

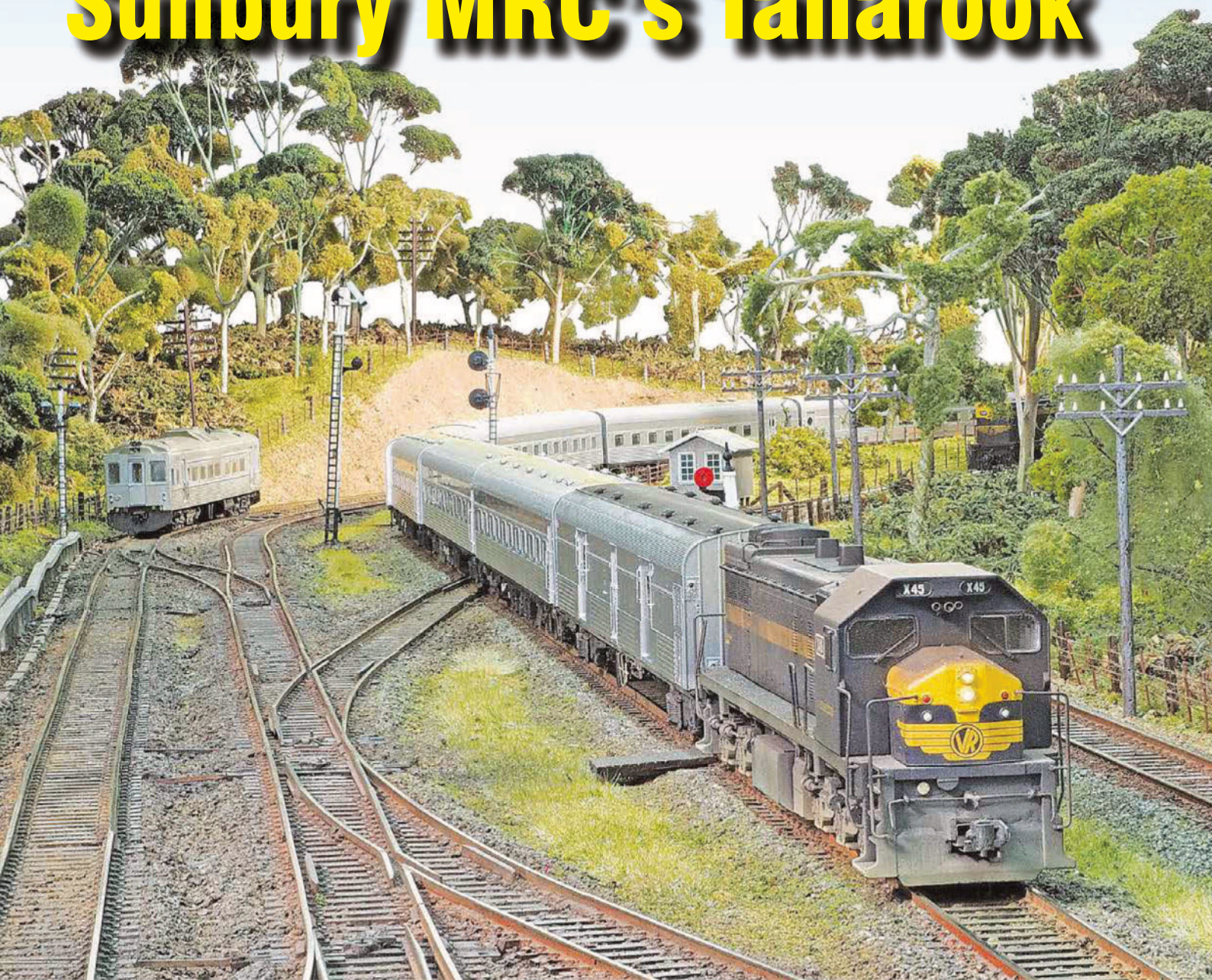
AUSTRALIAN

\$11.00
APRIL
2024

MODEL RAILWAY

MAGAZINE

Sunbury MRC's Tallarook



Modelling Queensland Railways Guards vans
Staff Considerations – Build a painting jig
The SRA of NSW 81 class locomotive
Reviews • Mailbag • AMRM News

Issue 365 Vol. 31 No.8

ISSN 0045-009X





Victorian Railways D3 Class Locomotive

GAUGE
H0
1 : 87



In Stock

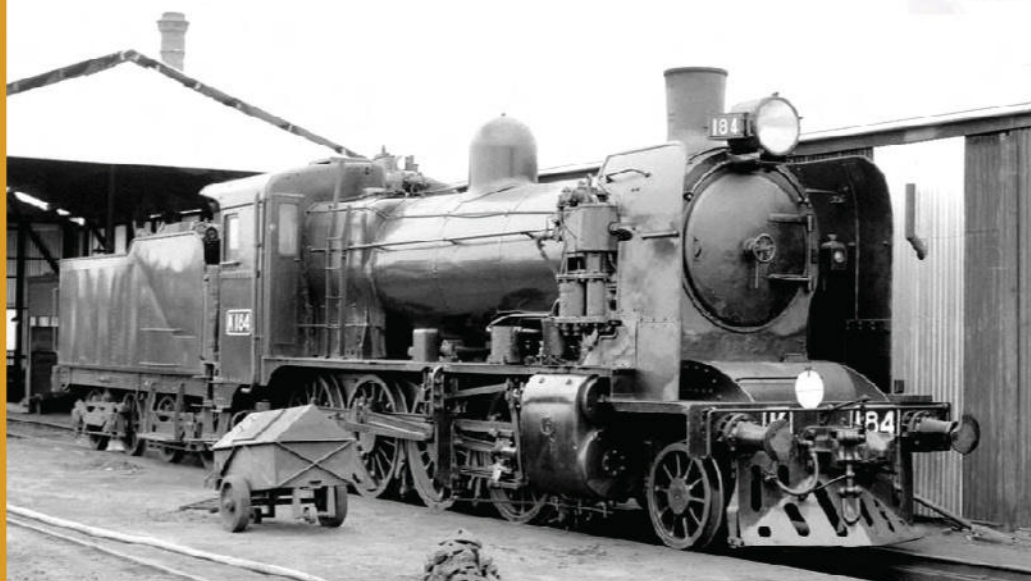
Featuring a diecast metal boiler, metal footplate, metal chassis and metal connecting rods. All wheel electrical pickup and a switchable keep alive capacitor for fault free DCC operation. Working headlight with red/white marker lights for realistic lighting control. Genuine Kadee scale head whisker coupler is fitted to the tender and a scale sized swivelling knuckle and three link coupler is fitted to the front buffer beam.

Available in either DC control @ \$660.00 per model or DCC + Sound @ \$799.00 per model.
See the SDS Models website for the full range of running numbers.

DCC - SOUND
ESTU LOK+SOUND
V5.0 Sound Decoder

GAUGE
H0
1 : 87

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.

The supplier is currently producing some painted and decorated samples. Once we receive these samples and are satisfied they meet our design criteria we'll proceed to assembly. Delivery will occur as soon as possible in 2024.

Available in either DC control @ \$660.00 per model or DCC + Sound @ \$799.00 per model.
See the SDS Models website for the full range of running numbers.

DCC - SOUND
ESTU LOK+SOUND
V5.0 Sound Decoder

SDS Models - ABN 86 628 053 529
PO Box 804 Winston Hills NSW 2153 Australia
sdsmodels.com.au
Email: sales@sdsmodels.com.au

Redutex

WHOLESALE!

MRC
MODEL RECTIFIER CORPORATION

REDUTEX

3D Textured sheets for Roofing, Brick Wall and Paving



OZRAIL - Retail - FB FLAT WAGON

Metal wheels - Scale knuckle couplers - ABS plastic chassis - Extra stanchions included



ALL SCALE SCENICS

All Scale Scenics is a division of Ozrail Model Trains. We manufacture an extensive range of scenery products, handmade in Vietnam.



WE BUY MODEL TRAIN COLLECTIONS

Ask for a no-obligation free quote.
Large collections are our specialty. Will travel interstate.

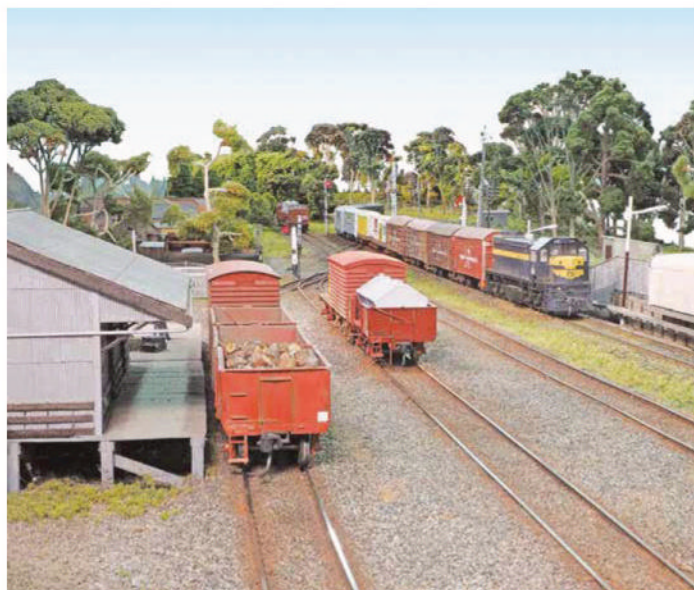
TRADING HOURS: WEEKDAYS 9AM TO 5PM, THURSDAYS 9AM TO 6.30PM
SATURDAY 9AM TO 4PM & SUNDAY 11AM TO 4PM - PUBLIC HOLIDAYS—CLOSED
PH: 08 8258 7665

Website: www.ozrailmodeltrains.com.au / Email: info@ozrailmodeltrains.com.au

Like us on Facebook!

18 Tallarook

Michael Holian describes the exhibition layout built by the Sunbury Model Railway Club Inc



28 Putting the O in Casterton – Part Nine: Point modifications and Electrics

Scott Whitaker continues his epic layout build.

32 Modelling Queensland Railways guards vans

Arthur Hayes models a selection of Queensland Railways guards vans.

36 Clamp it!

John Miller builds a simple paint masking clamp.

38 Staff Considerations

Stephe Jitts develops a train control system using Arduino.

40 Addendum KCC cement container wagons

David Clark provides additional prototype information on the KCC cement container wagons.

42 Super Series Locomotives: The SRA of NSW 81 class

Bernie Baker and the AMRM team outline the SRA's 81 class locomotive.

50 A Location to Model: Commonwealth Steel Co Ltd

John Casey presents a location with lots of shunting potential.



ON THE COVER:

As its passengers make full use of the dining coach for breakfast, and with about an hour left until arrival at Melbourne's Spencer Street station, X45 heads the up 'Southern Aurora' through Tallarook. On the broad gauge down main is DRC40 its on its way to Seymour. On the Sunbury MRC's layout Tallarook. Photo John Dennis

OTHER FEATURES

- 5 Comment: The Costs of Going Big
- 53 In the Loop: Time Invested
- 69 Vale: Charles Agland

REGULARS

- 54 Reviews
- 60 Recent Releases
- 62 AMRM News
- 68 Diary
- 70 Mailbag
- 78 Advertisers' Index



Follow us on Facebook

The Costs of Going Big

In any project or event, there is an inherent cost of going big. The bigger the scale, the bigger the effort and the complexity. Recent developments in the United Kingdom (UK) are poignant to Australian modellers.

Warley National Model Railway Exhibition is the biggest in the UK. The sheer size of this exhibition is staggering; the 2023 exhibition included over 80 exhibiting layouts, 130 trade stands, and one full size locomotive!

The club has announced that they can no longer manage such a large exhibition. The current exhibition committee is retiring, and without any other club members willing or capable to step up and sit on the exhibition committee, they were left with no other choice. I don't blame them – exhibition project management is a thankless task. While it seems simple on face value, it's a lot more complicated than it seems. The level of dedication required to pull off a good exhibition is rarely recognised, and only observed when things go wrong!

Certainly, in the Warley Club's case, without an orderly transfer of management skills, the sheer size and complexity would have almost certainly doomed the next exhibition to failure.

There are a couple of things we can observe here in Australia.

Sydney is the largest metropolitan location in Australia and currently only has one large exhibition a year. It used to have two.

A lot of people take up this hobby as a pastime for retirement. Joining a large metropolitan model railway club would tick a lot of those boxes, and you get to meet like-minded modellers in your age bracket. Dealing with lots of logistical headaches of running an exhibition doesn't really sound like a retirement goal.

Can younger modellers pick up the slack? Sure, however a lot of younger modellers are more 'lone wolves' when it comes to their hobby. Normal life pressures, such as growing a family, gets in the way of attending club meetings. 'Lone wolf' modellers allocate their modelling time on an ad-hoc basis.

It doesn't mean that they are not there, they are just on a different time zone.

The gap between these two types of modellers continues to grow.

What is the answer? Think about the following...

Smaller (manageable) regular exhibitions spread over the yearly calendar.

Pooling talents and resources, multiple clubs could pour their talents and resources to hold a couple of big exhibitions each year. The risk is reduced and the spoils can be equally shared. Setting up an organisation to solely deal with running exhibitions, focuses the aim and reduces complexity. It also puts the right people (even if they are not a member of a club) in the right place at the right time. Shareholders could be clubs and traders, as traders benefit from big exhibitions with lots of attendees seeing their trade stand. Additionally, there is nothing wrong with traders attending an exhibition with a layout and blurring the lines between trader and exhibitor. As an exhibition grows, ploughing that investment back into the organisation might make room to employ semi-professional staff, who knows. A good example of this concept in operation is the June Adelaide exhibition, run by the Adelaide Model Railway Exhibition Inc (AMRE). This organisation's sole purpose is to run the exhibition on behalf of various Clubs.

In rural locations, local councils have realised that encouraging model railway exhibitions means 'city' money pours into their local communities, as attendees from metropolitan locations make a 'day of it'. Rural locations have easy access and parking, lower overall cost; they have a significant advantage over a metropolitan venue.

With the demographics of modellers changing, perhaps it's time to consider how exhibitions change with them.

Give us feedback at: amrmeditor.outlook.com

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.

Secretary: Bob Gallagher

Membership Enquiries:

PO Box 345, MATRAVILLE, 2036
Phone (02) 9311 2036

DIVISIONAL REPRESENTATIVES

New South Wales:

Graham Windmill, Ph. 0423 527 951

Managing Editor **Scott Fitzgerald**
Editorial Assistant **Ben Gray**
Consultants **Chris Jones**
Office Manager **Melissa Cullen**
Subscription and Sales Coordinator **Karen Baldini**
Illustrators **Ian Thorpe**
Design **Keith Pennington**
Design Consultant **John Casey**
Computer Programmer **Grahame Davis**
Draughtsman **Roger Johnson, Mitch Campton**

SCR Publications – General Manager
Robert (Bob) Gallagher OAM

SCMRA PUBLICATIONS COMMITTEE
John Bevan, Fred Gooch, Ian Dunn, Mike Lillie
Trevor Moore, Bob Gallagher, John Parker

AT ISSN 0045-009X

The official Journal of the Southern Cross Model Railway Association (SCMRA) in Australia.

Published bi-monthly by SCR Publications of PO Box 345, Matraville 2036 for the Southern Cross Model Railway Association. (ABN 70 000 558 574) All rights reserved and all editorial matter copyright.

Print Post Approved. Imaging by Imagination Graphics Pty Ltd. Printed by John Fisher Pty Ltd, Marrickville NSW. Most editorial and distribution tasks are carried out by voluntary labour on a non-profit basis.

EMAIL: amrmagzn@tpg.com.au

WEBSITE: www.australianmodelrailways.com

FACEBOOK: <https://www.facebook.com/AM-RMag>

INSTAGRAM: [scott_amrm](https://www.instagram.com/scott_amrm)

DISTRIBUTION: Subscriptions, SCMRA members, hobby shops and Associations by SCR Publications; newsagencies and bookstalls by Are Direct.

CONTRIBUTIONS in the form of articles, photographs, hints, Letters to the Editor, drawings or trade press releases are welcome for publication in this magazine. All items received will be acknowledged upon receipt. Contributions can be made as 'hard copy' and/or electronically. Contact amrmagzn@tpg.com.au before submitting electronically. Please pack photographs and diagrams between stout cardboard before posting. Indicate whether photographs/slides are to be returned.

PRINT & DIGITAL SUBSCRIPTIONS: Details on page 73.

ADVERTISING: Details available from SCR Publications, PO Box 345, MATRAVILLE, NSW 2036. Phone (02) 9311 2036 (9.30am-2.30pm, Mon-Fri).

ADVERTISING DEADLINE for all copy and **RELEASE DATES** are:

	Advertising Deadline	On Sale Dates
June 2024	12.4.24	16.5.24
August 2024	14.6.24	18.7.24
October 2024	10.8.24	14.9.24
December 2024	6.10.24	10.11.24
February 2025	29.11.24	17.1.25
April 2025	8.2.25	13.3.25

This publication accepts no responsibility for the accuracy or reliability of articles or advertising contained herein, statements made or opinions expressed in papers or discussions, nor do we necessarily subscribe to the views expressed or implied by contributors. Neither is any guarantee implied or expressed as to the good conduct or practice of advertisers herein. This publication reserves at all times the right to refuse acceptance of any matter considered unsatisfactory for publication. The Australian MODEL RAILWAY Magazine is published by SCR Publications, PO Box 345, Matraville, NSW 2036. Please address all correspondence to the Editor.

ALL ABOARD

Is Back!

It's not the end of the line... All Aboard Hobbies is
NOW OPEN with new owners!

We have **RESTOCKED** your favourite brands and
have lots of **NEW** products, **NEW** brands
in-store and online **NOW!**

Use code **AMRM-10** for 10% off your first order
on our brand new website!

02 4871 2966 | hello@allaboardhobbies.com.au | www.allaboardhobbies.com.au

POWERLINE

MODEL RAILWAYS OF AUSTRALIA

P.O Box 2100 Brighton, Vic 3186.

www.powerline.com.au

powerline.direct@powerline.com.au

<https://www.facebook.com/PowerlineModels>



VR T-Class Series 3 (T4)

T370, T371

T381, T383



VR T-Class Series 2 (T3)

T359, T364



V/Line

T-Class Series 2 (T3)

T361, T362



SRA 48 Class Mark 1

4808, 4811

4827, 4841

DC (DCC & Sound Ready)
DCC & Sound Fitted



AUSCISION®

The Leader in Australian Model Railways

HO SCALE



UGL C43/C44ACi LOCOMOTIVES

Available Now!
While stocks last
DC \$335, DCC SOUND \$465
including free shipping*

LOK SOUND
EST. 1999

Freightliner



C44-36 CF4407 Freightliner
C44-37 CF4408 Freightliner

ARG/QR National



C44-43 AC4302 ARG/QR National (Look, Listen & Live)
C44-44 AC4306 ARG/QR National

Pacific National



C44-45 9208 Pacific National
C44-46 9211 Pacific National
C44-47 9308 Pacific National
C44-48 9312 Pacific National

QR National



C44-49 8009 QR National
C44-50 8012 QR National

Aurizon



C44-51 8002 Aurizon
C44-52 8004 Aurizon

Aurizon



C44-53 8025 Aurizon
C44-54 8028 Aurizon

Aurizon



C44-55 8009 Aurizon
C44-56 8010 Aurizon

Xstrata Rail



C44-57 XRN005 Xstrata Rail
C44-58 XRN016 Xstrata Rail

Glencore



C44-59 XRN007 Glencore
C44-60 XRN021 Glencore

GWA



C44-61 GWU004 GWA
C44-62 GWU006 GWA
C44-63 XRN011 GWA
C44-64 XRN030 GWA

One Rail



C44-65 GWU010 One Rail
C44-66 GWU011 One Rail

Centennial Coal/SSR



C44-67 CEY003 Centennial Coal/SSR (Liddale)
C44-68 CEY007 Centennial Coal/SSR (Lake Macquarie)

CFCLA



C44-69 CF4409 CFCLA (Stationsman)
C44-70 CF4411 CFCLA (Revenue)

Mineral Resources



C44-71 MRL004 Mineral Resources (Polaris Express)
C44-72 MRL006 Mineral Resources (Meridian Express)

Crawfords Freightlines



C44-73 PHC001 Crawfords Freightlines (Carrot)
C44-74 PHC002 Crawfords Freightlines (Spud)

Fletcher



C44-38 FIE001 Fletcher (Gail Allen)
C44-39 FIE002 Fletcher (Pamela Gaye)

*Free Australia shipping only. Model details, delivery dates & prices subject to change without notice.



AUSCISION®
The Leader in Australian Model Railways

AUSCISIONMODELS.COM.AU
information@auscisionmodels.com.au
PO Box 1781, Castle Hill, NSW 1785 Australia
Ph: 0425-868-442

Auscision Models Pty Ltd 2024 ABN 18 888 830 125

Scale Model Co. **Hobby Centre**

Our opening times are: Thursday 12.00pm - 8.00pm

Friday 10am to 5 pm

Saturday 9.00am - 1.00pm

We are located at: A4/ 2-4 Central Avenue Thornleigh NSW 2120

Visit our new website and online store at: www.scalemodelco.com.au

We can be contacted on sales@scalemodelco.com.au or by phone on 0404 935 663

Available Now

(HO Scale)

Bedford TK "Bushfire Brigade"

Resin Unpainted Kit with Decals

\$35.95



OZ KIT FOR AUSTRALIAN MODELLERS

(HO Scale)

Bedford TK "Tipper"

Resin Unpainted Kit

\$35.95



OZ KIT FOR AUSTRALIAN MODELLERS

NSWGR Two Storey Signal Box

Resin Unpainted Kit with Detailed Items (HO Scale)

\$65.95



(HO Scale)

Bedford TK "Flat Bed"

Resin Unpainted Kit

\$35.95



(HO Scale)

International ACCO SRA Flat Bed

Resin Unpainted Kit with Decals

\$35.95



Available Now

OZ KIT FOR AUSTRALIAN MODELLERS

Bobcat "Skid Steer"

Resin Unpainted Kit (HO Scale)

\$18.95



Coming Soon

International Acco NSWFB Fire Engine

Resin Unpainted Kit with Decals (HO Scale)

\$39.95



Available Now

Bobcat & Trailer

Resin Unpainted Kit (HO Scale)

\$29.95



Compressor Trailer

Resin Unpainted Kit (HO Scale)

\$18.95



Available Now

(HO Scale)

International Acco SRA Hiab Truck

Resin Unpainted Kit with Decals

\$35.95



OZ KIT FOR AUSTRALIAN MODELLERS

(HO Scale)

International Acco SRA Crew Cab Truck

Resin Unpainted Kit with Decals

\$35.95



(HO Scale)

International Acco SRA Crew Twin Cab Truck

Resin Unpainted Kit with Decals

\$35.95



6'x4' Box Trailer

Resin Unpainted Kit (HO Scale)

\$14.95



We are now stocking N British, HO Australian, OO British, 009 British and On30, as well as our extensive range of O scale and Modelling materials.

PAMAK HOBBIES

MOBILE 0408 656 446

www.pamakhobbies.com

info@pamakhobbies.com



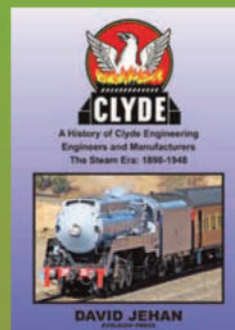
HORNBY R3545 B12 CLASS BR \$ 348

EVELEIGH PRESS presents THE DAVID JEHAN COLLECTION

CLYDE

A History of Clyde Engineering

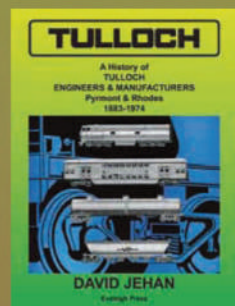
Engineers and Manufacturers
The Steam Era: 1898-1948



Clyde is a 336 page hard-cover volume which includes a listing of all tramcars, wagons, coaching stock and steam locomotives built in the period covered.

\$90.00 plus postage

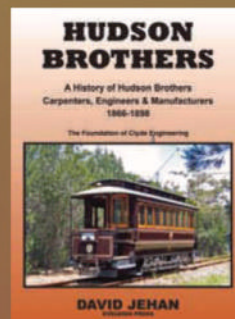
TULLOCH



Tulloch is 296 pages with colour and black and white photographs throughout.

\$85.00 plus postage

HUDSON BROTHERS



Hudson Brothers is 256 pages with colour and black and white photographs throughout

\$75.00 plus postage

SCR PUBLICATIONS

PO Box 345 MATRAVILLE 2036

Telephone: (02) 9311 2036

www.australianmodelrailways.com

62 Moore Street
LIVERPOOL
NSW 2170
PHONE (02) 9602 8640



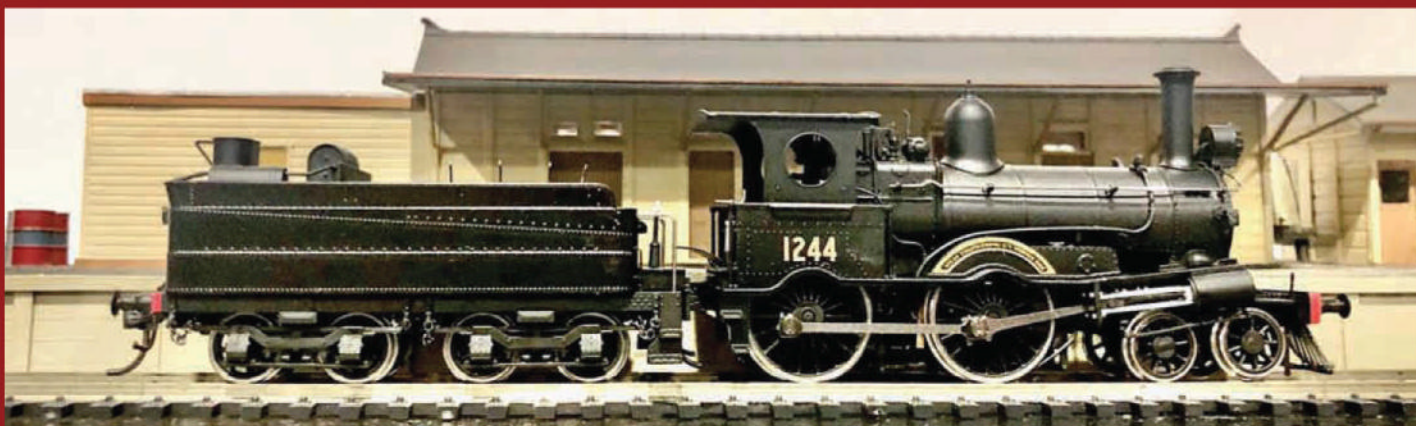
Mail orders:
www.casulahobbies.com.au

Email:
sales@casulahobbies.com.au



Still the place for models of Australian Railways

TRADING HOURS: MONDAY-FRIDAY: 9.30am-4.00pm. SATURDAY: 9.30am-2.00pm. CLOSED SUNDAYS



NSW 4-4-0 Z12 CLASS – \$895.00 DCC SOUND



NSW Z19 – \$895.00 DCC SOUND and \$795.00 DC

COMING SOON! MAY/JUNE 2024



**CX Composite Express Lavatory Car
HCX Express Lavatory Composite
Brakevan**



NEW MODEL DUE 2024



**NSWGR
BLH 36' 0" Bogie Limestone Hopper**

A unique vehicle - Components for BCH coal hoppers were modified to make 65 limestone wagons coded BLH for traffic between Medway Quarries and Berrima Cement Works. They were delivered between July 1957 and January 1958, fitted with bogies coded 2BQ, similar to the 2BP fitted to the BCH, but with inclined brake levers. In later life, they worked on the Illawarra from Bombo and Shellharbour. Supplied in three different packs of four wagons for each code: BLH, FCH and NHLF

SEE OUR WEBSITE FOR FURTHER DETAILS – LAY-BYS AVAILABLE

On Track Models

Our New 40' Curtain Sided Containers Have Arrived



40CS-31 Holden
Mid to Late 1990's

40CS-32 Holden Wise
Mid to Late 1990's

40CS-33 New Holden
Late 1990's

There's 3 Packs of Officially Licensed Holden Containers Available At \$50.00 Per Pack

1990's



40CS-34 M Cables
White

40CS-37 M Cables
Orange

40CS-39
LME Transport
Services

40CS-29
Chemtrans

Late 1980's

Mid 2000's Onwards



40CS-40 Railex

40CS-30 Intermodal

40CS-34 CEVA White

40CS-36 CEVA Maroon

40CS-33 CEVA Maroon

These Packs Of 40' Curtain Sided Containers Are Available for \$40.00 Per Pack

Each Pack Contains 2 HO Scale Containers

Our Victorian 40'2" & 56' Louvre Vans

Stocks are getting low, these HO Scale Vans are only \$225 Per Pack



We have only 6 different packs of Victorian 40'2" Louvre Vans left



We have only 5 different packs of Victorian 56' Louvre Vans left

Our South Australian 40'2" Louvre Vans

There's very few packs of these HO Scale Vans left at \$240 Per Pack



There's only 3 Packs in SAN Wagon Grey Remaining: LX-01, LX-03 to LX-04, plus ALGX-01 to ALGX-03



There's 3 Packs in SAN Wagon Red: LX-05 plus ALGX-05 to ALGX-04



There's only 4 Packs in SAN Green & Gold Left: ALGX-06, ALGX-08 to ALGX-10



Stock in this Mixed Pack of 1 SAN Green & Gold plus 2 SAN Orange Vans is Nearly Gone: ALGX-01

Available Direct from On Track Models and Our Retail Network

On Track Models Australia Pty Limited

Address: P.O.Box 5515, South Windsor NSW 2756 Ph: 0478 289 686 / 0478 BUY OTM

e-mail: sales@ontrackmodels.com.au Online Shop: <https://ontrackmodels.shop/>



We import all of these brands!



Contact us for a stock list and place an order today!

If we don't have what you are looking for we will gladly order it in for you.

orientexpressmodels.com.au

Orient Express Model Railway Shop

2 King William Rd, Unley SA, 5061

(08) 8271 7861

sales@orientexpressmodels.com.au

Your Model Railway Specialist!

ESU
Authorised Dealer




DECODER WIZ

THE SOUND WIZARD OF MODEL RAILWAYS

Decoder Wiz has been providing a professional & guaranteed sound/motor decoder installation service for over twelve years.

Check out the Sound files on the website for many NSW & Victorian outline. Digitrax sound decoders & sound files are also available for USA & British outline.

New QSI (qsindustries.com) 'Titan U' HO sound decoders have arrived suitable for many Australian & USA models.

Many New items from motor decoders to programmers are available, click 'Prices' on the website. Also Superseded decoders are available on the 'Bargains' page!

For more information Contact Rick:
Monday to Friday 9am-5pm (excluding public holidays)
Ph. **02-4957-3703** or **0418-260-553**
Email. sales@decoderwiz.com.au

Visit: **www.decoderwiz.com.au**

Decoder Wiz - ABN 66 960 478 419.

Exhibition Layout FOR SALE



Bethungra Spiral HO NSW Main South

10 baseboards including all track and scenery,
double track mainline suitable for DC or DCC.

Offers close 24 April 2024.
further details
contact@eppingmodelrailway.org.au
www.eppingmodelrailway.org.au

Building or updating a layout?
Need to enhance your layout with some new vehicles?
We have a wide range of HO, N and OO cars, trucks and equipment covering a wide range of eras and geographies.
Email us, see us at shows or head to the web for a downloadable catalogue.




