

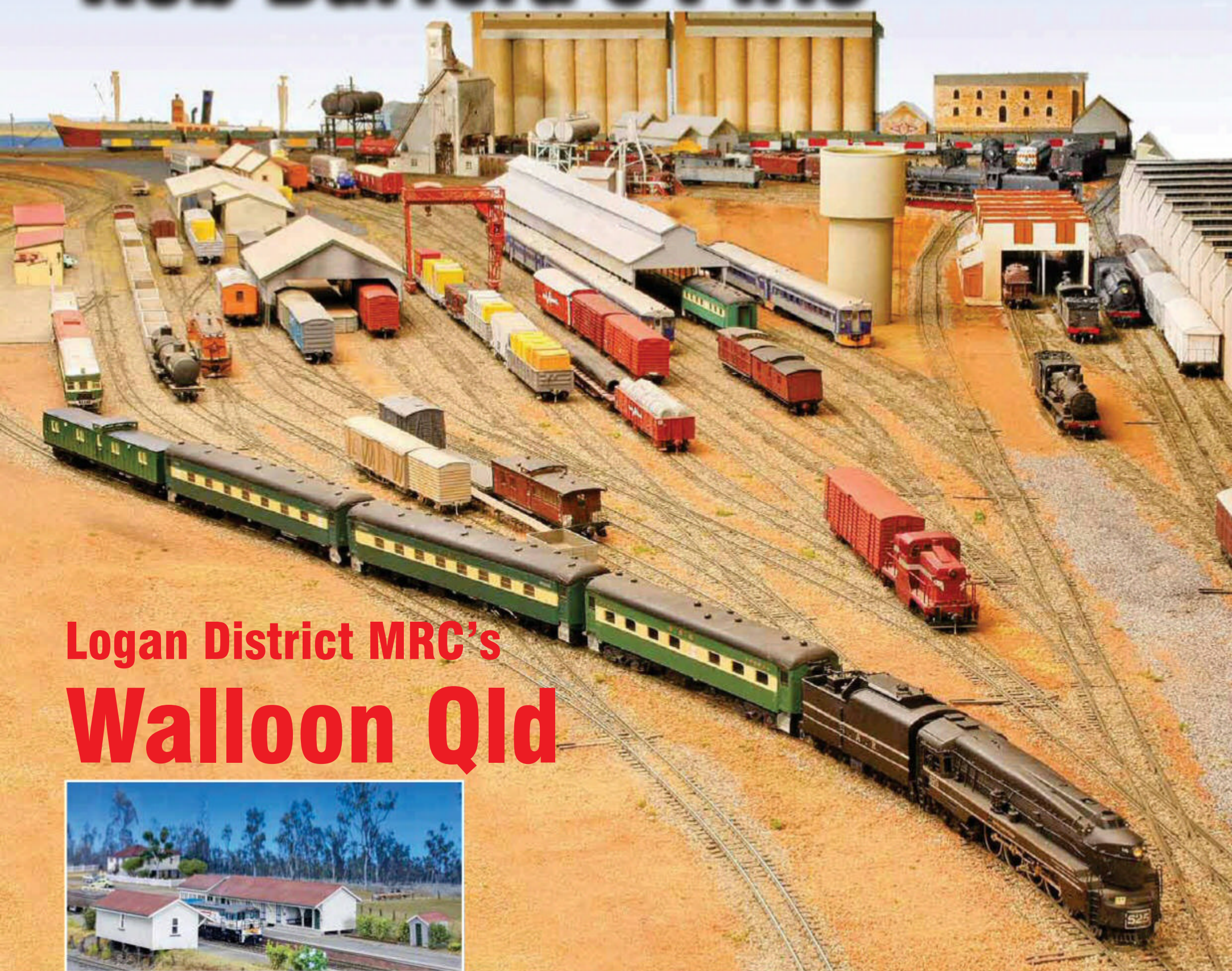
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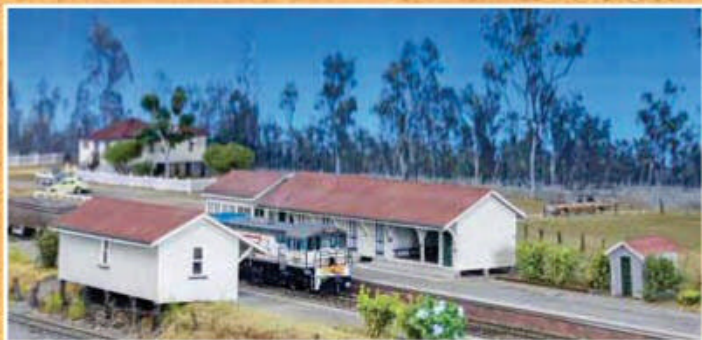
MODEL RAILWAY

MAGAZINE

Rob Burford's Pirie



Logan District MRC's Walloon Qld



Build a Countrylink RDH coach
Aurizon's QQWYs
Micro Layouts • Domestic containers
Recent Releases • Mailbag • AMRM News

Issue 351 Vol. 30 No.6

ISSN 0045-009X



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GAUGE
H0
1 : 87

Victorian Railways D3 Class Locomotive



In Stock

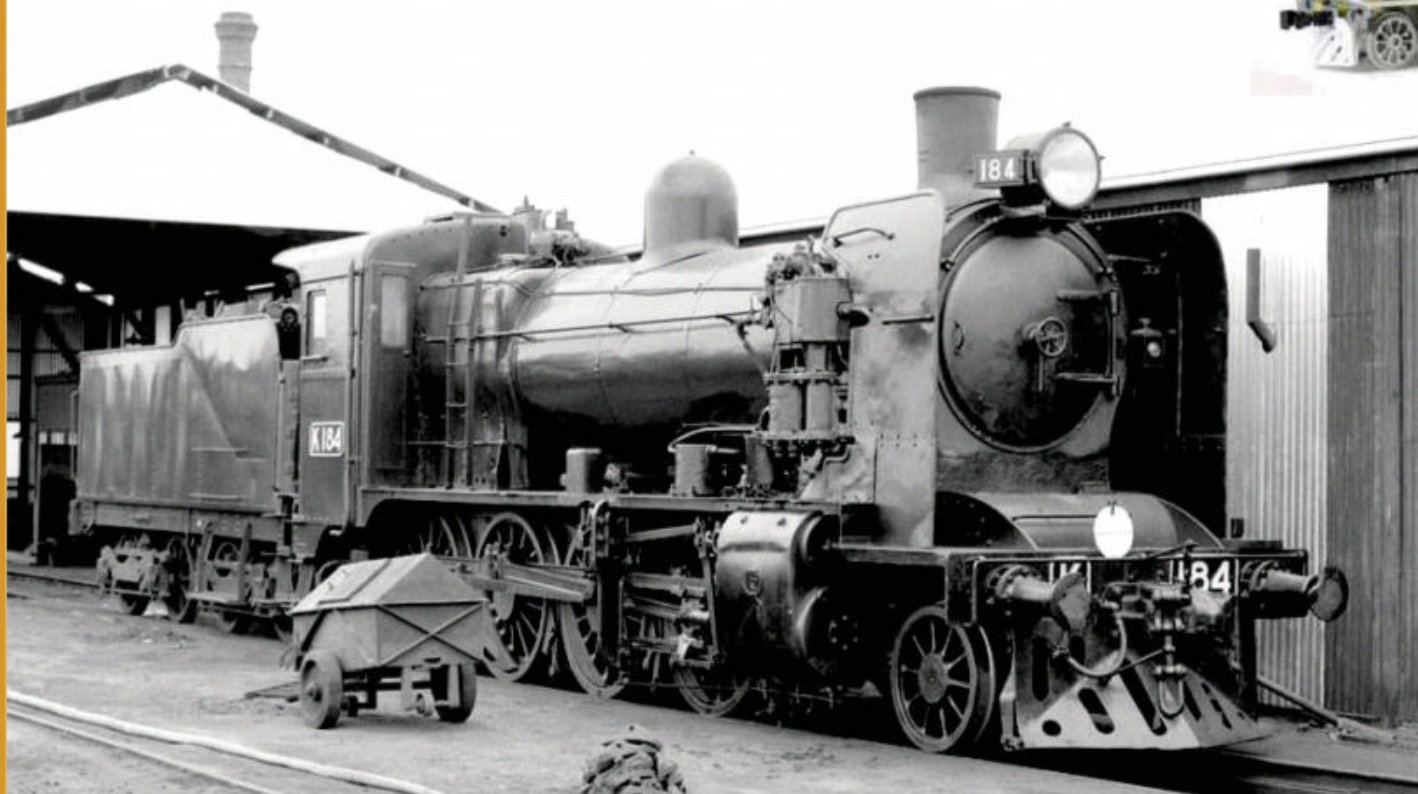
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DCC - SOUND
ESU LOKSOUND
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Victorian Railways K Class Locomotive



After a thorough evaluation by our engineering team, the VR K class model is being upgraded to the same standards as our D3 model. Fortunately, the D3 and K class share the same tender type, so the engineering changes are limited to the engine unit only. We expect running samples early 2022 and pending production availability, we anticipate delivery in Qtr3 2022.

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Eureka Models pre-order customers:
Please contact Eureka Models before 31.12.2021 to confirm K class running number selection.
These need to be finalised with the factory by January 2022. numbers.

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Victorian Railways D3 Class Locomotive with Flare Top Tender

In Stock

SDS Models have undertaken the production of two dedicated, and era specific, running numbers from this period. The engine units are based upon the Phoenix Reproductions model mated with our own low sided tender. These models were produced concurrently with the Phoenix Reproductions units and are now in stock.



21

GAUGE
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South Australian Railways 900 Class Locomotive

*Arriving
Mid 2022*



We will produce 4 body variants
and cover all paint schemes.



FULL THROTTLE
DIESEL

21



NSWR LHG / GHO - Brakevan

*Arriving
Late 2021*



SRA 81 Class Locomotive

The SRA 81 class model is in production.
First to arrive are the earlier single door variants.



FULL THROTTLE
DIESEL

21

*Arriving
Early 2022*



South Australian Railways 700 Class Passenger Cars

*Arriving
Mid 2022*



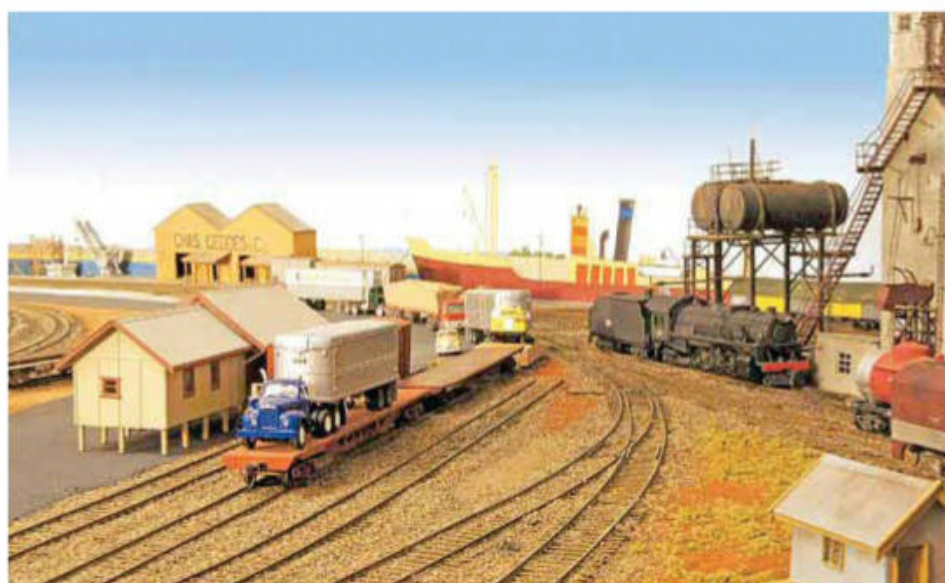
SAR 700, 750 and 780 Class passenger cars will be produced with the original and modified window frames.



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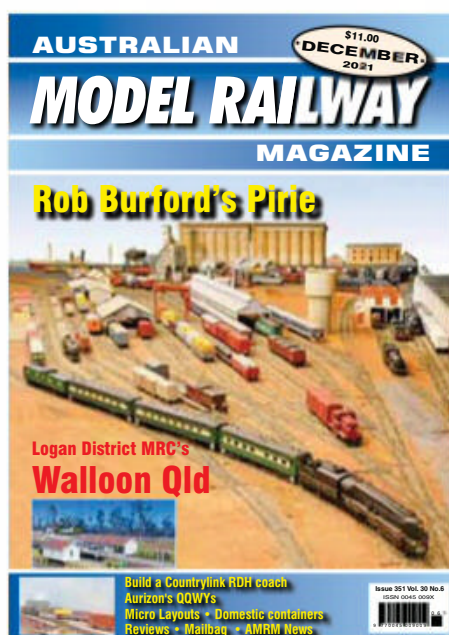
The AMRM team create realistic backdrops using aerosol paints.

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ON THE COVER:
South Australian Railways
4-8-4 steam engine
No. 525 leads a Adelaide
bound broad gauge
passenger service from
Ellen Street past the triple
gauge goods yard on
Rob Burford's Pirie layout.
Photo John Wilson.



Australian Layouts; mega to micro

Australians are very lucky, as a big country with a low population, space is not that much of a concern (overall). However, when it comes to layout construction, this space competes with other 'family' priorities.

A large proportion of the Australian population lives in major cities or larger regional centres.

In the urban environment, there has been a move to more compact living including, multi floor living, units and apartments.

One thing is for sure, for urban modellers usable space is shrinking.

Traditionally Australian modellers based on their usable space, can be divided into a few categories.

The home layout with multiple stations – locations, a crew is required to fully operate it and is usually housed in a purpose-built location.

Medium to large exhibition layout, that can be operated at its home location, and is capable of continuous operation.

Medium to small layout, that is a home or exhibition layout, with or without continuous operation.

The club modeller, who does not have a home layout. They have collections of rolling stock and regularly operates their stock on larger private or Club layouts.

Finally, there is a newcomer, the micro layout (see Michael Baum's article in this issue).

I am not going to steal Michael's thunder, but there are some points to discuss.

In countries such as the United Kingdom (UK), the average household space that could be dedicated to a layout are significantly less than Australia's. If you attend an exhibition in the UK, you will see some outstanding and truly ingenious layout designs, where every inch of space is efficiently utilised.

The knock-on effect is that the UK market has developed to cater for this demand with off the shelf solutions, such as small layout base board laser cut kits etc.

It might be time for the Australian market to look at these trends. There could be multiple versions, micro, small to medium, or maybe towards larger club layouts.

I personally know a lot of modellers that fit into the club modeller category.

Maybe the club modeller's first home layout could be a micro layout?

I have started building a small layout based on a location in Port Adelaide, so even 'big' layout builders such as myself can be bitten by the small layout bug.

It is extremely interesting to contemplate where micro layouts might fit into the future Australian modelling landscape.

Have your say at:
amrmfeedback@tpg.com.au

Layouts such as 'Lower Exbury' are par for the course in the UK, compact and well detailed, at Perth (Scotland) exhibition in 2017. Photo Scott Fitzgerald.



SOUTHERN CROSS MODEL RAILWAY ASSOCIATION

The Annual Membership Fee for SCMRA is \$66.00 from March to February and the Joining Fee is \$20.00, which includes the membership data pack. Applications must be received by the first of the odd month to meet our mailing list deadlines. For applications received between the 2nd September and the 2nd January the Half Annual Fee is \$33.00 plus the (\$20.00) Joining Fee (does not include October issue of AMRM). All fees are GST Inclusive. Membership entitles you to participate in the activities of the Association, to receive AMRM and our regular news-sheet *Booster*. Standards, Recommended Practices and Information Sheets covering model railway practice are included in the joining kit together with a vinyl ring binder and are also issued at regular intervals. For further details write to the Secretary or contact the divisional representative. Meetings are usually organised on the second Saturday of

each month in New South Wales. For further details and location please contact the divisional representative. Membership services include magazine binders and photocopies of articles from out of print issues of AMRM at discount prices.

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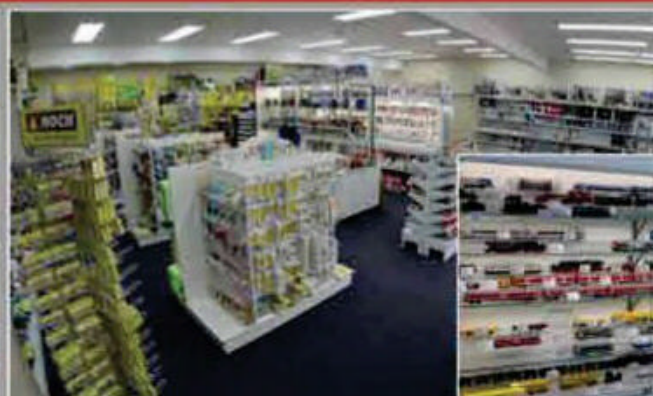
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We are presently finalising the renovations at the new shop and hope to be set-up by the end of November 21. Our opening times until early next year will be Thursday 5.30pm - 8.00pm & Saturday 8.30am - 12.00pm.

We plan to increase the range of products we manufacture and stock, with a focus on supply of materials for modellers in a number of scales.

Consequently we are changing the name of the Hobby business to "ScaleModelco" and the hobby shop will be named "Scalemodelco Hobby Centre" to appeal to a broader range of modellers. We will continue with ModelOkits as one of our O scale brand names. We are hoping to make visiting our hobby shop more of an experience with more modelling displays and from time-to-time modelling demonstrations and talks.

We will be establishing a new website and online store at www.scalemodelco.com.au. This will not occur until 2022, so until then we will continue under our existing website at www.modelokits.com

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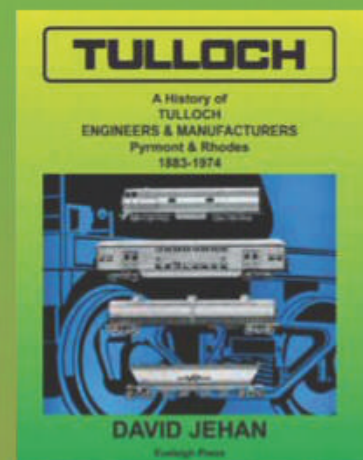
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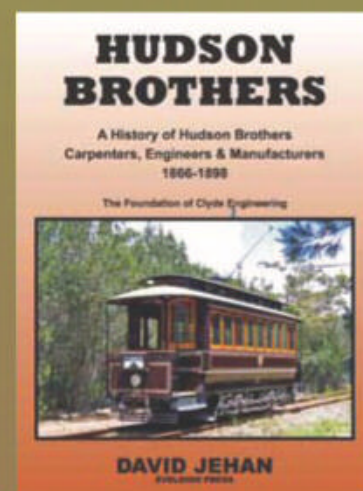
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Photo: Howard Armstrong



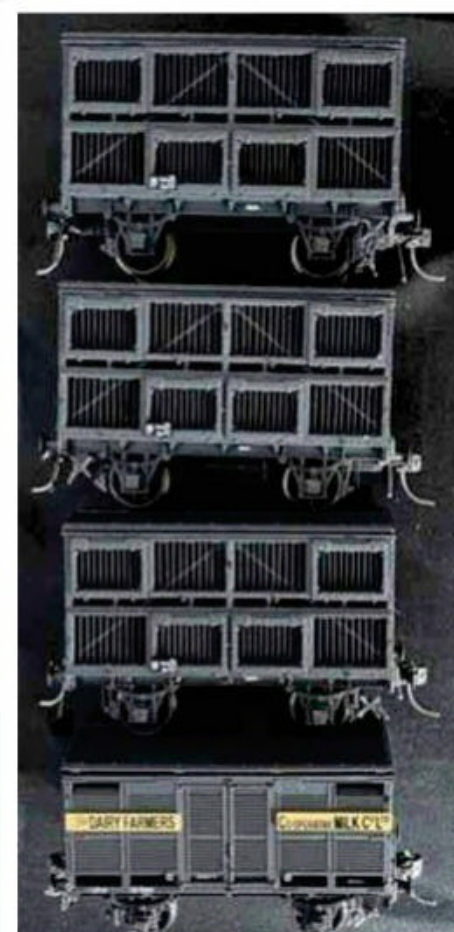
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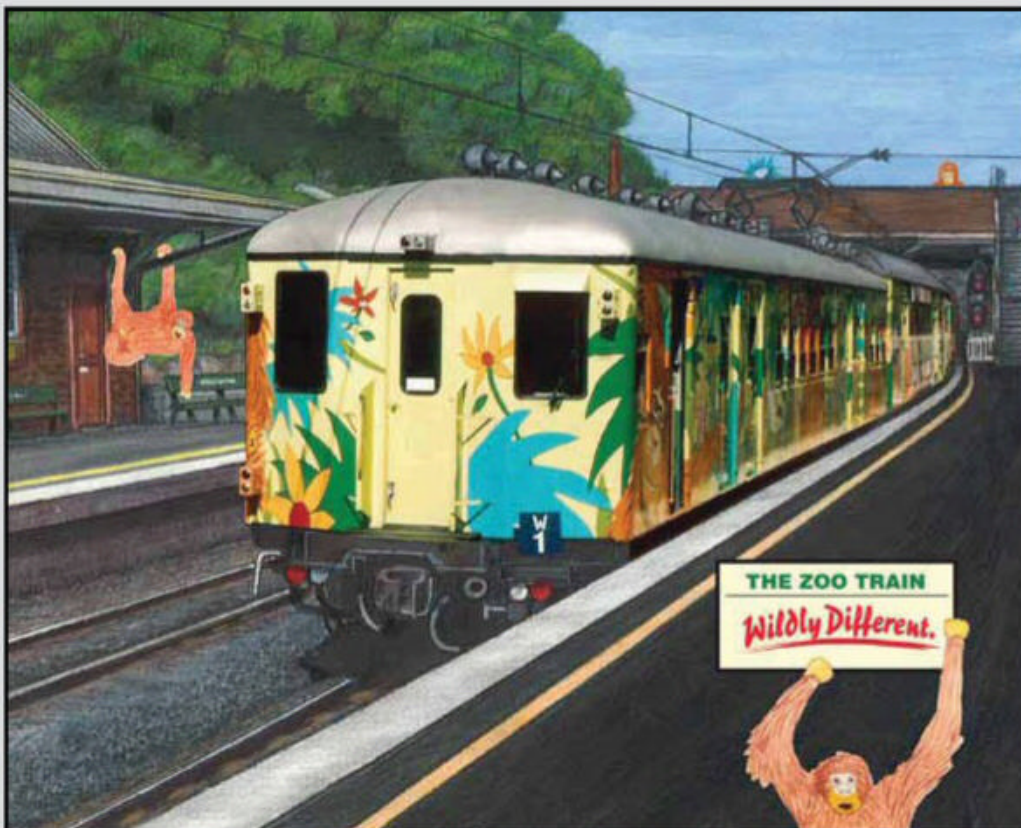
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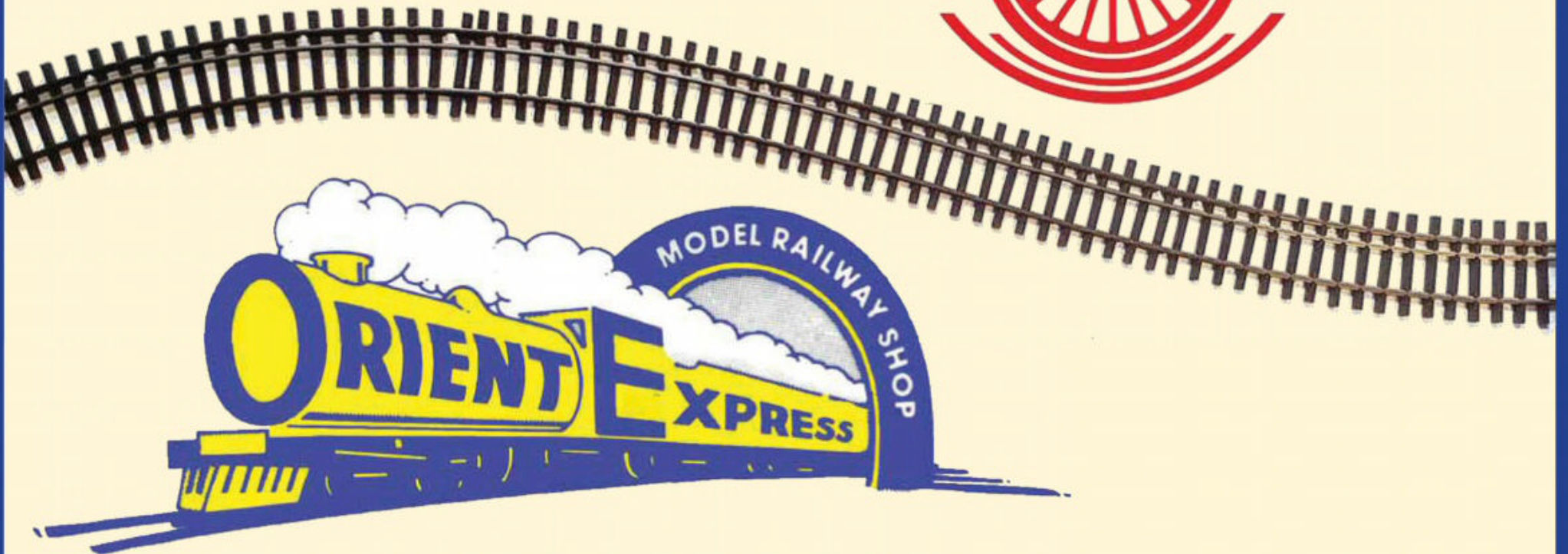
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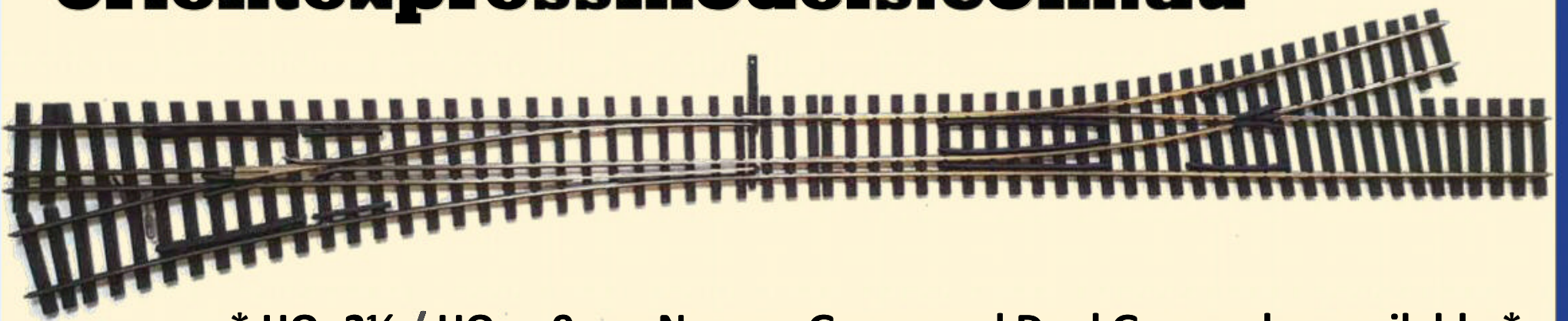
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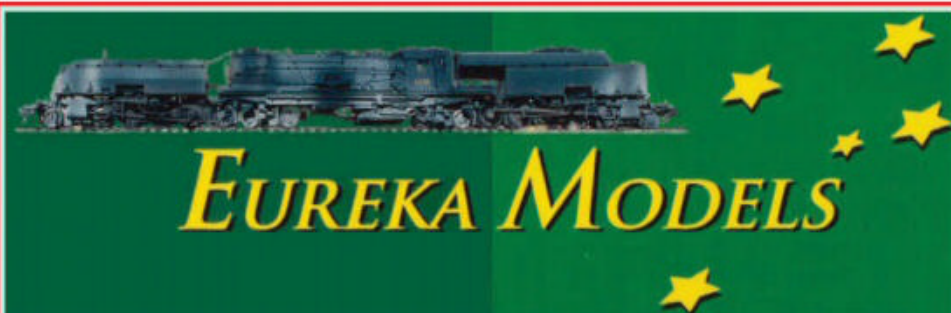
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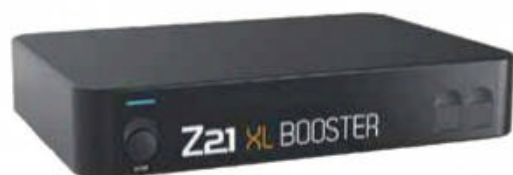
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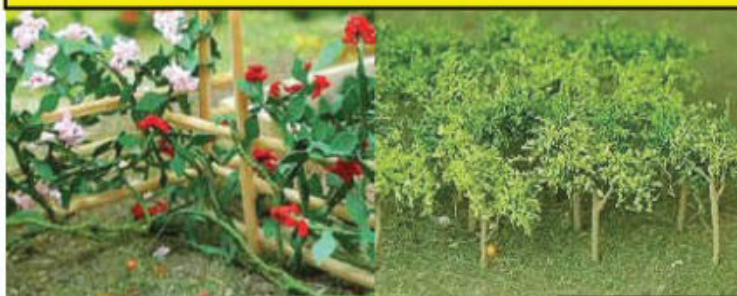


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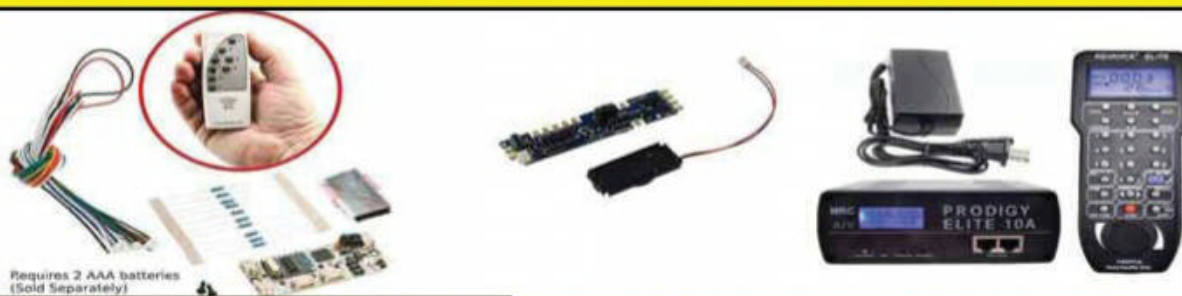
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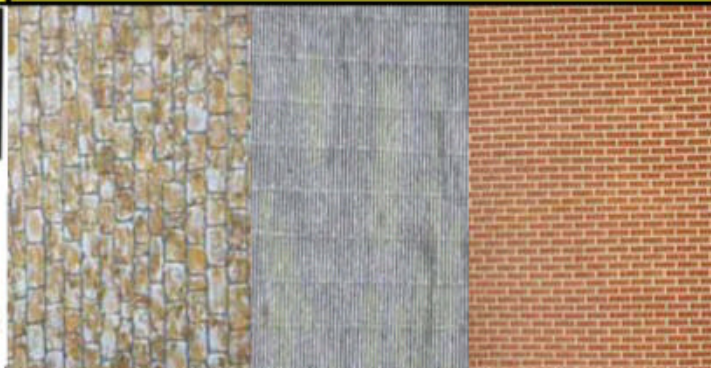
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Pirie

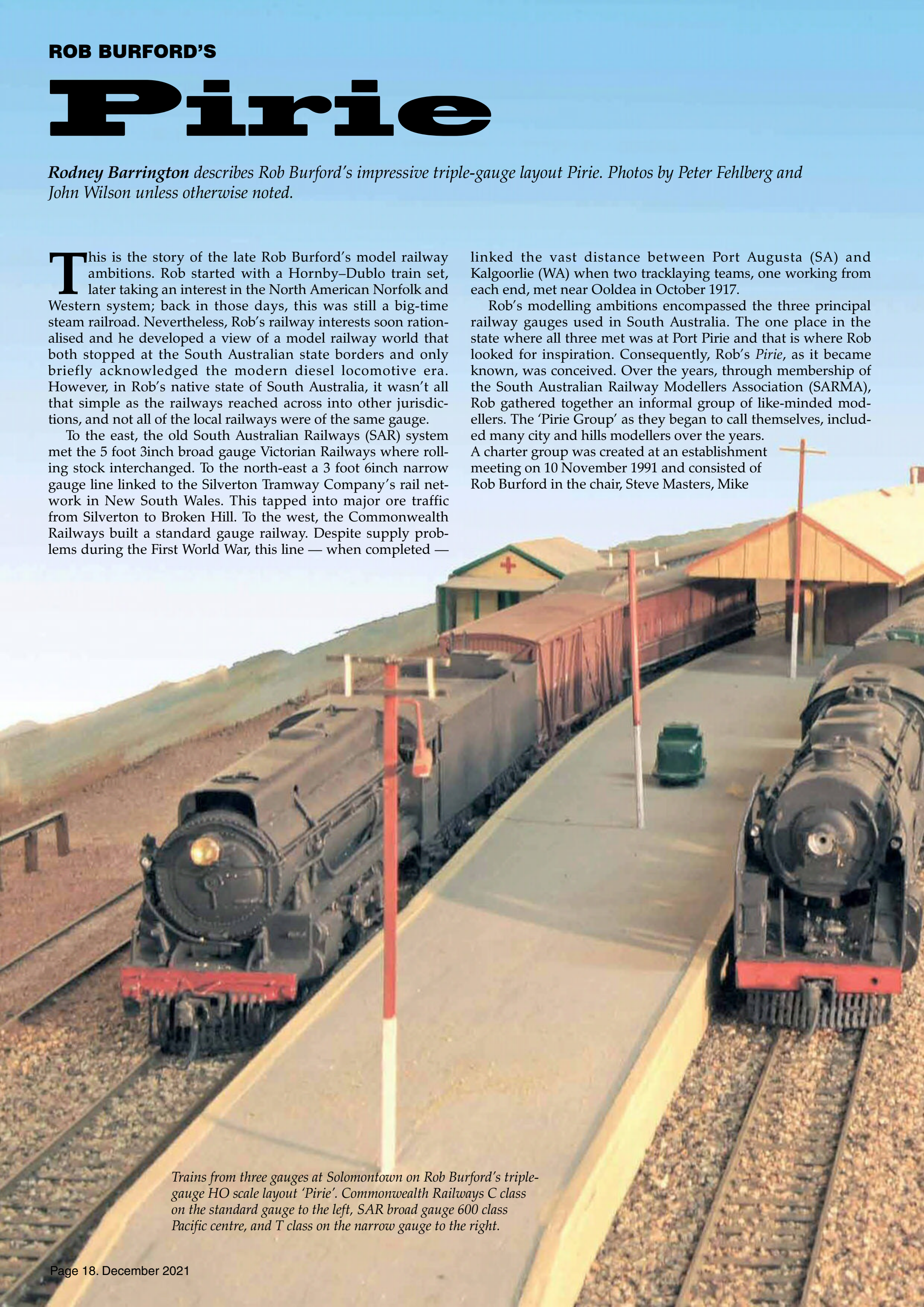
Rodney Barrington describes Rob Burford's impressive triple-gauge layout Pirie. Photos by Peter Fehlberg and John Wilson unless otherwise noted.

