in the modelling field. It was discussed that Dennis makes a video to put on u tube which was done and sent to all those members at that meeting for comment.


Interested Neighbours


Unfinished Sawmill

Dave and I set up and took down this large layout before and after the weekend.

The video that came out was very good for a first attempt. Dennis is keen to edit and refine it, but it certainly was an exciting starting point.

NMRA Regional Feedback:
• Frank mentioned the ARC zoom meeting held before this meeting

Next Meeting:
• 15-5-2022 at 2.00 pm at Rod Tonkin's place….

Division 5

Kel Sherson (NMRA Inc.-AR Div5 Superintendent)
Regarding January, February, & March meetings:-

Please refer to the 100% club, 'City of Sails Model Railway Club Auckland, New Zealand' report on page 39 for a report of activities in NZ.

Division 6

From David Orr (NMRA Inc.-AR Div6 Superintendent)
March meeting:-

Eight members & 1 visitor gathered at Peter and Mary Jackson's for our March meeting.

The gathering minus the photographer (Marcel van Eck) and the visitor (Mary Jackson)

Our Hostess , Mary, Drew the Raffle with Ainslie Brittain being the winner

The February meeting and report seemed to have been well received so we continued with that style of meeting.

David brought everyone up to date with ARC activities, specifically the status of using Microsoft Teams in lieu of Zoom, a Virtual convention planned for the June long weekend, and the Membership Continuity program, where members will be recognised for continuing their membership for 2 years, 4 years and 10 years.

David also advised the members of the outstanding Committee Member vacancy in ARC and of Adam Wuiske, the successful contender.

In the absence of Ron Solly and Ray Brownbill, David advised the meeting of the state of our finances and no changes to the Achievement Program within Division 6.

If you're not aware yet, the Adelaide Model Railway Exhibition will be going ahead this year. And Division 6 will be attending. We've been allocated space upstairs, at the eastern end, down in the lower section. The best spot in the place according to some of us! Our intention is to have NT Junction there, offering members of the public the opportunity of trying their hand at switching. We'll also have 3 tables with Division 6 members assembling, gluing, painting, building models. If you're planning on attending, keep an eye out for the roster which I'll be sending out soon. For our new members that haven't participated in the NMRA attendance at AMRE, attending the exhibition means spending most of your time at the NMRA exhibits. You will be allowed time off for good behaviour.

Having finished with the "official" business, we then went round the members, finding out what each has been doing these last few weeks.

Michael Robinson has been progressing his layout and can run some equipment on it. Special mention needs to be made of Ron Dunkley who has done an immense amount of work in the building of Michael's layout. Ron should consider applying for his electrical AP!

Neil Tonkin unfortunately couldn't make it to the meeting but asked Michael to show the meeting a product called Tacky Wax. This is another method of holding your people and other small items on the layout. If the small person gets knocked by someone's arm, the figure falls over and doesn't have its legs broken off!

Jane Robinson has been doing a lot of reading while she waits for action on her damaged shoulder. One book in particular she mentioned is by travel writer Tim Richards, who travels from one coast of Australia to the other, using all sorts of different trains along the way. The book is titled "Heading South".

David Teague has been participating in a South Australian N Gauge Society exhibition at Port Mall in Port Adelaide.

Vern Cracknell has been painting 2 more skyboards for Ray Brownbill's layout. Ray was so pleased with Vern's efforts last meeting that he conned… sorry, convinced, Vern to do another 2. After completing these, Vern was of the opinion that the first one was too busy so he set about softening it. As part of this process, Vern updated the PowerPoint presentation and donated a DVD of it to the Division library.

Vern also tested out the water-based Turps that Ray Brownbill advised us of last meeting and gave it the thumbs up. He managed to bring some brushes back to life using this product.

Marcel van Eck has been fitting the building he showed us last month into his layout. He's considering fitting models he builds into dioramas and then fitting the dioramas into his layout. That way, if he need to work on something, he can take the diorama to his workbench.

Ainslie Brittain has been working on a few projects, including cataloguing his rolling stock and whilst doing that, speed matching locomotives, a task he says has been taking forever! Along the way, he discovered a Broadway loco with a split axle which he repaired by supergluing sleeves on to the axle. He's also been adding lights in his cabooses (cabeese?).

