

Punchbowl Hobby Centre Pty. Ltd.

545 Chapel Road, Bankstown, N.S.W.
Australia 2200
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LOCOMOTIVES and ROLLING STOCK

ATLAS, STEWART, KATO, ATHEARN, ROUNDHOUSE, RIVAROSSO, BRASS LOCOMOTIVES, POWERLINE, AR KITS, IAN LINDSAY KITS, MAIN WEST MODELS, LIMA, CONCOR, IBERTREN, BACHMANN, LILIPUT, JOUEF, FLEISCHMAN, ROCO.

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ATLAS, WOODLAND SCENICS, DESIGN PRESERVATION, EVERGREEN, CAMPBELLS, FOX CASTINGS, LJ MODELS, POLA, HEKI, FALLER, HELJAN, VOLLMER, PREISER, WIKING, KIBRI, BREKINA, HERPA, ROCO.

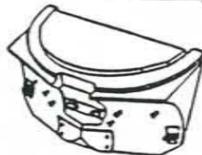
ACCESSORIES and TOOLS

ATLAS TRACK and ACCESSORIES, PECO, SHINOHARA, NORTHYARD WHEELS, ROMFORD, DETAIL ASSOCIATES, WHEEL WORKS, SENTINEL, CAL SCALE, KADEE, MITRONICS, LABELLE LUBRICANTS, MICROSCALE 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 SET, 1 INCH 'G' CLAMPS.

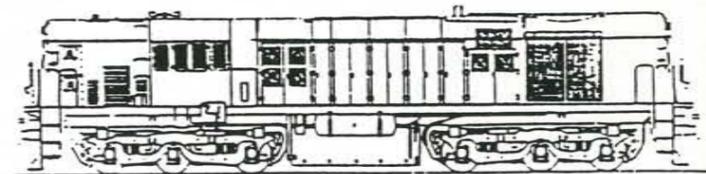
MAGAZINES and VIDEOS

AUSTRALIAN, AMERICAN, NEW ZEALAND, BRITISH VIDEOS.
N-GAUGE MAGAZINE, MODEL RAILROADER, RAIL MODEL JOURNAL, PACIFIC RAIL NEWS, TRAINS, NARROW GAUGE GAZETTE, AUSTRALIAN RAILWAYS, ROUNDHOUSE, BULLETIN, AUSTRALIAN MODEL RAILWAY MAGAZINE, PACIFIC RAILWAY, RAIL AUSTRALIA, RAILWAY DIGEST, MAINLINE MODELLER, RAILWAY MODELLER, CONTINENTAL MODELLER.

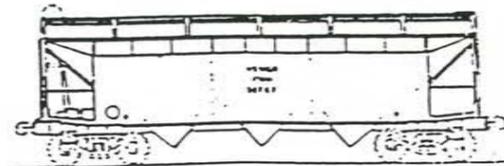
SNOW PLOWS



AIR HORNS



COOLING FANS

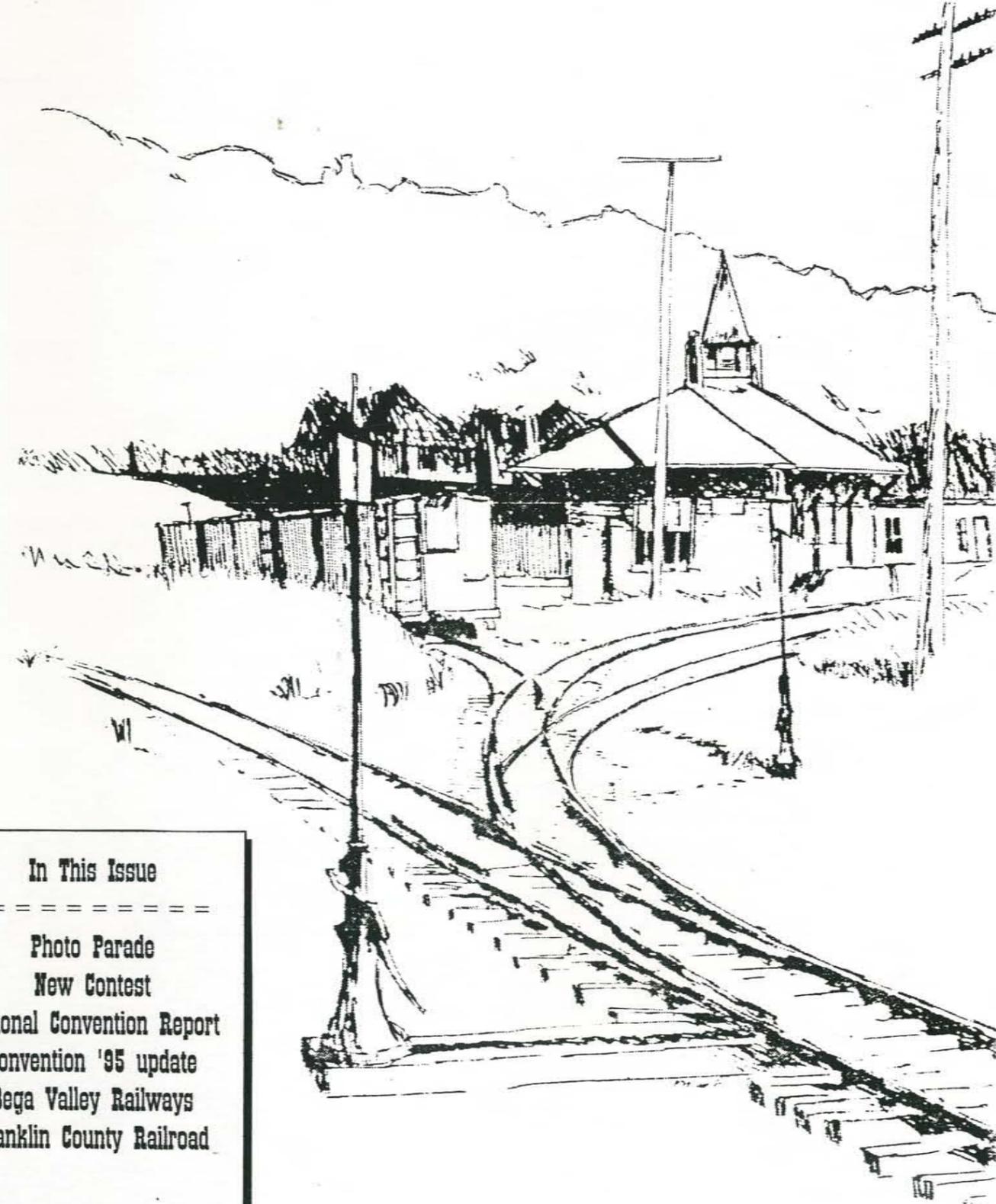


NUMBER BOARDS



Main Line

National Model Railroad Association Inc Australasian Region
Volume 11 Number 4 October, November, December 1994
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Franklin County Railroad

Australasian Region Directory		
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Main Line

Main Line is the official journal of the Australasian Region of the National Model Railroad Association Incorporated. It is published four times per year in approximately February, May, August, and November. Articles, letters, members classified advertisements and club notices are solicited from the membership and are considered to be donated free for the benefit of the hobby. They should be mailed to:- THE EDITOR, Main Line, 7 Booralie Road, TERREY HILLS. N.S.W. 2084.

Articles can be submitted on a computer disk (IBM) 3.5" or 5.25". Most WP packages can be read at this time. This magazine is prepared on a 386DX(40) computer (105M & 40M HD's) running under DOS 6.2 and prepared on a BJ10ex Bubble Jet printer using Wordperfect For Windows 5.2. Adobe Font Manager and Drawperfect 1.1. Articles can also be accepted if typed on A4 paper at 10 cpi, put diagrams on separate sheet and no columns.

Paid advertising is welcomed. Current rates for four issues are \$130 for a full page, \$70 for a half page, \$40 for a quarter page and \$150 for the back cover. All enquiries regarding advertising should be directed to the Editor.

On The Cover
Serenity at Strong, New England.
A slow time on the Sandy River & Ranglely Lakes Railroad (2ft). Drawn by Gerry Hopkins MMR.

Deadlines For The "Main Line"
Closing dates for the next issues are:
Feb. 30th December 1994
May. 30th March 1995
Aug. 30th June 1995
Sep. 30th September 1995
These dates are FINAL

Regional Meeting Schedule

10th December **NSW Thirlmere**
Ian Hopkins "Toad Hall" 18 Mason Street
1.00pm **Xmas Party**

Visit the Train Museum until 1.00 then walk 150 metres to Ian's Weekend retreat and partake of a "gourmet sausage sizzzzzzle". It is hoped that radio controlled live steamers will be running at this event. Don't miss out on this terrific venue

21st January **VIC North Balwyn**
Graeme Nitz 20 Alpha Street
2.00 pm (03) 857 6959

18th February **NSW St Clair**
Kevin Brown 5 Afternoon Court
2.00pm (02) 670 5370

On the last visit to Kevin's we so the marks on the ground for the layout room -- now see the layout room and the start of the layout.

18th February **VIC Ballarat**
Paul Richie 28 Ascott Street South
11.30 am BBQ (052) 32 1138

11th March **NSW Winston Hills**
Girl Guide Hall, Lot 20 Eddison Road
1.00 pm Behind Netball Court
Non - Silent Auction (02) 450 1033

Come along to this fun (& profitable) day. Bring your unwanted items of model railroad equipment. A 'live' auctioneer will accept your bids for each lot. Bidding will start at 2.00pm no items will be accepted after 1.45 pm. Auction forms will be available at the Xmas Party and in the next issue of Main Line. At the end of the auction, while you are waiting for the book-keepers to do their calculations, we will hold our AGM, there are NO elections at this time.

18th March **VIC Hopper's Crossing**
Gavin Hince 16 "The Glades" Johnston Ave
11.30 am BBQ (03) 749 6974

10,11,12 June Convention '95

Sydney -- NSW -- Australia

John Paul II Senior High School
Marayong, Sydney.

Registrations to: --
Ian Hopkins.
P.O. Box 714.
Willoughby NSW 2068

WAYBILL

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Coming in the next issue of Main Line:

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Modelling Poured Concrete Geo Paxon
Names for your Industries Fred Gill MMR
Clinics you missed at Sunbury Laurie Green MMR
Kennebec County Railroad Gerry Hopkins MMR

President's Report

By Kevin Brown

Last August your President, Vice-President, Trustee, and several members from Sydney, Melbourne, Perth and New Zealand attended the National Convention held in Portland, Oregon. The convention was overwhelming with so many activities to enjoy, and many fellow modellers from all around the world to meet and compare modelling ideas etc.

Two of our members from Victoria took out prizes in the model competition, against some very strong competition. Laurie Green took out two first prizes and the GOLDEN LANTERN for best in show. Gavin Hince took out a first prize, congratulations Laurie and Gavin.

On a sad note, New Zealand member Keith Oman, passed away shortly after the convention in Vancouver. Our condolences to his family on their sad loss. The hobby has also lost a good friend.

New Contests

.....at the 1995 Convention
by Fred Gill MMR

For the first time at our Regional Conventions we will be adding two new contests along with our normal model contests. These contests are not an official part of the model contests for the Convention and therefore will not be eligible for merit award status. However entrants will receive 1st, 2nd and 3rd Awards where applicable. The contests are sponsored by the Convention Contest Department.

The contests are: **Levity Model Contest** and **Pass Contest** Details of these contests and their rules are described below.