This is the story of the late Rob Burford's model railway ambitions. Rob started with a Hornby–Dublo train set, later taking an interest in the North American Norfolk and Western system; back in those days, this was still a big-time steam railroad. Nevertheless, Rob's railway interests soon rationalised and he developed a view of a model railway world that both stopped at the South Australian state borders and only briefly acknowledged the modern diesel locomotive era. However, in Rob's native state of South Australia, it wasn't all that simple as the railways reached across into other jurisdictions, and not all of the local railways were of the same gauge.

To the east, the old South Australian Railways (SAR) system met the 5 foot 3inch broad gauge Victorian Railways where rolling stock interchanged. To the north-east a 3 foot 6inch narrow gauge line linked to the Silverton Tramway Company's rail network in New South Wales. This tapped into major ore traffic from Silverton to Broken Hill. To the west, the Commonwealth Railways built a standard gauge railway. Despite supply problems during the First World War, this line — when completed —

linked the vast distance between Port Augusta (SA) and Kalgoorlie (WA) when two tracklaying teams, one working from each end, met near Ooldea in October 1917.

Rob's modelling ambitions encompassed the three principal railway gauges used in South Australia. The one place in the state where all three met was at Port Pirie and that is where Rob looked for inspiration. Consequently, Rob's *Pirie*, as it became known, was conceived. Over the years, through membership of the South Australian Railway Modellers Association (SARMA), Rob gathered together an informal group of like-minded modellers. The 'Pirie Group' as they began to call themselves, included many city and hills modellers over the years. A charter group was created at an establishment meeting on 10 November 1991 and consisted of Rob Burford in the chair, Steve Masters, Mike



Trains from three gauges at Solomontown on Rob Burford's triple-gauge HO scale layout 'Pirie'. Commonwealth Railways C class on the standard gauge to the left, SAR broad gauge 600 class Pacific centre, and T class on the narrow gauge to the right.

Partington, John Wilson, the late John Page and Rodney Barrington. Over the years other modellers joined the twice-monthly Friday night sessions. These included Terry Jomartz, Peter Mühlhäusler, Peter Fehlberg, John Gordon, Greg Winner, Wayne Hoskin, Nigel Gardner, Glen Boerth et al.

Background — the Gauge Problem

It is worthwhile digressing to describe how these three railway gauges came to meet in one location. The first railway at Port Pirie was a narrow gauge developmental line that opened in 1889. It soon stretched inland to Cockburn on the New South Wales border, where it met the privately-owned Silverton Tramway Company line, transporting silver, lead and zinc ore from the Broken Hill mines. A smelter was built at Port Pirie adjacent to wharves at the north-western end of town that continues to thrive to present times. In 1937 the Commonwealth Railways (CR) standard gauge reached down from Port Augusta and the South Australian Railways broad gauge came south from Adelaide via Redhill. On the outskirts of Port Pirie (at Solomontown), known in the railway timetable as Port Pirie Junction, all three gauges met and a cross-platform interchange was built to connect the two new railways. Interstate passengers

travelling between Adelaide and Perth no longer needed to travel via Terowie and Quorn on the old narrow gauge route. By 1970 much of the narrow gauge system had been converted to standard gauge. Now, Port Pirie is served only by standard gauge ore and grain trains. Passenger services and interstate freight all now bypass to the east via Coonamia.

Layout Design

Rob's early school teaching career — like most young teachers — was nomadic and involved living in various rented departmental houses. An early appointment was at a one-teacher school at Woocalla, a siding on the Trans-Australian line where Rob first took a serious interest in the Commonwealth Railways.

Finally, in the early 1980s, he was able to settle in a permanent abode in the Adelaide Hills. In 1983 the family moved into a new house that featured a rumpus room set aside for a future model railway. Over time Rob prepared extensive notes on a concept that was to incorporate his favourite features of three different railways, together with notes on potential traffic, locomotives and rolling stock, and fundamental modelling requirements such as train lengths.

From early on, the layout was going to be complex; in collabo-





Rob in 2005, after the announcement of his receipt of the Order of Australia medal. Three levels of 'Pirie' are seen here. The upper level was the CR standard gauge (with only the underside visible); the SAR broad gauge at Bungama is on the middle level (in the foreground) while the narrow gauge is on the lower level. Photo: Mount Barker Courier.

At A Glance

Name: Pirie

Scale: HO

Period: late steam to early diesel SAR and CR

Layout: triple deck with staging

Layout Size: 7.0 m x 3.3 m rectangle and a 2.5 m x 2.4 m L-shape addition

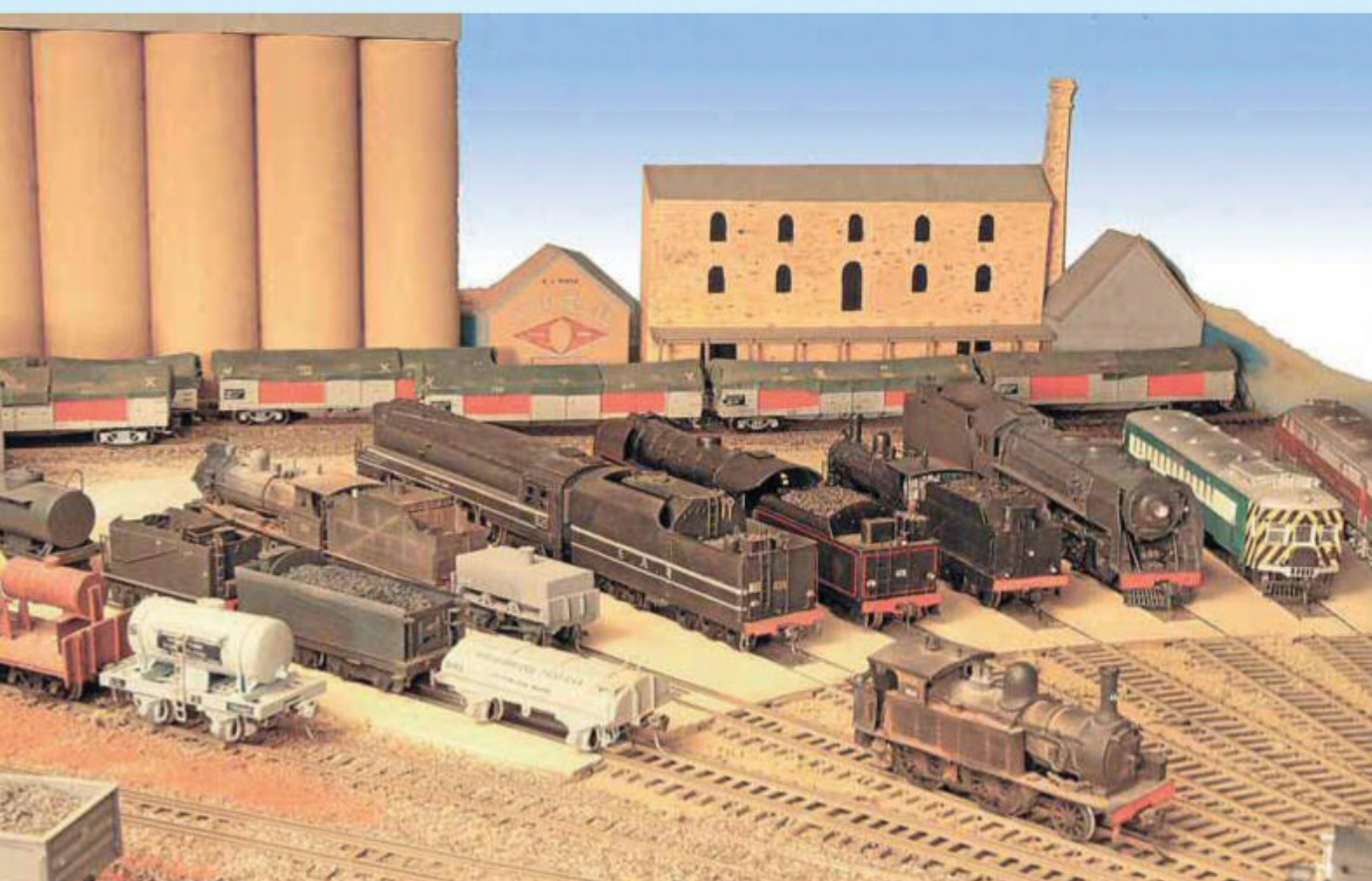
Rail height above floor: three-level layout between 885 mm and 1835 mm

Baseboards: open frame, with integral helix

Track: Shinohara code 70 and scratch-built where required

Control: NCE DCC

Builder: Rob Burford



Only the floor of the 'Pirie' loco roundhouse is complete. From left to right the first dual gauge road is occupied by a four-wheel weighbridge test wagon and a row of tenders. The second road is also dual gauge and occupied by broad gauge 2-4-0T P 124 and a narrow gauge 4-8-0 T class. The remainder of the roundhouse roads in the photo are broad gauge.

► 'Pirie' layout schematic. Broad gauge 'Pirie Yard' is displayed as the blue route control panel; the narrow gauge 'Pirie Yard' is displayed as the green route control panel and the standard gauge 'Pirie Yard' is displayed as the red route control panel.

ration with the author, an ambitious HO scale railway was planned. Although Rob was not intending to model a specific location, when the ideas were sorted through and distilled it looked a bit like Port Pirie with a roundhouse and a powerhouse added in. So *Pirie* it became.

The initial problem was how to fit a workable concept into the space available. A multi-level concept was deemed necessary to achieve reasonable main line runs; at the time a number of modellers were experimenting with two-level layouts with connecting helixes to join the levels. However, even with two levels, the planning was not working so a bold step was taken to consider a third level — and it worked! Logic determined that the middle level consisted of Port Pirie and the Junction, with the standard gauge heading up to the upper level (level 3) via a helix; the SAR broad and narrow gauge lines headed downwards to the lower level.

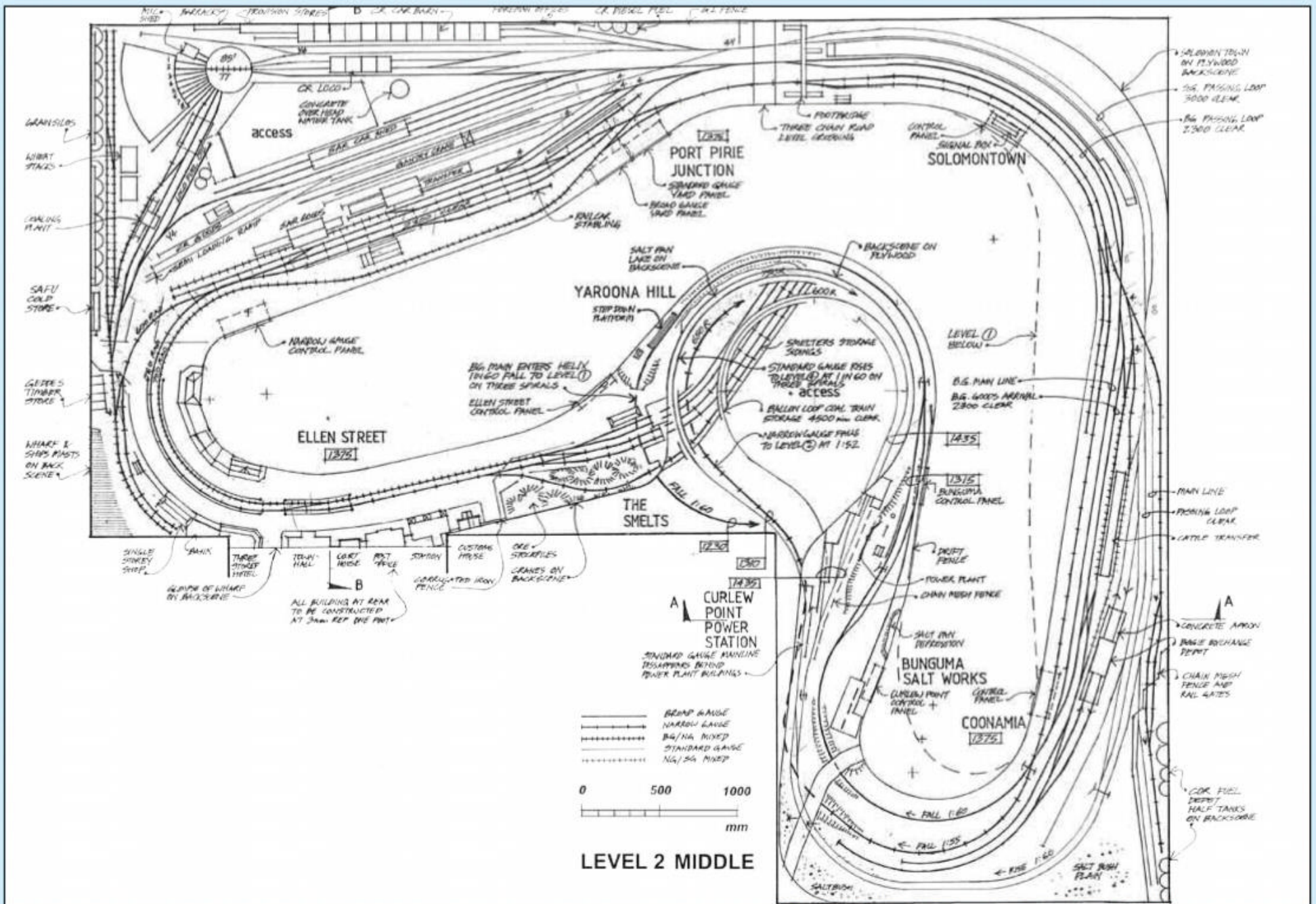
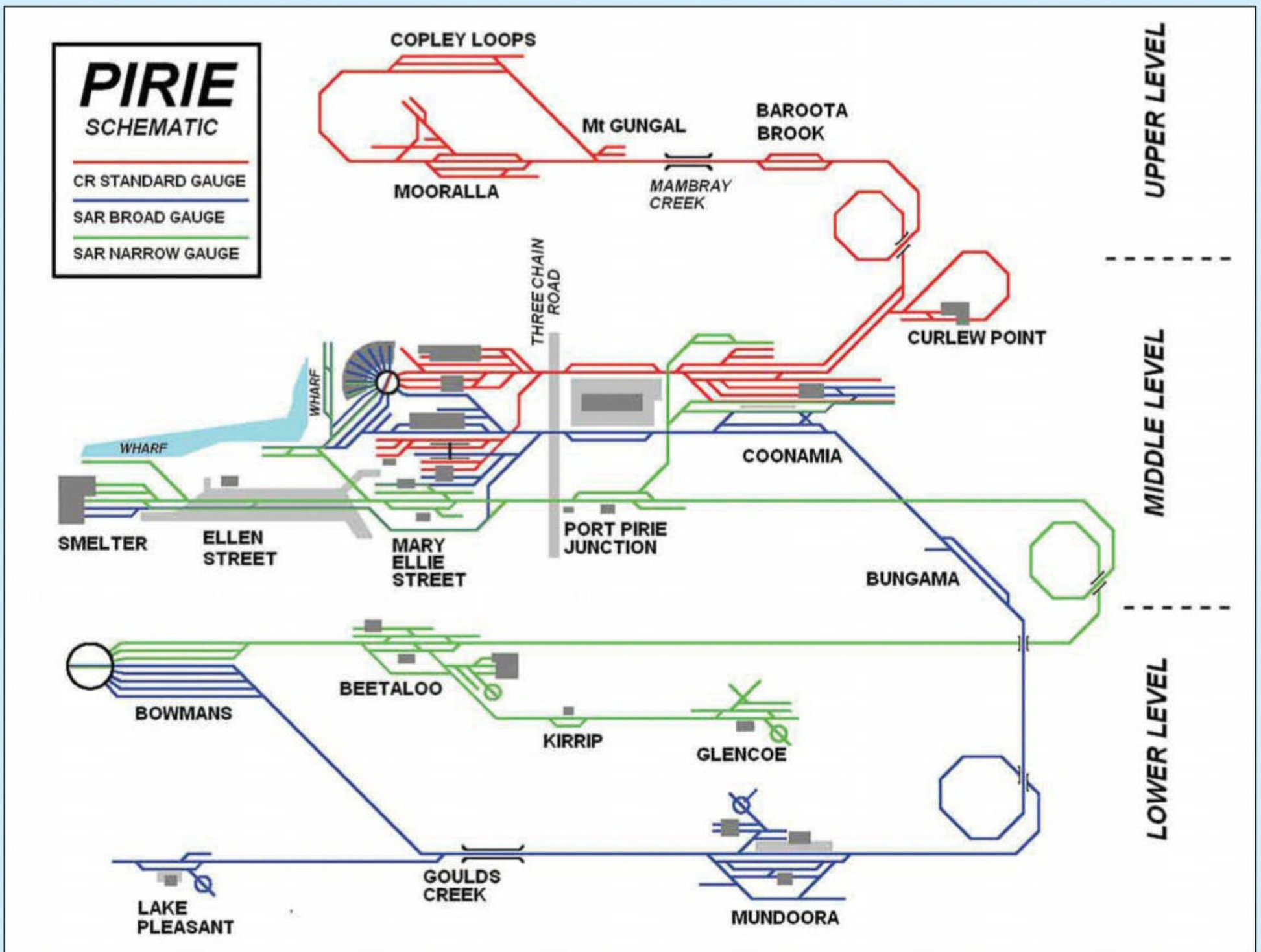
In essence, the three levels enabled a clear separation between the CR at the top level and the SAR at the lower level. The middle level was a logical meeting place for all three systems. The modelling concept also separated the scenic features. The flat and tree-deficient north worked best on a narrow, high-level shelf, the middle level could be gritty and industrial, and the lower level became rural and green. All could be connected by a helix that wound both up and down on the same planning footprint at around 750 mm radius.

Not all ideas go to plan and when the earliest sketches were prepared, a key dimension was 'undercooked' by around 500 mm; by now, though, the concept was entrenched. So, an extension to the room was proposed to claim back the 'missing' real estate. The existing room consisted of a 7.0 m x 3.3 m rectangle and a 2.5 m x 2.4 m extension into an adjacent carport area that created an L-shaped space. Track plans were prepared at a scale of 1:20, placing the helix on the internal corner of the 'L'.

Middle Level (Level 2 on the Plan)

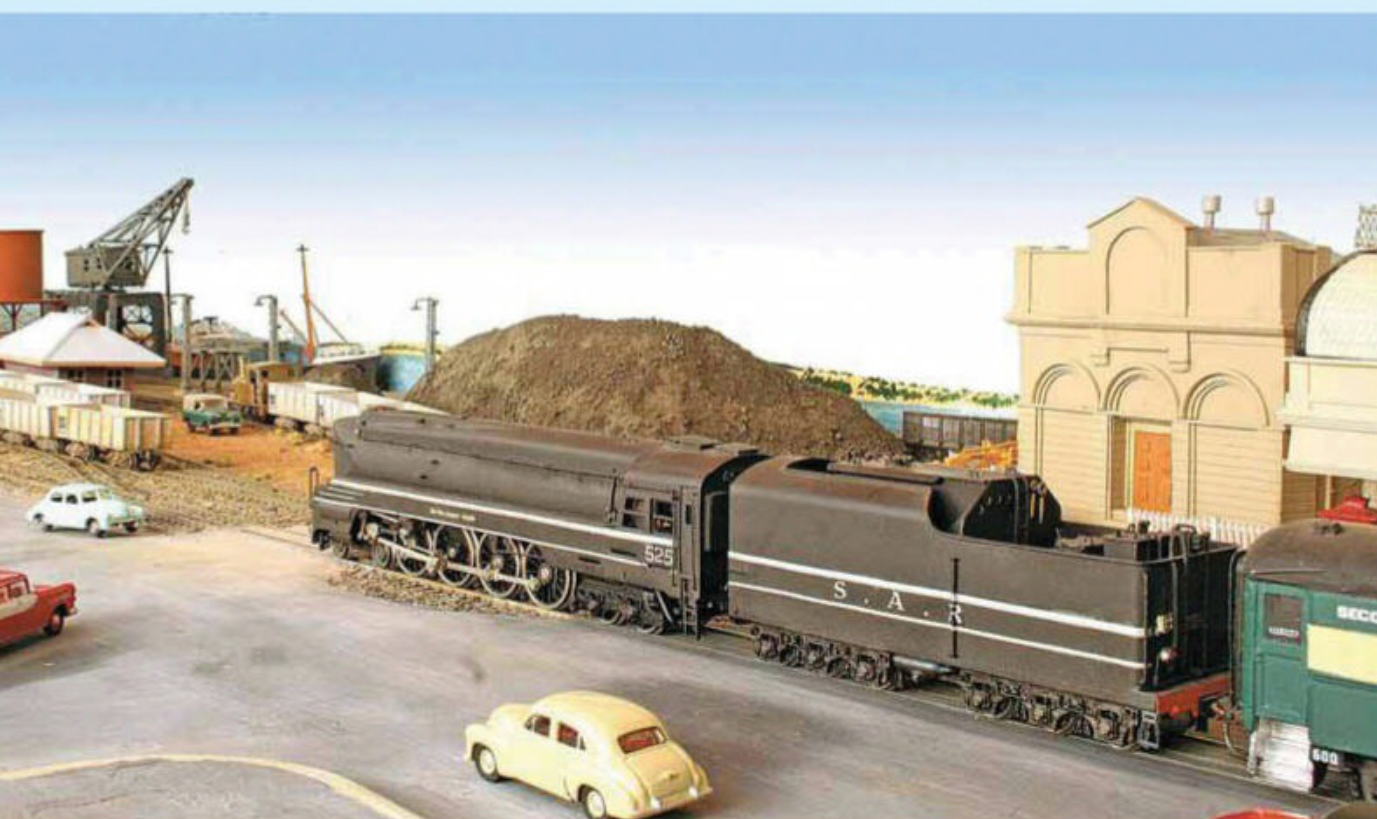
Rob's *Pirie* was able to incorporate many of the features of the prototype yard. When the broad gauge line reached Port Pirie Junction, it joined the narrow gauge route and threaded its way into the town centre via a new mixed gauge for-

► Middle level (level 2) layout plan. By Rodney Barrington.





Rob's Port Pirie Junction. In the foreground a narrow-gauge T class heads east with an empty ore train. At the rear, a GM has arrived on a standard gauge Trans-Australian working and, on this side of the platform, is the brakevan of a broad gauge south-bound passenger train.



Broad gauge 525 has arrived at Ellen Street with a passenger service. The Pirie smelters are seen beyond, to the left. The building in the right background was the old customs house. At the extreme right is a portion of the Ellen Street station building. There was no broad gauge run-around in Ellen Street so the train had to reverse all the way back to the junction.



mation that ran down the centre of the main street to a grand 'gingerbread' architectural edifice in Ellen Street. A significant modelling variation was the introduction of a 'proper' Webb-style roundhouse, otherwise the essential elements of Port Pirie were included. These included the junction station at Solomontown, created between the CR standard gauge and the SAR broad gauge line. Other major features included separate broad and standard gauge car barns, an interchange yard and a separate narrow gauge yard and a grand backdrop of grain silos. A portion of street running is featured with Ellen Street leading to the smelters beyond the passenger terminal. The standard gauge remained to the north of the SAR station, but necessitated some interesting diamond crossings in the main yard. Operationally, the broad and standard gauge are kept apart, with direct connections available at a shared turntable and two run-through tracks in the bogie exchange plant. The latter feature made interchange traffic so easy! In the other direction, heading out of Pirie beyond the junction, were livestock interchange facilities, fuel storage and bogie exchange facilities that were created in the 1960s. This area, known as Coonamia, was where the standard gauge veered north and the broad gauge turned south before crossing the original narrow gauge Peterborough main via a diamond crossing.

[Editor's note: The upper level (level 3) and lower level (level 1) will be covered in future issues of AMRM.]

Scale and Gauge

Rob has always modelled in HO scale with a track gauge of 16.5 mm; this is almost correct scale for standard gauge railways. The models are built to a scale of 3.5 mm to a foot (a ratio of about 1:87). However, for the narrow gauge division, a track gauge of 10.5 mm was used; this scales out at three foot gauge. This gauge was known as HOn3 and was popularised in North America by modellers of the Colorado narrow gauge lines. Although it is six inches under-scale for the South Australian narrow gauge, it has been taken up by many modellers for the convenience of ready-to-roll wheelsets and bogies, and a range of mixed gauge trackwork available from Shinohara. The ratio between 3 ft and 4 ft 8½ inches mixed gauge track and the actual 3 ft 6 inches and 5 ft 3 inches seen in South Australia

Curlew Point power station. At centre left is a DE class diesel shunter attached to the brakevan of a coal train that occupies a balloon loop hidden in the helix behind the power plant. The GM diesel loco to the right is the train engine just emerging at the opposite end of the balloon loop. The track at the rear is the main line that disappears behind the power plant. The ballast train at lower right is on the broad gauge at Bungama.

was acceptably close, the difference being 1 ft 8½inches and 1 ft 9inches respectively. So, the SAR broad gauge models travelled on the usual HO scale 16.5 mm gauge track and the same gauge was used for the standard gauge Commonwealth Railways models.

Trackwork

Shinohara code 70 was generally used because a range of both HO and HOn3 gauges was available, together with some exquisite three-rail mixed gauge track. However, in some locations, it was necessary to hand-build some mixed formations. John Wilson stepped forward and mastered this task and, in Coonamia, took a third rail through one side of a scissors cross-over then continued the siding on to a four-rail three-gauge segment. Point work was generally No. 6 frog angle with smaller frog angles applied in some tight spots away from the main line. In the broad gauge Mundoorra yard Peco code 70 track was used; on the narrow gauge Glencoe branch code 55 rail was hand-laid, with Nigel Gardner building the pointwork in Glencoe yard. Wayne Hoskin came up with a stub point arrangement for the wayside station at Kirrip. Minimum radius for the broad and standard gauge systems was 750 mm with a 600 mm minimum radius for the narrow gauge. Ruling gradient was determined by the configuration of the helix; at a 750 mm radius, this worked out at around 1 in 57.

