THE NATIONAL MODEL RAILROAD ASSOCIATION

THE MATIONAL MODEL RAILROAD ASSOCIATION was founded in the USA in 1935 for the purpose of developing standards allowing the interchange of equipment from one model railroad to enother. It has accomplished this goal admirably and along the way developed into an outstanding international organization offering numerous benefits to its model railroad members. For anyone interested in the hobby of model railroading, we heartily recommend your active membership.

Nembership in the NNRA offers the apportunity to develop and expand your modeling skills by association locally with the other NNRA members through the Australasian Region organization, functions and newsletter.

Why you should join!

Reason #1 The Bulletin

is published monthly in the U.S. From the coloured cover through to the back page, you receive a minimum of 52 pages each month <u>all</u> devoted to the hobby and the prototype.

Typical articles in recent months have included:

The Case for Practice Buildings Naming your Pike Motive Power Performance Report Simplifying Switching Modular Layouts Photographing Your Models Traction Modelling Naking Trees Lettering & Weathering Backdrops

As well there are many regular columns on a variety of RR topics

Reason #2 Special Interest Groups

The MMRA provides the opportunity to correspond with members of approximately 47 separate special interest groups which apart from covering each of the major U.S. Railroads (C & 0, D & H, EBT, GN, S.F., S.P. etc) also cover such diverse interests as Circus Modelling, Computers, European Railways, Layout Design, Modular Railroads, LGB, O scale, S scale and Marrow Gauge.

Reason #3 Annual Index

Each year, the Bulletin contains a complete index of all articles published in the American Model Railroad and Railfan Press including Model Railroader, Railroad Model Craftsman, Narrow Gauge & Short Line Gazette and of course, the Bulletin itself.

The NNRA member searching for a particular reference has only one place to look to find that elusive article.



The NMRA regularly publishes a listing by geographical location of all 22,000 members as well as an alphabetical cross listing. This means that members have the opportunity to correspond with and visit other members with like interests if they so wish.

Those of us who have had the opportunity to visit Morth America and the U.K. can tell of the many warm friendships formed in this way. We have also had the pleasure of entertaining overseas visitors who have contacted us in the same manner.

Reason #5 Standards and Data Sheets

The NHRA has formulated most of the standards and recommended practices existing in model railroads today.

These standards mean that the purchaser of better known railroad models or track knows that they will be compatible with his or her other equipment when they get it home.

Standards; Data Sheets and Recommended Practices are available to the membership with Data Sheets being included in the Bulletin as they are released.

Reason #6 Tape Slide Clinics

The Region now has available for rent a variety of clinics on various phototype and model railroading topics. A box of 35 mm colour slides plus an audio cassette is rented to members for a small fee to cover certified mail postage. New clinics will be added as received from the U.S.

Reason #7 The Australasian Region

The Region was created early in 1984 to represent modellers in Australia and New Zealand. It is one of only two regional organisations of the NMRA outside the USA and Canada.

Members reside in all States of Australia and in New Zealand. Membership has already passed the 200 mark and is continuing to increase at a most satisfactory rate.

Whilst catering primarily for modellers of US & Canadian prototype, the Region has modellers of Australian, British & European Railways amongst its members.

The Region publishes a quarterly newsletter titled "Main Line" containing news of interest on the local scene. Members meet regularly at members homes on a rotating basis.

HOW TO JOIN You can join both the National Model Railroad Association and the Australasian Region by completing the application form below and mailing it with your payment to our Epping address.

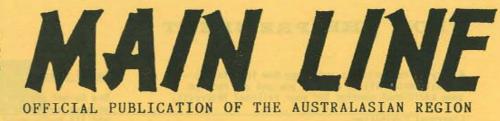
Membership of the Region costs \$A7 or \$N29. As you have to be a member also of the NMRA to be in AR you should also indicate your current NMRA membership number on the form <u>OR</u> add the local equivalent of the \$US20 annual membership fee to your payment – we will then send your money to the US by air-mail so you will quickly start to enjoy the benefits of both NMRA & AR membership. The current (September 1986) amount that needs to be added is \$A33 or \$NZ40.

