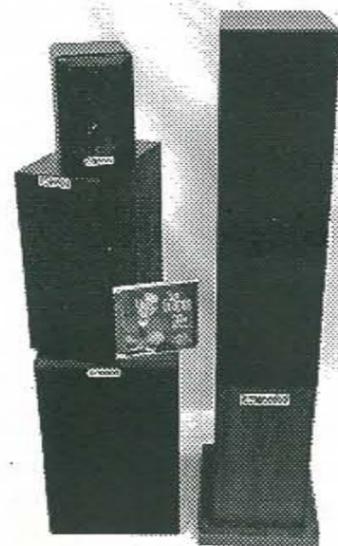


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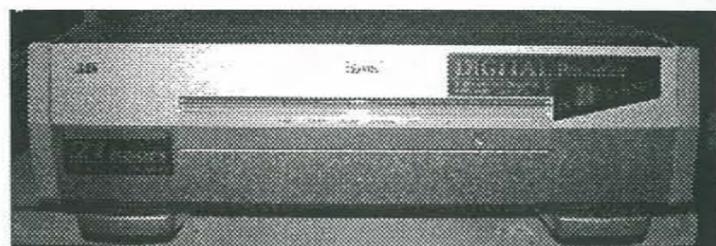


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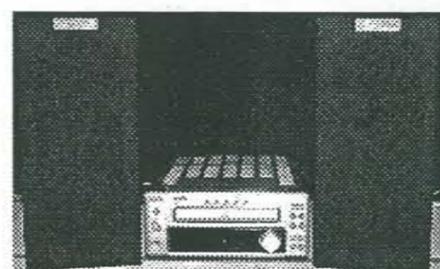
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MainLine

National Model Railroad Association Inc - Australasian Region

Summer 2000

Volume 17 Number 4



T R A M S
T R O L L E Y S &
T R A C T I O N

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SCENERY

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www.nmra.org.au

NMRA - SETTING THE STANDARDS IN RAILROAD MODELLING

ACHIEVEMENT PROGRAM

Model Railroad Engineer - Electrical



By Ken Scales, MMR
Achievement Program Chair

One of the easier AP categories to qualify for, if you already have a medium size large layout, is *Model Railroad Engineer Electrical*. To qualify for this certificate you must:

1. Construct and demonstrate on your own, or a club layout, the satisfactory operation of an electrical control system on a model railroad, capable of simultaneous and independent control of two mainline trains in either direction, and containing at least:
 - five electrical blocks
 - one mainline passing siding
 - one of the following: reversing loop, wye, turntable or transfer table
 - one yard with a minimum of three tracks and a switching lead independent of the mainline
 - facilities for the storing of at least two unused motive power units
 - one power supply with meter(s) and protective devices to ensure safe operation of the supply.
2. Wire and demonstrate the electrical operation of at least three of the following items:
 - turnout
 - crossing
 - crossover
 - double crossover
 - single slip switch
 - gauge separation turnout
 - double junction turnout
 - three way turnout
 - gauntlet turnout
 - spring switch
 - operating switch in overhead wire
3. Wire and demonstrate the satisfactory electrical operation of at least three of the following features:
 - Electrical turnout position indication on a control panel or at trackside for a minimum of four turnouts
 - Track occupancy indication on a control panel or at track side for a minimum of five blocks
 - Cab control, making provision for connection of at least two power supplies to a minimum of five blocks as the trains progress
 - Engine terminal including an electrically powered turntable or a transfer table, a minimum of three stall tracks and at least two blocked storage sections for parking locomotives outside the stall area
 - Two turnout junctions with electrical interlocking and protecting trackside signals
 - Constant intensity lighting
 - Electronic throttle with inertia and braking provisions
 - Grade crossing with electrically actuated warning indication
 - Two-way block signaling with automatic train detection for at least five blocks
 - Operating overhead wire and collecting current with either trolley poles or pantographs or both
 - Installation of an advanced electronic and/or computer control for the model railroad
 - Design, installation and operation of animated mechanical and/or electrical displays
 - Design, installation and operation of mechanical and/or electrical layout lighting displays
 - Installation of a command control receiver in a locomotive that is not plug-equipped
 - Installation of a command control throttle buss line around a layout capable of handling at least two throttles at three or more separate locations
4. Prepare a schematic drawing of the propulsion circuitry of the model railroad in Section 1 showing the gaps, blocks, feeders, speed and direction control, electrical switches and power supplies. Prepare schematic drawings identifying the wiring and components of the six items in Sections 2 & 3.

As I said above many modelers have most of these requirements on their layout. If you are one or two items short in categories 2 and 3 these can be built separately. There is no real judging. They simply must be done to a good standard and work correctly. If you require any more information, incentive or help with the paperwork contact the AP Chair whose name and contact details are in the Mainline magazine.

www.nmra.org

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Volume 17 Number 4

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The Sydney 2001 Convention

Long Weekend - June 2001

"Modelling with the Masters"

Modellers sharing their skills and techniques

The format will be similar to our previous successful Sydney Conventions with clinics on both Saturday and Sunday, and layout tours on the Monday. The convention dinner will be on the Saturday night.

Peter Jensen
Conference Chair
pmj@bigpond.net.au

Look out for more information over the coming weeks.

On the Cover: *Tram # 717 Destination Santa Monica Blvd.*

One of the famous big red interurban cars (Manufacturer unknown) used by Pacific Electric around Los Angeles in the 1920's and 1930's. Philip Moss took this close-up photo in June 1995 at the Orange Empire Railway Museum, Perris, CA.

Schedule of Divisional Meetings

New South Wales

All meetings start 2:00 Saturday unless indicated differently.

January	Sat 13 th	Modular Group Dence Park 26 Stanley Rd,	Epping	
February	Sat 17 th	George & Celeste Paxon 5 Appledon Ave	Wentworth Falls	4757 2629
March	Sat 10 th	Colin & Jan Brettle 140 Fragar Rd	South Penrith	4736 4266
April	Sat 12 th	Don Davis 5 Wake Place	Kings Park.	9671 4351
May	Sat 12 th	Ian Hopkins 18 Mason Street	Thirlmere	4683 1550
		Visit to Rail Transport Museum		

June 9.10.11 **Convention 2001** Venue to be advised

July	Sat 14 th	Piet & Jenny Hamersma 44 Superior Ave	Seven Hills	9622 1849
August	Sat 25 th	Trevor James Manadlong Rd,	Mandalong	4977 2816
		in conjunction with Newcastle Exhibition of the 25th - 26th		
September	Sat 18 th	John & Toni Saxon 186 Davistown Rd,	Yattalunga	4369 7456
October	[date tba]	Modular meeting Dence Park 26 Stanley Rd,	Epping.	9674 1563
November	[date tba]	Zig Zag Railway		
December		venue & date yet to be set.		

Please phone host if you are going to attend meeting. It is hard to cater when 6 people phone & 64 turn up.

Victoria

All meetings start 11:30 Sunday unless indicated differently.

February	Sun 11 th	Paul Richie 28 Ascot Street South,	Ballarat	(03) 5332 1138
March	Sun 18 th	John Beaton 25 Victoria Street,	Bacchus Marsh	(03) 5367 3128
April	Sun 22 nd	Gary Cronin 15 Scarlet Ash Circuit,	Eltham	(03) 9439 4489
May	Sun 13 th	Steve Cullen 67 Mowbray Crescent,	Melton	(03) 9746 6267
June	Sun 17 th	Ron Wrigglesworth 2 Terrigal Court,	Bayswater	(03) 9720 8076
July	Sun 15 th	Laurie Green 20 Nambour Drive,	Sunbury	(03) 9744 5188
August	Sun 12 th	Bob Backway 4 Tor Road,	Belgrave Heights	(03) 9754 6502
September	16 th	Gavin Hince 25 Dwyer Street,	Clifton Hill	(03) 9489 4527
October	14 th	Graham Meyer 2 Elizabeth Court,	Emerald	(03) 5968 4518
November	11 th	John Dennis 62 Owen Street,	Mitcham	(03) 9874 1684
December	09 th	Grant McAdam 194 Booran Road,	Ormond	(03) 9578 8685

Canberra

All meetings start at 2:00 pm Saturday unless indicated differently.

January	Sat 20 th	Host: Viv Brice
February	Sat 17 th	Host: John Bullen
March	Sat 17 th	Host: VOLUNTEER NEEDED
April	Sat 21 st	Host: John Gillies
May	Sat 12 th	Host: Ken Macleay (tentative)
June	Sat 2 nd	Host: VOLUNTEER NEEDED
July	Sat 7 th	Host: VOLUNTEER NEEDED
July	Sat 28 th	Host: VOLUNTEER NEEDED
September	Sat 1 st	Host: VOLUNTEER NEEDED
September	Sat 22 nd	Host: VOLUNTEER NEEDED
October	Sat 27 th	Host: VOLUNTEER NEEDED
November	Sat 24 th	Host: Stephen O'Brien

Queensland

February	10 th	Host: Glenn Stevens
April	14 th	Host: required
July	14 th	Host: Ken Leitch
September	8 th	Host: required
November	10 th	Host: required

For details of Queensland meetings venue and host, please contact Glenn Stevens on (07) 3201-5022.

MainLine

Official Publication of the
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of the
**NATIONAL MODEL
RAILROAD ASSOCIATION**

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Viv Brice
Gerry Hopkins
Philip Moss
Ken Scales

SUBMISSIONS: MainLine welcomes articles, photographs, drawings, cartoons and other railroad modelling related material as contributions to the mutual enjoyment of the hobby by the membership. Material should have wide appeal and preferably be sent by email or post to the editor. Articles may be submitted on 3.5" computer disks in any Windows or Macintosh based word processing format. Sharp photos, either B/W or Colour are welcome. Don't own a computer? That's fine - typewritten articles are also welcome.

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02 4369-7453

Australasian Region,
National Model Railroad Association
PO Box 714,
Willoughby NSW 2068

President's Report

A Year Gone, a Year Ahead



President Geoff Hoad

When I look back over this past year I am both pleased and concerned. Pleased because we as an Association have achieved so much, concerned because I know we could have done so much more.

The achievements have been organising and publishing the results of the member's survey, making significant savings to membership costs and reducing the costs of Mainline magazine publication. The disappointments have been in trying to implement the member's wishes. I am sorry to report that there is still a desire by some to hold back progress and oppose any change. This has slowed our progress considerably and caused a great deal of anguish all round.

Our other difficulty has been thinking 'big picture'. Too often, our efforts have been to micro-manage the activities of the Region. But when all is said and done we are making progress and moving forward. Let me reaffirm my commitment to making the strategic changes you have asked for in building membership, controlling membership costs and increasing member benefits.

We have also seen this year a sustained increase in meeting attendances with records being broken at least twice this year. More members are attending meetings and being involved. Most recently, I attended the Christmas meeting in Sydney, hosted by John Baker and attended by 135 plus members. The day was an unqualified success due to John's organisation and the support received by Ruth and Allan Garbutt and many others. This event was also attended by a number of special guests, all of whom are very involved in the retail side of the hobby. It was great to see local icons such as George Berg and Betty Patterson attend and share the enjoyment of the day with us.

I see one of the big challenges for next year in building a workable financial plan to manage income and expenditure so that we can manage increasing costs and a fluctuating US Dollar, as well as finance future member activities. Expect also to see the way we communicate with members to change and different approaches to be tried. In addition, we will start to aggressively market our Association in order to build membership. Early efforts in this field have proven to be very successful and show we can attract and retain new members.

This year has also been characterised by the hard work of a number of people, particularly at state level, who have 'gone the extra mile' so that others could share and enjoy the hobby. To all of you, my heartfelt thanks, for without the willing souls who give so freely of their time we would be but a shadow of ourselves.