RW HOBBY

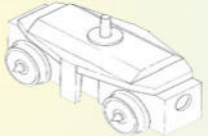
EST. 2012

Artitec, Brekina, Busch, PCX87
All Scale Scenics, Oxford Diecast
Wiking, Aussie Road Ragers
HO, OO, N Scale
Australian Army/RAAF Series
Avonmore Books
Roving Wolf Pty Ltd, ABN 55 160 524 176
PO Box 8, Healesville Main Street VIC 3777
E: wolfstoreau@gmail.com
W: rw hobby.au

BLACK BEETLE Self Contained Drive Bogies powered by 12mm coreless motors or Mashima 1220 or 1224 motors
Custom Assembled with two gear ratio options;
15:1 for \$95 and 27:1 for \$122; Un-powered
Dummy Beetle with pickups \$25
Wheelbases from 21 to 40mm

Wheel Options
9.6mm disc
10.5mm disc and 10 spoke
11.08mm 9 spoke
11.6mm disc
12.0mm disc
12.25mm disc and 12 spoke
14mm disc
Most sizes available in
RP25-110 and RP25-88 profile
All prices include GST

Phone: (03) 5956 9389
Visa, Mastercard.


C. PO Rhyll, Victoria, 3923.

mkn - Märklin Service Centre Australia
digital

märklin TRIX
ABN : 13693291720

H0 and OO 1947 to 2024, plus G1, Z & Trix. Servicing, Digital Conversions and Rebuilds.
Authorised Märklin Spare Parts Stockist.

From *800, 30*/31* to 36*, 37*/39* series locomotives undertaken.
AC to MM2 or MFX formats with/without sound. S/H Reverse Units.
Extensive range of spares, mSD/3 & mDL/3 decoders.
Help with Märklin Service Warranty for self imports.



P.O. BOX 40 BOWRAL NSW 2576 AUSTRALIA
Mobile : +61 (0)414 309 120
Email: mkn_digital@bigpond.com Website: mkn-digital-train-repairs.com

Track Planning Services

Prototype and Freelance Layout Design
Plans and Lists of Materials for all Gauges

www.trackplanningservices.com.au

0427 400 755

info@trackplanningservices.com.au

Plans for the finest layouts



AUSCISION®

The Leader in Australian Model Railways

HO SCALE

Grain roof and opening mechanism details fitted in BGVF Grain Hopper

Accurately weighted for railfanning performance

Accurate graffiti as per the prototype wagon

Factory painted and decorated with laser sharp printing

Robbed metal lift rings

Metal plating

Scale size metal knuckle couplers

Scale size axles

Blackened RP25-110 36" metal disc wheels

SSR - Graffiti
NGH-83 SSR Black with SSR Logo & Graffiti - Single Car \$100

Riched metal ladder and steps

Removable coal load on Coal Hopper version

All niches and piping details included

Super detailed bogies with separately applied brake rigging

CHS Coal Hopper/BGVF Grain Hopper Spare Parts

SP-107 2DB/DBA Bogies, PTC Blue with 36" Wheels - 1 Pair	\$14.95
SP-108 2DB/DBA Bogies, SRA Red with 36" Wheels - 1 Pair	\$14.95
SP-109 2DB/DBA Bogies, Black with 36" Wheels - 1 Pair	\$14.95
SP-110 33" Metal Disc Wheels - 12 Axles	\$19.95
SP-111 36" Metal Disc Wheels - 12 Axles	\$19.95

*All wheels are blackened RP25-110 Metal Disc with 25mm Axle Length

Available Now!
While stocks last
4 Car Pack \$300, Single Car \$100
Free shipping on orders over \$150*

NSW CHS & BGVF COAL/GRAIN HOPPERS

Accurate PTC Blue colour

PTC - Blue



NCH-80 CHS PTC Blue with Blue/Black L7
NCH-81 CHS PTC Blue with Blue/Black L7

4 Car Packs - \$300.00 ea

PTC - Wagon Grime



NCH-82 NHVF PTC Wagon Grime with Faded L7
NCH-83 NHVF PTC Wagon Grime with Faded L7

4 Car Packs - \$300.00 ea

SRA - Wagon Grime



NCH-84 NHVF SRA Wagon Grime with Faded L7
NCH-85 NHVF SRA Wagon Grime with Faded L7

4 Car Packs - \$300.00 ea

Freight Rail - SRA Red



NCH-86 NHVF Freight Rail SRA Red with FR Logos
NCH-87 NHVF Freight Rail SRA Red with FR Logos

4 Car Packs - \$300.00 ea

Freight Rail - SRA Red (B)



NCH-84 NHVF Freight Rail SRA Red with FR & B Logos

4 Car Pack

FreightCorp - SRA Red



NCH-88 NHVF FreightCorp SRA Red with FC Logos
NCH-89 NHVF FreightCorp SRA Red with FC Logos

4 Car Packs - \$300.00 ea

FreightCorp - SRA Red (B)



NCH-86 NHVF FreightCorp SRA Red with FC & B Logos

4 Car Pack - \$300.00

Pacific National - Faded SRA Red



NCH-82 NHVF Pacific National Faded SRA Red (Patch Job)

4 Car Pack - \$300.00

Pacific National - Blue



NCH-90 NHVF Pacific National Blue with PN Logos
NCH-91 NHVF Pacific National Blue with PN Logos

4 Car Packs - \$300.00 ea

Pacific National - Blue (B)



NCH-86 NHVF Pacific National Blue with PN & B Logos

4 Car Pack - \$300.00

Pacific National - Faded Blue



NCH-83 NHVF Pacific National Faded Blue with PN Logos

4 Car Pack - \$300.00

SSR - Black (Grain Version)



NGH-44 BGVF SSR Black with SSR Logos
NGH-45 BGVF SSR Black with SSR Logos

4 Car Packs - \$300.00 ea

SOLD OUT!

*Free Australian shipping only. Model details, delivery dates & prices subject to change without notice.



AUSCISION®
The Leader in Australian Model Railways

AUSCISIONMODELS.COM.AU

information@auscisionmodels.com.au

PO Box 1791, Castle Hill, NSW 1765 Australia

PH 0425-866-442

Auscision Models Pty Ltd 2024 APM 16-000 036 128

IDR MODELS



Now in Stock
Second run of BBW
Ballast wagons.
All new numbers



Available soon
VR NN Ballast wagons

Coming soon
QR SX Coaches



VR DERM & MT Trailer in
RTR now in stock.

Available with DCC sound
or DC.



Available direct from IDR Models
VISIT: www.idrmodels.com.au
for more information and pricing

P.O. Box 39 Galston NSW 2159 ABN-64 123 138 661



Sydney Suburban Electric Cars

STAINLESS STEEL COMENG SERIES 2 DOUBLE DECK-S SETS

NOW AVAILABLE

Ready to Run HO Scale 2-Rail DC

Manufacturing 3 models, power car, trailer car, and driver trailer in the combinations



Ph: (02) 9635 8618

Original Silver Livery

550-RR - 4 Car Set 1 x Power car (motorised) • 2 x Trailer car • 1 x Power car (dummy)	\$695
552-RR - 2 Car Set 1 x Power car (motorised) • 1 x Driver trailer car (dummy)	\$415
552-DT - 2 Car Set 2 x Driver trailer car (dummy)	\$395
550-PC/DC - 2 Car Set 1 x Power car (motorised) • 1 x Power car (dummy)	\$445

Citydecker Colour Livery

553-RR - 4 Car Set 1 x Power car (motorised) • 2 x Trailer car • 1 x Power car (dummy)	\$695
553-PC/DC - 2 Car Set 1 x Power car (motorised) • 1 x Power car (dummy)	\$445
554-RR - 2 Car Set 1 x Power car (motorised) • 1 x Trailer car	\$415
555-RR - 2 Car Set 1 x Power car (motorised) • 1 x Driver trailer car (dummy)	\$415
555-DT - 2 Car Set 2 x Driver trailer car (dummy)	\$395

Shop 1, 181 Church Street Parramatta. NSW 2150
Ph: +61 2 9635 8618
mail@bergshobbies.com.au www.bergshobbies.com.au



PO Box 407 SANS SOUCI NSW 2219

- Phone: (02) 9529 2235
 - Email: eureka.m@bigpond.net.au
 - Website: www.eurekamodels.com.au
- Eureka Models Pty. Ltd. ACN 109 195 655

Lunar New Year is over so what can we expect from our Chinese factories in the Year of the Dragon



From our Shenzhen factory: Final assembly underway



AD60 – ETA: May/June 2024



620/720 – ETA: August 2024



R class – ETA: Nov/Dec 2024



BSV ETA: July 2024



BCW – ETA: July 2024

NT Oil
Tankers
ETA: August
2024



From our Nanjing factory: Final assembly underway



38 class – ETA: May/June 2024

40 class ETA: July 2024



HUB set ETA May/June 2024



TAM/MCE ETA: October 2024



There are other projects underway at our factories in China with deliveries expected in 2025. For full details of all our current projects see the Eureka Blog at eurekamodels.blogspot.com

For a leaflet and order form outlining full details of any of our models including paint schemes, numbers etc., and our easy regular payment scheme contact Eureka Models or see our website: www.eurekamodels.com.au

EUREKA MODELS

"The Leaders in Sound"



NSW SRA 81 Class Locomotive

**NOW
IN STOCK**



Victorian Railways K Class Locomotive

**Arriving
2023**



Queensland Railways 1460 / 1502 Class Locomotive

**Arriving
Mid 2023**



Available with either
H0 or H0n3.5 Gauge



South Australian Railways 900 Class Locomotive

**NOW
IN STOCK**



NSWGR MHO / VHO / KP / DMC Vans

**NOW
IN STOCK**



NSWGR S-Truck and Shunters Float

**Arriving
2023**



**GAUGE
H0
1:87**

SDS Models P/L - ABN 86 628 053 529
PO Box 804 Winston Hills NSW 2153 Australia
Email: sales@sdsmodels.com.au

sdsmodels.com.au

SMRC's TALLAROOK

Michael Holian describes the exhibition layout built by the Sunbury
Model Railway Club Inc, photos by John Dennis



London North Eastern Railway (LNER) A3 4472 'Flying Scotsman', R707 'City of Melbourne' and Steamrail R761 charge towards Seymour during Aus Steam '88 celebrations.



Prototype Location

Opened in 1872, Tallarook railway station is located in Victoria, on the Main Northeast line to Wodonga.

Along with the line through to Seymour, Tallarook became a junction for the Mansfield branch line to Yea in 1883, with the line extended to Mansfield in 1891, then Alexandra in 1909.

A turntable was installed when the station became a junction, and the main line was duplicated from Broadford in the same year, with the double track extended north in 1886. The first interlocked signal box was erected in 1885, controlling three platforms and a four-road yard. The crossovers for the branch line initially faced the down direction, requiring up trains to reverse; an up-direction crossover was added in 1911.

When a parallel standard gauge line was built in 1962, it was laid through the middle of the station and three broad gauge crossovers were installed across the standard gauge mainline giving access to the station sidings. A new signal box was also opened around this time, with a crossing loop on the standard gauge line opening in 1969. This was the only crossing loop added after the initial construction of the line.

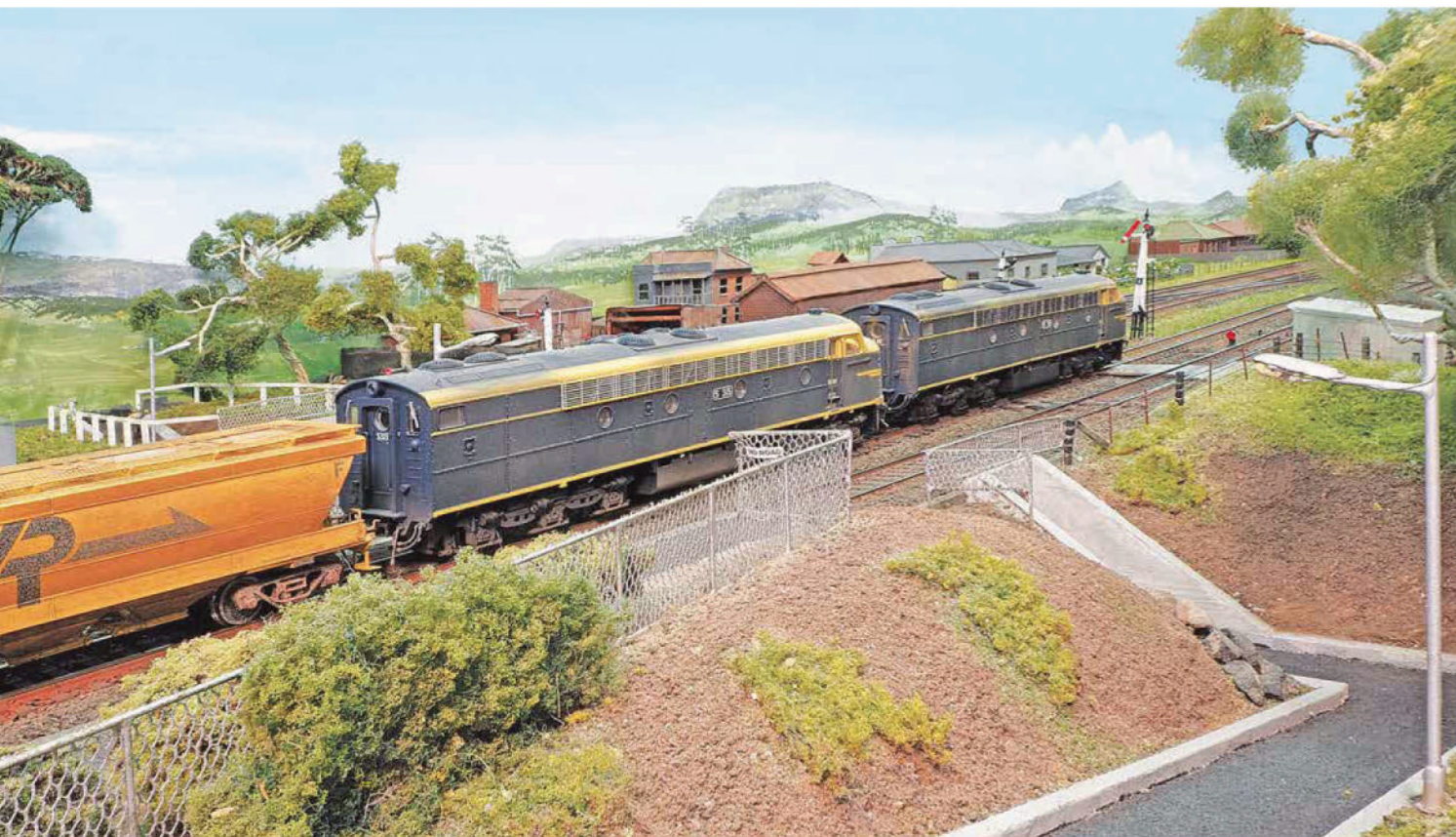
The current main road underpass, located nearby in the down direction of the station, was built in 1961, and replaced a previous level crossing. By June 1970, the turntable was removed.

Tallarook served as the junction for the Mansfield line until 1978, with the last regular passenger train to Mansfield operating in 1977. After the line to Mansfield was closed, one of the standard gauge crossings was removed in 1979, with another removed at the down end in 1981. The goods yard was closed by November 1982, with the last connection to the goods yard abolished in 1984. The signals for them remained until the signal box was closed in 1987, and the station left as straight track.

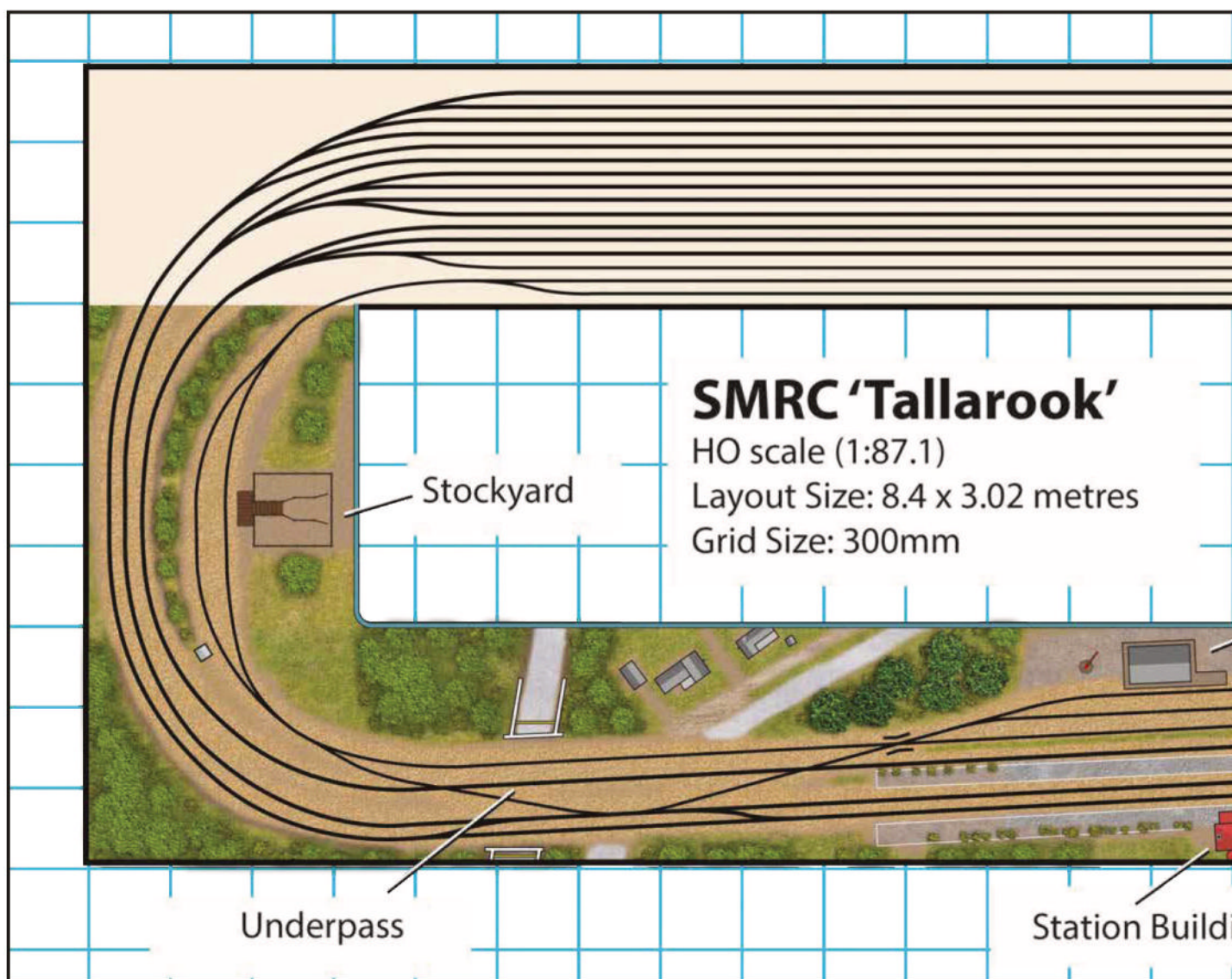
Why Tallarook

Around November 2006, the Sunbury Model Railway Club began to consider construction of a new HO scale Victorian-themed exhibition layout, and several options were put forward including Tallarook, Murtoa and Serviceton.

After some consideration of the proposals, Tallarook was selected as the best choice for the club, and the period chosen to be modelled would be 1971 to 1978. This era allowed for double track mainline operations on the broad gauge, standard gauge operations, and the broad gauge branch to Mansfield, thus giving the maximum level of operational interest for the club members and the general public.



S311 and S315 running elephant style, in full charge of a loaded block grainy headed for export at the port of Geelong.



Construction

The layout is constructed on open frames made of 90mm x 19mm pine with cross-braces as needed, and the sub road-bed is 12mm chipboard, which was heavily primed and sealed to prevent warping.

The backscenes are individual frames made from 42mm x 19mm pine with sheets of 3mm Masonite attached to a height of 300mm. This size allowed Laurie Green MMR (National Model Railroad Association 'Master Model Railroader') to easily paint the backdrops; once each section had been painted it was installed and fixed into place.

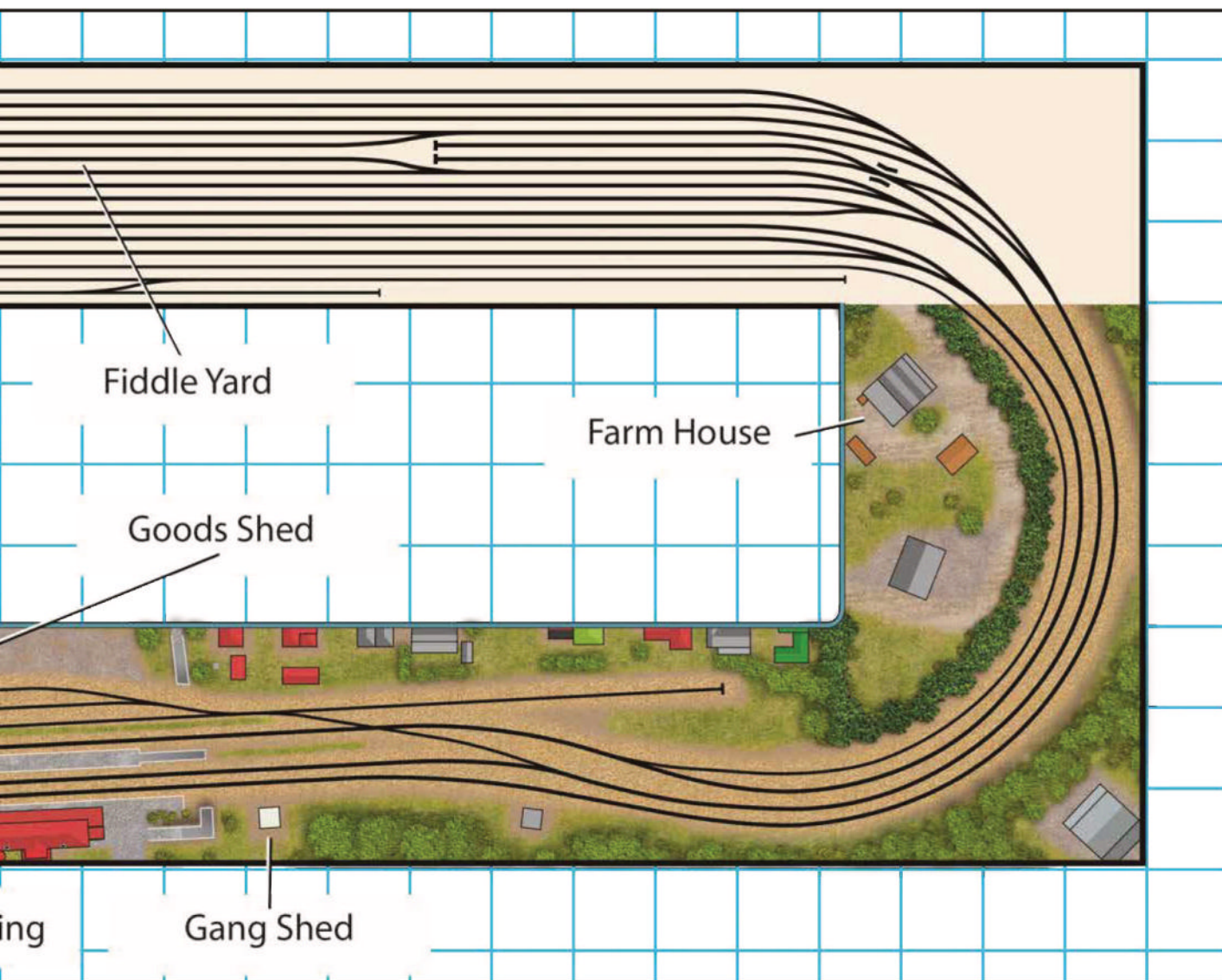
Legs are welded steel tubes that slot into place underneath the layout. They also feature adjustable feet that make it easier to line up rail joints when the layout is out on tour.

Track and control system

Track is code 100 PECO, as during the time of construction the variety of points and crossovers that are now available in the finer track codes of 83 and 75 weren't available. Furthermore, it was deemed that hand-laying the quantity of points and trackwork required for Tallarook was beyond the skill levels of the membership at that time. Track was laid by various members and special mention should go



RM60 and MT28 are working an up passenger service off the Mansfield branch, crossing over the main Melbourne – Sydney standard gauge line. This scene is being captured by a certain famous railway photographer with his trusty push bike lent up against the railway fencing.





RM40 is pulling into platform one at Tallarook with a down afternoon passenger service bound for Seymour.



Australian National Railways GM24 (on loan due to a locomotive shortage in Victoria) heads the Sydney bound 'Inter-Capital Daylight'



to John Humphries for his input on this component.

Tallarook was to be the first layout that the Sunbury Model Railway Club would build with the capability to run both DC and DCC. After some experimentation and research, the NCE Pro Cab system was chosen as the most suitable for the club, primarily because the majority of the members operating DCC had NCE systems. Moreover, there is an Australian distributor and repairer available should there be any issues.

The wiring on the layout is essentially done using traditional DC standards. There are four separate blocks: up broad, down broad, the 'gauge' and the branch. Each of these DC blocks can be controlled by either a panel-mounted DC controller or a corded handheld controller. Each controller can be plugged into each section if operators need to move around.

For DCC operation, the DCC system is plugged in to a separate input and each block has a separate plug to access the DCC power. Once cut over to DCC operation, the layout is fully DCC and you can run trains wherever you want without having to worry about track power or polarity etc. It certainly makes running the Seymour roadside goods much easier.

Points are controlled by Tortoise point motors and are wired back to double pole double throw (DPDT) switches. When the switch for the point is flicked, the DC polarity is switched and the point motor changes the point's position. Track indication is provided on panels located around the layout and light emitting diodes (LED)s signify the point's position at either normal or reverse.

Most wiring was undertaken by Stephen Holian and Warren Roche. Consistent labelling of components and wires has proven to be of great benefit, especially if something fails – it makes troubleshooting easy!

Scenery

Scenery was undertaken by John Humphries and myself using various methods and techniques available at that time. This included using tile grout for dirt and Woodland Scenics ground foam for grass and general vegetation. Ballast was obtained by sifting bluestone through various grades of mesh to achieve the desired size and look.

All scenery was glued down using the 'wet' water and polyvinyl acetate (PVA) method. Using a spray bottle filled with water and a drop of washing detergent to break the surface tension, a 50/50 mix of PVA and water is sprayed to act as a scenic cement to hold everything down.

Trees on the layout were made by Brian Chester. Armatures were made using copper wire twisted and bogged with Sellys No More Gaps, and these armatures were then painted various

◀ B75 is ready to depart Tallarook with the down Albury passenger service.



C504 and C502 round the curve at the down end of Tallarook, with an ex-Cooks River 'super freight' bound for unloading at South Dynon.

greys, browns and whites to simulate gum tree trunks. Finally, Woodland Scenics polyfibre sections are attached to the armatures to simulate the leaf canopies.

Structures

Buildings for the layout are of various makes. The pub, stable and house opposite the station were scratch-built by Terry Dunstan using balsa, scale wood and embossed styrene. The farmhouse at the up end was built by Terry's son using similar methods, and the shearing shed was built by Gary Taylor from an AMRM article that was titled 'The Wangaratta shed' [Editor: refer AMRM issue 151 August 1988]. The Station building was scratch built by Laurie Green; the brick-work is actual photos of the current day station that have been modified in photo-shop to appear as the station was during the period modelled. The goods shed is an old Ian Lindsay Models kit built by John Humphries, and the departmental residence and Police Station were scratch built by myself.

Tallarook Version one

Tallarook was debuted at the 2008 Sunbury Model Railway Show and has

since attended various shows over the years throughout Victoria. Although reasonably complete as a layout, Tallarook was never finished (is a layout ever finished?) Nevertheless, Tallarook became the club's 'go-to' layout for shows in between showing Beechy and Leopold, two of the club's then-current layouts.

During the 2008 to 2020 period some upgrades were made to the layout, the most significant one being the inclusion of an up and down broad gauge railmotor storage area in the fiddle yard. This addition makes operations a lot easier.

To Sell or Keep?

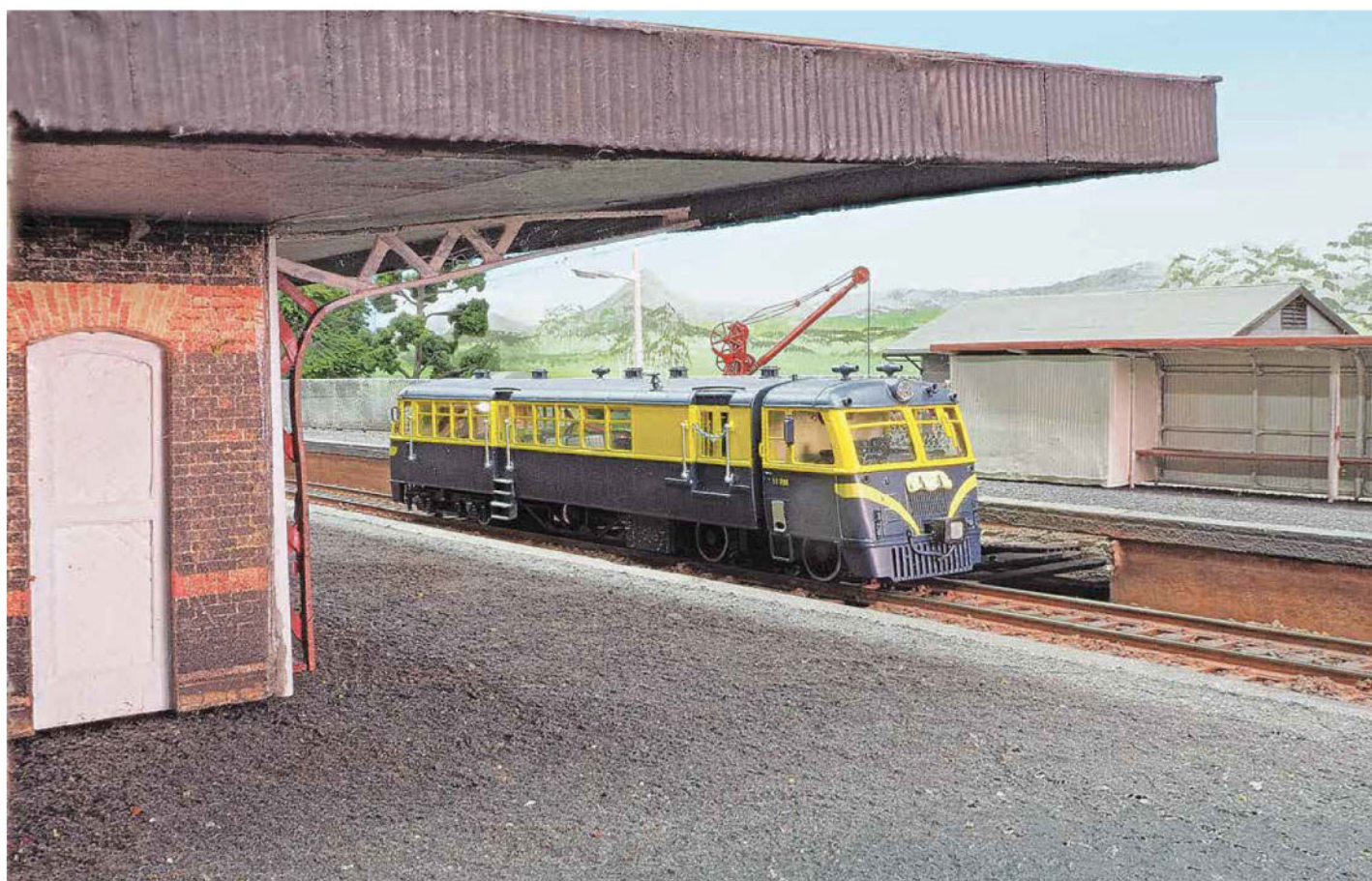
2020 came and with it so did mandatory 'lock downs'. This shut the club down and made it impossible for the club to operate and for members to enjoy their hobby. At the same time, Tallarook was getting tired and needed work done on it. Also at this time, the Sunbury Model Railway Club had completed the first part of a multi station/layout project to model the main northern line, which would later form part of a future permanent club layout. The first station for this project was 'Gisborne.' The 'Gisborne' main station modules will be removable from the club-rooms and be able to be exhibited when

attached to common end modules and a fiddle yard.