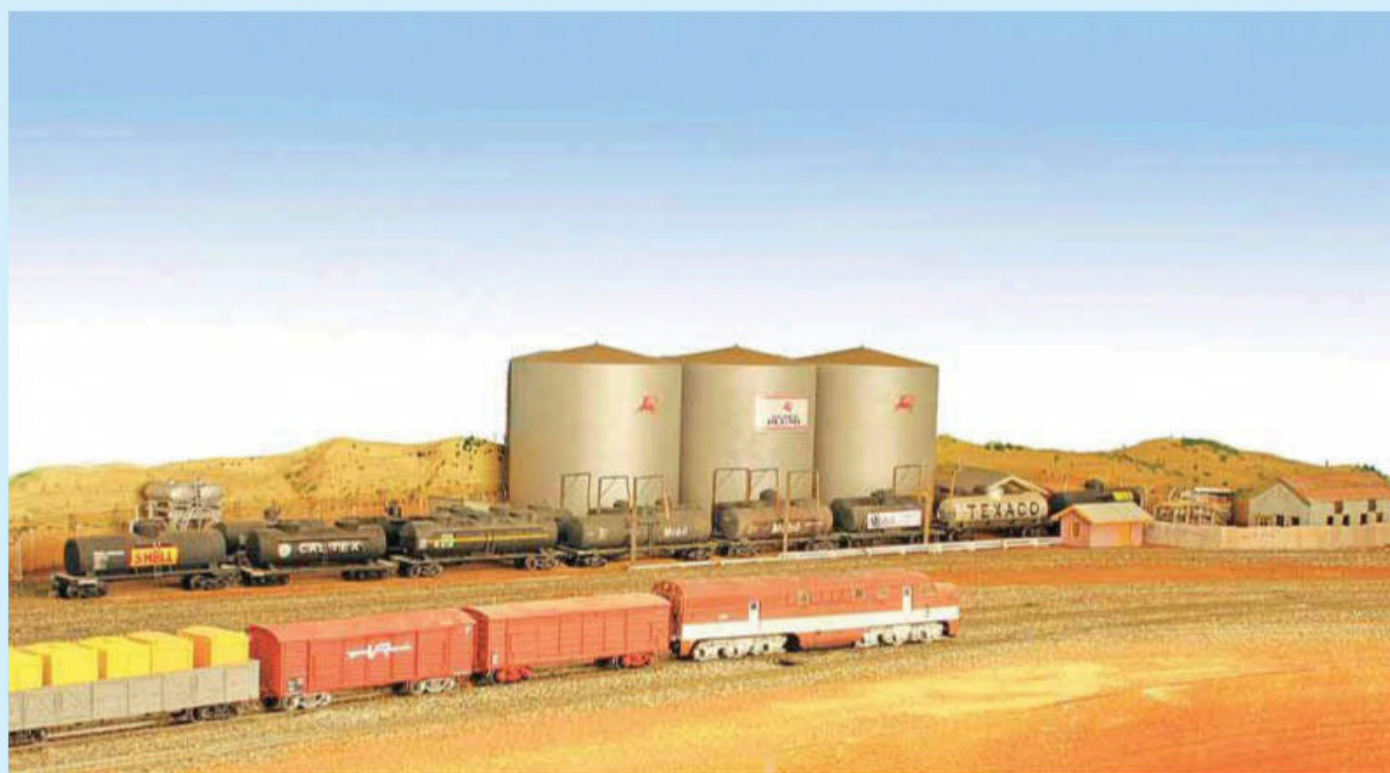
Construction

The lower and middle levels were supported on Lgirders. The Lgirders were generally constructed using pine with a 90 mm x 19 mm vertical flange and a 70 mm x 19 mm top flange. The outer girders were firmly fixed to the walls and the inner girders were supported on 70 mm x 45 mm posts. Some station yards were actually built up in segments on timber ladder frames that are in turn supported on the Lgirders. The upper level was constructed on a shelf principle with custom-made brackets supporting a light-weight frame. Conveniently, the upper level was scenically flat so the shelf remained relatively thin and unobtrusive. The middle level section across the entry doorway was also supported on a light metal frame to provide a thin and convenient 'stoop under' entry. The helix was built up in segments consisting of 10 mm plywood quadrants connected with short 70 mm high spacers to form a full circle. It was necessary to lay the track inside each

Coonamia livestock transfer platform. The red cattle cars are on CR standard gauge, the grey car to the right is on SAR narrow gauge. Broad gauge tracks are in the foreground. Note the mixed gauge three-rail track that provides narrow gauge access to the livestock transfer platform and, in front of the CR cars, is a narrow gauge to standard gauge transition point.



Semi-trailers are lining up to load onto Commonwealth Railways flat cars for their journey west. This activity actually took place at Port Augusta, but Rob was keen to include this feature on 'Pirie'. Beyond is the wharf area and, to the right, the SAR loco depot. The three tracks to the left are standard gauge; centre and right are broad gauge.

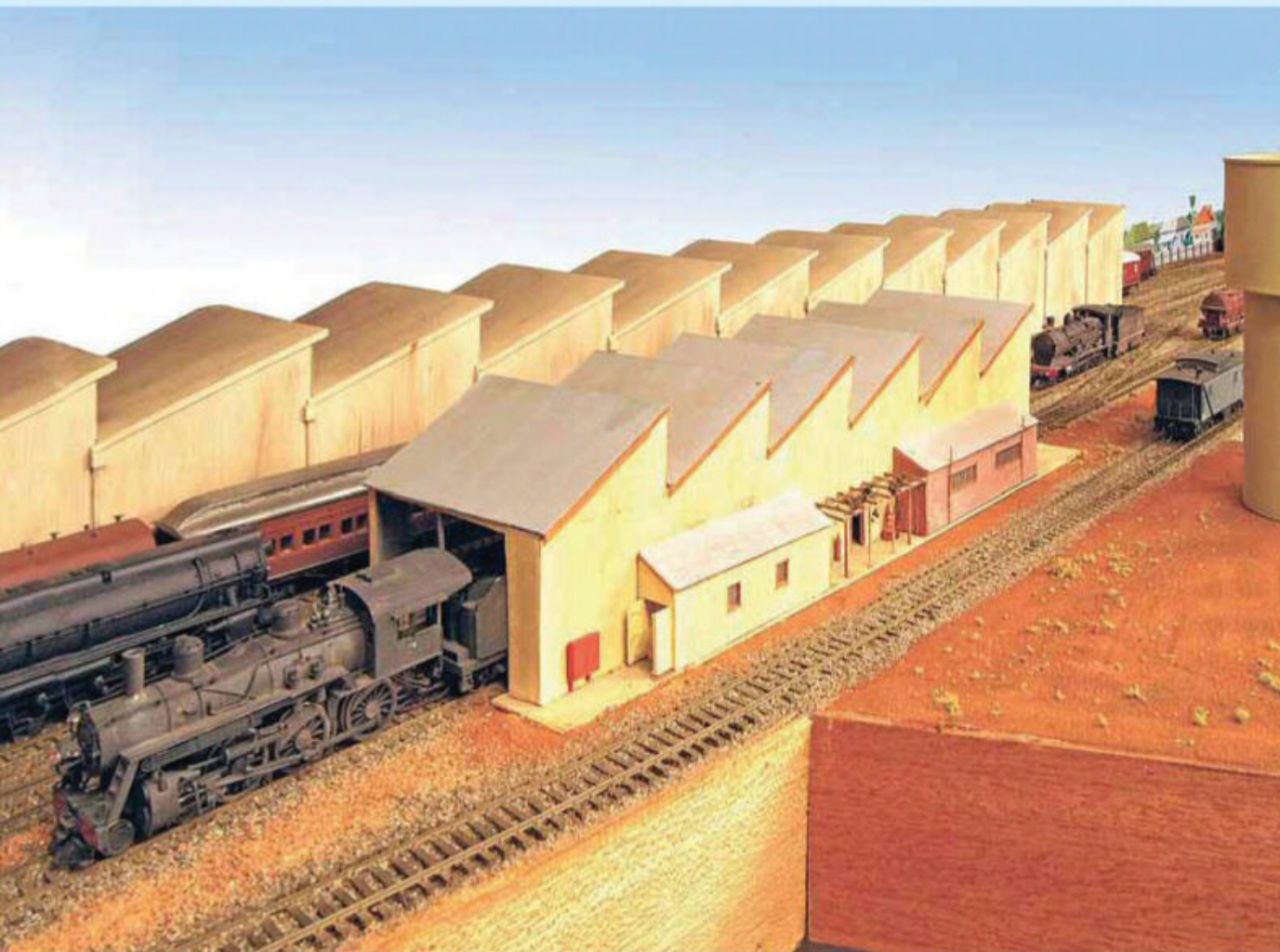


A 900 class passes Coonamia fuel depot, serviced by both broad and narrow gauges.





Some of Rob's favourites are in this scene. To the left is the Commonwealth standard gauge Jordan spreader ditcher. Adjacent, on a triple-gauge siding, is stabled narrow gauge break-down equipment. The third vehicle is a 'blue brake' and behind it is a former NB horsebox. The next track is the narrow gauge main with the broad gauge main to the far right. Rob won the short step-down platform serving the broad gauge in the end-of-session raffle at the 2010 SARMA convention.

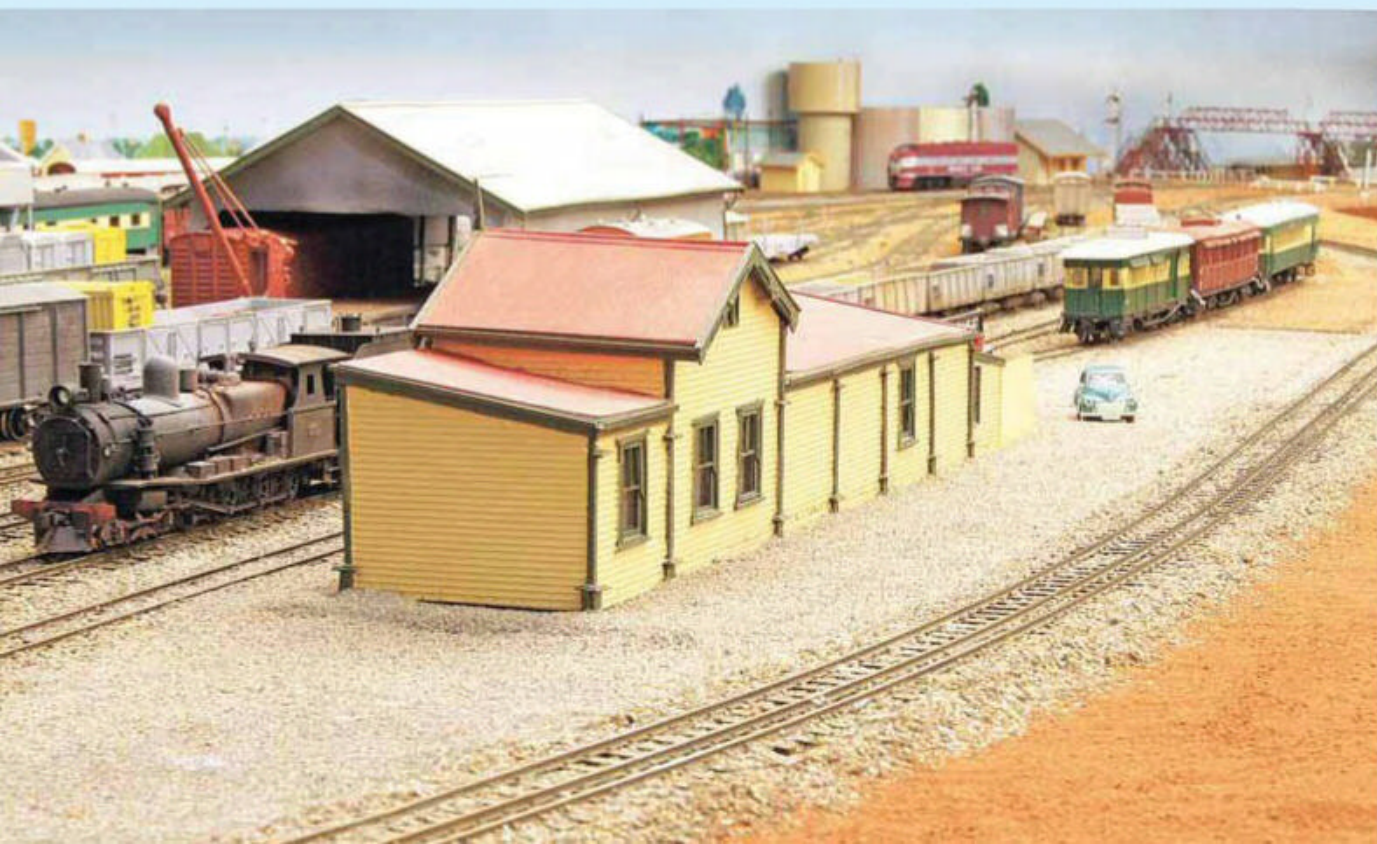


full circle as construction progressed. The outer side of the helix was enclosed in 3 mm plywood; in addition to giving strength, this provided a backscene canvas to the layout, while maintenance access was from inside. The structure was built outside and simply rolled into the room after completion.

Operation

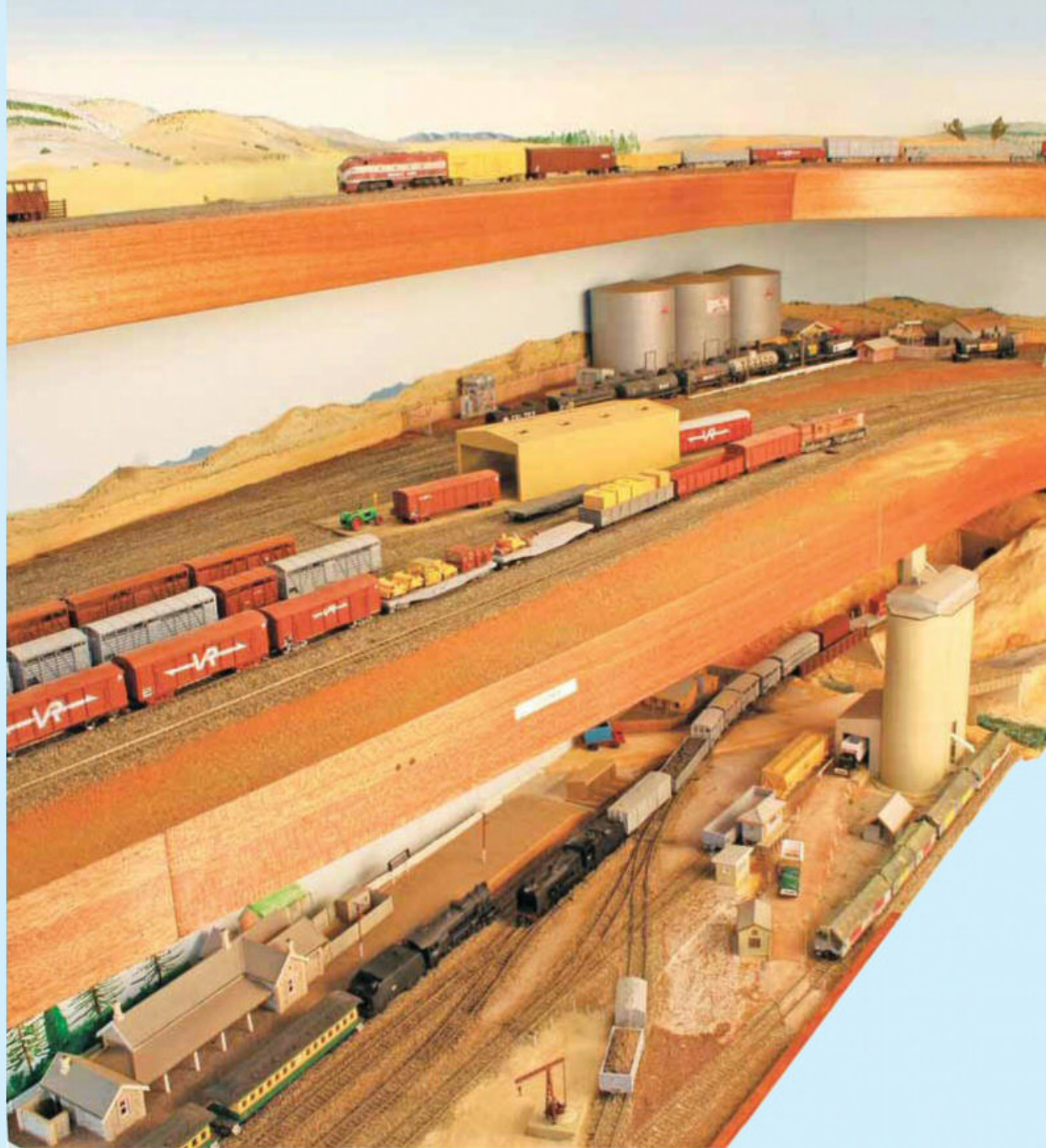
Pirie never became fully operational. Rob decided from inception that he would use a digital command control (DCC) system. The railway was divided into nine power districts, three for each gauge. In essence, *Pirie* consisted of three independent railways separated only by gauge. At the time of Rob's death the upper level (the Commonwealth standard gauge division) had been made operational and a number of Commonwealth locomotives had been fitted with decoders. Another stumbling block was point operation. Rob began by using old PMG relays, but he was not happy with the outcomes; they were fiddly to install and noisy in operation. Greg Winner also built some mechanisms using a slow-action principle and these were successfully installed in the Bowmans staging yards. Eventually Rob decided to try a new product, the DCCconcepts Cobalt stall-type mechanism and, after a successful trial installation, 24 units were ordered. 🚧

The Commonwealth loco depot at 'Pirie'. In the foreground is 4-6-0 CN 79. Beyond is C 63 and, at the far end of loco, is a G class 4-6-0. Behind the loco depot is the CR car barn. The front track is broad gauge.

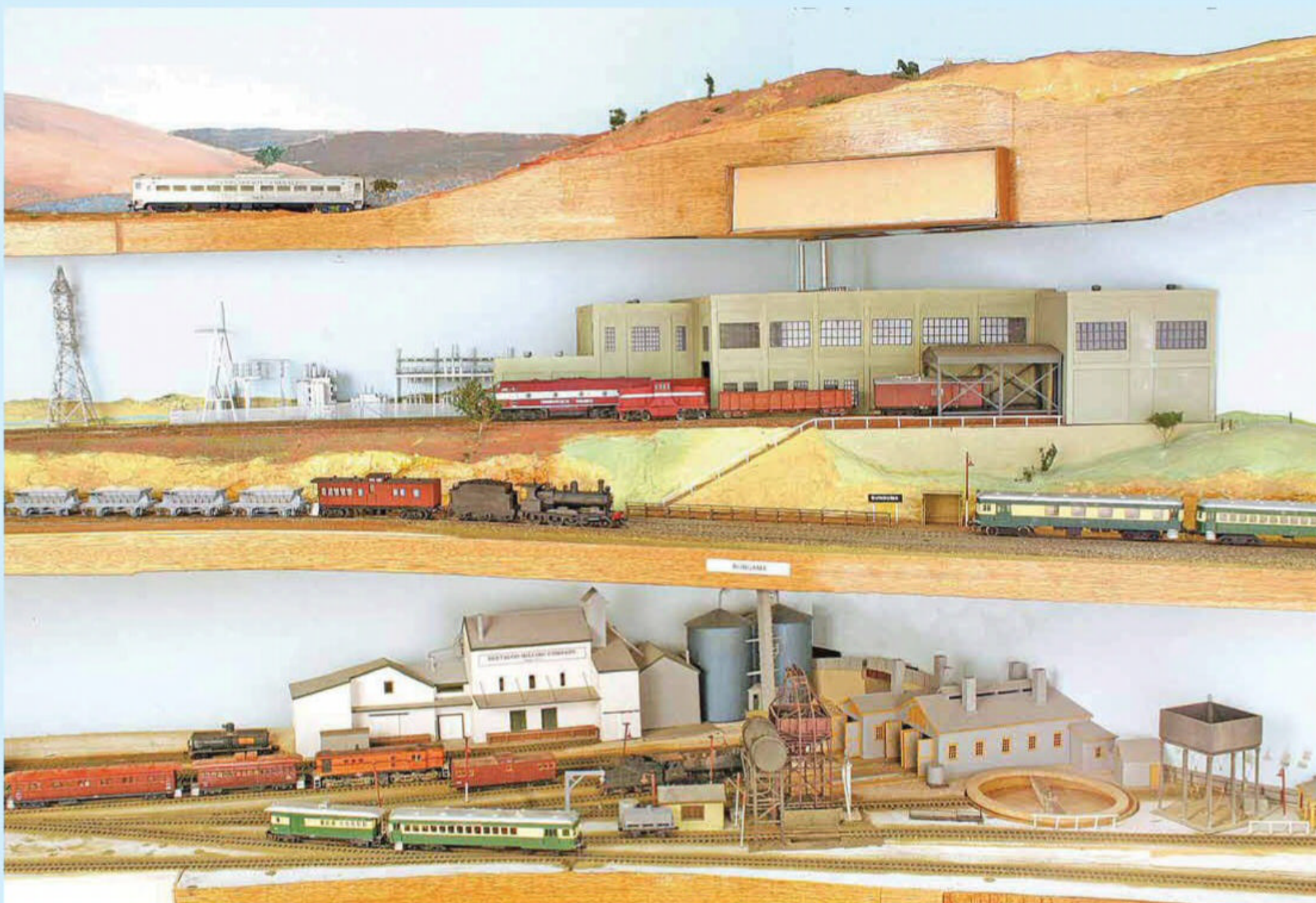


General view of the rear of the old Mary Ellie Street station. This building represents the first station at Port Pirie. On the prototype it remained as an administration building when the passenger facilities were moved uptown to Ellen Street. The narrow-broad mixed gauge track in the foreground is the newer 1937 main line that bypassed the yards.

All three levels of Rob's layout. Baroota Brook is at the top, Coonamia in the middle and Mundoora at the bottom. The cream-coloured building in the centre of the middle level represents the early bogie exchange shed. Standard gauge is to the left and broad gauge to the right.



A single CB Budd rail car scoots along on the upper level, middle is Curlew Power Station and Bungama, the lower level is Beetaloo.



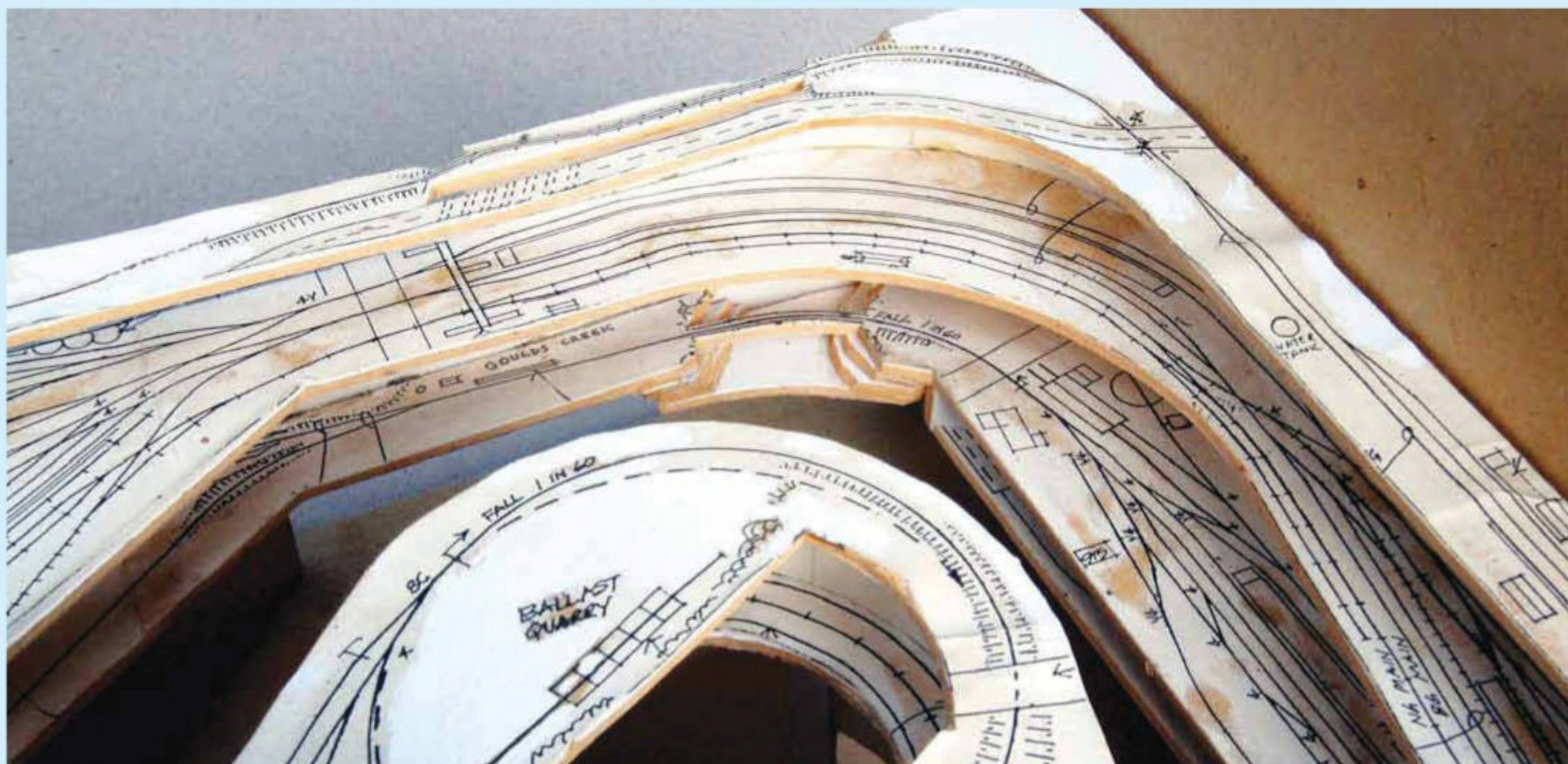


Broad gauge Rx 224 shunts the smelter in Pirie. Beyond, are empty ON bogie narrow gauge ore trucks.



Aerial view of the triple gauge Pirie yard. In the centre of the view a CR DE diesel shunter propels a standard gauge wagon into the transfer shed. In front of the shunter the broad gauge crosses the standard spur.

With such a complex build, Rob created a 1:20 scale 3D mock-up of his layout to ensure all three levels would work as expected.





The completed RDH2220 arrives at Harding on a Countrylink service on the author's layout.

Kit-bash a Countrylink RDH coach

Paul O'Flaherty describes how to kit-bash a Countrylink RDH coach in HO scale. Photos by the author.

Materials List

- Eureka Models BH coach
- Auscision Models RUB coach (or other suitable roof)
- Casula Hobbies RUB coach spares
- Casula Hobbies torpedo roof vents
- 1mm styrene sheet for new interior
- 1.5mm x 2.5mm styrene strip for bracing
- 0.25mm x 1.5mm styrene strip
- 0.25mm x 0.5mm styrene strip
- Brass wire for handrails and other detailing
- Bits and pieces from the spares box
- Raileys deep Indian red for the body, XPT white for the roof, matt black for the chassis.
- Decals: Car codes are from a Berg's Candy HUB coach decal sheet; stripes are AM Decals and Countrylink logos are custom printed.

Tools

- Dremel tool and new parting disc
- Scalpel with new blade
- Pin vice and small diameter drill bits
- Assorted files and sandpaper
- Glass panel or other suitable flat surface for sanding
- Your preferred plastic glue, superglue, and Micro Kristal Klear for windows

A short history of RDH coaches

The RDH coach was introduced as an uncoded class buffet coach designed to complement the ABS dining coach on the *Gold Coast Motorail*. With the progressive conversion of airconditioned sitting cars into day / night style coaches, there was an increased need to offer takeaway style food and beverage facilities on locomotive hauled services. The first seven RDH conversions came from existing RBH and RFH buffet coaches. Later, with the reintroduction of locomotive hauled services to Broken Hill and Griffith, BHA 2220 was also converted to an RDH. This made a total of eight RDH coaches.

Kit bashing

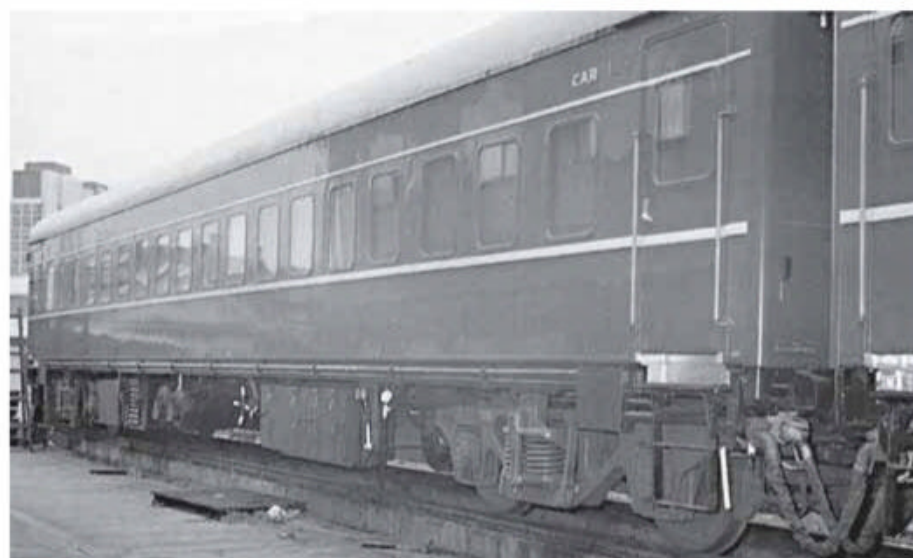
With the recent release of Auscision Models (AM) Countrylink coaches, so came the need to provide a suitable RDH buffet coach to complete the set. To be able to accurately recreate either the Countrylink Broken Hill or Griffith

services I decided to kit bash a model of RDH 2220.

The obvious choice of a suitable BH donor is the Eureka Models (EM) HUB set coach. I was not totally happy with the shape of the EM roof. When I was researching this conversion, I started out by comparing the two brands of coaches. It became apparent there was something slightly different with the shape of the roofs between the brands. The elliptical cross section of the EM roof is a little more vertical along the sides and a little flatter across the top of the radius than the AM roof. To get a uniform appearance along the roof profiles of my train, I made the decision to replace the entire roof section of the BH coach with an AM RUB roof.

I had a spare AM RUB coach as a suitable donor but, I imagine, a Casula Hobbies RUB coach roof could also be used, although you would need to simulate the roof sheeting joins (refer step one).

RDH 2235 soon after conversion from an RFH. This side is opposite the buffet area.
NSW Railway Archives

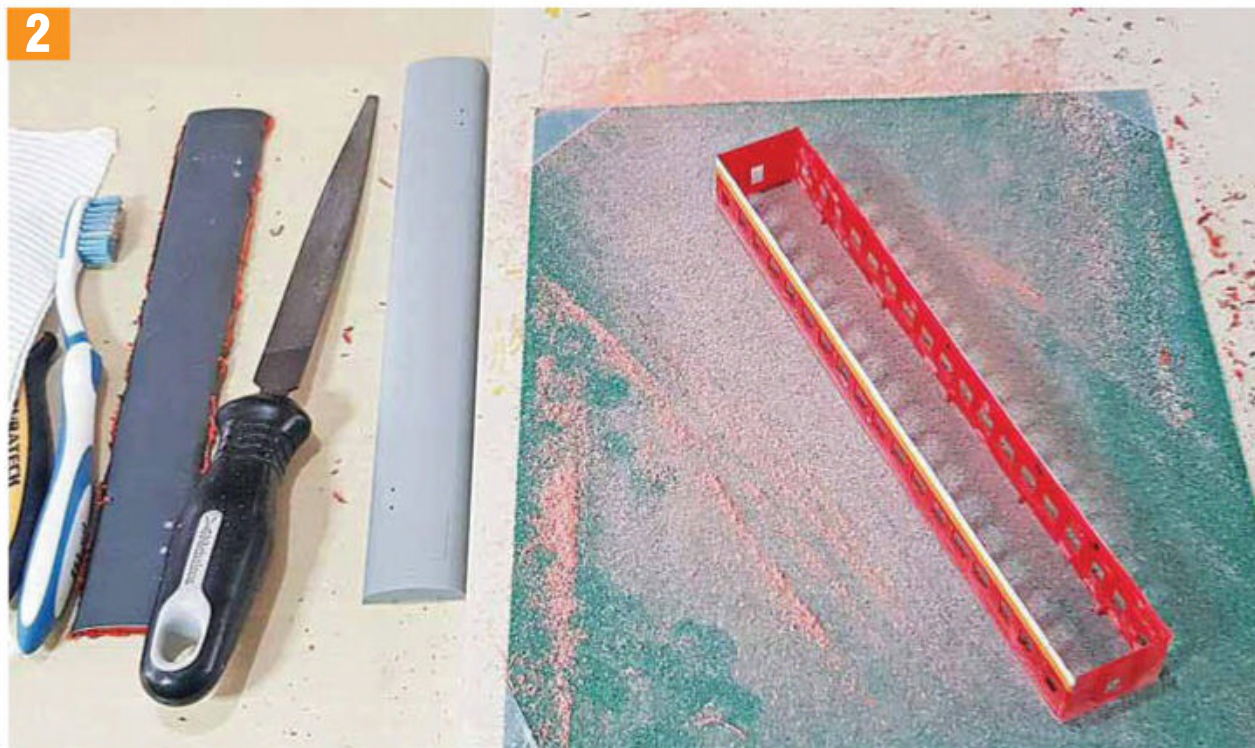


Step 1: The roof

Using a Dremel cutting tool with a parting disc, cut below the roof gutter line on the Auscision car and then above the roof gutter line on the Eureka car (see photo 1).