LEVITY' CONTEST RULES

A levity contest is a contest where the model railroader can build a model that is strictly a figment of his imagination. In fact he builds a model that in most cases would not be practical in real life. An example would be an 0-2-0 Steam Loco or a diesel loco that can fly over damaged track, like a helicopter. There are many, many more visions that can spring to mind and this is where the modeller can really let his hair down and build the model of his dreams.

The word 'levity' can also be called fantasy, optical illusion, unreality, visual fallacy, pretence, fictitious, imaginary, frivolity, hallucinatory or as Collins dictionary states 'inappropriate, lack of seriousness' whilst Webster's Dictionary states 'lack of serious thought'. Personally, I call it fun and that's part of our hobby, enjoying oneself. The rules of the contest are quite

simple. There's only one the entry must fit through the contest room door. Merit Awards will not be applicable to the contest. Just build a model of a piece of motive power (dummy), rolling stock, structure or any other railroad item that can be recognised as a 'fun thing' and that's it. The model can be in any scale and the contest is open to all age groups from 1 year to 100 years old.

This contest is not an official part of the model contests for the convention. They are however, sponsored by the Convention Contest Department. So come on modellers, let's have those 'dream models' and let's have some fun.

PASS CONTEST RULES

- 1 Four copies of the subject pass must be provided to the contest entry supervisor.
- 2 Two copies of the pass will be used for judging and these should be placed in a clear plastic envelope. Any envelope with the entrant's name on it will NOT be accepted. The contest entry supervisor will place a number on the envelope at time of entry.
- 3 The other two pass copies should be displayed for members viewing and both sides of the pass must be displayed. These should be mounted on a flat rigid card base (NO folders or glass).
- 4 Entries may be printed, hand lettered, typed, stamped or reproduced by other suitable means.
- 5 There will be 1st, 2nd and 3rd place Awards given.
- 6 Factors that will be considered by the judges are the following, Aesthetic appeal, Balance and Readability, Colour Match and Attractiveness, Uniqueness of design.
- 7 The Pass Contest is not an official part of the model contests of the convention. They are however, sponsored by the Convention Contest Department

THE 1995 CONVENTION MODEL CONTESTS

Currently there are eleven (11) categories for models in NMRA contests. So that all contestants can understand NMRA contest rules the following information is printed for their benefit.

There are two sections in which entrants may join the contests, as a Master or as a Modeller. Masters are those modellers who have earned more than 87.5 points in that category in a previous contest. (Do not misread 'Masters' as being an MMR in the Achievement Program). Modellers are those entrants who have not achieved 87.5 points in that category in past contests.

MODEL CONTEST RULES

- 1 All models must be brought to the Contest

Room. They must be properly entered, displayed and removed by the entrant as supervised by the contest staff.

- 2 No entries will be accepted after judging has started. Late models may be exhibited.
- 3 All entries must be on the official entry forms. Contestants will be given a receipt which must be presented to recover the entry.
- 4 There will be no limit to the number of entries per contestant.
- 5 The model must be entirely the entrant's own workmanship.
- 6 Suitable space will be allotted for effective judging and viewing. Every reasonable precaution will be taken to protect the models.
- 7 Models will be displayed to permit maximum inspection with a minimum of handling.
- 8 First, second and third ribbons will be awarded in each category on the basis of points earned. Any category in the contest event having less than two entries shall be considered for an award, if in the judgment of the Contest Chairman the model has reached merit award standard (87.5 points).

ELIGIBILITY

- 1 Contestants must be paid-up members of the NMRA and AR.
- 2 Commercially built models and professional model builders are ineligible. Unmodified, ready to run models are ineligible but may be exhibited.
- 3 Models that have won 1st place awards in previous Regional or National contests are ineligible.
- 4 Entries requiring more than ten square feet of space and/or weighing more than 50 kilos are ineligible.

CATEGORIES

- 1 **Steam Locomotives** - Types of locomotives representative of steam power.
- 2 **Diesel Locomotives and others.** - All locomotives except steam types and passenger revenue carrying types.
- 3 **Passenger Cars.** - All types of passenger revenue carrying, including RDC, rail buses, observation, combines.
- 4 **Freight Cars.** - All types of freight revenue carrying, including express reefers.
- 5 **Cabooses.** - All types, including bobbers, drovers, transfers, etc.
- 6 **Non Revenue.** - Right-of-way and track maintenance vehicles, rail and inspection cars, and railroad cranes.
- 7 **Traction.** - All equipment particularly associated with urban, suburban and interurban railways electrically powered.
- 8 **Structures on line.** - On line structures being those which would normally be owned by the railroad, which are permanently fixed along the right-of-way.
- 9 **Structures Off Line** - All structures NOT owned

by the railroad.

If any of the above items (1-10) are presented on track or any form of presentation then they are considered to be a display/diorama.

- 10 **Displays or Dioramas** - A group of models or a model which includes supplemental scenery not pertinent to the function of the model or primary structure.
- 11 **Modules** - the same as 10 except that it is operational on its own or as part of a layout.

SPECIAL AWARDS

Best in Show (Master) - (John Kiddell Award) - This award is for entrants in the Master Section of the model contests.

Best Entry by a Modeller - (John Gordon Award) - This award is for the Modeller Section of the model contests.

Best Entry by a Junior - (John Lebsanft Award) - Best **Passenger Car in Show** - (Walthers Award)

THE PORTLAND CONVENTION

.....from John Saxon MMR

The Region was well represented at Portland with around 15 attending from Australia and New Zealand. Due to meetings and other commitments, I did not see any local layouts but from other reports, the 47 available were of mixed quality with many that we would not accept for showing in our region. To be fair however, a large National convention can attract up to 2500 registrants, most wanting layout visits, so that the organisers would have not had a lot of choice with the numbers required.

There were 165 clinics, most repeated up to three times and as usual, all reports were that they were very worth while. The buses at this convention were well organised and the tours were very popular.

Portland and the Columbia Gorge area is in a very beautiful part of the United States and the weather stayed sunny and glorious for the convention. A local hobby shop with a free shuttle bus offered 15% off most items and with no local sales taxes most brought home lots of bargains.

The Silent Auction, whilst not as large as some previous conventions, offered many bargains and our contingent came away well satisfied. There were 219 exhibitors at the Train Show covering the whole gamut of the Hobby. I thought I had done well by picking up a Kato NW2 for \$US68 but Sowerby Smith trumped me with his purchase at \$US65! He was also tempted by a Proto 2000 SP E8/9 for \$US47 but as the seller did not have two, Sowerby declined!

With Tony and Judy Koester, Toni and I had dinner with Allen and Sharon McClelland to discuss their visit in June next year for our convention with Tony

continuing to be effusive about the great time they had here last year.

On the business side, our meetings extended from the Friday night, through Saturday day and night and all day Sunday. As the newly appointed chairman of the Finance Committee and a member of the Audit Committee, I was also meeting with people the rest of the week. (Are we having fun yet?) The minutes, when published, will have more detail but worth reporting here are the following significant matters.....Yet another mis-guided move to increase foreign membership fees to cover extra Bulletin postage to Canada, England, Australasia, etc. was defeated 17 to Nil by the Board; dues were increased to \$US30 from \$US24 effective 1 September (N.B. Apart from \$2 for a postal hike, this extra 50 cents per month is the first increase since 1988. In those six years there has been a 27% drop in the purchasing value of the dollar so that this rise just covers that).

Bob Charles and Allen Pollock were elected President and Executive Vice President respectively for a two year term; we met the new Executive Director Peter Jehrio who took up duties in Chattanooga on 10 October; the NMRA has commissioned a professional to survey its members to identify why 20% do not renew each year.

NMRA expenses exceeded income by \$US58,492 in the ten months to 30 June, 1994; although the Board accepted the Treasurer's 1994/95 budget which forecast that income would equal the projected expenditures of \$US969,205, there was substantial concern that the income projection may have been optimistic. (The Treasurer was asked at a later meeting of the Finance Committee to submit a revised budget no later than 30 November incorporating the effects of more recent membership statistics showing lower numbers). Hopefully the Committee can then identify areas for closer attention so that we can get our finances back on track.

NMRA FUNDING VERSUS SPENDING

You will have read above that the NMRA expenses exceeded income by some fifty eight thousand US dollars in the ten months to June, 1994. The explanations provided to the Board were as follows:

INCOME: For the ten months, on a calendar pro rata basis, we should have received income of \$782,299 but only \$632,671 was booked resulting in a shortfall of \$149,628. Major disappointments were Regular Dues \$41,599, Building Fund Donations \$41,530, Grants \$8,330, Heritage and N Scale Cars \$24,480, Convention Department \$15,020, Building Account \$16,763, HQ Sales \$13,724 and Investment Interest \$4,671. Fortunately, better than budgeted income from Other Dues and Bulletin Advertising provided some

compensation.

It is fair to point out that by year end the results from the heritage cars and the convention area should have brought them closer to Budget. However, it is highly likely that we will have a significant income deficit for the year.

EXPENDITURE: For the ten months, expenses booked were \$691,163 versus a pro rata budget of \$755,643. However, many expense items associated with the Portland Convention and meetings will substantially increase some areas including Travel, Executive, Convention and Promotion so that by year-end the expenses might well be closer to Budget. Accordingly, it is unlikely the deficit to June will be much improved by year-end, 31 August.

1994 / 1995

The current year's balanced budget of Income and Expenditure matching at \$US969,205 is unlikely to be achieved with a shortfall in Dues Income being highly likely. The major areas of NMRA expenditure budgeted for 1994/95 are Publications \$US297,420 (30.7% of Budget) and Secretary, Library, Treasurer and Headquarters Office \$US572,545 (59.1% of Budget). Whilst we are unlikely to be able to significantly increase dues income quickly, we must urgently address the areas of greatest expense to bring them back into line with our income.

With preliminary accounts to 31 August and a revised 1994/95 Budget both promised by early December, it will be imperative that the Finance Committee present the February meeting of the Board of Trustees with a plan of action to urgently turn the situation around. As chairman of that committee I will be trying to making sure we do not lose that opportunity.

So, You Are Holding A Meeting !!

The National Model Railroad Association Inc. holds monthly meetings, usually in homes of members whose wives are prepared to put up with the model buffs. In an attempt to explain to members' spouses what is involved the following should be of some help.

Invitation to the meeting

Members are advised of the date and location of the meeting in the Main Line. Hosts should advise of "traps" regarding the location of the residence e.g. any parking problems.

Time of meeting

Normally Saturday 2.00pm - 5.00pm with a short business meeting around 4.00pm, followed by

afternoon tea. Officials will arrive around 1.30pm to deliver items for the meeting. Normal attendance is around 50, but up to 70 members can turn up.

What do we do?

When possible, view and operate (with permission) the host layout, shop at the Company Store and "Bring & Buy" stall, watch videos if available and natter endlessly about matters pertaining to the iron horse.

Who brings what?

Supplied by the association

Large hot water urn.	Wooden Stirring sticks.
Instant Coffee	Donation Jar
Name Tags	Disposable cups
Tea Bags	Sugar
Attendance Book and pen	
Sign to Identify Residence	

Supplied by the Hostess

Milk, Biscuits, Cakes etc	Soft drink on hot days.
Card Table for attendance book	
Card Table for drinks.	

A reimbursement of \$30.00 is given to cover expenses. All members are invited to offer their layout for one of these meetings.

DEFERRED LIFE PAYMENTS DETAILS.

Jack MacMicking can now tell you exactly what a **Life Membership** of the Parent will cost you based on your age and whether you want to pay up front or spread your payments up to five years. **Affiliate Life Membership** at half rates is also available. Contact Jack on (02) 958 5988 or write to him at P.O. Box 714. Willoughby NSW 2068.