PLEASE PRINT

Surname	InitialsHome 'Phone (
No. & Street	the manager that is to the later,				
City	StatePostcode				
Primary Scale	New Renewal (tick one)				
NMRA #	NMRA expiration date				
AR Annual	\$A 7.00 or \$NZ 9.00				
AR 5 years	\$A 28.00 or \$NZ 36.00				
AR Life	\$A140.00 or \$NZ180.00				
AR and NMRA Annual	\$A 40.00 or \$NZ 49.00				
	Total enclosed \$				

Send to: NMRA - Australasian Region: P.O. Box 412, EPPING NSW 2121



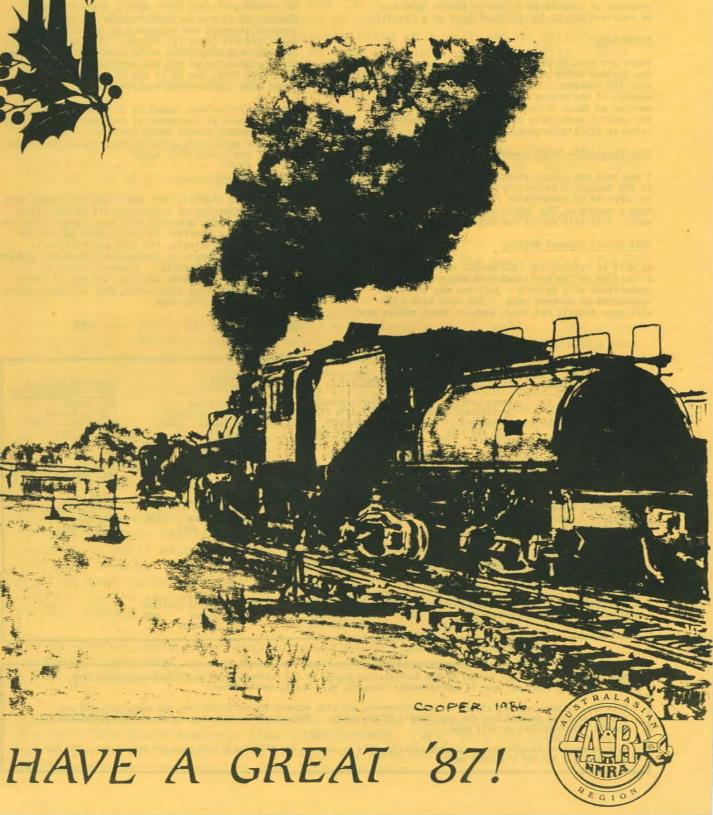


VOL.3 NO. 4 EI BUSINESS ADDRESS

REGISTERED BY AUSTRALIA POST -

EDITOR

OCTOBER,NOVEMBER,DECEMBER,1986. Bill Cooper 2 Mason Ave., Cheltenham, N.S.W., Australia,2119. T - PUBLICATION # NBH 7190



A very Merry Christmas and Happy New Year to all -I trust Santa will be kind to you and you receive some additional goodies for your railroad interests.

Liverpool Exhibition

We again exhibited at the Sydney AMRA Exhibition on the October long weekend at Liverpool and were successful in joining another twelve to the fold. Thank you particularly to Bruce Lovett who exhibited a 6' x 4' layout which drew a lot of attention and to the following members who also assisted in manning the stand - Garry Wheatley, Bill Cooper, Hal Saxon, Ray Walter, Garry Norwood, Richard Roth, Bob Benson, Clive Riley, Peter Webb, Frans Persson, Peter Burrows and Toni Saxon.

Bruce also donated 50 cents each from the sale proceeds of some large rulers he had on hand and we received \$82.50 for Regional fund as a result!

Membership

There are now 240 members residing in Australia and New Zealand which puts us ahead of the British Region with 177 members. Unfortunately not all are members of the Australasian Region so keep on working on those friends of yours to join - I think the cost of membership even with today's exchange rates is still a bargain.

1986 Convention Model Competition

I now hold the judges sheets for all models entered at the Macquarie University Convention. They will be supplied to entrants on request so that they will have a record of the judges assessments of their work - this will assist for future competitions.

1987 Annual General Meeting

We will be holding the 1987 annual meeting in May at a location in the Bankstown area where a model competition will be held - just one day and restricted to members only. The next Main Line will have details but start work on those models now!

Postal Address

Due to not one but two mix-ups at Epping Post Office we have a new box number viz. 529 after our Box 412 and its replacement 480 had previously been allocated to other organisations!

Badger Air Brush Award

The October Bulletin includes news of the award of a top-of-the-line Badger air brush to each Region for the best recruiter of new members, minimum of ten. If ten sounds too many perhaps a group of two or three members could get together and recruit their ten? Obviously the entry would be in one name only.

Layout Visits

We recently visited Geoff Nott's White Pass and Cowlitz RR at his North Rocks home. Some 24 members attended and enjoyed a great afternoon with Geoff and his beautiful layout. His scenery and painted back-drops have to be seen to be appreciated and the blending of the two together is the best I've seen here, the UK or the US. Perhaps it might make the overseas magazines one day?

Another first-class layout is to be visited on 7 February next at Chatswood at the home of a recently joined member, Soweby Smith (pronounced Sorby). His scene containing a bridge over rapids has to be seen. Don't miss this date!