So although this year was hard and difficult I believe we have made some significant progress and are well placed for the New Year. In the meantime, I would like, on behalf of the Board, to wish you and your families a very Happy Christmas and prosperous New Year! And whatever you do, have fun doing it.

Geoff Hoad

Sydney

October
by Gerry Hopkins MMR

As usual, the weather was just perfect for our first trip to the home of John & Natalie Montgomery at Shalvey. John's layout is housed around the wall of a two-car garage and runs on a new DCC system.

The layout is point to point and has steam power for the logging and mining operations - including a 2-truck shay. John has not added much scenery yet as he has thoughts of doing some changes first. John has to spread his time between model trains and his other model building, some of which was on display at the Newcastle Exhibition.

This is one of John's models that scored a place in last years convention. You can almost smell the gun powder in this one.

Thanks to John and Natalie for a great day.

November
by Steve Chapman.

The 18 November meeting was held at Mike and Carmel Bartlett's home at Newport, a far northern suburb of Sydney.

The layout is large at 34 feet long by 14 feet wide and is now almost fully scened. It is Union Pacific based and is a folded dogbone with 4 mainline electrical blocks and approximately another 25 subsidiary blocks. There are 85 powered turnouts, around eighty locomotives plus about three hundred items of assorted rolling stock.

Since our last visit Mike has added staging tracks which run from eight to fifty feet long. He has also added a fifty-foot passing loop on the main line providing great scenic treats watching meets of the long trains he features.

A great layout, one of our best and always a pleasure to visit.

President Geoff Hoad thanked Mike and Carmel for their hospitality and welcomed the new members and visitors present. Trustee David North thanked all the regular attendees, saying that it showed how popular these monthly layout visits were with up to 60 members and visitors attending.

David went on to remind everyone about the upcoming Christmas party at John Baker's home at Kellyville on 9 December.

The next meeting was announced to be at Dence Park,

Epping with SCMRA on 13th January 2001 commencing at 2.00pm. Although this is to be a module group meeting, all were invited and Southern Cross will be running a clinic on scenery techniques.

Members were reminded that if they are having trouble getting to the meetings, to advise one of the board members so that arrangements could be made to assist them with transport.

John Montgomery had gone to a lot of trouble to frame his NMRA meeting plaque that was recently presented to him and which he now proudly showed to those present.

It was announced that Alex Danilov has been appointed clinic organiser for Convention 2001 with interested members invited to offer their services to Alex as clinic presenters.

Finally, it was asked that the member who had borrowed the 2 audio CDs of the 1999 convention from the Library to return them promptly.

was using the group as a sounding board for some major decisions that he has to make on the final design, such as two or three (or even four) levels.

John has found that his original design did not allow much operating flexibility with too few passing sidings so he plans to up this number to six. Given the length of trains that he plans to run, there will be a lot of track required.

Continued on the next page/...

Finally, we visited John's layout room where he is modelling part of the Burlington Northern in the late '60's. To date, he has most of the two end helixes (helices?) built together with the bottom staging tracks. He was about to take a month off to do some serious modelling and

Canberra

by Viv Brice

At John Gillies' September meeting, we welcomed back our overseas travellers, and Rob Anderson from their recent overseas trips. John Bienkowitz enthralled us with his tales of his travels on the Alaska Railroad where he obviously had a great time. Rob Anderson then covered travelling by rail between San Francisco and San Jose. John Bullen displayed photographs of a European double deck car carrier with a twist - it is hinged in the middle to accommodate tight curves!

We held a very informative session about airbrushing including best paints to use, with some especially interesting comments by Stephen O'Brien, based on his experiences using different makes of paint.



At the ACT Division Xmas party, Viv Brice presents John Gillies with his Volunteer award in the Achievement Program, for long and devoted service as the ACT Division Superintendent. For Ken and John - thanks guys - it happened.

NSW December

The December Christmas party was an outstanding success, following a great deal of hard work and planning by John Baker.

About 135 members and their partners gathered in John's "shed," which used to house his daughter's antiques business. After a recent successful auction, the shed, a 70' by 30' monster, was empty and so was available for our xmas venue.

And what a perfect venue it was too. Large round tables and chairs were arranged, café style, with plenty of seating for all. Following a great luncheon, we were entertained by the fabulous singing Bennets (member Erik Bennet and his talented family). They have a good repertoire of railroad-related songs, after which, they led everyone in Xmas carols too.

With wine, layout and song, the afternoon passed very pleasantly indeed, with everyone thoroughly enjoying the day and the company.

Thank you John Baker for another of your professionally organised and well-planned Xmas functions. TE

Canberra October *Continued from Page 4/...*

Tony Payne was the lucky host for the October meeting, and he greeted us all with the news that he is emigrating, and plans to leave for Queensland around the end of the year. This is a great loss to the group and especially to the local Operations group as Tony did have a great operating layout. He had already dismantled the layout and in doing so, had found many items for which he could find no place in his future plans. Consequently, he generously offered these to the members present rather than take them to the tip and several of us took away some useful items.

Ian Petherick was visiting the area from Melbourne and took some time to tell us about Show'n'Tell, which is now part of each meeting there. To demonstrate, he showed us a painted brass locomotive and told us the story about why he had got it for such a low price - it only runs in one direction. Despite several attempts to fix it, which led to some success, an interstate move reversed all this and now it still only runs in

one direction! Ian also showed us a Bachman 4-8-2 and a diesel, both ready-to-run, and talked about ways that these HO models could be modified into something approaching narrow gauge in O scale.

The very enjoyable meeting ended up with watching a video of a few New Zealand model railway layouts. VB

Do you want to drive a locomotive?

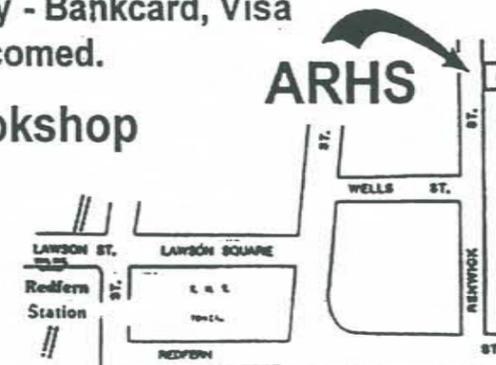
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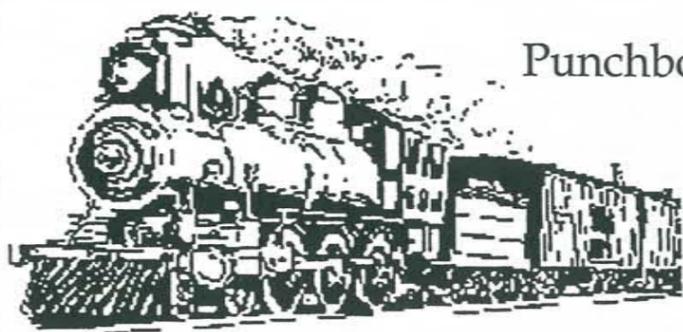
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LOCOMOTIVES AND ROLLING STOCK

Atlas, Stewart, Kato, Athern, Roundhouse, Rivarossi, Brass Locomotives, Powerline, A R-Kits, Ian Landsay kits, Main West Models, Lima, Con Cor, Ibertren, Bachman, Liliput, Jouef, Fleishman, Roco.

ACCESSORIES AND TOOLS

Atlas track and accessories ties, Peco, Shinohara, North Yard Wheels, Romford, Detail Associates, Wheel Works, Sentinel, Cal Scalé, Kadée, Mitronics, Labelle, Lubricants, Micro Scale Decals, Kerrob Models, AMRI Signals, J&C Models, Front Range, Brawa, Eda, Floquil, Dremel, Pro Edge Knives, Drills and Taps, K&S Metal, Fuller Pliers, Jewellers Screwdriver Sets, G-Clamps, and many, other tools.

BUILDINGS AND SCENIC ACCESSORIES

Atlas, Woodland Scenics, Design Preservation, Evergreen, Campbells, Fox Castings, L J Models, Pola, Heki, Heljan, Volmer, Preiser, Viking, Kibri, Brekina, Roco

MAGAZINES AND VIDEOS

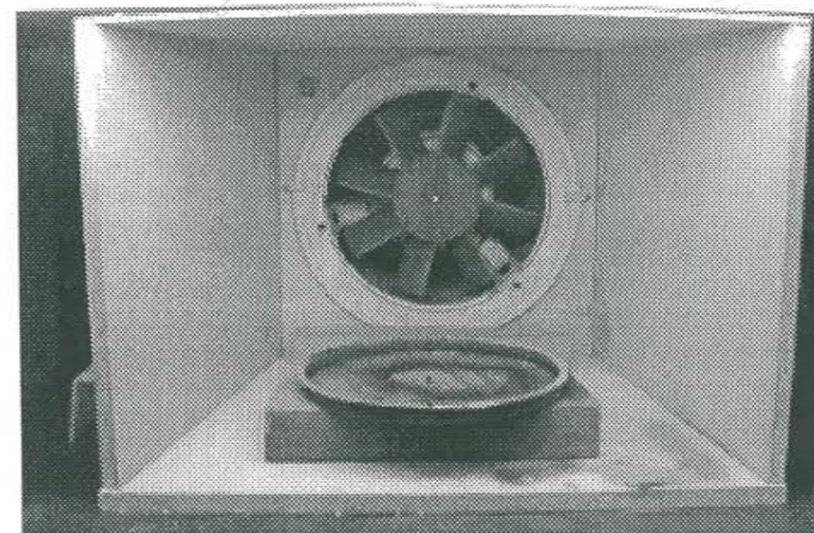
Australian, American, New Zealand & British Videos, N-Scale Magazine, Model Railroader, Rail Model journal Pacific Rail News Trains, Narrow Gauge and Shortline Gazette, Australian Railways, Roundhouse Bulletin, Australian Model Railway Magazine, Pacific Railway, Railway Digest, Main Line Modeller, Continental Modeller and Model Railroad Craftsman.

THE ONLY DRIVE-IN HOBBY SHOP IN SYDNEY

A SPRAY BOOTH

FOR THE CEDAR VALLEY

by John Saxon



The move to the new location left me without some means of exhausting dangerous paint fumes (read Floquil) when using my airbrush. I considered allocating a corner of the adjoining garage but realising what dust could do to a freshly painted model if the automatic door was inadvertently opened led me back to the new train room.

I found a spot under the layout, which, although offering only a one-metre clearance from the floor, by using a 635mm high card table as a bench gave me a little under 365mm for the height of the proposed booth. A former office chair, set to its lowest elevation, would then provide a comfortable working position.

Unfortunately, the household electrical box was directly behind the single brick wall of the room so exhausting horizontally was out of the question. Then at the local recycling centre I found 2 pieces of 160mm plastic storm water piping joined together by a 90-degree plastic elbow. Although I was concerned the bend would impede the airflow somewhat I accepted that by cutting a 160mm circle in the floor I would have a convenient way to exhaust the booth.

I had previously identified a suitable fan. Although all the experts advise that the fan motor must be out of the airflow for safety reasons, I could not afford what were available and looked at ceiling exhaust fans. All but one were unsatisfactory, either because

of poor airflow or, more importantly, because the motors were open frame types offering no protection whatsoever against igniting volatile paint fumes.

The one exception was a New Zealand made 200 mm Mistral ceiling exhaust fan with an enclosed motor and a very efficient 8-blade fan. Although dearer at around \$52 this proved to be a very effective choice.