MEETING REPORTS

by Ian Hopkins

On **July 16th** the Managing Director of the Exmouth Valley Mines, K.P. Ratt, Esq. invited people to an Open day at the Bega Valley Railway. Attractions offered were free rides on the great Nukkaldragga Shire Zig-Zag and various clinics.

Without trying to duplicate Keith's article later in the magazine, the BVR is a wholly owned subsidiary of the EVM and was formed in March 1994 when the EVM took over the Batesman Bay to Bega line from Staterail. The company also owns the Nukkaldragga Shire Zig-Zag which is a logging line where a Shay operates and also a steam rail motor for passengers.

This NSZZ zig-zags down the hill to a dispiriting set of industries: **Toxic Waste Recycling; South Coast Whaling and Fur Sealing Pty Ltd and Cedar Felling.** Near the line is a quite delightful bucolic scene, not

often witnessed, the annual **Wild Lammington drive**, although it appeared that the numbers were down on previous years.

Afternoon tea was served followed by the usual short meeting (kept short because the temperature was falling and there was still a lot to do. Jenkilton Scenery Constructors (Peter Jenkinson and Keith Pratt) demonstrated how to make scenery. Laying down strips of paper soaked in coloured Gipro plaster. The plaster coloured by using dry ground pigment. When the scenery is dry highlight it by using acrylic colours (those used for the demonstration were Chromacryl, available from many newsagents). Paint the colours on until you get the result that you desire.

Meanwhile, Peter Gibbons was showing how to develop an enthusiasm for gardening, specifically, how to make trees from roots. Trim the roots, put two or three together to get a good looking tree. When the framework is complete, tease out Woodland Scenics Polyfiber and paint the required colour, say brown. When the paint is dry cut out the required shape, tease it out again. Attach the Polyfiber to the tree and spray the tree with Aussie Grip Spray Adhesive. Sprinkle fine Timber Products foliage material onto the tree, a light colour on top and a dark colour underneath.

Peter then showed how to make gum trees using several pieces of weed stuck together and the gaps filled with a soupy mix of plaster. Paint the tree a silvery colour. Other trees demonstrated were Poplars from common Yarrow and tall shrubs from the old flowers of Buddleias.

I would like to thank Keith and Marion, as well as their assistants Peter and Peter for a most entertaining afternoon.

September 24th, another meeting. This time in Newcastle at Mike Hallinan's. But, before trying to find Mike it was to the Hunter Region Rail Modellers' Exhibition. It was in a large hall and an annex with a total of 42 stands.

The general impression I had was that the layouts were of a pretty high standard with one that really stood out - Binnabri. This an O scale module of a simple station located on a lightly laid cross country branch line, the builders say that it representative of the Binnaway/Werris Creek line in the north west NSW. At the station is a platform with a small station building in some state of disrepair and a grain silo at a single ended siding. There is a photo of the module on the front of the August AMRM but it looks better in the flesh.

Then it was off to find Mike's place. After climbing up a steepish drive I found the Hallinan residence. Up some stairs around the side of the house to a flat area contained by the house and a rock wall. Along the wall and extending into the bush is a 'G' scale layout. Currently it consists of a small yard and about 10m of

track stopping at a chasm which is to be bridged by a trestle. From here on all that can be seen is the roadbed which has been graded but no track laid.

Mike's track is laid on a concrete base on which he hand lays sleepers and rail, ballasts it with Kitty Litter and holds the whole thing together with Bondcrete. The track looks very effective snaking off in amongst the trees.

When I arrived the yard had been filled with rolling stock. Some were being attached to a locomotive and taken for a ride up to the end of the line and back. At the end of the line on a spur was a railbus (unpowered, plans for the motor at some later stage). The locomotives were radio controlled with the receiver in a car behind the locomotive (It's enough to make one go and start laying track in the garden).

Because of the show people kept coming and going which made it different from the usual kind of meeting. Afternoon tea was served for those who were there and then the gallop along the expressway back to Sydney. Many thanks to Mike for inviting us to see progress so far and look forward to seeing the trestle installed and track laid along the rest of the roadbed.

AUSSIES WIN GOLD AT PORTLAND!

.....from John Saxon MMR

Laurie Green MMR and Gavin Hince scooped the pool for the Region at the Portland NMRA Convention.

Laurie won the Golden Lantern Award for first place in Cabooses with his On3 D&RG caboose and first in the Non-Revenue category for his On3 flanger.

Gavin was judged first in Freight Cars for his sway-backed On3 stock car.

Additionally, they received the Most Popular awards in those categories (as assessed by the convention registrants).

I believe this supports my belief from attending seven National conventions since 1985 that Australasian modelling is often as good if not better than the best seen in the United States.

Convention '95 - Update ...from Gary Spencer-Salt

All is progressing well and Convention planning is well under way. The Convention site has been booked at **John Paul II Senior High School at Marayong**, a suburb of **Blacktown**. Blacktown is a major junction on the Great Western Rail Line from Sydney and is approximately **26 Km from the C.B.D. of Sydney**. There is a regular rail service to both Blacktown and Marayong stations. Buses run from Blacktown past the Convention sitewhich is also an easy walk from Marayong station. For those who come by car there is plenty of parking .

The site was selected for the facilities it offers to the convention organisers. Some of the major features are two separate halls connected by a common entrance and stage. One of the rooms is equipped with a theatre and combined with a video projection system stimulating some new and exciting ideas. The hall is serviced by a connecting canteen, to be open over the three days of the convention - no reason to leave except for one of the off-site events. There will be adequate rooms for the display of contest and display models as well as the silent auction. There is a large lecture theatre in a tiered arrangement for the major clinics.

The committee has selected a recommended motel that is approx. 2 km from the Convention centre and has agreed to provide buffet breakfast if we can fill 10 rooms - book early as there are only 22 rooms. Alternative accomodation will be available at Westmead.

There will be a much stronger Non-Rail Program this year to entertain those who do not have a total interest in the Rail Program.

All the elements are now in place, all we need is your input. We are still seeking clinics, they don't have to be any longer than 10 minutes, maybe a tip you have for other modellers on any subject. Please consider adding to the success of the Convention. Your input is the key to the success!

Registration forms should be available in December -- Looking forward to seeing you there.

Reply to :

Gary Spencer-Salt (Convention Chairman)
P.O. Box 200, Marayong NSW 2148.
AUSTRALIA

Tel. (02) 622 1916 (a.h.) Fax 61 2 831 4132 (24hr)

N.M.R.A. Australasian Region Convention 95 10, 11, 12th June 1995

Special Guest :

**Allen McClelland - Owner of the
"Virginian & Ohio" Railroad
and
author of "The V & O Story"**

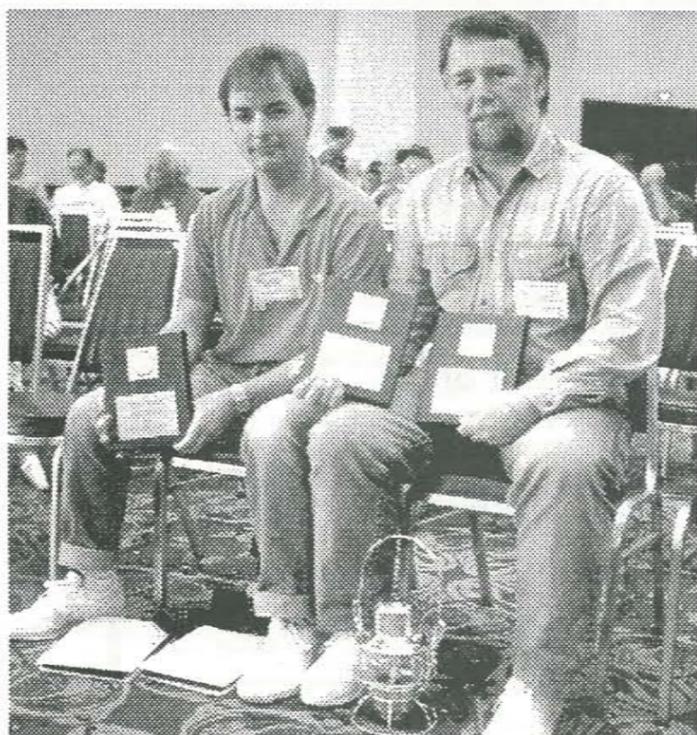
Allen will conduct a wide range of clinics featuring the Virginian & Ohio. These clinics will be of invaluable interest to all model railroaders. Allen is one of the major forces in the direction of the hobby since the early 70's with the publication of the "The V & O Story" by R.M.C.

Allen's 5 clinics will provide powerful insights into the design and operations of all model railroads with an up dated look at the V & O at the dinner.

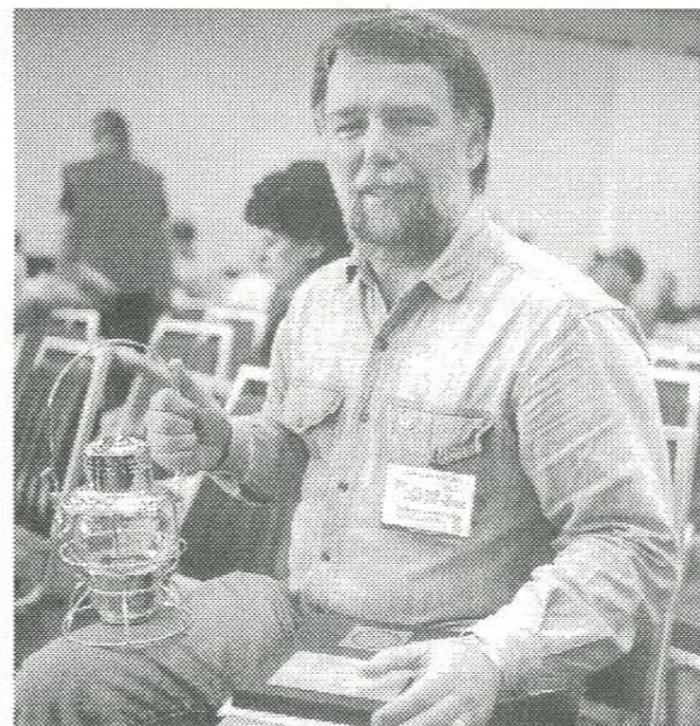
Convention 95 Highlights

- **3 days - 30 hours of program**
- **Silent Auction**
- **Model Contest**
- **Clinics - 28 hours**
- **Non-Rail Program**
- **Sunday Evening Dinner**
- **Layout Tours**
- **Layout Inspections**
- **Non Railroad Tours**
- **Commercial Displays**
- **Company Store**
- **Souvenir Tours Video**
- **Sunday Theatre Spectacular
and more to come !**

Laurie Green and Gavin Hinze Clean up NMRA National Convention



Laurie and Gavin with their spoils



Laurie won Best Non Revenue car with his Flanger and Best Caboose. Also he won the Brass Lantern Award for Best Caboose



Gavin's Stock Car model won the Best Freight Car Category and he scored four points more than he did at Sunbury!

The Australian contingent made a big impression in the model contest. Laurie Green led the charge with two first place awards and the Brass Lantern.

Gavin won not only the Best Freight Car but also the Northeastern Wood Products Best Wood Crafted Model Award.

Rob Nesbit was second in the Switching Competition



ANOTHER LAYOUT IN 'S' (continued)

by Paul Richie.