A discussion was had as to whether we should sell Tallarook. Ultimately, it was decided not to sell the layout for a few reasons, these included several of the members of the club having collected large amounts of rolling stock over the years that were specific to the north-east line. Further, many club members really wanted to finish it – particularly Tallarook's numerous signals – which had not been modelled when the club first built the layout.

Tallarook Version two

During the summer of 2020/21, work commenced on upgrading Tallarook, with Robin Bootle and Mark Warner taking the job of scratch-building and kit-bashing the required signals. For the lattice mast signals, Ratio London North Eastern Railway (LNER) kits are used as a basis, with Broad Gauge Models (BGM) ladders and semaphores added as required. The baton masts are scratch built from styrene strip and hardware is from Ratio and BGM as well as some San Mateo parts. Each signal was researched to get the correct height and type from drawings, pictures and diagrams. The colour light sig-



A very clean RM11, a 102HP Walker, stops on the up platform at Tallarook to pick up passengers before continuing its journey to Melbourne.

nals are San Mateo r-t-r items that have been wired up and fed power via the point motors. This means when the points are set against a movement heading north on the standard gauge loop, they will display red over green and vice versa when you have the road set to normal.

As for the scenic upgrade of Tallarook, Greg Berntsson and myself undertook this work. I think there is a saying that an avalanche starts with a single snowflake, and this was the case with this aspect of the layout's upgrade. What was supposed to be a couple of Sundays worth of work turned into five weeks' work, working six days a week from 8am to sometimes 10pm at night. It was insane, to put it mildly, but once the work was completed it had proven worth the effort!

Some of the work included:

- New fencing along the entire railway right of way.
- Additional trees being built, painted and flocked, including new Sedum Gums.
- Restoration and upgrading of the wire gums previously built, as well as pines of various types around the station area and the farm to act as a wind break.

The scenery was either stripped back or glued over, as we now had access to static grasses and a greater variety of colours and materials to work with. The static grass was from the Ground Up range, which I think is marketed by Modellers Warehouse in Queensland.

The bracken and general scrub type bushes under the tree canopies are made from sphagnum moss. This moss is dyed with acrylic paint in various brown shades, which is then glued in place with PVA. The tops of the moss bits are air-brushed various shades of green, and then Woodland Scenics fine ground turf is sprinkled over the top.

Signal troughs and conduit lines were all scratch built and custom placed for their various locations. Built using styrene sheet and painted a weathered grey aluminium colour, these were then panel-lined to bring out the individual 3 ft marks that are hand-scribed along their length.

All the point rodding on the layout is also scratch built using styrene sheet and shapes to achieve the desired effect. At the time of rebuilding, Ratio point rodding kits were very difficult to get even from overseas and the amount of kits required for the layout would have been cost prohibitive, so Greg and I devised another method to achieve a similar result. Each elbow on the point rodding (when it changes direction) is made up from a piece of 0.40" x 0.40" Evergreen styrene cut to length, then a soldering iron on very low temperature heats the strip up to where it can be bent to a 90° angle, and it's then glued in place. I said it was insane, didn't I?

Restoration work was also undertaken on the existing buildings with paint touch-ups; the pub received a balcony railing, the farmhouse received a new

cream with green trim paint job as well as other general work including weathering, rusting etc.

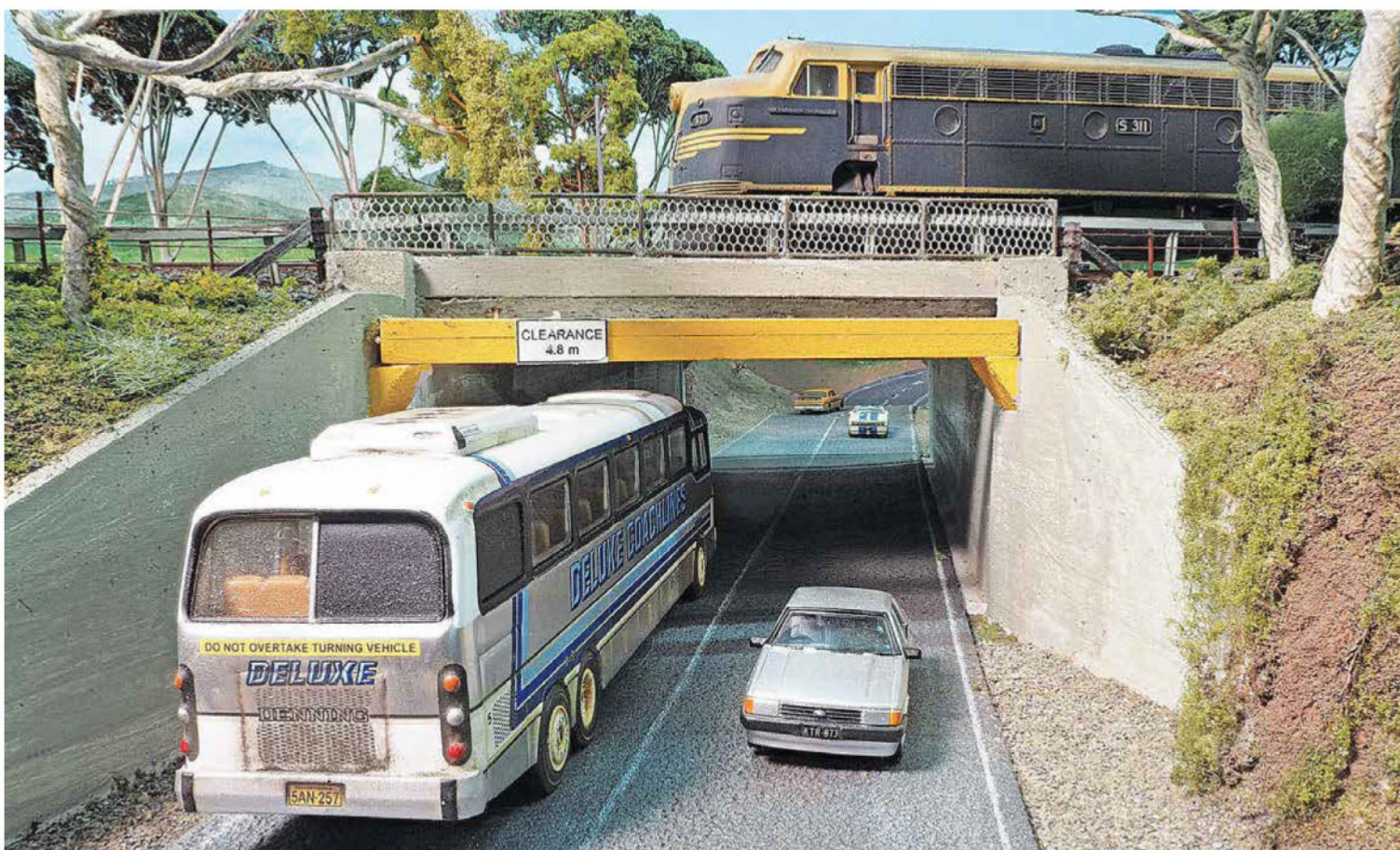
Careful consideration was given to preserving the legacy of previous members' work while also improving items, so any buildings that didn't have gutters received them, as well as down pipes to water tanks etc.

Garry Richie built a new crew shed at the down end of the branch yard after we found a photo showing it was there during the period modelled.

One area that was of concern was the large open area between the pub and farm; it looked just bare and boring. On the prototype and during the period modelled there were a number of different buildings that make up part of Tallarook town. However, from a space point of view they really needed to be painted onto the backdrop to be prototypically correct. This wasn't an option as removing the backscenes was going to be too much of a job, so some modellers licence was employed, and a selection of buildings in Tallarook were chosen to fill the space in a ¾ and ½ relief capacity. These included some houses, a building that currently is the post office and fish and chip shop and the iconic Tallarook Mechanics Institute.

I undertook the modelling of these buildings, and below is a brief synopsis of how this was done.

The measurements and dimensions of these buildings were obtained using Google Earth's distance tool as well as



S311 on a down goods crosses over the main road at Tallarook. The bridge was installed when the original road crossing gates were abolished with the introduction of the standard gauge in 1962.

from street views. Each of the buildings' measurements in actual feet were then converted to HO scale feet using a set of digital callipers to find out how many millimetres a wall is in length and height vs the HO measurement. This data was then input into a program I use called 'Brother Workstation,' before being transferred to a Brother 'Scan and Cut' machine to cut out individual walls, floors, roofs etc. for each building. When designing the walls, I made allowances for things like windows and door openings to be cut out. Most doors and windows are either Tichy Trains or old Grandt line. I believe San Juan details owns that tooling now. The machine isn't perfect, but it doesn't require a degree in Computer Aided Drafting (CAD) to operate. It's a relatively small financial outlay to purchase the machine (around the \$800 AUD mark for the SDX 1250 which is the current model of machine I use if you are looking to purchase one), and the program is easy to learn for a beginner. Brother Scan and Cut machines are primarily used by scrapbookers and quilters for making accurate cuts on card and fabric. It just so happens that it will also cut up to 0.040" styrene sheet- very useful tool in the scratch-builder's toolbox in the modern age.

The 'new' and improved Tallarook was exhibited for the first time in 2021 at Yarra Valley Model Railway Club's Diamond Creek exhibition and has been well-received since. Subsequently, Tallarook won the Exhibitor's Choice Award at AMRA Caulfield exhibition in 2022.

Rolling Stock

All rolling stock that is displayed and operated on Tallarook belongs to individual club members, and the types of rolling stock and what gets run has changed over the years. When the layout was initially built and exhibited it was a free for

all – A2 steam locomotives on a 1950s-era passenger service passing NR class locomotives on the 'gauge'.

Over time and with the benefit of an ever-growing r-t-r market the layout has more recently settled into a firm 1970s era, with lots of Victorian Railways (VR)



B67 heads the down combined Albury/Tocumwal passenger service. This train featured on-train refreshments in the form of an MBS mini buffet, and will be split at Seymour with each section heading to their respective destinations.



T332 heads a short down goods bound for Mansfield. To the left we can see the stock sidings at Tallarook, and to the right nature is reclaiming the former turntable and depot that serviced the branch.

blue and gold and the occasional Commonwealth Railways GM class locomotive seen on the 'gauge'.

This however is also changing, as the demographics of the active club members and what used to be "a club built on blue and gold" is moving with the times. Younger members have joined the club

with a passion for the era of transition otherwise known as the 1980s. Some even like modern era stuff...

The current focus of the club and its members when exhibiting is to tell a story and show a 1:87 version of the location we are modelling. We make sure trains are weathered and marshalled correctly,

even down to running a prototypical sequenced timetable, just to add extra interest.

Summary

With Tallarook currently renewed and proving popular on the exhibition circuit, its future looks bright. It will certainly serve its purpose into the foreseeable future as a layout to run at the club and also to display.

Maybe the next step for Tallarook is to be modernised into its configuration in the 1980s? Who knows?

References:

https://en.wikipedia.org/wiki/Tallarook_railway_station

Book, 'Spirit of Progress', authors Chris Banger and Phil Dunn

Sunbury Model Railway Club

The SMRC hold their annual train show in Sunbury, Victoria on the 3rd full weekend in October each year.

The club is always looking for new members, especially those with good backs for lifting layouts.

Club facilities include: a meeting room, library and multiple layouts to operate and work on.

Club meetings are held on the last Friday of each month, while other Fridays are social nights which includes operating trains and working on layouts.

Senior members' social gatherings are held between 10am and 2pm on the second and fourth Wednesdays of each month.

The SMRC welcomes new members, so if you're local to the Sunbury area or greater northern or western metropolitan Melbourne, come along and have a look.

Contact details: Mark Warner, SMRC Secretary. smrcinc1979@gmail.com

Club Website: smrcinc1979.org



K153 enters the branch bound for Yea on an Australian Railway Enthusiast (ARE) special passenger service.



▲ An overview of the yard at Tallarook sees X36 on 'the gauge' with a goods train heading for Wodonga.

► T359 heads an up morning passenger service towards Melbourne, with a short stop at Tallarook to pick up any passengers headed to 'town'.





The crew of locomotive T408 are only moments from their destination of Casterton. After cresting the hill, the train will roll across the Glenelg River bridge and ease into the platform road. At 200ft (61m) the station platform is just long enough to accommodate the train. The Casterton branch is normally served by railmotors, but today the consist of 'W' cars is being run for the annual races. At locations such as this, where the track is close to the edge of the layout, some sort of barrier (probably clear Perspex) will be installed to save the rolling stock from falling to the floor should a derailment occur

Putting the O in Casterton

Part 9: Point modifications and Electrics

Scott Whitaker continues his epic layout build. Photos by the author

The big mistake

Despite all the careful planning, somewhere, in the back of my mind, I had a nagging feeling that a costly mistake was going to occur at some stage.

So far, I'd built up about 30 turnouts, which is about a third of what will be required. They are all hand-laid on timber sleepers (or point timbers in Victorian Railways parlance), based upon the templates produced by Fast Tracks. For simple turnouts, the fabricated Fast Tracks frog and guard rails were substituted with Right-O-Way castings. For the three-ways and other special pointwork, I used Fast Tracks jigs to build up the frogs.

During construction, the turnouts were tested by using a NMRA standards gauge and by propelling a consist of long-wheelbase four-wheel wagons, in my case

U and T wagons, through the turnout. The theory being, that if these vehicles can get through and perform as expected, then anything will. But I neglected to use the gauge on the cast frogs, assuming that they would be correct.

After I finished wiring up Sandford yard to both the DCC power and accessory busses, testing began with my trusty Atlas SW8 propelling a consist of about eight vehicles, including a six-wheel Z guards' van. Sandford is a simple two road passing loop and was to be used as a test bed for the more complicated yards at other stations. To ensure the tests would be accurate, all wheelsets of the rolling stock were checked against a NMRA standards gauge. So, the first test began by propelling the train through the turnout at very low speed – barely crawling –

to watch the interaction between the wheels and the point rails and frogs. Success! Or so I thought. I'd isolated each siding to ensure that the train stopped long before the end of the track, and even though I had a barrier in place, thoughts of seeing a whole train plummet over a metre to the concrete floor beneath was just too disastrous to contemplate. This meant that the locomotive stopped short of the frog on each test run. The testing continued, at steadily increasing speeds, until I was able to run the consist flat out, backwards, through the diverge of the turnout (reverse). This of course is not at all prototypical, as in the real world, facing turnouts are a problem for trains. The major issue is that there is no transition on the diverging route, which on the model is an approximate 72-inch

(1828mm) radius curve. On a real railway, a typical turnout would have a speed restriction, and one only needs to consult the final report into the 2020 XPT derailment at Wallan, Victoria, to see what happens to a train that enters a facing turnout at excessive speed. On the layout, Train Controller software will apply a maximum speed to all facing turnouts by automatically reducing the speed of an approaching train – to say 15km/h – before it enters the turnout.

Next, I powered up the sidings, and repeated the testing process. But I didn't get very far. On the very first test, at crawling speed, the wheels of the locomotive rode up over the frog and derailed. A glitch I thought, so I did it again, same result, and again. You get the picture here, there is something seriously wrong with the turnout. I relocated the train to the other end of the yard and the same thing happened. Time to go back to the drawing board.

First, a test of the locomotive through the three way, and number five frogs that I had fabricated using the Fast Tracks jigs was conducted. No problem at all, so it must be the castings on both the code 100 and 125 turnouts. After a session of on-line research, I soon realised my mistake. The frog castings I purchased are produced to Proto48 (P48) standards, which are a finer version of 1:48 O scale. Also, P48 modellers use a track gauge that scales to 4' 8½" (1435mm) rather than the 5' (1524mm) legacy gauge that most 1:48 scale modellers use. What complicated matters for me was that the wagons in the test train all had Slaters Plastikard wheels, which were able to negotiate a P48 frog. What I needed to do from day one, was to run a locomotive (all my locos have the same NMRA standard wheel profiles) as the test vehicle through the turnout. Even if I had pushed it by hand, it would have revealed the previously unknown problem in my track work. I also noted that the guard rails were not long enough to fully engage the wheel flanges on the diverging route, of long wheel-base four-wheel wagons as they negotiated the frog.

So, what to do? I could modify all the locomotives and my bogie rolling stock that run on O scale wheel sets to P48 standards, but that would take time, and prevent any visiting modeller from running their 1:48 trains on the layout; or I could change out the frogs and guard rails. I chose the latter, and at the time of writing, I had only 26 more to do! Fortunately, all the remaining turnouts are on modules that allow for the changes to be made on the workbench, as necessary, prior to installation on the layout. The modification turned out to be straightforward, although time-consuming. Firstly, the point timbers that supported the frog were removed. Next, the wing-rail section of the cast frog was carefully cut off using a rotary cutting tool, thus retaining the 'V' section. Any remaining burrs were taken off with a small file. Replacement timbers were then put into position and new wing and guard rails, fabricated using the Fast

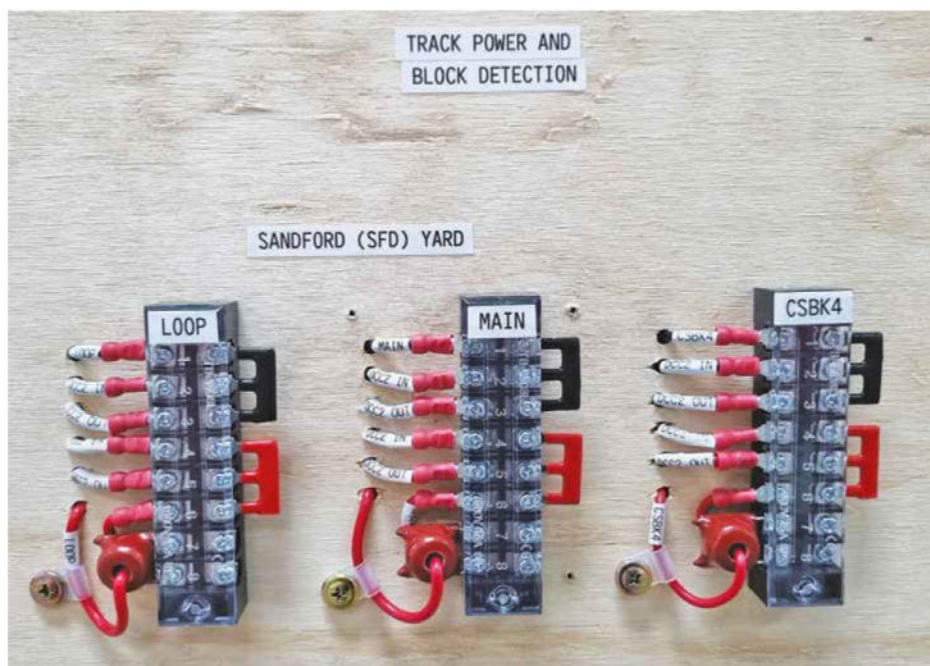


Photo 2 A close-up view of the terminal blocks for Sandford yard showing the use of printable heat shrink tubing. The plastic covers on the blocks simply lift off, and any troublesome circuit can be quickly isolated. By keeping everything standard, wiring errors are minimised. The arrangement allows for easy expansion to accommodate the larger yards on the layout. Cat 5 wires will be added to terminals 7 and 8 to input the block detection signals into LocoNet.

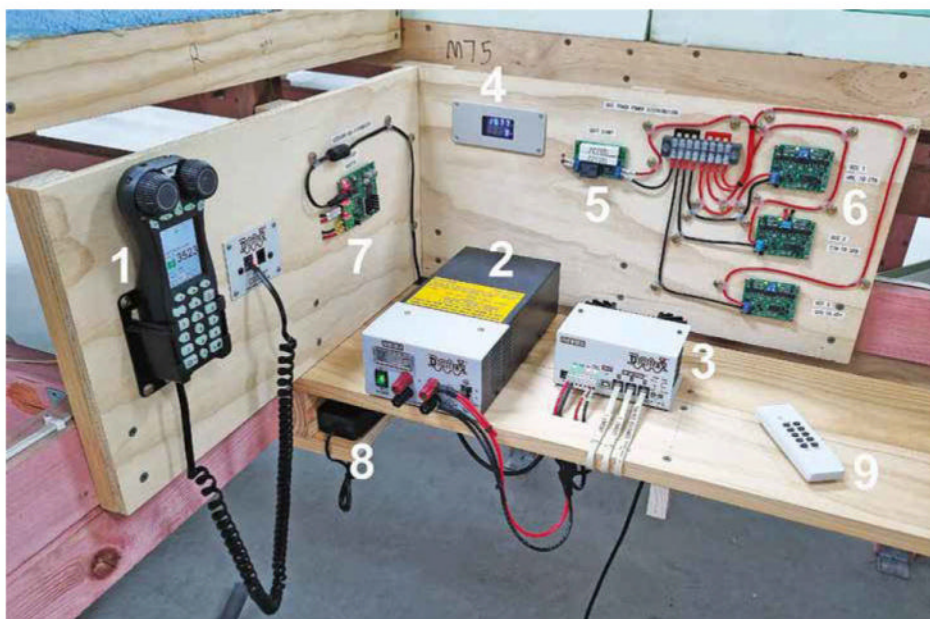


Photo 3 The DCC set up for the layout. 1. Throttle. 2. Power supply. 3. Command station/booster. 4. Ammeter. 5. Soft start module. 6. Circuit breakers. 7. Accessory bus booster. Note the white labels indicating DCC in, and the yellow as Accessory (ACC) out. 8. Power supply for the accessory booster. 9. Remote controller for turning power on and off to the layout. All wiring is arranged so that wires carrying different polarities do not cross, helping to avoid 'crosstalk' interference. Still to be added is the common return wire that will connect all track boosters. The wiring is standard 1.5mm builders wire in red and black, with green/yellow used for the common return.

Tracks jig, were placed on the turnout. And this time, the turnout was thoroughly tested prior to being installed on the layout.

Electrics and computer control

From day one of this build, my aim was to have bullet-proof electrics, that, hopefully, will mean I won't need to get under the layout except to repair failed components. Strict colour coding of wiring has helped with the repetitive nature

of the task, and so far, every connection to the 'network' has worked first time, with no short circuits. I've put a lot of work into planning the system, which will comprise power districts that are further divided into sections (blocks). So far, I've installed the hardware to control three power districts, which will increase to nine once the layout is complete.

Each power district encompasses the line from the end of each yard, through to the end of the next station's yard.

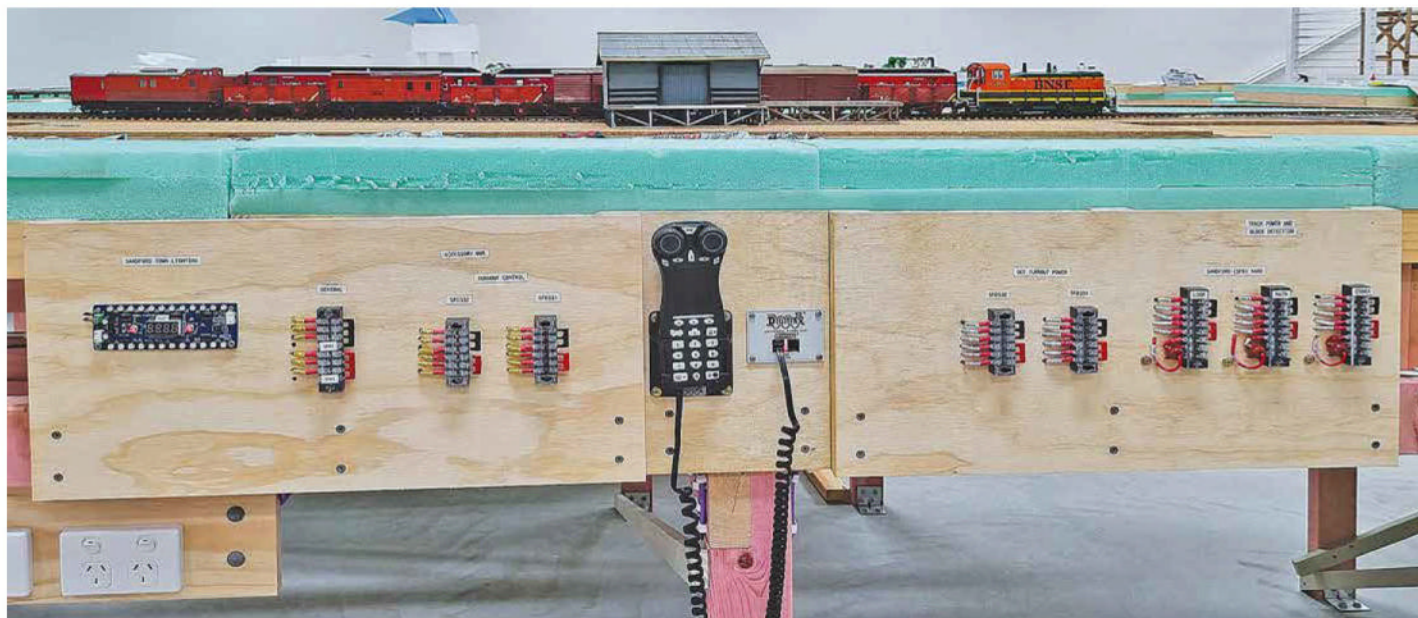


Photo 4 The panel for Sandford yard showing DCC power on the right and accessory power on the left. Note the recess for the throttle and LocoNet plugs. The unit to the far left is a stationary decoder that will be used to control the township lighting. Each light will have its own DCC address to enable the light to be controlled independently. On the right, the red/brown rings on the terminal blocks are the current sensing devices used for block detection. Still to be added are the Arduino and Arcomora (<https://www.arcomora.com/>) modules to input the block detection signals into LocoNet.

Individual blocks are then inserted, and numbered sequentially. For example, block CSBK3 is the third block between Casterton and Sandford.

Within the yards, each line is named as per VR conventions: such as platform road, one road, two road, turntable road etc. O scale locomotives are heavy, and can draw a lot of power, with my Atlas SW8 drawing around one amp at maximum speed, so the provision of multiple power districts (each with their own power supply) will ensure that there is enough power to run several trains simultaneously.

The heart of the system is LocoNet, which conveys the DCC signals between the computer and the layout. The LocoNet bus begins at the Digitrax PR4 interface module that sits between the desktop computer running Train Controller (and JMRI) software and the layout. DCC messages then travel via data cable to the command station located in the middle of the layout. The LocoNet bus then follows the track around the layout in an open-ended fashion, i.e., not a closed loop. Along the way, various components are installed for tasks such as block detection. Adjacent to the command station, a separate heavy-duty power supply provides the necessary track power.

The reliable distribution of track power is assisted by the insertion of various components between the command station and the track. Firstly, track power is run through a DCC Concepts ammeter, which indicates the load on the system. Next, a Tam Valley soft start module is inserted. This module solves a potential problem on startup, where the command station wrongly interprets the in-rush current of multiple sound and capacitor equipped locomotives as a short circuit and shuts down the system. Depending upon the load, this module can get quite hot, so it is mounted on stand-offs to help dissipate the heat. The DCC power is then fed

through a Tam Valley circuit breaker (one per power district) and then connected to the track (see photo 3)

The initial three power districts installed: Hamilton to Casterton, Casterton to Sandford, and Sandford to Henty, are all controlled by the booster contained within the command station. As Branhholme, Coleraine Junction and Hamilton will have large yards, a separate booster will supply each location [Editors note: refer to AMRM issue 360 June 2023 for the complete track diagram]. To prevent the odd electrical gremlin interfering with the layout, all track power boosters will be connected via a common return (also known as a ground) wire.

To assist with power management, a separate DCC accessory bus provides the necessary power for such components as turnouts, stationary decoders, and turntables. DCC power is fed through a separately-powered Tam Valley accessory booster, and is then distributed as required.

Wiring connections are generally made with the use of terminal blocks. I have a selection of three, four, five, six, eight and 10-pole blocks sourced from China via eBay. A crimping tool is used to attach the red (3.2mm wire) fork connectors to the screw terminals. The best ones I have found are produced by Multicomp and are available at Element 14 (order code 9971700). All terminal blocks are labelled with the circuit designation. This makes tracing wires easier and fault finding relatively straightforward.

The circuits are then brought into the walkway and the componentry mounted on 12mm ply control panels. Along with the standard terminal block labelling, each wire is labelled with printed heat-shrink – white for DCC track power, and yellow for DCC accessory power. The labels are made with a Brother P-Touch labelling machine. If a fault develops, it is a simple process to disconnect, and thus

isolate, the offending circuit. Most of the circuits, and other componentry like stationary decoders and block detectors are gathered at each station precinct.

At each location, a standard Digitrax throttle holder and LocoNet jack are provided, with the DCC power on one side of the control panel, and accessories on the other. Although it is easy enough to program your accessories using radio throttles or tablets, I prefer to program using a hard-wired connection, as I have found that using radio/Blue Tooth/Wi-Fi can be a bit problematic, especially if you are some distance from the transmitter, or objects are in the way. By recessing the throttle holder, and using clear plastic covers over the terminal strips, the risk of snagging the wiring as one walks past is lessened. I also make the panels larger than needed, to allow for future expansion.

Another consideration with a layout as large as this, is that one tends to do a lot of walking. Although a couple of devices purchased lately do make a difference. First, remote-controlled power points were added between the mains supply and the command station power and accessory busses. These handy items allow me to turn the layout on and off from wherever I am in the train room, which is great if you are underneath the layout. The other item is a LocoBuffer from RR-CirKits, which plugs into the USB port of my laptop to connect to LocoNet. This allows me to adjust the programming of accessories locally rather than climbing the stairs to the main computer.

Learning new systems

Although I had previously built a large DCC-equipped HO layout, developments within the industry and a change of manufacturers meant learning new systems. My previous layout was equipped with NCE DCC, with the turnouts controlled



Photo 5 Ten weeks have elapsed since the last module was transported from my home to the train room. About 50% of the modules that will make up the larger of the two peninsulas have been mounted, and the scenery is nearing completion. At the centre of the island, formed by the loop of railway, will be a large homestead, typical of many that were established in the Western District of Victoria. Complete with a tractor shed, staff quarters, chook house, woodshed, vegetable garden and fruit trees, hayshed, stockyard, part of an airstrip, and an aircraft hangar with the owner's Cessna 172 out front; this will be one of the larger 'non-railway' scenes on the layout. A smaller farmhouse will occupy the 'dirt' area in the foreground.

by Tortoise switch machines and NCE Switch-it stationary decoders. The change to Digitrax from NCE required me to discard some of my previous ways of doing things and adopt a different approach. Sometimes it was just the terminology. NCE (and Victorian Railways) use the term 'Normal' for the straight road through the turnout, and 'Reverse' for the diverging leg. With Digitrax, 'Closed' and 'Thrown' are used. Just as I had gotten ahead of myself with building turnouts, so it was with the switch machines. For this layout, I settled on Cobalt digital IP machines from DCC concepts. These point machines draw minimal power and have a built-in stationary decoder. As each section of station yard module was built, it was wired up and the switch machines installed. When I got around to installing Sandford yard, I expected to be able to energise it and just run trains. But a few problems arose. Firstly, there was no power to the frog, even though it had been wired up as per the instructions with the switch machine. Again, after a little research, I found that as I was powering the switch machines from the accessory bus, I needed to run jumpers from the track bus to power the frog and utilise the switch terminals to drive the motor. Secondly, when the switch machine was activated via the DCC throttle, the display was wrong: what should have been displayed as 'Closed' was shown as 'Thrown'. A quick look at the manual revealed that a simple CV change would correct that issue. The last problem was

the actual placement of the machine. To change the CVs and program, a small switch is toggled on the side of the machine. The data is then entered with the throttle, and the power turned off and back on. I hadn't really paid much attention to the mounting orientation – probably because I was still thinking Tortoise – which made accessing the switch harder than it needed to be. To solve all these issues, all future programming and testing will be done on the workbench.