Do not rush this step – cut nice and slowly so as not to melt the plastic. I then used a large file to clean up each piece before sanding on a flat piece of glass (see photo 2).



The roof was then shortened from the end without a roof hatch and a new end was fabricated using 1mm sheet styrene, ensuring there was a slight overhang at each end of the coach body. The roof sheeting overlap was simulated using 0.25mm x 0.5mm styrene strip and the technique from Peter Jarvis's brilliant RUB coach series starting in AMRM issue 242 (October 2003). Bracing was then added to hold the sides in place using 1.5mm x 2.5mm styrene strip glued to the existing side lugs inside the body, while tabs made from scrap styrene were glued to the inside edges of the roof piece to ensure it was correctly positioned on the coach body. Once happy, everything was glued in place. Casula Hobbies torpedo roof vents were added above the kitchen, on the same side as the roof hatch end (photo 3).



Step 2: The windows

I then looked at which windows were blanked out on the prototype and removed those windows from the moulded window strip to be undercoated and painted separately before being refitted to the body. Next, I tackled the smaller kitchen window by using a small flat file to open up the bottom half of the window, removing the bottom half of the moulded window rubber in the process. The hole was then plugged with a suitably sized piece of scrap styrene. A small notch was made on each side to allow a new window rubber to be added on top of the styrene plug. This was made from a small piece of 0.25mm x 1.5mm styrene strip softened with solvent, bent to shape and glued in place in a similar method to making the roof sheeting overlap from Peter Jarvis's RUB coach article. The window glass was shaped from clear styrene (photo 4).

There is a small square vent on the window immediately to the right of this window, which was made by gluing a piece of scrap styrene approximately 0.75mm x 1.175mm x 1.175mm in the top left corner of the window glass. (photo 5).

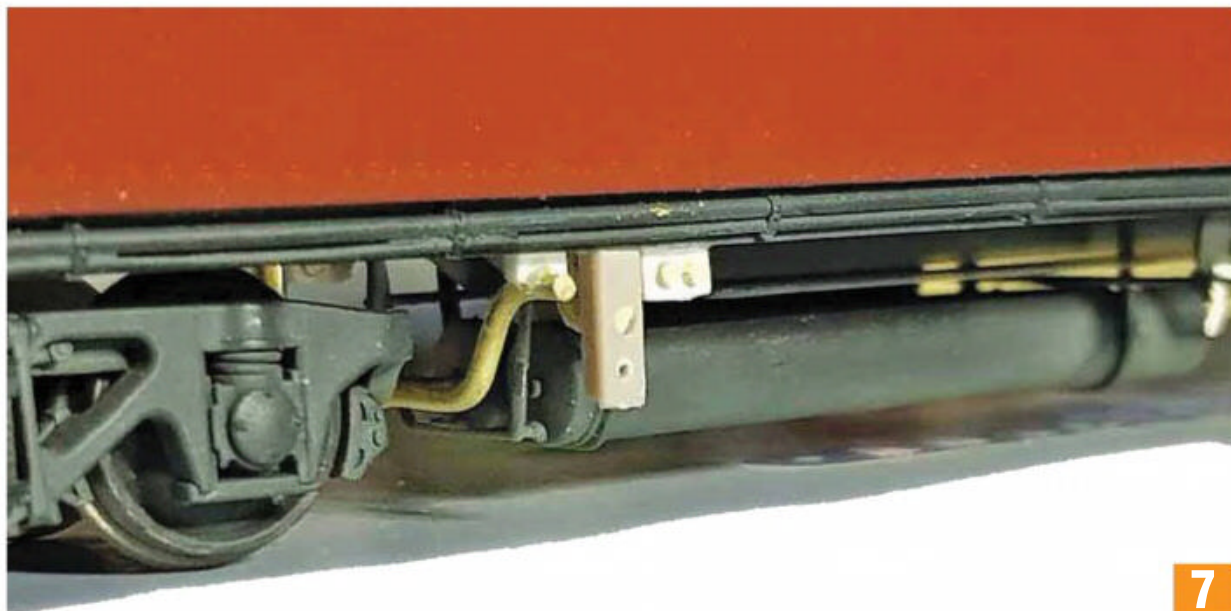
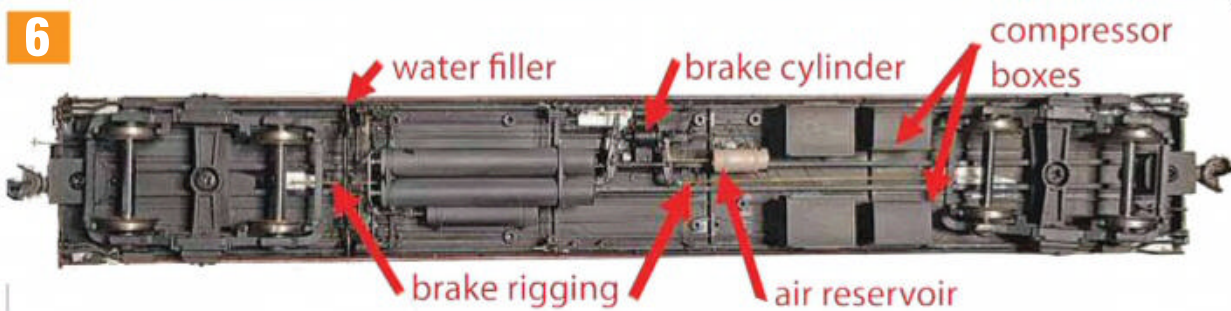
Once happy, the new body was undercoated. At the same time the previously cut window pieces were stuck down to a piece of masking tape and undercoated on their outside face, and inside face for any frosted white windows.



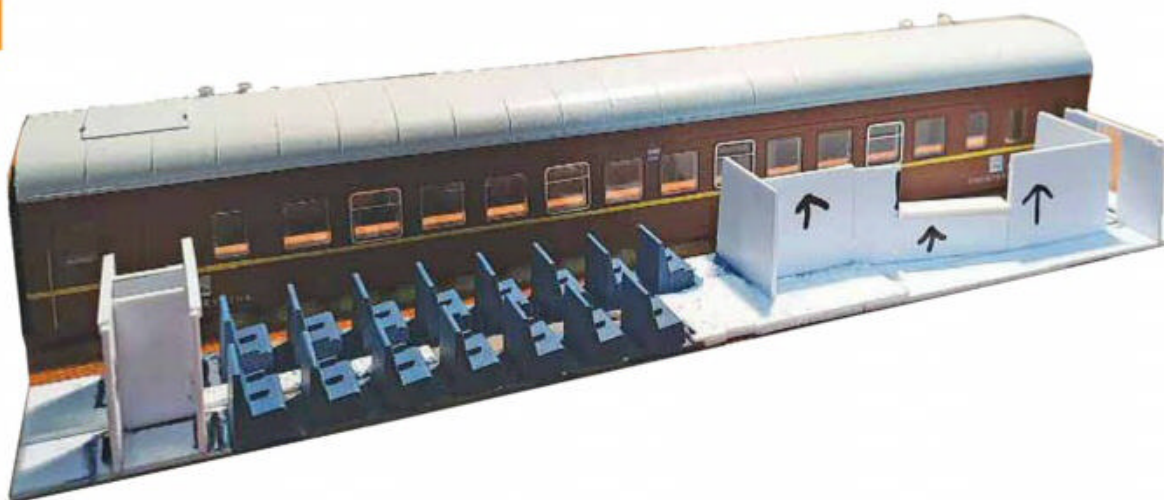
Step 3: The chassis

Next, I looked at what could be improved on the chassis. The compressor boxes on the EM HUB cars are fitted in reverse thus are facing the wrong way. This is an easy fix by removing from the chassis, trimming the mounting lugs, and gluing back in place correctly oriented. All other details except the water tanks were removed. The brake cylinder and levers were replaced with more prototypical ones glued to a new mount made from scrap styrene. Brake rigging was added using brass wire. Small, pre-drilled styrene offcuts were glued between the centre longitudinal at each end close to the inside axles to allow the rigging to be glued in place, made from two pieces of brass wire, 0.7mm x 63mm and 0.7mm x 59mm, bent at right angles. A new air reservoir and water filler lever bracket were added from Casula RUB coach spares (photo 6).

The water pressure gauges were made using 1mm brass rod and scrap styrene, along with the water filler pipe (photo 7).



8



Step 4: The interior

A new interior was (crudely) made, featuring the counter, serving area and toilets using sheet styrene and the original BH seats. The seats were painted blue and a suitable "tan" colour was applied to the walls to simulate the wood panelling (photo 8).

Step 5: painting

The car was then painted using Raileys deep Indian red for the body, XPT white for the roof and matt black for the chassis. Suitable decals will need to be sourced. The coding was modified from a Berg's HUB coach decal sheet, stripes are AM decals

and Countrylink logos are custom printed. Once clear coated, Beclawat frames and handrails can be added, completing the model. Any weathering should be extremely light as the cars were kept relatively clean (photo 9).

9



Conclusion

I've dedicated this build to the late, great Allan Brown, who was never shy to take a razor saw to a model. Over the

years Allan has instilled much inspiration in me with his "can do" attitude and willingness to pass on his skills and knowledge. Thanks also to Aaron Denning and

Steven Pracy for help in preparing this article.

Modelling Modern-era Containers

Part 3: Domestic Containers

Chris Jones concludes the 'how' and 'why' of modern-era domestic containers. Photos by the author unless noted.



Sadleirs prototype RCS 6301 at the Adelaide Freight Terminal on 11 February 2016. Photo Glen Thomson.



While big in the USA domestic markets, 53 foot containers have never been commonplace in Australia where a strong preference still exists for 48 foot containers. Early 53 foot containers were owned by Boxcar and wore a distinctive green and yellow livery. Over time they were acquired by Mayne Logistics and now Linfox. These large containers are mainly used to move light-weight high-volume product such as cereals and toilet paper.

General purpose 48–53 foot containers are extremely common on domestic rail freight services and are ideally suited to low-density high-cubic sized freight that commonly consists of consumer goods found in supermarkets and retail shops. Early 9 foot 6-inch high containers often carry the code MEG1, while more recent containers are 9 foot 10-inch MFG1 and MFGB types. 53 foot PFG1 containers are mainly operated by Linfox, some being new builds and others repainted Boxcar containers.

Some of the early large-size containers from the 1990s were marked for Boxcar, Toll and FCL, with many of these still in service today, albeit painted in other liveries such as Linfox.

The major freight-forwarding and logistic companies have large quantities of 48 foot general purpose containers, with some notable fleets being Toll, Linfox/FCL, Aurizon [Linfox], SCT and Pacific National. Leasing companies SCF and Royal Wolf also have sizable fleets. 53 foot containers in general freight are less common, with Linfox having the lion's share (also inheriting some 54 foot FCL containers), a small number being owned by GWA (formerly FreightLink).

Worthy to be included in this category are two mammoth prototypes that are both around 60 foot long. The 'world's longest container' when manufactured more than 15 years ago was FCL's 19 metre FCPU 628600-9 and, recently, Sadleirs prototype RCS 6301 was a trial to replace louvre vans.

Self-powered thermal containers are commonly referred to as refrigerated con-



Hardly used on rail or road, before being re-purposed as a site office in Parkes, NSW, FCL's 'world's longest container' was 19 metres long. Unlikely to be able to be moved by road (except with specific exemption), any container of this size would need to run from depot to depot by rail only.

tainers (or 'reefers'). Unlike the export container 22R1 and 45R1 types that are required to be plugged into a power supply to operate or have a small 'clip-on' generator fitted, these domestic refrigerated containers are self-powered and have a fuel tank fitted that supplies an engine driving a compressor and generator to supply heating or cooling. Days of reliable operation can be achieved by one tank of fuel. Often remote monitoring of the container enables the temperature to be checked and managed from an office.

Due to the size of the refrigeration unit, these containers are often an unusual length to ensure efficient pallet capacity. The refrigeration units are almost exclusively Thermo King or Carrier brand and the model of the unit depends on the size of the container and type of heating or cooling required.

Regularly sighted on rail are four unusually-sized refrigerated containers that are commonly known as '20plus', '40plus', '46-6' and '48plus' types. The 'plus' refers to these containers being longer than a standard container due to having the refrigeration unit. This extra length is not necessarily a fixed length across all designs, although the '40plus' type is pretty consistent in their length of 41 foot 3-inch (12.6 m).

'20plus' and '21plus' are common with Toll Tasmanian freight and are often shipped between Burnie and Melbourne, before being rail-hauled. Other small fleets have been owned or operated by Aurizon [Linfox], Cronos (now Seaco), Tradecorp and FCL (now Linfox). Linfox has recently taken delivery of 22 foot refrigerated containers.

'40plus' refrigerated containers are particularly common with Toll, SCT, Lindsay Transport, Breeze and Aurizon [Linfox]. The Toll refrigerated containers are particularly common on east coast Pacific National services.

The next size up is 46 foot 6-inch, shortened from 48 foot to more efficiently align with pallet sizes. These are a very common lengths for domestic refrigerated containers and are seen on many inter-modal freights across the country. I believe the largest fleet belongs to AHG Refrigerated Logistics who own around 550 rail containers. AHG owns the Scotts, Rand and Harris businesses, all of which have container fleets, plus their own ARLS-coded containers. Linfox, Lindsay Transport, Pacific National and SCF also have respectable fleets of refrigerated containers.

There are increasing fleets of '48plus' refrigerated containers, with SCT, Linfox and Toll owning fleets. These containers are marginally longer than 48 foot due to the refrigeration unit, with the SCT unit having a slim fuel tank to enable them to fit inside the bottom of a well wagon.

'Cartainers' are purpose-built containers used to move vehicles between major cities, and effectively replaced car-carrier wagons operating between all states with the exception of the Adelaide-Perth corri-



Toll runs a sizeable fleet of '40plus' or 12.6 m self-powered refrigerated containers. Many of them operate up and down the east coast, including across the Tasman to Burnie on the Toll ferry. The compact refrigeration unit allows these containers to sometimes be placed on the end of a wagon or facing another container without the end unit protruding too far to cause a problem.



With the now common yellow or orange posts to identify the lifting and securing locations of containers longer than 20 ft, this Lindsay Transport 46 foot 6-inch refrigerated container is fitted with a Thermo King unit. The fuel tank sits below the refrigeration unit.



The slim-line fuel tank on this SCT '48plus' refrigerated container is evident when not inside a well wagon. The slim-line fuel tank allows these extra-long refrigerated containers to fit inside a standard 48 foot well wagon for double stacking.



◀▶ An early version flat-roof Autotrans 53 foot cartainer on an MP5 service on 28 January 2005. A Toll mansard roofed version shown below for comparison. Photo by Scott Fitzgerald.



dor that still sees conventional car carriers used in most cases. TNT Automotive introduced the 'cartainer' in 1998 with a custom-designed 51 foot long, 10 foot 6-inch high container to match with a custom-designed TRAY low-deck container wagon, making it compliant with the rolling stock outline across all states. These containers (now painted in CEVA maroon and white) have wall-mounted tyre supports inside the container to allow cars to be double-stacked like a conventional car-carrier trailer, generally allowing six cars per container.



In 2004 Toll (now Prixcar) and Patrick Autocare (now LINX) invested in the cartainer concept with the manufacture of around 400 new 53 foot containers, with rail operator Pacific National building more than 50 RRYR low-deck five-pack wagons. While many of the containers were similar in design to the TNT cartainers, Toll had 150 containers that had a mansard roof and measured 11 foot 4-inch at the highest point. This design allowed for higher vehicles, such as SUVs to be carried efficiently in containers. A small number of the Toll cartainers were delivered painted in Autotrans yellow. Autotrans was acquired by Toll in 2001. Many of the cartainers were manufactured by Doric Engineering in Devonport, Tasmania. Since the demise of Australian car manufacturing, many cartainers have been scrapped or stored.



Coil containers (also known as 'butter boxes', is the colloquial name for rail horizontal (RH) and rail vertical (RV) containers used for carrying BHP/Bluescope steel products around Australia. The term 'butter box' was coined in reference to the look and operation of the containers being similar to a butter dish, where the top lifts off the base. Butter boxes are 20 foot long and were originally built for National Rail (now Pacific National) in the mid-1990s. Toll operates a small fleet of butter boxes in Queensland on intermodal services.

▶ Cartainers have been-and-gone in the rail industry, with the mode of transport lasting around 20 years. This December 2005 image shows an RRYR with a yellow Autotrans cartainer leading three Toll-branded cartainers. All display the mansard roof design; the train is approaching Bowral tunnel.

◀ While the orange and yellow RH 'butter-boxes' are common across Australia, a small fleet operate entirely within Queensland for Toll. They have a solid base and a removeable cover that allows loading and unloading of steel coils.

► Empty glass container on a Perth–Melbourne PM6 service on 7 January 2016. Photo by Scott Fitzgerald.

While butter boxes are commonly found as block loads on Pacific National steel services, small blocks of RH yellow butter boxes do appear on intermodal services, usually attached to the front or rear of the consist to facilitate easy attaching and detaching at terminals as these containers are dealt with at steel facilities rather than intermodal terminals.

Platforms, also commonly referred to as 'flatracks' are flat container bases used to carry loads that are usually overlength or difficult to handle into and out of a standard container.

Common loads for flatracks include steel, timber beams, pipes, vehicles, pre-cast concrete items, cable drums and machinery.

K&S Transport is the biggest operator of flatracks and have two main types, classified as KT and KHS classes. K&S commonly have loads of timber (Wesbeam) and pre-cast concrete heading from the west to the east, and loads of steel (Elcon) heading from the north to the south.

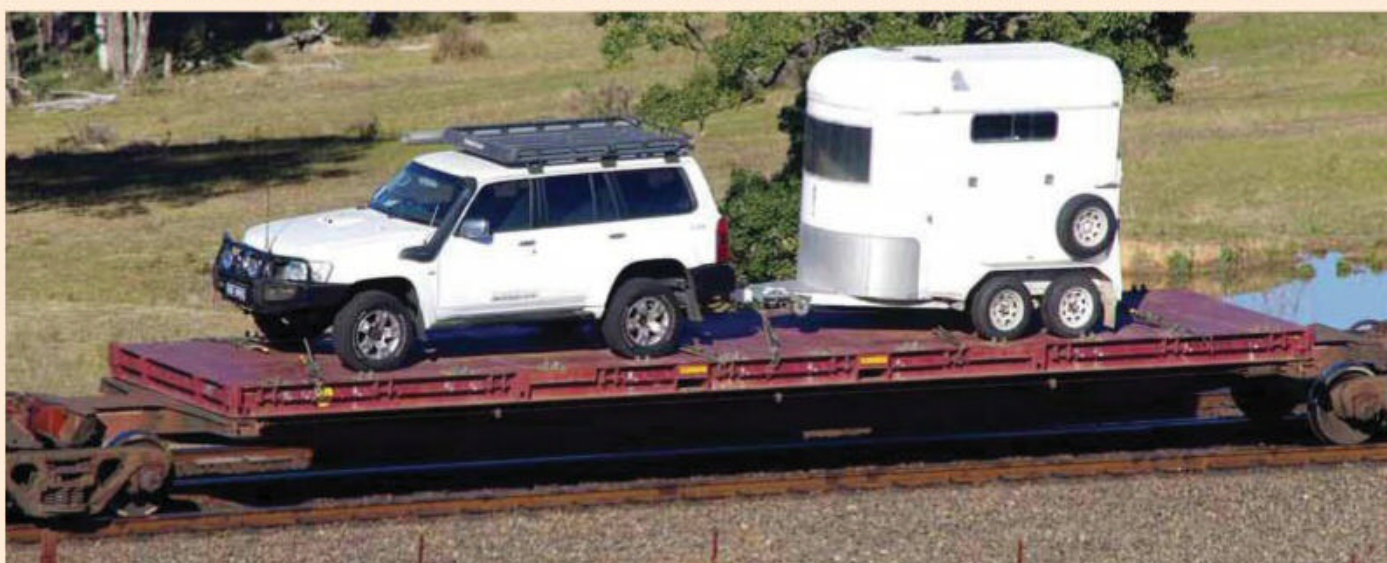
Other interesting loads include vehicles and trailers, machinery, crane components, cable drums, coiled wire or reo. Other owners of flatracks include Simon, CS Leasing and Corden. Seaco/Cronos provide a lot of flatracks for domestic use, but these are shipping containers used for domestic purposes.

Glass containers are a blend of a platform and a curtain-sided container, while others are simply an open-top container. The former green Pilkington Glass containers continue to operate on domestic rail services and come in various heights including 9 foot 6-inch, 9 ft 10-inch and 11 foot 6-inch.

Dry tanks have become more common in recent years with an increase in cement and concrete ingredients being moved by rail in tank containers. Dry tanks use the N type code, although some carry a B code for bulk. Containerised cement products have been railed for many years to more remote locations such as far north Queensland, the Northern Territory, out-back South Australia and Western Australia. Recently, this traffic has become common between capital cities and major project pre-cast concrete hubs such as Benalla, Victoria.

CS Leasing, Jamieson and Seaco/Cronos supply a large number of tanks into the market, with some of them marked with company branding of the transport company or that of the cement producer. Cement Australia, Boral and Cockburn Cement are large users of dry tanks. Discharge of the product is achieved by pressurising the tank to around 165 kPa.

Liquid tanks are predominately ISO standard shipping containers with a



This CS Leasing platform carries an interesting load of a 4WD and horse float from WA to Queensland. This type of freight was common when Aurizon operated standard gauge intermodal services, although it is now long gone. This would make a very interesting model.



Extremely common freight from Western Australia to the eastern states is Wesbeam timber products. They are moved on K&S flatracks and are packaged in neatly-wrapped bundles that are then meticulously strapped down for the long journey. A head-board reduces the risk of a load shift.



Cement and dry powders are commonly moved long distance by rail due to the mass of the product. Dry tanks are common across most rail networks and can often be found on both dedicated trains and common intermodal services.



◀ No placards are visible, so this FBT Transwest liquid tank is not moving any dangerous goods. This tank is clearly a domestic tank due to the lack of compliance information marked on it.



Gases are often moved by rail in liquid tanks. This Coregas container is an insulated high-pressure tank carrying liquid argon for BOC.



While not common in Australia, there are a small quantity of multi-tank liquid containers being used to move compressed helium by rail. This container has three decks of tanks whereas many have only two.

large number of leased tanks operating as domestic containers. It is difficult to determine if tanks are shipping or export, or domestic use; often the only way to determine their function is on what train service they are loaded.

Tank leasing companies such as Eurotainer, Exsif, Seaco, Bulkhaul, SCF and CS Leasing, have a strong presence in the domestic market with a lot of containers consisting of the 22T6/22K2 variety that are suitable for liquid dangerous goods. Operators of lease tanks or their own tanks include FBT Transwest, McColls, Sadleirs, Solvay Interlox, Chemtrans and Geocycle SBF.

The other common tank type seen on rail are cryogenic tanks consisting of the 22T7-T9/K7 variety that are used to transport various gases. Common operators of these gas tanks include Coregas, Air Liquide and BOC. In addition to the common style single cylindrical tank are the compressed helium and hydrogen tanks that consist of a series of eight or 12 cylinders within a container framework.

Orica operate a large fleet of sodium cyanide tanks that are customised domestic tanks. These tanks are a beige colour and are relatively basic in external appearances.

Open-top containers in domestic traffic often have a very specialised purpose and are usually covered with a tarp to keep water out or the product contained. The EPE garbage containers are 25U0 type and commonly hauled waste products between Sydney and Brisbane until that operation ceased. Ettamogah Rail Hub has a small fleet of 4EUA bright green open-top containers used to haul pulp and paper between Brisbane and Albury. Other open-top containers such as the Mountain Industries 2EU0 type and the BIS 25U0 containers are generally operated on dedicated train services hauling grains and sulphur respectively.

Stock containers have recently made a comeback in Queensland, with the government purchasing a large number of 40S0 livestock (cattle) containers.

Major Container-Owning Freight Companies

There are a lot of freight companies that own containers. The following list is a summary of some of the biggest container-owning companies that use rail transport for domestic freight. Most of the large rail operators are also container owners. In no particular order, my list of major container owners includes:

- Toll,
- Linfox (FCL),
- Pacific National,

- AHG (RAND),
- SCT,
- Aurizon (now Linfox),
- Sadleirs,
- Austrans (Qube),
- K&S, and
- Northline.

Note: These company also generally lease a lot of containers.

Container Leasing Companies

Leasing companies play a very important role in the domestic container market with a likelihood of more than 50% of domestic containers being lease containers. Some leasing companies provide both domestic and shipping containers to the market, and often long-term leased containers are marked or painted in the customer's livery. The major suppliers of domestic containers are:

- SCF Containers,
- CS Leasing,
- Royal Wolf,
- Seaco (Cronos),
- Intermodal Solutions,
- Macfield, and
- Tradecorp.

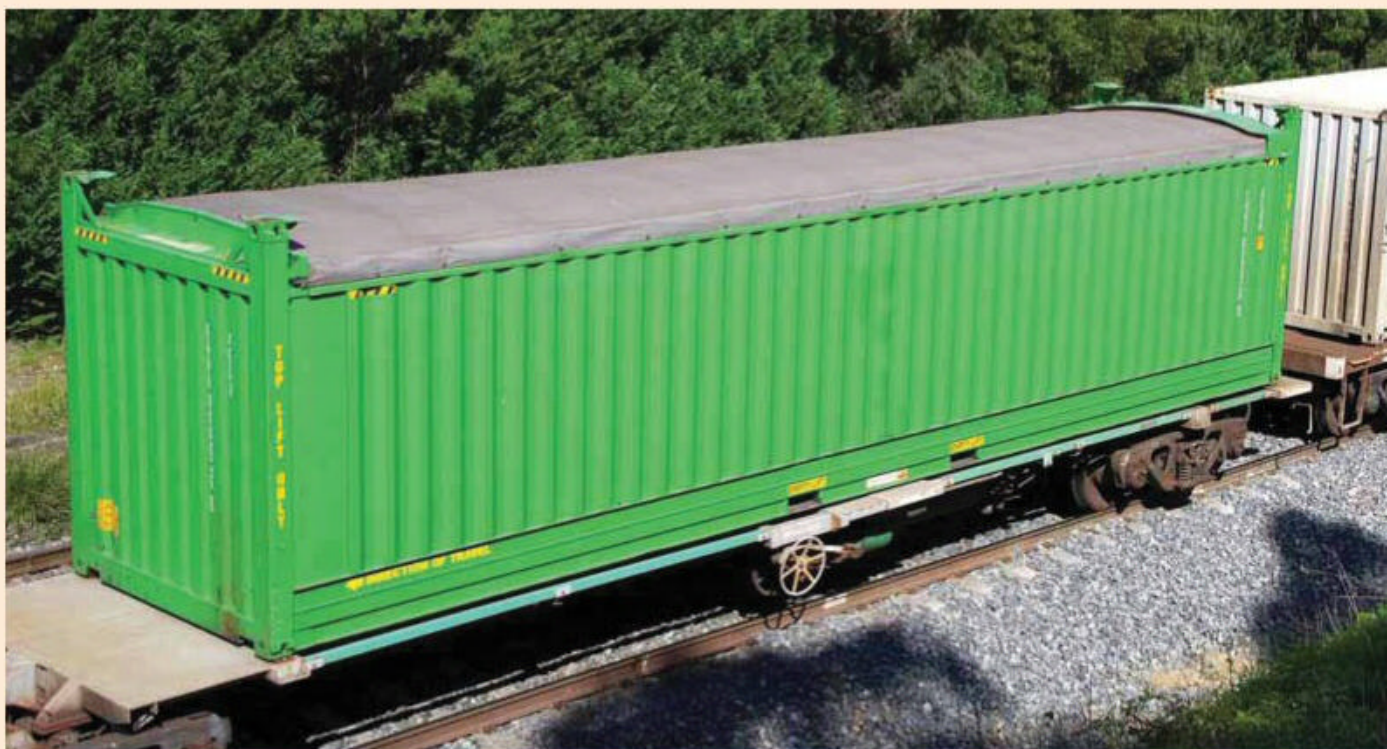
Modelling Container Trains — Domestic Containers

As always, it is worthwhile to get track-side and witness (doing so safely) trains if you are modelling the present era. Otherwise, the internet can be a great source of photos and videos of container trains from yesteryear. While there are always new containers coming into traffic, there are still many containers in service from the 1990s and early 2000s. The following aspects are worth considering when modelling a domestic container train:

Contracts — Major freight owners and forwarders often have long-term contracts with one rail operator. For example, you will only see Sadleirs containers on Pacific National services. Similarly, when Aurizon were still operating, you would only see K&S containers on Aurizon services (these are now back on Pacific National services). SCT generally only carry their own containers or leased containers.

Services — Particular services are heavily weighted in the favour of particular container types. For example, 25–50% of a Pacific National Brisbane–Melbourne (BM4) and Melbourne–Brisbane (MB4) service is refrigerated container traffic moving fruit, vegetable, dairy, meat and refrigerated consumables between capital cities. Sydney–Perth (SP5) and Perth–Sydney (PS6) services move a lot of low-density consumer goods and parcels in large-capacity containers and high-density bulk products in 20 foot bulk containers.

Container Types — 48 foot containers are becoming more common on domestic services, in part due to the common low density of domestic freight and the freight pricing structure. Due to a lack of five-pack wagons, 48 foot containers may



Ettamogah Rail Hub, located north of Albury (on the New South Wales–Victorian border) invested in a number of open-top containers specifically for hauling top-loaded paper products on the east coast. The top tarp is wound back to allow loading or unloading.

also be placed on 60 foot or 80 foot wagons. This is a good chance to show off wagon deck detail in the 12 foot of unused space.

Colours — One thing I always notice is how colourful domestic container trains are. Mix brightly coloured containers through the consist, noting that most refrigerated containers are white to reflect heat.

Branding — Most services have a heavy weighting of common containers such as Toll, Linfox, FCL, Pacific National, RAND and a number of leased containers like SCF and Royal Wolf.

Loading — Depending on the day of the week, services may be full or lightly loaded. The same service between two cities on a Friday may not have a single container slot available, whereas the Sunday service may only be half loaded. Both train loadings are plausible.

Export Containers — Occasionally, shipping containers are seen on intermodal services. A couple of containers from the same shipping line placed

together can add some more interest, but generally it is better to leave them off.

Model Container Suppliers — In recent years, a large number of domestic containers have come into the ready-to-run market in HO scale, from such manufacturers as: Auscision Models, On Track Models, SDS Models and Southern Rail Models.

There are a number of niche and cottage industry suppliers including InFront Models, and Road and Rail Resin.

[Editors note: *It would be interesting to see if there is a potential market for ready-to-run concrete containers or even the many variations of half-height containers.*]



Stock crates owned by the Queensland government are a good example of the diversity in containers and intermodal, where almost anything can be built to fit on four corner anchors and be safely transported by rail.

Walloon

Locomotive 1565 slows into the up platform of Walloon with a stock special.

**LOGAN DISTRICT
MODEL RAILWAY CLUB INC.,
PRESENTS**

Walloon in H0n3½

Photographs by the AMRM Team, unless otherwise stated.