The box itself is made from 13mm chipboard I had in the scrap box, screwed and glued together with all joints sealed with silicone. The internal dimensions are 430 mm wide X 300 mm high at the front, a depth of 355mm and a rear panel 300 mm square. An appropriately sized hole was first cut in the rear panel to take the fan with the supplied fan fixing bolts and flanges being rejected in favour of 3 plastic electrical saddles screwed against the fan flange from inside the booth. (Refer photo 1)

To reduce the projecting larger diameter rear of the fan to the 160 mm rainwater tubing I simply used a 95c plastic bucket with a 160mm hole cut out of the

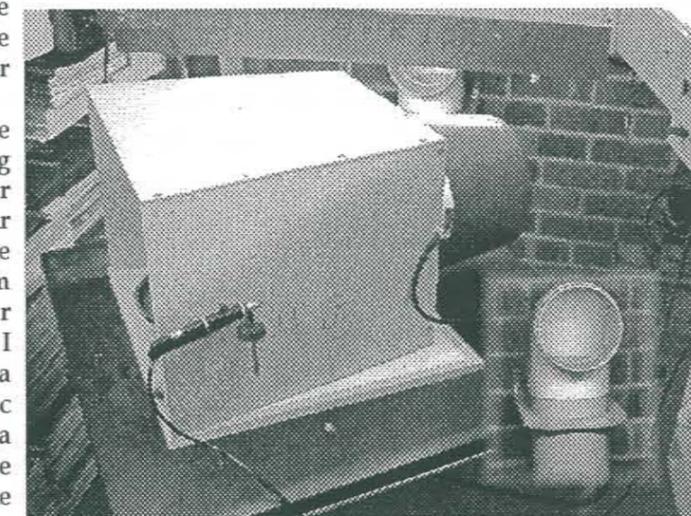
base with the flange of the bucket siliconed and screwed to the back of the rear board. (Refer photo)

By sliding the booth with fan and bucket towards the piping previously positioned in the floor, I was then able to fix the piping to the wall with a suitable bracket. (Refer photo 2) This also meant that I could simply withdraw the unit for maintenance (unlikely) or to access adjoining magazine storage.

A 20-watt fluorescent tube, located directly in front of the unit, took care of lighting.

In use, I have found the setup to be very quiet and efficient. I did initially use an air conditioner filter in front of the fan but found that it impeded the flow enough to result in some kickback of fumes.

Now, when Toni transits the room between garage and entry hall, it is rarely that she asks if I have been painting. That is how well this set-up has worked out. JS



National Model Railroad Association Inc.

(Australasian Region)

Income and Expenditure Report for Year Ended 31 December 1999

Income	1999	1998	
	\$	\$	
Meeting Contributions	693	544	
MainLine - Advertising	220	290	
Membership Dues Received	11775	10254	
Bank Interest	2	15	
Donations Received	304	250	
Company Store and Name Badge Net Sales	133	794	
Auction Receipts	3838	3370	
Public Liability Refund from US	1232		
Convention Income	15118	2185	
Library Income		20	
Exhibition Layout Revenue	<u>255</u>	<u>175</u>	
Total Income	<u>32338</u>	<u>19129</u>	
Expenditure			
Meeting Expenses	1218	653	
MainLine Printing Costs	3480	4153	
MainLine Postage Costs	720	816	
Membership Administration	272	570	
US Membership Remittances	9408	9810	
Bank Charges & Fees	206	236	
Credit Card Merchant Fees	896	271	
Postage, Photocopying & Stationery	300	2684	
Public Liability Insurance	613	614	
Storage	40		
Exhibition Layout Costs	248	259	
Convention Costs	10278	1224	
Library	12	118	
Achievement Program	27	5	
Auction Payments to Members	3374	2533	
Company Store	<u>162</u>		
Mail Box Rental	115		
Trustee Travel Support	468		
State Government Registration	35		
Subscriptions	<u>35</u>		
Total Expenses	<u>31705</u>	<u>24148</u>	
Surplus/(Deficit) for the Year	633	(5019)	E.Hodgson, Treasurer.
		(Signed)	

National Model Railroad Association Inc.

(Australasian Region)

Balance Sheet as at 31 December 1999.

	31/12/99	31/12/98	
Assets			
NMRA Main Trading Account	1933.76	4452.25	
NMRA Convention Account	<u>12038.80</u>	<u>8380.93</u>	
Cash Reserves	13972.56	12833.18	
Library Inventory at cost	<u>1144.00</u>	<u>650.00</u>	
Total Assets	<u>14116.56</u>	<u>13483.18</u>	
Liabilities			
Members Equity	<u>14116.56</u>	<u>13483.18</u>	
			(Signed) E.Hodgson, Treasurer.

Melbourne

by Grant M^cAdam

Division 3 - September 2000

Steve and June Cullen hosted the September meeting of Division 3 on a beautiful spring day. It was one of our usual lunch time meetings. June supplied assorted salads with the members bringing along their own meat and drinks. Throughout the day there was continuous tea and coffee and an assortment of goodies for afternoon tea.

The numbers regularly attending our meetings are slowly increasing with 19 members and partners enjoying a very social get together. It was a pleasure to see John and Lyn Cracknell attend their first meeting. John joined the NMRA during the very successful Convention held in Melbourne. Another new face was Patrick Compton a former member of the NMRA from NSW who now lives in Victoria. Patrick has decided to re-join the NMRA.

Steve has done a lot of work on his On2.5 layout "Bellbird" since our last visit. Unusually he has gone against the normal trend of wanting more space and actually made the layout smaller. Steve said that the new arrangement still achieved everything that he wanted and had lost nothing with the reduction in size. The focus of the layout has now changed from a common carrier to one concentrating on logging with some mining. Many of the members took the opportunity to switch the layout. The use of short sidings introduces its own challenges when trying to shunt the yards. As we have now come to expect, Steve's layout ran faultlessly and the only problems were operator induced.

The formal meeting part of the day was kept to a minimum as to not to interfere with the socialising. During the afternoon Grant M^cAdam thanked Steve and June for hosting the meeting and gave the members a brief update on the proposal that Geoff Hoad had circulated about the convention planned for next year. Grant stated that the proposal was

only a discussion item and no decision had been taken about the form of the convention for the coming year.

There were numerous show and tell items on display this month. There were an assortment of books and magazines including Two foot Gauge Rails to the Iron Stone (Grant M^cAdam), Bridges Vol. 1, Structures Vol. 1, Southern Pacific Common Standard Plans (Paul Richie), The Locomotive Portraits - Kinsey, Photographer (Gavin Hince), Smalsparight (John Dennis, Swedish narrow gauge magazine) and copies of the latest editions of Narrow Gauge Downunder and the Narrow Gauge and Shortline Gazette (Geoff Trueman). Paul Richie brought along an engine shed that he is building and an assortment of detailing parts from Sierra West and S scale figures from Railmaster Exports. Gavin Hince has been busy again and had two structures nearing completion, several model T trucks, and a modified Bachmann Porter. Another structure under construction came from Grant

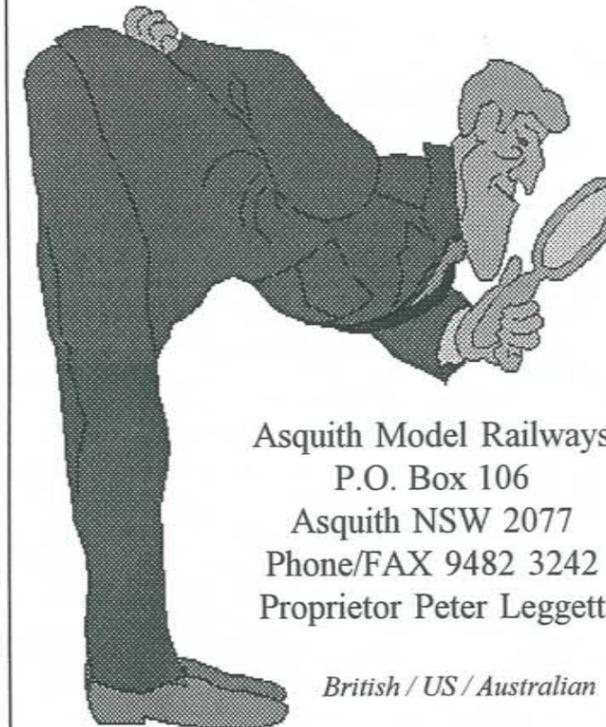
Continued Page 18/...

LOOKING FOR THOSE ELUSIVE DETAIL PARTS?

THEN LOOK NO FURTHER THAN

Asquith Model Railways

359 Pacific Hwy Asquith
(Opposite the Railway Station)



Asquith Model Railways
P.O. Box 106
Asquith NSW 2077
Phone/FAX 9482 3242
Proprietor Peter Leggett

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(brass & steel)
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- Romsford gears, wheels & worm sets
- Narrow Gauge kits & accessories
- Woodland Scenics - large range
- 'O' Scale kits & accessories
- Floquil paints - new stock
- Wide range of Decals

Mario Rapinett's Aluminium Benchwork Part 2

In the September *MainLine*, Mario Rapinett introduced us to his light-weight framing concept. In this issue Mario discusses the scenery that goes on top of his frame, and specifically...



Desk Top Modelling

The lightweight mini scene, I believe is another alternative when trying to complete a large layout. They are really dioramas that can be relocated at any time. I actually have some sitting on top of my office computers and shelves at home. Why hide these models in the layout room or garage where they are permanently fixed to the layout.

A town scene is currently under construction, for one of my "Steeles Creek" 900 x 900 mm modules. This whole scene will be developed using Styrofoam and 3mm MDF base. It will enable me to detail it either in the lounge, office or when I travel. Once completed, it can be placed within the module at exhibitions.

Another way of creating interest and losing that straight module front look is creating add-on mini scenes, which can be bolted to the front of modules. "Red Stag" a layout shown at the recent Castle Hill exhibition made good use of add-on mini scenes.

Light weight for transportation

Unless you are building a small N-trak layout or flat earth type layout,

most modules need extra manpower when moving. If you don't use too much heavy scenery, lightweight construction can limit the strain on your back and reliance of family and friends for help.

Double stack modules

By using four way plastic joiners and short (200 to 250 mm) vertical lengths of SHS, you can double stack a layout. The options are endless. It is quick, easy and inexpensive.

Other Materials

Paper towels dipped in plaster is a popular way of covering large areas of a layout, however plaster becomes heavy when it sets.

In some cases I have used *Mod-Rock*, a plaster impregnated cloth. Doctors use this product to set broken arms and legs. It's not messy, no mixing and does not harden quickly like plaster.

Cut up into small 6" pieces, then dip into lukewarm water and place over the Styrofoam. After placing a few pieces, use one of your cheap paintbrushes and brush over to smooth. One layer is enough, but

two layers give extra strength. Don't worry if some of the cloth still shows.

Once dry, cover with diluted acrylic house paint. I personally like the light earth tones. Add some light brown shades of sifted dirt or a few earth colour tile grouts.

Paints

I use Art & Craft acrylic paints for buildings, figures, locomotives, rolling stock and staining timber. Diluted with rubbing alcohol these paints are similar to Polly S, but cheaper, plus I can use my wife's collection if I run out. Craft acrylic paints come in tubes and are available at craft shops and hardware stores.

Natural Ground Cover

During winter, I collect various mosses, which are stored in a plastic container and added to the scenery at a later stage. I have treated natural vegetation with full strength engine coolant, but in most cases I find the vegetation lasts for quite a while without this process. If I need to, I just add a bit more landscaping. It sure beats the plastic stuff.

Natural materials have been used extensively by Geoff Nott and Mark Fry.

General Finishing

I use 3 mm MDF for the module fascia. I chose to use Jo Sonja's Forest Green background paint as a finish, and this is applied with a sponge type brush. This gives a great smooth finish. I find ordinary brushes tend to leave streak marks. I have also used black as a fascia colour. You can purchase a set of 4 sponge brushes for about \$3.00.