John Armstrong

Through John Kiddell, Toni and I met the famous guru of layout planning on a recent visit to Australia. He was inspecting progress on a very large layout he designed for a modeller in the Eastern Suburbs of Sydney. Surprisingly, his fees are relatively modest and if anyone is interested I have his address and current fee schedule. However, there is currently a eight-month waiting list but at least you can be building structures, etc. whilst awaiting the masterpiece from John.

Until Next Time

JOHN

President & Trustee	Vice-President	Secretary	Treasurer	Main Line Editor &
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Main Line is the official journal of the Australasian Region of the National Model Railroad Association, Inc. 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 addressed to the Editor at the address shown in the Directory on this page.

Paid advertising is welcomed. Current rates payable in advance are \$100 for a full page for four issues, \$50 for a half page and \$25 for a quarter page.



Jood news is no news....

Consequently, in this and other hobbies, woes are often expressed: 'Fewer hobbyists; rising average age; few young hobbyists; escallating prices..' The list is long. Nor is it new. In the '50's, much hobby mag ink was devoted to the 'Imminent disappearance of the hobby', due two malevolent crices: Plastic kits..'bringing scratchbuilding to a halt and so satisfaction' and; Steam's End...'leaving nothing to take its place worth modelling.' Such determination to find fault with change is by no means limited to trains... plastic aircraft modelling, for example, is particularly prone to contemplating its navel.

A lot of this gloom results from extrapolating short-term trends. If business is, for example, down 10% at Christmas, then it 'follows' that there will be <u>no</u> business in 10 years. Paul Ehrlich, the Club of Rome and other 'experts' made quite an art of gloom-mongering in the early '70's, predicting the extinction of, for example, both oil and copper 'by the mid '80's'. The current glut of both shows just how wrong they were. But people forget. There is something new to be gloomy about. If not, then make something up.

Fortunately, the real picture is much more optimistic. The much-feared 'future' has arrived and it's much better than it seemed to be back then...in fact, it is pretty good.

As to the dual fears of Plastic(ecch:) + No Steam(sniff:), well.... how wrong could they be! Plastic sheet/rod/castings has transformed scratchbuilding and generated a whole new sub-hobby of kitbashing, not to mention the newfound freedom of modellers to get on with a layout and operate it, rather than just be stuck with building things. And you're still free to scratchbuild, anyway. STEAM... is still loved, of course, just as square-rigged sailing ships are loved. Distance lends enchantment, so steam has been eulogised even by those who detested them: by passengers who hated the dirt and slowness: by operators, appalled at the low availability and high operating cost(and bad image, at the time). Steam has not disappeared. It is about and generally looking a great deal healthier than in its last days. But as to no interest in its replacement.... Few steam locos attracted the interest aroused by the last days of those anonymous '2000hp Passenger Engines' that put steam in the weeds. The same attitude exists world-wide. In the UK, there are many more preserved examples of early mainline diesels than of the steam greyhounds that they replaced, such as Kings and Gresley Pacifics. Perhaps the ultimate indicator that 'We have nothing to fear but fear itself' (as Roysevelt said of the depression) is the adulation of plastic + diesel, as expressed by ATLAS and, of course, ATHEARN.

So, if someone moans about declining whatevers, just point out that the 'good days' are what we can make of today and what we can plan for the future. Anything else is unattainable.

#COVER DRAWING#....is a photo from the shortline information-packed book by Jim Fair: "The North Arkansas Line" (HOWELL-NORTH, 1969) This top book may be out of print, but is well worth chasing up. Loco #21(Baldwin,1913), a 4-6-0, switches the Harrison yard in 1949, its last year.

« EDITORIAL ... »

3

or (TRAINING UP - OVER)

Those (few) of you who may have wondered what became of the ALL-ELECTRIC issue promised for this year, welll...that is planned for our next issue. All lovers of the 'singing wire' will find something of use. Even if you detest EPILEPTICS and, for that matter, DISEASELS, you can, at least get some info on THE ENEMY, or, in the extreme case, rip up the issue! Which brings forth another thought...just WHAT ARE YOUR LIKES AND DISLIKES? I must admit that I generally express my dislike of a publication by not buying it again, but MAINLINE is a bit different, more like the NMRA's (oops!) NRMA's OPEN ROAD, where the benefits of membership transcend just the Mag. sub.. Still, since you get the Mag anyway, then it may as well be as good and as relevant as possible.