At this stage it was decided to prepare a couple of models for the convention modelling competitions - "S" of course. A water tank based on an article in the Jan / Feb '87 Gazette. The tank base was constructed from stones broken from sheet of plaster 1/8" to 1/4" thick; the floor also made from individual stones broken from a thin sheet of plaster. A door and two window openings were provided for when building. The door and window frames were made from wood stained with a paint pencil, the door was made from styrene strips grained, one window only has a shutter. Both the door and shutter open using HO Roundhouse door hinges altered and drilled, wire angles fitted to the door and window frames are the hinge points. The other window has a lower fixed and upper hinged frame using wire through the frame.

The roof of the building is of timber strips with tissue strips and black acrylic paint with white glue to resemble tar paper with colour grout sprinkled on top while wet, then lines painted on to resemble joints. This method is based on one in a recent Gazette.

The tank floor is the usual system of prestained wood. Tank is of strips glued to a suitable tube with fishing line hoop bands with Grandt Line HO hoop fasteners; the spout is turned from tube.

The shingle roof is individual shingles from model aircraft ply with a base of thin cardboard and a ladder of strip wood. There is also furniture for the interior.

The second model is a Shay, using a Roundhouse kit, altered bogies for Sn3, detailed frame, scratchbuilt cab-tender, front and back buffer beams, an altered boiler with turned domes and chimney and extra details added. This model was handpainted with Accuflex paint then lettered with CDS and rub on transfers completed the model.

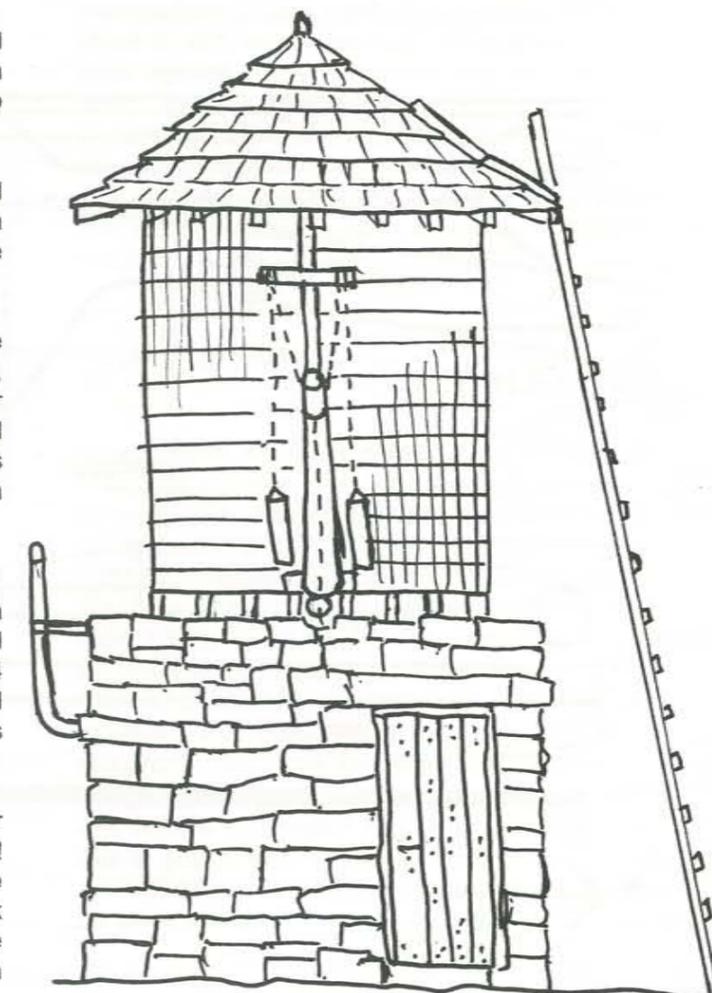
Other rolling stock constructed were 1 large and 1 small Grant Line O Gilpin tram ore cars with Roundhouse HO archbar bogies with Kadee old time couplers, Railmaster boxcab and white pass 4 wheel diesels. Scenery Unlimited boxcar, Overland C & S boxcar. Building & Structure Co. Assayer's office.

With only 1 month between the convention and our local exhibition, the stops had to be pulled out! Stone embankments were carved, the off stage track laid, wiring done and tested, trestle deck installed, basic scenery coloured by covering the white plaster base with a sloppy plaster mix with

brush or small modelling tool, then loosely covered with colour grout mixed to the right shade, then mist spraying water to fix all. When this had dried Woodland Scenics ground foam was glued on, foliage pieces were glued on for shrubs; some of the trees from the convention were added. The creek has rocks glued in; water will be added later using gloss medium. A station has been started using the same system as the tank base.

With only 2 weeks to go it was decided to quickly construct a basic model of the Coffee Pot - the steam railcar of the Pichi Richi Railway in South Australia. This model running on HO track "Sn3-1/2" used a Spud as the "power" ran for the 3 whole days almost non stop - as did the Box cab. A small 0-4-0 HOn2-1/2 Joef steam engine and rolling stock did not look out of place on the top level.

The control system was simple - one throttle for each level. With care there could be a train in the diorama nearly all the time. There is still a lot to be done. Buildings to finish, more colour to the scenery and, of course, more rolling stock.



BEGA VALLEY RAILWAY

HO LAYOUT BASED ON NSW PROTOTYPE

By Keith Pratt.

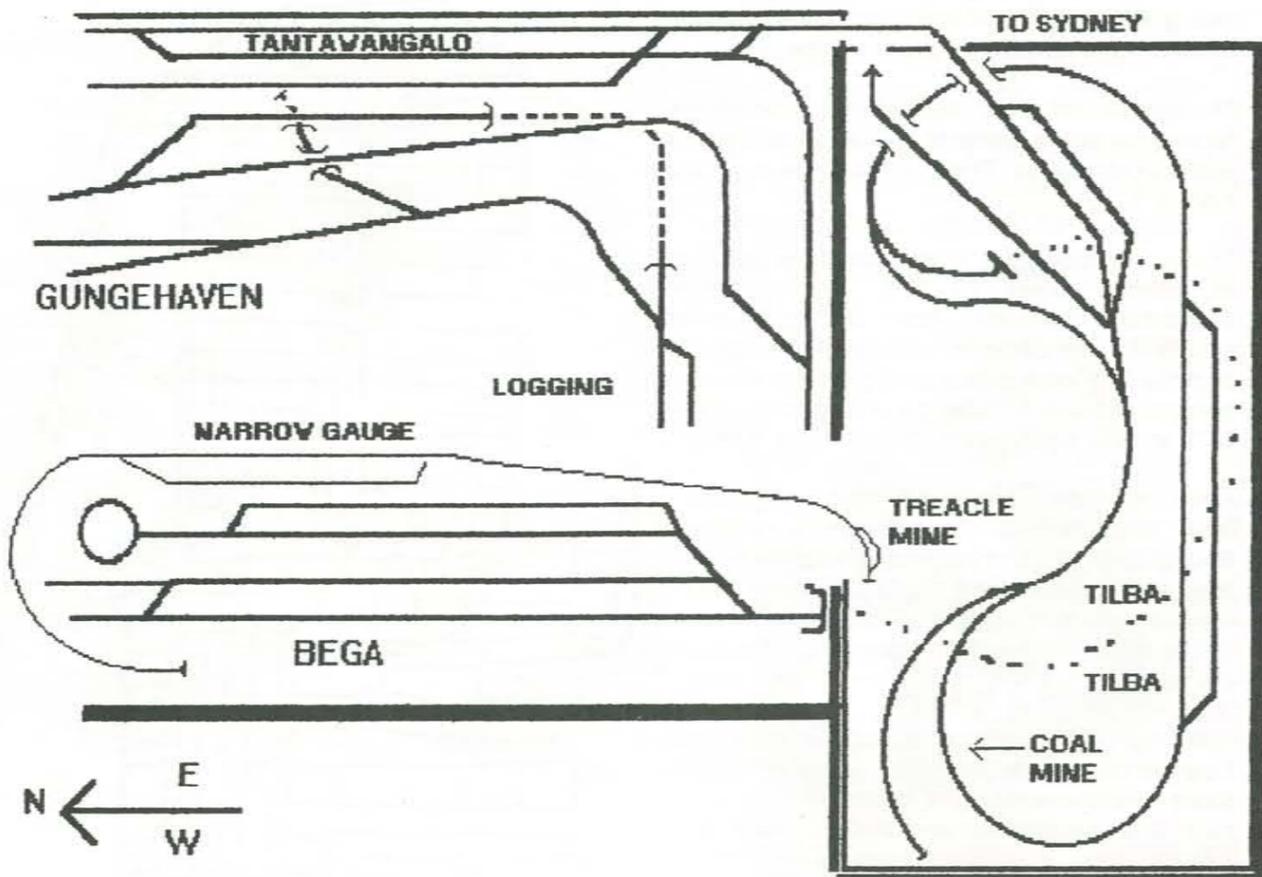
There are no railways in the real Bega Valley but, like many other residents of the South Coast, I always felt it was a shame that the line never went further south than Bombaderry (Nowra). So when it came to deciding on a location for my HO layout and being blessed (or is it cursed ?) with an overactive imagination, I decided that south of Nowra was the place for me. This way I could still model NSW railways which are my main interest but I would also have the opportunity to improvise a little & break away from pure prototype.

My first layout (at my previous house) was based around Ulladulla in the steam era, on moving to Exmouth Rd, Peter Jenkinson & Myself started building the first Bega Valley layout, again NSW prototype, this time in the transition era. Also at this time (approx 15 years ago) we formed a small club (5 members) known as "Dapto Modellers" with the express intention of building a portable layout for local & Southern Highlands exhibitions.

This we did and this was the time when the concept of Exmouth Valley Mines was first conceived to add some variety & private operation to the club layout.

For various reasons I dropped out of the model railway scene for some years, The club "folded", the unfinished Bega Valley Railway was ripped up & the layout room became my art studio. However, I always kept the rolling stock & some of the buildings etc. with the idea that when I retired I would "get back into the trains again".

Two years ago retirement came sooner than expected in the form of "an offer I couldn't refuse " so it was indeed "back into the trains again" resulting in the new BVR which many of you saw in July. This time around we are now completely autonomous, Exmouth Valley Mines being the Corporate giant which takes over the Bega valley division of the SRA south of Batemans Bay. EVM also takes over the B-Bay export coal loader from the PWD and forms yet another subsidiary company to act as the common carrier, Bega Valley Railway.



BEGA VALLEY RAILWAY
LAYOUT PLAN

LOCATION.

On the map of NSW the BVR main line runs : Batemans Bay -- Moruya -- Narooma -- Tilba -- Bega. The branch lines, heavy duty, Narooma to Exmouth Valley Mines in the hills behind Tilba, then light duty (the old timber company line) from Tilba to Tantawangalo & finally down the Zig Zag in the imaginary "Nukkaldragga Shire" to finish at the imaginary seaport of Gungehaven, approx 25km north of the real town of Eden.

There is also a narrow gauge line (HOn30") running from Bega up to the Treacle Mine near Candello.

IN THE LAYOUT ROOM

The layout room is part of the garage / workshop area under the house, we start at Bega station & yard on the western wall, proceed through the wall and wind up to the higher level in the next room and onto continuous run around with passing loop at Tilba station, branch to EVM,s " Cowpat No.2 Colliery and a branch back to the outer room again at yet a higher level to Tantawangalo Station and the top of the Zig Zag on the Eastern wall of the outer room then down the Zig Zag to the timber mills & Gungehaven.

At present I am constructing another branch from near Tilba which will pass through the Eastern wall of the Inner room to a hidden return loop under the house. This will actually be the main line supposedly heading for "all points north" & designed to take away the "train playing" effect of the continuous loop.