Peter Jackson has been working on his operations with new rolling stock cards made by a friend with a photo of the piece of rolling stock provided by Peter and added to the card. He's also spent some time working on JMRI's Panel Pro. A reasonable effort is required to provide Panel Pro with the details of your layout but Peter thinks the effort is definitely worth it.

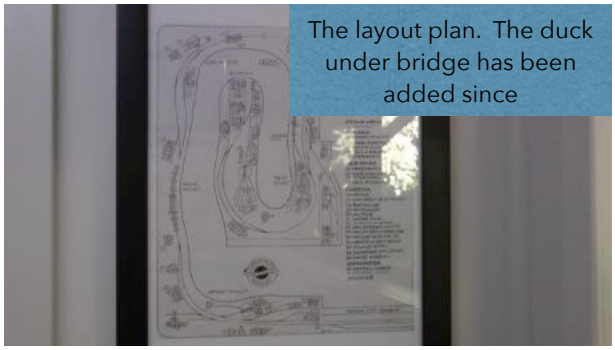
Peter also advised the group about a product he's been trailing to keep track clean – NO OXID, which he discovered when watching a YouTube channel – Ron's Trains & Things. This is a product that looks like grease and is applied very sparingly. But it can't be used if your locomotives have traction tyres. Apparently, they'll be destroyed.

Ainslie then advised that a friend of his had tried something similar and found that his locos couldn't pull his trains up his grade, a task they could do previously with ease. So the friend spent the next 6 months removing the product from the track and all the wheels of his rolling stock.

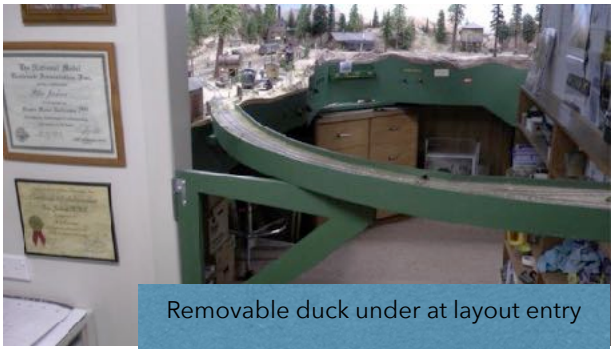
Whilst on the subject of track cleaning, Ainslie advised that CRC now release a product for cleaning electronic components called CO.

After all this, it was time to sample some of Mary's delicious scones with jam and cream. Some members had to sample more than once!

The meeting concluded with a look at Peter's layout…..



The layout plan. The duck under bridge has been added since



Removable duck under at layout entry

Nevada City - staging

Grass Valley showing the blue led lighting

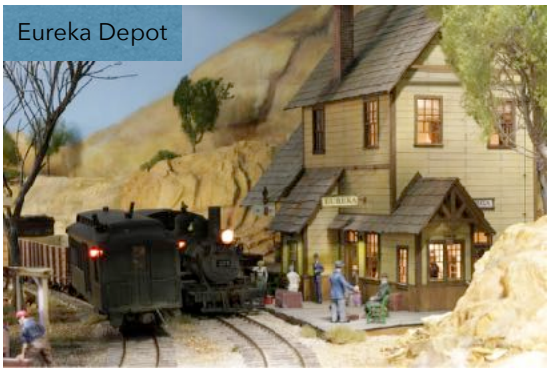
This small structure serves the needs of the engine crews based in Grass Valley

Empire Mine in Marysville

Brown's Brewery in Grass Valley

Cedar Kress township

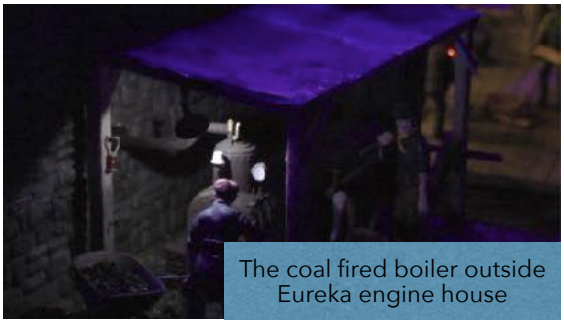
General Mercantile store in Cedar Kress at night time