Do you have any BRASS sitting about? One of those THEME or ERA mistakes that you would like to correct one of these days? Why not advertise same in the MAINLINE? This is a particularly useful way of dumping a "lemon". but please, please, be realistic in pricing. BROWN BOOK prices are a bit unrealistic locally, especially if adjusted for the currency difference. Some local retailers use BROWN BOOK prices, but just try to get that sort of money from them for your brass! A typical 33% markup can give some idea of 'wholesale prices'. Anyway, this is a 'friendly' outfit and you wouldn't want to profiteer from your friends, would you? Another approach may be to SWAP your unsuitable brass for something more useful. Big brass for smaller or perhaps for, say, geared engines, or Australian for US, or UK. Some engines can be hard to love , but, you never know, someone out there may be absolutely lusting after that Suburban Tank that you wonder why you ever bought .. and may even be willing to swap some thoroughly desirable item, say a Santa Fe Consol. You don't know 'til you try....

#VIDEOS#....A source of great modelling inspiration and ideas - if there is any modelling time left over from the idiot box. But videos are expensive and rarely viewed more than a few times. Perhaps if a group pooled their money and shared the resulting broader variety ...

This idea has been proposed by

Roger Johnes, 46 Palmgrove Road, Avalon Beach, NSW 2107 918 0604

Contact Roger if you are intereseted in this venture. He has lots of ideas about selecting titles.

NEW MEMBERS

Welcome is extended to the following newly joined members:-

Russell Ball, Balwyn 3103; Jim Wadsworth, Queanbeyan 2620 (HO); R. Parr, Toongabbie 2146 (HO); J.D. Lock, Dee Why 2099 (Sn3); E. Hodgson, Denistone East 2112 (N); R.J. McGowan, Maraylya 2765 (HO) G.R. Farnsworth, Orchard Hills 2760 (HO); K. Spackman, Marsfield 2122 (Sn3½) D.F. Hicks, Winmalee 2777 (HO); Geoff Nott, North Rocks 2151 (HO); C.A. Wilson, Kirrawee 2232; M. Carney, Sefton 2162 (HO/HOn3); Brian Moore, Wentworthville 2145 (N), Dorothy Moore, Wentworthville 2145 (N); Brisbane N Scale Club 4152 (N); Ross Ferguson, Narara 2250 (HO); Jim Patterson, Bankstown 2200 (HO); John Lee, Hurstville South 2221 (O).

by Peter Burrows

In 1981 my family and I moved to Virginia USA for a three year posting. During our stay I had the good fortune to become a member of the Northern Virginia Model Rail Roaders. This club has its home in the 100 year old Vienna Railway Station on the now abandoned Washington and Potomac Line.

Joggers and Cyclists now puff down the right of way were the first Civil war rail battle was fought just south of the Vienna train order signal. By special arrangement with the Vienna Town Council and the National Parks and Wildlife Service who now control the right of way the NVMRR have a most "roadworthy" permanent home. This unique arrangement preserves rail road history in full scale on the outside and HO scale on the inside.

4. Complexity/Reliability The waiting room now serves as a 5. Change over disruption meeting room and the office area is used for administration and dispatcher 6. Operating Benefits. functions. The remainder of the old Vienna station has been converted to We were confident that the CTC-16 one large sealed room containing system with a bit of fiddling from two approximately 3,000 feet of Ho track mates (from opposite ends of the earth) on five levels and a walk through sharing resources would win through. public gallery. All this trackage represents the Western North Carolina Cost would be kept down by RR from Spencer to Ashville N.C. with 1. Interesting as many people as connections to the main southern line possible in building their own system and the Blue Ridge Traction Company along with the club thus allowing us to (Thomo's Trams). bulk buy components.

Now amongst the approximately 50 3. Do all our own assembly work. members of this fine establishment there are some very hard working and ingenious chaps who are almost as good The cost to individual members (not at scrounging and "borrowing" as their installing CTC-16 at home) was of mates down under. To control this crucial importance as not all members immense layout they had devised an could afford to or were willing to buy intrieging electromechanical device a receiver for each train run at the the boys called the "Herdy Gerdy". club. To overcome this problem the There were two or three "Herdy club would provide a set of 16 tenders, Gerdy's" and they kept track of each slugs, dummies, box cars etc to suit just about everything ever run at the train on a block basis. The club all fitted out with a receiver. associated wiring looms were enormous and because the helping hands that The members would only be required to installed them over the years were fit a receptical on their engine and often not trained in "wire-jerking" select a suitable receiver car on the the resultant electricals were a bit night of running. dodgy.

The high maintenance requirement of dozens of relays and hundreds of contacts plus complex wiring meant the club had a very complicated operating system that few understood and was often out of service. This caused guite a bit of frustration and some embarrising moments during open houses. Something had to be done and it was evident that the existing systems days were numbered. The search for a better control system began.

In March 83 my good friend Bruce Whal and I presented the club with a proposal to instal CTC-16 (the carrier control system developed by Keith Gutierrez). In our opinion it was the only viable system for a layout the size of ours. Despite some opposition we got the nod for a more detailed study and costing. The ball was in our court to sell the idea to the members.