Water scene

Place topping coat onto MDF, then after an hour, stipple with brush. Paint with acrylics mixing shades of green, brown and blue.

Finish with a few coats of Watty! Speed Clear Estapol. (non-toxic) or Watty! Marine Varnish. Gloss Medium is fine, but lacks the mirror finish.

I use non-toxic, water based products where possible. No odours and brushes clean easily in water.

Have a go! (Adrian Hoad 1998)

For some that are about to build their first layout or module, lightweight construction might be an interesting alternative to timber framework.

It's light, quick, cheap & easy to build.

If you have already built your dream layout, why not get a couple of friends together and construct, say an On30 - 1200 x 600 mm aluminium module each.

Keep it simple, not much wiring.

Include rivers, cliff sides, a bridge or two, add a few real rocks or Mark Fry's soft rocks, some natural vegetation and who knows, before you know it, you may have picked up some new scenery techniques for your existing layout.

A sample 1200 x 600 module, called "Meyers Creek RR", has been constructed using all of the above techniques for future clinics and "show & tell" demonstrations.

It has high mountains, deep river bends and loads of natural

vegetation. It could have been an "N" gauge layout, but I decided on HOn30.

Because I prefer narrow gauge *backwoods* type scenery, I was able to have tight curves in such a small area and run small loco's and a few wagons.

Summary

The combination of Aluminium framing, Styrofoam and topping coat is light, inexpensive & easy to use.

Personally, I would like to see more modules using lightweight construction with some adventurous scenery techniques. There really is not much more cost involved and makes for more varied and exciting displays at exhibitions.

I would like to thank Grant McAdam for assistance with these notes.

If you have any questions, please contact me.

Mario Rapinett
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Victoria, 3777
(03) 5962 2190
mjbd@hard.net.au

Happy Landscaping

These notes were first presented at the Victorian NMRA Convention, May 20th 2000.

Further reading

Australian Model Railway Magazine

"Swans Crossing" by Mark & Angela Fry

June & August 1998

October & December 1999

Articles by Malcolm Furlow & John Olson. Model Railroader and Model Railroad Craftsman.

Materials

Square Hollow Section Aluminium

Capral Aluminium
Canterbury Road, Bayswater,
Victoria.
(03) 9720 4333 phone
25 x 25 mm SHS

\$25.00 per 6.5 m length

Small charge for cutting to individual lengths, but well worth it.

Plastic joiners - \$2.00 each average

Cork

Local Hobby Shops

ModRock

Art Supplies
2 Kg / \$18.00 10 kg / \$65.00

Styrofoam

Kilsyth Bargain Centre
159 Canterbury Road, Kilsyth,
Victoria.
(03) 9761 5511

2400 x 1200 x 50 mm
\$22.00

1200 x 600 x 50 mm
\$6.00

Liquid Nails

Selleys Liquid Nails
\$3.00

MDF (medium density fibre-board)

Large Timber & Hardware Stores
900 x 600 x 3 mm \$3.00
1800 x 900 x 3 mm \$6.50
1200 x 450 x 6 mm \$5.00

Jo Sonja's Acrylic Paint

Back ground paint. 250 ml jar
\$10.00

Tube \$4.50

Albench.doc 15/8/2000

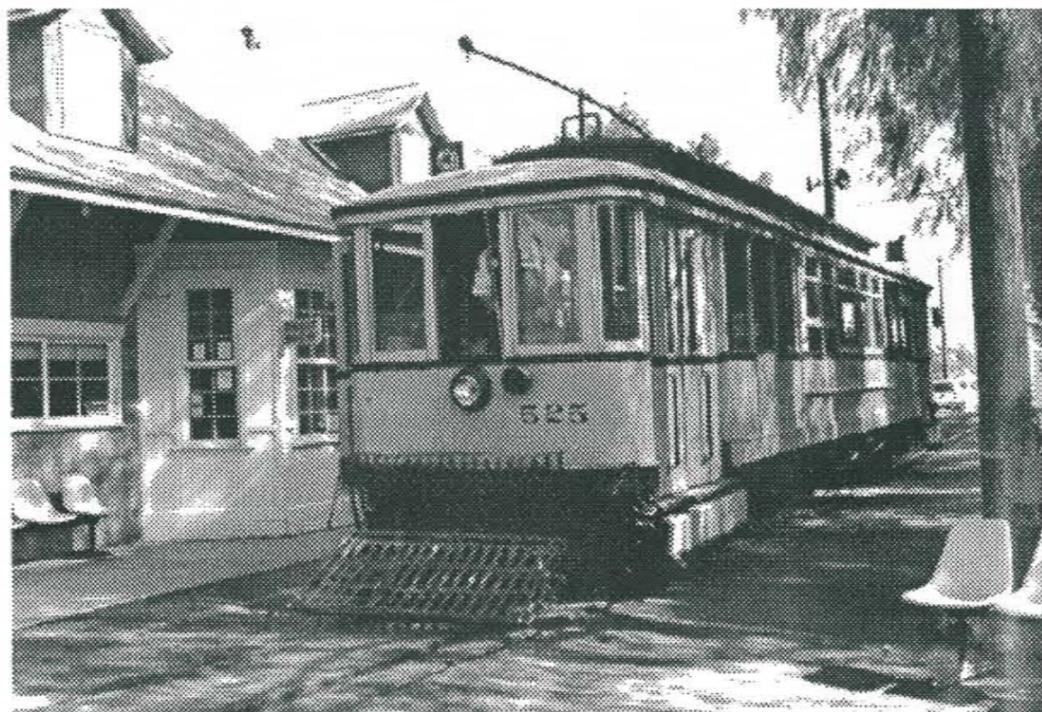
Try This

When completing a recent arts project, I dipped Hessian into casting plaster a'la the hand-towel hard shell method. Hessian is much stronger than paper, it dries to a hard, yet thin layer of rock in a matter of days, and you can cut it with a hack saw, if you need to. When draped over either a wire frame or crumpled newspaper, it forms natural looking terrain, in minutes. Try it.

TRAMS

TROLLEYS AND TRACTION

by John Bullen



Tram # 525 Stopped at Ticket Office. 1905 St. Louis Car Company California Car in Los Angeles Railway colours. Photo taken June 1995 at Orange Empire Railway Museum, Perris, CA. Photo by Philip Moss

These three words are only a few of the words used for a transport phenomenon that appeared late in the 19th century, spread rapidly throughout the world, was at its peak in the 1920s to the 1940s, struggled desperately (and mostly unsuccessfully) for survival in the 1950s, and is now making a minor comeback at the dawn of the 21st century.

Other words for the same thing are streetcars, interurbans, trolley cars and light rail vehicles. For simplicity, I'll call them all trams. They came in various forms, such as horse trams, cable trams, battery trams, steam trams, and finally electric trams. The one thing they all had in common is that nearly all of them, worldwide, were dedicated to carrying passengers only.

They fall into two major

categories. One category ran through the streets of cities and suburbs. Throughout the British Empire, these were called trams. In USA they were streetcars or trolleys. A good example is Sydney's city and suburban tram service, which was, at its peak in the 1940s, one of the world's biggest.

The second category of trams ran a service through rural regions and linking cities and towns. These were still called trams in the British Empire, but in USA they were interurbans. Generally they were an American phenomenon, and were bigger, heavier and faster than streetcars. Few interurbans were ever seen in Australia, but the service operating between Adelaide and Glenelg would be called an interurban in USA.

The new line in Sydney running from Central Station to

Wentworth Park, and now about to be extended to Lilyfield, and possibly further, is referred to as light rail, but really, it is just a modern tram.

On its first day of operation about a year ago, one passenger on one of Sydney's brand new light rail vehicles was seen carrying an Esky. It was pointed out to him that the round trip was not much more than half an hour, and that he would hardly have time to build up a thirst. He replied that his father had made his family promise him that if ever trams were restored to the city of Sydney, he wanted a ride. Opening the Esky, the passenger displayed the urn containing his father's ashes!

The word traction is a bad one. It means pulling things along, and trains do a lot more of that than trams. However, in North America, "traction" means tram, both streetcars

and interurbans.

The word trolley is another bad one, because it really refers to the little wheel at the end of the trolley pole which collects the electric current from the overhead wire. As you know, not all trams are electric, and not all electric tram use trolley poles. Tram used to use bow collectors, trolley poles and pantographs, but pantographs are steadily taking over on modern tram

Now let's look at a bit of the history of the tram. As public transport the tram was the logical development when the industrial revolution overtook the stage coach and the horse bus. Road steam coaches appeared in the 1830s, but were short lived while the new railways thrived. Around 1830 the horse tram appeared first in USA, combining the features of the existing railways and horse buses. By 1860, horse tram had appeared in Paris. They then rapidly spread throughout Britain and Europe, and were even running in Sydney in 1861. The Sydney service was unsuccessful and lasted only five years, but horse trams were later adopted elsewhere in Australia, even in such out of the way places as the tiny town of Roebourne in the North West of Western Australia.

Experiments began with mechanical road transport as early as the 1870s, but the horse remained supreme until near the turn of the century. Horse buses lasted in London as late as 1914.

Steam trams began in USA in

the 1860s, but never really became important there. By the 1880s steam trams were flourishing in Britain, Europe and Australia. A few steam trams consisted of just one vehicle, containing both the engine and a passenger compartment, but more commonly there were two vehicles, an enclosed steam locomotive with a passenger trailer behind. Sometimes there were two trailers.

Following on after the steam tram came the cable tram. The cable tramcar lowered a rod down, through a narrow slot in the road midway between the two running rails. At the bottom end of the rod was a grip mechanism, which gripped an endless cable, which ran continuously in its own little tunnel beneath the road. The cable was driven by a steam engine in a winding house somewhere along the route. The tram gripped the cable to go, travelled at the same speed as the cable, and released the cable and applied its mechanical brakes to stop. The driving car, which contained the driver and the grip mechanism, was known as the grip car, and the passenger car behind was the trailer or dummy.

Objections to steam locomotives in urban streets, and the uncertainties of the new fangled electricity until near the turn of the century gave the cable tram an excellent opportunity to become popular, and they did, especially in hilly cities. The difficulties with steam and electricity also led to many experiments, such as

battery trams, gas trams, compressed air trams, and fireless steam tram, but all had serious disadvantages and none lasted long.

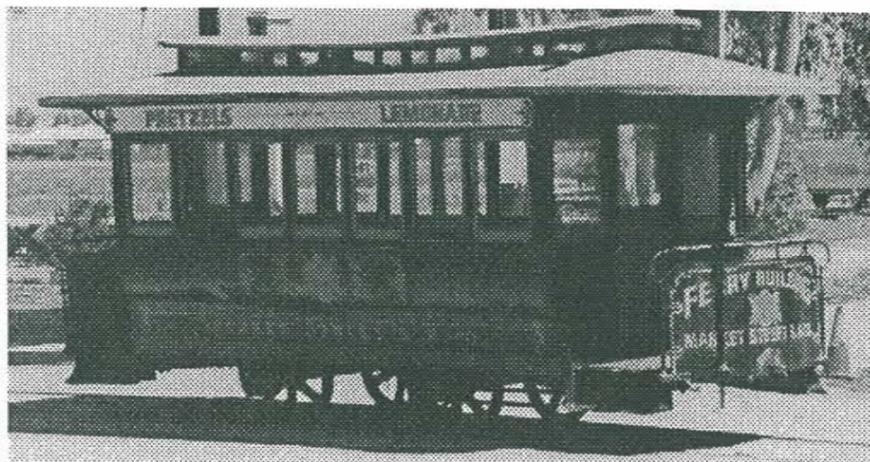
In Australia, the thriving goldfield city of Bendigo soon had its own tram service, but it began disastrously with battery trams. Inadequately tested before introduction, they were unable to cope with the hills on the route. The batteries were always running flat, and the passengers had to push their own tram at a speed less than they could walk themselves! Bendigo's battery trams were hastily abandoned after only thirteen weeks, and steam trams took over. Steam trams did well in Australia, and Sydney had quite an extensive system south of the harbour. They were also long lived, lasting until 1943 when the last steam tram ran from Parramatta down to Redbank Wharf on the Parramatta River.