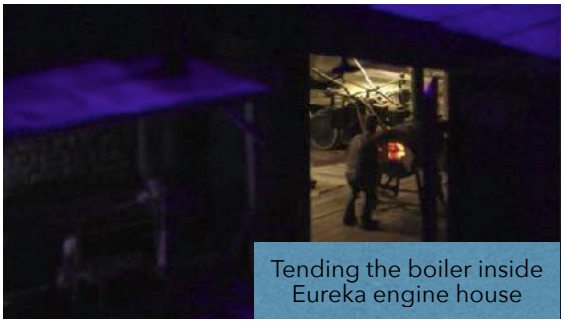


Eureka Depot


Selling tickets to passenger in Eureka


The engine house at Eureka


The coal fired boiler outside Eureka engine house


Tending the boiler inside Eureka engine house

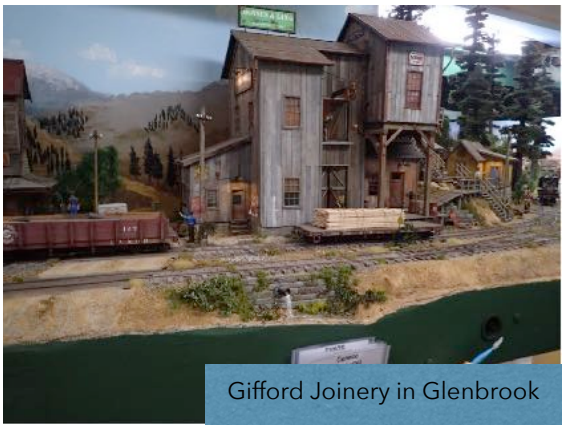

Night watch at Eureka Depot

Glenbrook which was built into a window opening


Glenbrook

Glenbrook siding at night


Moyses & Lang Machinery in Glenbrook


Gifford Joinery in Glenbrook

Total Concentration by the builder

From David Orr (NMRA Inc.-AR Div6 Superintendent)

April meeting:-

Thirteen members gathered at David and Maggie Orr's for our April meeting. We welcomed 2 members of Adelaide Model Railroaders, our recently joined 100% NMRA club, namely, Jeff Barclay, the AMR President and Paul Wright, , to their 1st NMRA meeting.

Not much has happened at ARC since our last meeting so David brought those that hadn't been at our March meeting up to date with ARC activities.

Ron Solly, our retiring Treasurer, advised the meeting of our financial state.

Ray Brownbill, our Achievement Program Asst Manager, advised the meeting of the status of our members with regards to the Association Volunteer achievement. Ray went on to explain how the Achievement Program works and the goal of Master Model Railroader.

David advised the meeting that the DVD produced by Vern Cracknell on how to paint clouds and make your skies come alive, has been added to the library.

On the subject of AMRE, the Adelaide Model Railway Exhibition, David advised the meeting that only 5 members have indicated that they will be attending. We need more. We will be exhibiting NT Junction with the goal of attracting members of the public to "have a go at switching". We'll also have 3 tables with various demonstrations of modelling going on. We would like to have at least 1 member at each table at all times, demonstrating and/or answering questions on construction, painting, decoder installations, etc, all the facets of model railroading.

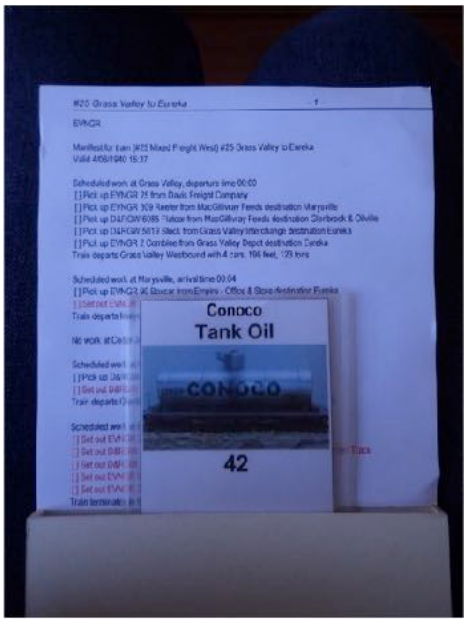
Speaking of NT Junction, it has now been converted to DCC. Timber and bolts have been purchased and legs created. Unfortunately, some of the buildings require repair. If you'd like to help, please let me know.