There were several key features the club would be looking at :-

- 1. Cost to club
- 2. Cost to individual members
- 3. Compatibility

2. Produce our own circuit boards for the receivers.

Tests showed that only the roughest of motors did not respond well to CTC-16 signals and since remotoring was a common practice amongst members, we did not consider this a problem. The receptical on the engine would take a small dummy plug to quickly convert back to conventional D.C operation.

Whilst the circuitry of the CTC-16 control unit and receivers is complex it is very reliable. The system would be constructed to facilitate easy maintenance. Any failures could quickly be swapped out by any member and the failed unit repaired at a more convenient time by a club member skilled in electronics.

Converting the club layout to CTC-16 with minimum disruption required much thought. It would be desirable to be able to switch between CTC-16 and the existing D.C. system and since it would be necessary to isolate the existing block wiring and link some blocks together, a relay change over system would be devised.

The resulting operating benefits would be many viz:-

- a. Realistic Operation (Helper service etc.)
- b. Simpler wiring and low maintenance
- c. Reliable Operation
- d. Simplified yard control.

After some research of component prices and availability we decided to compromise between cost and time by purchasing the command stations in kit form direct from Keith Gutierrez. The power supplies, receivers and throttles would be built from scratch. Since the power supply boards were simple and the receivers boards many, economies could be made by producing our own.

Each command station would be modified to drive 9 power stations and we would need one for the main layout, one for the trolley line and one spare on the test bench. Nine power supplies driving the main layout was probably a little generous but those double heading units climbing Black Mountain could really pull the Amps. Having 9 power blocks in 3,000 ft of track which featured 4 switching yards was reasonable insurance.

The club would require 3 command stations, 10 power stations, 20 receivers, 20 throttles, 16 receiver

cars, an enormous 20 V.D.C power supply, a large changeover system and quite a long throttle connecting bus. Private member systems would swell those numbers considerably.

It was time to generate more enthusiasm amongst the members. A demonstration of the CTC-16 system was organised with the expected results. We received enough orders for private systems to make the project really viable. Cost to the club would be approximately \$2500, cost of a private system with 10 receivers would be approximately \$300.

The presentation to the club was made at the May 1983 AGM requesting a budget of \$2500. Despite some apprehension and a little opposition the motion was carried. Our members had the forsight and guts to give it a go. We would not disappoint them.

I immediately began purchasing components taking advantage of bulk discounts from suppliers all over the country. it took over 6 weeks to just compile component lists and scan the cattledogs for the cheapest source. My home soon resembled a mail order house. Meanwhile Bruce was discussing our project with Bruce Chubb (author and designer of the C/MRI) who had improved the power supply design and come up with a 3 chip receiver.

Our association with Chubb was most beneficial to the project as was the assistance of Keith Gutierrez who didn't mind being called up by the man with the funny accent and awkward questions. A few basic design changes were made and we began construction. By September the first units were on the bench. Some minor bugs were removed and assembly proceeded at full steam.

Bruce with the aid of a couple of old club hands who knew the Herdy Gerdy arrangements concentrated on converting the layout and designing the changeover mechanism. I concentrated on assembling the clubs command and power stations, organising members kits and writing assembly instructions. We had decided to build the receivers in 3 different shapes to suit the various locomotives modeled. By having the circuit board made locally we could produce a receiver for about \$12 and a steady hand.

After assembling a few receivers ourselves, Bruce and I soon decided an assembly line was the only way to get over 50 receivers built in a reasonable time and not go blind. Since we had agreed to assist the members in building their private systems we felt it only fair that we collar those with some dexterity for a few assembly sessions. A basement table tennis table was set up and away we went. Our little crew soon became fairly efficient and the receivers rolled off the line with few rejects.

By January 84 it was time to commence instalation. To facilitate up to 16 hand throttles in use simultaneously we decided to run a 25 wire flat cable right around the face of the layout with 25 pin 'D' type sockets at suitable intervals. Although each throttle only used 4 wires each representing a different channel this arrangement allowed us to plug in any throttle at any position. This led to a modification to the Command station for walk around control which also solved noise problems on the long input bus.

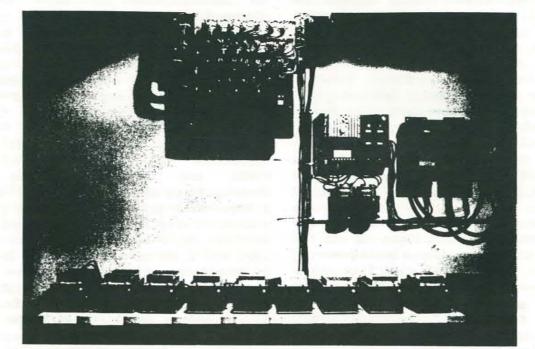
In February came the moment of truth. A few late nights had sorted out the bugs and there were sufficient receivers installed in locomotives for a good demonstration. The joint was packed when we fired it up and there was a mixed atmosphere of expectation and apprehension as the first loco rolled out of Spencer Yard. Any doubt was soon blown away when the helper service joined the first freight up Black Mountain. It was a total success and CTC-16 was a hit.