Sydney and Melbourne both adopted cable trams. Sydney had cable trams on the Eastern Suburbs line running out to Edgecliff, and from Milson's Point up the Miller Street hill to Falcon Street and on to Crows Nest. Sydney's cable trams ended when the electric trams took over at the turn of the century. In Melbourne it was a different story, and the cable trams survived until 1940 despite the development of a big electric network there. I still have very clear memories of travelling by cable tram in Bourke Street and Nicholson Street.

Despite a few cable trams and



Tram # 637 Pacific Electric. One of the famous big red interurban cars (Manufacturer unknown) used by Pacific Electric around Los Angeles in the 1920's and 1930's. Photo taken June 1995 at Orange Empire Railway Museum, Perris, CA. Photo by Philip Moss



Tram # 1 Destination Ferry Building Market Street Early horse drawn tram used by Market Street RR Co in San Francisco, CA C1890-1900. Photo taken by Philip Moss Sept 97 at Orange Empire Railroad Museum.

steam trams surviving until near the middle of the 20th century, nearly all were overtaken by the electric tram back at the turn of the century, and the first half of the 20th century was well and truly dominated by the electric tram. This applied to Britain, America, continental Europe, and Australasia. Initially there was only the suburban tram or, streetcar, well known in Sydney and Melbourne, but very soon came the bigger, heavier, faster and more comfortable interurban.

The interurban really only ever caught on in North America. Before World War One, USA and Canada were big countries with a relatively small amount of reasonable roads outside the main cities. This gave rail service a big advantage over road, and interurbans were quick to exploit this. They reached their peak mileage of over 15 000 miles in 1916, with 3000 miles of track in Ohio alone.

The 1920s saw the American interurban soar to new heights. The overall track mileage did not increase, but the quality of the vehicles themselves did. Fifty-ton giants were produced. They were really motorised railway coaches, but their appearance was distinctively different. Some had pantographs, but most still had trolley poles. Some were hideous, while others had very pleasing lines, especially the early models with bodies clad in varnished

wooden slats, before the steel cars took over.

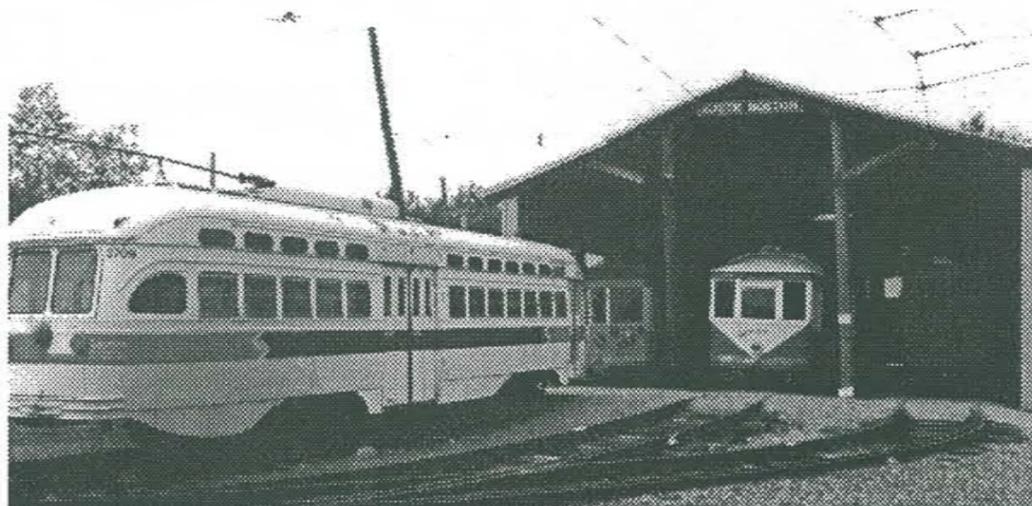
The decline of the interurban came in the 1930s as roads improved, and most had gone by the beginning of World War Two. Some interurbans still exist in Europe, but they are regarded as normal railways there. And of course Adelaide's Glenelg line still runs today.

In the meantime, while the interurban came and went, the suburban tram or streetcar was going from strength to strength. In 1929, 25 of the largest tramway companies in USA formed the Electric Railway Presidents' Conference Committee and set about designing the ideal tram. After five years they came up with the Presidents' Conference Committee tram design, which became world famous as the PCC tram. It was an immediate success in USA where it was adopted by many tram networks. The PCC cars were swift and comfortable, and became very

popular. The aftermath of the Great Depression and the approach of World War Two curtailed an even wider adoption of the PCC cars, especially outside North America. Sydney was going to buy some, but the war killed that. They did reach other countries however, including Britain. Most PCC cars were single ended, requiring a balloon loop at each terminus to change direction. The only PCC car in Australia is double ended, and is a museum import. It is a San Francisco car, which was acquired by the Sydney Tram Museum in the late 1980s, and is in running order.

Most tram networks around the world reached their peak of operation during World War Two. Wartime austerity curtailed the advance of road transport, and trams carried huge numbers. This applied especially in Australia. No modern transport can approach the ability of Sydney's trams to clear an entire race crowd of 80 000 people after the last race at Randwick in about 20 minutes. An important factor in this was of course the use of the O and P Class "toast-rack" trams, which took only a few seconds to load to their full capacity of 80 seated passengers, with an extra 40 or 50 standing. How will the railway and buses at Homebush compare in 2000?

The 1950s saw the decline of the tram all over the world, as the challenge from road transport became too strong. Nearly all trams in America, Britain and Australasia had gone by the 1960s, though many networks in Europe have survived and are now thoroughly modern, except for Lisbon which still operates



Tram # 2709 at South Boston Depot. One of the famous Pullman PCC cars from the 1950's. Photo taken July 1999 by Philip Moss, at Seashore Trolley Museum, Kennebunkport, ME.

a large and ancient fleet.

Melbourne is of course the notable exception at this end of the world, thanks to the vision and force of personality of Major General Sir Robert Risson, Chairman of the Melbourne and Metropolitan Tramways Board from 1949 to 1970. In Melbourne, the tram has triumphed over the car in the inner city where trams pass smoothly through a pedestrian mall prohibited to cars. Until very recently Sydney looked like following the same path. Its recently

introduced tram service was to be extended along pedestrian malls from Central Railway Station down Pitt St to Circular Quay and back along Castlereagh St, but the NSW state government has now bowed to protests by the government bus lobby which claimed its city bus service would be no longer viable if it had to compete with tram.

Now for a few remarks on model trams. They exist in the popular scales, both in ready to run and kit form. American, European and Australian models are readily available in HO scale. Some are quite cheap, and others exist in brass. One of the layouts in the 1999 issue of *Great Model Railroads* is a "traction" layout fitting under a coffee table. And it's in O scale!

In prototype practice, double trams have always been common around the world, and the modern



Tram # 415 Destination Granite City. No details known for this one. Photo taken by Philip Moss, July 1992 at Illinois Railroad Museum, Union, IL.

articulated trams have three to five units joined together, but you never see the long trains common on railways and there is no scope for shunting and making up trains. On the other hand, trams and extremely tight curves (such as right angled street corners) go together. This offers effective modelling in very limited space indeed. The steeper grades in model tram layouts are readily handled by the tram having only to move itself or at the very most, no more than one or two trailer cars.

A model tram layout accurately matching its prototype can be a very simple project to construct. For those seeking a big technical challenge however, it can be as complex as you like, especially if you want to model a Grand Union intersection with fully operating overhead catenary. Grand Union is the title given to a four way street intersection where double tracks

come into the intersection from all four streets, and where there are enough turnouts to allow any tram to turn into any of the three other streets leaving the intersection. The point work is complicated enough with eight turnouts, without the overhead wiring to consider as well. To the best of my knowledge, Australia has only had one Grand Union junction, in Melbourne at the corner of Balaclava and Hawthorn Roads at Caulfield. Auckland had one in the city centre, and Sydney never had one at all. Cities just didn't build a Grand Union unless they really had to, a policy plenty good enough for all but the most serious modellers!

So, having inspired you to plan and build a tram, trolley or traction layout, I now urge the need for restraint before you dive into a fully operating Grand Union! JB

Heard Around the Roundhouse

We were sorry to hear that long-term member *Stan Michel* of Concord had recently passed away. Stan had been a member since January 1963 and was one of the 78 signatories to the petition taken up in 1983 that led to the formation of our Region. (See other article titled "The Originals").

John Baker has accepted the role of organising future members meetings in the Sydney area. He has already placed most meetings for 2001 but if you are interested in hosting a meeting, give him a call on 9629 2349.

Eric Hodgson's move to Orange has led him to have to resign as Treasurer. His role has been taken over by *Mike Bartlett*.

Ken Scales, local Achievement Program Chairman, was recently presented with an award on behalf of the Parent for his superior work in the program.

Peter and Dale Burrows have just returned from Athens where Peter was part of the Sydney 2000 Olympics contingent advising the local organisers on their 2004 games.

The Central Coast operating group is now meeting on Wednesday nights to operate, gossip and generally have a good time. Members are *Gerry Hopkins, John Saxon, John Parker, Jack Parker and Trevor James*. *Greg Morris* is also travelling all the way from Bullaburra to join the fun.

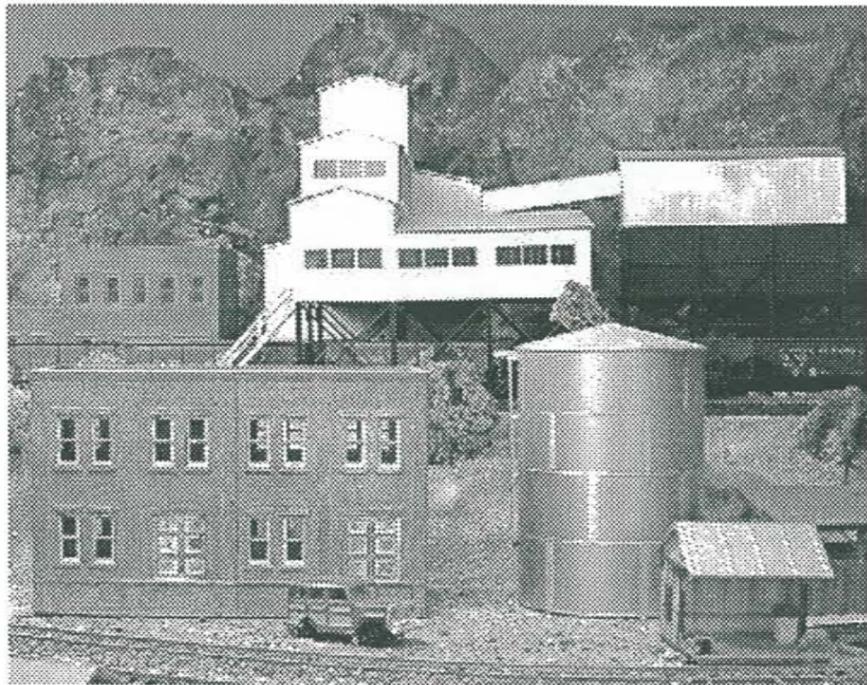


Photo of Mike Bartlett's layout

Building Plastic Kits

By Ken Scales MMR

There are some brilliant structure modelers in our region of the NMRA. Many of us look at some of their creations and are a little over-awed. Most of our top modelers are scratch builders but that does not mean you cannot build great structures using plastic kits. The difference between an ordinary looking plastic building and a really great looking structure is often only a few hours work and a few extra parts. You can break this down into three fields, which are construction, finish and detail. There are also a few tricks, which will actually save you, time and improve the overall look of the model.