In summary, the situation with the

turnouts wasn't so much a 'one step forward, two steps back' type of thing, but more valuable lessons to learn from. I still kick myself over these mistakes, because although I had all the equipment on hand to do the tests properly, I rushed ahead under the assumption that my previous experience would suffice.

In the next instalment, I'll continue reporting the progress of the layout, and, hopefully, I won't have to confess to anymore 'mistakes.' Until then, enjoy the ride.



Author and builder Scott Whitaker at work on the layout. Although the temptation is there to install more track modules and thus run trains further, experience has proved that it is easier to finish the scenery, mainly due to access issues, before moving on to the next module

Modelling Queensland Railways guards vans

Arthur Hayes models a selection of Queensland Railways guards vans. Photos by the author.



Griffith van No. 627 with one 2nd class compartment. Class GV, in later years this was changed to BGV.

As I am Modelling Queensland Railways (QR) in the 1960's, there is no shortage of guard van types for the layout. Some were part of small contracts or batches, others were converted from surplus carriage stock, and then there were vans built to increase train loads without the need for a vehicle just for accommodating the guard. On top of this, there was the odd departmental van. These models were built using A4 QR plans with basic dimensions and aided with various prototype photos.

The plans were purchased from Ipswich Workshop and Railway Shop some years ago. Today AMRA Qld Library at Zillmere have extensive files of QR rollingstock plans.

All models are HO $3\frac{1}{2}$ (12mm gauge track) and have been scratch built using styrene. Most have a press fit roof to facilitate the painting and fitting out of the interior.

External siding for passenger guards vans was constructed using Evergreen styrene No. 2037 Car siding.

On brake vans converted from goods wagons with a larger boards, Evergreen V-Groove No. 2030, No. 2040 and No. 2050 was used, subject to the board size required.

Plain styrene sheet purchased from Mulford Plastic was used for interior, seats, roof, underframe etc.

Evergreen styrene strip was used to form window and door trim. A platform jig with a straight edge was made from



Griffith van No. 725, has two 2nd class compartments. Classed as a GV, in later years this was changed to BGV. There was also a three-compartment version as well. Modelling with the window down and doors open adds another dimension to the model giving that 'in service' appearance. It also opens up the interior, making it visible.



In some vans, passengers are installed on one side only to give the van a dual role when on the layout. You can't view both sides at the same time!

acrylic sheeting to assist in assembling the various parts. Both sides could be laid out and built at the same time.

Bogies, buffers, brake cylinders, and dynamos are from the Caintode Flats product range. Standard HO scale whisker 158 Kadee couplers were used on all models.

Sheet styrene was used to form the roof. A length of styrene sheet was wrapped around a 57mm (2¼ in.) outside diameter section of steel pipe and held in place using masking tape. The pipe was then placed into a metal cake tin, which is filled with hot water from a jug. After a few minutes, the pipe is then placed into cool water, creating the base for a curved roof. For brake vans with a canvas roof, sections of washed, used tea bags were placed over the styrene base.

For a corrugated iron roof, yoghurt tub foil was run through a homemade rolling mill to replicate the corrugations.

Externally, the vans are painted with the PGC Scale Models range of acrylic lacquer paints. For internal surfaces and for weathering, Vallejo water based acrylic paints were used.



Composite (1st and 2nd class compartments) CV class, No. 286.



This van is fitted with a passenger compartment and red side lights powered from a button battery. A latching reed switch with a magnet turns the lights on and off when required.



CLV class van (Composite Lavatory Van) No. 1402 for mixed trains with passenger accommodation on branch lines. 20 CLVs were built in 1950/51. In later years, many were modified with the 1st class compartment becoming part of the guard's compartment, making them BLV class vans.



The figures were purchased unpainted from an online auction site, or were found in the scrap box.



CV 18 was built in 1963 using a surplus carriage underframe (coach CL 18 built in 1886).



NB No. 3920 sheep van added extra loading (revenue) to a train and provided accommodation for the drover and guard. The vertical bars were made from Ratio 'N' gauge No. 245 Great Western Railway spear fencing kits.



One of many World War two (WW2) conversions, a box wagon converted into a Guards van, CB class. Some of these vans made it to the end of the wooden wagon era as breakdown vans.



A CB class van. This van is part of the Gladstone breakdown train.



Many small country depots had a stand-alone Breakdown van for quick response to minor, local derailments.



▀ Mostly, I only add brake equipment that is visible when a wagon is standing on the track as the wagon will not be viewed on the layout upside down. However, sometimes I do let my hair down and add a little more detail. Van CLV 1402 has been equipped with battery boxes, dynamo, train and brake pipes to the combined brake cylinder which is coupled to foundation levers and pull rods. Pipes from under the toilets have also been modelled. All vans have a sheet of plumbers' lead tucked in between the underframes to add weight. Coupler boxes have been custom-built to allow the bogies to freely swivel and reduce coupler swing.

Clamp it!

John Miller builds a simple paint masking clamp. Photos by the author.

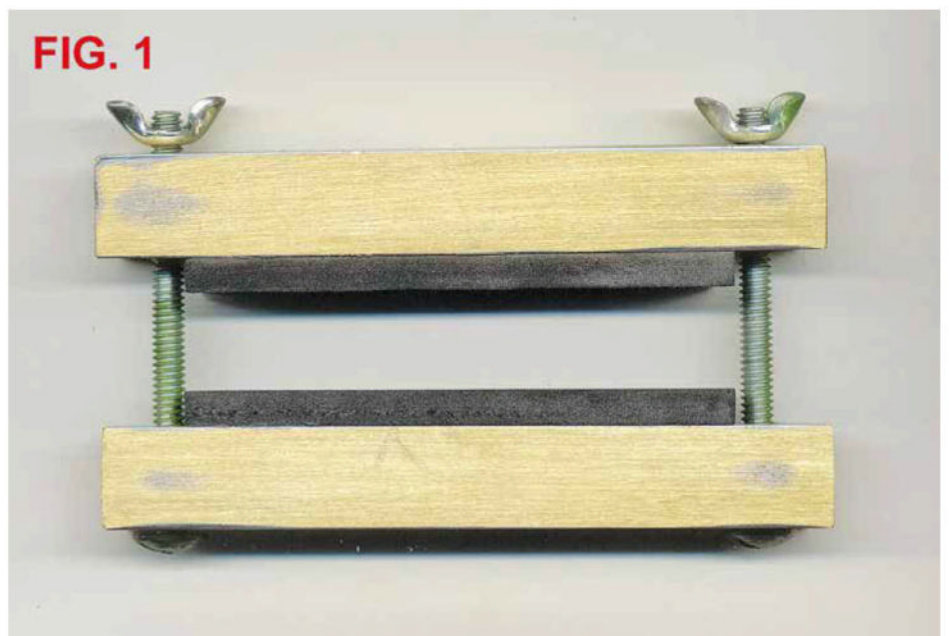


A pair of completed Boxcar containers, painted by John using his 'Clamp it' technique.

I model in N-Scale, where domestic Australian containers have not been available in r-t-r until recently. I wanted a batch of Boxcar 48-footers, 48ft which is definitely a problem to replicate, so I made a master and cast a batch up.

Applying the Boxcar decals to the corrugated container side is a modelling marathon to say the least.

Rather than decaling the green strip at the base of the container sides or the tedious task of applying masking tape to ten corrugated containers to paint them, I decided to construct a masking clamp to mask and paint the containers. This is a simple bar clamp made from materials I had to hand. I cut two 130mm lengths of 18mm square tube from an old chrome towel rail and cleaned them up with a belt



sander. These were then clamped together, and the ends drilled with a 1/4" bit in the drill press to take two 60mm x 1/4" roofing bolts and wing nuts. Finally, I faced the jaws of the clamp with 6mm thick high-density neoprene, which is available from Clark Rubber stores, to secure the models in the clamp without damaging them. An 18mm wide strip of neoprene was cut, taking care to ensure the cuts were square and a 100 mm length was glued to each bar using contact adhesive. (I prefer the Selleys acrylic version as it is water-soluble and has no noxious fumes). The finished clamp is shown in Fig. 1.

The ends of the container were masked conventionally using Tamiya masking tape. I extended the masking around the sides of the container approximately 1mm to act as reference points for locating the masking clamp. Once the container was accurately positioned in the clamp, the wing nuts were gently tightened until the neoprene was compressed sufficiently to conform to the surface profile of the container side. See Fig.2.

The green strip was then applied using light airbrushed coats of water-based acrylic, keeping the spray pattern parallel to the top of the clamp. The idea is to minimise paint build-up on the neoprene as much as possible, thus avoiding a fillet of paint forming between the neoprene and the container. Once the paint was dry, the clamp was released, and the container removed. The neoprene pads were then cleaned of any paint build-up using cotton buds dipped in methylated spirit and allowed to dry before being used again. This masking clamp will also be useful when I decorate my next batch of TNT containers with the orange strip around their bases.

I have also made a couple of versions using plywood to take HO containers. The one shown in Fig.3 was used to mask the roof of Boxcar containers for painting them white. ▴

FIG. 2

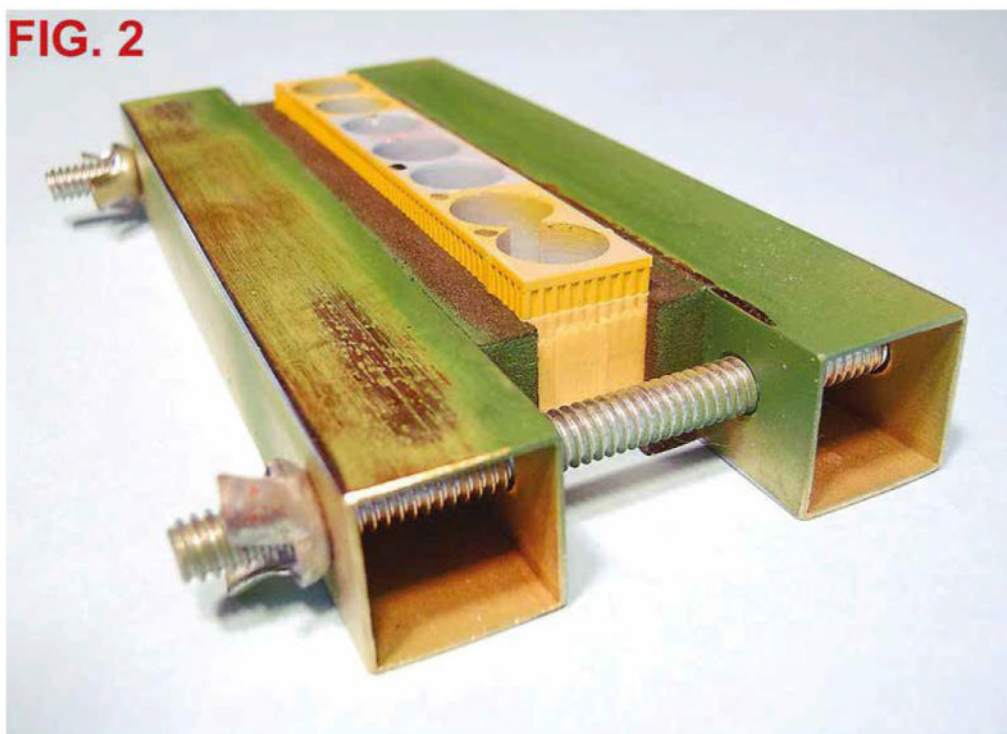
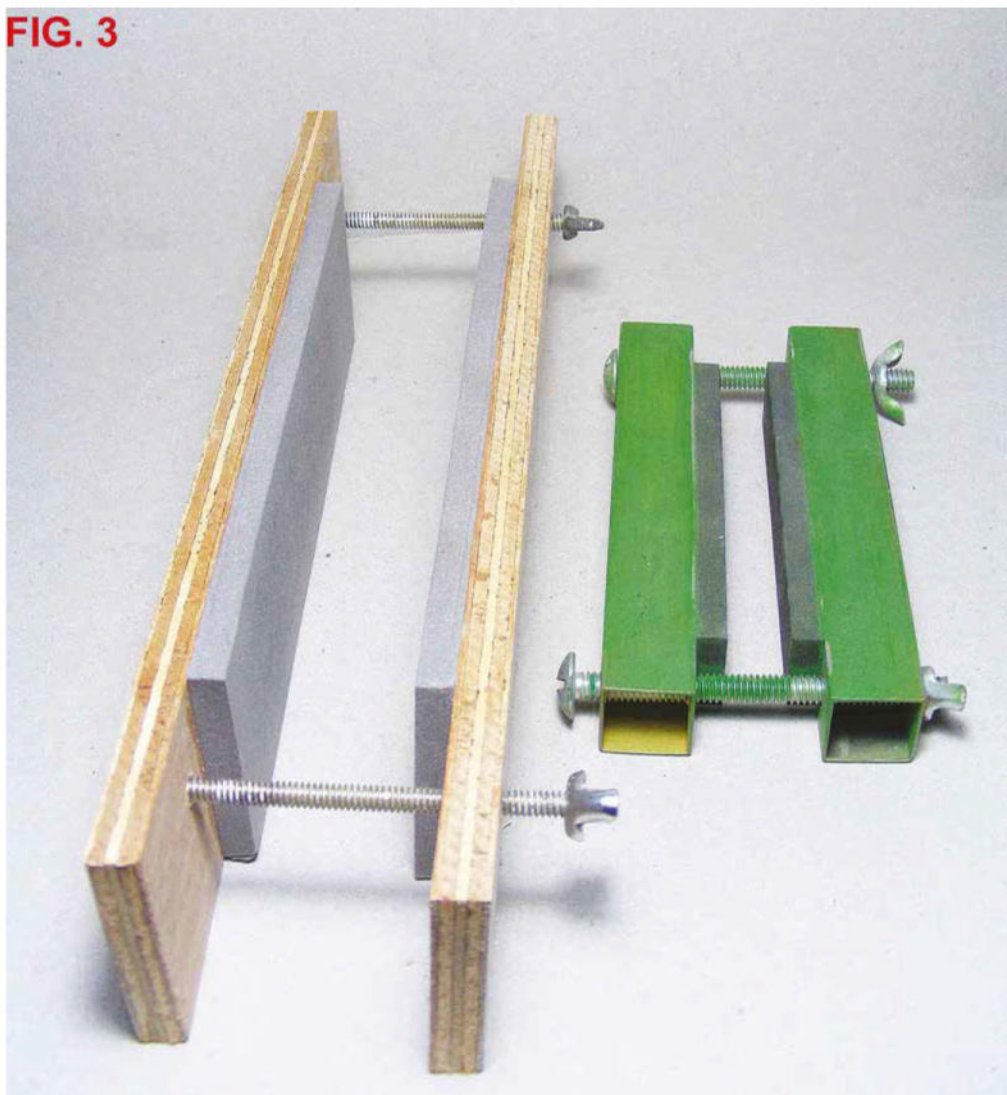


FIG. 3



Staff Considerations

Stephe Jitts develops a train control system using Arduinos. Photos by the author.



Photo 1.

Craig Mackie's recent article 'A Poor Man's Staff Machine' [Editor note: see AMRM issue 363 December 2023] caused me to look at the system a good friend Geoffrey and myself have developed for use on my Kangaroo Valley Historic Railway (KVHR). The railway has expanded considerably since it was featured in the February 2012 issue of the AMRM. The KVHR now has a lengthy single line section with five stations on the line. As some stations don't have a clear line of sight to each other, it was necessary to develop a staff system of some sort.

As Craig stated in his article, "There is no perfect world where we humans are concerned, but as in real world scenarios, we can try to minimise problems."

Thinking about the KVHR situation, we considered several aspects;

- We wanted to ensure that operators still controlled their own fate (i.e. they could make mistakes but still hopefully live to tell the tale.) We decided we wanted operators to obey signals of their own volition and not rely on automatic systems that would stop their train if they committed a Signal Passed At Danger (SPAD) violation.
 - We also wanted operators to be aware they were in a single line working situation and that they had to consider that there may be another train operating as an opposing movement.
- Over time we have developed a sys-

tem based on the use of Arduino board, block detection, point position detection and signals. For the unfamiliar, Arduino is an open-source electronics platform based on easy-to-use hardware and software. The use of Arduino boards allows us to integrate the other components.

The basic staff system is quite simple. At each station there is a single button and a meter that has three aspects (Line blocked - red, Line clear - white, Staff issued - green). See Photo 2.

These are connected to the local Arduino. Between the two Arduinos is a pair of wires (receive (Rx) and transmit (Tx)). Operation is simple. If (and only if) the meter aspect is 'Line Clear' and a button is pressed, that station's meter would move to 'Staff Issued' and the local Arduino would pull the Tx low (to low voltage value). The remote Arduino would register its Rx has been pulled low and change its meter to 'Line blocked'.

This very simple system can be improved by the addition of a block detector in the block between the two stations. This detector is connected to both Arduinos. This is useful in two ways. Firstly, it can tell the local Arduino to change the meter to 'Line blocked' thus telling a following train that they cannot proceed. The second improvement is that when the train vacates the block both Arduinos will change their meters to 'Line clear' and whole process can begin again.

The system can be made even more

sophisticated by integrating it with signals.

While not strictly necessary, we like to have start signals at stations. The start signal simply goes 'clear' when the meter displays 'Staff issued' and remains 'stop' at all other times. It could be argued that this is an unnecessary repeat of the meter, but we like operators to have a signal adjacent to the line on which their train is standing.

Much more important is the Home signal at each station. We integrate its operation with block detectors and point detectors to ensure that the train has a suitable route into which it can proceed before the Home signal can be set to clear by the Arduino.

Finally, there is a further enhancement that we use at the intermediate stations. There is a switch to switch out the local signal box. When the signal box is switched out the Up Rx is connected to the Down Tx and the Up Tx is connected to the Down Rx, thus bypassing the station and connecting the stations on either side. (If you really want to get fancy the same switch can set points and signals appropriately too!)

There is another desired enhancement to which we have not yet found a good solution. Kangaroo Valley station is a main junction station, it has a double track main line to the north, a single main to the south, is the junction to the Alabmob Branch-line and has three short



Photo 2.

branches to local industries. It is normally operated by a Station Master and two Shunter operators. It is capable of being very busy. The station master needs a system by which permissions to leave adjacent locations can be given rather than just have trains appear at the various home signals waiting for entry. (A memorable moment during an operating session was when there were seven trains all waiting to enter Kangaroo Valley station. This caused total chaos and it took several

hours to sort this all out!)

Over time, we have installed variations of the system described in KVHR. To be frank, most operators embrace it but others rebel, preferring a simpler we'll-just-see-what-happens approach. This attitude has led to some cornfield meets! But all in all, this version of 'staffs' not only improve safety but also add a certain extra interest to operations.

The system is not particularly expensive or complex to install. Components

include:

- Two Arduino boards (either Uno or Mega)
- Two modified DC meters (from Jaycar)
- Two normally-open, single-push buttons.
- Two signals (we used cheap, \$5 ones from China)
- One or more block detectors of your choice (we have made our own)
- lengths of two core bell wire.



A C38 has a green home signal to enter the year, on the Kangaroo Valley Historic Railway (KVHR).

Addendum KCC cement container wagons

David Clark provides additional prototype information on the KCC cement container wagons.

After the publishing of parts one and two of the KCC cement container wagons in the AMRM December 2023 Issue 363 and February 2024 Issue 364, the following additional Information and photos of the first version of cement containers has since come to light.

Donald (Don) McLean, a retired former Victorian Railways (VR) and TransGrid senior engineer has provided some information regarding the transport of cement to Cudgewa.

"After reading part one of the KCC cement container wagons, it led me to consult my copy of the 'Engineering Features of the Snowy Mountains Scheme' published by the Snowy Mountains Hydro-electric Authority, Cooma New South Wales (NSW), for the

quantity of cement used in the western (Murray) part of the scheme.

The Murray development of the Snowy Mountains Scheme, which includes the works west of Geehi Dam and the Snowy - Geehi Tunnel where with the latter, only 13.3% of its length was lined with concrete plus grout behind to the rock face. A total of 192,500 m3 overall volume of concrete was placed for the Murray development. I have estimated that this would have required some 87,000 tonnes of cement to be railed to Cudgewa. This figure is based upon the likely high strength grades of concrete required for major foundations, tunnel lining, the Murray two arch dam wall, Murray one and two power stations plus other associated electrical works such as the Murray switching station near Khancoban.

The VR North-Eastern Working Timetable (WTT) dated 21st July 1958, see Table 1, shows a through ruling grade load of 180 tons for a K class steam locomotive. At that time the T class diesel locomotives were not permitted beyond Tallangatta.

The 180 ton limit is on the 1 in 30 / 39 gradients in the section of Bullioh - Shelly, meant that a K class steam locomotive could only take seven loaded KCC cement container wagons (two containers per wagon = 14 in total per train) or less if other wagons were included to Cudgewa, see photo 1. This required the equivalent of some 830 train loads hauled by a K class steam locomotive to meet the total requirement of 87,000 tons of cement for the Murray works alone!

Once the track beyond Tallangatta had been upgraded to permit the T class diesel locomotives to operate through to Cudgewa, this provided some improvement to the ruling grade load by an estimated 135% based on the relative performances on the 1 in 40 grades between Wodonga to Tallangatta.

Thus a T class diesel locomotive could take a block load of say ten fully loaded KCC cement container wagons through to Cudgewa."

Don McLean accompanied by his friend the late Lindsay Crow, took Photo 1 (and see photo 8 in KCC cement container wagons part 1) of K161 hauling six KCC cement container wagons plus more than likely a loaded QR bogie wagon and HY/RV wagon along with a Z Guards van. The weight of this train would have been approximately 180 tons.

Additional photographs were discovered of the first version of cement containers in a later life, used as storage bins on a farm at Nariel near Cudgewa, taken in 2012.

These photographs show the early containers with lift rings and show where the rods were attached to the cleats / gussets at the base of the containers.

WODONGA AND CUDGEWA.																		
Engine Running Time							SECTION	LOAD										
Roadside Sectional Loads			Through Ruling Grade Loads					Mileage.	DOWN	S	B	T	J	K	N	A2	D3	D1
3/5ths Load.	4/5ths Load.	Full Load.	3/5ths Load.	4/5ths Load.	Full Load.	"T" (See note "H")												
6	7	8	...	...	...	...	3	Wodonga to—										
...	6	7	...	...	...	...	...	Bandiana Sdg. }	...	...	800	...	...	...	...	...	...	...
6	6	7	...	...	...	...	4	Bandior Sdg. }	1500	1200	...	760	700	700	660	545	480	...
7	7	8	...	...	...	...	7	Bonegilla	...	...	...	...	...	...	...	...	...	...
6	7	8	...	...	...	...	9	Ebden ...	750	...	...	...	...	...	...	...	...	...
14	16	18	...	...	...	35	14	Huon ...	...	650	...	...	...	...	280	...	...	...
19	20	22	...	...	...	19	22	Tallangatta	...	...	400	320	295	295	...	230	205	...
24	26	29	...	...	...	...	31	Bullioh (c)	...	...	...	...	295	...	...	...	...	...
65	77	92	...	...	...	...	43	Koetong	...	...	...	...	...	...	...	...	...	...
31	38	45	...	...	...	...	50	Shelley (d)	...	...	...	...	180	...	...	140	125	...
50	50	50	...	...	...	...	59	Beetoomba	...	...	...	...	435	...	...	340	300	...
30	30	31	...	...	...	...	69	Cudgewa	...	...	...	...	220	...	...	170	150	...
UP																		
29	31	33	...	...	...	...	10	Cudgewa to—										
48	59	70	...	...	...	...	19	Beetoomba (f)	...	...	...	...	180	...	...	140	125	...
25	26	27	...	...	...	...	26	Shelley (d)	...	...	...	...	180	...	...	140	125	...
43	44	45	...	...	...	...	38	Koetong (c)	...	...	...	...	315	...	...	240	210	...
23	24	27	...	...	...	...	47	Bullioh	...	...	...	...	...	...	...	...	...	...
19	19	20	...	...	...	19	55	Tallangatta	...	...	...	...	315	...	...	240	210	...
14	16	18	...	...	...	...	60	Huon ...	...	...	...	...	...	...	...	...	...	...
5	6	7	...	...	...	...	62	Ebden ...	...	650	400	385	365	365	345	285	250	...
6	6	7	...	...	...	...	65	Bonegilla	1200	1000	800	1250	1160	1160	1105	905	800	...
7	8	9	...	...	...	...	...	Bandior Sdg.	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	Bandior Sdg.	...	...	...	800	725	725	685	565	500	...
6	7	8	...	...	...	...	66	Bandiana Sdg. }	...	...	...	...	...	...	...	...	...	...
6	7	8	...	...	...	35	69	Wodonga	1800	1600	1500	1250	1160	1160	1105	905	800	...

Table 1 Cudgewa line load table.



Photo 1. KCC wagons on the down Cudgewa goods - hauled by K161 coming off the new viaduct near old Tallangatta 1965. Photo Donald McLean - Train Hobby Publications - Victorian Country Branch lines Part 4



▲ Square on view of cement container with the early lift rings and rods. Photo By Chris Pearce.



▼ Angle view of cement container with the early lift rings and rods. Photo By Scott Gould.

► Elevated view of cement container with the early lift rings and rods. Photo by Scott Gould.



Super Series Locomotives: The SRA of NSW 81 class

Bernie Baker and the AMRM team outline the SRA's 81 class locomotive.

Photos by Bob Richardson unless otherwise stated.

There is very little that can be described as ubiquitous in the modern New South Wales (NSW) rail scene other than the State Rail Authority (SRA) 81 class.

Its rugged design has been matched by its longevity.

In the modern diesel era, New South Wales motive power advancements seem to come in decade waves; in between these waves, it is a case of hold the course and don't deviate. The peak of these 'waves' are followed by a stroke of brilliance and or great technical advancement, only to be sent to a committee that seems to do it's best to water it all down.

At the time of assessing their future

motive power requirements the SRA could be described as an inward-looking organisation – and rightly so – as they only needed to satisfy their unique operational intrastate requirements.

It was clear in the late 1970s that SRA's reliance on Alco-based locomotives was coming to an end. Accordingly, with the end of this 1970's decade wave, the ComEng 80 class was introduced with an Alco 12 cylinder 251 engine developing 2000hp for traction.

Other State Government railways had progressed to EMD-based 3000hp diesel electric locomotives: Western Australian Government Railways (WAGR) in 1967 with the L class, Commonwealth

Railways in 1970 with the CL, and Victorian Railways (Vic-Rail) with their C class in 1977.

As the decade was coming to a close, SRA looked at their long-term motive power plan. What would the next decade's haulage demands look like, what changes would they bring?

Clyde Engineering (Clyde) had never fully been accepted by the New South Wales Government Railways (NSWGR) or the Public Transport Commission (PTC) as a serious contender for large locomotive fleet replacement orders. Clyde would end up with a token order (around 20 or less locomotives) such as the 422, 421, and 49 class locomotives, while a large



Locomotive 8102 and 8101 at Saxonvale NSW with loaded coal train consisting of NHVFs on 17th January 1983.





Locomotive 42220 at Goulburn Locomotive Depot on 2nd November 1980. 42220 has been re-built as a J26C-2SS, following the installation of EMD's Super Series wheel slip control system.

order would go to Alco-based products, such as the 44 and 48 class, with 100 and 160 in their number respectively.

Clyde was the Australian licensee for Electro Motive Division (EMD) of La Grange, Illinois in United States of America. EMD at the time was a division of the General Motors Corporation. In 1972, EMD released the SD40-2 locomotive, a 3000hp Co-Co locomotive for the domestic North American market. This model became very popular and gained a reputation for being rugged and displaying high reliability.

This model had some refinements over previous models (SD40) such as HTC bogies, improved blower ducting, as well as microprocessor circuit boards that were unitised for ease of replacement in the field etc.

In 1972, EMD embarked on a four-year research program which investigated the wheel-rail, friction-creep relationship of a locomotive. In parallel with this program EMD also launched a developmental program in 1973 to design a locomotive control system which would take advantage of the information and conclusions from the friction-creep study.

In 1978 EMD built five SD40-2S locomotives for the Burlington Northern.

Numbered 7049 to 7053 they were fitted with a control system to be known as 'Super Series'. Super Series is an innovative wheel slip control system that provides an increase of approximately 33 per cent increase in adhesion over conventional locomotive wheel slip systems.

'Super Series' technology coupled with the SD40-2's high reliability would be a formidable freight locomotive for any railway.

Clyde did their homework and in 1980, the SRA took the unorthodox step of contracting Clyde to rebuild their most recent EMD-based locomotive 42220 with the 'Super Series' control wheel slip system and a Dash-2 electrical cabinet.

42220 was dispatched to Clyde's Rosewater Plant in suburban Adelaide South Australia on the 25th of January 1980 and re-built into a J26C-2SS, 42220 was dispatched via Broken Hill back to NSW on the 25th of July 1980.

The SRA were then able to test the 'Super Series' wheel slip system in real 'home grown' operating scenarios and local conditions. British Rail used a similar technique to test new technologies on a prototype locomotive prior to ordering a 'production' batch.

SRA also tested Australian National

Railways (ANR) AL class locomotives (JT26C).

The SRA liked what they saw, and even better, they had decided to take the plunge and go for the turbocharged 3000hp version with 'Super Series'!

However, the design was not finalised, the committee types had their say, and stipulated that the design should include:

- Dual-cabs similar to the 422 class with a full width body. Unfortunately, this meant that the cabs were small and this also meant that when the seats when reclined fouled the cab doors.
- A non-monocoque design (meaning that the frame takes all the stress, the body does not assume any structural support).
- Unitised body sections that can be removed for ease of access for maintenance.
- One-off bogie design with isolation taps on the bogies.
- A Multiple unit cable permanently attached to the locomotive, similar to the 80 class.
- A 6600litre fuel tank.

These committee requirements reflect the SRA's operational mindset. At the time when SRA ordered the 81 class, the network consisted of regions (referred to as

'divisions'), where for the most part locomotives were assigned to and usually remained within. In effect, each division would behave almost like an isolated section of a railway inside a railway. So, in line with these operational conditions, a small fuel tank would be acceptable, compared with the 10,230L fuel tank Commonwealth Railways opted for in the CL, and the 10,130L in the Victorian Railways' C class. Clearly, the SRA did not have interstate running in mind!