The narrow gauge line runs from Bega station up around the edge of the doorway to the inner room to finish at the (as yet to be built) treacle mine on the northern wall of the inner room.

Trackwork, all HO is Peco code 100 & standard Peco points. The narrow gauge is partly handlaid on wooden sleepers & partly standard pecco flex track, again using pecco points.

Point control is under bench manual lever where handy or by Telecom relays operating on their own 45 volt supply where remote, on the Zig Zag I have used Peco point motors with "stud & probe " switching.

LIGHTING & SIGNALLING

Bega stn, yard, street and structures are lit by either commercial fixtures or hidden "grain o' wheat" lamps. There is also some semi automatic colour light signalling at Bega stn, operated by a combination of mechanical interlocking with the points combined with a simple cascade circuit employing 3 Telecom relays. These signals indicate "road" only in the automatic mode and must be switched from red to green for directional purposes by a manual switch. Which is why we employ a signaller at Bega isn't it ?

TRAIN OPERATION

Designed to be standard cab control, at present only using temporary controllers in both rooms as operation is the very least & last of my interests. I enjoy building railways but I don't think I could get much pleasure out of a finished one for very long.

Structures, are 90% scratchbuilt from Northeastern timber, cardboard, plaster or styrene sheet & 10% kitbashed from old buildings on other layouts. Some structures, e.g. the Railway Hotel, Tadwhallakers Engineering Works and Dunster's Feed & Grain Store are half structures set against the back drop and paint "perspective" (there's a new word for the Macquarie Dictionary) into the backscene to give a greater illusion of depth in a small space.

ROLLING STOCK

Ah yes! what a conglomeration. One of the joys of running a private railroad is that, within reason, I can run what I like (no Conrail or CSX though, Mr Jenkinson please note.) and I can justify it. EVM has a colour scheme of red and yellow and, like Hammersly Iron, they buy their locos from the USA, GP35, SD35 & SD40/T2 plus an ex Santa Fe caboose & the latest addition an ex Santa Fe round-end observation car, newly painted in glorious EVM red & yellow and fitted out with dining room, bedroom, bathroom, and observation lounge including grand piano & bar (complete with topless barmaids) and all for the exclusive use of guess who? Yes you got it in one, the MANAGING DIRECTOR and of course a few of his close friends.

The BVR colour scheme is green & black and of course consists of ex SRA stock, which you will remember we have recently taken over, however due to the influence of the heritage body in the valley who want to maintain the old NSW colours we so far have only repainted one 44 class, one standard goods steamer & one box car. I should mention here the other loco in BVR colours, The Box cab diesel, which is part of the weed control consist, was formerly owned by the Saxon Track Cleaning Co P/L of Clontarf NSW & purchased at a secret auction at a secret location in one of the southern states of Australia. There is also an SRA 442 class in the latest Freight Blue because we have revived the old "Bega Mail" as a "Heritage Train" and this is operated straight through from Sydney by SRA locos. On the Zig Zag the Timber Co's Shay is basic black/green & the steam railmotor owned by Nukkaldragga Shire Council is dull red. So, there we are, all justified, yes?

SCENERY

This consists of standard hard shell on chook wire with Alfoil used to form rock moulds then painted with Chromacryl student colours & natural pigments. I should express my thanks here to Peter Gibbons for the donation of many trees. I am sure those of you who attended his tree making clinic at the July meeting would agree that he is "tops" in this field.

THE REALMS OF THE IMAGINATION.

Someone commented at the July meeting that if there was such a classification as NMR (Nutty Model Railroader) then I would surely Qualify. Treacle Mines? Live Lamington Drives? The eight-foot-tall monster, " Jenko " ? Indeed, what is model railroading but an outlet for our talents, artistic or otherwise. I can admire and perhaps envy a little, the serious Model Engineer with his sometimes near-perfect reproduction of the prototype.

My feeling is that Model Railroading is a type of theatre and therefore requires an imaginative script as well as the necessary hardware. So herewith, a couple of reprints of the "info boards" around my layout.

BEGA STATION

Or to be precise NORTH BEGA as, when in 1897, the NSW Govt decided that this was not the best route to Melbourne they did not justify the expense of completing the line across the Bega River, a further mile or so into town. The narrow gauge line is owned by Bega Valley Treacle Mine (a subsidiary of EVM) and runs from the mine, via Candello & Kameruka to Bega Stn. Originally it ran to the coast at Tathra but after the line between the station and Bega town was washed out in the great flood of 1926 it was never rebuilt. However, the town to Tathra section is now run as a tourist attraction by VIPERS, the Valley Industrial Preservation, Engineering & Railway Society.

BVR PASSENGER SERVICES

Daily: By ex SRA Budd cars to Batemans Bay, connecting with SRA South Coast XPT to Sydney.

Thrice Weekly: the "Bega Mail" a tourist orientated "Heritage Train" operated jointly by the SRA & BVR and usually hauled by "stealth blue" 44207.

Mon-Sat: Tantawangalo to Bega mixed goods/pass, connecting with Budd cars at Narooma.

Daily: Treacle mine to Bega (narrow gauge) connecting with main line trains.

Mon-Sat: Steam railmotor, Gungehaven to Tantawangalo, operated up the Zig Zag by Nukkaldragga Shire Council.

ASSOCIATED ROAD SERVICES

Hamiltons Coaches; daily Bega to Melbourne via Princes highway.

Mon-Sat; Hamiltons coaches, Eden - Gungehaven - Pambula - Merimbula.

EVM, BVR & VIPERS combine to operate

steam tours, mine inspections and many other tourist activities.

NUKKALDRAGGA SHIRE.

Pronounced "NUCALDRIGA " by "nice" people or; " KNUCKLE DRAGGER" by people like me. An imaginary area between Tantawangalo in the mountains and Eden on the coast. The Zig Zag line was built by the Shire Council and leased out to the Timber Co and the South Coast Whaling & Fur Sealing P/L but is now part of BVR.

Nukkaldragga Shire is the SHAME OF THE SOUTH COAST, it is best described as being "Environmentally Unfriendly". TTC cuts Cedar from the remaining rainforest, then there is Sth Coast Whaling & Fur Sealing P/L and let's not forget the Shire Council's Toxic Waste Recycling Plant. They manufacture Agent Orange, Rat Poison, Nerve Gas & other undesirable products, most of which are sold to the most unscrupulous dictatorships around the world.

Most of the inhabitants are also a disgrace, the local roads made unsafe by young hoods in hotted up cars who know that the local police ("subsidised" by EVM) are too busy rounding up Greenpeace Protesters.

The Council is also in the pocket of EVM & does nothing to clean up Muckengungere creek, which carries seepage from the toxic waste plant into Gungeree Bay and thence out to sea near Eden.

Black Pete's "Jolly Roger Tavern" is a den of iniquity with after-hours boozing & Illegal gaming. Whilst the rooms upstairs are let out to all sorts of dubious organisations. For example; why do the members of THE GUNGEHAVEN MODEL RAILWAY SOCIETY (Weds 7.30 p.m) come to their meetings dressed in white sheets & pointy hoods???? It is also rumoured that upstairs above Hamilton's general store is a "House of Ill Repute".

I hope you have enjoyed this brief tour of EVM and BVR and should you wish to hear more of the colourful history & characters of this remote area please let Gerry or myself know.

MORE VIDEO'S

....FOR OUR LIBRARY

...from John Saxon

Thanks to Ben Pearlman of the Services Department, I brought back with me 16 new videotapes for our library. They are all in NTSC format and we yet have to arrange copies in PAL so that we can pass them on to our new librarian Bruce Ballment to be lent out to the membership. Ten tapes were recorded at last years Valley Forge convention and are very worthwhile. Three are videotapes of older Tape/Slide Clinics and three are old Kalmbach tapes now of limited appeal. A full listing will be published in an early edition of Main Line.

VALEKEITH OMAN

.....from John Saxon

We were very distressed to hear that Keith Oman of Hamilton NZ died suddenly in Vancouver after attending the Portland NMRA Convention. Keith was in fine spirits at the convention banquet on the last night and was looking forward with his son Reese to continuing his trip further North into Canada. Keith was the Regions first director for New Zealand from May, 1984 to May, 1988 and was well respected for his modelling by all. The Region has sent a message of sympathy to Mhyre and the family. A nice guy and we will all miss him.

Welcome Aboard

Please welcome the following members to NMRA Inc, Australasian Region.

Warren Baker
P.O. Box 970 CAMPBELLTOWN 2560
Western Maryland -- HO

Ron Seddon
13 Graham Cres. BAULKHAM HILLS 2153
N S W -- HO

Graeme Hearn
"Polygon Creek" YERONG CREEK 2642
Baltimore & Ohio -- HO

Mrs Janice Hearn
"Polygon Wood" YERONG CREEK 2642

John Humphrey
3 Plevna Court PARKWOOD 6147
Rio Grande Southern - HOn3

Kim Marsh
137 Little Everleigh Street REDFERN 2016
NSW Rlys -- Gauge 1



Computers in Model Railroading

A C Lynn Zelmer

Obsolete before they leave the store?

Buying used computers is the topic for this issue. I hope that the comments which follow can help you save some money while providing you with your needed computer facilities.

The PC industry is just over 15 years old, yet we have gone through at least 5-6 generations of desktop computer. As well, many users begin agitating for a newer and more powerful machine almost as soon as the current computer is delivered.

Fortunately, this phenomenon, closely related to planned obsolescence, can provide the less demanding user with an economical computer.

First, almost any computer and printer can be used for word processing and basic list management—tasks such as writing letters and Mainline articles, maintaining your model railroad inventory or cataloguing your books, etc.

As well, almost any computer can be used for controlling external devices—signals, switches, or block controls on your railroad—if you have the technical expertise to do it.

On the other hand, the fastest, most powerful computer are required to run CAD (Computer Aided Design), photographic manipulation, multimedia, or similar sophisticated program.

Deciding on your needs: Look at your needs and try to determine just what you want the computer to do. How many items will there be in your equipment inventory? How much detail do you want to keep on each item? How often will you be using the information? How will you want

to display the information?

The answers to these questions will determine exactly what you will require in a computer.

Buying Used: Watch the 'bargain finder' ads in your community newspaper; you can often find some good buys when the owners of unused computers decide to clean out their closets.

Another source of used computers is a current computer user who wants to upgrade. Since used desktop computers don't have a very large trade-in value, the owners either hand them down to other members of the family (or business) as I have done, or try to recoup some of their investment through selling the computer to a new user.

Note that the computers that I am talking about are not broken—they are usually just as functional as when they were first purchased. They simply don't have enough speed or capacity for an increased work load. For your purposes, however, the used computer may be a good value.

If the first step in buying any computer, new or used, is to evaluate your needs, the next is to look at the software available to meet your needs.

This is even more important with a used computer than with a new computer. A used computer may be old enough, for example, that software developers aren't making new software for this computer. If the software that comes with your purchase will do the work you want done, however, the availability of new software doesn't matter.

Most software is sold on a

licensing basis that allows the original owner to transfer the ownership PROVIDED the new owner gets all the original disks and manuals, AND the original owner destroys all his backup copies, etc.

Ensure that the vendor is providing you with 'legal' copies of the software.

It is a sad commentary on our society that a large percentage of the software being used on desktop computers has been 'pirated'. Don't let yourself be a victim or a further perpetrator.

Used computers don't come with a warranty. Get a knowledgeable friend or repair depot to check that the system is working properly before you buy.