Before you assemble a kit you should look at the best method of preparing it for its final resting place on the layout. In many cases this means that the original base should either be discarded or cut down before you begin assembly to suit the site it will occupy. Mixing several small kits to

make an industrial scene is a cheap and effective way to create a relatively large industry. This can be done on a heavy cardboard base, which is then fitted into a space on the layout. This allows the building and other details to be blended into the ground. It also allows all detailing to be done on the workbench rather than leaning over the layout.

To get ideas about industries look at the real thing and if possible take photos. Note the way buildings are joined together and the external pipes and machinery that are appropriate for the industry in question. Many industries are a mixture of buildings which are not made out of the same materials. However to make it believable on a model it is usually preferable to paint them all the same color particularly when mixing structures from different kits. They can be detailed with varying degrees of weathering to simulate the

subtle manner in which different materials weather in nature.

One of the best ways of making plastic buildings look effective is to assemble the walls of the building and airbrush them before fitting windows doors and roofs. This will allow you to make sure the corners are properly fitted while they can be easily rectified. You can use a minimal amount of glue on the actual joins and reinforce the building on the inside with 5 minute Araldite, where it cannot be seen, to achieve a better finish.

Airbrushing plastic siding or bricks with flat acrylics gives a very good finish and provides a great base for detailing with chinks and washes. Similarly the windows and doors can be airbrushed a different color before fitting while attached to the sprue. This saves a lot of time and usually gives a much better finish. Windows with small panes of glass will often look better if you form the glass using

"Micro Kristal Klear". You can buy this from most hobby shops. Large windows should be formed with clear acrylic placed as close as possible to the inside of the frames. If the glass provided with the kit does not look shiny and real you can use acrylic from a shirt box. This can be attached with 5 minute Araldite. Often you can also use 5 minute Araldite to fit the window frames to prevent the liquid glues running over paintwork on walls.

Roofs can be airbrushed to look realistic and detailed with dark chinks. Dark chinks make plastic tile roofs look much more realistic by getting in the cracks and making the tiles look three-dimensional. You can improve the look of many buildings by replacing the roof with flat styrene, which has been covered with either commercial shingles or masking tape to simulate tarpaper. Often this allows you to give a similarity to a mixture of buildings.

Most buildings look flat in real life. For this reason flat acrylic paints

usually look best on model structures. Most buildings are not perfectly clean. This can be best simulated using chinks and washes. The golden rule is never leave anything in original shiny plastic.

The real icing on the cake is detail. There are many detail items you can add to a structure that are free. Small drinking straws with fluted bends that come with popper drinks make excellent large diameter pipes. Nails, steel wire brazing rods even meat skewers make smaller pipes. Even larger diameter pipes can be made from normal drinking straws with or without fluted bends. Painted cotton makes steel cable. Old tank cars can be made into stationary storage tanks. Storage tanks can also be made from plastic electrical conduit with flat styrene glued on the ends. The most important thing is painting these items to make them look like they are made from metal.

Details can also be purchased separately from most hobby shops. Typical items, which can be used on

most industries, are Rix roof vents, Kibri pipe and vent kits and Walthers Cyclones. Other detail items such as junk, pallets, garbage bins etc are made by Woodland Scenics. Some Woodlands Scenics whitmetal kits are a goldmine of detail parts. British manufacturers also make a lot of basic detail items. Antons Trains makes some very good quality cast metal detail parts suitable for industrial scenes. One of the best places to buy detail items is The Model Railroad Craftsman at Blacktown, which has a huge range.

People, crates, lumber, barrels, drums and other small detail items should be placed in strategic locations to make a complete scene. They should also be painted and weathered in an appropriate manner.

The final thing to remember is finish. Rust and dirt should only be used where appropriate. You can use washes, dry brushing and chinks on the same building. The real trick is follow the prototype and it will look effective and realistic. ks

**Detailing that Special Locomotive ?
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Searching for a Good Book ?
or just need those special items by-**

Detail West, Detail Associates, Overland, Precision Scale, Grandt Line, American Model Builders, A-Line, AR Kit Co., Creative Model Associates, Cannon & Company, Eastern Car Works, EEL River Models, Flush-Glaze Windows, Ian Lindsay Models, Hi-Tech Details, Krystall Castings, L & C Kits, M.V. Len's, NWSL, Plano, Rail Detail Products, Rail Power Products, Run 8, Sunrise Enterprises, Sagami Motors, Scale Replicas, Titchy, Taurus, Tomar, Train Station Products, Utah Pacific, Westerfield, Evergreen, Northeastern, Model Flex, Cabbose Industries, Micro Engineering, Pikestuff, Jordan, Gregs Garage, Woodlands + much more.

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Module Meeting 11th Nov 2000

by Steve Chapman

Although not advertised as one of the usual Saturday afternoon members meetings, the module group accepted an invitation from the Southern Cross Model Railway Association to set up a joint module layout at Dence Park, Epping.

We started assembly of our NMRA modules around 12 Noon, finding the connection of our numerous rail joiners did slow us down a little. We also found that we need to pay more attention to our power leads and DCC wiring arrangements before our next meeting.

We ended up with a balloon loop at each end, a large station with storage sidings, a single track section going from one side of the room to the other which led into double track on five of our modules to the other balloon loop.

In operation, we found that trains tended to accumulate on one side of the modules due the single track section. About all we were able to do was to run from end to end and get tangled up on it. This led to some light hearted teasing from other operators caught in the delay and there were also delays when someone decided to switch the available sidings. We need to review this single track arrangement for the future as well as expansion of the number of sidings from two to provide better operation opportunities.

Much FUN was had by all and the module sections got a good workout. If you were unavailable that day you really missed out on a lot of fun. Congratulations NMRA module group on a job well done.

A very big thank you to the S.C.M.R.A. group for organizing the meet and supplying a delicious afternoon tea. We loved the rooms and gave them a rating of 10 out of 10 and we look forward to our next opportunity for a joint module meeting. sc

The Originals

The recent passing of Stan Michel led us to re-visit his membership history which, in turn, led us to our file on the formation of the new Australasian Region way back in 1984.

The Southern Cross Region successfully represented the Australian and New Zealand members for many years. However, its incorporation as the Southern Cross Model Railroad (later Railway) Association on 21 December 1967 unfortunately resulted in local representation being lost on the Board of the NMRA.

In 1983, a circular letter was circulated amongst the then local members of the Parent association to petition the NMRA to form another Region for Australia and New Zealand. 78 members signed the petition and approval was granted in 1984. As the saying goes, the rest is history.

That is now 17 years ago and whilst these supporters would have received individual recognition at the time, we feel it is time to publicly record the names of that group, without which, there would be no Australasian Region of the NMRA. So our thanks are extended to the following.

Terence Carpenter, Vivian Brice*, Kerry MacPherson*, Peter Weller-Lewis*,

Len Opie*, David J. Cooper, Roger Wheeler*, H.J. Manley, M.K. Cowley, M.R. Kranz, Ern Raddatz*, Paul Richie*, R.M. Webber, M.G. Whiting, J.A. McClaren, Alan McKenna*, Michael Maloney, Chris King, Howard Pettigrew, Ray Brownbill*, Donald Moon, Stan Eaton, Peter Duckett*, John McClure, E.Kowadlo, Max Gottlieb, David Goddard, Fulvio Gerardi*, John Franklin*, Craig Hartmann, David Lander, Albert Berkavicius*, E.W.H. Ward*, Ron Bennell*, Bernard Benson, John Lebsanft*, John Treacy, Barry Meynell*, J.B. Marstaeller, R.J. Nunn, Gordon Berry, Ken Leitch*, D. John Rylah, Chris Hitchins*, David Cutcliffe*, David Howarth, John Saxon*, Clive Riley*, Trevor Moore*, Phil Knife*, Hal Saxon, Bill Cooper, AMRA, Austral Modelcraft, George Berg, Mark De Havilland**, Thomas Halliburton*, Ian Hopkins*, Stan Michel**, Frans Persson*, A.H. Robinson, Don Turnbull**, David Jacobs, Clive Huggan, Ian Howarth, Richard Roth*, Fred Gill*, Tony Earp*, Prospect Model Railway Club, P.M. Perkins, Paul Roussell, D. Lamb, Michael Tollich, Keith Oman**, John O'Malley, M. Jackson.

* Member of Parent as at 30/9/00

** Since Deceased

John and Toni Saxon.

Victorian Meetings Cont.

Continued from Page... 9/.

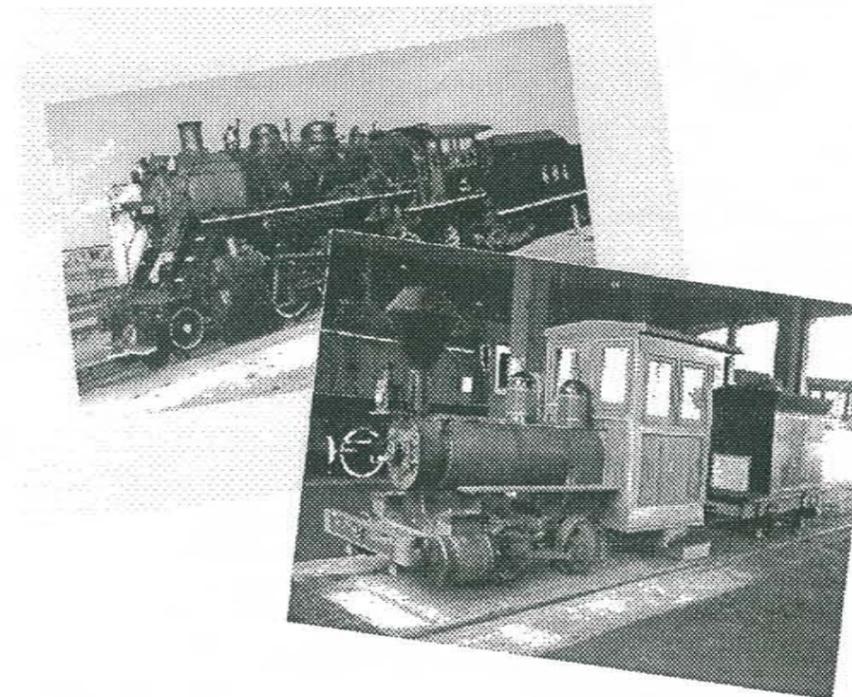
M^cAdam. One of the main reasons Grant brought it along was to get advice on how to go about fitting louvres to a circular opening in the façade. He also brought along a small display of figures showing the steps he uses when painting them. Mario Rapinett has put together a video from the footage that he had shot of the Red Stag Lumber Co., he also had a small module featuring large trees and a small caboose that he had recently completed. The O scale bug has bitten Ian Petherick who brought along some ore hoppers, several On2.5 diesels under construction and a Bachmann On2.5 coach. Last but by no means least, Laurie Green displayed the new turntable to accommodate an entire train for his layout. The turntable features positive mechanical locking to ensure track alignment and a pair of interlaced points. The mill complex for the new layout is now complete and this was Laurie's last chance to bring it along before he installs it permanently into the layout.

Continued on Page...24/.

Happy New Year from the Editor, the Copy Editor and
the staff at the ABC-TV Printing Department.