The 81 class would be built at Clyde's Kelso facility near Bathurst, with a total of 80 locomotives ordered by the SRA. The first locomotive 8101 was delivered in October 1982, and 8180 was delivered February 1986. As introduced, locomotives 8101 through 8127 were fitted with five portholes, tail disk mounted in the low position, and a mansard air intake. There were a number of variations or changes initiated over a four-year production time span in response to the SRA's experience with the locomotive. These included:

- Porthole windows reduced to four and mansard air intake relocated to the body side from on 8128 onwards to improve air intake to the prime mover during long, slow climbs under load in tunnels
- 8140 onwards delivered with impact resistant windows.
- Tail disk relocated to the high position on 8179 - 8180

Bringing in a change

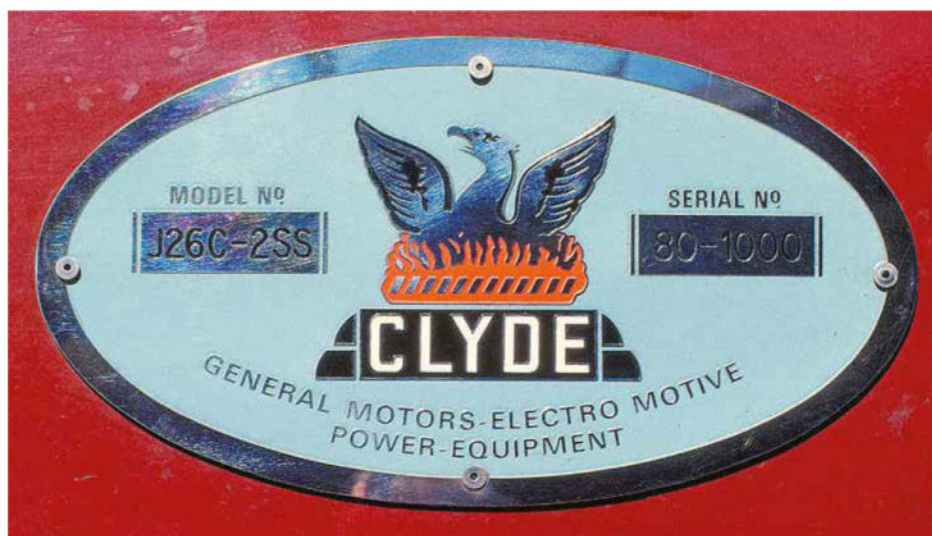
Like most Australian Railways in the late 1970s and early 1980s, the SRA was going through a transition. The SRA was losing general freight on most branch lines, and regular short goods trains were not helping the bottom line. These losses were mounting and something needed to be done to retain the traffic that they had. The traditional operating profiles needed to change.

The 81 class is by design a good bulk-hauler, and the 'Super Series' wheel slip system would give the class great low speed haulage capacity, allowing SRA to concentrate on what they do best: hauling a bulk products like coal and grain. Slow and steady wins the race.

In line with this operational guidance, the SRA allocated the first forty locomotives 8101 to 8140 to Hunter valley coal traffic, operating out of the Broadmeadow depot. The remainder were allocated to DELEC and the Southern region.

The arrival of the 81 class would cascade a lot of other classes into other operations, and effectively each division played locomotive class musical chairs after the 81 class were delivered.

Earlier investments in rolling stock meant that the 81 class settled into hunter Valley operations hauling standard rakes of 42 coal hoppers, producing 4200t loaded coal trains. Later, under certain conditions in the 1980's and early 1990s, certain coal trains were increased in size to 84 wagons and four 81 class locomotives



42220 builders plate following rebuilding at the Clyde Rosewater plant in suburban Adelaide SA.



Locomotive 8101 at Everleigh on 3rd October 1982. 8101's official build date is October 1982.



Locomotive 8178 at Goulburn Locomotive Depot on 25th December 1985. 8178's roof is still clean and the black walkway across the crown of the roof can be clearly seen. From 8128 onwards, the class were delivered with body side air intake grilles and four body side portholes. In the background are stabled 4531, 4826 and 4827.



Locomotive 8117 at North Goulburn on 17th July 1984. 8117 has its mansard air intake grille plated over and a new body side intake installed, the new panel is painted in white undercoat, this panel mismatch might be a good modelling feature.



Locomotive 8110 at Goulburn Locomotive Depot on 07th August 1983, in as-built condition with mansard air intake and five portholes.

(8400t loaded). These were not the only configurations.

The decision to allocate 40 members of the 81 class in the Hunter Valley paid dividends for the SRA. The locomotives excelled, with their low-speed haulage capabilities suiting the operations over the Great Dividing Range to the Hunter Valley and New England coal fields almost perfectly. In July 1986 V/Line's G518 and G519 were allocated to the Hunter valley to test 'speed master' in July 1986. As a result of this test this feature was retro fitted to the odd numbered members of the class 8101 to 8139.

NSW Bi-centennial

To celebrate the New South Wales Bi-Centenary the SRA repainted 8120 (Hunter Valley allocated) and 8172 (southern allocated) into a special livery.

Interworking

As part of the SRA – V/Line interworking agreement, the SRA allocated 8166 to 8180 as though-running locomotives into Victoria. This included the fitting of V/Line radio equipment so these locomotives could lead in Victoria. 8163 was sent to Dynon, Victoria for crew training in April 1986. Other 81 class members were allowed to operate into Victoria but were not allowed to lead.

FreightRail 'Stealth'

In the late 1980s the SRA decided to reinvent itself, and reading (once more) directly from a 'British Rail' play book, what's the first thing you do to project forward looking 'company' image? You do some experimental locomotive repaints. 8167 and 8175 and 8601 and 8602 were chosen to be repainted into an





Locomotive 8179 at Everleigh on 11th January 1986. Only 8179 and 8180 have their tail disk installed at a higher location on the nose of the locomotive. Compare this image with 8174 at Goulburn Locomotive Depot on 22nd August 1985.



▲ Locomotive 8120 at DELEC on 24th December 1987, this striking livery was applied to celebrate the NSW Bi-Centennial.

► Locomotive 8172 at DELEC on 5th May 1988 in Bi-Centennial livery, note that the '00' in '200' are a metal plate clearing the air intake grille.

◄ Locomotive 8174 at Goulburn Locomotive Depot on 22nd August 1985, items of note, the impact resistant windows, ditch or fog lights incorporated into the headstock. Lower coupler pin puller installed on the observer's side only.



experimental 'FreightRail' livery.

The Candy livery of the SRA was striking, but to say it was labour intensive would be an understatement. The candy livery required masking and painting seven different colours! That must have been a scheduling nightmare.

The 'FreightRail' concept introduced a blue and yellow livery separated by a white stripe, with heavy grime collection locations such as the roof and the lower pilot and frame painted in a medium grey colour. Possibly this was done in an effort to hide road grime on the livery. This livery reduced the colours from seven (in Candy) to five.

First Component Change Out

When the class came up for their 10-year overhaul in the early 1990s, some

traditional maintenance practices remained. The operation of the 81 class in coal operations meant the fleet looked a little worse for wear. Clyde was contracted to accomplish Component Change Outs (CCO's) at their Kelso facility. The CCO included a repaint into the final version of the 'FreightRail' livery and addition of a double door on the power plant compartment body side panels.

Going back for seconds

A consulting firm 'Booze Allen and Hamilton' conducted a financial and operational review of 'FreightRail' in the early 1990s. One of the consultant's recommendations was to build four new 81 class locomotives using equipment from 'FreightRail's' current spare parts inventory. FreightRail acted on the recom-

mendation, and contracted Clyde to build four 'new' 81 class locomotives from 'spare parts.' 8181 to 8184 were built in July and September 1991, and were delivered with double engine room side panel doors, and painted in the final 'FreightRail' livery.

Part two will cover the 81's post-NRC history and statues etc.



Locomotive 8167 at DELEC in February 1992 in the first version of the FreightRail 'Stelth' blue livery, with a high yellow band separated with a lower white stripe, blue car body, and grey pilot and roof. 8167 is shown here with a tail disk holder without a tail disk installed.



Locomotive 8175 at DELEC in August 1990, note the 'microscopic' 'FreightRail' lettering and symbol under the cab side window and that the air horns have not been fully painted.



Locomotives 8133, 8122, 8110 and 8175 pass through Hexham with an empty coal train on 20th June 1991. The constant punishing environment of coal haulage operations have clearly affected the physical state of the Hunter Valley 81 class fleet. 8133's numbers are starting to wear away and the body side panels are showing signs of advanced fading. The cab probably leaks like a sieve in the rain! 8110 being the last locomotive in the consist is more heavily coated with exhaust grime.



Locomotive 8105 at DELEC in March 1993 following CCO and repaint into the final 'FreightRail' simplified livery (deleting the grey and moving the yellow band down to cover the headstock and pilot). Clyde accomplished the CCO at their Kelso facility, in addition to the overhaul, two doors were added to the engine room body side panels. Both 8105 and 8107 had the air conditioner grille painted white.



Locomotive 8182 at DELEC in August 1991, 8181 – 8184 were delivered in the final version of the FreightRail livery.

Commonwealth Steel Co Ltd

John Casey presents a location with lots of shunting potential.



The Commonwealth Steel Company shunted its yard with its own locomotives. The last of the steam locomotives was ex-BHP No.4 which was used to move wagons with the company's products to the main line. Ron Preston photo courtesy of Transport Heritage NSW.

The Commonwealth Steel plant in the Newcastle suburb of Waratah is a location to model that could inspire the construction a small or micro shunting layout with an industrial theme.

Commonwealth Steel Products Ltd (Comsteel) was formed in April 1917 when the directors of Clyde Engineering, A. Goninan & Co, the Pioneer Spring Co. and Ritchie Brothers met and decided to form a company to manufacture axles, wheel centres and tyres for railway stock in Australia. The plan was to reduce their reliance on imported products.

The new company was registered on the 12th March 1918 and plans were being considered to establish a plant on the Parramatta River in Sydney. Eventually, the site at Waratah in Newcastle was chosen due to the availability of electric power.

At the same time, the New South Wales Government Railways (NSWGR) were considering a plan to construct a plant to manufacture the same equipment, but decided to abandon their plans

in favour of the Commonwealth Steel group.

The Waratah site adjoined the coal roads on the Main Northern line. NSWGR locomotives were permitted to operate over some of the lines inside the facility. At the end of the industrial line was another facility, Newbold's Silica Firebrick Co Ltd factory and NSWGR locomotives were permitted to service the factories siding.

Inside the site there was a network of light railway lines servicing the various workshops. A dam provided water to the workshops and steam locomotives.

During World War II, Comsteel developed a non-magnetic steel product which was used by Clyde Engineering in parachutes.

Comsteel is now part of the Molycop group. Today, Comsteel rail products are the only Australian manufactured rail wheels for passenger, locomotive and heavy haul trains.

The Comsteel yard was shunted by the company's own locomotive, No. 4 which

had been purchased from Broken Hill Proprietary (BHP) Ltd in 1962 when BHP converted their steam network to diesel. No. 4 was a Porter 0-4-0, one of an original order for four locomotives (later increased to seven) and joined by another eight copies built in BHP's own workshops.

No.4 worked for Comsteel until the early 1970s. It is currently at Dorrig NSW.

Around this time, Comsteel purchased a General Electric 35 ton diesel-electric locomotive to shunt their sidings, built by A.Goninan & Co in 1972.

With NSWGR locomotives being allowed onto part of the Comsteel network, 73 class diesel-hydraulic locomotives regularly shunted the wagons from the main line into the industrial site.

Comsteel used their own flat wagons and open wagons to move goods around the various plant sidings. During steam days four-wheel wagons would have been utilised. Later bogie wagons were used. Any goods to be shipped over the



On the 22nd February 1961, Comsteel Shunter Juno, an Andrew Barclay 0-4-0 built in 1923 shunts the sidings. Photo late Weston Langford,

Government lines would have been approved departmental types.

Newbold's Silica Firebrick Company Limited was established as an adjunct to the steel industry. The following article appeared in the Newcastle Morning Herald and Miner's Advocate of 10th December 1923.

Newbold's Firebrick Works

The Newbold Silica Firebrick Company's works at Waratah is an important adjunct to the steel, metallurgical, and other industries. The foundation of the company was laid at Lithgow in 1909 by Mr. A. R. Newbold, the present manager and director. The coming of the steel works and the demands from other sources brought about the increase of capital in the company, and the erection of the present Waratah works. The industry developed to the extent that in 1919 it had grown from the original nine men and 10,000 bricks per week to 90 men and a weekly output of 120,000 bricks.

The company have received flattering encomiums of the quality of their bricks, and customers have informed the principals that they are of better quality for steel furnaces than any other known brick in the world.

Newbold's was established in Lithgow in 1908 and was the first to manufacture silica refractories in Australia. Newbold's won their first contract with BHP in Newcastle just before World War I and this began a long association with BHP and the steel industry in Australia.

On 17 August 1974, after a protracted fight to avoid a takeover, the directors



Comsteel's GE35 ton diesel locomotive shunts wagons on site at the Waratah plant. 11th February 1981, note the S truck on the road opposite the locomotive. Photo Bob Richardson.

conceded they had lost and stood down, making way for Manufacturing Resources Australia (MRA) to take control. MRA sold off the business and land of Newbold and realised the capital.

Modelling Comsteel

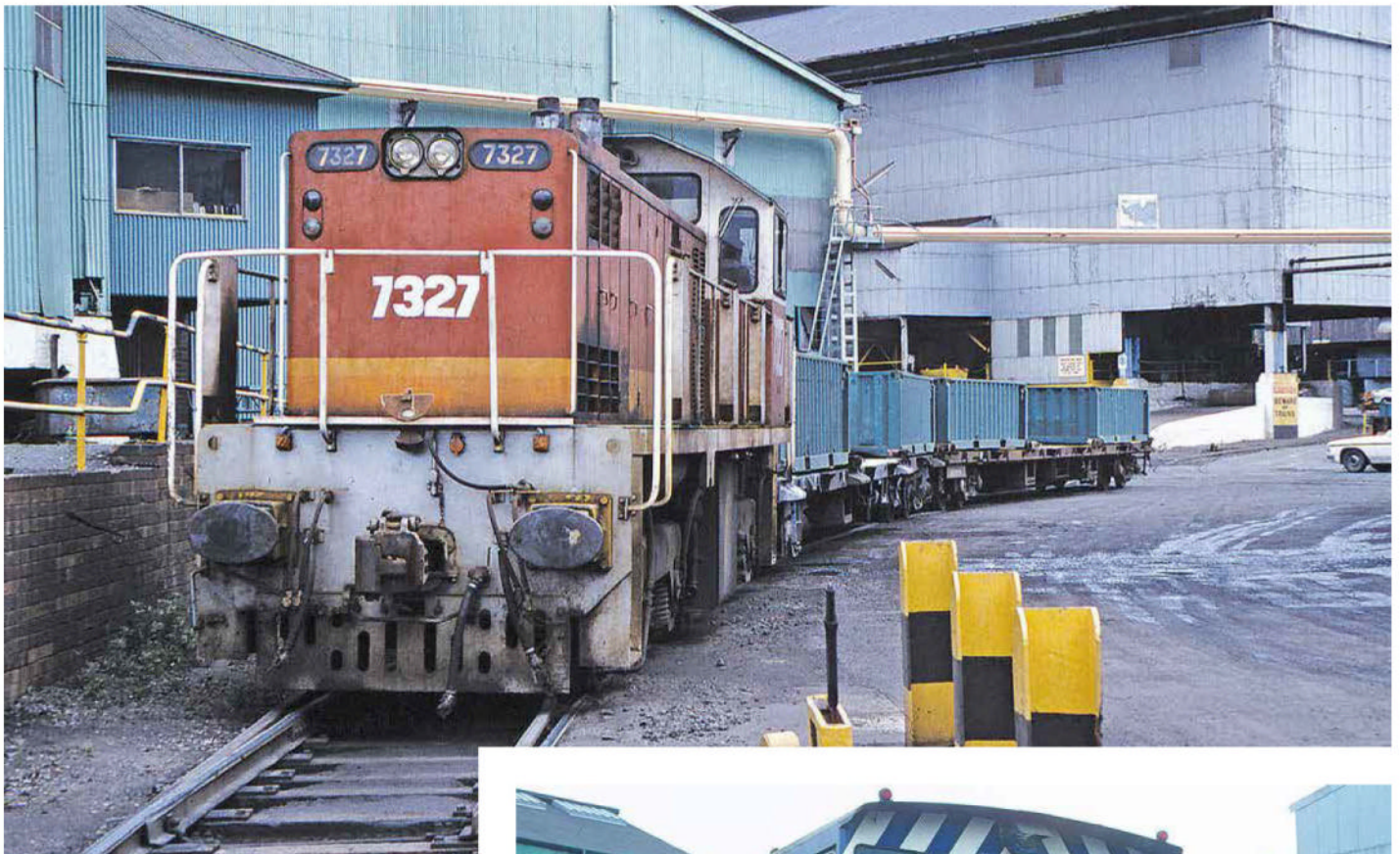
A model of parts of Comsteel's plant could be achieved in a relatively small space.

The four track mainline could be

obscured by some of the buildings on the site and be used as a fiddle yard.

Steam locomotives of the type used on the line are not available commercially however small tank locomotives would suffice. Diesel-hydraulic 73 class locomotives brought trains onto the site.

Trains would run into the complex and shunt the wagons delivered for the company's locomotive to take over. The company locomotive would distribute the



On the 22nd of November 1985, diesel-hydraulic locomotive 7327 was the duty shunter at the Comsteel plant. Note the container flats with two half height open containers, late Western Langford photo.

► Comsteel's GE35 ton diesel locomotive working in amongst the plant, note that the trackage is mostly covered, with the exception of the point blades. 11th February 1981, photo Bob Richardson.



wagons and return loaded wagons to the exchange siding. While this is happening the 73 class could continue along the branch to Newbold's Silica Firebrick siding.

Note: SanJuan Details marketed a GE 25t locomotive which could be a good starting point for modelling Comsteel's GE 35t shunting locomotive.

This industrial location has a maze of siding servicing various parts of a large plant and could provide the modeller hours of complex shunting operations with a relatively small layout footprint.

If you were tempted to model in a larger scale, this location would really fit the bill. If you wanted to go 'really' big, Piko market a GE 25t locomotive in G scale. 



► Comsteel track diagram C1950



IN THE LOOP

Time Invested

Trevor Hodges

As I approach construction of what will probably be my last large layout, I've been putting some thought into the construction methods I would use on the structures. Over time, one of my favourite aspects of the hobby has been scratch building structures, with bridges and station buildings being particular favourites. The layouts I've built over the past thirty-four years have provided me with abundant opportunities to explore this aspect of railway modelling. I've enjoyed exploring a wide range of materials and construction methods as I've set about building everything from a large wooden elevated coal stage on 'Trundlemore' in HO scale to the imposing goods shed in O scale at 'Morpeth'.

However, what's had me evaluating my approach to modelling structures is that I'm almost sixty-three years old. Back in the day I could invest nine months into a single structure model without a second thought such as the station building on Morpeth. My health is relatively good now, but I'm not getting any younger and I'm not going to live forever. I have a very large new layout room that's almost ready to fill with a layout; should I tailor my approach to things like modelling structures to suit my age?

If I use faster and perhaps more efficient methods of construction, surely the time freed up could be devoted to other aspects of the hobby that are crying out for attention?

Perhaps the best way for me to illustrate the reason I spent nine months building one station building is to quickly describe the construction methods.

The station building on Morpeth was always going to be the centrepiece of the layout. It's located pretty much dead centre of the scene, and I deliberately constructed the scenery to funnel the viewer's eye to this structure. I wanted the buildings and platform to be highly detailed with brickwork as realistic as I could make it.

I've been a fan of the UK based modeller Gordon Gravett for many years, and he describes in one of his books a method of scribing brick into a thin layer of DAS modelling clay. The station building was my first attempt at using this method.

I started by making a box with window openings from 6mm plywood which was glued together with Polyvinyl acetate (PVA) woodworking glue. Before making any cuts I carefully marked out the various openings and cut these out with a jig saw before cutting out the main wall sections. DAS is an air-drying clay that can be shaped into just about any form you choose. It dries to a hard, matt finish and because its main ingredient is chopped-up paper it takes paint beautifully. I began by painting a small area of PVA onto the outer surface of the plywood box and then gently smearing a small chunk of the DAS over it, aiming for a thickness of approximately 2mm. The PVA is used to help the DAS adhere to the wood. Before it dries you can smooth the surface of the DAS by dipping your fingers in some water and rubbing them over any rough

spots. It's possible to sand the clay when it's dry, so you don't need to worry too much about it being smooth at this stage. After the clay dried, I marked out the mortar lines with a fine pencil and then scribed the lines into the surface of the clay using a woodworking scribe and a steel rule. DAS dries to a hardness just slightly softer than dry finish plaster, so scribing the lines is quite easy. One of the great advantages of using this method is that you can continue the mortar lines around corners and into window openings. I gave the whole model a base colour of a sandy shade from the Tamiya Paints range. I then picked out random bricks in alternative colours and then went over the whole model with a wash of light grey water colour to highlight the mortar lines.

This time-intensive construction method to build the station building on Morpeth is probably more suitable to the larger scales. However, I found the whole process extremely enjoyable and the results speak for themselves. I imagine some modellers would consider my sanity needs to be assessed. What I like about this hobby is we all do things differently and take enjoyment from different aspects of the hobby.

The question I asked myself is, should I invest so much time into building structure models on the new layout?

I have no hard plans at this stage but it's quite possible that I'll need to build a couple more brick buildings, so the question isn't just academic. My answer is reflected in the style of layout I plan to build. I've decided to go with a simple track design with plenty of aisle width and what I would describe as a modest amount of real estate requiring structure models. I may not ever finish this layout but I'm okay with that. If the models on the layout are the best I can produce then I'll be doing the hobby the way I want to.

It's not a race to the finish; I have a lot of time left for scribing lines into DAS and that's what I plan to do! 



Morpeth station looking from the eastern end of the yard. The author deliberately chose a light, sandy colour palette for the brick work to ensure the building stood out in a crowded scene.

Queensland Railways (QR) 1460/1502 class Diesel Electric Locomotives.
In HO_n3½ and HO scale by SDS Models in partnership with CGL Models.
Website: www.sdsmodels.com.au
Phone 0431 423 878
Email : sales@sdsmodels.com.au
Website : www.cglmodels.com.au
Phone 0407 559 086
Email : info@cglmodels.com.au
Price: AUD \$335.00 DC, \$485.00 DCC + Sound.

1460 Class the prototype

In September 1963, Queensland Railways (QR) awarded Clyde Engineering Co. a contract to supply 12, 90-ton mainline locomotives. The new locomotives were very similar to the 1450 class under the bonnet, with Co-Co bogies, and a 12 cylinder, 1425hp. EMD 567C prime mover. The car body had a few more curves and was more pleasing to the eye. These locomotives were built by Commonwealth Engineering at Salisbury in Brisbane, and became known as the 1460 class.

Class leader, locomotive No. 1460 entered service on 20 April 1964. Two more contracts saw a total of 42 locomotives built (1460 – 1501), all in service by August 1966. Six locomotives were fitted with dynamic brakes grilles and fan installed the No 1 end short hood. These were known as elephant ears locomotives to railfans and to crews as 'head scalpers'. To celebrate Queensland Railways centenary in 1965, 1461 was painted in a gold scheme and was named 'Centennial', affectionately called the 'The Golden Holden'. As delivered, all locomotives were painted in the blue scheme, and received the QR logo after 1970. From 1973 onwards, the hook drawgear were replaced with auto couplers. In later years, the footplate colour changed to a more serviceable grey colour. The class was the first to be fitted with station protection device (magnets located at the distant signal would activate the locomotives vigilance control system (VCS). The class were limited to 620 tons from Brisbane to Toowoomba, and on passenger trains 15 cars was the maximum load from Brisbane to Bundaberg.

At first, from their base in Brisbane the locomotives worked the North Coast Line (NCL) on the 'Sunlander' services, to Roma on the 'Westlander' and other long distance mail/passenger trains. At around this time QR introduced new steel wagons and commenced running express freight trains at 50 mph, thus giving the class extra services to work. Between long-haul jobs, the class could also be found working Brisbane suburban trains. By 1969, the class had spread their wings even further working the 'Inlander' passenger services on the Mt Isa line, though generally they were 'pool' locomotives based at Mayne (Brisbane). In the mid 1970's, several of the class were allocated to the Mt. Isa line. The locomotives were worked hard with many travelling over three million kilometres. I recall working the 'Sunlander' south



Locomotive 1496 leaving Tiaro with fruit train No. 242 bound for Brisbane.

out of Mackay in 1967 – the locomotive log showed the engine had left Mayne, worked the Wallangarra Mail to Toowoomba, returned to Brisbane on a train from Wallangarra, that night worked the 'Sunlander' north to Cairns, had been to Cairns and now was just under 24 hours from being back in Mayne, and the week was not over.

Following the electrification of the NCL and the Central Queensland (CQ) coal fields in the late 1980's, newer, more powerful locomotives took over their work and many were placed into storage. The class also had its share of accidents to the point a couple were written off. A couple of locomotives were sold to South Africa, most of the class was sold to New Zealand Railways (NZR) also known as Trans Rail commencing in 1995. In 1998, 15 of the class returned to Australia via Tasrail. Locomotive 1461 'Centennial' is currently in storage as part of the QR heritage fleet.

1502 Class the prototype

The 1502 class is basically the same as the 1460 class except for a new 645 E prime mover, giving them an extra 200hp. The class can be identified by the three-pot exhaust on the roof earning them the nickname 'Queen Mary', and of course their different sound. The class was fitted with an auxiliary in-frame body fuel tank increasing their range to around 800 miles. The refuelling coupling is located on the footplate. Quick start was fitted to the locomotives for working passenger trains, the same as fitted to 1720 class locomotives. There were a few other little differences to the 1460 class in door panel and hand rails on the No 1 end. All locomotives entered service in the blue scheme. Locomotive 1502 entered service in October 1967, and a second contract eventually

saw a total of 29 locomotives in the class, with locomotive 1530 entering service in August 1969. These locomotives took over the mail train workings to a point where two would be rostered on the new daytime 'Sunlander' service out of Brisbane. As such, 40 minutes was cut from the timetable between Roma Street and Rockhampton. North of Rockhampton the train was reduced back to one locomotive. They were regularly used on the new 'Queenslander' service with a 1720 class assisting; having two 90-tonners on the front was too much power. Like the 1460's they too did their lions share working Brisbane suburban trains. Both classes had dual driving positions, and working long (No. 2) end leading was common. All except two were 'pool' locos based at Mayne, the other two were attached to the South Western Division (SWD) in Toowoomba. Tonnages/train load tables were the same as the 1460's. Locomotive 1513 was the 100th Clyde locomotive built in Queensland, and 1528 was the 150th Clyde diesel electric locomotive (DEL) built for QR.

In 1969 a section of the headstock was painted brown to highlight the location of the in-frame body mounted fuel tank. As with the 1460's, after 1970 the QR logo was added to the sides, visibly altering the white area.

Withdrawals of the class commenced in 1995, and in the next couple of years four went to NZR. By the late 1990's, units still in service had not been overhauled for many years and were looking down and out. Five were painted in corporate 'Broncos' colours. By the end of 1999, most units were stored at Redbank. In 2002 work commenced on converting six of the class to standard gauge for Interail becoming the 423 class, utilising New South Wales Government Railways (NSWGR) 49 class bogies. Over the next few years many were



Locomotive 1503 with little brother (1700 class) approaching at Wallumbilla heading for Toowoomba.

disposed of: in 2005, seven were sold to Ferrocarril de Antofagasta a Bolivia (FCAB) in Chile, in 2006 two were sold to the Australian Railroad Group in Western Australia, and 2011, a further eight went to Chile, while the final two went to Tasrail for spare parts.

If you were to ask a driver which was the best engine in QR, 99.9% would say the 1502 class. Both classes were restricted to 15-ton axle load lines (TAL), later known as 'A' class lines. At the time that being Brisbane to Roma, Wallangarra, Emerald, Cairns and Mt Isa.

Models

Order forms for both models covers all eras in both HO $\frac{3}{2}$ (for 12mm track) and HO (16.5mm track). The 1460 class has eight models to pick from, as built early era (no logo), 1461 'Centennial', 1470 with dynamic brake and 1473. Later era 1970s onwards with logo, 1461 'Centennial', 1501 with dynamic brake and run of the mill locos 1488 and 1497. Also available is Tasrail locomotive QR 2056. 1502

class locomotives there are five models, early as delivered no logo 1517, later scheme with logo 1513. 1528 is only available from CGL Models, with 1510 and 1526 available in Corporate 'Bronco' colours.

The models I am reviewing are HO $\frac{3}{2}$ (12mm track), for DC operation and are painted in the early 'as delivered' colour scheme.

The models come in the usual packaging that we expect of late: stiff colourful cardboard outer box lined internally with foam. The model is wrapped in clear plastic sheet and is secured in a clear plastic clam shell (these are marked designating which end to place the front of the locomotive). The shell clips shut on one end and slides into a clear plastic sleeve which fits into the box surrounded by foam. Included as extras are coupler boxes for 12 mm modellers. You will also find a parts list (for 100+ parts), an instructions sheet detailing how to remove the body, how to care for your new model, and warranty.

Couplings

The model comes fitted with Kadee scale couplers set to the recommended Kadee coupler height of 9.9mm. This is the same height as the SDS Models PCO/PCUY container wagons, kits from the early days and hand-crafted r-t-r locomotives. Turning the locomotive upside down, the bottom of the coupler box shows a No. 16. The extra coupler boxes packed separate in the box shows a No. 12 on the bottom. Pins on the rear of the coupler box are quite firm and holds the box together without glue. A centre screw holds the coupler box in place under the locomotive body. The No. 12 box sets the coupler height at 9.3mm, a difference of 0.6mm. If installing the couplers at this height, there is a good chance the coupler trip pin will hang below the rail head and cause derailments. When using this height, I bent the trip pin up a little to clear the railhead. The length may also need adjusting to avoid fouling other rollingstock, like cow catchers. A pair of hard wire pliers will do the trick. I run both heights without any issues and my track is far from 100%. The prototype has new and old wheelsets with empty and loaded wagons. A difference of half a knuckle is acceptable.



Locomotive 1473 is fitted with a No. 12 coupler box. 1470 is standard with a No. 16 coupler box. The difference is minimal.



Locomotive 1470 in as delivered livery with dynamic brakes.

REVIEWS

The products covered in the Review pages have been supplied or made available by the manufacturer, producer, importer or retailer listed in each product heading. AMRM welcomes access to new product lines for inclusion in the Review pages and requests items be addressed to the Editor at Australian Model Railway Magazine, PO Box 345, Matraville 2036. Readers are reminded that the prices quoted in the reviews are those applicable at the time of going to press. Those using the prices as a guide to purchasing products by mail order should always add extra for postage, or contact the supplier for the additional cost for mail order.

Editor

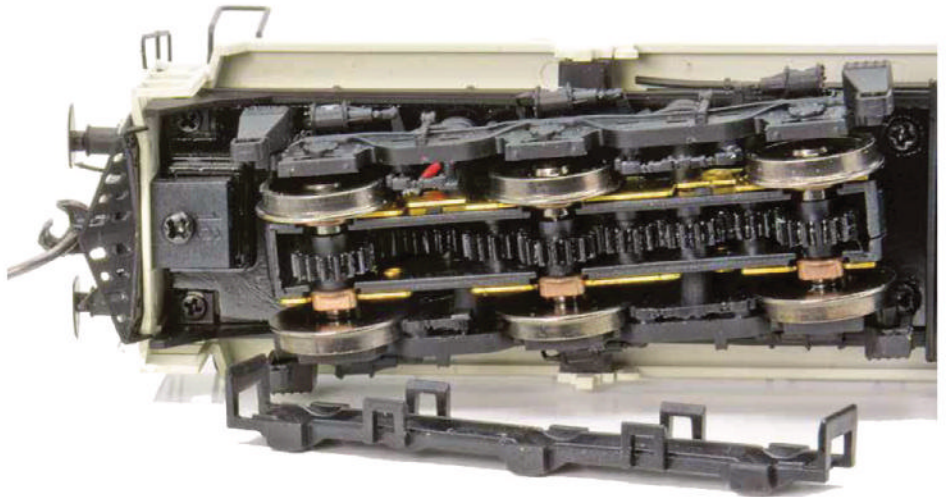
Bogies

QR H0n3½ 12mm gauge modellers over the decades have used various track manufacturers to build their layouts. Wheelsets from one manufacturer used on a different track systems would often derail. I recall one wheelset manufacturer making two different gauged wheelsets to assist QR modellers to overcome this issue. The good news is if you are in this position the wheelset back-to-back on the models can be adjusted with little effort. The bogie side frames are a push fit and slide off with ease, and the bogie bottom plate unclips giving you access to the wheelsets and the gear tower when maintenance comes due.