Mechanical components fail with greater frequency than electronic components. Reject any systems that have strange noises coming from the computer, especially when the disk drive is working.

Hard disks are most likely to cause problems. The question is not 'Will the hard disk fail?', but 'When will the hard disk fail?'. Fortunately, replacement disk drives are usually inexpensive.

Look for quality when you buy.

Many small computers have been depreciated over a 3-5 year period. Such computer systems lose between 20% and 50% of their current value every year. It is worth paying more for quality, but you shouldn't have to pay new prices for used.

Finally, as with any major purchase, think before you buy.

A CIVIL APPROACH TO TRACK ALIGNMENT

By Lawrence Nagy

Railway design as it was practised in its heyday from the 1850s to 1910 or so, was an adaptation of canal design. By the 1920s the motor car had become popular and fast enough to warrant paved roads specially designed for its use, and road designers in turn modified railway design procedure for their use.

To ensure the proposed railroad could in fact be built from A to B, the designer and surveyor worked together in a series of stages that are still used today for railway and road design.

- A survey defined the topography and key features along the proposed route.

- The designer located the alignment in plan view.

- A long section along this alignment was drawn to allow grading and approximate estimating

- Once a suitable cost effective alignment and grading were determined, detail design commenced.

- The detail design was set out by the surveyor.

- The railroad was constructed.

The same planning and evaluation process takes place on our model railroads. We have to measure the available space, draw a plan, calculate grades, fine tune the plan, set it out and build. Many of us do this in our heads as we build, with no formal plan to guide us, but the process still applies - assuming we know what we're doing of course. Some times steps get out of sequence and the jig saw attacks a length of timber before the full ramifications are known. Luckily we're not moving mountains, only molehills, so it's no big deal if we screw up and have to grab another piece of wood.

When prototype railways came along, the designer had to consider an extra complication that horse transport and canals didn't have - dynamics. The old canal barge captain didn't have to worry much about accelerating, braking and cornering as the faithful mule providing the locomotion wasn't likely to reach break neck speeds with ten tons of barge tied to its rump.

Consequently the odd bang against the canal wall was no big deal. Meanwhile, on the new fangle Macadam highways, horses could be trusted to know their way around well enough to keep out of trouble and each others way; even at a heady 12 mph.

However, trains were capable of (gasp!) 20 mph - 40 before too long, and the task of plucking hot metal and cold bodies out of line side paddocks prompted the exploration, and mastery, of train dynamics.

Our models, even G scale ones, aren't affected to the same degree by forces as the prototype, so the intricate tables and calculations civil designers use to plan horizontal (plan) and vertical (elevation) alignments are not required for reliable operation. Yet to understand how the prototype is designed will lead to more realistic modelling. Let's look at prototypical alignment design to see what we can use to make our model right of way more realistic.

HORIZONTAL ALIGNMENT

When a train needs to change its direction, some sort of easement is required. Imagine for example, a horizontal alignment of only angles. A train would just lurch into the angles with terrible consequences. Obviously, curving the track to a fixed radius would ease this lurch. What's not so obvious is that even when entering a fixed radius curve the train would still lurch at the tangent point; though not as badly as at the angle. What was needed was a further easement between the straight and the fixed radius curve. This was achieved by the use of shift and plan transition, which in effect provided a constantly variable entry to the curve, from almost straight at the start, to almost the radius at the circular curve itself. See figure 1.

The amount of shift and the length of plan transition are functions of curve radius and design speed. Setting out transitions is covered in detail on page 73 of John Armstrong's book 'Track Planning For Realistic Operation'. If it seems too technical or involved, relax. Just realise that a 18 inch radius curve with plan transitions will look and perform better than a 24 in ch fixed radius. Simply eyeballing in an easement with flex track will yield an important improvement in looks and operation. Its one area where following the prototype will yield smoother and

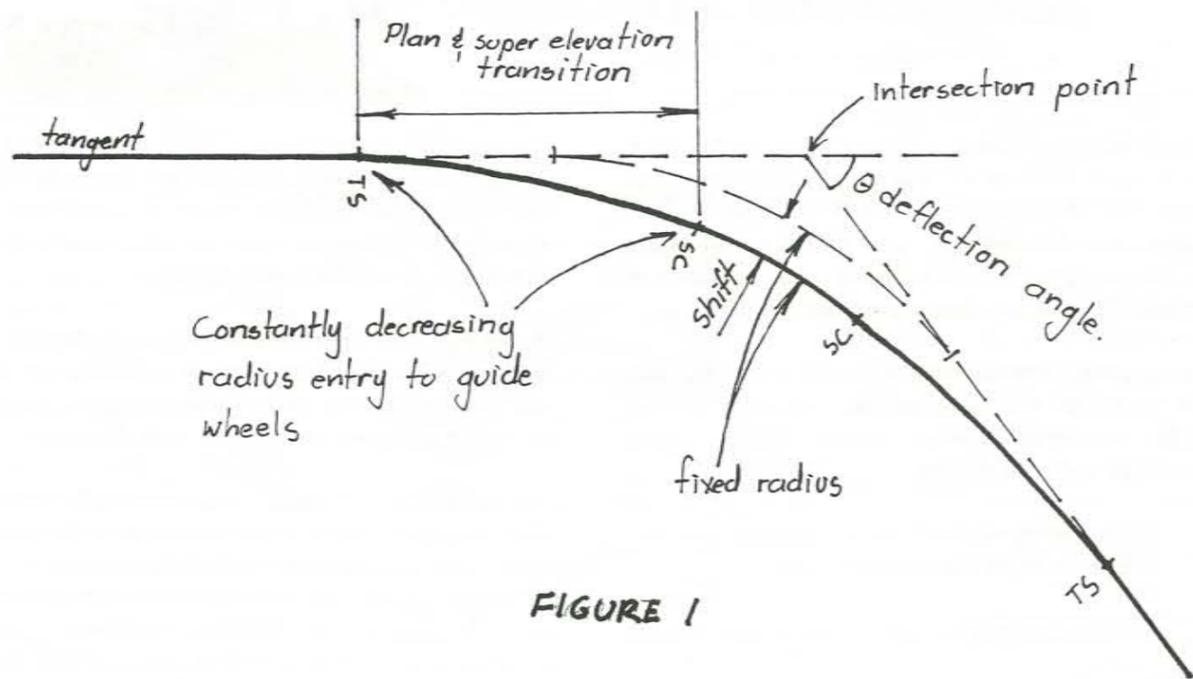


FIGURE 1

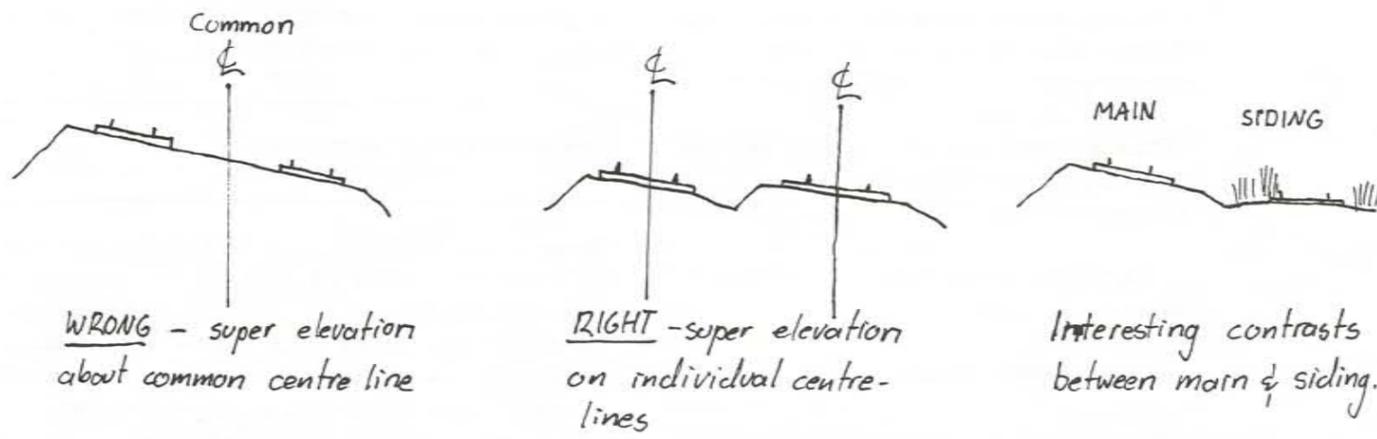
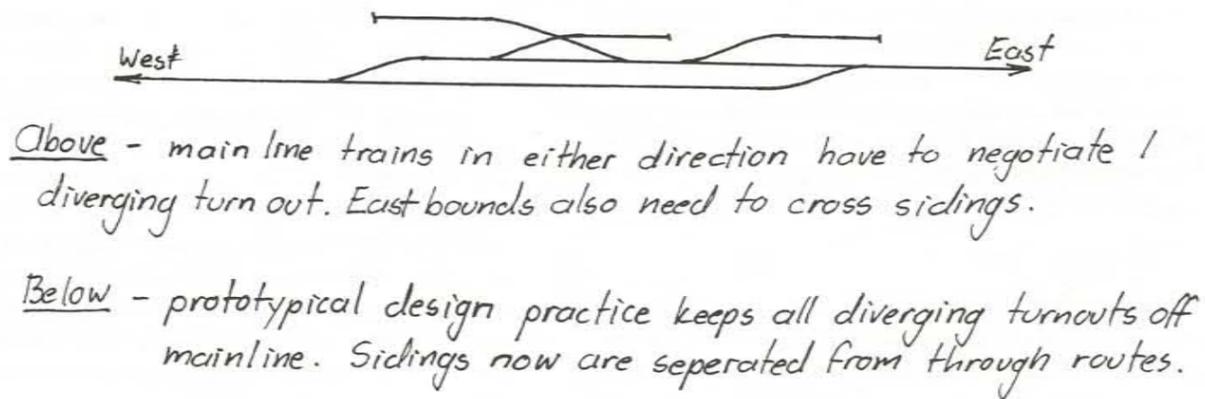


FIGURE 2



Above - main line trains in either direction have to negotiate 1 diverging turnout. East bounds also need to cross sidings.

Below - prototypical design practice keeps all diverging turnouts off mainline. Sidings now are separated from through routes.

FIGURE 3.

more reliable operation.

I suppose I'd better come clean now and explain that this civil design stuff is what I do all day at work and TAFE. Then again, since I do it all day the last thing I want to do is bring my work home, so I simply sketch in curves as I see fit. Those more conscientious than my slack self won't mind going through the process detailed in John's book. Certainly they won't find a clearer explanation or a method easier to use than his.

Once plan transition was coined, trains could be guided into the curve by a progressively decreasing clothoid spiral or cubic parabola, depending on the method used, rather than hammering into the tangent point as they had previously.

There was one other development that completed the process of horizontal alignment. Some clever sod hit upon the idea of raising the outside rail higher than the inside rail in curves to achieve yet another improvement in tracking. This was called super elevation. In the same way that shift relies on plan transition to ease the train into the curve, super elevation relies on super transition to ease the level straight rails to the banked curve rails. Super elevation transition starts and ends coincidentally with plan transition on railways. It allows trains to travel more quickly through a given radius curve.

Super elevation is typically found in the one to twelve percent range, that is, the outside rail is on a grade of one to twelve percent in relation to the inner rail. While it is possible to lean the road bed riser on our model railways to attain super elevation, the difference between rail heights on our models is generally so small that accurate, and smooth super elevation is difficult to achieve by such a method. Particularly when using flex track in the smaller scales, you're better off to lay the road bed flat and shim the track work with styrene under the sleepers. Three to five percent looks dramatic, but if transitioned properly it won't cause operational problems. Sloppy construction and large values of super elevation are recipes for disaster.