Who would have thought that a mid-1980s weekend drive, armed with a camera and three rolls of film, would produce a captivating exhibition layout? This is a layout that captures the essence of a location, depicting something uniquely Australian. John Smith located the ideal scene. His goal was to feature a double main line and a small yard with buildings that everyone could associate with QR and rolling stock that told a story of an era. Walloon, on the Toowoomba line west of Ipswich, is such a location. *Walloon* is based on the station of that name.

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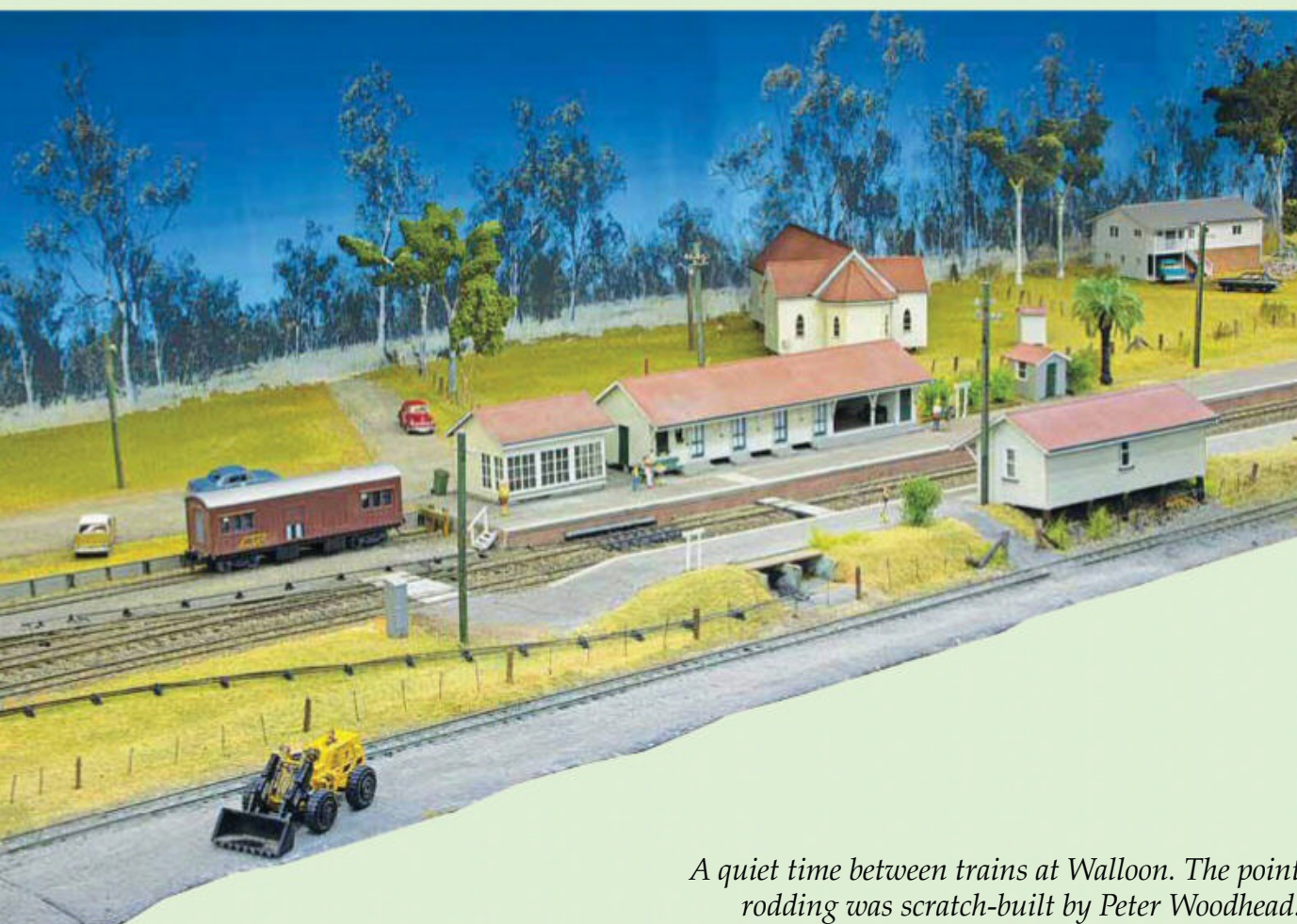




Locomotive 1565 on the up at Walloon while the locals busy themselves for the day.



Locomotive 1726 on a short mixed goods on the down through Walloon yard.



A quiet time between trains at Walloon. The point rodding was scratch-built by Peter Woodhead.

The layout design is straightforward, simple to assemble and fun to operate. The culmination of foresight, hard work and experience has produced the layout *Walloon*, of which the Logan District Model Railway Club Inc. (LDMRC) is very proud.

John Smith, an experienced layout builder, hounded John Love (a current member and past president of the LDMRC Inc), to build *Walloon*. John produced the 100-plus photographs that captured the station, yard, bridge and QR buildings, also the nearby houses and church from all those years ago. Based on the research (and John's passion for the project) the go-ahead was given by the club, and John's vision could now become a reality.

John Smith and John Love gathered a select few club members to help recreate Walloon as it stood in the 1980s pre-electrification of the line to Ipswich.

Design

John's design criteria meant that the layout needed to:

- be light, and easy to load and handle;
- ensure quick assembly and disassembly;
- have minimal wiring and connectors, with the assembly accomplished from the perimeter, without accessing the layout from the underside;
- be wide enough to display a shunting yard and a station with main lines; and
- be able to fit in an enclosed 1.8 m x 1.2 m trailer.

Frame construction features steel legs and horizontal supports made from 25 mm x 25 mm square hollow section (SHS — that is, steel box tubing) and 20 mm square steel spigots.

Each baseboard is made from 70 mm x 19 mm finger-jointed pine screwed and glued in a ladder frame, on top of which

At A Glance

Name: Walloon

Scale: HO_n3½

Period: QR (mid to late 1980s)

Layout Type: exhibition format, station to fiddle yard

Layout Size: 5.2 m x 2.0 m

Rail height above floor: 1.0 m

Baseboards: grid pattern with incorporated backdrops and lighting

Track: Peco HO_m

Control: Digikeijs DR-5000 Command Centre

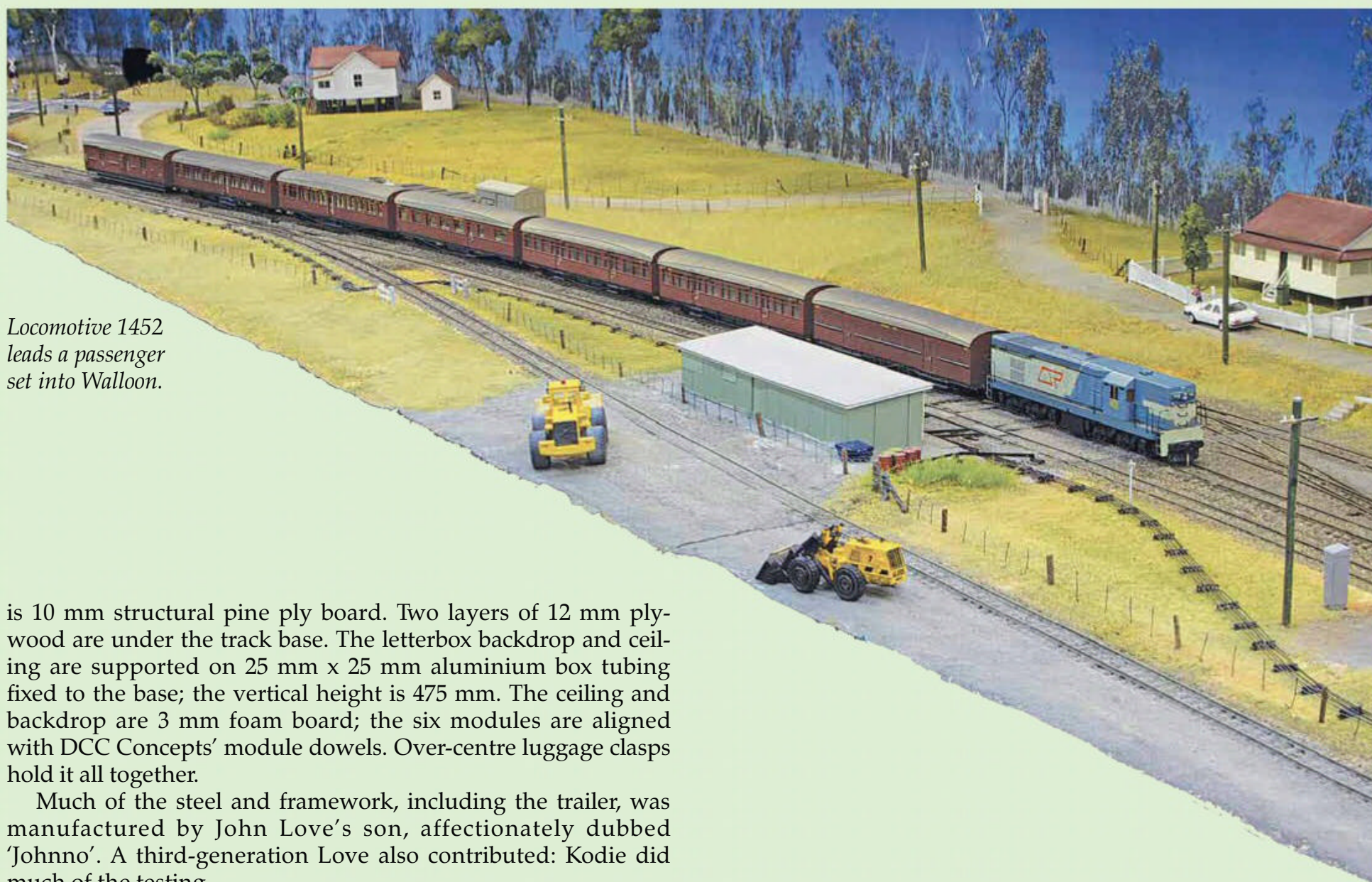
Buildings and Structures: scratch-built

Scenery: polystyrene base covered with tissue and clay with static grass

Locomotives: RTR and kits from Wuiske Models and Southern Rail Models

Rolling stock: RTR and kit-built

Builder: Logan District Model Railway Club Inc.



Locomotive 1452 leads a passenger set into Walloon.

is 10 mm structural pine ply board. Two layers of 12 mm plywood are under the track base. The letterbox backdrop and ceiling are supported on 25 mm x 25 mm aluminium box tubing fixed to the base; the vertical height is 475 mm. The ceiling and backdrop are 3 mm foam board; the six modules are aligned with DCC Concepts' module dowels. Over-centre luggage clasps hold it all together.

Much of the steel and framework, including the trailer, was manufactured by John Love's son, affectionately dubbed 'Johnno'. A third-generation Love also contributed: Kodie did much of the testing.

Scenery and Buildings

Landscaping was mapped out from the station plans obtained from QR archives.

The scenery base was formed from polystyrene foam, covered in facial tissue and glued with polyvinyl acetate (PVA) glue. This was covered with clay dust and static grass, ground foam, trees, and bushes and plants sourced from Modellers Warehouse.

Fencing was made by splitting 5 mm dowels; these were then sized and drilled; 0.2 mm wire was then threaded through the posts. Point rodding and the bridge at the western end of Walloon were scratch-built by Peter Woodhead (LDMRC member, and avid ship and railway modeller).

All buildings were designed and drawn by John Love and scratch-built by John Smith. The vinyl adhesive backdrop of blue sky, and local gums and fauna is from Wuiske Models; it was extended and blended together to make it cover the length.

Trackwork, Electrics and Lighting

The layout is DCC controlled by a Digikeijs DR5000, with loco control handled by mobile devices. Ten-inch tablets operate the points via a track plan using their touch screens.

One tablet is positioned at the front of the layout when in use for operations such as shunting the ballast wagons.

All track and points are from Peco's Electrofrog H0m range.

DCC Concepts DCP-CB1DiP Cobalt iP digital point motors control the points and switch the frog polarity. A 15 amp work-

shop battery charger supplies power to three lengths of adhesive light emitting diode strips. Using two colours (bright and warm white) results in a 'mid-afternoon' look of the Queensland sun.

Conclusion

Walloon made its debut at the Bundaberg Model Train and Hobby Expo on 23–24 March 2019.

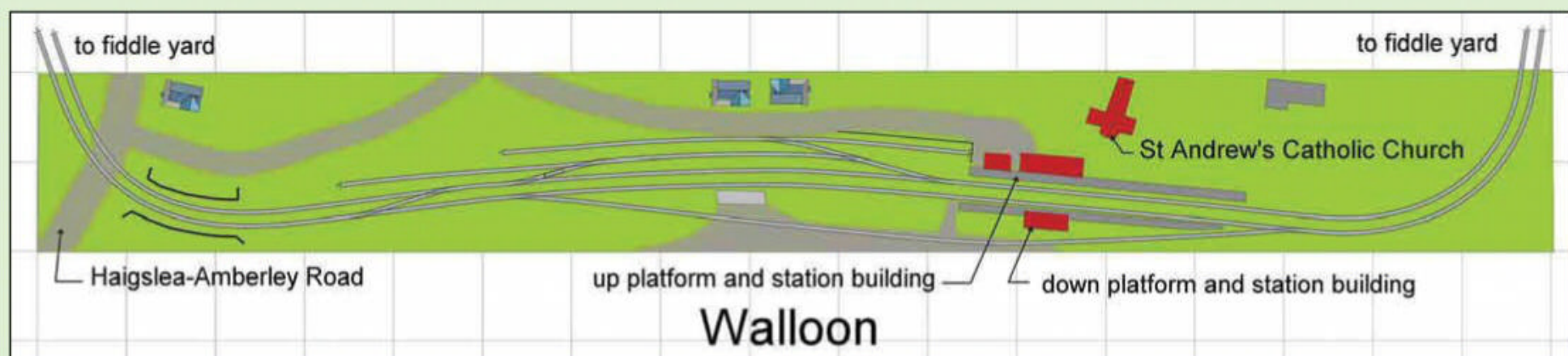
The layout travels well in the adapted trailer, and can be packed and unpacked quickly. It is a dream to set up, with barely any bending or floor work, thanks to the diligent builders who have toiled to bring *Walloon* to fruition.

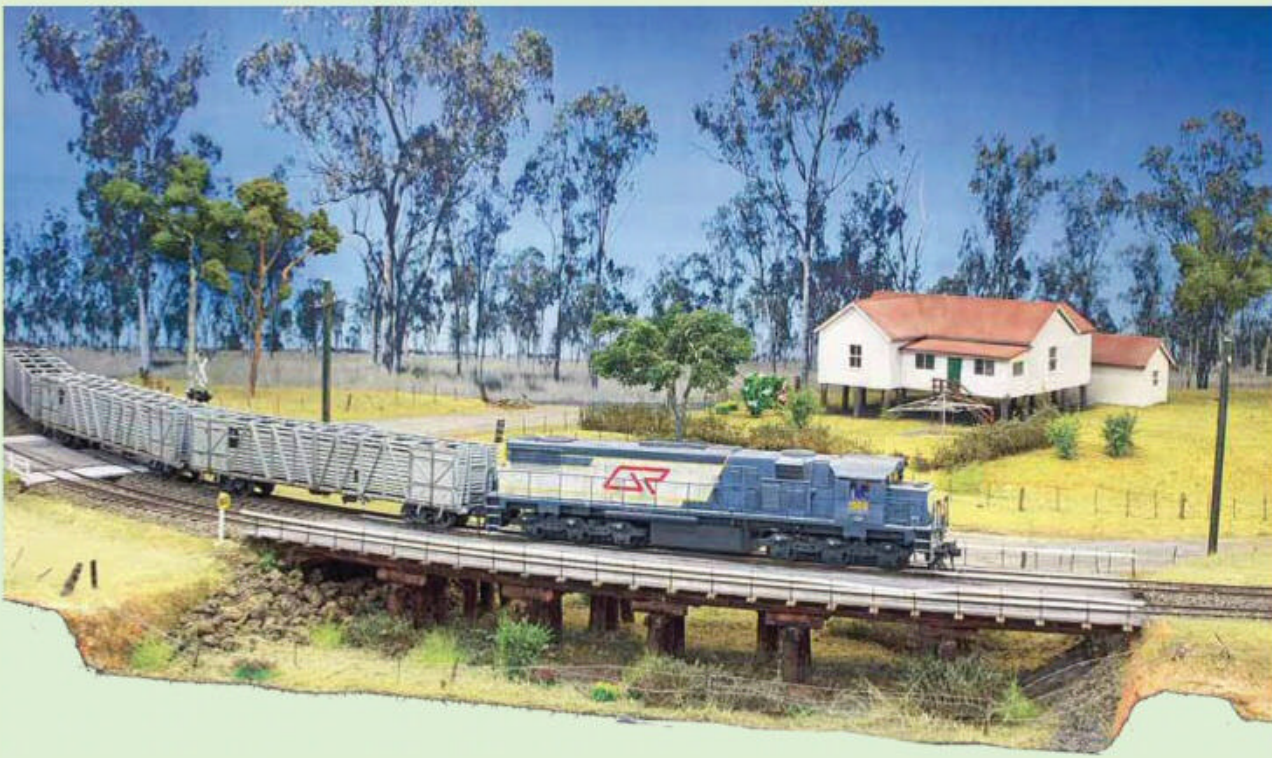
Walloon has since had a considerable impact on drawing members to the club and will be presented as often as possible during its life, including interstate locations.

John, Smithy, Peter, Johnno and Kodie have developed a strong mateship bond. The camaraderie they share while going away together is half the fun; the other is chatting to friends — old and new.

Meeting people who know the area is really rewarding. We have had comments like: "It's just as I remember." or "I lived down that street." and "The lady who owned that house worked at the school; they only ever had Fords.". Well, now the layout only has Fords parked at that house!

Marty van Doren, the LDMRC Inc. president and contributor to the electrical design, wishes that as many people as possible get to see the layout. We are all very proud to display and operate the layout for you all.





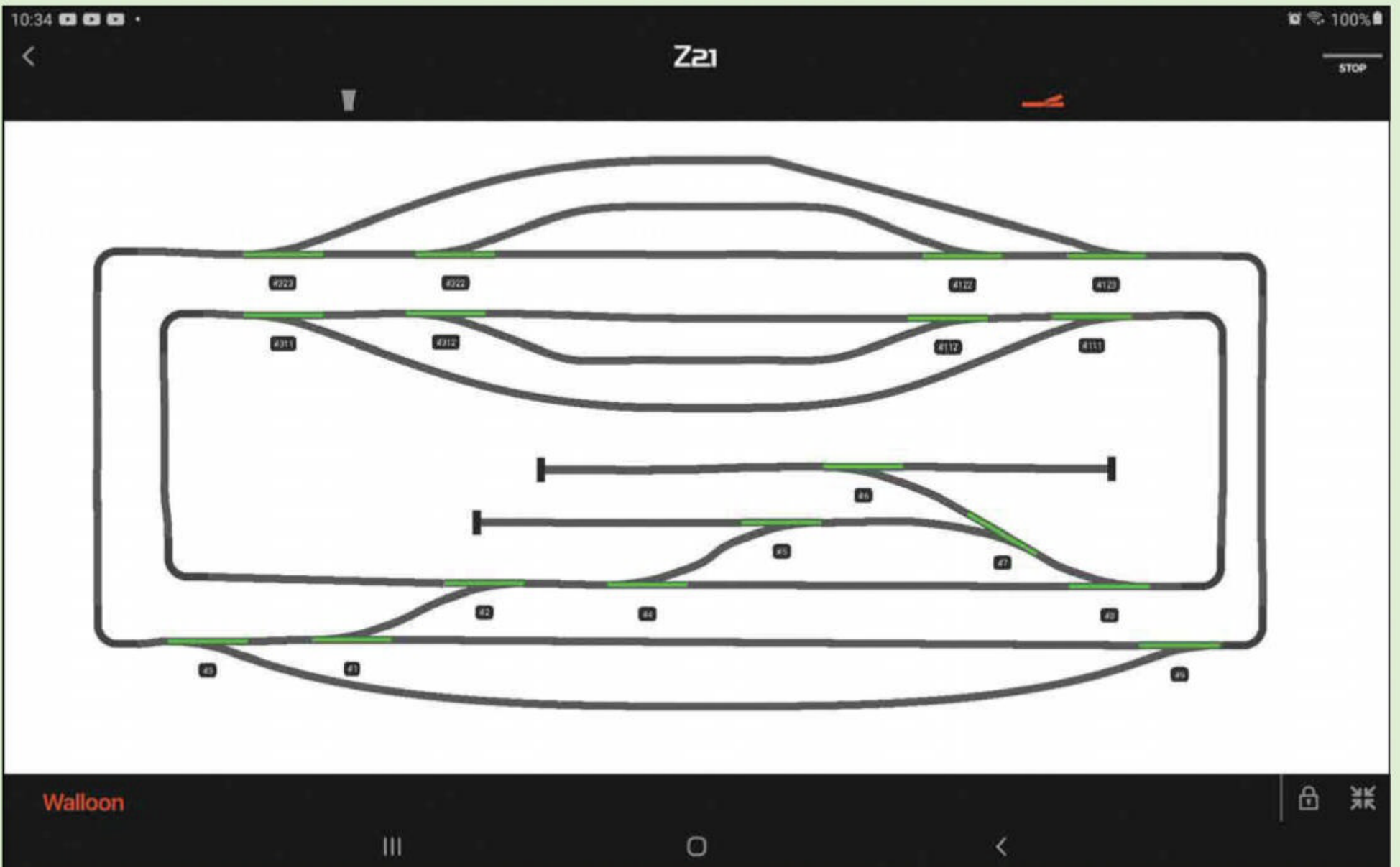
◀ Engine 1565 has just crossed over Haigslea–Amberley road with a stock special.

▶ A workers' van stored on the up side back platform of Walloon.



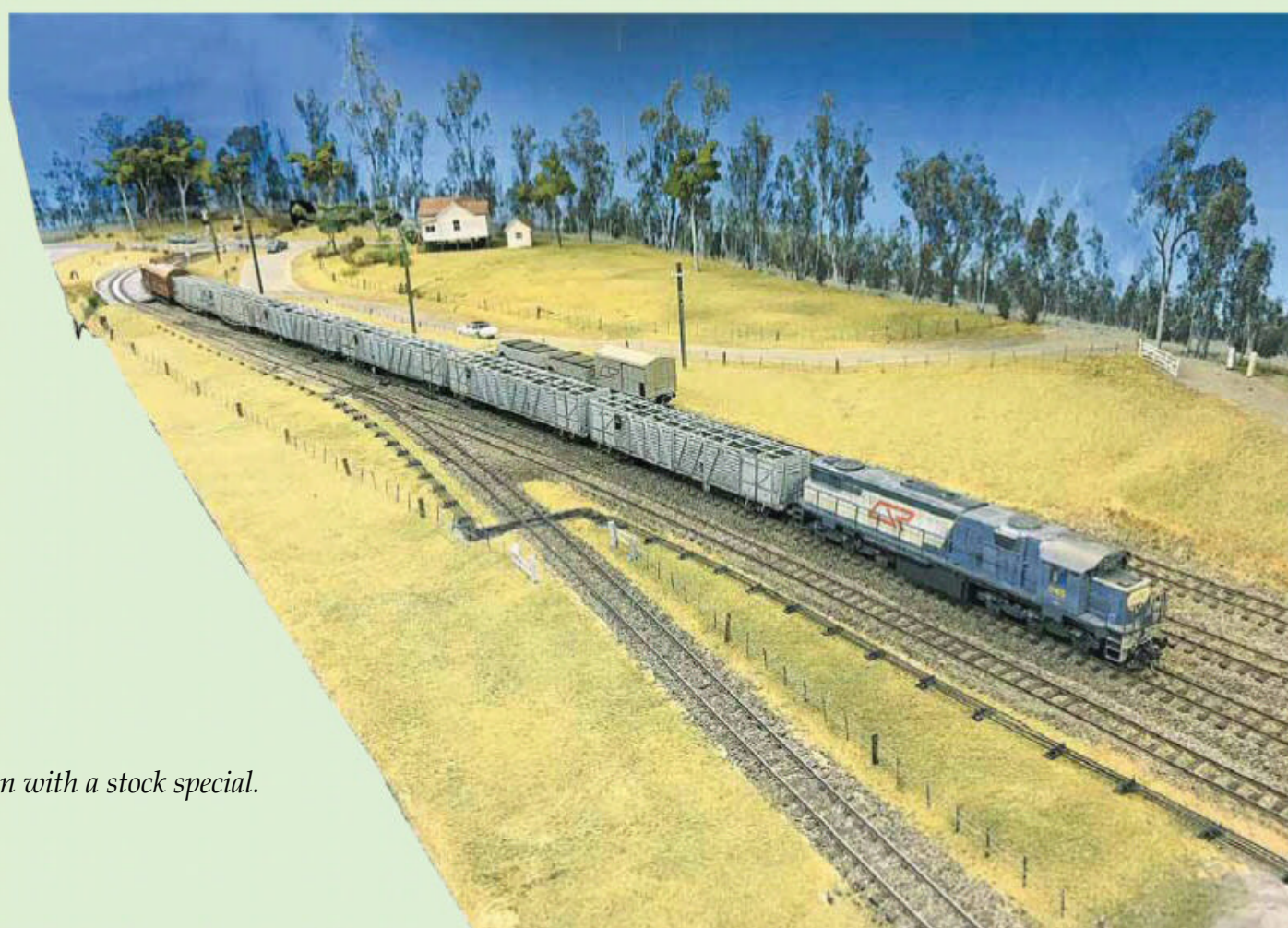
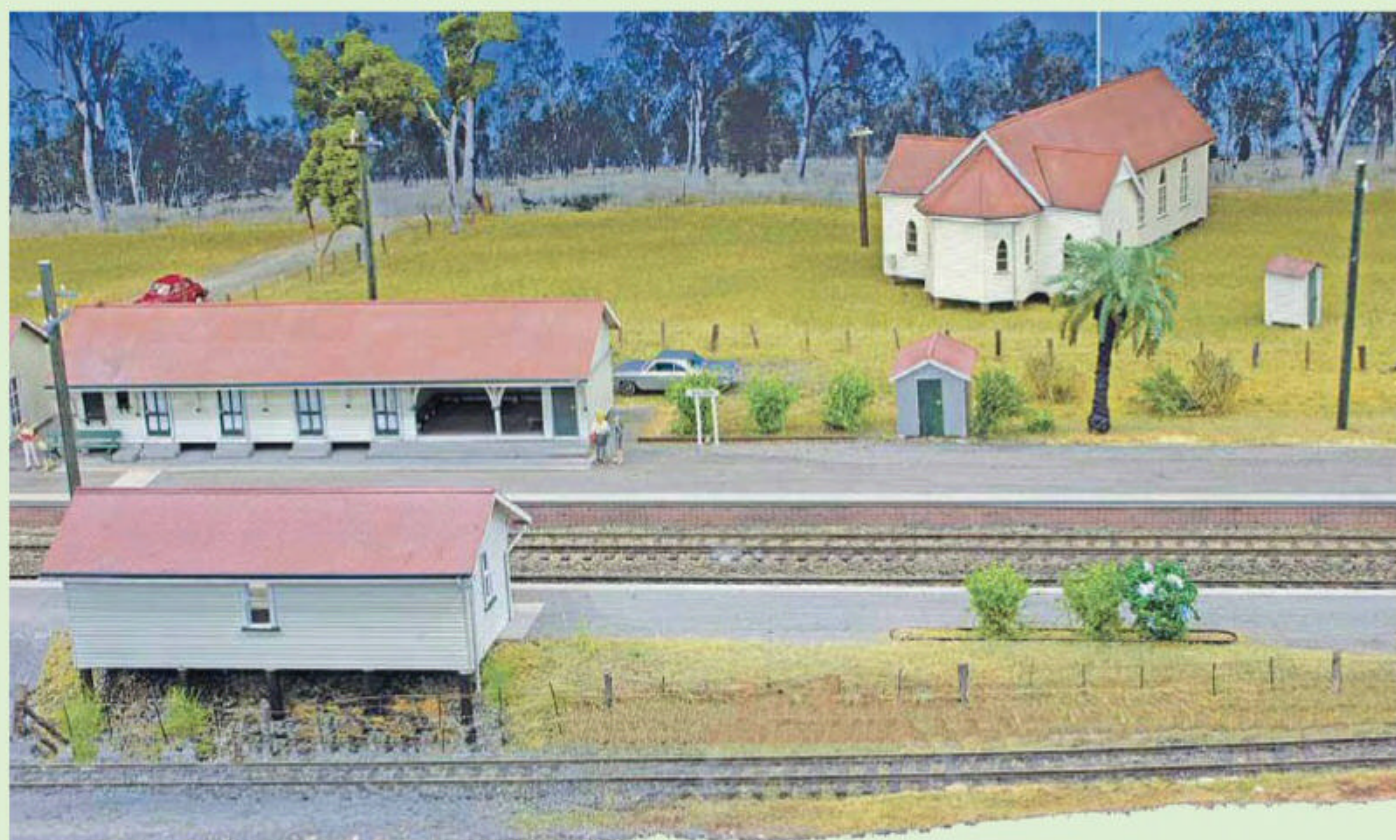
▶ Locomotives 1452 and 1726 cross each other at the down end of Walloon station.

▼ Control of Walloon's points is achieved using a tablet. Photo by Marty van Doren.





Passengers wait for the next train to Roma Street at Walloon.



Locomotive 1565 barrels through Walloon with a stock special.



Locomotive 1770 slows into the up platform at Walloon with a ballast train. Photo Marty van Doren.



St Andrew's Catholic Church, Walloon (scratch-built by John Smith from a drawing by John Love). Photo by Marty van Doren.

Aurizon's QQWYs

The AMRM Team outlines Aurizon's QQWY well wagons. Photos by the AMRM Team.



Aurizon's 6001 and 6003 C44ACi leads PM1 past Binduli, Western Australia, on its way east on 8 January 2016. QQWYs dominate this train's consist.

In 2015 Bradken Rail delivered 60 two-pack 48ft well wagons to Aurizon for their standard gauge intermodal operations. Built in China, Bradken delivered these wagons via Western Australia's Fremantle port in July 2015. These wagons were part of a 175-wagon order to support Aurizon's intermodal operations. This included:

- QQBY (19.3m three-TEU container flat wagons)
- QQDY (44.34m five-pack with 48ft platforms)
- QQWY (42.5m two-pack with 48ft wells).

Description

The QQWY is a two-pack permanently coupled 48ft well wagon.

The well section is designed with outside bracing, similar to Specialised Containerised Transport (SCT) PWWYs which Bradken Rail also designed and built. Each platform is built with a main reservoir end and a plain non-reservoir end. Each well side has raceways for two airlines which go through the uprights. However, only one raceway is used per side, either for the main reservoir airline or an airline to feed the bogie at the non-reservoir end. See QQWY configuration diagram.

Numbered in the 3000 series, the QQWYs are finished in Aurizon wagon light grey with Aurizon symbols.

The QQWYs are handed. The tell-tales are the airlines. On this side there is an airline feeding the other bogie on the platform, which uses the lower pipe line position.