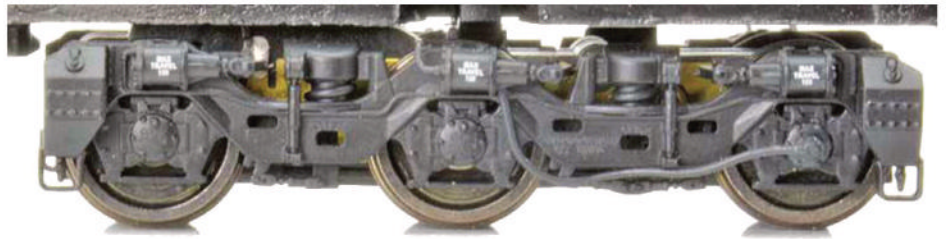
The detail on the bogies is remarkable and to scale. Brake cylinders, brake levers, air lines, springs, shock absorbers, speedo cable, brake blocks and linkages with adjustment screw, axle box slide plates with rivets are all there. Sand boxes with filler cap, rivets, discharge valve with protectors. Even the step on the driver's side. Pull out a magnifying glass and a new world opens up with manufacture markings and bearing type on the axle box covers. The wheels are the correct size, as is the axle spacing.

Body

The locomotive body is stacked with fine detail. It's hard to know where to start, it's all there. I started to look for what's missing and drew a blank. The shape and style of the body is spot on. Engine room doors with handles, radiator shutters and vents as per the prototype. On the roof is the radiator filler, handrail, riveted panels with smart looking lift rings, horns, cooling radiators and exhaust outlets. Handrails are made from a plastic type material that clip into the body, all are correct and includes the destination board holder front and rear. They have some flexibility, but may not take too kindly to 12 inches to the foot hands pressing on them hard. The headstock features air pipes and hoses, multiple unit (MU) socket, and an uncoupling lever and bar that does not foul the coupler for prototype operators using uncoupling picks. Buffers are the correct shape and size



All wheels pick up.



Bogie detail.

allowing the coupler to swing freely, and finally there is a nice-looking cow catcher. Looking hard, even the knob to change the marker lights colour is on the front and rear under the marker lights. Mesh window protectors allow you to see into the cab. The cab is fully detailed, featuring both control stands with gauges, two brake pedestals each side, and seats. Cab windows fit flush to the body edged with aluminium trim around the windows, as per the prototype. Windscreen wipers are fitted to both front and rear windows on each side. Under the footplate you will find air reservoirs, air pipes and racks of electrical equipment. The battery box has vents,

catches and hinges, and the fuel tank features a sight glass and fillers.

Lighting

For the DC models when running forward regardless to which end is leading, the headlight, marker lights and number boards are illuminated, the rear end will have white marker only. On the prototype changing the colour of marker light was a manual task, one had to go to the light and turn a knob under the light. In service very few locomotives had red marker lights showing on the rear. The only requirement for red lights was on the rear of the train.

The head light is quite bright, if running with reduced lighting in the layout room, the headlight will shine on the track and on any wagons in adjacent sidings. The number boards also illuminate nicely with the number being readable.

On the dynamic brake model, if running in reduced lighting conditions, a small amount of light is visible under the fan on top of the locomotive. I feel if it did bother you any, it could be easily taken care of.



◀ *Note the control stand detail visible through the cab windows. Using a standard, generic A4 QR plan with basic measurements, overall dimensions, length, width and height are spot on. On the weighbridge scales, the mass of the model is 286 grams.*



No. 1 end details.



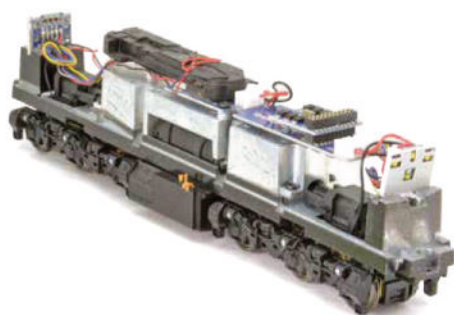
No. 2 end detail



Locomotive 1461 'Centennial'

Finish

Transition between colours is clean and sharp. The locomotive has numbers on the cab sides and each is as per the prototype. Builder's plates are displayed on the cab sides. Some lettering is so small you will need a magnifying glass to read it. On the side of the footplate are oil and water drain points, and bogie isolating cocks. The bogies feature the brake piston travel lengths. The Vigilance Control System (VCS) isolating cock is shown on the short hood. On the headstock the air hoses are identified along with the unit length of the locomotive. The unit length is within a circle which is correct for imperial measure era before 1972.



▲ The mechanism has a low in line power drive shaft. All electricals are within the mechanism, no wires to the body shell.

Initially, I was not happy with the roof grey, I thought it was too dark. Over the years I have painted various locos and have taken for granted the colour supplied. Checking my photos and others in books I had to eat pie. I guess this area on top of the locomotive is exposed to the elements more (weather and heat from the engine room) than other parts of the locomotive and fades quickly.

The colour of all these model locomotives was colour matched with the locomotives on display at Ipswich Workshop Rail Museum by the manufacturer.

Removing the Body

Removing the body is simple, remove the coupler screws each end and remove two screws each end of the fuel tank. Gently pull the underframe from the body. All wires are part of the mechanism. The good news is that there are no wires connected to the body.

Operational

All locomotives were put to work on the layout which is laid with Peco HOm track. The track had been down for approximately 20 years and is ballasted. I don't think I would win any prizes for its top and line.

The model accelerates smoothly and ran quite as a church mouse. The only noise is the locomotive and wagons on the train travelling over joints etc. The model ran over most points without any issues, a couple of points in a crossover there was flange climb without

derailing. The crossover is between two tracks with 45mm centres, there is minimal transition between the two curved sections. Possibly, not the best design on my part. Peco points have a plastic check rails and regularly let me know who is boss. Co – Co bogies on the prototype are noted track spreaders on sharp curves due to the length of the ridged bogie frame. The back to back of the wheels were measured and found to be between 10.2 and 10.1 mm. The back-to-back was adjusted to 10.3 mm and the problem was gone.

No real load tests have been done at this point, however my loaded steel train of 15 bogie wagons was a breeze. With the small grades on the layout, the controller was set and forgotten, it was nice to just sit back and enjoy the train travelling through the scenery.

Summary

The model replicates the prototype in every aspect as I knew them. Detail and finish is superb. I'm sure the model will give the same sterling service to the modeller as the prototype gave to QR. The locomotives fill a gap in motive power that saw service from the transition years to the turn of the century. Thank you to SDS and CGL Models team for an outstanding model that many of us will cherish. We appreciate your efforts knowing that it has not been an easy road. No QR modeller should be without at least a couple to expand their operations.

Arthur Hayes.



Locomotive 1473 in as delivered livery



Locomotive 1517 in as delivered livery.

SDS Models marketed under the 'Austrains NEO' brand NSWGR LHO guards van review
Website: <https://sdsmodels.com.au/lho1.htm>
Address: P.O.Box 804 Winston Hills NSW 2153
E-Mail: sales@sdsmodels.com.au
Phone: 0431 423 878
Price: \$125.00 AUD per single van pack

The Prototype

From December 1962 to October 1964, the New South Wales Government Railways (NSWGR) converted ten ACX composite sleeping coaches into passenger brake vans. Retaining only the underframes and coach numbers from the donor ACX's, the new vans were fitted with 2BM bogies and coded LHO.

As-built, the centrally-located guard's compartment of the vans was fitted with sliding, side-door access, as opposed to the hinged side doors of their MHO counterparts. Following union complaints about draughty conditions in the vans, the railways modified these doors by sealing up or panelling over the sliding door and installing a hinged door further along the van. Some vans received a beclawat window in place of the original door during this program.

The vans were originally painted in unlined Indian Red, later receiving Public Transport Commission (PTC) insignia on the external luggage compartment walls. Some were also repainted into 'Candy' livery during the State Rail Authority of New South Wales (SRA) era.

During 1983-85, high-speed, roller-bearing YMD bogies were fitted to seven of the vans to allow them to work on interstate express trains to Melbourne. These vans were re-coded LHY.

The narrow side duckets for viewing the length of the train were also removed in the early 1980's and replaced with angled mirrors.

Apart from LHO 1615's regular allocation to the Tenterfield mail from 1972 to 1974, these vans could be found on most long-distance passenger and mail trains.

The Model

These models are newly-tooled upgrades of the previous Austrains LHO and KP models, with new liveries and numbers available (seven different LHO versions and five KP versions). Marketed by SDS Models under their 'Austrains NEO' branding. The model reviewed was LHO 1619 in Indian Red livery.

The main measurements for the model come in at the correct scale to the prototype.

Detail items

Overall, the model looks impressive straight out of the box, with truss bars, underfloor detail, brake rigging and correctly-scaled running boards all reproduced to a high standard. The truss bars have been moulded to join the side of the chassis at the same point as on the prototype, however underneath the model they start from further toward the center of the van, presumably to be clear of the swing of the bogies on the harsh radii of model railway curves compared to the prototype. To my eyes



SDS Models 'Austrains NEO' brand NSWGR LHO guards van

at least, this compromise doesn't detract from the model, even when running by at slow speed and eye level.

The luggage compartment door handles are moulded in relief and are very finely pad-printed in a weathered brass colour – I mistook them for a speck of packaging when first viewing the model! The doors themselves do not slide open.

The body side panels are crisp and straight, with the platform lighting and other body details represented convincingly. The only detraction here is the presence of a raised panel line depicting the modification of the viewing ducket into an angled mirror. To me, this is a little too coarse when compared to pictures of the prototype, where this panel appears flush with the body panelling.

All LHOs in this release are fitted with un-sprung buffing plates and Kadee™ couplers as standard.

Livery

The Indian Red livery applied to LHO 1619 is faithful to the prototype in my era, with a matt finish representing an in-service look straight out of the box.

The weathered grey applied to the roof continues the in-service look of the van applied to the rest of the model and is finished well with no blemishes or overspray.

Bogies

SDS Models has specifically retooled the 2BM bogies from the Austrains range, and these are produced to a satisfying level of detail, fitted with SDS' signature semi-scale wheels.

Era-appropriate details

For the purpose of this review the era concerned is the late-PTC era. This era was characterised by (very modeller-friendly) short, colourful goods trains, comprised of four-wheelers and brand new, longer, high-speed bogie wagons, as well as refurbished passenger rollingstock returning to service in a deep Indian Red livery. Frankly, I don't know why more NSW modellers aren't choosing—sorry... LHO 1619.

As can be expected in such a small fleet, there are details and nuances specific to each van depending on the era the modeller seeks to depict. The version of LHO 1619 produced by

SDS Models depicts the van in 1980, after being fitted with an angled mirror and before the van received high-speed 2CM bogies. LHO's ran with an original ducket and double-guard's door during the 1970's, however SDS Models haven't produced a version with these details in this production run, though I'm sure thousands of new converts to the sunlit lands of the NSW PTC Era in 1:87 scale would create a groundswell of support—sorry... LHO 1619.

Era-specific details on LHO 1619 include yellow highlights applied to the buffing plates, and the new guard's door with angled viewing mirror in place of the ducket. The yellow paint on one buffing plate was less crisp than the other end, but this is very easily rectified if desired. To me, it produces a more realistic representation of this safety feature, quickly added to buffers and buffing plates across the network in 1978 in response to a shunting fatality, than a perfectly straight line would anyway.

Running qualities

The model was tested on code 100 and code 75 track and runs well, with no noticeable wobbling or fouling of the bodies against the chassis. The van weighs 116 grams, which is 17 grams lighter than the NMRA standard, although there is no noticeable impact on running quality. SDS Models hasn't provided a recommended minimum operating radius, however the rule of thumb I use for coaches with non-sprung buffers and standard-length coupler shanks is a 610mm (24-inch) radius. When tested on a 610mm radius curve coupled to both an Auscision FAM, and a Eureka Models MCS, the LHO performed faultlessly. The van had no issues tracking through an uncompensated reverse curve of the same radius, or a crossover comprised of PECO medium-length turnouts (SLE-195).

Verdict

Overall, SDS Models have released a fine reproduction of the LHO and LHY guards vans, providing modellers from three decades with a passenger brake van that is easily and prototypically added to a variety of consists on just about any NSW modeller's layout. I rate this model an overall 8.5 out of 10.

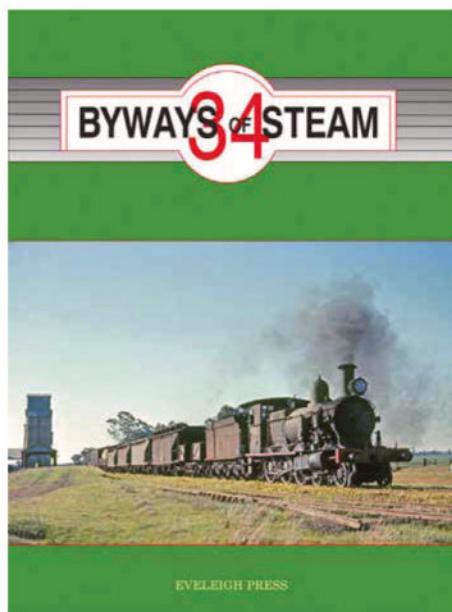
Ben Gray

Byways of Steam 34, Eveleigh Press PO Box 345 Matraville, NSW, 2036. Phone (02) 9311 2036. www.australianmodelrailways.com Price RRP \$50.00 (plus postage)

Byways of Steam 34 is a substantial 232-page reference document about the lives and times of the New South Wales Government Railways (NSWGR): the railway men and women who constructed, operated and maintained this extensive system. The first and major portion of this volume begins with a very detailed, interesting, and informative essay by Ray Love covering the Temora locomotive depot (now a heritage listed site) and the surrounding branch lines. In the next essay, Ian Wallace recounts his memories mainly as a Homebush secondary school boy, locomotive spotting and photographing steam trains in the 1957–1961 timeframe. R K Brown continues his story of employment with NSWGR and how he became a locomotive driver out of Goulburn. Well-known railway photographer Leon Oberg provides an astonishing story of the ‘most spectacular fire’ in Goulburn’s history. The final section provides us with an insight into the challenges of working large steam trains in the Blue Mountains.

Temora is situated 38 miles north-west of Cootamundra and was first opened for traffic in 1893. It was, and to a lesser extent still is, the focal point for a number of branch lines and connections to towns such as Griffith, Rankin’s Springs, Naradhan, Lake Cargelligo and Burcher. Ray’s essay covers a period where Temora had become one of the most important branch line depots in the state. Included are detailed tables and charts with historical information as to depot and branch line construction, through to demolition and closure, staffing, locomotive allocation and locomotive transfers between depots. A locality diagram and station/yard two-page track diagram are provided. Of interest to modeller and enthusiast is a myriad of detail ranging from sizes of timbers used in the roundhouse construction to the types of maintenance machinery in use. Extensive photographic support draws from the collections of many notable photographers and a number from archives. There are quality photos of the roundhouse, yard, turntable, trains and branch line stations, essentially covering all aspects of the railway. There are photos of 30s, 32s, 50s and later AD60 class steam locomotives. Among the many rare photos are those of 12 and 14 class steam locomotives utilised in the 1920–1940s period, even one with a Baldwin style bogie tender. Other photos cover the rescue of locomotive 5565 that had fallen into the turntable pit, blocking all locomotive movements to the roundhouse for several days. Additionally there’s an image of a circus elephant rerailing a tender!

Traffic through Temora was varied but mainly wheat, livestock (sheep and cattle) and passengers. At its peak in 1950 the depot employed 80 men and this was generally the situation through to the end of steam in 1972. The essay continues with a description of the infrastructure, operation, and typical loadings for each of the branchlines radiating from Temora. These include Wyalong to Lake Cargelligo, Griffith,



Barmedman to Rankin’s Springs, Ungarie to Naradhan and West Wyalong to Burcher. The ‘goods with passenger accommodation’ often carried travelling water tanks due to the unreliability of water supply in these locations.

Ray concludes with general notes including locomotive allocations, finally touching on topics such as the garden competitions and obtaining heritage status for Temora depot. The railway station is now largely restored and there are plans to rehabilitate the roundhouse area and to reinstate the turntable.

Ian Wallace is well known to *Byways* readers. He lived at Eastwood in the late 1950s when he was a schoolboy at Homebush secondary school. He spent what must have been a considerable time with his bicycle and school friends locomotive spotting and recording, both with camera and notebook, documenting trains near Eastwood on the steep main line to Hornsby. He joined the school railway club and with friends travelled further afield to record a wide variety of trains in the period towards the end of steam and the start of electrification and then dieselisation. His photography began with a basic box camera and quickly progressed to an Adox bellows film camera. His essay includes some useful tips on how to achieve better quality photos.

Photos included are many and varied. They include the last steam hauled *The Fish*, pictures around Hornsby locomotive depot, a AD60 class Beyer-Garratt with experimental snorkel to improve air supply to the cab, the first electric locomotive nicknamed ‘green beetle’, opening of electrification to Lithgow and various trains around West Ryde pumping station, including locomotive Manning Wardell No. 4. Where there are gaps in Ian’s record, photos have been drawn from Fred Saxon’s collection that also includes photos taken by the late Val Palmer. There are great photos of the seven-ton luffing crane locomotive 1052, C38 3805 in 1960 heading a down passenger train across the old railway bridge spanning the Parramatta river, and

steam on the Hawkesbury river railway bridge shortly before the opening of electrification to Gosford. Additionally, a favourite of Ian’s, 3240 slowing for staff exchange at Coal Cliff signal box. This picture clearly shows all the infrastructure details of the era. Ian was fortunate to have many cab rides (he lists 22) and visited many railway workshops including Eveleigh, Chullora and Cardiff, although in 1957 photos inside were banned. Ian obtained some photos when he returned to Eveleigh in 1961 when security restrictions had been eased.

As he says, it was a fortunate time to be a rail enthusiast. With photos and recollections supported by his comprehensive notes he gives us a memorable insight into the 1950–60s railway scene around western Sydney.

As a follow-on from his essay on his training and on firing locos out of Goulburn in *Byways of Steam 32 and 33*, Russel Keith Brown relates his driving days, including some hair-raising escapades and many satisfying and amusing tussles with where he conflicted with authorities and won. RK was Bob Gallagher’s uncle, a comment Bob has made in the end notes to this essay. Dispersed through the text are pictures of typical steam and diesel trains in the Goulburn area, a number of which are in full colour.

Descriptions of various parts of a steam locomotive such as Cardew Valve, Grade control valve and Pilot drifting valve help make his discussions on how best to drive a steam locomotive very interesting and informative. RK was a hard driver and recounts many occasions where he bent the rules to make up time or in order to achieve the best outcome. He was unique in sitting all his driver’s examinations in one lot, basically passing all except for an item in the air section. At his next exam three months later he was asked what the correct answer was and he was passed immediately as acting driver. When in charge of a steam special for railway enthusiasts, inspector Bob Butters gave him the ultimate compliment “that he could handle any train” and instead of remaining on the train went home! R K drove that train very hard and was complimented by many passengers who gave three cheers for the locomotive crew for ‘the best’ ride they had ever had.

Leon Oberg treats us to a sobering tale as to how the Goulburn depot caught fire when a 55 class oil burning steam locomotive was being refuelled. The surrounding area caught alight, bringing down power poles and gutting the locomotive, wagons and two oil tankers. It took a further two hours to bring the blaze under control.

Working the mountains is an entertaining tale of a trip on a 1006-ton goods train with a 57 class locomotive in charge from Enfield to Katoomba in 1934, as recorded by Charles Gavan Duffy.

Byways 34 concludes with a useful reference section with recommended further reading. A massive tome, thoroughly engrossing and at 232 pages, outstanding value for both the stories and the hundreds of photos of steam in action on the NSWGR.

Bob Jensen



Mark Jesser has released a 20ft Kent removals container.



Mark Jesser has released two 40ft TNT Express containers.



Mark Jesser has released a 48ft Pacific National container, these containers are available through his website markjesser.com.au/nscale

Auscision Models has released a re-run of the C43/C44ACi Locomotives. This re-run features new and previous released liveries including: QUBE (shown) Crawford's Freightlines, QR National, QR National Aurizon, Aurizon yellow and simplified yellow, SSR Centennial coal yellow and green, Mineral Resources (new numbers), Freightliner, Pacific National 92 and 93 class, XRN class in Xstrata, Glencore, GWA and One Rail, CF class in CFCLA, GWU class in GWA, FIE class in Fletcher. AC class in ARG livery. Models are available r-t-r DCC ready and DCC with sound.

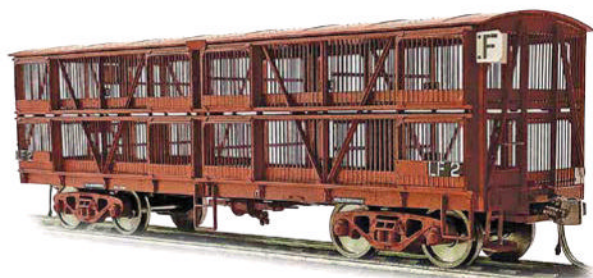


Auscision Models has released the Public Transport Commission (PTC) CHS coal hoppers in the following liveries: CHS PTC blue (shown), NHVF in wagon grime with faded L7 with and without SRA red ends, Freight Rail red with and without large 'B', FreightCorp red with and without large 'B', Pacific National blue with and without small 'B', faded Pacific National and patch. These models are available r-t-r in four wagon packs



Auscision Models has released SSR BGVF grain hoppers r-t-r in four wagon packs and a single wagon pack with graffiti (shown).





Ixion Model Railways has released the Victorian Railways LF VSAY sheep - stock wagon, r-t-r in triple and single wagon packs.



Ixion Model Railways has released the Victorian Railways MF VSBY cattle wagon, r-t-r in triple and single wagon packs.



Scalemodelco have released under their Oz Kits banner a TK Bedford table top (flat bed) truck kit, digital rendering shown.



Scalemodelco have released under their Oz Kits banner a TK Bedford tip truck kit, digital rendering shown.



SDS Models has released the NSWGR LHO brake van, r-t-r in the following single van packs, VHO in six versions including varnish finish, Venetian red – russet and Indian red. MHO in seven versions including, varnish finish, Tuscan – full lining, Venetian red – russet, Indian red and SRA Candy. KB in two versions, Indian red and SRA Candy. DMC in two versions Venetian red – russet and Indian red. SRE in Bi-centennial. MHX in Indian red. AAH in light purple brown. Also available are four MHO KB twin packs.



SDS Models has released the NSWGR LLW well wagon r-t-r. Available in single packs with six variations including, 1950s – 1960s wagon grey (with buffers), PTC blue, SRA red and road grime. Note these models include a moulded rail section which is designed to carry a IDR Models X200 Series two diesel rail tractor. The LLW is also available with a X200 non powered diesel rail tractor. Available in 1960s Indian red (shown), Tuscan and Candy liveries. The non powered X200 series one diesel rail tractors are also available separately in 1960s Indian red, 1980s yellow with green band, 1970s deep Indian red with L7 logo and 1990s red and black liveries.



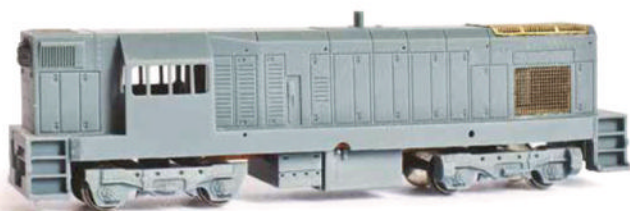
SDS Models and **CGL Models** has released the Queensland Railways (QR) 1460 and 1502 class locomotives r-t-r DCC ready. Liveries include, QR blue early 1960s and 1970 – 1990s. For the 1460 class only, QR blue with dynamic brakes. No. 1461 'Centennial' gold early 1960's and 1980s – 1990s. QR class No. 2056 with light blue carbody and Tasrail lettering. For the 1502 class only QR 'Bronco' corporate livery. There is also several exclusive numbers that are only available from CGL Models.

Spirit Design - N Scale

Spirit Design has announced the production of six versions of the Victorian Railways (VR) T class and H class diesel locomotives.

- Series one 'flat top' T320 - T346 and T413 with dynamic brake.
- Second series 'high nose' T347 - T356 with first series long hood arrangement and with later radiator arrangement T357 - T366.
- Third series 'low nose' T367 - T398
- Fourth series T399 - T412 and H1 - H5.

Each kit comes with a 3D printed body, see-through grills, rolling chassis with bogies and metal wheels, decals, air horn and handrails. The dummy can be operated with weight added until the owner gets a donor mech or you can just build your fleet up with dummy units. A VR Y class diesel locomotive will follow the T class production.



Spirit Design series one 'flat top' VR T413 with dynamic brake.



Spirit Design series one 'flat top' VR T class T320 - T346.



Spirit Design series two 'high nose' VR T class T347 - T356



Spirit Design series two 'high nose' VR T class T357 - T366.



Spirit Design series three and four 'low nose' VR T class.

Auscision Models

Have received painted pilot models of their 'The Overland' passenger coaches.

A couple of corrections need to be made to these models. Production is expected to commence in March.

Auscision Models has received painted pilot models their NPHH cement hopper wagons. These models are now in production and will arrive in the 2nd quarter of 2024 with a mid year expected delivery.

Long term future production goals include:

- New South Wales Government Railways (NSWGR) 42, 44 (Mk II and Mk III) and 49 class diesel locomotives.
- Victorian Railways (VR) S class diesel locomotive.
- Commonwealth Railways GM class diesel locomotive.
- A V/Line A class locomotive re-run.
- NSWGR BCH coal hopper wagons and BWH grain hopper wagons.

▼ Auscision Models painted pilot model of their NPHH cement hopper wagon in FreightCorp 'Australian Cement' livery.

► Auscision Models painted pilot model of their NPHH cement hopper wagon in Pacific National livery.





Auscision Models painted pilot model of their 'The Overland' sleeper coach in V&SAR livery.



Auscision Models painted pilot model of their 'The Overland' club car coach in V&SAR livery.



Auscision Models painted pilot model of their 'The Overland' CO baggage coach in V&SAR livery.



Auscision Models painted pilot model of their 'The Overland' PCO power van in V&SAR livery.



Auscision Models painted pilot model coach in 'The Vinelander' livery.



Auscision Models painted pilot model coach in V/Line 'The Vinelander' livery.



Auscision Models painted pilot model PCO power van in V/Line Passenger Mk III livery.

Auscision Models painted pilot model PCO power van in V/Line Passenger Mk IV livery.



Auscision Models painted pilot model coach in Great Southern Railway blue 'The Overland' livery (2017 to current).



IDR Models

The second run of NSWGR BBW ballast wagons have arrived. These models are available three wagon packs with new numbers as follows:

Pack 13 and 14 as delivered in the late 1920's, fitted with arch bar bogies, spoked wheels and buffers.

Packs 15 to 17 with era appropriate details as running from the 1950's to 1970's.

Packs 18 to 20 with era appropriate details as running from the 1970's to 1980's

Victorian Railways (VR) NN ballast hoppers are running a little behind schedule. Assembly will start after Chinese New Year and delivery is expected around late April to early May.

The Queensland Railways SX coaches tooling is completed and the early stages of production is expected to start soon.



IDR Models painted pilot model of the VR NN ballast hopper wagon, early version with spoke wheels and solid bearings.



IDR Models painted pilot model of the VR VHWA ballast hopper wagon late version with disk wheels and roller bearings.



IDR Models painted pilot model of the VR VHWA ballast hopper wagon with spoke wheels and solid bearings.

InFront Models

Have developed several 22ft wagon loads to suit the NSWGR 'K' wagon, VR 'GY' and associated variant Victorian wagons and South Australian Railways (SAR) 'OBf' and variant wagons. These loads include:

44gal drum loads to suit 22ft wagons. These loads have been designed as separate pieces to help the modeller to paint the drums in individual colours if required and to achieve a individual load appearance (non uniform placement). The kit come as 11 pieces and the vertical footings can be trimmed at the base to allow for varying wagon depths depending on the manufacturer of the wagon being used.

▼ InFront Models 44Gal drum loads for VR GY four-wheel wagons and NSWGR K four-wheel wagons.



Also developed for 22ft wagons is a concrete pipe load. The load is a two piece 3D resin printed pipe designed to fit inside the various open wagons.



InFront Models a concrete pipe loads for NSWGR K four-wheel wagons.

InFront Models has also developed for the smaller NSWGR 'S truck' 44gal drum loads, pipe loads both strapped and loose format. Additionally, loose cast concrete pipes for work site or construction scenes etc.



InFront Models pipe loads for NSWGR S four-wheel wagons.



InFront Models pipe loads for NSWGR S four-wheel wagons.



InFront Models 44Gal drum loads for NSWGR S four-wheel wagons.

Finally, for detailing your layout a drums and pallets kit. This kit consists of 12 drums and 3 pallets.



InFront Models 44Gal drum and pallets kits, note this kit is unpainted.

Ixion Model Railways

The first early CAD (digital renderings) of the Victorian Railways (VR)

A2 steam locomotive have been received. This rendering represents the preserved locomotive A2 986. By the time of publication, the 3D design work should be complete, and tooling may have commenced.

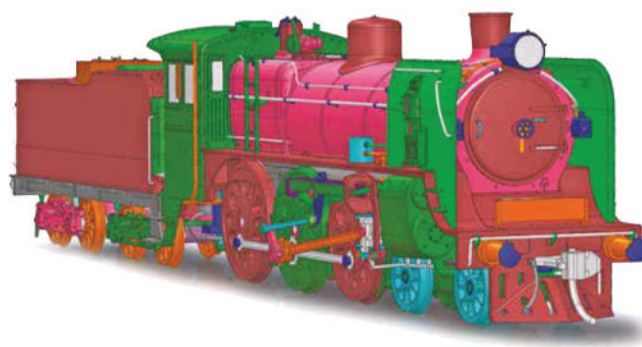
The early Stephenson valve gear A2 steam locomotives, and those of the class without smoke deflectors are not being produced.

The production models will have, as applicable per the prototype:

- Walschaerts valve gear.
- Spoked or Boxpok driving wheels.
- Coal and oil-burner tenders.
- Rod or plate cowcatchers (these will be interchangeable and will be included in the box).
- The tender unique to preserved A2 No.986 will be replicated.
- The model will incorporate locomotive to tender connection which will be a simple push-to-click coupling designed to also carry the electrical connections.

In a first for Ixion, the A2 locomotives will be available as DC models (DCC ready) or with factory-fitted DCC sound.

All models will be fitted with two 'sugar cube' speakers as standard, and DC locos will have a DCC-ready chip socket installed in the tender.