David, Ray Brownbill and Ron Solly have been assisting the widow of a deceased member sell off the member's collection. This task has now been completed but there are some items leftover. On display were a number of buildings which were offered to the members present.

Having finished with the "official" business, we then went round the members, finding out what each has been doing these last few weeks.

Vern Cracknell is in the process of designing a new layout. But he still has time to create a scene with a couple of animated log cutters.

Ray Brownbill has been creating scenery and painting locos on his Wild Creek RR. His next project is to blend in the skyboards that Vern painted.



Peter Jackson is continuing the development of his operating sessions using car cards, switchlists and JMRI Operations Pro.

Ken House watched and reviewed the Haebich Files DVDs. His review is follows;

THE HAEBICH FILES

NMRA Division 6 library DVDs numbers 237 & 238

A review by Ken House

The Haebich Files are a four disc set in two covers. A list of contents is written on the DVD covers. The videos were filmed during the 1980s and many filmed in 1984 which made them very interesting to me because 1984 is the year modelled on my home South Australian freelance/prototype layout the Kanunda & Emu Flat Railway. Some of the videos are as late as 1988.

They give the viewer a good look at SA railways in the period, seeing a good range of rolling stock, most trains have brake vans. Mostly 8300 class brake vans in the lemon twister livery but some still painted brown and some painted white. It is also useful to see the line side scenery and road vehicles of the time.

The filming was done at various locations around Pt Adelaide including Ethelton, Peterhead, Birkenhead, Snowden's Beach, Osborne and Outer Harbor. Other locations include the Steam-ranger depot at Dry Creek, Islington, Dudley Park, Keswick, Adelaide, the line up to Robertstown, the Adelaide Hills, Victor Harbor, Murray Bridge, and places on the line going to the South East.

The Australian National diesels shown are the 500, 700, 800, 830, 900, 930, BL, CL & GM classes and ex SAR 350 class in a mix of red, mustard pot and green liveries. The V-line diesels seen in orange and grey as well as blue and yellow are the C, G, & X classes. There are a number of light engine movements.

Steam Ranger's ex SAR steam locomotives shown are 4-8-4 520, 4-6-0s RX 207, RX 224 and 4-6-2 621. There is a nice sequence showing 621 running parallel with NWSGR 4-6-2 3801 from Keswick to Dry Creek.

There are a lot of shots of red-hen railcars a few of the 2000 class Jumbos and one or two of the 3000 class suburban railcars as well as Bluebird railcars.

There are a number of shunting sequences videos, often not shown in railway DVDs, These include 907 & 909 shunting the stonie at ICI's plant at Osborne an 800 shunting the cement works at Birkenhead, 500s shunting Overland carriages at the old Adelaide railway station and 351, in light blue livery, shunting at the Steam-Ranger depot.

H class trams are also videoed in Victoria Square and going into the tram barn in Angas St. We even get a look inside the tram barn.

Other notables are a trip to Robertstown by RX 207, three GMs on the Ghan, plain stainless steel Railways of Australia carriages, and items from the commercial TV news services about the opening of the Keswick passenger terminal and the last train to Victor Harbor.

However the downside is that it is all filmed using an early camcorder and VHS tape so the quality often leaves much to be desired. Colours appear to be washed out and there are many distant shots where all we can see of a train is a blur. One of the worst is the Troubridge going down the Port River at Snowden's beach. The ship is just a blur on the horizon for too long. Also a number sequences have been uploaded in a wider format than they were filmed distorting the subject matter, for instance, the whole of RX 207's trip to Robertstown was uploaded in a wide format making RX 207 look much longer than it really is and, front on, the boiler looks oval instead of circular.

We need to remember this video was filmed using the equipment available at the time. It is unfortunate that some was incorrectly uploaded but still it is a treasure-trove for those of us interested in modelling SA in the 1980s.

John Prattis showed the meeting the module electrical connectors as recommended by David North. During his holiday in Tasmania, he came across a drinks coaster and just had to have one! John also showed the meeting the Golden Spike 150th Anniversary Boxcar and related his time at the Golden Spike Ceremony at Promontory Point. John is already booked to go to the NMRA Gateway Convention in St Louis in August this year.