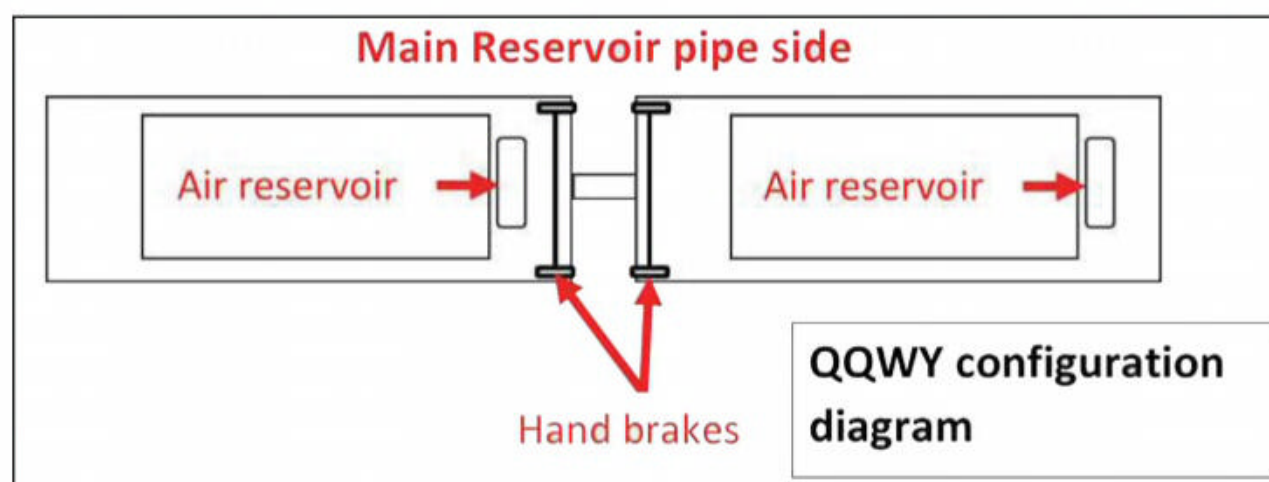
Operations

Soon after delivery, the QQWYs were operated on Aurizon's East-West intermodal traffic; the QQWYs dominated this service when introduced. In 2017 Aurizon would depart the standard gauge interstate intermodal business. The QQWYs were then stored at Avon Yard in Northam, Western Australia. In May 2018 the QQWYs were taken out of storage and are currently used to supplement Specialised Containerised Transport (SCT) operations.

Modelling notes

In HO scale, some modelers might be tempted to use an SCT PWWY. However, this model has different strengthening positions and the internal well ends are angled, whereas the QQWY is vertical.

For the well body, a BGM RQZY kit could be a better kitbashing proposition. The sides of the kit are smooth plastic with vertical ends of the well. The side strengthening uprights could be represented by applying Evergreen styrene strips over the smooth sides.

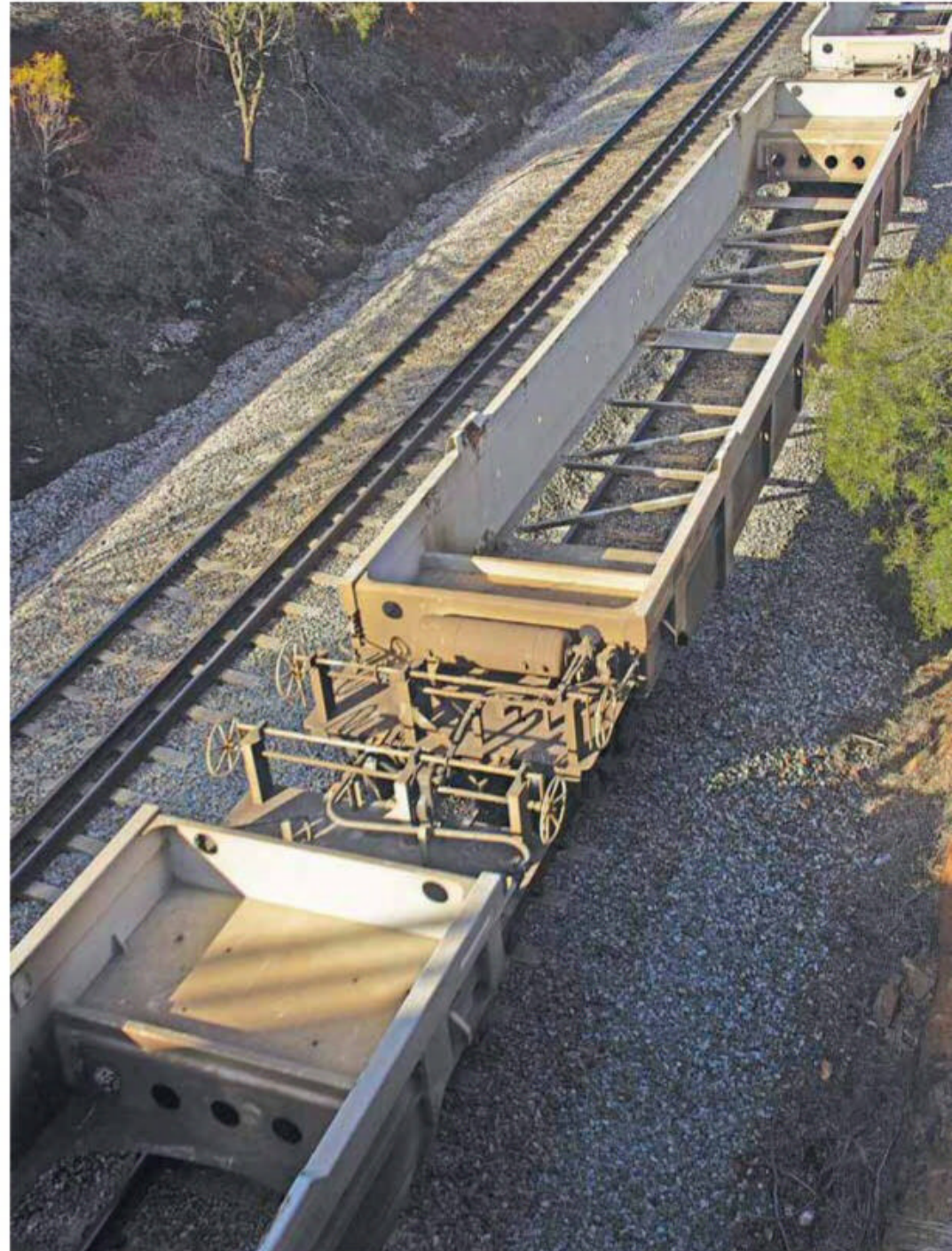




On this side the main reservoir (MR) airline utilises the upper pipe line position.



The reservoir non-hand-brake end of the platform. In this view you can see the two airline raceways installed through each upright and the air reservoir stand-offs.



An overhead view showing the internal bracing, fillets and the well floor strengthening strut arrangement.



Handbrake assemblies. Note the drawbar and that the hand brakes are located in the centre of each two-pack.



Handbrake assemblies and reservoir top detail.



Non-reservoir, non-handbrake end.

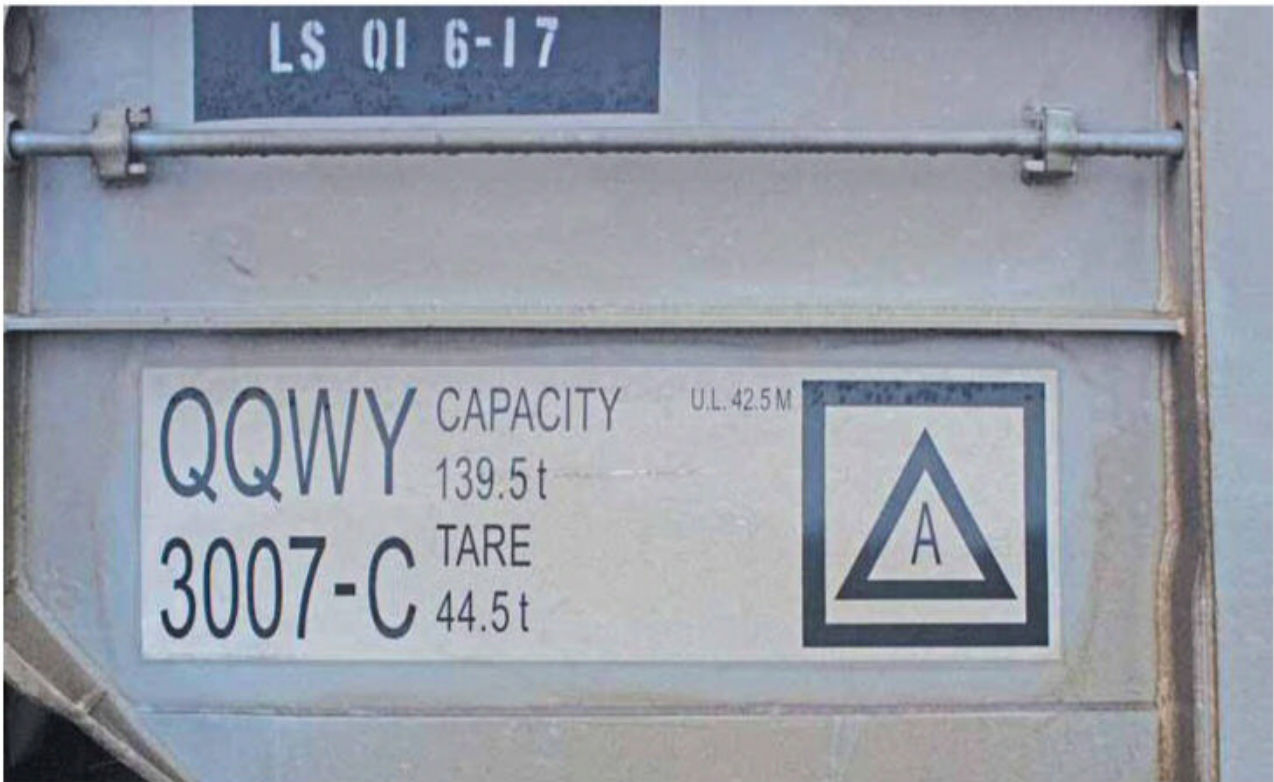
Internal well end detail.

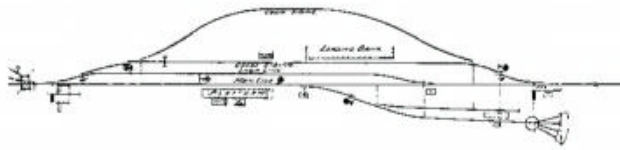


Centre well side details.



Code board.





IN THE LOOP

Peak r-t-r?

Trevor Hodges. Photos by the author.

I was on the phone to a train modelling friend the other day and we were laughing about our early kit building efforts stretching back into the eighties and nineties. I built my first steam locomotive kit in 1994 and the reason I remember the year so clearly was because I heard about Kurt Cobain's death on the radio while I was working on the kit. I was never much of a fan of Nirvana's music so perhaps it would be more accurate to say I remember what year he died because I was doing something really important at the time; assembling my first New South Wales Government Railways (NSWGR) steam locomotive kit which happened to be a (C) 32 4-6-0.

At the time the DJH/Lloyd's Model Railways (C) 32 locomotive kit was considered pretty cutting edge and I've been told by friends who are old enough to remember an earlier modelling era that it was a significant improvement over some of the earlier kits which had been produced in the 60s and 70s for the growing NSWGR HO market. But I guess anyone looking back today as a railway hobbyist who has only ever known the often brilliant ready to run models now available might look back in horror at the idea of having to actually assemble a locomotive kit. Why would you bother?

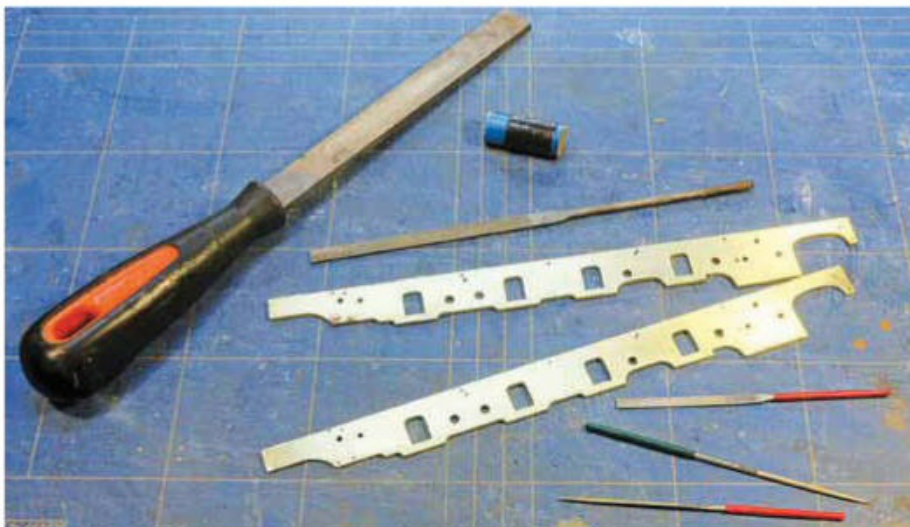
The kit I've just started work on is a Century Models (D) 50 2-8-0 standard goods locomotive in 1:43.5 scale that I've had sitting in the cupboard for about sixteen years. I purchased it when it was first released in the early 2000s. I'm not sure why it's sat unbuilt for so long but the arrival of good ready to run brass diesels onto the market in the intervening years might have something to do with it. Because these ready to run locomotives became available, the need for steamers to take on train assignments on the Morpeth line wasn't quite so pressing. I'd originally had the idea that Morpeth was going to be an exclusively steam operated line, but the Auscision 48 in 1:43.5 put paid to that idea. The sentiment that "I need to build that" can very easily drift into "I must get around to building that" and go on for many years if you're not very careful. I've actually sold a few kits recently because of the dawning realization that I simply will never get around to building them.

I managed to stretch the assembling of the tender over a couple of months and, after applying the final details I made a start on the chassis of the locomotive. This particular kit uses 1.6mm thick flat brass for the chassis frames that has been cut using a laser. While it does produce parts that are very accurately cut, I was surprised to find there were quite a lot of

burrs around the edges of the frames. These needed removing and the parts generally needed cleaning up before I could move on to assembly. I take my time with this step in the building process; once the chassis is assembled and soldered up many areas on these parts will be inaccessible. Therefore, there is no better time to work on cleaning the frames up than before assembly starts. As I scrubbed away and cleaned the frames with wet and dry sand- paper in the kitchen sink and filed and de-burred them at the workbench, I did have time to allow my mind to wander over the prospect of someone who'd never been provided with the opportunity to build such a kit and how they might react to the experience of carrying out such mundane and boring tasks. Is kit building is a dying art when quite a large percentage of doing it can be classified as boring and on the verge of unpleasant? Although I'm sure there are some people out there who also find this part of the kit building process enjoyable. Combine this with the ready availability of excellent ready to run locomotives from China and you could be forgiven for thinking that the future of kits and kit building is far from rosy.

Just think about a few other things we've taken for granted over the past couple of decades; quick and reliable worldwide supply chains for goods coming from the rest of the world; vast pools of cheap labour in China and other Asian nations; friendly and mutually beneficial trade relationships with our biggest trading partners. Have you tried to buy a new car recently? The factors that allowed Australian suppliers to provide our relatively small market with high quality ready to run railway models came into being in the early 2000s; Covid and our changing relationship with China have fundamentally shifted things and to believe that railway modelling manufacturers will be immune from these global forces would be somewhat naïve.

Am I predicting the end of ready to run railway manufacturing supply for the Australian market? Of course not! Ever smaller sections of the market are finding ready to run plastic diesel models becoming available for the first time ever. However, there are signs that prices are heading up and certainly supply has become more costly for the manufacturers. We may have already passed the high tide of reasonably priced models. Under such circumstances, who knows what the outcome may be? Railway modellers are fairly adaptable and I wouldn't put it past some of them to start considering whether their old kits might have some merit and perhaps rising monetary value. Who knows, they might be the next investment alternative to real estate and, if past experience is any guide, boomers will be in the best position to exploit it? ▴



The author's (D)50 class chassis frames in the process of being cleaned and de-burred.

Micro Layouts

Michael Baum describes some design principals for micro layouts. Photos by the author.



Introduction and a little bit of background

Everyone has their own focus and goals in the hobby. It leads to a set of requirements and design values that govern how we go about it. Personally, I've always liked minimum space layouts that allow me to focus on only a few elements and features at once. That's my choice. I have the space to build one larger layout, but I really enjoy the process of planning, constructing and eventually operating/exhibiting a layout. If I completed a layout and didn't have any space for another, I'm not sure what I'd do! I am always looking for prototypes to model, being inspired, and planning a layout. It's what I love.

If you have limited storage space, they need to be small, very small. So what differentiates a micro layout from just a 'small' layout?

Micro layouts are defined as "small model railways, usually less than 3 or 4 square feet in area that have a clear purpose and excellent operating capability. The layout size is more a state of mind than a rigid dimension" (refer: esngblog.com)

From the basic definition many configurations can emerge. I've historically preferred shunting puzzle-style layouts like the 'Inglenook'. Some other versions are:

- A single line terminus (layout without points)
- Circular minimum radius tail chasers

I have always preferred manageable projects that I can finish within budget, in a realistic amount of time. Besides, there can be something appealing about a model that is complete and finished to a (hopefully) high standard. I've been building shunting puzzles since I was a kid and see no reason to alter my behaviour!

Inspiration

The initial spark for undertaking new projects can take many forms. It can be a prototype photo, a memory from rail-fanning, an account of an operation from a piece of text, or even just the release of an appealing model.

For a condensed modern passenger terminus, Stony Point, Victoria, has to be a possible topic. It's compact, scenic and requires only a few pieces of rolling stock to run it. Indeed, if you only wanted to run your On Track Models Sprinter up and back into a fiddle yard, you could do that in a very minimal space and budget. Fitzroy goods yard and Stony Point are just two isolated examples. I'm sure the reader has their own prototype locations that come to mind.

Inspiration can also come from other modellers' work. As a micro layout builder, I see a small segment of someone else's layout, as a complete layout in itself. A single fan of sidings or a couple of industries makes a potential layout.

I predominately model Victorian HO, but there are potential micro layouts all over the world

In Victoria, up to about 1990, there were excellent topics for minimum space modelling as small 4-wheel rolling stock was still in use. This reduces the size of a layout greatly and means you can have more rolling stock on the layout at once. Also, with shorter rolling stock, tighter radius trackwork is more convincing, reducing the size of the layout again. These features all contribute to the design of a successful micro layout.

DESIGN FEATURES AND CONSTRUCTIONAL CONSIDERATIONS

Choice of scale

I usually model in HO, but I do dabble in a bit of N scale. If you were going to build a micro with a continuous run, N scale is the obvious way to proceed. Minimum radius can be as tight as (Peco) 9 inch or with Kato Unitrack, even less.

Analogue/Digital control

Most micros only require one locomotive to be moving at a time, so analogue control is fine. However, for ease of wiring and the other benefits of DCC, there are advantages such as constant directional lighting and sound (if that's your bag). User-definable speed characteristics for shunting are also very advantageous for the micro layout builder.

Designing 'Operation-Centric' micros

Even at the very origin of an idea, it's really important to consider how a micro layout will operate. I have a convincing sequence in my mind's eye. Wagon lengths and clearances, head-shunts, traffic patterns and loadings all need to be thought of. I have a flow of traffic and potential manoeuvres in mind before pretty much anything else. Many modelers use a waybill or card system to generate patterns and create movement on their layouts. I've never really gone this far, but I do think of how the real thing would be shunted.

Fiddle Yards/ staging

One of the most crucial things to get right (and hence operate correctly), is getting the fiddle yard or staging to work in

a practical way. At an exhibition where I'm operating the model for hours, it can't be overstated how important it is getting the fiddle yard to work well. Cassettes and traversers are good, but for ease of use and construction, a sector plate is my preferred method. (see side bar how to construct a sector plate).

Entry and exit

Consider how or if you are going to conceal the exit to the staging. A tunnel or road overbridge are common methods. In 'Parke' I used a covered piece of architecture to span the 'hole in the sky'. On my Wimmera Layout (See photo 8 to 11) I will use a tall silo to provide a visual obstacle – enough to insinuate the break of scene.

It is questionable if you need to conceal the fiddle yard at all. On my as yet untitled NSW layout, I'm not planning to

make a physical break. The staging will be in full view. I have also done this on the N scale 'Northern Banks', where the landscape is flat and a tunnel etc would be most unlikely. Some craftsmanship can be on display as well. If the fiddle yard is constructed well and finished to a high standard, why should it be hidden?

Presentation and lighting

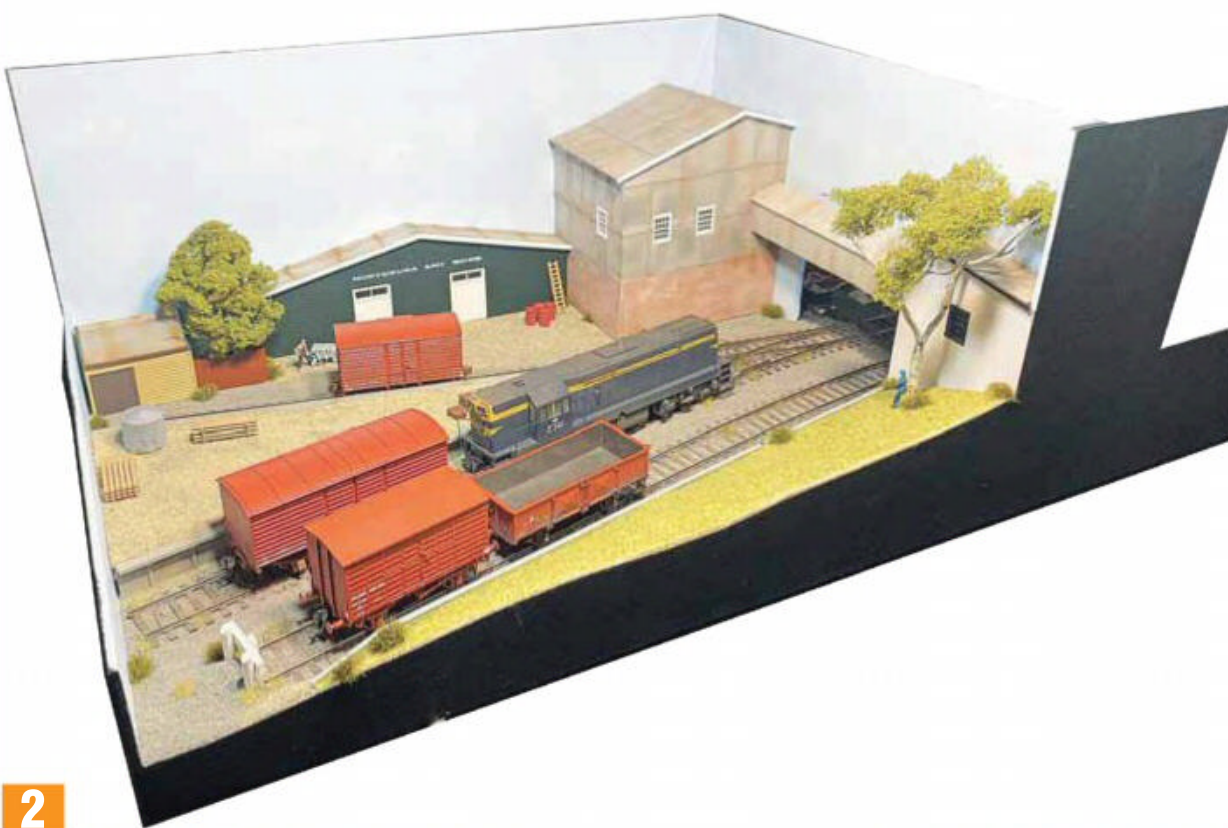
A visit to any model train show is always an eye-opener. I suppose my 'end-game' is the public display of a model. I'm always considering the layout in that context. Many of the layouts at a show are skilfully modelled. Some of these layouts can be let down by lax presentation and a poor system of lighting. I want my models to be almost theatrical in nature. I insist on a backscene (in some form) and lighting. I begin with this at the earliest point in the construction process. I want to know how lighting and shadows will fall on a scene as this will govern colour, texture and force viewing angles etc. It also has implications for photography and governs the elements of scenic detailing that will come into play on the eventual layout. I use multiple spotlights with an array of different bulbs to light my models. My lighting rigs are removable and can be disassembled for transport. (See photo 3a)

For the fascia and stand etc, I like to use black, as it creates a stark contrast with a well-lit subject and has a strong impact and presence in an exhibition hall.

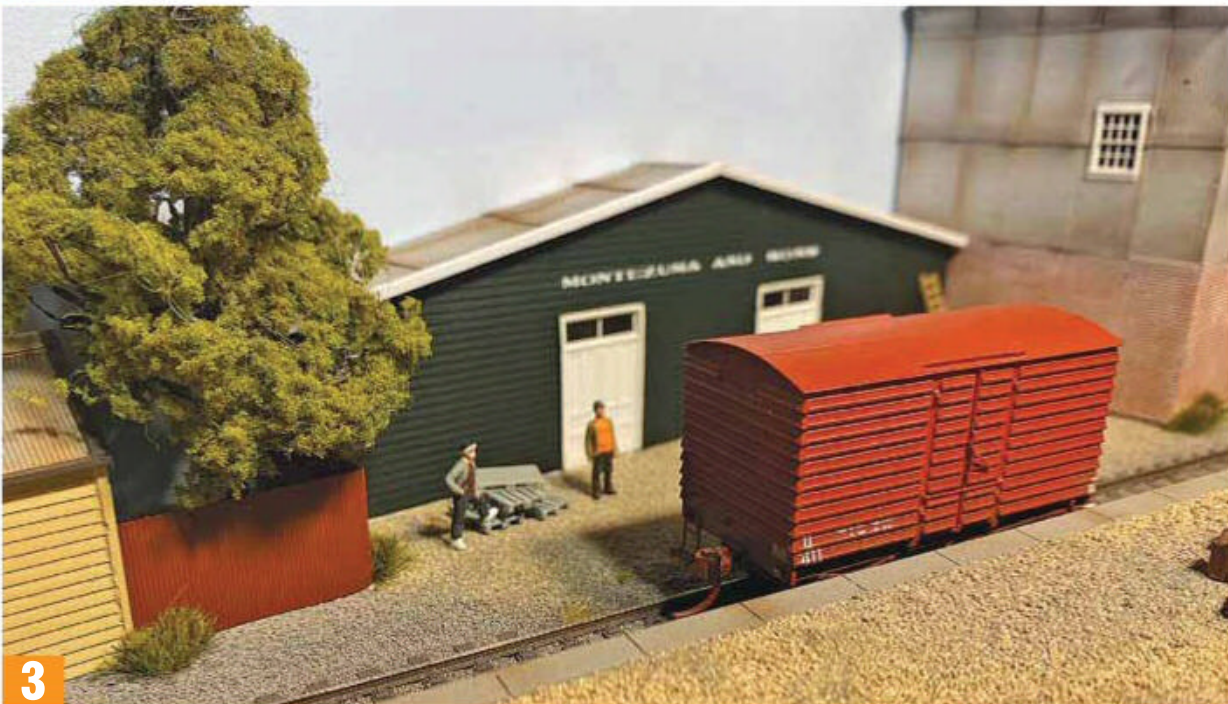
When I exhibit, I also consider the layout height. I prefer my models at eye height. This isn't always practical, so I plumb for a rail height of around 1.2 to 1.4 metres. I have multiple folding stands which are painted black and can be used

Parke

In Melbourne, Victoria, there are a few locations that are particularly interesting to me. Certainly, the inspiration for 'Parke' came from looking at photos of Fitzroy goods yard before it was closed. 'Parke' was never meant to be a representation of Fitzroy goods, but the fact that a little urban, goods-only terminus existed was enough for me.



2



3



3a

For lighting, I use clip-on lamps from Bunnings and aluminium temporary frames made from aluminium box tubing. They detach from the layout and aren't heavy or cumbersome. The aluminium can be cut to length and is strong enough to take the weight of the lamps. I use a combination of 'cool white' and 'warm white' LED globes that don't generate much heat and are efficient. I have found that to light a micro layout of average size, three lamps are optimum – one 'warm white' and two 'cool'. They are placed about 40 to 50 cm above the model.

Port Flora

An example of a different kind of inspiration is 'Port Flora' inspired by some particular models – the IDR W class and the Austrains Y class. They are perfect locomotives for a shunting layout. They run beautifully and look terrific. They're small and straddle quite a long prototype era. Also, they're perfect candidates for running a variety of rolling stock with them.





Wimmera

Wimmera layout with silo removed.

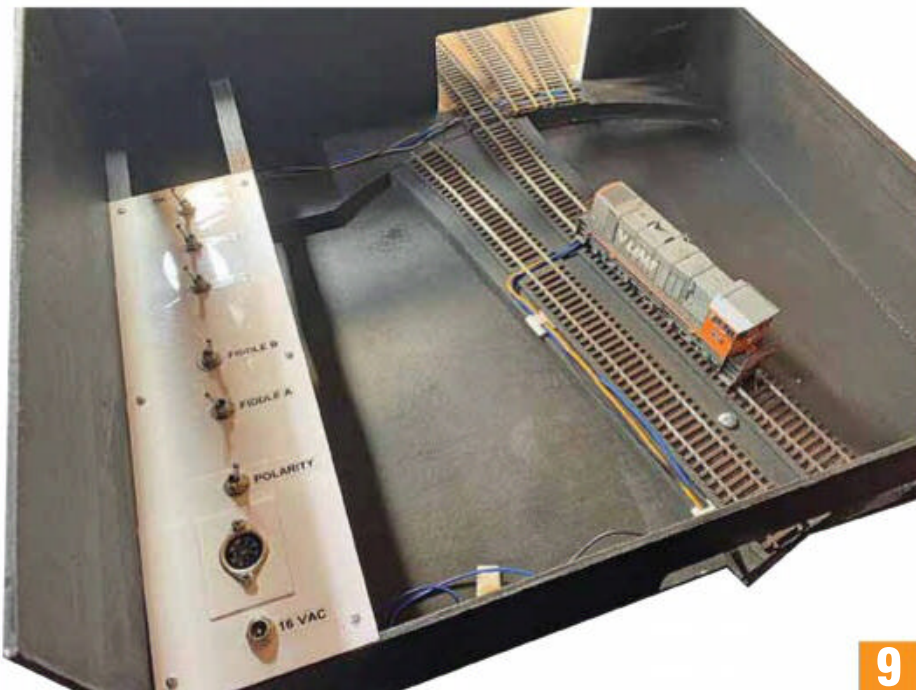


Photo 9, illustrates the 2-road sector plate and control panel. It is a successful design and feeds the scenic section adequately. Each road of the sector plate can be electrically isolated.



Photo 10, shows the alignment of the two roads. A lot of care was taken to get the geometry right so that running was trouble free. The main deck was built from 12 mm MDF. It is very sturdy, if not a little heavy. It was built prior to the final designs shown in the side-bar about making a sector plate.



Photo 11. The silo conceals the exit to the fiddle yard from the main.

for whatever layout I'm working on or exhibiting at the time.

Practical Concerns

Moving a large layout is not fun for me! Module joints, finding the correct set of legs relative to its corresponding module, driving with a trailer etc, adds to the stress of exhibiting. I drive a small hatchback and have no problem with fitting a micro layout in the back with the seats down. The biggest item is the 1.2 m stands, yet they are small enough to fit into any average vehicle.

Another practical advantage is the minimal number of tools required to construct a micro layout. I find that the following is enough to finish a build:

- A good jig saw
- A cordless drill

- A few different clamps
- Two sets of drill bits – one metric and one imperial
- Measuring devices: a 600 mm rule and a vernier calliper (for measuring drills/bolts etc)
- A soldering iron and basic electronics tools such as a set of nippers
- Dremel (for cutting flex track etc.)
- I also use a drill press, but not very often. You wouldn't absolutely need this.