Ixion Model Railways digital rendering of locomotive A2 986.



Ixion Model Railways digital rendering of locomotive A2 986.

MagnorailOz

Have advised that the Magnorail tandem cyclists model has been upgraded and will be released at the Yarra Valley Model Railway Clubs' Easter Show and will also be available at Epping Model Railway Clubs' Sydney exhibition in May.

The main innovations of the V2 version are:

- A new frame made from Maillechort (an alloy of copper, nickel and zinc), which is thinner but more rigid than brass.
- A new design for the tandem frame and an improved position for riders who were too high on the old version.
- An improved pedalling motion thanks to a new opening in the frame to guide the transparent wheel, the frame no longer rests on the wheel. The result of this redesign is a total absence of shaking or vibration during pedalling.
- The cyclist is fixed to the wheel and glides along just like on the road!
- Cyclists are now 3D printed which gives better colour and clothing definition.



MagnarailOz tandem cyclists V2.

On Track Models

The third run of the 40ft curtain sided containers have been delayed due to packaging issues at the factory. They are now expected to be dispatched after

the Chinese New Year.

The FreightRail - Freight Corp – Pacific National 82 Class diesel locomotive re-run will commence production around late March 2024, with delivery expected later in the year.

Powerline Models

Have received pilot models of their VR Y class steam locomotive in three liveries. These include:

- Engine black with shunters steps and handrails.
- SteamRail green and as preserved in Williamstown museum green.
- This model is on scheduled for a 2024 release.

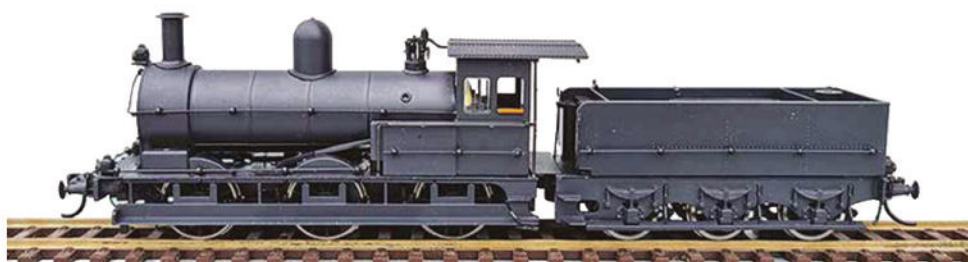
Powerline Models Y class steam locomotive pilot model in 'as preserved' livery. Note in the production models the yellow painted items will be a brass colour.



Powerline Models Y class steam locomotive pilot model in 'SteamRail' livery. Note in the production models the yellow painted items will be a brass colour.



Powerline Models Y class steam locomotive pilot model in engine black with shunters steps and handrails.



SDS Models

Has received pilot models for several of their projects, these include:

- The National Rail Corporation's RHGF aggregate hopper. Production run for this model is expected to be around 3rd Quarter 2024.
- Painted pilot models of their 'early' South Australian Railways (SAR) 8300 series guards vans, the production of these models will be in March and available around April 2024.
- Queensland Railways - QR National QQAY (standard gauge) or BZEY narrow gauge 60ft container flat wagon. Painted pilot models are expected soon, with a production slot scheduled for around 3rd Quarter 2024.
- Victorian Railways (VR) ESX - VODX bogie slab steel wagon.
- VR ELX - VOJF type one bogie open wagon.
- VR ELX - VOJF type two bogie open wagon (with strengthening straps)

Additionally, SDS Models has been working on a re-design – retool of the NSWGR LFX/HCX/LHG coaching stock previous produced under the 'Austrains' banner. The revised tooling for the elliptical roof coaches (LFX and HCX) is now complete. As SDS Models needed to replace the left and right side bodyshell 'slide' as part of the re-tooling, the opportunity was taken to make another set of side and end 'slides' allowing for earlier panelled version to be produced as well.

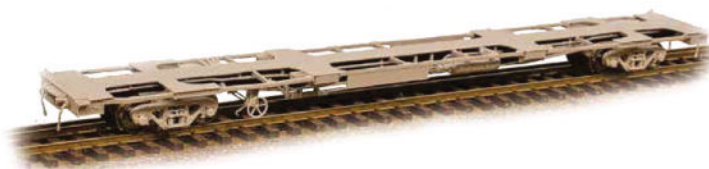
Pilot models will be ready in a few months and delivery will be later this year.



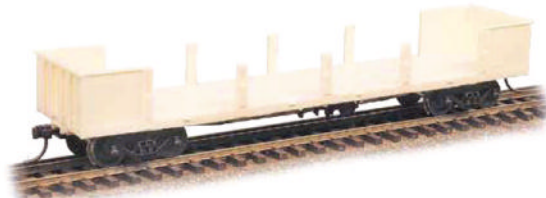
SDS Models unpainted pilot model of their National Rail Corporation's RHGF aggregate hopper.



SDS Models painted pilot models of their 'early' SAR 8300 series guards vans in: SAR maroon, maroon with black roof, Australian National Railways blue boxed lettering with white body and Australian National green and gold.



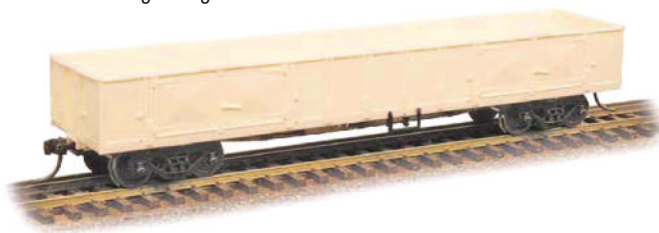
SDS Models unpainted pilot model of their Queensland Railways QR National QQAY (standard gauge) or BZEY narrow gauge 60ft container flat wagon (shown).



SDS Models unpainted pilot model VR ESX - VODX bogie slab steel bogie wagon.

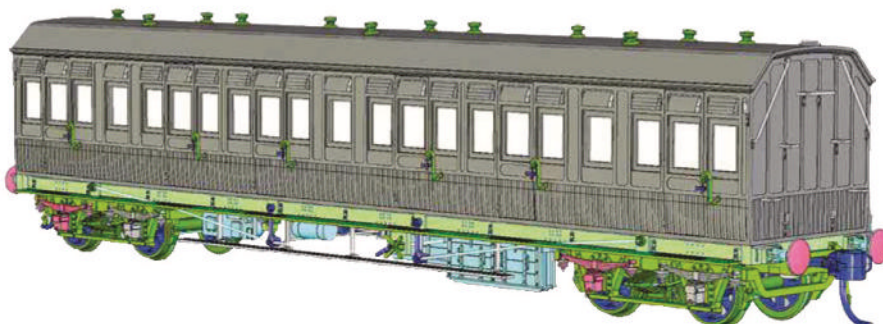


SDS Models unpainted pilot model VR ELX - VOJF type one bogie open wagon.



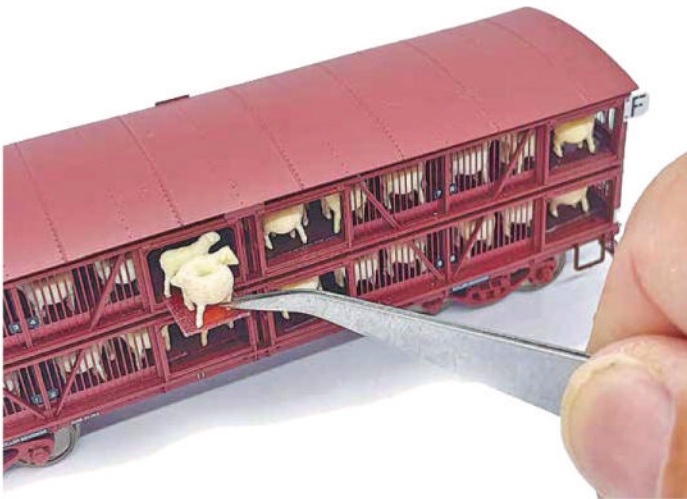
SDS Models unpainted pilot model VR ELX - VOJF type two bogie open wagon (with strengthening straps).

► SDS Models NSWGR LFX coach digital rendering.



West Edge 3D

Has recently added to their range sets of coloured sheep for loading into the Ixion Model Railways LF/VSAY bogie sheep – stock wagon. Each set contains 24 'blocks' of sheep which are 3D printed integrally with a red base which matches the interior colour of the wagon. The blocks can be simply placed into the compartments through the open doors, and slid along to allow the next 'block' of sheep to be fitted. The red bases 'disappear' visually, and three blocks fill a compartment. The separate compartment doors (included with the LF VSAY model) can then be glued in place to finish the wagon. Illustrated instructions are available at <https://westedge3d.com.au/resources/>



West Edge 3D sheep being added to an Ixion Model Railways LF bogie sheep – stock wagon. While replicating loading and unloading sheep in model form could be a challenge, it's not impossible.

Are You Missing Copies of AMRM?

Volumes 1 to 24 of AMRM are now available on DVD to complete your collection

Each issue is searchable and the disk contains an index to Articles and Authors. A copy of MagIndex for issues 1-100 is also included.

The files are in PDF format and articles can be printed for easy reading.

A copy of Adobe Reader is also provided on the DVD.



**UP TO 2 DVDs ORDERED TOGETHER \$25.00 EACH
3 OR MORE DVDs ORDERED TOGETHER \$23.00 EACH POSTED**

Discount not available online

SCR PUBLICATIONS

**PO Box 345, Matraville 2036. Phone (02) 9311 2036
www.australianmodelrailways.com**

SCMRA ACTIVITIES

*For all activities contact Eastern Division representative
Graham Windmill on 9626 0351.*

13 April	Running Session at the home of Tim Stewart, 1 Narambi Close, Berowra Heights. HO NSW layout based on Mudgee in operation. DCC layout. 2pm -5pm.
4-5 May	SCMRA/AMRM Stand at Great Train Show at Rosehill Racecourse. Contact Graham Windmill if you can help man the stand. G. Windmill 0423 527 951.
8 June	Running Session at the home of Ron Senior, 88 Carmen Drive, Carlingford. HO layout. 2pm -5pm.
13 July	Open Day with operating HO layout with DC and DCC. 10.00am to 2.30pm. BBQ sausage sizzle lunch. Getting Started in Model Railways Clinic at 11.00am. Epping Creative Centre, Dence Park, 26 Stanley Rd., Epping 2121.
10 August	Layout running session at the home of Trevor Moore, 44 York St., Epping, 2121. Two layouts in On30 covering Australian and Welsh prototype. 2pm -5pm

EXHIBITIONS & EXPOS

SPRINGVALE – VIC. March 16-17, 2024. Train and Hobby Show. Sandown Race Course, 591-659 Princes Hwy Springvale. Open: 10am-5pm (Sat), 10am-4pm (Sun). Email: exhibit.with.us@trainandhobbyshow Website: www.trainandhobbyshow.com.au

BUNDABERG WEST – QLD. March 23-24, 2024. Bundaberg Model Train & Hobby Expo, Bundaberg Multiplex Sports & Convention Centre, 1 Civic Avenue, Bundaberg West. Open: 9am-5pm (Sat), 9am-4pm (Sun).

KALEEN – ACT. March 23-24 2024. 35th Canberra Model Railway Expo, UC High School, 104 Baldwin Drive Kaleen. Open: 9am-5pm (Sat), 9am-3pm (Sun). Adults \$20, Children – school age and under free, Concession \$15.

Email: clubcmrci@gmail.com

Website: www.cmrci.info

DIAMOND CREEK – VIC. March 30-31, 2024. Easter Model Railway Exhibition. Community Bank Stadium, 129-163 Main Hurstbridge Road Diamond Creek VIC. Open: 9.30am-5pm (Saturday), 10am-4pm (Sun). Adults \$15, children \$5, family \$30.

Contact: Matt McMillan 0433 235 858.

Email: secretary@ymrc.org.au

BOWEN HILLS – QLD. May 4-5, 2024. AMRA Qld. Inc. Annual Brisbane Model Train Show 2024. Exhibition Building, Brisbane Showgrounds, 601 Gregory Terrace, Bowen Hills (cnr. Costin Street). Adults \$18.00, Concession \$12.00, Children under 16: free if accompanied by an adult. Tickets only available at the door.

www.brisbanemodeltrainshow.com.au

ROSEHILL – NSW. May 4-5, 2024 Great Train Show, Grand Pavilion, Rosehill Gardens Racecourse, Entry from James Ruse Drive or Grand Avenue, Rosehill. 9am-5pm (Sat), 9am-4pm (Sun). Adult \$20, Senior \$16, Child \$10, Family \$50.

Contact: Mike 0408 817 554.

Email: contact@greattrainshow.com.au

Website: www.greattrainshow.com.au

LAVINGTON – NSW. May 18-19, 2024. Murray Railway Modellers Show. Mirambeena Community Centre, 19 Martha Mews, Lavington. Open: 9am-5pm (Sat), 10am-4pm (Sun).

Contact: Grant: 0417 538 700.

<https://murrayrailwaymodellers.com.au>

GLEN WAVERLEY – VIC. June 8-10, 2024. Waverley Model Railway Club Annual Exhibition, Brandon Park Community Centre, 649 Ferntree Gully Road, Glen Waverley.

Open: 10am-5pm (Sat), 10am-5pm (Sun), 10am-4pm (Mon). Adults \$13, Children \$6, Family \$32.

Details: exhibitions@waverleymrc.org.au

STAWELL – VIC. July 13-14, 2024. Grampian Model Railroaders Inc, SES Hall Sloane St, Stawell Victoria Open: 9.30am-5pm (Sat) & 10am-4pm (Sun).

Enquiries: Stuart 0438 545 233

Website: www.gmrinc.org.au

MELBOURNE – VIC. August 3-4, 2024. Melbourne Showgrounds, Langs Road, Flemington. Open - 9am-5pm (Sat), 9am-4pm (Sun). Enquires: Clubrooms Telephone (03) 9885 7034.

Email: exhibitionamravic@gmail.com

HOBART – TAS. August 10-11, 2024. BRMA Model Train Show. Howrah Recreation Centre, Howrah Road, Howrah, Hobart. Contact: Model Train Show Coordinator, Alex van der Hek 0419 120 128

SUNBURY – VIC. October 19-20, 2024. Sunbury Model Railway Club 39th Annual Model Railway Exhibition. St Anne's Church Hall, 101 Riddell Rd, Sunbury, 3429. Open: 10am-5pm (Sat), 10am-4pm (Sun). Adults \$10, Kids \$5, Family \$25 (2 Adults, 3 Kids).

SEMINARS & CONVENTIONS

EPPING – NSW. July 27, 2024. Modelling the Early Days of the NSW Railways. Dence Park Creative Centre, 26 Stanley Road, Epping. Registration essential.

ADELAIDE – SA. September 7, 2024 (to be confirmed). Registration at 8.30 for 9am start (Sat). Modelling the Railways of South Australia 28, at the Flinders Medical Centre lecture theatres, Bedford Park. Registration forms: MRSAC, PO Box 356, Parkholm SA 5043; www.mrsac.com; or selected hobby shops. Contact: at the above address or email at convention@mrsac.com.

OPEN DAYS

SLACKS CREEK – QLD. October 27, 2024. Logan district Model Railway Club Open Day Train Show and Sales, 76 Springlands Drive, Slacks Creek. Open: 9am-1pm (Sun). Adults \$5, kids under 12 free. Sausage sizzle, tea, coffee, soft drinks. Free parking.

ZILLMERE – QLD. April 20, July 20 & October 19, 2024, at AMRA Qld. Inc. premises, 20A Murphy Road Zillmere. Turn right at the Handford Road lights just before the rail overpass. Open: 8.30am-1.30pm.

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 ammagzn@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

Sutherland: A location to model

I have just been reading the article in the December 2023 issue of the AMRM titled 'A location to model Sutherland' by John Casey. Having grown up in Sutherland I found the article excellent. I should point out there was a running shed there until the early 1980s to service the CPHs. My father Bill Morton was the fitter there for about 25 years and I have no idea how long it existed before his tenure. It was only about 50 metres from the signal shed. Please see a picture I had taken in the 1970s of the running shed road - how I wish I could go back with a modern camera with unlimited shots!

Paul Morton
Katoomba NSW

I found a small error in the February 2024 issue on page 70 'A location to model: Sutherland'. The caption for 5801 states "Locomotive 5801 heads south through Sutherland in the 1940s". According to 'Steam Locomotive Data', 5801 entered service on the 19th of January 1950, so 5801 missed the 1940s by several weeks!

With reference to Gary Kahler's letter in the same issue, from 1964 to 1972 I lived in Loftus and caught the Up Waterfall to Sutherland railmotor set many times. The nickname 'Tin Hares' was very appropriate. To get to platform two at Sutherland, the Tin Hare set traversed a crossover from the Up main (leading to platform one) to the Down main to platform two. This crossover was taken at a very high speed and I am sure that no steam or mainline diesel could do the same without derailling!

The normal consist was a three car set comprising of a CPH at each end and a non powered car in between. This centre car was unusual and I never saw elsewhere, but on this service. I was told that it was a 'Silver City



Sutherland running shed road. Photo Paul Morton.

Comet' car, painted Indian red, not in stainless steel. The taper from the door to front/rear was quite distinctive. I don't remember it having concertina door connections which of course would have been useless when coupled to a CPH. This car had very comfortable seats and was quiet inside.

Roger Lloyd
Melbourne Vic

Victorian Railways Tait trains

I greatly enjoyed Doug Hart's essay on Victorian Railways Tait suburban electric train sets.

I noted that Doug had been unable to locate any photographs of 442M or 443M, which were constructed in 1936. However, I was lucky enough to photograph 443M leading a seven car Tait set towards Princes Bridge at Macleod in the late 1970's. 442M and 443M were constructed on the underframes of swing door 'Dog box' motors whose bodies had been scrapped following a collision at Croydon in 1935 (Source Peter J Vincent). Note the narrower underframe of 443M when compared with the trailer coach behind.

Alan Greenhill.



towards Princes Bridge at Macleod in the late 1970's. Photo Alan Greenhill.

Putting the O in Casterton

I would like to add some additional information on Scott Whitaker's latest instalment of 'Putting the O in Casterton'. His recommendation on the use of non-polar mineral turpentine for cleaning track is sound. The latest (January) issue of the on-line magazine, Model Railroad Hobbyist, contains an update on a well researched study into cleaning track that was first published in May 2019 issue. The use of non-polar solvents to eliminate micro-arcing is critical and their top recommendation is WD40 contact cleaner - not plain old WD40. WD40 contact cleaner is available from most Australian hardware stores.

Ross Hurley
Blackwood, SA

One offs

In recent times the AMRM Editor has commented about the crazy one-off models that we would like to see, either as a kit, 3D printed or in r-t-r format.

There are several wagons that are in good numbers which need producing in r-t-r. However, many of our manufacturers don't seem 'interested' in these. I would like to believe that some of these models are already nominated in closed circles amongst the manufacturers, considering the rivalry to be first in best dressed. I would like to nominate some models which I think are a long time coming.

1. NHLF limestone hopper wagon, originally nominated by TrainOrama but as of today for various reasons have not made it to fruition.

2. NHBF ballast hopper wagon. This wagon is long overdue to be replicated in model form. It has now been painted in several liveries through its lifetime. In recent years these wagons have returned to ballasting operations. It could be said "Who needs another ballast wagon?" The NHBF is a uniquely different wagon and would add some variation to modellers ballast wagon fleets. These have appeared in kit form over the years notably by Hanovale Castings who later produced them as a one-piece body.

3. SGMX / AOFX / AKFX open / steel wagon. This wagon seemed to be plentiful in its various forms during its lifetime. This wagon would appeal to many modellers in several time frames due to it travelling all over the standard gauge network, apart from its broad gauge wanderings. In model - kit form I have only seen it produced by Broad Gauge Bodies (BGB). This wagon is still active on Pacific National steel trains.

And now a couple for the 3D Print makers.

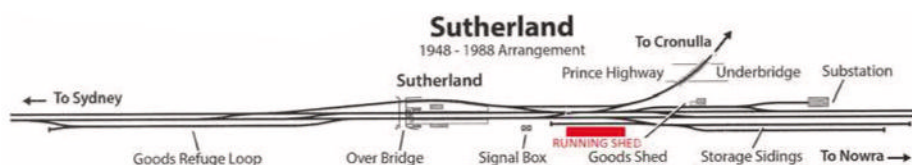
1. A 72-foot floor for the LIMA NSWGR TAM passenger coaches with the right bogie mountings. These could be supplied in kit form with battery boxes, water tanks and other detail to suit the three types of coaches. Over the years a few producers have done replacement floors, but these did not improve from the LIMA model.

2. Six-wheel bogies appropriate to the TAM passenger coaches. I know there are some producers doing these bogies in r-t-r.

3. NSWGR SBX / SFX passenger coaches.

I believe the models I have nominated would appeal to the manufacturers and enable them to return a dividend on their investment. There are probably other wagons and passenger coaches from the various systems in good numbers that are also worth producing.

Geoffrey Wilson
Norville, NSW



Sutherland track diagram showing the location of the running shed.

Vale

Charles Agland 1945 - 2023

Sadly, we record the death of Charlie Agland, in November 2023

Charles 'Charlie' Agland was born on 11th of March 1945, and soon developed a strong interest in all things rail, inspired by his father's work as Head Fitter at Cardiff locomotive workshops. While his first career was in public service, Charlie's second career brought him the greatest satisfaction and enjoyment – 'Chuck's Ballast Supplies'.

Charlie came to the Australian model railway hobby from lapidary, rocks. It is understood that when he crossed over, he sold everything to do with the rocks and threw himself into the Australian model railway scene. Initially an avid scratch builder in metal, he shared his skill of making New South Wales Government Railways (NSWGR) goods wagons in metal at exhibitions, challenging those looking on with 'If I can do it, so can you!' He made it look so easy almost forgetting how skilled he was.

At one exhibition he spoke to the Australian Model Railway Magazine team with a challenge of "Why don't the Australian layouts have Australian scenery? The colours are not right!" To emphasise his point of view he started building mini scenes using locally sourced materials; ballast and sand, pointing out the differences of the rocks and dirt between regions.

Frustrated by the lack of region-specific modelling ballast on the market, in the early 2000s Charlie produced a range of 'local' ballast, sourcing and creating model ballast from quarries including Marulan, Karuah, Martin's Creek, Marangaroo, and Bombo.

To further emphasise his point of view Charlie attended exhibition and model railway club meets giving demonstrations of applying the



scenery. He eventually built and displayed 'Chinaman's Creek', a Queensland Railways diorama that allowed him to emphasise his point of view and the vast contrasts of Australian scenery. Chinaman's Creek was covered in Australian Model Railway Magazine (issue 273), where James McInerney's photography showed the brilliance of Charlie's work.

Also, as an encouragement to his outlook, he donated a prize for the best scenic layout, the shield being displayed in the accompanying photograph.

Charlie and his wife Marilyn were regular features at various model exhibitions around the country,

demonstrating his scenery techniques as well as directly supplying the Chuck's Ballast product. He would often comment that the tonne of rocks on the trailer would become too much for him and he would have to give away the exhibition scene soon. But he always seems to soldier on. It is understood that his home was surrounded with buckets of ballast and sand from which he screened off the oversize residue.

After a period in care, Charlie passed away on 29th of November 2023, surrounded by his family. Charlie is survived by his wife, Marilyn, daughters Susan and Roslyn and their families.

Sadly, we have lost one of the Australian model railway hobby's engaging characters. The task of supplying area specific rocks and sand has fallen to others, but we will always fondly remember our Chuck.

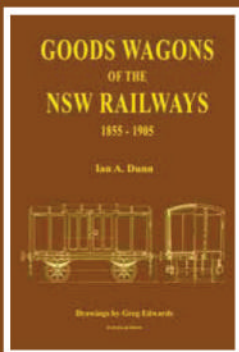
You made us think and changed our perspective on Australian scenery. Rest in peace Charlie.

Bob Gallagher

EVELEIGH PRESS

Continuing its series on the rolling stock which has served the New South Wales Railways, Eveleigh Press presents

GOODS WAGONS OF THE NSW RAILWAYS 1855–1905



This 368 page volume charts the growth of the NSWGR's wagon fleet over its first half century, from just 52 wagons at its inception to over 11,000 assorted vehicles in 1905.

There is a chapter on each type of wagon or van, photographs of each, generally illustrating a number of variations, all illustrated with 85 superb HO scale drawings by master draughtsman Greg Edwards.

This book supplies most of the answers for those seeking to understand the development of the NSWGR and its goods wagon fleet in the 19th century.

\$110.00 plus postage in Australia

SCR PUBLICATIONS

PO Box 345, Matraville 2036

www.australianmodelrailways.com

Telephone: (02) 9311 2036

THE 46TH ANNUAL

BRISBANE MODEL TRAIN SHOW

4th and 5th May
2024



EXHIBITION BUILDING, BRISBANE SHOW GROUNDS
CORNER GREGORY TERRACE AND CROSTON STREET, BOWEN HILLS

ADULTS: \$18 • CONCESSION: \$12 • CHILDREN UNDER 16: FREE*

TICKETS ONLY AVAILABLE AT THE DOOR

***CHILDREN UNDER 16 FREE WITH PAYING ADULT**

ALL COMPANION CARDS ACCEPTED



PRESENTED BY
THE AUSTRALIAN
MODEL RAILWAY
ASSOCIATION
QUEENSLAND INC.



2024 GREAT TRAIN SHOW



For all the details, go to-
www.greattrainshow.com.au
contact@greattrainshow.com.au
2nd Hand Stall- Mike 0408 817 554



4-5 MAY
GRAND PAVILION
ROSEHILL RACECOURSE

2024 MODEL RAILWAY EXHIBITION

Presented by

Australian Model Railway Assoc. WA Inc.



Kindred Societies

Hobby stores

Lego®

Layouts of all sizes

Sat. June 22 &
Sun. 23, 2024
0800 to 1800 hrs

ADMISSION	
Family: 2 adults & accom. children	\$45
Adults:	\$20
Concession: Pensioner & Student	\$15
Children: 6 yrs & over	\$10
5 yrs & under	Free
Companion Card Friendly	
Tickets at the door (Cash or Card) Or Online (Through TryBooking)	

Silver Jubilee Pavilion,
Claremont
Showgrounds,
Claremont, Western
Australia

THE 2024 WORKSHOP ON MODELLING THE EARLY DAYS OF THE NSW RAILWAYS

will be held on

Saturday, 27 July 2024

at Dence Park Creative Centre
26 Stanley Road, Epping

Write for details. Regular attendees will be notified by post or email.

Registration essential.

Details of the programme to follow.

SCR PUBLICATIONS

PO Box 345, Matraville 2036

Phone: (02) 9311 2036

Email: amrmagzn@tpg.com.au

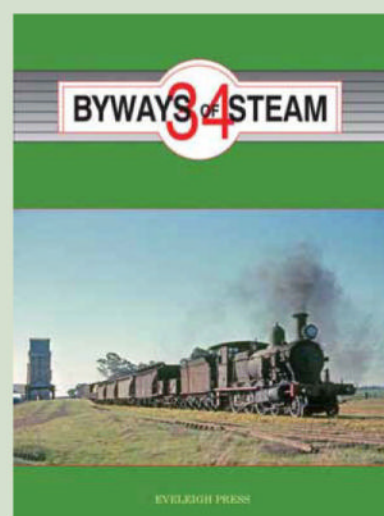
www.australianmodelrailways.com

BYWAYS OF STEAM 34

Byways of Steam 34 includes coverage of the Steam Locomotive Depot at Temora by Ray Love, Growing Up With Steam by Ian Wallace, R. K. Brown recalls his driving days at Goulburn, Leon Oberg tells the story of a fiery night at Goulburn and Ken Groves' recollections of working the mountains. This mammoth 232 page volume of *Byways of Steam* is scheduled for release in early 2024.

The volume contains:

- **Steam Locomotive Depots in NSW: Temora.** Ray Love covers the railway history of Temora. The term 'railway history' is relatively broad but in this volume, as in many previous issues, the focus is on the 'nuts and bolts' of the railway scene in the town, particularly the locomotive depot, the crews, the types of locomotives in use there and typical train working in the district of which Temora played a significant part.
- **Growing Up With Steam.** Ian Wallace remembers the era of steam he grew up with between 1957 and 1961 and his account tells the story of a young boy who became interested in railways, particularly operating steam locomotives, at an early age while attending primary school in the suburbs of Sydney. This interest developed during his teenage years into railway photography with, once again, steam locomotive operation playing a leading role.
- **Out of Goulburn – Driving Days.** R. K. Brown continues his story of his days on the New South Railways and undertakes his driver's exam.
- **Goulburns Depot's Fiery Night of Drama.** Leon Oberg tells the story of an oil fire which erupted at Goulburn locomotive depot about 11pm on Anzac Day 1951. It was described at the time as being the 'most spectacular fire' in the city's history.
- **Working the Mountains.** Stephen Halgren (in conjunction with the late Ken Groves) relates the story of a trip on 5707 working over the Blue Mountains with a goods train as recorded by well-known Victorian enthusiast Charles Gavan-Duffy in 1934.



BYWAYS OF STEAM 34 is \$50.00 from your local stockist or by mail order, plus postage of \$11.00 from

SCR PUBLICATIONS

PO Box 345 MATRAVILLE 2036
www.australianmodelrailways.com

Telephone: (02) 9311 2036
TRADE ENQUIRIES WELCOME

AUSTRALIAN

MODEL RAILWAY

MAGAZINE

The best in Australian railway modelling
direct to your screen



Why you should subscribe?

It really does make sense. We know it is sometimes difficult to find AMRM at the newsagent or hobby shop. We are working to improve that, but a subscription makes it so much easier to ensure that you never miss a copy. Your copy of the *Australian Model Railway Magazine* can be delivered to your mailbox and now also **direct to your screen!**

Yes, your favourite magazine is now also available online, the same subscription rate applies to either the print or digital copy, but the best choice is to select both, which only adds \$9.95 to the normal subscription price.

Overseas subscribers who select only the digital version will now pay the same as Australian subscribers, ie no additional postage costs.

SUBSCRIPTION RATES

Australian Subscribers

One Year (6 issues) Print **or** Digital \$66.00
One Year (6 issues) Print **and** Digital \$75.95
Two years (12 issues) Print **or** Digital \$127.00
Two years (12 issues) Print **and** Digital \$145.90
Three years (18 issues) Print **or** Digital \$188.00
Three years (18 issues) Print **and** Digital \$217.85

Overseas Subscribers

Asia-Pacific

One Year (6 issues) Print \$105.00
One Year (6 issues) Digital \$60.00
One Year (6 issues) Print **and** Digital \$114.95

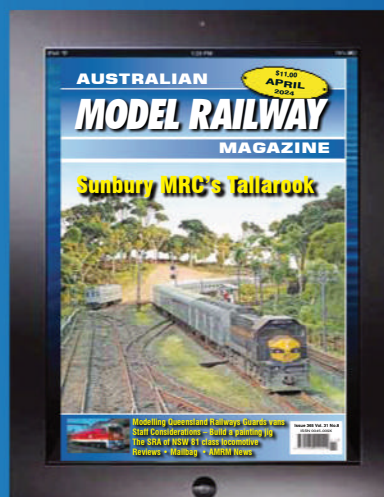
Rest of the world

One Year (6 issues) Print \$132.00
One Year (6 issues) Digital \$60.00
One Year (6 issues) Print **and** Digital \$141.95

**All overseas print copies are sent by airmail.
Please highlight or circle the option required.**



The digital version using Zinio Reader can be viewed on PC and Apple computers, iPad and Android tablets.