In our previous meeting, Marcel van Eck showed us his progress on the buildings he has been scratchbuilding. He mentioned last month that he preferred to create a diorama with his buildings in the diorama so that if he needed to work on them, he could do so at his bench rather than on the layout. Today, Marcel showed the meeting the finished product.

Paul Wright (he likes being called Mr Right -) has been busy assembling, painting and decaling VR U vans and GY wagons.

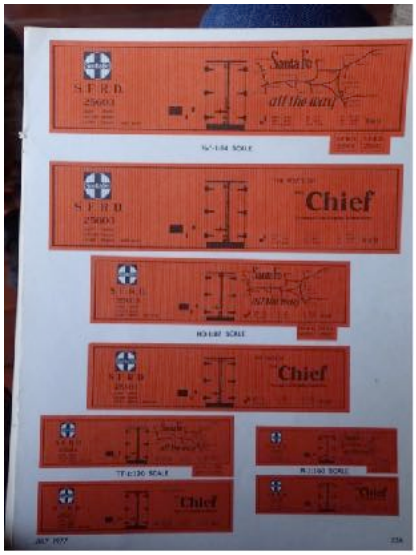
Ron Solly is busy with his train orders for his Devan & Summersett Railway but his preferred occupation is making Spratt & Winkle couplers for his P4 club's 0 scale layout. (Just joking Ron!)

Ainslie Brittain told us last month about the excitement he was having with fixing an axle on a Broadway Blueline locomotive. He told us he managed to find a gear for the axle, with the correct diameter and number of teeth. The only issue was the centre hole was a little small. So using a reamer which he hasn't used for many years, Ainslie was able to gently ream the hole to make a snug fit.

Bob Bevan has been successful in selling his collection of Fleischmann rolling stock. He's been working on his layout with help from a couple of friends but he's having issues with a troublesome 800 class SAR locomotive. When initially put on the layout, the loco performs as it should. But after a minute or so, the loco says it's tired and goes very slowly.

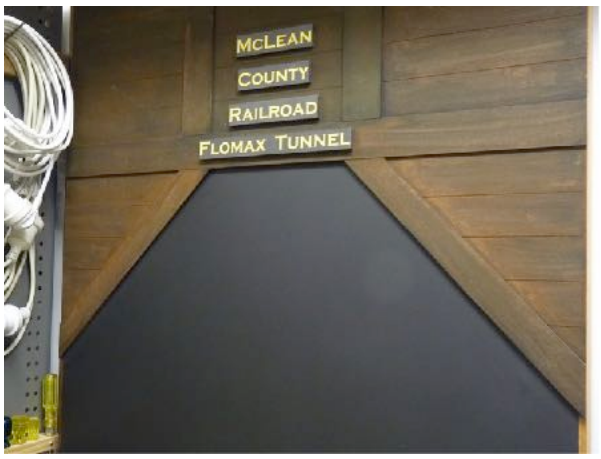
Rod Stewart has been busy wiring his layout.

Jeff Barclay showed the meeting an NMRA Silver Anniversary boxcar from 1960. He also showed a collection of rolling stock car sides made of heavy card which were designed to be added to the sides of scratchbuilt rolling stock. These were available from the NMRA Bulletins of 1974 – 1979.



Our next meeting will be at Bob Bevans's 26 Cameron Tce, Malalla on the 14th May 2022.

The meeting concluded with a look at NT Junction and David's layout, the McLean County RR.....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McCONNELLSBURG


EXPORT
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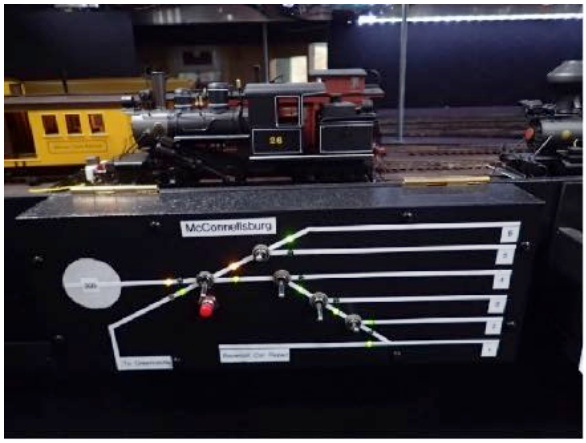
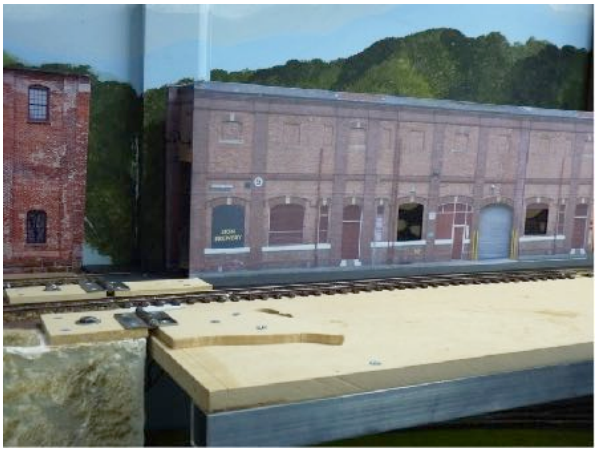