TRAVELS THROUGH THE SOUTH Part II

by Philip Moss.



Continuing my journey, from Atlanta, I traveled across southern Georgia towards the beautiful old city of Savannah, on the way visiting the Okefenokee Heritage Center in Waycross, a place by the name you would not think was of any interest to railfans. It is either a local history museum or a rail museum, depending on your interests. Over half the displays inside are railroad related while outside is a baggage car, a passenger coach, a caboose and a 1912 Baldwin 2-8-2 steam locomotive.

As well as many old southern mansions around Savannah, there are also the Historic Railroad Shops, which are now a National Historic Landmark. Thirteen of the original structures built in 1845 are still standing, including a massive roundhouse, an operating turntable and a 125-foot smokestack, which go to make up the oldest and most complete railroad repair and manufacturing facility still standing in the United States. As the railroad in Savannah made the city such an important supply centre for the Confederacy, when the 1988 civil war motion picture "Glory" was made, the

shops became the ideal filming location.

After several days in Savannah I crossed into South Carolina to visit the historic city of Charleston before continuing along the coast to the town of Conway where they have a short line called the Waccamaw Coast Line Railroad. Although it was not yet operational, the railroad intends to establish a tourist passenger line using a variety of early diesels and cars along their existing track between Conway and Myrtle Beach some fifteen miles away.

Then it was across another state line into North Carolina and the city of Wilmington. Here in a former Atlantic Coast Line freight office building is the small but interesting Wilmington Railroad Museum where they have an ACL Baldwin 4-6-0 #250 built in 1910 with an ACL steel caboose and boxcar outside along with various pieces of ACL memorabilia inside. The building also houses the Cape Fear Model Railroad Club with their HO layout on display.

Next stop was the former Seaboard AirLine Railroad station at Hamlet, which still serves Amtrak, to

visit the National Railroad Museum and Hall of Fame. The station was an important junction for the Seaboard AirLine and remains so today for its successor CSX Transportation. It is the crossing point for their main lines between Atlanta and Wilmington and their East Coast line running from Richmond to Miami. The building is a large two storey wood structure with a round bay facing the crossing and has displays including a Seaboard SDP35 diesel and caboose, a replica of the early locomotive "Raleigh" and an HO scale model railway layout.

From Hamlet it was worth the detour North to see the best railroad attraction in the state, the North Carolina Transportation Museum in Spencer. It is located in the old historic Spencer Shops buildings. Once part of Southern Railway's biggest steam repair facility, it also includes one of America's largest remaining roundhouses, complete with operating turntable. The complex was donated to the state in 1977 for a transportation museum and now tells the story of railways, aviation and motorized vehicles in North Carolina. Trains displayed included Graham County Railroad 1925 Lima 3-truck Shay #1616, Southern Railroads EMD E8 #6900 and EMD FP7 #6133, Norfolk Southern EMD GP9 #620 and a Buffalo Creek & Gauley 1926 Baldwin 2-8-0 #604 which is used to pull several coaches on a forty five minute tour of the museum grounds. In the off-season the tour is operated by diesels #6133 and #620.

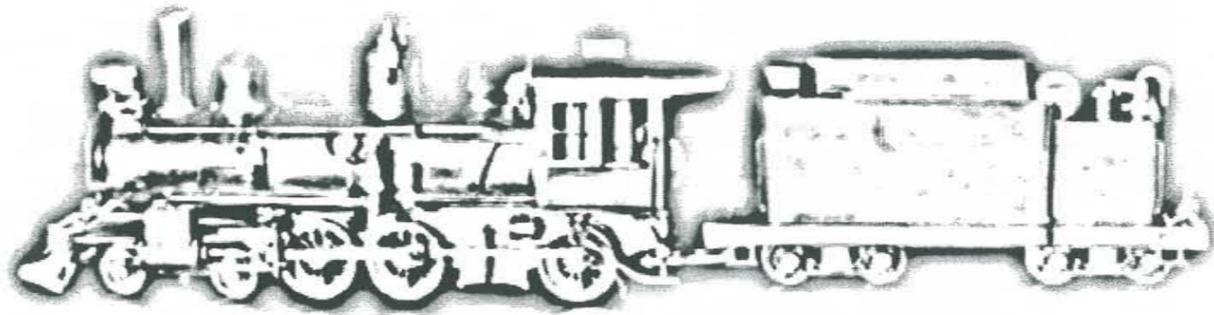
Then it was off to see something entirely different, a visit to Charlotte, which is the centre for that hugely popular form of motor sport in America known as NASCAR racing. Most of the racing teams live and work in and around the Charlotte area, so I was not only able to tour all the race

Continued on Page... 23/.

FEATURE SERIES Brass Locos

Getting Them to Run

By Martin Boyask



A 4-6-0 HO3 Brass Loco - out of the box & ready for fine tuning -

Part 5. Completing the Mechanism (Adding the fiddly bits)

In part 4 we ended up with a smoothly running basic mechanism. [Well don't look at me, mine was okay!] Now we have to finish the mechanism, which mainly means adding the rest of the side rods, the brakes, the cylinders, and the trucks. If anything is left over, we will add that too.

First, add the cylinder block. This secures usually with a hollow brass screw, but rarely can have ordinary 2 mm screws into the underside of the chassis. [The bore of the hollow screw takes the long bolt that secures the front of the chassis to the smoke box. In many locos with a 4 wheel leading truck, that long bolt has a downward extension that acts as the truck kingpin, and carries a coil spring

- but all this comes later.]

Before fitting cylinders, check that the piston rods run smoothly in the holes in the cylinder and open up the hole if need be - a slightly sloppy fit is better than too tight a fit here. Most US locos have horizontal cylinders with the piston rods on or near the driver centre line. Unless you know your prototype had inclined cylinders, check the model ones for fit, and do a little filing if necessary - it rarely is. Modelling licence sometimes dictates that the piston rods come out slightly higher than the driver centres, but they should still be horizontal.

I usually hand paint the valve gear hangers with matt black cellulose, and then screw them back to the chassis. Later I touch in the screw heads matt black as well. It often is not necessary to remove all the small valve gear links from the hangers unless some kind of repair is necessary. It is possible to paint around them, and clean up the rods and links afterwards.

Next come the brakes, before we cover

their locations with more side rods. If brakes are brass coloured, I hand paint them. Check each one in situ to make sure it is well clear of the wheel tyre. A little filing of the shoe can sometimes be needed. Ensure any spacers are in place at the upper end of the hanger, whether such spacers are Delrin or brass tube. Some plastic brakes are not Delrin but fragile styrene - these are easily damaged but it is usually possible to get similar, or better, replacements from the details manufacturers.

Some models have the brakes soldered up as a unit to a brass plate that fits below the keeper plate. These just need checking for solder joint security and clearance to the wheels when fitted. This type can be spray painted as a unit, and left until last for fitting.

There are umpteen variations in slide bar and valve gear rod arrangements. You just have to refit each part as you marked them when dismantling [you did mark them when dismantling, didn't you?] and a prototype photo or drawing also helps.

Some tips worth considering:

- assemble only one side at a time;
- check the piston rod/cross head assembly, on its own, in the slidebars, for a clean run throughout its full travel [which is not necessarily the whole slide bar length];
- when fitting back slide bar hangers, make sure they aren't constricting the slide bars at the rear end and causing a bind at the cross head - file a little off the relevant slide bar support if it does;
- check very carefully the solder joint between the cross head and piston rod if these are separate parts - a notorious breakage point. If in doubt, re-solder then clean up thoroughly [in numerous models the cross head and piston rod form a single casting];
- check the fly crank [eccentric crank] if it has a pinch bolt - often these are stripped or broken. This is not a disaster and the easiest remedy, lacking re-tapping equipment, is to solder the crank across the end of the main crank pin on final assembly, but more on this later.

Don't forget any small bushes/washers. There is usually one on the main crank pin between the coupling rod and the main [connecting] rod. I have seen older models with tiny bronze washers on the other crank pins, between the wheel face and the coupling rod section.

Rivets: some valve gear parts are secured by small screws; others by tiny rivets. The best replacement rivets I have come across are those used by Bowser in their steam loco kits, with the little punch for peening their ends. Any duff rivets should be discarded, the rod holes checked and adjusted for easy fit for the new rivet, and the parts assembled with a layer of paper between the two rod ends. This is then removed and leaves the right amount of freedom.

A very practical alternative is to use an ordinary small household pin, head outwards, and solder it to the back surface of the inner rod of the joint, then clip off the surplus, and dress the joint smooth on the inner side. Be careful to not get solder into the joint itself [use a layer of greaseproof paper this time.]

Valve gear doesn't need much,

if any, oil. Nevertheless, I do usually put a spot on the piston rod, slide bars and crank pins.

The point to emphasise here is to check the motion of the mechanism after each and every addition. You will instantly see a bind or an interference. Many can be eliminated by a slight bend of a rod, gently easing the slide bar assembly in or out, or even adjustment of the fly crank 'angle' [lap and lead, an' all that] to the wheel. The closer the crank is to lining up with the axle, the less actual motion is imparted to the valve gear rods. We want it to look right of course, but sometimes it just gets you out of trouble to set less angle. Remember that some steam technology [inside admission and three cylinder jobs] requires the crank to be set in what looks like reverse. A common fault to look for is the lower end of the expansion link knocking against the end of the slide bar. This can be corrected by the above-mentioned crank angle reduction.

If you do have to solder the fly crank, make sure it and the crank pin are clean and oil free. Put a tiny spot of liquid flux on the crank pin end and the fly crank, use a very hot iron and



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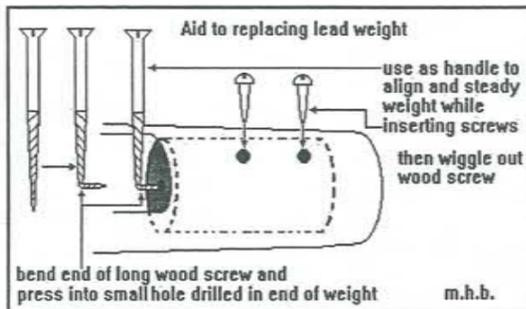
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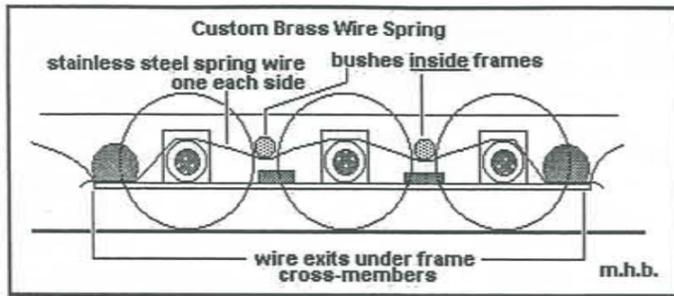
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little solder. Make the joint, allow it to cool, and then clean it up with a small flat needle file. Swab off the flux with some solvent on a cotton bud.

So now we have the complete, working mechanism minus trucks. Ah, trucks. Thereby hangs an engineer. You have to have them, but boy, what a pain! The basic trouble is that models ain't prototypes. Prototype truck swing is about 1.5 mm each way in HO. Even the 4-12-2 only had about 6" movement. But model trucks have to move a lot more. Why? Because we lay 30" radius track or less! If you have the luxury and foresight to lay minimum 4 ft or 5 ft radius trackage, you will have little trouble with trucks.

The first job is to make sure the truck is mechanically all it should be - axles nice and square in the frames, plenty of movement available to them, free rolling, and good electrical qualities, both of current collection where applicable, and insulation. Trucks have been found where the insulated wheel's rim can touch the inside of the truck frame - not a good way to get the engine moving as it represents a dead short. I've seen 2-

once inspected.