Order Form (Feel free to copy to preserve your magazine)

Name.....
Address

Postcode.....
Phone

Email

Please start/continue my subscription from Issue

I enclose a cheque payable to SCR Publications,
PO Box 345 Matraville NSW 2036 for \$..... or charge
\$..... to my Visa/MasterCard

Expiry ____ / ____
Current Membership No.
Name on card

Signature.....

You can also subscribe online at www.australianmodelrailways.com

HOBBY SHOP DIRECTORY

NSW

Australian Modeller
Unit 68/45 Powers Road
SEVEN HILLS NSW 2147
Phone: (02) 9620-9035
Fax: (02) 9620-6695

We stock over 6000 Australian Outline Model Railway Products
Come and visit our brand new Sydney showroom. We carry all major brands including: S2S Models, Austrains, Eureka Models, Trainorama, On Track Models, Bendigo Rail Models, Powertine, Southern Rail Models & Auscision. Huge range of scenery, track, scratch building materials, DCC systems & decoders available both in store & online. Visit our online store for full product listing with images of every single product we sell.
Website: www.australianmodeller.com.au
Email: information@australianmodeller.com.au

Open every Saturday 10am - 4pm

Australian Modeller is part of the AUSCISION GROUP

AUSTRALIAN RAILWAY HISTORICAL SOCIETY
Railway Bookshop
5 Henderson Road Alexandria 2015
Open Monday to Saturday - 9.00am to 5.00pm

www.arhnsnsw.com.au email: sales@arhnsnsw.com.au
Very fast mail order service or order securely online
Phone 02 9699 4595

COME AND VISIT OUR NEW PREMISES AT ALEXANDRIA, WHERE WE HAVE AN ENORMOUS RANGE OF SECOND HAND BOOKS

WOODPECKER MODEL RAILWAYS
www.woodpeckermodelrailways.com.au
Shop 8/7 Joyce Street, PENDLE HILL 2145
Open Tuesday - Friday 10am - 5.30pm
Saturday 9am - 2pm
Phone (02) 9636 3855

QLD

HOBBYRAMA
EVERYTHING IN MODEL TRAINS, - ALL SCALES
BEGINNERS OR EXPERTS, CONSULT US FIRST
FREE PARKING - OPEN 7 DAYS
PH 07 3352 3333 FAX 07 3352 3300
MAIL ORDERS - All major Credit Cards & EFTPOS welcome
Cnr Stafford Rd & Shand St, Stafford 4053

M&K MODEL RAILWAYS
▲ For all model trains and accessories ▲ New and second hand
▲ All gauges and leading brands ▲ Mail orders welcome
▲ Indoor and outdoor model train tourist attraction
▲ Retail shop, ride-on train, tea room, groups welcome
50 Old Maryborough Road, Pialba 4655
Phone: (07) 4124 1979
www.mkmodelrailways.com.au Email: mkrail@bigpond.net.au
Facebook: M & K Model Railways

VIC

BRANCH LINE
Suppliers of Fine Model Railway and Constructive Hobby Equipment
490 Dorset Road, Croydon 3136
Ph: (03) 9723 1211
Fax: (03) 9723 5432 Website: www.branchline.com.au
Email: trains@branchline.com.au
Hours: Mon.-Fri. 10am-5pm, Sat. 10am-4pm
Phone, Fax, Mail & Credit Card Orders Welcome.

The Model Emporium Hobby Store
Trains, Planes, Automobiles & Hobby Supplies
Open Tuesday to Saturday
20 Station Road, Cheltenham, Vic.
(03) 8555 0892
www.modelemporium.com.au

TRAINWORLD
290 Bay St, Brighton, Victoria 3186
Ph: (03) 9596 6342 or Fax: (03) 9596 3917
internetsales.tw@trainworld.com.au www.trainworld.com.au
[facebook.com/trainworld](https://www.facebook.com/trainworld)
OPEN 7 DAYS, 360 Days per year
Monday to Thurs 10am - 6pm Friday 10am - 9pm Sat 9am - 5pm
Sunday & Public Holidays 11am - 4pm
We do: orders, back orders, holds, lay bys, mail orders, phone orders, service and advice.
We accept: Eftpos, Visa, Mastercard, money orders or cash.

SA

JUNCTION MODELS
Your Model Railway Specialist
Bankcard/Visa/Mastercard/Eftpos Accepted
MAIL ORDER WELCOME
OPEN TUESDAY TO SUNDAY EXCEPT PUBLIC HOLIDAYS
SHOP 4/449 MAIN NORTH ROAD ENFIELD S.A. 5085
Phone: (08) 8349 7464 sales@junctionmodels.au
www.junctionmodels.com.au

ORIENT EXPRESS
2 King William Road, Unley SA 5061
Trading Hours: Mon-Fri 10am-6pm Sat 10am-4pm
Ph: (08) 8271 7861
orientexpressmodels.com.au
sales@orientexpressmodels.com.au

MARKET PLACE

COMMERCIAL: \$9.00 per line, minimum of \$21.00. Continuous or Advance insertions not guaranteed.

PRIVATE: 60 cents per word - name, address and phone number free. Minimum \$6.00 per insertion. Continuous insertions not guaranteed.

All monies must accompany copy, which must be written clearly on paper or emailed to amrmagzn@tpg.com.au. Phone insertions not accepted.

Send all copy and payment to SCR Publications, PO Box 345, MATRAVILLE, 2036. All copy must be received by advertising deadline for the issue required. (Advertising Deadlines listed on page 5.)

WANTED

Athearn HO scale USRA Light Mikado. Ken Cowen 07 4600 4907 cowen.kenj@gmail.com

**Your customers can't buy your product if they don't know it exists...
Advertise in AMRM!**

COMPETITION AND CONSUMER ACT 2010

The above act contains strict regulation on advertising. It is not possible for this company to ensure that advertisements which are published in this magazine comply with the Act and the responsibility must therefore be on the person, company or advertising agency submitting the advertisement for publication. In case of doubt, consult your legal adviser.

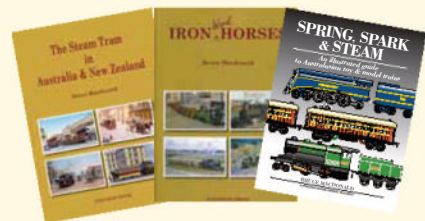
SCR Publications
PO Box 345, Matraville 2036

EVELEIGH PRESS

proudly presents the

BRUCE MACDONALD COLLECTION

Three unique books on Australian model railways, tramways and industrial railways



THE STEAM TRAM IN AUSTRALIA & NEW ZEALAND
\$70.00 plus postage

IRON WORK HORSES
\$54.00 plus postage

SPRING, SPARK & STEAM
\$60.00 plus postage

SCR PUBLICATIONS

PO Box 345 MATRAVILLE 2036

Telephone (02) 9311 2036

www.australianmodelrailways.com



ADVERTISING DEADLINE

June 2024 Issue 366

Advertising deadline is:
11 April 2024

The June 2024 issue should be available at the normal outlets around 16 May 2024.

HOBBY SERVICES DIRECTORY

DATA SHEETS

Highly detailed drawings to HO scale with photographs and information describing NSWGR locomotives and Lineside Data Sheets, drawings and information describing NSWGR buildings and structures. New sheets produced regularly.

12 WHALAN PLACE, KALEEN, ACT 2617

Email: datasheet.greg@gmail.com
Website: nswgrdrawingsbydatasheets.com

SAN MATEO LINE

Searchlight Signals for VR and SAR in HO and N. Colour Light Signals for QR and NSW in HO. Upper Quadrants for VR and SAR in HO. VR Somersault Lattice Mast Semaphores. RTP Etched brass kits with LEDs or fully assembled and painted models, made to order. Available from hobby shops or **San Mateo Line**, PO Box 2205, Mildura 3502 www.sanmateoline.com.au sales@sanmateoline.com.au **Ph. 0428 236 055**



WOMBAT MODELS

Maker of Fine Models

HO NSWGR C30T RTR

Email: wombatmodels@gmail.com
web: wombatmodels.com.au
M: 0466-940-646



REDFERN WORKS

HO scale kits for pre-1900 NSWGR
using 3D print, urethane & brass castings/etches

1855 A, 1858 D (10) & 1878 Gun Powder goods wagons
1st & 3rd 1855 Sydney Railway Company Cars
16 Green St., Kogarah, 2217 0432 882 593
<https://redfernworks.com.au/>



THE track underlay for HO/OO, HOm and N Gauge flex track.
Available in various profiles to suit your layout needs.
Designed and manufactured in Australia from long life XLPE.
Ask your local hobby supplier for TRACKRITE Flexible Track Underlay or contact us for more details.

J & K HOBBIES, PO Box 28, Albury NSW 2640
Ph: (02) 6041 4098. Mob: 0438 414 098. Email: jkhobbie@draget.com.au

EZI KITS

Quality NSWGR "Early Days" loco kits (HO) including the Class 1, A93, B205, T14, D334, D261, J522, J131, Q158 and CC79.

Later period kits include Z13, Z16, Z19, Z24, Z25 and Z26.

All kits are complete with motor, gearbox, wheels, etc.
Email newbj48@gmail.com
or phone 02 6254 2526



We offer a
Custom Decal Service
FREE QUOTES

Printers & Designers of Quality Decals for all Scales & Models
Email: signsof1@bigpond.com Phone: (08)8280 9117

Gwydir Valley Models



- EasyDCC Command Control
- FastTracks Point Jigs
- TCS & Soundtraxx Decoders
- IRDOT Infrared Detectors

Ph: 02 6732 5711

www.gwydirvalleymodels.com

When you attend, tell them you saw it in AMRM!

SCMRA SERVICE DIVISION

The Southern Cross Model Railway Association offers AMRM readers a number of services.

Photocopies of out of print issues of AMRM are available at a cost of \$1.20 a page. A minimum charge of \$5.50 is applicable plus postage. Payment can be made in \$1.20 stamps for orders under \$7.20. Just check the indexes for the article you require and write to the SCMRA Service Division, with (estimated) payment. Extra payment, if needed will be advised.

Magazine Binders for AMRM and other similar sized magazines are available in blue vinyl and are equipped with twelve wire holders. Each binder costs \$20.00, plus \$11.00 postage within Australia. A name sheet showing the magazine's title and volume number for insertion in the plastic pocket on the binder spine is included with each order.

AMRM indexes: Indexes for Volumes 13-28 are available at a cost of a \$1.20 stamp per single order or 2 x \$1.20 stamps for multiple indexes. To obtain these, send the stamp/stamps and a stamped self addressed 95mm x 225mm envelope (for a single index) or larger 230mm x 320mm envelope stamped \$3.60 for multiple indexes with a request detailing the indexes required. Indexes are also available to download from www.australianmodelrailways.com

For further details on service items write to:

SCMRA

PO Box 345, MATRAVILLE, 2036
www.australianmodelrailways.com

BACK ISSUES

No.209 - April 1998	No.215 - April 1999
No.210 - June 1998	No.216 - June 1999
No.211 - August 1998	No.217 - August 1999
No.212 - October 1998	No.218 - October 1999
No.213 - December 1998	No.219 - December 1999
<i>The above issues are priced at \$5.50 a copy, plus postage.</i>	
No.220 - February 2000	No.221 - April 2000
No.222 - June 2000	
<i>The above issues are priced at \$5.90 a copy, plus postage.</i>	
No.223 - August 2000	No.224 - October 2000
No.225 - December 2000	No.226 - February 2001
No.227 - April 2001	No.228 - June 2001
<i>The above issues are priced at \$6.50 a copy, plus postage.</i>	
No.229 - August 2001	No.235 - August 2002
No.230 - October 2001	No.236 - October 2002
No.231 - December 2001	No.237 - December 2002
No.232 - February 2002	No.238 - February 2003
No.233 - April 2002	No.239 - April 2003
No.234 - June 2002	No.240 - June 2003
<i>The above issues are priced at \$7.00 a copy, plus postage.</i>	
No.241 - August 2003	No.247 - August 2004
No.242 - October 2003	No.248 - October 2004
No.243 - December 2003	No.249 - December 2004
No.244 - February 2004	No.250 - February 2005
No.245 - April 2004	No.251 - April 2005
No.246 - June 2004	No.252 - June 2005
<i>The above issues are priced at \$7.50 a copy, plus postage.</i>	
No.253 - August 2005	No.254 - October 2005
No.255 - December 2005	No.256 - February 2006
No.257 - April 2006	No.258 - June 2006
No.259 - August 2006	No.260 - October 2006
No.261 - December 2006	No.262 - February 2007
No.263 - April 2007	No.264 - June 2007
No.265 - August 2007	No.266 - October 2007
No.267 - December 2007	No.268 - February 2008
No.269 - April 2008	No.270 - June 2008
No.271 - August 2008	No.272 - October 2008
<i>The above issues are priced at \$8.00 a copy, plus postage.</i>	
No.273 - December 2008	No.274 - February 2009
No.275 - April 2009	No.276 - June 2009
No.277 - August 2009	No.278 - October 2009
No.279 - December 2009	No.280 - February 2010
No.281 - April 2010	No.282 - June 2010
No.283 - August 2010	No.284 - October 2010
No.285 - December 2010	
<i>The above issues are priced at \$8.50 a copy, plus postage.</i>	
No.286 - February 2011	No.287 - April 2011
No.288 - June 2011	No.289 - August 2011
No.290 - October 2011	No.291 - December 2011
No.292 - February 2012	No.293 - April 2012
No.294 - June 2012	No.295 - August 2012
No.296 - October 2012	No.297 - December 2012
<i>The above issues are priced at \$9.00 a copy, plus postage.</i>	
No.298 - February 2013	No.299 - April 2013
No.300 - June 2013	No.301 - August 2013

No.302 - October 2013	No.303 - December 2013
No.304 - February 2014	No.305 - April 2014
No.306 - June 2014	No.307 - August 2014
No.308 - October 2014	No.309 - December 2014
<i>The above issues are priced at \$9.50 a copy, plus postage.</i>	
No.310 - February 2015	No.311 - April 2015
No.312 - June 2015	No.313 - August 2015
No.314 - October 2015	No.315 - December 2015
No.316 - February 2016	No.317 - April 2016
No.318 - June 2016	No.319 - August 2016
No.320 - October 2016	No.321 - December 2016
No.322 - February 2017	No.323 - April 2017
No.324 - June 2017	No.325 - August 2017
No.326 - October 2017	No.327 - December 2017
No.328 - February 2018	No.329 - April 2018
No.330 - June 2018	No.331 - August 2018
No.332 - October 2018	No.333 - December 2018
No.334 - February 2019	No.335 - April 2019
No.336 - June 2019	No.337 - August 2019
No.338 - October 2019	No.339 - December 2019
<i>The above issues are priced at \$10.00 a copy, plus postage.</i>	
No.340 - February 2020	No.341 - April 2020
No.342 - June 2020	No.343 - August 2020
No.344 - October 2020	No.345 - December 2020
No.346 - February 2021	No.347 - April 2021
No.348 - June 2021	No.349 - August 2021
No.350 - October 2021	No.351 - December 2021
No.352 - February 2022	No.353 - April 2022
No.354 - June 2022	No.355 - August 2022
No.356 - October 2022	No.357 - December 2022
No.358 - February 2023	No.359 - April 2023
No.360 - June 2023	No.361 - August 2023
No.362 - October 2023	No.363 - December 2023
No.364 - February 2024	No.365 - April 2024

The above issues are priced at \$11.00 a copy, plus postage.

POSTAGE:

Australia: \$3.30 (250g); \$5.50 (500g)
Overseas:
New Zealand: \$8.10 (250g); \$12.00 (500g).
Asia/Pacific: \$8.80 (250g); \$13.10 (500g).
Rest of World: \$13.50 (250g); \$20.00 (500g)

Larger parcels – by surface mail

No. of Copies

	Base rate for 3-4 copies	Plus for each additional 4 copies
New South Wales	11.00	0.50
Victoria, South Australia, Queensland	12.00	1.00
Tasmania & Western Australia	13.00	2.20
Northern Territory	14.50	3.00
Overseas	Rates on application	

Please list issues required on a sheet of paper separate from any other matter, complete with printed postage instructions (i.e. name and address). Please allow at least 21 days for the delivery of goods.

Post your order and payment to:

SCR PUBLICATIONS

PO Box 345 MATRAVILLE 2036

Cheque, money order or credit card accepted

Orders can also be made online at www.australianmodelrailways.com

Ixion

Model Railways



The HO scale VR bogie sheep and cattle wagons are here!

Available from good model shops, and from the Ixion website shop.

MF/VSBY Cattle wagon: single \$84.50, 3-pack \$253.50

LF/VSAY Sheep wagon: single \$89.50, 3-pack \$268.50



The re-run of the VR J Class 2-8-0 is available @ \$625.00. Numbers are: J500, J507 and J515 (coal tender), and J549 and J550 (oil tender). All red-edge footplate except J507.



**Ixion's next HO model will be the VR A2 4-6-0 locomotive.
Variations may include both coal and oil tenders, spoked or Boxpok driving wheels and Stephenson or Walschaert's valve gear.**

For updates follow our Facebook page - see our website for the link.

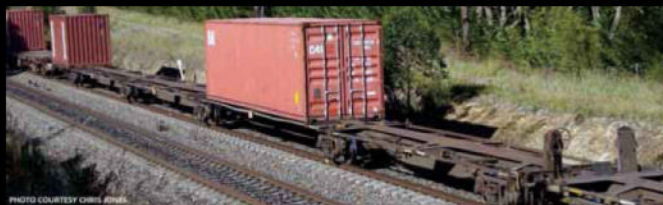
**Ixion Model Railways Australia Pty Ltd
Sales: 0412 574 151 Technical advice: 0433 646 393
Website: www.ixionmodels.com Email: info@ixionmodels.com**

RRAY/RRBY/RRGY

5 CAR ARTICULATED CONTAINER WAGON

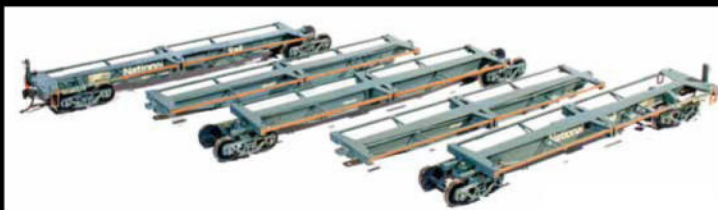
Great Model Sold Out in 3 weeks

Coming May 2024



Second Production Run

- * Coming May 2024
- * Same great Quality
- * Price increase to \$399 due to Exchange Rate



RRBY National Rail



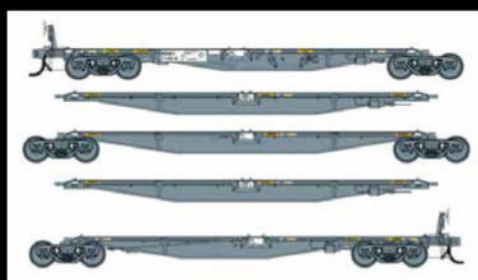
RRAY Pacific National Blue



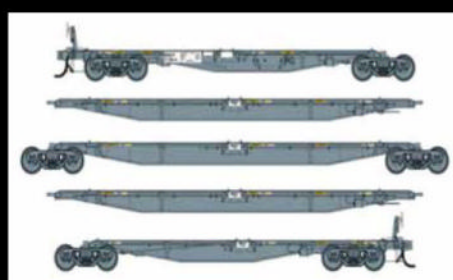
RRAY Pacific National Grey



RRBY Pacific National Grey



RRGY Pacific National



Features

- * Ready to run
- * Diecast metal body (no extra weight required for empty running)
- * Genuine Kadee 158 whisker couplers
- * Super detailed
- * Factory painted & decorated
- * Pacific National & National Rail liveries
- * 3 wagon types

48' Domestic Containers

AVAILABLE NOW



www.southernrailmodels.com.au

ADVERTISING INDEX

All Aboard	6	Early Days of the NSW Railways	70	Modelling Early Days of NSW	72	SCMRA Seminar	76
AMRA-QLD 2024 Train Show	71	Epping Model Railway Layout	12	On Track Models	10	SCR Publications	68, 73
AMRA-WA 2024 Exhibition	72	Eureka Models	15	Orient Express Wholesalers	11	SDS Models	2, 16, 17
Auscision	7, 13	Eveleigh Press	8, 72, 74, 78	Ozrail Model Trains	3	Southern Rail	77
Australian Model Craft Co	80	Great Train Show	71	Pamak	8	Steam Era Models	12
Berg's Hobbies	14	IDR Models	14	Powerline	6	Track Planning Services	12
Casula Hobbies	9	Ixion Model Railways	76	RW Hobby	12	Train World	79
Decoder Wiz	12	MKN Digital	12	Scale Model Co	8		

Eveleigh Press Publications

If your local hobby shop does not stock Eveleigh Press books, then order direct from SCR Publications.

Unless specifically stated in the price, items posted incur a packaging and postage rate of \$11 plus \$1 for each additional item up to a maximum of \$15.00 and must be added to the order total.

2024 AMRM Calendar (\$25.00 including postage)	☐	\$		Byways of Steam: 20, 21 & 22 (\$40.00 each plus postage)	☐	\$	
38 – 2023 Reprint (\$80.00 plus postage)	☐	\$		Byways of Steam: 23 (\$38.00 plus postage)	☐	\$	
44 – The World Down Under (\$65.00 plus postage)	☐	\$		Byways of Steam: 24, 25 & 26 (\$40.00 each plus postage)	☐	\$	
46 – Portrait of a Classic (\$70.00 plus postage)	☐	\$		Byways of Steam: 27 (\$45.00 plus postage)	☐	\$	
A History of Clyde Steam Era (\$90.00 plus postage)	☐	\$		Byways of Steam: 28 (\$45.00 plus postage)	☐	\$	
A History of Hudson Brothers (\$75.00 plus postage)	☐	\$		Byways of Steam: 29 (\$45.00 plus postage)	☐	\$	
A History of Tulloch (\$85.00 plus postage)	☐	\$		Byways of Steam: 30 (\$45.00 plus postage)	☐	\$	
Alco DL541: NSW 45 & SAR 600 Classes (\$30.00 plus postage)	☐	\$		Byways of Steam: 31 (\$50.00 plus postage)	☐	\$	
AMRM on DVD, Volume 1 (\$25.00 including postage)	☐	\$		Byways of Steam: 32 (\$50.00 plus postage)	☐	\$	
AMRM on DVD, Volume 2 (\$25.00 including postage)	☐	\$		Byways of Steam: 33 (\$50.00 plus postage)	☐	\$	
AMRM on DVD, Volume 3 (\$25.00 including postage)	☐	\$		Byways of Steam: 34 (\$50.00 plus postage)	☐	\$	
AMRM on DVD, Volume 4 (\$25.00 including postage)	☐	\$		Byways of Steam: Encore (\$35.00 plus postage)	☐	\$	
AMRM on DVD, Volume 5 (\$25.00 including postage)	☐	\$		The Fourth Byways Collection (\$100.00 plus postage)	☐	\$	
AMRM on DVD, Volume 6 (\$25.00 including postage)	☐	\$		The Fifth Byways Collection (\$100.00 plus postage)	☐	\$	
AMRM on DVD, Volume 7 (\$25.00 including postage)	☐	\$		The Sixth Byways Collection (\$115.00 plus postage)	☐	\$	
AMRM on DVD, Volume 8 (\$25.00 including postage)	☐	\$		The Seventh Byways Collection (\$115.00 plus postage)	☐	\$	
AMRM on DVD, Volume 9 (\$25.00 including postage)	☐	\$		The Eighth Byways Collection (\$115.00 plus postage)	☐	\$	
AMRM on DVD, Volume 10 (\$25.00 including postage)	☐	\$		The Ninth Byways Collection (\$115.00 plus postage)	☐	\$	
AMRM on DVD, Volume 11 (\$25.00 including postage)	☐	\$		The Tenth Byways Collection (\$115.00 plus postage)	☐	\$	
AMRM on DVD, Volume 12 (\$25.00 including postage)	☐	\$		The Eleventh Byways Collection (\$130.00 plus postage)	☐	\$	
AMRM on DVD, Volume 13 (\$25.00 including postage)	☐	\$		Clydes Among the Cane: Fiji's Sugar R'way (\$20.00 plus postage)	☐	\$	
AMRM on DVD, Volume 14 (\$25.00 including postage)	☐	\$		Coaching Stock of the NSW Railways 1 (\$100.00 plus postage)	☐	\$	
AMRM on DVD, Volume 15 (\$25.00 including postage)	☐	\$		Coaching Stock of the NSW Railways 2 (\$120.00 plus postage)	☐	\$	
AMRM on DVD, Volume 16 (\$25.00 including postage)	☐	\$		Coaching Stock of the NSW Railways 3 (\$110.00 plus postage)	☐	\$	
AMRM on DVD, Volume 17 (\$25.00 including postage)	☐	\$		Coaching Stock of the NSW Railways 1-3 (\$300.00 plus postage)	☐	\$	
AMRM on DVD, Volume 18 (\$25.00 including postage)	☐	\$		Day of the Goods Train (\$60.00 plus postage)	☐	\$	
AMRM on DVD, Volume 19 (\$25.00 including postage)	☐	\$		Essays in Steam (\$15.00 plus postage)	☐	\$	
AMRM on DVD, Volume 20 (\$25.00 including postage)	☐	\$		Gerald Dee (\$60.00 plus postage)	☐	\$	
AMRM on DVD, Volume 21 (\$25.00 including postage)	☐	\$		Goods Wagons of the NSW Railways 1855-1905			
AMRM on DVD, Volume 22 (\$25.00 including postage)	☐	\$		(\$110.00 plus postage)	☐	\$	
AMRM on DVD, Volume 23 (\$25.00 including postage)	☐	\$		Green Diesels – 40 and 41 Classes (\$30.00 plus postage)	☐	\$	
AMRM on DVD, Volume 24 (\$25.00 including postage)	☐	\$		History of the SAR, Volume 5 (\$70.00 plus postage)	☐	\$	
Australian Trains:				History of the SAR, Volume 6 (\$70.00 plus postage)	☐	\$	
Newcastle Express (\$22.00 including postage) LOW STOCK	☐	\$		Iron Work Horses (\$54.00 plus postage)	☐	\$	
Central West Express (\$22.00 including postage)	☐	\$		Kicked Out Like A Dog –			
Southern Highlands Express (\$22.00 including postage)	☐	\$		The Turbulent Career of Thomas Midelton (\$40.00 plus postage)	☐	\$	
Diesel Spectrum:				NSW Railways in Colour 1855-1955 (\$145.00 plus postage)	☐	\$	
NSW – Reverse Livery (\$12.00 including postage)	☐	\$		O.B. Bolton's Engine Portraits (\$45.00 plus postage)	☐	\$	
Qld – The Blue and White Era (\$12.00 including postage)	☐	\$		Ray Love's Days of Steam (\$50.00 plus postage)	☐	\$	
NSW – Candy Livery (\$12.00 including postage)	☐	\$		Shale & Shays (\$78.00 plus postage)	☐	\$	
Private Operators – Part 1 (\$12.00 including postage)	☐	\$		South Australian Steam Memories (\$65.00 plus postage)	☐	\$	
Australian Diesel Scene: 3 (\$25.00 plus postage)	☐	\$		South Maitland Railways (\$30.00 plus postage)	☐	\$	
Australian Diesel Scene: 4 (\$25.00 plus postage)	☐	\$		Spring, Spark & Steam (\$60.00 plus postage)	☐	\$	
Australian Diesel Scene: 5 (\$25.00 plus postage)	☐	\$		Standards in Steam: 53 & 55 Class Soft cover (\$50.00 plus postage)	☐	\$	
Australian Diesel Scene: 3, 4 and 5 (\$75.00 including postage)	☐	\$		Steam Across the Border (\$28.00 plus postage)	☐	\$	
Byways of Steam: 9 (\$27.00 plus postage)	☐	\$		Sydney Suburban Steam (\$30.00 plus \$7.20 postage)	☐	\$	
Byways of Steam: 10 (\$30.00 plus postage) LOW STOCK	☐	\$		The Steam Tram in Australia & New Zealand (\$70.00 plus postage)	☐	\$	
Byways of Steam: 11 & 12 (\$33.00 each plus postage)	☐	\$		Time of the Passenger Train – 1st Division	☐	\$	
Byways of Steam: 13 (\$38.00 plus postage)	☐	\$		Time of the Passenger Train – 2nd Division LOW STOCK	☐	\$	
Byways of Steam: 14 (\$34.00 plus postage)	☐	\$		Time of the Passenger Train – 3rd Division	☐	\$	
Byways of Steam: 15 (\$35.00 plus postage)	☐	\$		(\$60.00 each plus postage)			
Byways of Steam: 16, 17 & 18 (\$38.00 each plus postage)	☐	\$		AMRM Binders (\$20.00 plus postage)	☐	\$	
Byways of Steam: 18 (\$40.00 plus postage)	☐	\$		Plus Postage		\$	
Byways of Steam: 19 (\$38.00 plus postage)	☐	\$		Total		\$	

Cheque or Card Payment only. Cheques payable to SCR Publications. Allow at least ten working days for return of order.

SCR PUBLICATIONS

PO Box 345, MATRAVILLE 2036 • Phone (02) 9311 2036

Name
 Street.....
 Suburb Postcode.....
 Phone.....

Card Number ☐ Mastercard ☐ Visa

 Expiry date...../..... Signature.....

BOOKS CAN ALSO BE ORDERED ON LINE AT www.australianmodelrailways.com

TRAIN WORLD PTY LTD

290 Bay St, Brighton, Victoria, 3186.

Ph: (03) 9596-6342 Email: internetsales.tw@trainworld.com.au

www.trainworld.net.au / www.facebook.com/trainworld

Monday-Thursday 10am-6pm, Friday 10am-9pm, Saturday 9am-5pm, Sunday & Public Hol 11am-4pm



Victorian Railways 0-6-0 Y-Class.
Y-112. Newport Museum. (TWY-05)



Victorian Railways 0-6-0 Y-Class.
Y-108. Steam Rail Victoria. (TWY-04)



Victorian Railways 0-6-0 Y-Class.
Y-108. Black w/shunters steps. (TWY-03)

**First artwork and coloured samples only. Some tweaks and fixes to follow such as the brass.
Production and delivery expected in 2024.**

DC or DCC & Sounds, ORDER ON-LINE.

trainworld.net.au/collections/australian-locomotives-1/y-steam



TRAIN WORLD PTY LTD

ONLINE 24/7

www.trainworld.net.au

NEW

Ffestiniog Railway

00-9

BOWSIDER COACHES



GR-600A FR Short Bogie, Victorian, No. 17



GR-600B FR Short Bogie Coach, Victorian, No. 18



GR-601A FR Short Bogie Coach, Early Preservation Green, No. 17



GR-601B FR Short Bogie, Early Preservation Green, No. 18



GR-620A FR Long Bogie Coach, Victorian, No. 19



GR-620B FR Long Bogie, Victorian, No. 20



GR-621A FR Long Bogie Coach, Early Preservation Green, No. 19



GR-621B FR Long Bogie, Early Preservation Green, No. 20

Gwyndy Bank, by Callum Willcox
Photo: Railway Modeller

PECO

**Great Little
Trains**

PECO TV

Watch our special video of the new Bowsider coaches featuring exclusive behind the scenes footage at the Ffestiniog Railway. Search for **PECO TV** on **YouTube**.



AUSTRALIAN MODEL CRAFT CO.

P.O. Box 245 Arundel, QLD 4214 (Trade enquiries only)

If you cannot obtain any PECO product, contact us on the PECO HOTLINE: 07 5528 9686 for a list of AMC PECO Hobby Shops.