McConnellsburg


BROWNBILL MECHANICAL REPAIR


McCONNELLSBURG




THURMONT


CASCADE

Division 7

John Arrowsmith (NMRA Inc.-AR Div7 Superintendent)
April meeting:-

Meeting Attendance:

21 attendees
3 apologies

Awards:

- David O'Hearn - MMR
- Paul Morrant - Model Railroader Author (Grand MMR)

Well believe it or not, here we are flooded in – again. But this time being determined as I am to actually get to an NMRA meeting, I managed the trek via Mt Victoria all the way up to David O'Hearn's place near Newcastle. So, leaving at 9am I get to David's just before 2pm in time for the meeting start. Yay!

I am very glad I got there. We had a great meeting, and everyone has been very supportive.

David O'Hearn, our Region AP manager was our meeting host. Thank you David for all the effort you went to, and for the privilege of viewing your layout.

Paul Morrant earned his Model Railroad Author AP, presented by David O'Hearn. Paul has now achieved every AP award. Congratulations Paul. This is an amazing effort.

David O'Hearn also achieved his MMR. In Dennis' absence, Gerry Hopkins kindly stepped in to present David his award. After viewing David's layout, it has been well earned. Many of the structures on David's layout are either kit bashed or scratch built, and his layout was a real treat to see.

Meeting briefs:

- APs presented (as described above)
- Trevor had old railway calendars free to a good home
- Bob Best won the raffle
- Discussion on Div 7 Mini convention
- Update on US online Magazine
- Discussion about social media and attracting new younger members on platforms such as Facebook and Instagram
- Discussion on DCC & Arduino technology. Show of hands for interest in Arduinos and how they work
- Old models, kits, decals and modelling tools sold to raise money for the division.
- Apologies: David North, Randall Jones & Paul Volkart

Thank you, Gerry, for the photos of David's layout:….


Containerterminal


SHORT NORTH


Containerterminal

Division 3 *(Continued from page 60)*

From Peter Kendall (NMRA Inc.-AR Division 3 Superintendent)
April Meeting:- (*Report Supplied by Rod Hutchinson)*

The April Div 3 meeting was held on Sunday 24th April. A great day was spent out in Sunbury at the home of one of Australia's greatest modellers, Laurie Green and his wife Rosemary. For train spotters the home overlooks the Emu Bottom Wetlands and Jackson Creek to a distance ridge supporting the railway line to Bendigo and Mildura.

For those wanting to view the modelling history of Laurie a small museum of structure buildings made over the many years in model railway modelling. His modelling room houses his rather large stock of Denver & Rio Grande NG locomotives and rolling stock.

Around 14 members and guest attended what turned out to be a beautiful Autumn day in a beautiful part of Victoria.