Design faults are something else. Small adjustments of the arm of the truck frame can allow better swing. Slight movements of details such as piping can prevent interference. Altering the truck pivot screw to allow more vertical movement [e.g. a screw with a longer shouldered portion] can help. One can trim or move the pilot coupler box when it is found to touch the front truck. The biggest single correction I've personally made, and on a fairly regular basis, is to alter 4-wheel front trucks from pivoting around a central screw, to being suspended from a "drop arm" [slot-racing term!]. The classic front truck just pivots, spring-loaded, on a screw coming down from under the cylinder block. On easy track, it works okay, in most cases. When it doesn't, I make a short brass arm that pivots off the front keeper plate screw, just like a 2-wheel truck. The 4-wheel truck then pivots on the front of this arm. There are no springs or weights needed. So long as the distance between pivot centres is reasonably accurate, to put the truck in the right place, it holds the track very well, even in difficult

wheel engine trucks [pony trucks] fitted upside down so the cross bearer is lower than the rail heads. Most truck faults will be obvious

circumstances. The truck is also less likely to touch the cylinders when on a curve. An odd quirk of geometry suggests that this works even better if the front pivot is ahead of the truck centre. [See sketch] I can't say I've done a lot of research on that - they all seem to work okay.

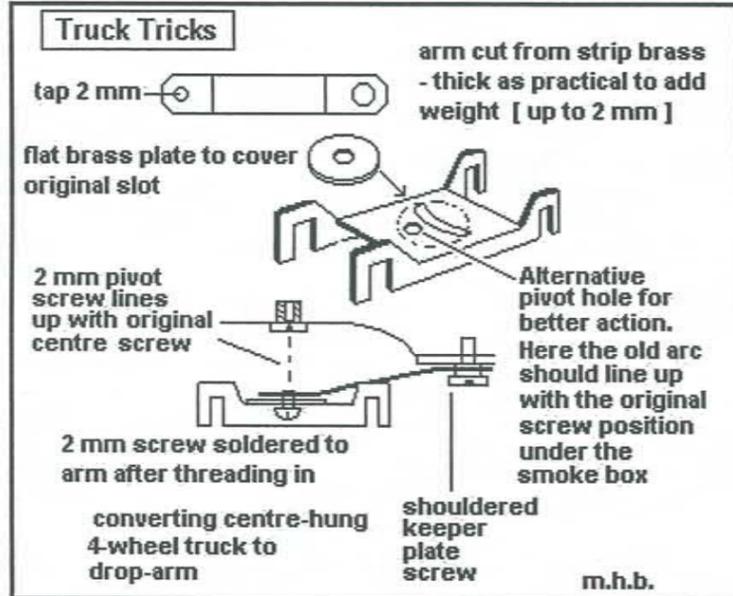
The same holds true for 4-wheel trailing trucks. Most are pivoted from the rear keeper plate screw, via a tab sticking forward from the truck frame. Yes, this also works - until it doesn't [usually in reverse motion.] It is equally satisfying to make up a similar drop arm and watch the truck sail through just about anything [with the loco above it, of course.]

One other word on trucks. Many have all wheels insulated, so they don't assist current collection. For most American locos this doesn't matter too much, but if a loco seems poor at picking up current, it is worth seeing if you can substitute similar wheelsets with one side only insulated. 4-4-0 and 4-4-2 types benefit most.

The final job on the mechanism is to replace such parts as the pilot and front deck. This is a good time to fix up your coupler. If the pilot needs chopping about at all, this work can be done and then the pilot parts sprayed and replaced. [Re: couplers, don't forget slight changes in height and attitude when the body weight goes back on.] Check the joint between any steps and the pilot deck. This is another weak point in construction, and the "step ladders" often come off. Sometimes the steps are fixed to the boiler running board instead - these also come off. Also check security of queen posts, coupler cut bar posts, and piping around the pilot area.

A few locos have headlights involved with the front deck, e.g., articulateds and many C&O locos. This is a good time to think about lighting, and drill any wiring holes needed for this if you want working headlights.

At this point, we seem to have a fully fitted and hopefully sweet-running mechanism. In the next chapter, the final chapter, we will look at the superstructure and weighting. I am afraid you'll just have to *weight* for that!



Southern Travels

Continued from Page... 19/.

shops but I got to see the cars in action at the one and a half mile high banked oval Charlotte Motor Speedway. When it is not in use for other racing events, like it was the weekend I was there, the speedway uses the opportunity to give race fans high speed rides at near racing speeds, around the track in a group of real NASCAR racecars. This seemed enormously popular as the cars circulated around the track continuously all day while I was attended a huge car show in the infield.

After a great car weekend I left Charlotte and headed south to Winnsboro to see the South Carolina Railroad Museum. In 1982 this museum acquired twelve miles of the Rockton-Rion Railway, which was later renamed the Rockton, Rion & Western Railroad. They currently operate a seven mile trip from Rockton to Greenbrier over a section of this line using either a former Hampton & Branchville Railroad 1927 Baldwin 4-6-0 #44, or one of three former U.S. Army diesel switchers.

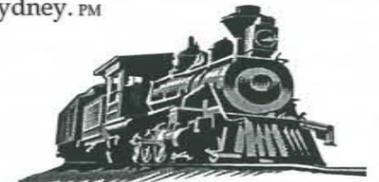
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		Scale	Interests
Eric Cother	Orange NSW	HO	Not stated
Jurgen Engel	Jamison NSW	O&S NG	US
Ted Ankrum	Jerrabomberra NSW	HO	NW Pacific
Ernest Raddatz	Snowtown SA	HO	US Short Lines
Dave Dawe	Blaxland East NSW	HO	NSW
Tom Rennie	Russell Lea NSW	HO	SP
Maida Rennie	Russell Lea NSW	HO	SP
Andrew Jordan	Potts Point NSW	HO	UP
Trevor Humphreys	Fairfield NSW	HO	Not stated
John Hughes	St. Clair NSW	HO	UP, SP, AT & SF
Neil B. Higgins	Maclean NSW	HO	US

From Winnsboro I continued on back to Atlanta where I made one last stop. Fifteen miles east of the city is the world's largest granite monolith, Stone Mountain that rises 825 feet above the surrounding parkland area. Among all the museums and other attractions in the park is the Stone Mountain Scenic Railroad that operates a thirty-minute ride around the park behind one of three diesels. The day I was there they were

operating a restored FP7 #3499 with matching coaches, which made quite a sight.

This visit made a perfect finale to my trip, as later that day I left Atlanta on the long flight home to Sydney. PM



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Victorian Division

Division 3 - October 2000

The October meeting was held at the home of Gavin Hince at Clifton Hill. The close proximity to the city makes it relatively easy for people to get there which may have contributed to one of our highest attendances for the year with 19 members and friends being present. Our run of luck with the weather had held once again. There was the occasional brief shower but nothing to dampen anyone's spirit and everyone enjoyed a very sociable day.

Gavin has recently had a studio built over his carport to act as his layout room. He has already moved in some of his sections of the Big Sky Lumber Company (in On3) although they may not remain as the permanent layout progresses and he has started work on the new version of Shelter Bay. The plans allow for removable sections that can be exhibited. In the garden is his G scale railroad that consists of a simple dog-bone style layout with a passing loop at one end and a siding at the other. The short stock that Gavin uses on the railroad manages to handle the irregularities in the trackwork, while the larger locomotives of David Fletcher (a visitor) had some trouble with the small radius curves. The local wild life, Spike (the cat) and Wilbur (the dog), create their own particular problems for the railroad creating land slides and other obstructions. With the advent of spring some judicious pruning has also been necessary to allow the free passage of trains. Gavin is discovering that time spent in stabilising the roadbed will be repaid by minimising the amount of time that is spent on maintenance and repairs. Some sections of the trackwork may need to be re-laid.

Grant McAdam kept the formalities to a minimum at this meeting. He did take the opportunity to hand out the thank you plaques to those who had hosted meetings earlier in the year.

The topic for this meeting was meant to be bench work construction. Our host was the first to admit that he may not be the best person to speak on this topic and those who had seen his handy work in the studio agreed. Instead of the proposed topic Gavin

gave a clinic on the water effect he had used around the wharf at Shelter Bay. A thick layer of Selleys No More Gaps is spread over the surface with a wet paint brush. A gloved hand is then patted over the surface to produce a ripple effect. The glove facilitates the clean up process. Once this layer has dried it can be painted. The sheen for the water was added by using a locally produced equivalent of Envirotex which Gavin mixes in a plastic bag to help prevent entrapping air bubbles.

Mario Rapinett has come up with a new tool for distressing timber and he gave an impromptu demonstration of its use. It is a small circular brass brush, similar to a shaving brush, used for removing rust from cars. How this one differs from normal brushes used for this purpose is that the bristles continue across the brush rather than the centre being devoid of them. The advantage of this brush over a razor saw or screw thread is that the grain that it impresses in strip wood is of a more random nature. Once "grained" the wood takes stain easily.

There was a feast of display items this month with people bringing either their latest modelling project or acquisition. Surprisingly most of the items were in one of the variants of O scale narrow gauge. Steve Cullen had converted an HO Athearn locomotive into an O scale narrow gauge Class "A" climax. Another conversion of an HO locomotive to an O scale narrow gauge diesel was brought along by Ian Petherick. He also had an On2.5 gondola that contained Bachmann OO boilers as the load. Yet another O scale conversion came from our host, Gavin, who had converted a Bachmann O scale narrow gauge box car into a maintenance of way car. Laurie Green had also been busy building rolling stock for his new layout the "Enterprise Gold Mining Co." in On2.5. Mario Rapinett has been at his work bench once again and displayed a modified Bachmann Porter and an 0-6-0. Mario has also been working on the trestle for his new HO narrow gauge layout currently under construction. He was also seen running a couple of G scale Porters on the out door layout throughout the day. David Fletcher has had an article published in the latest issue of Narrow Gauge Downunder on some

of the conversions that he has performed on G scale locomotives. David brought along some examples to run on Gavin's garden railroad but as you have already heard they had trouble negotiating some of the curves. The locomotives included 1:24 scale C-16's #268 and #278 and a South Park 2-6-6. Both John Dennis and Grant McAdam brought along reading material. John had the books "Halfway to Heaven" on the Darjeeling Himalaya Railway and "The Innisfail Tramway". Grant had the following books "Modelling and Painting Figures" by Jerry Scutts and "Welsh Narrow Gauge - A Colour Portfolio" by Peter Johnson. Moving into some of the smaller scales Paul Richie has been very productive in Sn3 with a Porter that he had converted from the Bachmann Porter by regauging and modifying the cab and a small caboose. Paul has also been kit bashing a two storey factory kit with extended had carved plaster walls. John Cracknell flew the HO Australian flag with a Red Hen and Bluebird Railcar by SAR Models and BGB.

Division 3 - November 2000

On an overcast November day 16 members made the trek out to Sunbury for our monthly meeting at Laurie Green's. The rain stayed away throughout the day but the recent wet weather had made Laurie's drive way a little harder to negotiate than normal. It was one of our usual lunch time meetings where the members bring along their own meat and drink and have a barbecue for lunch. Considering the distances many of the members' travel to get to a meeting it makes it more worthwhile to make it a days outing than just an afternoon gathering.

Laurie's layout room has undergone some significant changes since our last visit. This room has been where he has built his recent exhibition layouts. The remains of the permanent home layout has gone and in its place Laurie has set up Old Ophir and the Enterprise Gold Mining Co. which are both O scale switching layouts, the former in On3 and the later in On2.5. I am not sure whether Laurie now plans to have running sessions or whether his prolific rate of building layouts is going to be reduced for a while. Anyway, it was great

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