We were soon swamped with requests for sockets to be mounted on engines. Even the most sceptical members were soon modifying their locomotives. On a typical pre CTC-16 running night members would roll in about 8 pm run a few trains and be gone again by 11 pm. Now members were turning up at 6 pm and at 1 am the next morning wives would be calling to see where their husbands were. The project was a success and we were within budget. Soon it was time for my family and I to return home to OZ. We had thoroughly enjoyed our stay in the USA and the NVMRR will always have a special place in my memories. I learnt a lot about model rail roading from the club activities and its members and I was happy I could contribute something myself.

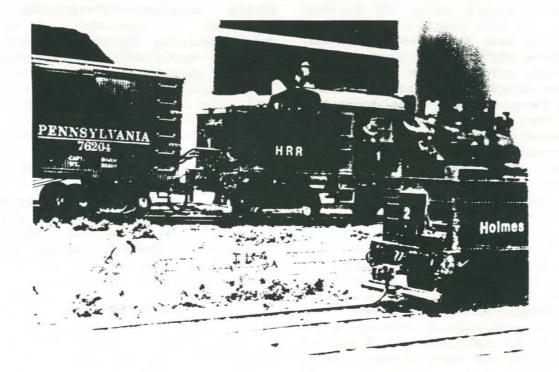
Those of you who run CTC-16 will appreciate the experiences of the NVMRR and for those who are contemplating a carrier control system I hope this article encourages you to take that big step. There have been further improvements to CTC-16 since 1984 and I am sure there will be more in the future. There are a few ready to run systems on the market, but they tend to be expensive. Gutierrez's CTC-16 offers modellers with the skill and/or resources to build electronic circuits to save heaps. As model railroading is embraced by the electronic age, I believe carrier control is an even more important break through than computer control (even though the two go hand in hand) Simply because it enables very without realistic operation depersonalising operation. If you have an opportunity to try carrier control, go for it.

References:

Model Railroader Dec 79 through Apr 80 Dec 80, Sept 81, Jan 83, Jan 84, May 84, April through Aug 85 and Nov 85.



Top Centre :- The Changeover Panel Centre Right :- The 20V D.C. Power Supply Bottom Row :- Nine Power Supplies carring the Control Signals.



Top Locomotive connected to Receiver Car Bottom Locomotive has dummy plug for conventional running. 'PHONE (02) 799 8572

STATION

2

23 Hennessy St., CROYDON NSW

CANBERRA CLAN

Despite all the political rumblings, threats, inuendo, mud slinging, emanating from the big white house on the shores of Lake Burley Griffin, the modelling scene is more one of quiet progress, with reports from clubs, groups and individuals in the area beavering away in the evenings and week-ends (one good thing about the ACT's climate is that it is not conducive to outdoor activities in winter.)

Our most recent meeting was held at Stephen O'Brien's home where we took in a video of the N & W J. Class Northern. Great viewing, much enjoyed by Steve (being a N & W modeller) - the video provided by Kerry McPherson. Likewise another enjoyable night was had at Ian Macfarlane's home where, after a session of running on the "Central", we then admired Ian's latest efforts of scratchbuilt Rolling Stock of Queensland prototype in " S_{n3} ", followed by a bull session. All in all, very interesting and informative evenings.

Perhaps the only retrograde step one can report from our neck of the woods was the "Malkara" model exhibition. From our hobbies point of view it was rather poor. For people who are more into collecting Corgi, Dinky toys, etc., model aircraft, boats and plastic models, then it would have been worth the entrance fee. Without boring people with local politics, perhaps it is enough to say the current organisers do not look upon model railway layouts as great crowd pleasers. Plus they take up too much space! With only four layouts this year including the one by the Hornby tinplate collectors, perhaps modellers can look forward to March when bigger and better things are scheduled for this area. For instance, six layouts, three never seen before, of British, Australian, NSWGR, USA and Japan. Make a note in your diaries or on your dunny wall! It will be worth the visit to Canberra. Incidentally, March is still warm in this part of the world so skis and snow chains will not be required. It is also hoped an NMRA stand can be provided but our numbers will be spread very thin to stage the exhibition.