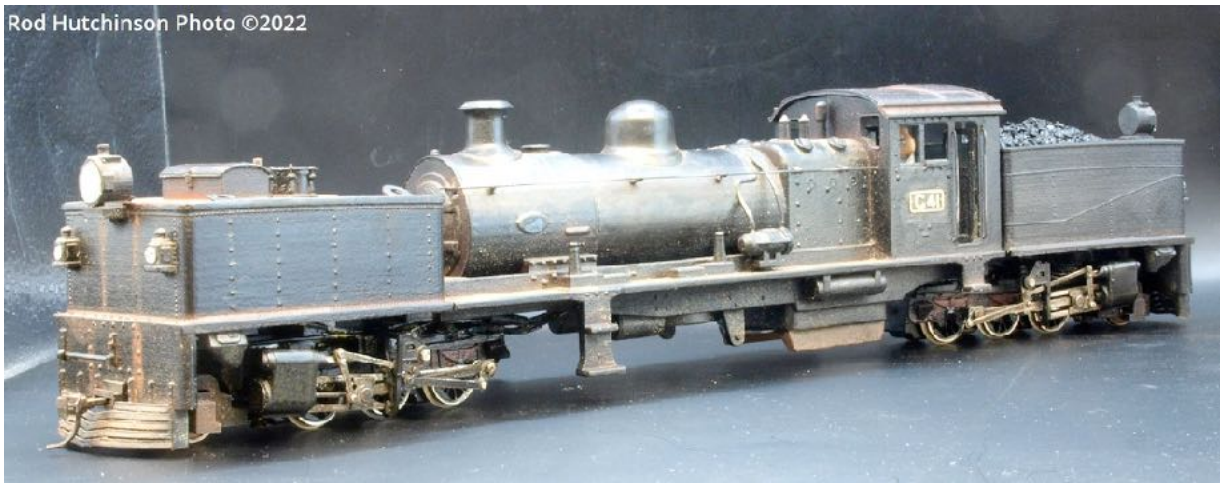
Attending members passed on their very best wishes to Paul and Kath Richie with their health challenges. Paul, you have the support of all our members during this difficult time. At time of writing Kathy has passed away.

Gavin Hince has kindly agreed to host our May meeting. The final date will need to be confirmed with Gavin. We hope that Mick Bennie (new prospect) may be also be able to host a meeting later in the year. We now have hosts for all our monthly meetings except July & Sept. Please contact Peter Kendall if you would like to host a meeting.

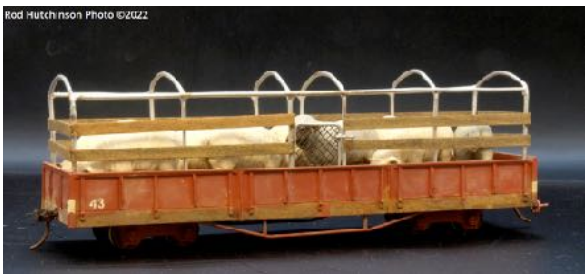
Grant McAdam provided an impromptu report on the Diamond Valley Show. Models on display were all O scale narrow gauge……

Dan Pickard – On30 Logging Disconnects

Gavin Hince – On30 VRNG NB & NBS passenger stock, all scratch built



Mick Bennie – O-16.5 VRNG G41 from Shapeways.



Mick Bennie – O scale removable wagon loads

Peter Kendall – Montana Paints – Flat finish spray cans

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Division 8/9 (Northern NSW)

From Ian West (NMRA Inc.-AR Div8/9 Superintendent)

April meeting:-

Unfortunately, our April meeting was cancelled due to lack of numbers, and members in isolation with covid.

We couldn't change the meeting to May as Col South, the April host, is unavailable. The next meeting will now be on Sunday 19th June at the home of Paul Baker, 1 Palm Tree Drive Boambee.....

Division 10

Pat Britton (NMRA Inc.-AR Div10 Superintendent)
Regarding March & April meetings:-

There has been no report received for the March / April period from Division 10….

What's in the Next Edition

- *The cupboard is still empty with regards to the availability of articles about MEMBER'S LAYOUTS, that could be used as the 'FEATURE ARTICLE' in future editions of our Magazine. So your opportunity is still available to send in an article about your layout and see your Model Railroading Masterpiece, 'on the front cover', and shown between the pages of MainLine.*
- *Arthur Hayes concludes his article which he commenced on page 6 in this edition, where in Part 2 of 'Scratch Building in Styrene', he further outlines how to build structures in styrene.*
- *Paul Morrant - MMR shares his knowledge on how he approached the Motive Power AP, which was a necessary module to complete in his journey to qualify as a GRAND MMR.*
- *Erik Bennett built a Diode Matrix system to switch multiple turnouts in a yard that were controlled by two-coil switch machines, so turnouts aligned for a particular track, by pressing one button. In his article, Erik describes how to build his Diode Matrix.*

& lots more as well ……