I have the standard modelling items such as an air brush/compressor, brushes and paint roller (for facia painting etc), scalpel, tweezers etc.

Links/Research

A very noted micro builder, now sadly no longer with us, Carl Arendt, has a very good site – www.carendt.com. The site is

now managed by someone else and is still active. There are quite a few other blogs and planning sites as well. Pinterest is also a great resource.

Summary

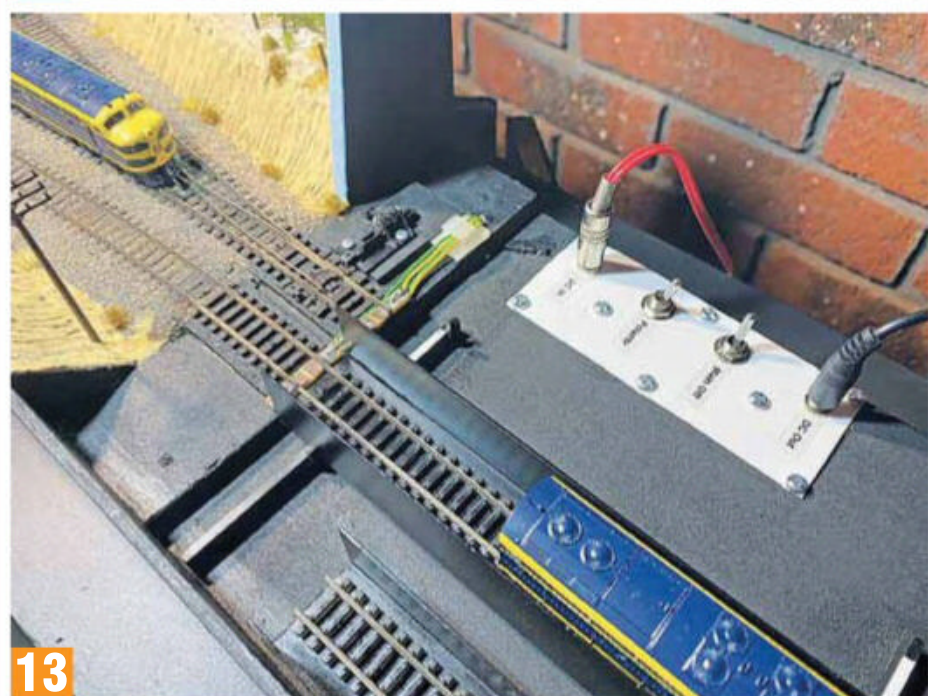
Planning and constructing micro layouts has taught me a lot about modelling. Repeating the process time and time again has meant that my techniques are refined and efficient.

This article is not meant to be a detailed 'how-to.' However, I have tried to equip the modeller with enough information to go about constructing a micro layout of their own.

Finally, I hope you have enjoyed this article and it inspires you to go on your own micro layout journey. May it reward you as much as it has me!



12



13

This shows the fiddle yard cassettes and the control panel. I use a lot of audio components from Jaycar. They are readily available and give a nice 'clean' look. The manually operated point is controlled by a Caboose Industries ground throw. The cassettes slide on styrene 'runners' but are completely removable. Power is supplied by 1/4 inch audio (headphone) jacks on the end of each cassette.

Northern Banks

On my Layout 'Northern Banks', I wanted to depict a rural freight terminal in NSW, but served by the Victorian system north of Echuca. I like that part of the country because its landlocked and arid. It is my only attempt in VR N scale so far. I've

enjoyed constructing it. The layout presented some interesting challenges, such as a cassette-style fiddle yard and manual point control.

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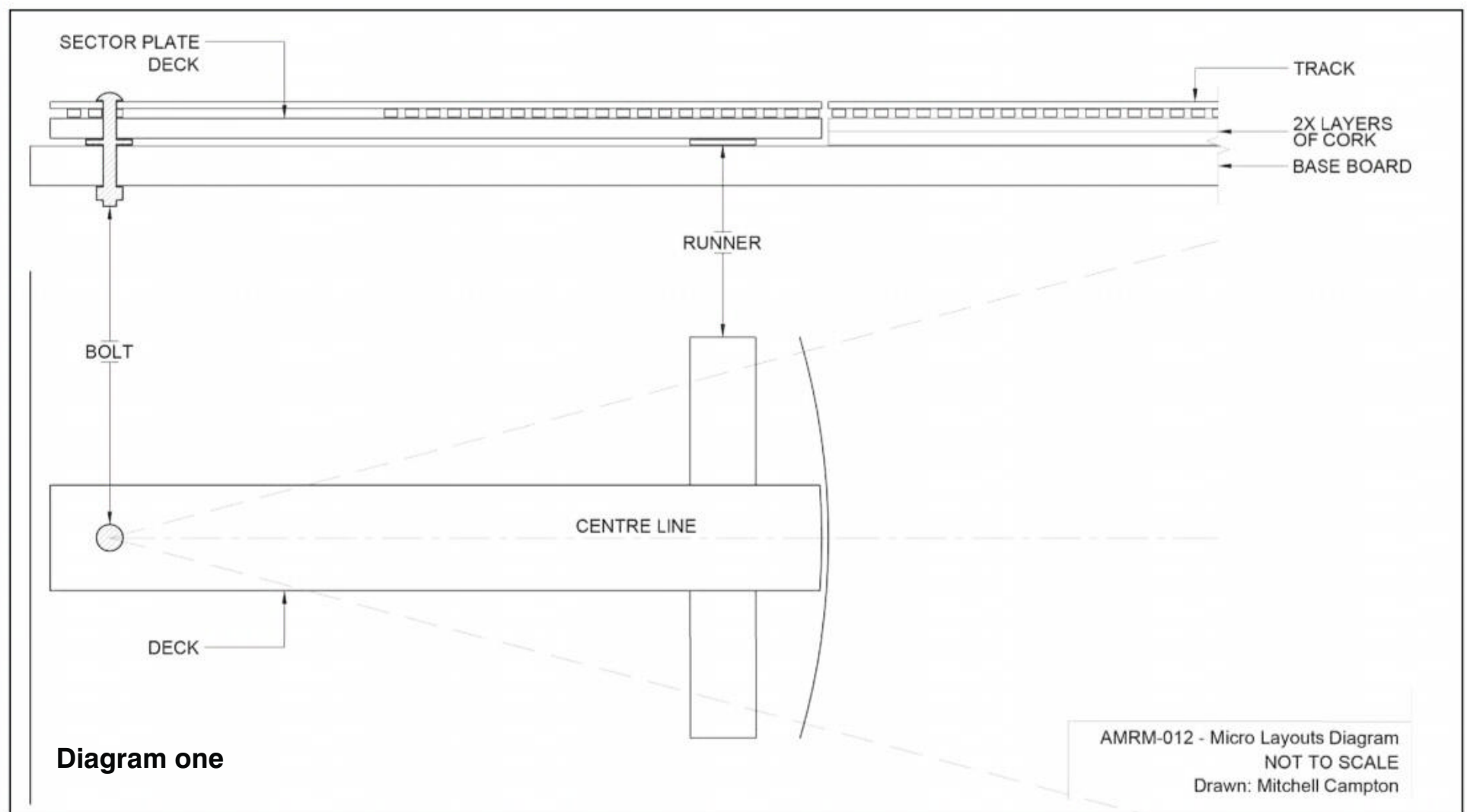
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Making a sector plate

Diagram One offers some insight as to how I built the sector plate for my as yet unnamed NSW layout.

Two layers of $\frac{1}{8}$ th inch cork were used to raise the rail level for the movable deck, which is 6 mm high. As it happens, an

$\frac{1}{8}$ th inch is close to 3.2 mm, so the flex track sits 6.4 mm above the baseboard. This allows room on the 6 mm MDF deck for a 0.5 mm washer and brass 'slide' to reduce friction while the sector plate is in motion. See photo 14.



For the pivot, I use a $\frac{1}{8}$ inch drill to drill a hole in the MDF deck and base board. I then bolt them together with a $\frac{1}{8}$ th inch brass bolt and nut and drill in the MDF deck and baseboard. I want some friction in the pivot so that the deck doesn't fly around too much. However, I do want the deck to slide freely on the brass 'runner'.

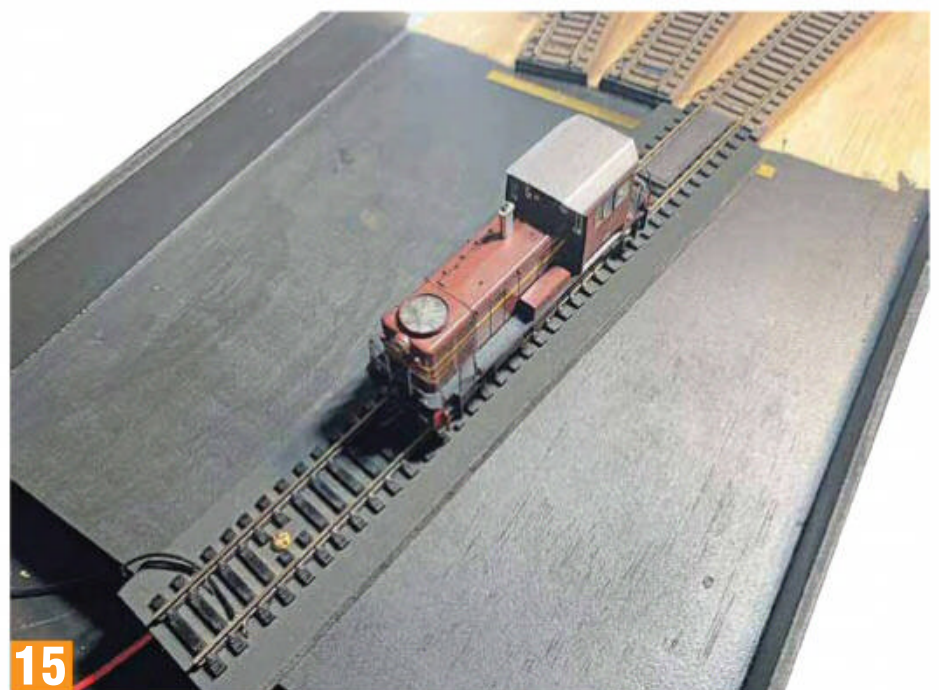


Photo 15, I cut a clearance in the sleepers of the flex track so that the hinge bolt sits flat against the deck and doesn't foul couplers or pilots. The wiring can be clearly seen tucked away and fed under the end of the layout.

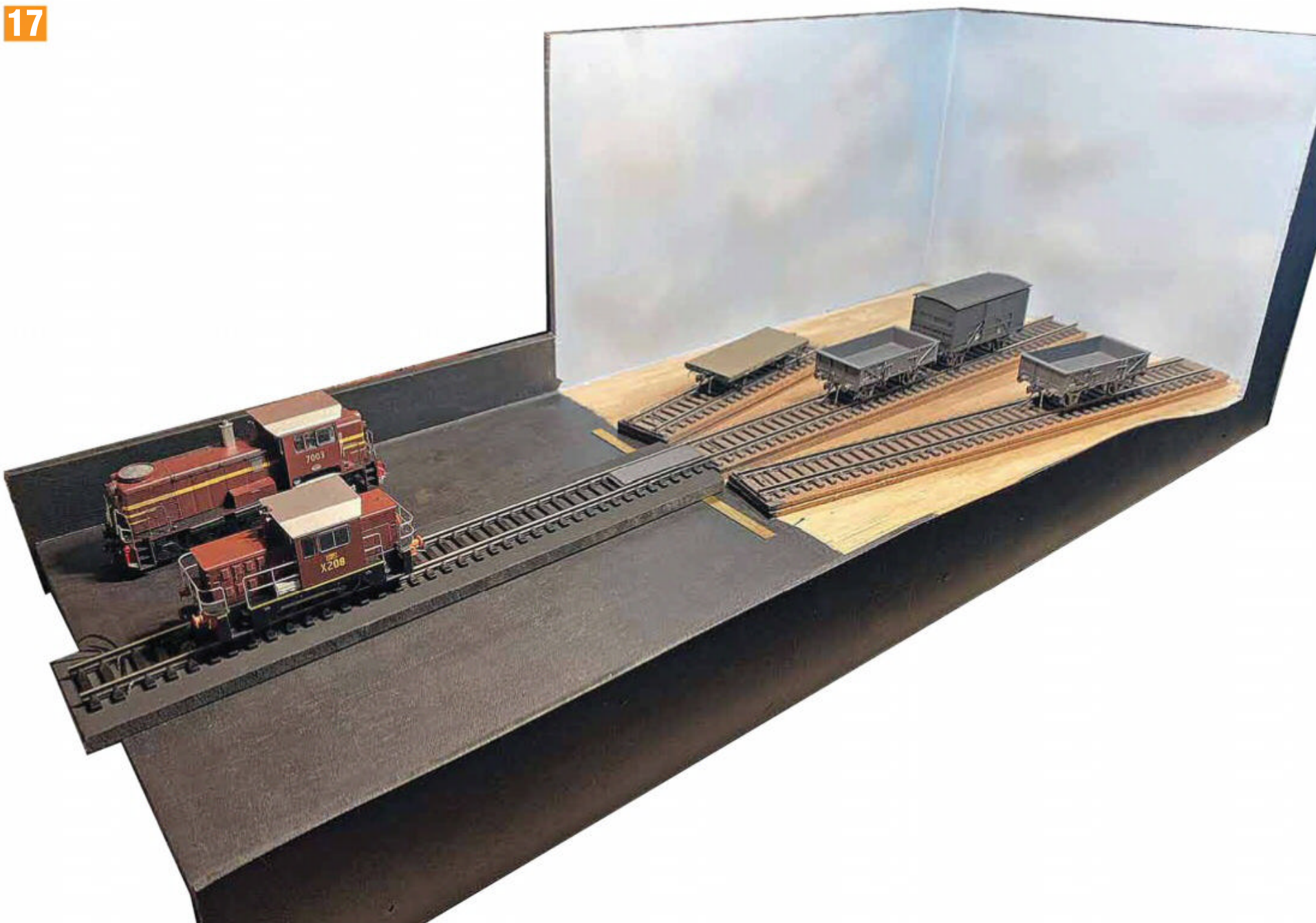


16

Photo 16 shows the relative heights in the construction. The two layers of cork, the brass runner, and the MDF deck can be seen. The track alignment is easily close enough.

Photo 17 shows how the 'fanned' geometry is formed by inherent design. All tracks are radiating straight, so the Kadees work without hindrance. The magnet for them can be seen on the sector plate deck which, in this case, holds one locomotive and two goods wagons.

17



Realistic backdrops using aerosol paints

The AMRM team outlines misting techniques for realistic backdrops. Photos by the AMRM team.



To create a realistic painted backdrop, you can use a technique called misting to replicate the colour gradient of a cloudless sky.

Basically this technique uses light misting of differing hues of aerosol paint cans, to create the sky colour gradient.

Backdrop preparation

The backdrop is made from 3mm Medium Density Fibreboard (MDF). With a paint roller, the backdrop was painted with two coats of Haynes acrylic 'Swan Sea' blue paint.

The terrain was painted an applicable earth colour, the shape of which was copied from an image of the actual location. The hue of this ground cover was picked from the local paint shop's miss-tint bargain box.

The backdrop was appropriately detailed with grasses and trees (see photo 1). Tube acrylic paints from Jo Sonja's and Chromacryl were used for this task (these brands are made in Australia, see photo 2 for examples).

Misting

Applying the technique is reasonably straight-forward. The board and backdrop were placed upside down in a well-ventilated area.

Safety note: Ensure that you wear an appropriate respirator, and that it seals correctly. If you can smell paint while you are working that means that paint is going into your lungs.



See photo 3 for an example respirator and aerosol cans.

To help the paint from an aerosol can flow smoother and finer, place the cans in some hot water (not boiling), and give it time for the temperature to equalize. Use in a timely fashion. Shake well before and during use.

With your respirator fitted correctly you can start using a gentle misting motion at the top of the sky with the lightest colour. The aim here is to get a gentle gradient in the top of the sky.

Repeat the process with a darker hue. Make sure the darker hue is higher in the sky. (see photo 4).

At the horizon height a light misting of chalk white was applied to give the illusion of distance.

Problems

All seemed fine until the backdrop was touched. Misting in effect means that the paint has a chance to dry as it falls onto the backdrop. Thus, dry paint falling onto a dry backdrop means that the paint particles will just sit on the backdrop until disturbed.

A couple of remedies were tried:

- Using matt artists clear fixer, this was an expensive option and didn't fully fix the paint particles, as

hoped.

- Misting paint on the backdrop just after the base coat was painted with a roller. Again, this didn't work as hoped, all it did was create 'waves' in the sky where the roller paint had built up. (See photo 5). Note the rough texture that resulted from misting over wet paint.

The solution

The final answer came in the form of a product from Dulux in their Dura Max range called Frosted Glass Effect. (see photo 3)

This is a matt opaque paint that can be evenly applied to the backdrop without fear of destruction. It easily sealed all the misted paint.

Summary

This technique is simple enough for a beginner (or an expert) to produce a reasonably realistic sky backdrop at a relatively cheap price. 





Auscision Models have released their State Rail Authority of New South Wales (SRA of NSW) CDY, NOCY, National Rail ROCY open wagons and FreightCorp NQKY container flat wagons available r-t-r in HO scale.



Casula Hobbies have released their New South Wales Government Railways (NSWGR) ABV Arnott's Biscuit Vans in HO scale. Available r-t-r in ten different three-packs featuring both boarded and Masonite Siding versions.



IDR Models have released their NSWGR BBW and SRA of NSW, FreightRail NHWF bogie ballast hopper in HO scale. Available r-t-r in twelve different three-packs. Covering the as-built era 1920 to 1950s, through to the modern era. Each pack has prototypical era-specific detail such as: Arch-bar bogies for the early era and roller bearing bogies for the modern era. Pack 12 shown (SRA of NSW – FreightRail).



Stephen Johnson Models have released the NSWGR BBP/SRA of NSW NZBF ballast plough van kit in HO scale with 2AQ bogies (wheel sets not included).



***Ixion Models** have released their Victorian Railways (VR) HO scale 2-8-0 J class steam locomotive. Available r-t-r in both coal and oil burning versions, seven road numbers are available, and three un-numbered versions. All models are DCC and sound ready with 21-pin decoder socket in tender.*

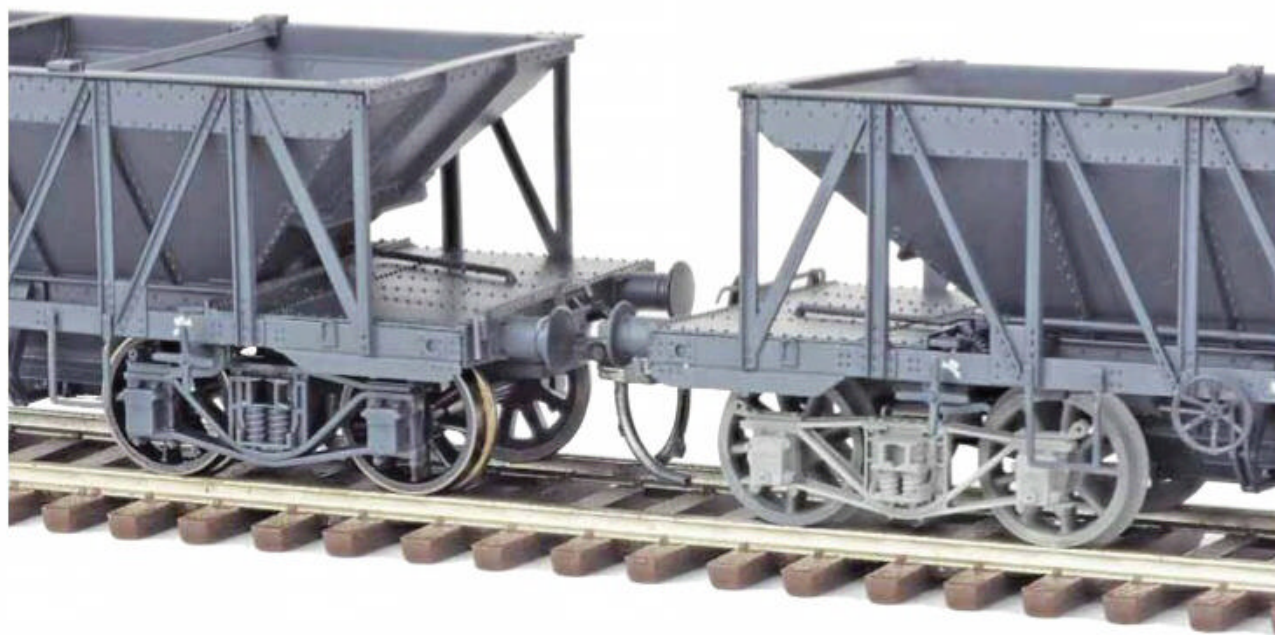


Fireman's side of the Ixion Models VR HO scale 2-8-0 J class steam locomotive.



***SDS Models** have released another run of the NR class locomotives in HO scale, including 'Great Southern' and 'real trains not road trains' liveries. All models are available r-t-r in DC, or DCC and sound with a 21-pin decoder.*

***Stephen Johnson Models** have released the NSWGR Lucy Arch-bar bogies kit in HO scale (wheel sets not included). Lucy Arch-bar bogies were fitted to (but not limited to) LLW well wagons, and the IDR Models recently released riveted BBWs (shown here fitted to an IDR Models BBW on the left using IDR Models wheel sets).*

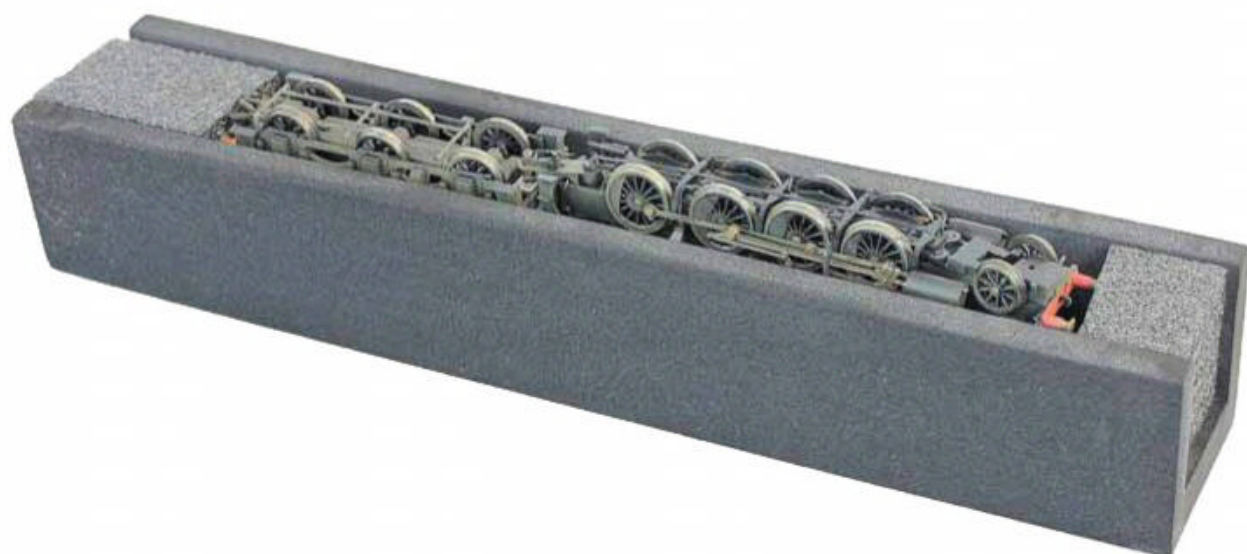




Phoenix Reproductions have released their Victorian Railways D³ 4-6-0 steam locomotive in HO scale. Available r-t-r in six different versions, including: bar or plate cow catcher, generator positions, with or without staff exchanger. All models are available DC, or DCC and sound with 21-pin decoder.



Trainorama have released a re-run of their South Australian Railway (SAR), Australian National Railway (ANR boxed), Australian National (AN) 930 class locomotive in HO scale. This run includes SAR silver roof, SAR maroon roof, maroon and silver, ANR (boxed) and AN with green and grey roof. New road numbers in both single and double ended versions. Available r-t-r DCC ready with a 21-pin socket. 936 and 962 shown in AN livery.



DCC Concepts have released a HO/OO scale locomotive servicing cradle, made from super-high-grade ethylene-vinyl acetate foam. This foam is both soft enough to prevent damage to fine detail, but firm enough to allow a locomotive to be picked up without handing. Included are foam end pads to hold your locomotive in place whilst servicing. Available in four different lengths 240mm, 340mm, 440mm and 540mm.



Wuiske Models have released a second run of their 'made in Queensland' r-t-r HO and HO_N3½ scale Queensland Railways HJS open wagons. Available in five different (two black and three grey) three packs



Above: Bergs Minimodels HO scale r-t-r pilot model of the 1955 Commonwealth Engineering 'Sputnik' set W2 in the 'Zoo Train' floral livery it carried from 1992. Photo James McInerney



A power and trailer car from the upcoming Bergs Minimodels HO scale r-t-r 1955 Commonwealth Engineering 'Sputnik' set W1 in the Sydney Sesquicentenary Orangutan themed livery applied in 1992. Each side of the cars has a slightly different version of the livery, as per the prototype. The power car illustrated, 3725, is modelled with original lift up windows, while the rest of the set is modelled as fitted with Beclawat windows, which is per prototype. Photo James McInerney



Bergs Minimodels has received pilot models of their HO scale r-t-r 1955 Commonwealth Engineering 'Sputnik' set W1 in the 'Zoo Train' Orangutan livery and set W2 in the Sydney Sesquicentenary floral themed livery, both applied in 1992.

Trailer and power car from Bergs Minimodels HO scale, r-t-r, Bergs Minimodels 1955 Commonwealth Engineering 'Sputnik' set W1 in the Sydney Sesquicentenary Orangutan themed livery. Reflecting the prototype, these cars also feature the prototypical differences in the livery between each side of the train and each individual car. Photo James McInerney

DCCSound will release a very limited run of Ixion Victorian Railways J class 2-8-0 steam locomotive models in HO scale with DCC and sound. The model features an ESU 21 pin decoder and sugar cube style speaker, along with sound recordings of an actual J class prototype, J549.

With the recent release of the Victorian Railways HO scale *Tait* sets from Auscision Models, DCCsound has produced a sound

project recorded from Elecrail's four car *Tait* set. The project suits ESU LokSound 5 series decoders.

IDR Models advise the Victorian Railways Diesel Electric Rail Motor (DERM) and MT trailers r-t-r in HO scale project is progressing well. The next running pilot models are due to be delivered shortly.

The artwork and numbering have been completed, with the final review to be completed.

Phoenix Reproductions Victorian Railways D³ 4-6-0 steam locomotive r-t-r in HO scale arrived mid-October and while they had an extended wait for the ESU decoders (through no fault of theirs) this situation is now well in hand.

The next project is the Victorian Railways K class 2-8-0 steam locomotive r-t-r in HO scale. This model was initiated by Eureka Models, Phoenix Reproductions assisting in getting this model into production.

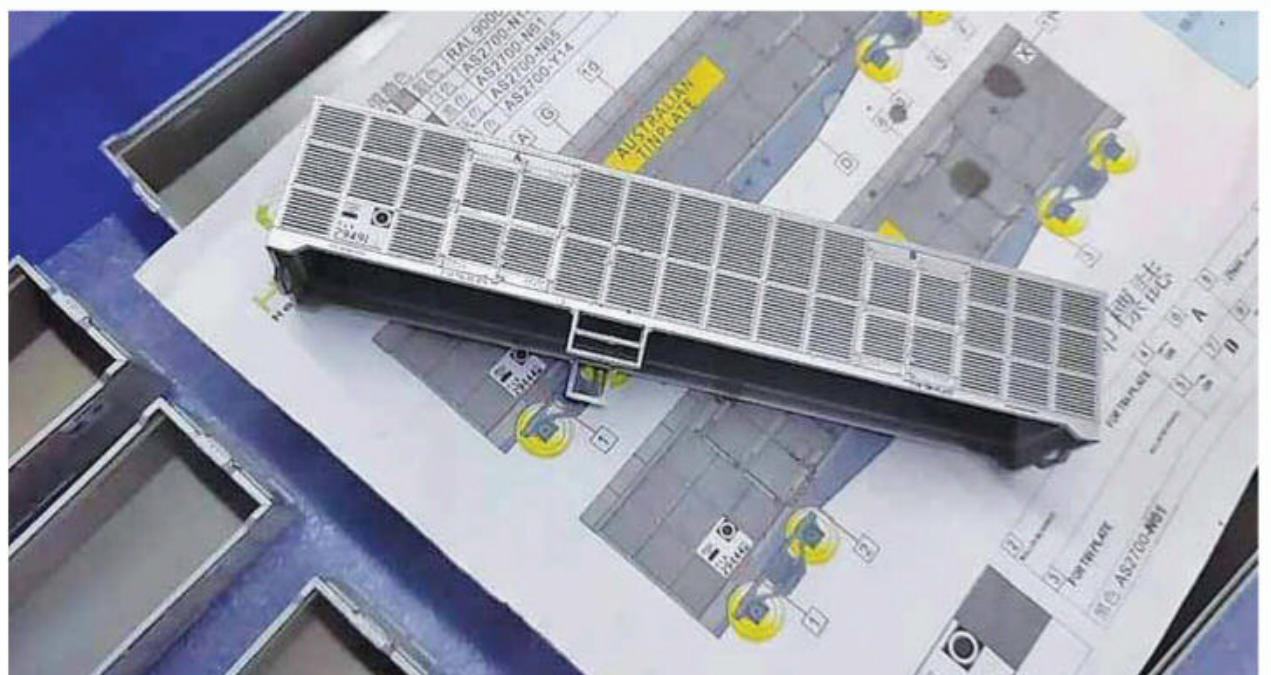
On Track Models advise the re-run of the NSWGR LLV wagons in HO scale is in production, delivery dates are yet to be advised.

On Track Models have recently accomplished a stocktake, during which they have located some V/line Sprinter railcars in HO scale! These models will be listed on their website.

On Track Models are reverting to the email address sales@ontrackmodels.com.au for email contact.

On Track Models are planning some re-runs for next year to build up stock levels.

On Track Models are also developing some new products. They are currently in the design phase, and announcements will be made when the design work is complete.



Currently in production is On Track Models NSWGR LLV louvre van r-t-r in HO scale. Shown here are the Australian Tinplate versions at the factory.



SDS Models HO scale digital rendering of their forthcoming NSWGR dynamometer car.



SDS Models pilot model of the SAR/ANR 700 class coach in HO scale.



SDS Models pilot model of the SAR/ANR 750 class coach in HO scale.

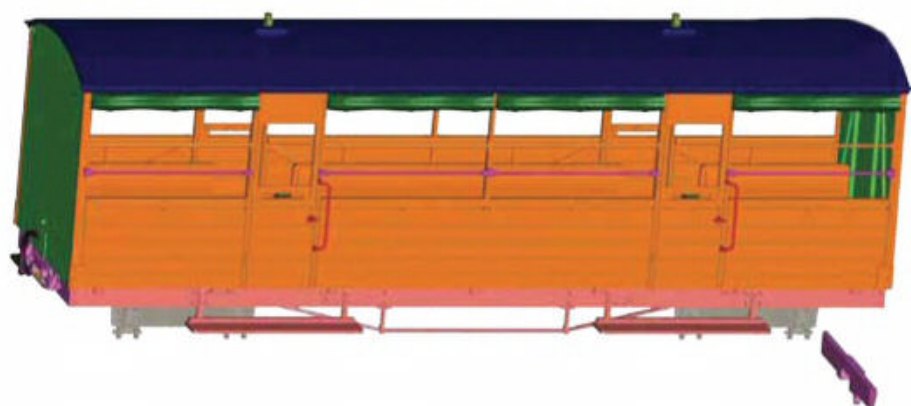


SDS Models pilot model of the Queensland Railways 1460 and 1502 class diesel locomotive in HO and HO1/2 scale.