Unlike plan transition, there is no technical reason to have super elevation on our model track work. However, once you've seen a long train gracefully lean into a series of curves you'll be hooked, and realise the minimal effort is well worth the reward.

Note that parallel mainline tracks have super elevation developing around their individual centre lines, not the common centre line. See figure 2. Also, it is usual to

super elevate only the mainline tracks, a parallel low speed siding would be laid level. It's a neat visual effect to show the discrepancy between the carefully planned mainline, super elevated on a high manicured ballast, with a parallel siding wandering through the weeds along side.

One last factor that should be considered in horizontal alignment is turnout location. Firstly, the prototype designer limits to an absolute minimum the number of turnouts on the mainline. In the case of double track mainlines they will also keep as many facing point turnouts as possible to a minimum.

Both the model and prototype become more reliable when as many turnouts as possible are removed from the high speed tracks. Ladders or multiple turnouts should diverge from one mainline turnout, and it doesn't hurt to make it a number six frog or larger. Keep the number fours for isolated locations where only a few cars at a time need to negotiate them. For reliable running when visitors are present, a route devoid of negotiating diverging turnouts is very useful. See figure 3.

VERTICAL ALIGNMENT

The improvements in horizontal design and locomotive technology raised speed to the point where vertical alignment, or grades, became the limiting factor of average speed. The prototype goes to great lengths to avoid or minimise grades. The great tunnels, bridges and earthworks under taken from the 1860s to this day are all dedicated to keeping the profile as flat as possible.

Modellers are a weird mob. They defy prototype practice and introduce grades on purpose! Generally, rail traffic rolls along nicely up to a one percent grade. Above this operation becomes difficult both ascending and descending grades. Some smaller railroads would tolerate grades of two and a half percent on their mainlines. Three percent is suitable only for branch line use while sidings may go to ten percent for extremely short lengths - say a coal trestle that only sees two or three cars at a time. Certainly, if you look you will find exceptions, but these figures are a guide that represent a *desirable* standard.

Looking at layout articles in the model press, experienced steam-heads seem to limit their grades to one and a half or two percent, while diesel-heads go for three or four. Model steam is limited by its pulling power - this is not a problem for multiple unit diesels. However, multiple diesels will buck going down a

grade steeper than four or five percent. Its pretty much a matter of trial and error with your locos and train lengths.

Since the prototype is so flat, model grades of more than three or four percent may look odd on most main lines. Four percent would be acceptable for a model of the four track Pennsylvania Railroad around Horseshoe Curve (the prototype was actually less than two percent) but to put the lightning stripes of the 'Water Level Route' on similar rails would look odd - unless you were modelling the New York Central's roller coaster mainline through the Berkshire Mountains. For the record, the steepest line haul (general freight use, as opposed to industrial or mining) grade was actually on a secondary mainline - the Pennsy's 5.89 percent Madison Hill. Operations required SD7s with special rail cleaners to maintain braking and hauling traction.

Vertical curves are parabolic, not circular, so they are defined by length, not radius. Longitudinal sections are usually drawn to a distorted vertical scale, say one to a thousand horizontally and one to two hundred vertically, so some vertical curves may appear circular, but they never are. As long as our model roadbed is made out of thick plywood or splined roadbed then gentle and realistic bends for vertical curves are easy to achieve. The bigger the difference between two grades, the longer the vertical curve needs to be to effectively transition them.

Again, looking at contrast, a model mainline with broad curves and level grading could be contrasted by a branch line with sharp curves and steep grades. If the large equipment and longer trains are kept on the main line then all will seem well.

Although track alignment is not a feature that leaps out at you in the same way scenery does, it does have a subtle impact. A carefully designed and laid track plays a big part in the 'correctness' of the layout, and does much to improve authenticity. It's well worth considering during both planning and construction.

Next time.....bridges and retaining walls.

THE LIBRARY CAR from Bruce Ballment

The Region's Library stock was much enhanced by the donation of a number of hard cover books railroad interest by NMRA member A.C. Lynn Zelter of Rockhampton, Queensland.

The books donated are as follows:

The Steam Locomotive in America

- by Alfred W. Bruce

450 pages covering the development of the steam locomotive, mainly in the first half of the 20th Century. Written by the Vice-President of the American Locomotive Company (ALCO).

The White Pass & Yukon Route

- by Stan Cohen

A pictorial history of the WP&Y

The National Dream

- by Pierre Berton

The politics behind the construction of the trans-Canada railway 1871-1881. 450 pages.

Iron Horse American Locomotives 1829 - 1900

- by E.P. Alexander

Black and white drawings and brief specifications of various types of locomotives built during this period.

The Story of American Railroads

- by Stewart H Holbrook

488 pages of history and tales of American railroads.

Ships & Narrow Gauge Rails

- by Gerald M. Best

The story of the Pacific Company's rail and shipping lines on the U.S. West Coast.

The Last Spike

- by Pierre Burton

The construction and completion of the Canadian Pacific Railway, 1881 - 1885.

Canadian Pacific - A Brief History

- by J. Lorne McDougall

As the title says - a brief history of the Canadian Pacific Railway.

The Ma & Pa - the History of the Maryland and Pennsylvania Railroad.

- by George W. Hilton

The story of the much loved 77 mile short line.

Mansions on Rails - The Folklore of the Private Railway Car.

- by Lucius Beebe.

The story of the private car in words and pictures.

These books are now available from the librarian, Bruce Ballment, who can be contacted on (02) 489 3836.

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THE FRANKLIN COUNTY RAILROAD

Part Two

By Gerry Hopkins MMR

Design and Preparation

From my involvement with an earlier layout, (Rio Grande Miniland, A.M.R.M. Oct.'84) I had learnt to set out some standards and requirements before building commenced.

1. The layout had to be big enough to be operated as a home layout by 4 - 5 people, yet be able to split into smaller units for transport to exhibitions.
2. The trackplan had to be typical of the Maine Two-footers and had to be representative of the area.....rolling hills, rivers and lakes, plenty of trees, and of course a covered station and a small wharf.
3. All turnouts to be hand layed with a few stub switches for variety. Where possible, code 40 rail to be used in sidings and code 55 for the mainline. All turnouts to be No.6 or bigger and curves to have a minimum radius of 18", except the logging branch which could go down to a 12" radius. Maximum grade on the mainline to be 3% and a maximum of 8% on the branch.
4. Construction to be of the open frame type with a positive method of joining the sections together..... not clamped as is often the case.

Construction

The layout consisted of four sections as shown in fig.1. The two end sections measured 2m X 1m, and the side sections measured 1.5m X 0.6m. The outer frame was made of 4" x 1" with large gussets (6" x 4") glued into each corner for extra strength. Cross members were made from 2" x 1" timbers and were positioned as required. The track bed was made of 1/2" pineboard on 2"

risers. All joints were screwed and glued for permanent strength.

Once all sections of the layout were finished, they were then clamped together. Two 3/4" holes were drilled to accommodate the brass, flanged bushes that would hold the 1/2" bolts. The bushes were epoxied in place and the whole frame was left for a week to set. The layout was then mounted on a strong frame at a convenient height for working.

Trackwork

The trackwork was a mixture of Railcraft code 55 Flextrack and hand laid code 40 on Campbells and Railcraft ties, with a few circuit board ties for extra strength. The track was laid on 3mm cork using Railcraft spikes. The cork helped to give the correct shape to the roadbed. All the turnouts were No.6, most of them being built 'on the bench' and then being placed on the layout. The exceptions were the three turnouts that fed the engine house, storage track, and repair shop. These three were built as one unit with the curved section being built to a strict 18" radius.

Although all the rail joints have fishplates, all the gaps were fitted with jumper wires for electrical continuity. I learnt MANY years ago not to rely on fishplates for electrical continuity. The turnouts complied with the N.M.R.A. "N" scale track gauge and never gave any trouble. The turnouts were operated by PFM/FULGAREX motor drive switch machines, and Switchmaster geared motors. The latter being very positive in operation and drew a low operating current. The PFM units had plenty of spare contacts for signals, track switching and interlocking while the Switchmasters were driven through relays.

When all of the track had been laid, an airbrush was used to spray the sides of the track with a

Fioquii rail brown/tuscan mix (5/1). The paint was allowed to dry for 48hrs, the tops of the rails were then rubbed with a Peco track rubber to remove the paint from the running surface.

No further work was done on the layout for a few weeks. This gave me time to run ALL my rolling stock and locos to make sure there were no trouble spots on the trackwork.

Scenery

The scenery was built using an assortment of well known methods, hard shell on crumpled newspaper, hard shell on webbed cardboard, plaster on styrene sheet. These methods have been described in detail in many model railroad magazines so I will not go into them here. The only deviation is the addition of Aquadhere (a white wood glue, water based) to the plaster mix.....one tablespoon to a litre of plaster.

Once the shell had set, it was painted earth colour with latex paint (Taubmans Plastic paint). As the paint was drying, Woodland Scenics ground foam was sprinkled on. The colours used were Earth and Soil. These gave the base textures to which all the other grasses were attached.

Small areas were sprayed with adhesive from an aerosol can, WS ground foam was sprinkled on in almost random patterns. Mixtures of Weeds, Grass, light/medium/dark fine and coarse foams were used. The darker colours where more moist soil would be found and the lighter colours where the grass would be worn or bleached by the weather. Take a walk through the bush/countryside and you'll see what I mean! Plant types may vary from area to area or country to country but the general colour doesn't change much.

The trees were 90% Woodland Scenics and 10% scratch built. There were approximately 450 trees ranging in height from 10ft up to 60ft. These larger trees dwarfed the little narrow gauge rolling stock. Some of the background trees had Litchen as a base but all were replaced as they had gone mouldy in Sydney's high humidity.

Structures

The buildings were made up from an assortment of Craftsman kits (12) from Campbells, Muir, Alexandria, Woodland Scenics and Magnesun, and the others (14) were scratchbuilt. The eight bridges were scratch built from stripwood. The buildings I made at the start were constructed of scribed wood and stripwood with Grandt Line windows and doors. I now build them out of Evergreen scribed styrene with Grandt Line door and windows. The reason is quite simple, painted wood is too rough for the appearance I want, the painted styrene has a better representation of painted buildings. I still use stripwood for bridges and fences etc.