Next Meetings:

Tuesday 14 January 1930

59 Angophora Close, Rivett ACT

Darryl Chandler Host with his N.Guage Japanese Layout. Bull Session (show off "Santa's Gifts?" If you bought any!)

Tea and Coffee provided.

Tuesday 25 February 1930

Venue to be confirmed.

WEDNESDAYS	1:00	-	5:00	p.m.	
THURSDAYS	5:30	-	7:30	p.m.	
SATURDAYS	9:30	-	2:00	p.m.	



PETER WELLER-LEWIS



by Lawrence Nagy

Surviving Without Coal Mines

Coal mines, coal mines and more coal mines yet. Almost every layout boasts at least one, some more. The reasons are many. Coal is the standard fuel shovelled into the maw of the ironhorse - coal and steam go hand-in-hand. Mines and their related structures are interesting features to model. Coal trains are special trains which can be operated differently to other trains on the layout. Coal is the backbone of industry - model a coal facility and you can potentially include almost any other industry as a consumer.

Modelling coal mines however, has its attendant problems. Firstly, keeping loaded cars and empty cars circulating in their respective directions involves an arsenal of deceit and false imagery involving hidden connecting tracks, removeable loads or the 0-5-0 switcher (ol' fiddle fingers). Secondly, once the problems of loads and empties are solved, you're still lumbered with the aggro of trying to get decent rolling qualities out of the empty coal cars. An empty open top car is an empty open top car, devoid of any suitable place to hide a decent amount of weight.

I solved these problems on my Pennsylvania New England by modelling common aspects of industrial railroading. Firstly, the coal mines are located 'off the layout' and so are the consumers. By doing so, coal traffic becomes overhead traffic, merely rolling over the layout from one end to the other with minimal on line switching. The actual function of coal traffic on the PNE is to pad out car movements; since all coal is westbound and iron ore is carried as the return load, car cards aren't required for these movements which simplifies the sorting of car cards. Also, the coal drags act as obstructions on the mainline around which other traffic has to manoeuvre.

Secondly, as often happened on the prototype, coal cars returning to the coal fields carry return loads. Iron ore cars are very specialised vehicles designed to carry very dense loads. As a result they were most common on the Michigan ore roads like the DMIR, GN, CNW etc. Other roads located in the industrial regions (which historically were coal producing regions) couldn't afford the luxury of such specialised cars which would run empty half their mileages, and tended to haul iron ore in their coal cars, obtaining nearly 100% utilisation from that type of car in the process. The BLE, LV, PRR, CNJ and CMSt.P&P all hauled coal to maritime areas for export and returned the cars to the coal fields with loads of iron ore for the blast furnaces. Their hoppers seldom ran empty except for short shuttle movements.

Thirdly, my biggest on line industries in terms of traffic are cement plants, which ship loads in covered hoppers, negating the loads/empties problems of open top cars and weighting worries. As on line industries, cement plants offer many of the advantages of coal mines without their drawbacks. In fact, the only real drawback from the modelling point of view is that of size - cement plants with their crushers, stockpiles and kilns covers acres of land and are on par with steel mills for difficulty and complication of modelling.



Spur disappears behind trees

Surviving Without Coal Mines

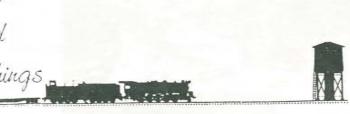
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EDGE OF VAYOUT

11

cement plant on backdrop.

cement plant extends off Layout edge.







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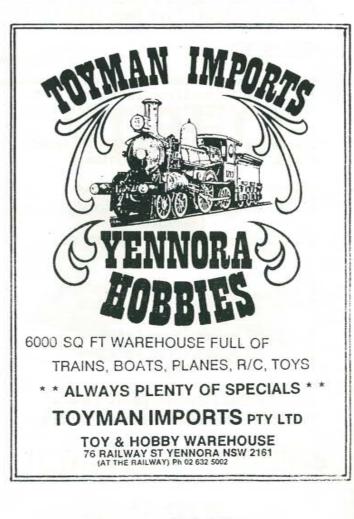
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We sometimes hear of model items for sale and even though the owners of the following items are not members, we publish the advertisements as a service to our membership:

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7	x	SI	96	x	Insulfrog Lefthand	\$4	each)	
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SEPTEMBER MEETING

BRUCE LOVETT

Saturday, 13th September, despite the number, was a lucky day for twenty one of our members. The weather was fine and warm, but best of all we had the opportunity to visit the Sydney Model Railway Society at their clubrooms on platform 2, Arncliffe Railway Station.

This club is the oldest model railway club in Australia having celebrated its 50th Anniversay in June.

Two large rooms in the station building are occupied by the club, one housing an HO gauge layout to N.S.W.G.R. prototype. The layout is designed as a walk in type without any duckunders (marvellous for the older members), with a mainline length of over 250 ft. of double track.