SDS Models recent arrival of the NSWGR mainline brake van samples (MHO/VHO/DMC/KB) has kept the engineering team busy checking over details of six body types. These models should be available mid 2022.

To complement their forthcoming South Australian Railways (SAR) – Australian National Railways (ANR) 900 class diesel locomotive in HO scale, SDS Models has developed the SAR 700 class series of r-t-r coaches in HO scale. These coaches will be available in twin and single packs and will cover three classes of coaches: 700, 750 and 780 class. The models are production-ready and awaiting an assembly timeslot in early 2022.

Something SDS Models have been working on for a while – the Queensland Railways 1460/1502 class of diesel electric locomotive in HO scale. Built by Clyde Engineering, the 1460 class from 1964 through to 1966 and the 1502 class from 1967 to 1969. The r-t-r models will be available in HO and HO1/2 scale, in DC and DCC with sound. Developed in conjunction with CGL Models, this model has been several years in development. This work has resulted in an exceptional model that effectively captures the Clyde Engineering design traits of the EMD G12 family. These models are production-ready and are expected in the third Qtr. 2022.



Haskell Co. have in development Victorian Railways On30 NBH passenger coaches. These models will be available in three liveries: brown, red and red with yellow stripe as a r-t-r two pack. This model is scheduled for production in 2022.

Digital renderings (left) of Haskell Co.'s On30 Victorian Railways NBH passenger coach. Note: couplers and wheels are not shown, as they are Kadee supplied parts that will be fitted to the r-t-r model.

A cut-away digital rendering (right) of Haskell Co.'s On30 Victorian Railways NBH passenger coach showing some of the interior details.

Powerline Models are imminently expecting another batch of pilot models for their r-t-r HO scale SRA of NSW 48 class MK1 in Candy livery. The production run is expected to be dispatched prior to Christmas 2021.

Steam Era Models (SEM) is expecting a shipment from DJH which includes kits of Victorian Railways (VR) streamlined S class steam locomotive and R class steam locomotive in HO scale. They should be

available by the time this magazine is published.

SEM is also working on J class steam locomotive kits in both oil and coal burning versions. There is still some work to be done on

Vale

Kevin Kavanagh

26th January 1928 – 1st September 2021

One of the most rewarding aspects of our hobby is the friendships you make and share this hobby with. A few of us had the chance to share our hobby with a talented modeller and enjoyed operating his layout. Every year Kevin reminded the group that there was a public holiday we had to celebrate his birthday (Australia Day).

Kevin was the builder and owner of the *Huntingdale and Grange Railway*. The layout depicted the South Australian Railways (SAR) in the period 1960 to 1970. This layout featured in the December 1997 issue of the *Australian Model Railway Magazine* and in the June and July 2015 issues of *Continental Modeller*. Kevin also prepared a book 'Recollections' which was a history of the layouts of the Adelaide Branch Line Operators group in Adelaide.

There are not many modellers who are proficient at the many diverse fields of this hobby. Kevin had a talent in the design and building of a model railway that ran well, looked good and was a pleasure to operate. The design of the layout fulfilled its purpose of providing a layout for the group to operate.

The structures and scenery were a feature of the layout. Kevin's talent for constructing buildings and scenes created a wonderful backdrop for running trains. Kevin's sense of humour shone through on many buildings named after the regular operators and the names given to the many businesses that were spread around the layout. The station buildings and goods sheds at each station were all different, based on SAR buildings. Each station had stock

sidings and an oil tank car unloading facility, and there was a locomotive servicing area at both terminal stations.

The whole layout was complemented by a wonderful backscene painted by Kevin's wife Sylvia. Each station on the layout is named after a golf course, acknowledging Sylvia's love of golf.

A number of the locomotives on the layout were built from kits by Kevin. The finished locomotives ran as well as they looked. The layout was constructed at a time when we did not have the range of models readily available. A set of Hobbytown American PA1 diesels was modified and painted to represent the SAR 900 class diesels and after 50 years we were still able to run these diesels on the 'Overland'.

Kevin scratch-built a number of specialised pieces of rolling stock, such as the sulphuric acid tank car. Supper time on our running nights was the chance to discuss ideas on how to overcome some of the

problems in the construction of various pieces of rolling stock or locomotives.

Kevin was a talented modeller, a good teacher and always ready to share his knowledge. When I moved homes in 2007, Kevin was quick to build three cattle yards, some station buildings plus oil depots for my new layout. Kevin told others in the group, "Les won't have trains running for a year or so", so it was about 3 months later that Kevin was called on to cut the ribbon and run the first train.

Thank you Kevin for sharing your layout with our group,

David Thomas
and Les Fordham



Kevin contemplates the next shunting move at Allinga on his layout.

the J class kit, so it will be early in the new year, at best, when those kits will be available.

TrainBuilder is importing a brand-new version of the Victorian Railways H220 'Heavy Harry' 4-8-4 in HO scale. The model will feature all brass construction, fully painted and decorated, DCC ready, detailed cab with crew, working headlight and marker-lights. Expected arrival date is around November 2021.

Pete Grant's departure

During the transition of managers from James McInerney to Scott Fitzgerald, Pete has been instrumental in maintaining a strong grammatical presence. However, all good things must come to an end. In August 2021 Pete decided to concentrate on other endeavours, such as Grey Nomading, looking

after the grand kids, and building his layout of *Rylstone* NSW.

The AMRM team thanks Pete for his support

A pre-production image of the TrainBuilder Victorian Railways H class steam locomotive in HO scale.

and we wish him all the very best for the future.

With this issue Scott Fitzgerald will assume the role of Managing Editor.

Mailbag

NSW Mail Trains

On reading the preamble relating to '*Trains Worth Modelling, NSW Mail Trains*' on page 52 of the August issue of the magazine, I note mail trains described as being effectively 'mixed trains' with lots of shunting enroute and at terminal stations. In my many years of experience as an officer with the NSWGR, mail trains did not, and were not tabled to, shunt at intermediate stations enroute or at terminal stations. They could not be described as being a mixed train. Shunting at terminal stations, when required, was done by a yard shunting engine. The consists of both trains and operations were different. Mail trains conveyed passengers, mail and parcels traffic, never goods traffic. Bogie wheeled vehicles were at times in a mail train consist, but conveyed either parcels or mail traffic. Mixed trains conveyed both passenger, goods and livestock traffic and shunted intermediate stations and sidings where and as required. There was a vast difference in the consists and working of both trains.

*Victor Underwood
Constitution Hill NSW*

The good the bad and the ugly, AMRM feedback... In-depth articles

I saw your request for feedback in the October edition of *Australian Model Railway Magazine* and thought it would be prudent to relay my recent AMRM experience.

Many years ago in 2015, a younger me saw that there would be an article in the AMRM October edition featuring how to model the relatively new Pacific National stone train. Being a modeller with a modern day focus and there was no convincing rollingstock available close to

an RHKY hopper, I thought this would be the perfect opportunity to learn how to create something current and unique that would grace my (then non-existent) layout for years to come.

Upon reading the article, I was dismayed to find it was barely half a page, with three quarters of it devoted to operational information that I already knew. The real low blow was that the modelling of the hoppers themselves was only two sentences long, and all it did was suggest that someone with more experience would be better at covering the topic! I was disappointed and regretted spending more than I did that day. From that point I swore to never read another AMRM.

Fast forward six years and during June, as I was browsing social media for sales and modelling inspiration, I saw a post for the AMRM magazine. It specifically detailed building *Cameo Layout boards* and modelling an ultra-modern variant of *Narrabri North* (an excellent location I plan to photograph later in the year). I could feel the synapses in my mind activating, trying to convince my hands to make an impulse purchase. I knew that a modern version of Narrabri would be exactly the type of modern layout I would love. But that sour taste of the last article I bought still cemented my reasoning that it would not be worth the money, especially since I had no layout or space to construct something similar.

My curiosity had been piqued and, after a stock-take on how much Australian outline I had laying around, I realised \$9.50 was nothing compared to the stuff I had just sitting in a cupboard. I promptly bought a digital edition and was extremely glad I did! The articles were extensively in-depth and provided clear directions in how to go about doing what they had done. The practicality of Narrabri has given

me some ideas for an exhibition layout (once they finally start up again) and the construction methods used in the *Cameo Boards* article inspired me to make something work in the space that I have. I should also note that the news section was much better than I remembered, with some announcements I could not find anywhere else, saving me from on line scalpers. The inclusion of multiple layouts has also made for a much better read. For example, I found the premise of '*Marmalake*' very interesting in the most recent edition and would be eager to see if there are any similar modern-image contributors out there.

As for the future, one article I would like to see would be a soldering guide specifically relating to DCC. Now that I've had a chance to think on what the end goals of my collection might be, I've begun moving towards putting sound and decoders in all my locomotives. However, there have been a few instances where I need to do maintenance (replacing lights, rewiring lighting boards, etc.). I don't have the confidence to do it as I don't have much experience soldering with such fine parts (and I don't want to ruin a \$300 locomotive). This has probably been the biggest hurdle for me as I make the transition to a modern operating layout. A small series dealing with some of the bigger challenges that come with decoder installation (or even hard-wiring decoders) would be something I would definitely read.

If anything is up for grabs, scratch-building modern rolling stock in the vein of the O scale Bluebird from the October edition would also be of great interest. I've always been looking for ways to create trains that are both unique and prototypical and I believe there's much out there still to be made. For example, it has always puzzled me why the only real piece of CFCLA

(now, Rail First Asset Management) rolling stock released has been the CQBY. Given the wide variety of leased wagons that exist and that are needed to make authentic trip trains, I'd be very keen to see if there was anyone who could make a step by step scratch building guide, or advise how to digitally design something to fill this gap in the market. As I have seen recently, there are some local 3D printing services that could save me buying a printer outright.

In any case, I feel the magazine has definitely improved since the last time I read it. I appreciate the more modern tinge it's acquired and I'm looking forward to what's on offer next month.

Stuart Ball
St Ives NSW

Solving beginners problems

First, thank you for a great magazine. I model HO_N3½ (12mm gauge) Queensland Railways (QR) narrow gauge. You throw a QR front page and I line up at the newsagent [*Editor: hopefully a double page spread of 'Walloon Qld' will be sufficient?*]. I have been a subscriber before and at some stage will be again. I know we do not have a huge population, unlike North America or Great Britain, so our hobby is not as well covered as in other countries. As a beginner since 2016, I not only bought your publication, but American and British too. I gathered from AMRM that we have a huge talent base out there that is still not yet fully utilised. My layout being built in a four-car shed is still not fully done as only a quarter of bench work is completed. Which brings the problem of high humidity and how do I stop track buckle. I am still trying to fix that one. I would like to see more how-to articles that tackle beginners' problems. How to convert PECO points to DCC friendly etc. I do not wish to buy overseas on how to model, I would rather buy our magazine to find this information. Maybe some follow-up stories, or how to do things via quick response QR code magic – just point the phone then up comes a video of a topic of interest. Our magazine has so much potential. QR 12mm has a good following but some of our niche manufacturers could do with some lessons on putting their products out there.

Personal opinion: We have an excellent manufacturer in Adam and Bridget's Wuiske Models. Maybe get our suppliers to have an interest in using our magazine as a mouthpiece for our hobby, not only QR but all states. I notice we have only two business advertisements for Queensland hobby shops. I know that a business runs on volume and profit, that is the name of the game. Nowadays passion is sadly missing.

I started my working life as a QR bridge nipper. I was with QR for seven years both as nipper, bridge labourer, bitumen platform layer, station painter, bridge painter etc. So, my modelling has so many memories to fall back on as to what I want on my layout. I will support any business that helps me achieve this. Please don't think I am QR biased as your magazine provides me with interesting content on lots of topics and different layouts. Keep up the good work.

Graeme Kneller
Barker Creek Flat Qld.

Beginners articles and scale plans

I have given some careful thought to your editorial request in the latest AMRM.

I have been a reader since the early 1970s and have had a few articles published. I accept the magazine is mainly run by volunteers and that articles can be from either these people or other readers volunteering to provide material for the magazine. As such I accept the contents of each issue as they are.

I have no problems with 'Beginner Articles'. I think there would be areas, irrespective of how long we have been in the hobby, that we would be beginners if we tried them. For example, I have never built a steam loco either from scratch or a kit. The fact that we decided, when we first built 'Twigg,' we were not going to have steam locos has not caused us any problems.

Over the weekend I looked at an international publication. There was a seven page article, aimed at beginners, about baseboard construction. Plenty of photos accompanying text containing some good ideas. It was timely to read as we are just starting the baseboards for 'Fern'.

Two other areas that could be of interest are:

- Questions from readers with, typically, one of AMRM staff answering, and
- An introductory article on a specific topic, for example water, and how to use specific products to obtain the right outcome.

If either of these ideas were to be used for AMRM, perhaps a panel of modellers could be established to provide the answers/topics. Especially if they were only going to be called upon from time to time.

I would like to see:

- More details in captions accompanying articles on model railways, and
 - Articles with plans for buildings, preferably small buildings, that include construction.
- I trust the above is of assistance.

Martin Murden
Phillp Island Vic

Inspiration

I've been buying AMRM for a lot longer than I care to think about (I'm 66). I used to have all my paper copies but gave them away when I moved house. I now subscribe to the digital version, that I read on my tablet. I've had a model railway in some form since I was eight. My layout was featured in AMRM many years ago, 'Wallanearly' [AMRM No. 209 April 1998 Editor], along with a couple of small articles. One was about an N scale T class [AMRM No. 206 October 1997 'So You Bought a T or Three' Editor] and one about making the station building on my Wallanearly layout.

For a start, let me ask that this magazine always be about Australian prototype, not other prototypes that people model in Australia. There are plenty of other publications that cover the main overseas prototypes.

If I was a beginner, I would want inspiration. Huge, beautiful layouts like the recent article by Darren French [AMRM No. 349 August 2021 'Cann River'] or tiny ones like Twigg [AMRM No. 341 April 2020 'Twigg Rebuilt'.] Something I

can look at and go "wow." This is the key reason I purchased AMRM, especially early on, and I still enjoy looking at great models and great layouts in the magazine today. I was a lone modeler for many years and AMRM was my main inspiration. I guess that's why it's important to me. I joined a club, the Victorian N Scale Collective (VNSC), many years ago and can see inspirational layouts first hand e.g. Darren French's 'Cann River' that you recently featured. But I still enjoy seeing whatever comes up in AMRM, some issues more than others but, like you said, you'll never keep everyone happy.

With the digital version I like to be able to enlarge pictures to examine the detail, so please keep photos as high-res as practicable.

I'm not avoiding anything due to lack of knowledge etc, I'm just a procrastinator! Being in a club like the VNSC gives me access to plenty of 'how-to' help in a vast range of topics.

I think you have covered everything I'd like to see over the years. Now, I like to support AMRM because it is 'our' Australian Model Railway Magazine.

And I've answered your fourth question when I answered your first one. Seeing good Aussie prototype layouts inspires me. I have been into N scale most of my life, so I like to see that, but I think you keep the balance pretty well.

Roger Vistarini
Point Cook Vic.

[Editors note: the feedback we have published in Mailbag is a fraction of the actual feedback and suggestions we have received. We thank all of the AMRM readers who took their time to share their thoughts with us. As a result, we are keeping the feedback email alive. Have your say at: amrmfeedback@tpg.com.au]

MAILBAG

Australian MODEL RAILWAY Magazine welcomes letters on any pertinent model railway subject for inclusion in Mailbag. Letters should be sent to Mailbag, SCR Publications, PO Box 345, Matraville 2036, emailed to amrmagzn@tpg.com.au or faxed to (02) 9661 4323. All Mailbag contributions must include the writer's name, address and phone number to permit verification. Contributions without this information will not be considered for publication.

Editor

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Victorian Railways locomotives

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Price \$595.00 + \$20.00 post/pack

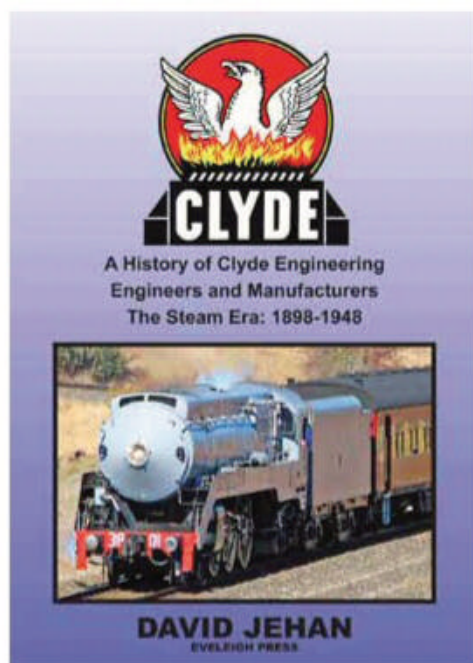


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Diary

EXHIBITIONS & EXPOS

COWES – VIC. January 15–16, 2022. Phillip Island & District Railway Modellers Show. Senior Citizens Hall, 6 Lions Court, Cowes. Open 10am–5pm (Sat), 10am–4pm (Sun). \$8 Adults, \$5 U/15, \$20 Family. Check website for any COVID-19 changes.

Grant Colwell 0432 104 220

piadrm.com

FORESTVILLE – NSW. March 5–6, 2022. NSRMA Forestville Exhibition Forestville Memorial Halls, Cnr. Warringah Rd & Starkey St, Forestville. 9am–5pm (Sat), 9am–4pm (Sun). Further details TBA.

Andrew King 0412 447 743.

BUNDABERG – QLD. March, 19–20, 2022. Bundaberg Model Train & Hobby Expo, Wide Bay Burnett Model Railway Club Inc. Bundaberg Multiplex Sports & Convention Centre, 1 Civic Avenue, Bundaberg West. 9am–5pm (Sat), 9am–4pm (Sun).

Graham Nicolson 0407 559 086

graham@queenslandscalemodels.com.au

ROSEHILL – NSW. 14–15 May, 2022. Great Train Show at Rosehill Gardens Grand Pavilion, off Grand Ave, Rosehill.

Mike 0408 817 554

secondhand@eppingmodelrailway.org.au

www.eppingmodelrailway.org.au

OPEN DAYS

CALOUNDRA – QLD. March 26, 2022. Sunshine Coast model Railway Club Qld. Uniting Church Hall, corner Queen and Ulm Streets Caloundra. Commencing at 8.30am (Sat).

Terry Hicks 07 5491 4617

ghicks4@bigpond.com

SALE DAYS

BRISBANE – QLD. November 7, 2021. The Railway Modellers Club of Queensland will hold a Buy & Sell and Open Day, at our clubrooms, Buckley Park, 20 Terrence Road, Brendale.

10am–1pm. Over 40 tables of new and pre-loved items for sale, and our large G, HO, HO_N3 and N layouts will be operating.

rmcqevents@gmail.com

0408 706 411

http://rmcq.org.au/home/calendar/buy-sell-days or https://www.facebook.com/rmcqbrendale.

CALOUNDRA – QLD. March 26; June 25; October 8, 2022. Sunshine Coast Model Railway Club. Uniting Church Hall, corner of Queen and Ulm Streets, Caloundra commencing at 8.30am.

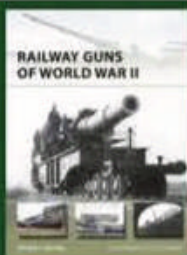
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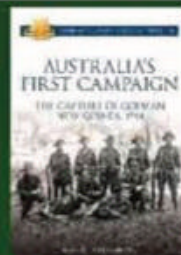
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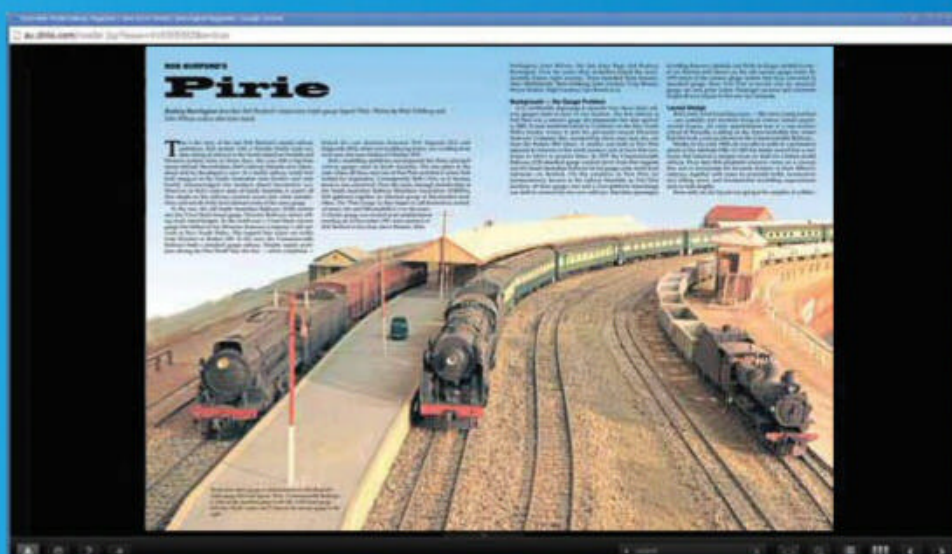
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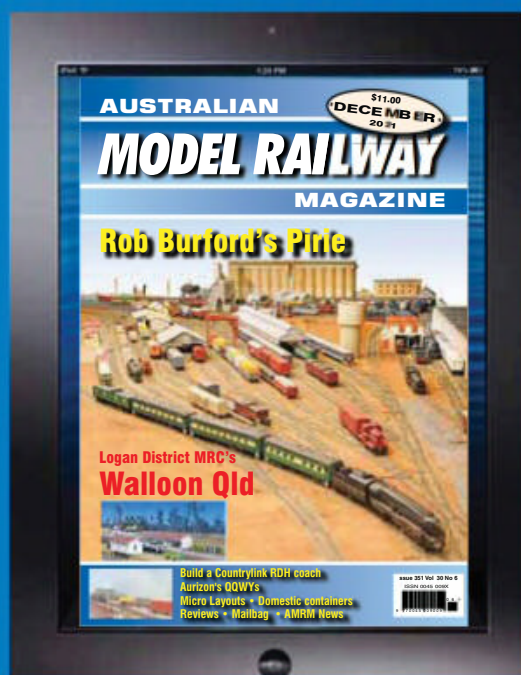
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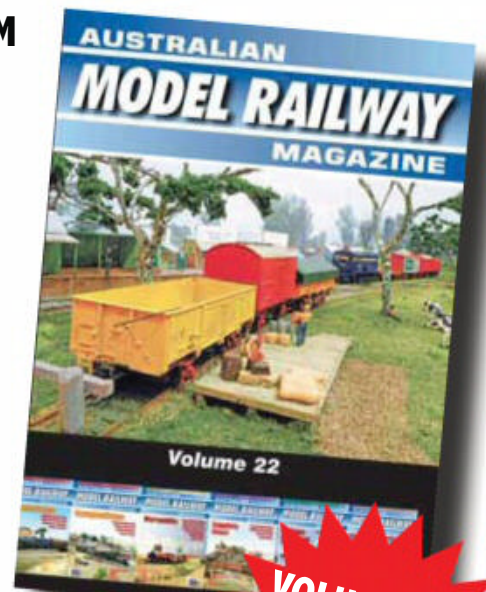
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The 2022 AMRM Calendar



The diesel cover features SSR102/SSR101 near Tumulla on an empty grain train. Other photos include El Zorro grain train with former government locomotives 44209, T342 and S312; 4912, 4842, 4903 and 4902 on a Dubbo freight at Newbridge; a FreightLink intermodal service near Adelaide River; English-Electric locomotive D45 departs Bulli with a local empty coal service to Coalcliff; C504, X47 and X50 between Ballarat and Warrenheip; English-Electric locomotives 2111 and 2113 climb out of the Meander River valley near Lemana Junction; two-car diesel railcar set 604/704 at Barmedman with a Lake Cargellico to Cootamundra service; Aurizon-liveried DBZ2309 and DBZ2311 haul a train of caustic tankers through the Darling Ranges; QR 1411 heads north from Nambour with a goods; No. 7524 express freight descending the grade at Lynton behind 967, X54, S313, 832, 841 and 939.

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The steam calendar cover features NSW 3628 on No. 25 Bathurst Day train at Locksley. Other photos include the down Coonamble Mail at Gilgandra hauled by 3040; VR N475 with a load of 4-wheel grain wagons; NSW 3641 and 6018 near Fassifern; SAR oil burning T44 on a weekly goods from Quorn to Hawker; NSW 6040 between Wongarbon and Dubbo; WAGR F407 at Collie Depot; Standard Goods 5278 departing Newcastle with a Singleton passenger train; VR K151 departs the briquette siding with a string of 4-wheel open wagons; NSW 2510 climbs the grade from Harden to Demondrille; QR B18 906 departs South Brisbane with a commuter train; NSW 3130 and 3135 in No. 3 roundhouse at Enfield; TGR Tasman Limited hauled by M# at Western Junction ready for departure to Launceston.

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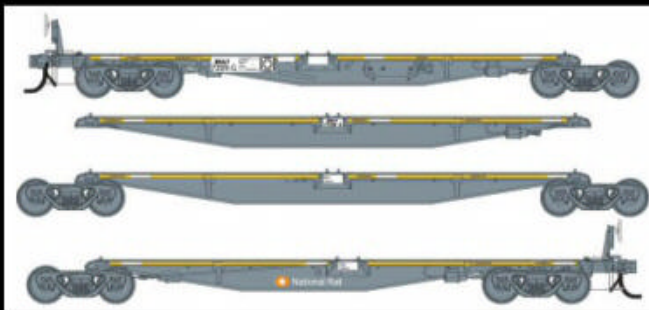
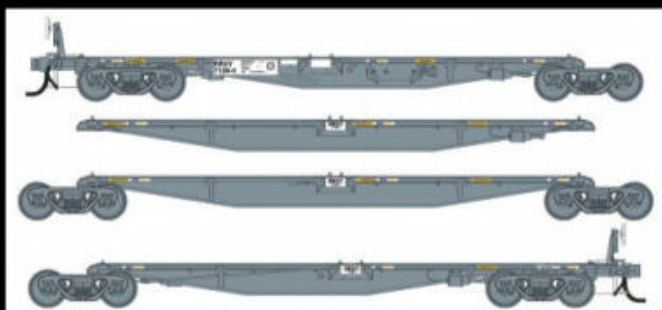
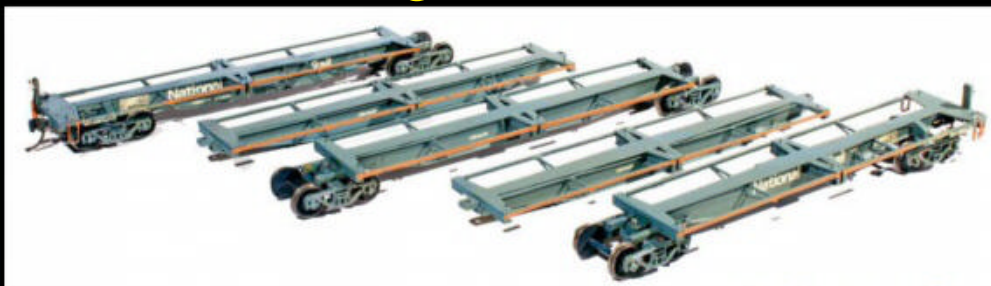
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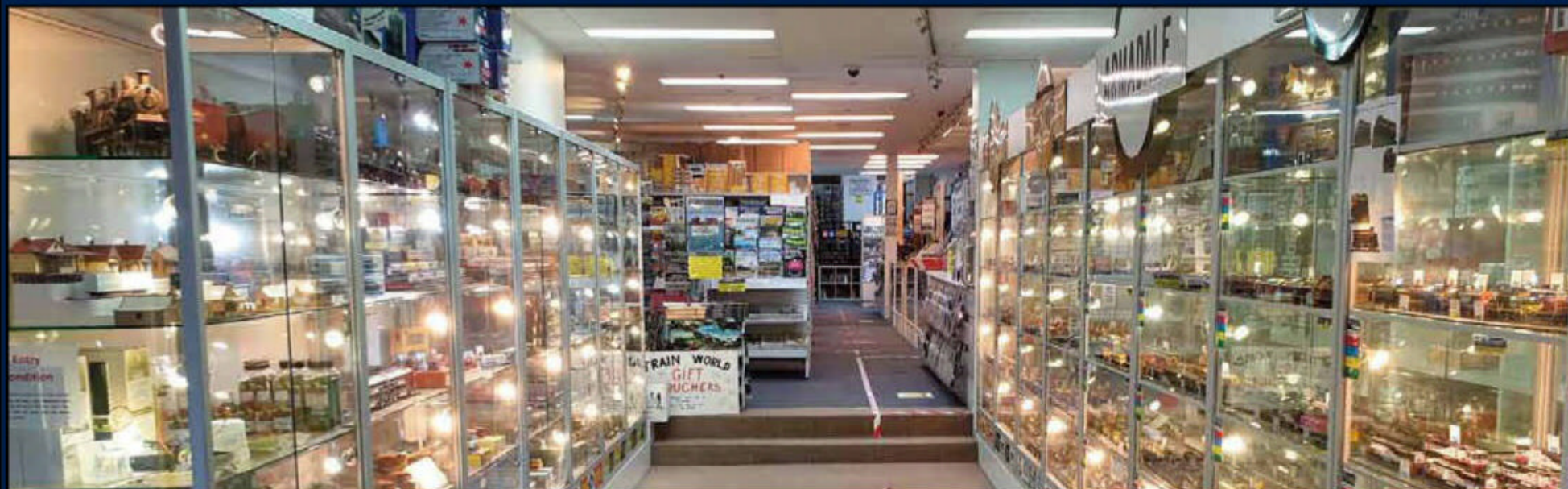


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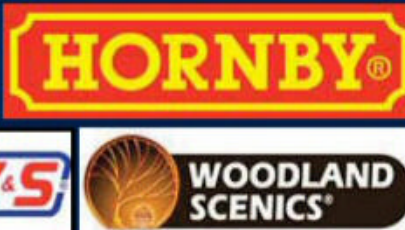
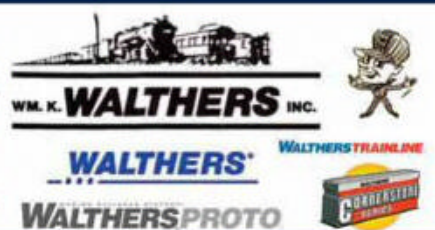
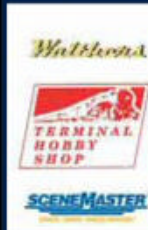
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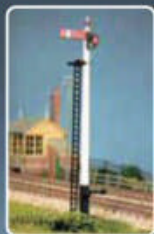
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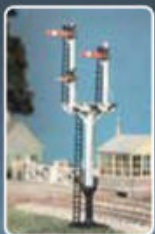


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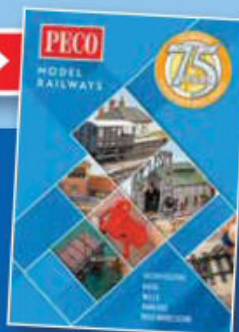
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