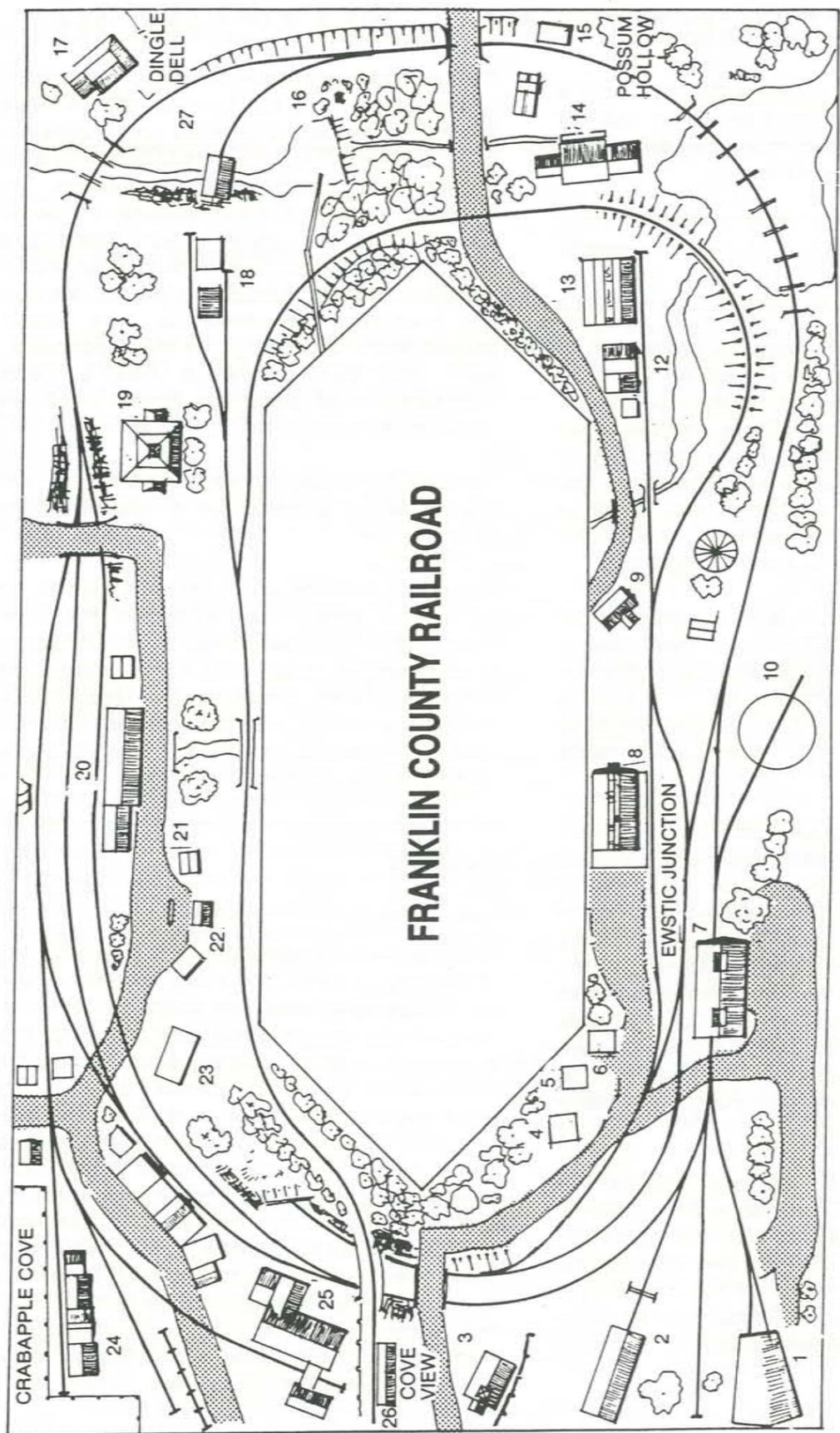
Some of the buildings had full interiors, lit with grain of wheat lamps run on a reduced voltage for longer life.

Before the buildings and trees were fixed to the layout, the ballast was added to the track. Woodland Scenics ballast was used, mixtures of N scale and HO scale. The ballast was wetted with the usual 'soapy water' and diluted Aquadhere [50/50] was the 'dripped' onto the ballast. The layout was then left for 48 hours, giving the glue plenty of time to set.

Detailing

This can be the slowest but most satisfying part of building a layout, too many modellers build the layout, add trees, add buildings and finish there. I only do one small area at a time, this way I get close to finishing each section but never quite! Woodland Scenics make a very good range of detail parts, as do Easyway (New Zealand), F&G (Australian) also make a large range of parts which come already painted. Just have a browse at your local hobby shop, its surprising the odd little packets of 'things' what you can find on the shelves. Take a slow stroll around you own area, it doesn't have to be near a railroad, make a mental note of the things laying around the local garage, panel beater, or light industry if you model branchline or heavy industry if you model the mainline.

A close inspection of my layout revealed that



- | | | | |
|-------------------|-------------------|-------------------------|-------------------------|
| 1 Engine House | 8 Seabold Factory | 15 Possum Hollow Depot | 22 Tucker Bros. |
| 2 Repair Shop | 9 Seabold House | 16 Hobbo Camp | 23 Doctors' House |
| 3 Church | 10 Turntable | 17 Jollif's Farm | 24 Wharf and Warehouses |
| 4 Cafe | 11 Water Tank | 18 Tie Treatment | 25 Weekes Mill |
| 5 Undertaker | 12 De Witt | 19 Haunted House | 26 Cove View Depot |
| 6 Machine Shop | 13 Lee King | 20 Crabapple Cove Depot | 27 Rabbits |
| 7 Covered Station | 14 Water Mill | 21 Gas Station | |

only small areas had been heavily detailed, but as the eyes passed along, the mind was tricked into 'seeing' the detail that was not there. When you saw the rabbits in the field, the hobos around the flickering camp fire with the smoke swirling through the trees, you didn't notice that there was no water on the turning water wheel!

Locomotives

The roster consisted of 2 Baldwin 2-6-2's, 3 Baldwin 2-6-0's, a Baldwin 2-4-4 Forney, 2 Porter 0-4-4 Forneys, 2 Porter 0-4-0ST's, 2 Plymouth 0-4-0 diesels and 2 Shays. They were brass kits from Sango, Flying Zoo and Joe Works. Detail had been added to make each loco different but still based on a prototype. Extra pickups had been added to ALL the locos to ensure reliable running. When switching with one of the Shays I had to remember to switch the throttle off otherwise the loco would creep through the yard and off the end of the wharf! Kadee couplings were fitted throughout and gave very reliable operation.

There were also a number of diesels on the roster. No.25 was the usual variation on the Minitrix FM switcher in N scale. No.26 was a centre cab kitbashed from a Kato switcher. There were also a pair of boxcabs made up from Grandt Line kits and powered by Kato 4wh chassis. To be patriotic I also ran a Queensland Railcar with trailer.

Rolling Stock

The passenger cars and cabooses were brass kits from Sango. Four of the boxcars were also brass kits but the rest of the freight stock (50 units) were scratch built from stripwood or styrene with Grandt Line detail parts. A variety of trucks were used:- Kadee, Grandt Line and an obscure brass type from Japan. The wheels in the Kadee trucks were slowly replaced by the newer 'low profile' wheels from Kadee, besides looking better they also rolled a lot better and were more reliable on the hand built turnouts.

All rolling stock used body mounted Kadee N scale couplings at the normal Kadee height, they were more reliable than truck mounted

units when pushing rakes of heavy brass rolling stock over numerous turnouts. My favourite piece of rolling stock was the stock car complete with its load of bull! It was constructed 'plank by plank' with Evergreen styrene strips and Grandt Line detail parts, the nut and bolt details were easy enough to put on..... once I found the right size spanner!

Control systems

The system was controlled by three mainline throttles and two yard throttles. The mainline units were all inertia types with the addition of a relay in each for the automatic slowdown sections and for interlocking. The yard throttles were plug in 'walk round' types. each throttle had its own 1 amp circuit breaker and trip indicator. "Mainline Red" controlled the outer track, "Mainline Orange" controlled the inner track, and "Mainline Brown" controlled the 'tourist train' up the branch. Toggle switches controlled the turnouts which in turn controlled the signals and interlocking of the automatic controls. The auto sequences were triggered by reed switches under the track. This proved to be a very reliable system over the years. The auto control was only used to test locos and for taking away the pressure of operating at exhibitions. This allowed me time to answer questions and just talk to people.

Postscript

Construction on the layout commenced in 1983 and the layout was first exhibited in June 1984. From then to October 1989 the layout appeared at 28 exhibitions around Australia and covered 15,000 KM (9,000 miles). It won many awards and, I hope, brought a lot of enjoyment to a lot of people. Unfortunately the heavy rains and storms that hit the East Coast of Australia in the middle of 1989 damaged the layout and the decision was made to scrap the layout and start work on a replacement.

Over the years I have taken many photographs and slides along with a considerable amount of Video tape, so I can still sit and look at it!

Because the layout was intended for exhibiting

to the general public, I had to sacrifice prototype fidelity for reliable and varied operation over long periods (three X 10 hour days on long weekends) even so, I still tried to keep to the "Character" of the Maine Two-Footers, or rather my perception of it!

Numerous "GIMMICKS" had been added to the layout to interest the general public.

Three hobos around the flickering camp fire that gently puffed smoke (fibre optics running from assorted flashing LED's mounted around a "funnel" that housed a smoke generator).

Assorted rabbits, squirrels, dogs, cats, cows, pigs, ducks, swans, deer, horses add to the interest for the "younger" members of the public.

The steamer "Rainbow" puffed smoke from another generator, but this one was on a timer - 15 sec on - 15 secs off.

Three "Walkman" type cassette decks supplied six speakers with all the necessary sounds of birds, cars, dogs, seagulls, chickens. These sounds were at a very low level not to be overpowering and detract from the overall effect of the layout.

The haunted house even had its own ghost! An automobile brake lamp was mounted in the top story of the house. It was covered by a thin piece of blue tinted paper. When viewed through the window the lamp was "flashed" by the discharge of a capacitor (operated by a relay and 555 timer IC) this illuminated a shadowy figure at the rear of the room, giving the impression of a 'ghost'. I have seen up to 30 adults waiting for up to 2 minutes to see the ghost!!!! If they took their eyes away for even a second they could miss the flash and then stand around for another 2 minutes!!!

Along side the tie treatment plant there were four pine trees - one had almost turned yellow from continued "visits" from one of the workers (the gentleman comes from one of the Woodland Scenic kits).

Another 'crowd pleaser' was the "bare hunter" in the woods who had been caught short!!

I'm Still Thinking.....

I "BLAME" my conversion from "N" Scale (Great Northern / Burlington Northern) to "Maine HO_n30" on articles such as *Thatcher's Inlet* (Frery & Hayden); *Elk River* (Frery & Hayden); *Finer Than Fine Scale* (Bob Brown); and the series of articles on the *Carrabasset and Dead River* (Frery & Hayden).

The charm and character of the narrow - narrow gauge appealed to me (after all, I was brought up with "The Little Trains of Wales") and at that time I was part owner / operator of another exhibition layout -- Rio Grande Miniland..... But thats another story.....

Not having visited the U.S.A. I had to rely on books and magazines for information and inspiration. A great source of information (and inspiration!) was the "Narrow Gauge and Shortline Gazette"

I did not want to build an exact replica of a particular railroad but wanted to have a little room to move, so to speak. Anyway, who wants to model a railroad that only lasted as long as the Great Depression? I made a few "small" changes to history you would have read about them in Part One.

I have continued this theme with the Kennebec County Railroad another small exhibition layout, and now on to the Franklin, Somerset and Kennebec Railroad.....my home layout that incorporates the KCRR (which can still be taken to exhibitions).

This wonderful hobby of ours has room for many types of Railroad Modelers ... armchair, historical, hysterical, builder, operator, photographer, gunner, nitpicker, observer, dreamer *et al*. I am split 50/50 between building and operating and I'm a *genuine* 2 foot modeller if you can't see it from two feet away, why put it on?.....I'm still thinking.....

Next issue we will take a trip on the Kennebec County section of the line.....

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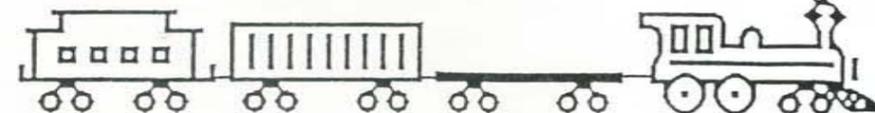
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