The other room is set up as a lounge/meeting room/library/workshop, with comfortable chairs and coffee/tea making facilities.

Nine members of the club were on hand to run the layout and answer the multitude of questions from our members.

We were treated to faultless running of long N.S.W. prototype trains through typical N.S.W. scenery. When we wanted a breather, it was a case of walking out the door onto the platform and watching the prototype. Talk about the best of both worlds!

The Sydney Model Railway Society is a member of the N.M.R.A. and, like us, has no restriction on the prototype followed by its members. For members to run their trains on the club layout there are two regulations, one, the models have to conform to N.M.R.A. standards and two, they have to be fitted with Kadee couplers.

On behalf of the N.M.R.A., Australian Region, may I take this opportunity to thank Alan Cross, President, and members of the S.M.R.S for a most enjoyable afternoon and congratulate them on thier 50th Anniversary.

SYDNEY MEETINGS SATURDAY, 7TH FEBRUARY, 1987, 2.00 PM. Soweby Smith

174 Fullers Road, Chatswood, 411-5726.

SATURDAY, 14TH MARCH, 1987, 2.00 PM.

Bob Benson

12 Russell Avenue, Winston Hills, 639-1247.

If you are attending, please ring the host the day before the meeting.

NOVEMBER MEETING

After several days of rain, Saturday 15th November dawned fine and warm. Eighteen members and two visitors, who promptly were handed membership applications, assembled at Kevin Brown's home at St. Marys, N.S.W., for the last meeting of 1986.

Earlier this year Kevin extended his garage and subsequently his layout, which now measures approximately 36'-0" long by 10'-0" wide. It is basically a "round the walls" double track folded figure eight design based on N.S.W.G.R. prototype.

The track and points are all HAND LAID using code 70 nickel silver rail on printed circuit board and hard balsa sleepers. A few lengths of flexible track has been used in some of the sidings but this will be replaced with hand laid track.

Kevin's layout was on the layout tour as part of our Convention last May. A lot of midnight oil was burnt to complete the trackwork for the tour, there being insufficient time for scenery. However, this was not a deterrent as visitors were able to see the baseboard and track construction.

This time, however, scenery had been installed on portion of the layout and trackwork painted. N.S.W. prototype passenger and goods trains wended their way through the scenery, which included a beautiful long reverse curve. Even the non N.S.W. modellers were impressed.

Because of the size of the layout, prototype length trains could be run, which added to the operating pleausre. As one character put it as he viewed the layout, "by the time the locogets back to where it started, it will need a new motor"!

While all this was going on, a certain member was bullying the members into buying a laminated N.M.R.A. logo for their own layouts. More details of this logo are elsewhere in this magazine.

After a delicious afternoon tea, John Saxon gave brief details of the meetings scheduled for February to May 1987, and thanked Kevin and his mother for their hospitality.

To round out the afternoon, Kevin, who has a soft spot for the Great Northern, ran his Empire Builder set for the several G.N. fans present, amidst oohs and aahs.

The benefit of these meetings could be summed up by one member, who, on leaving, said "I have learnt so much this afternoon, talking to other members. One of my grades has been giving me problems, so I am now going home to relay it using Kevin's method of adjustable risers."

Enough said.



BRUCE LOVETT

RESISTANCE SOLDERING

from Ian Venables

For some soldering I use "resistance soldering" in the cheapest possible way. My set up is to use a Scope soldering iron transformer with a lead to an alligator clip and the other to a home-made handle of wood (so as not to burn fingers) around a brass tube into which is held a carbon rod ve electrode from an old penlite battery) shape for the purpose. Scope transformers cost \$32, low resistance leads cost under \$1, alligator clip .15¢ plus an old piece of dowel, tube and flat "AA" cell puts it in the under \$35 category. If the piece to be soldered is tinned first, just about anyone could do a good soldering job with such a tool. I believe though that they should be an addition to the usual soldering methods although some people might use them as their only soldering tool. The actual soldering irons that Scope make may be a bit weak and fall to bits easily. Consequently it is easy to get a transformer free from someone who so longer has need of it. Other sources are auctions. Telecome stores, fetes, second-hand shops, etc. where they can be picked up for a few dollars.

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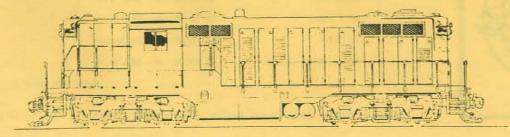
BRASS! BRASS! BRASS!

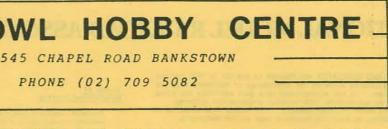
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