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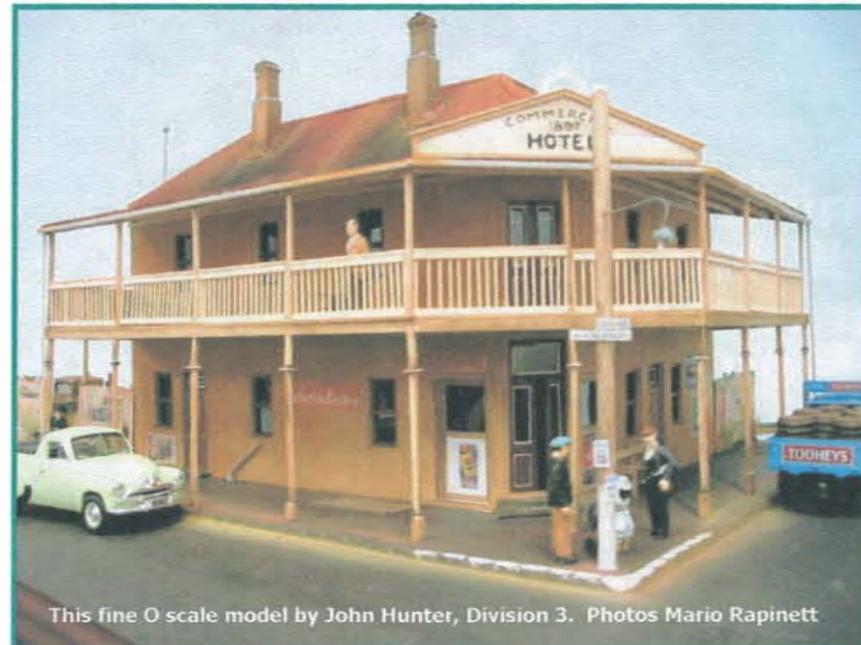
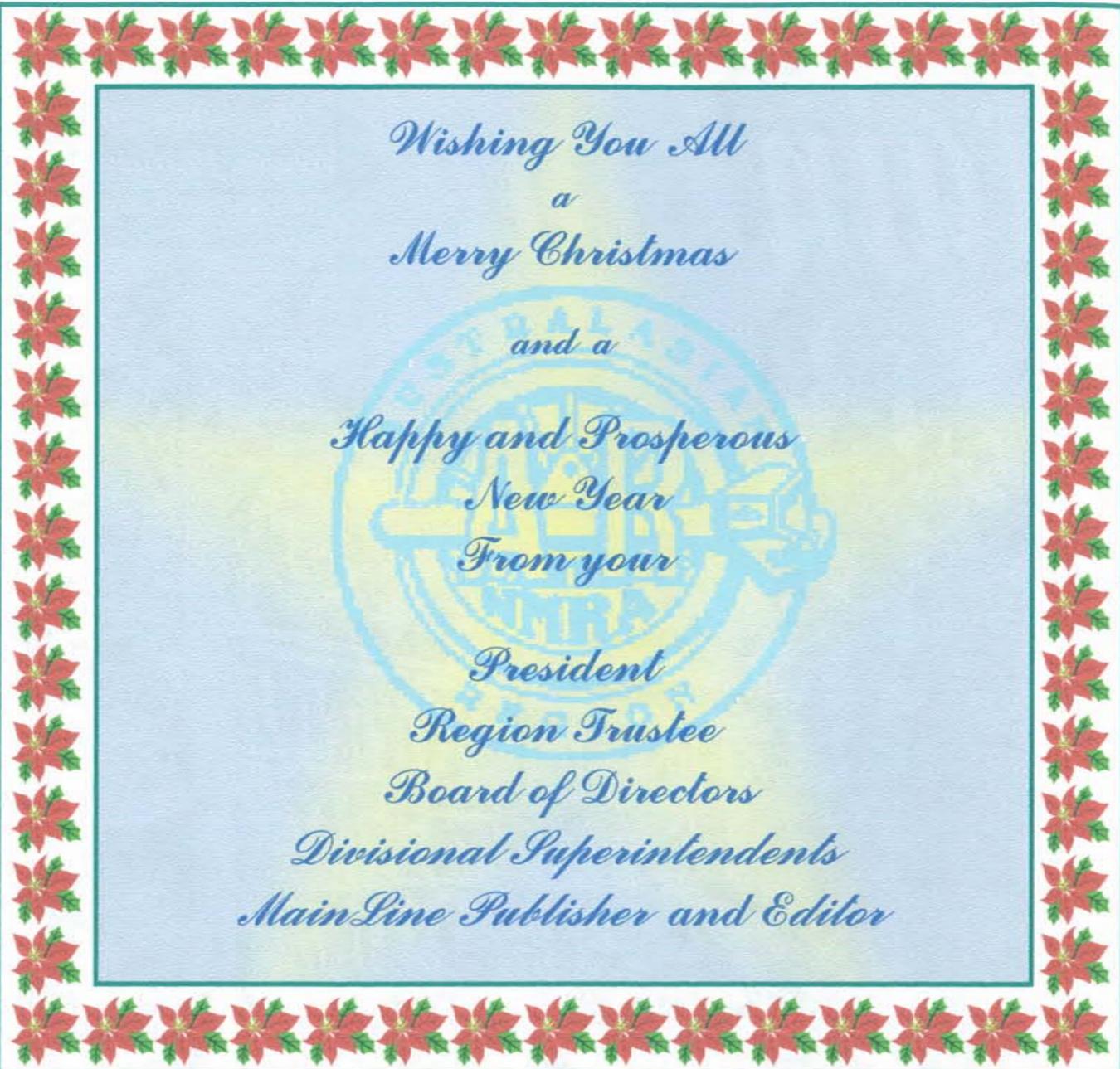


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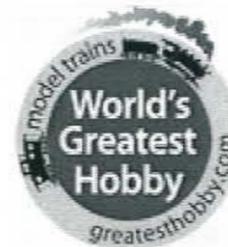
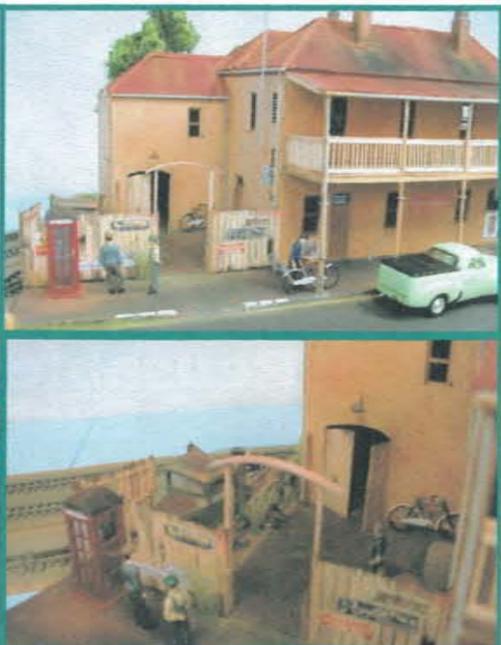
# MainLine

November 2002  
Volume 19 Number 4  
[www.nmra.org.au](http://www.nmra.org.au)

This Issue:  
**Modeling Rust  
Standards & Practices  
Reusable Moulding Material  
Across Eastern Europe by Train  
Union Pacific's 6000hp Locomotives  
New Product Reviews and much More....**



This fine O scale model by John Hunter, Division 3. Photos Mario Rapinett



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*The next MainLine will be Available February 15th.  
Featuring "The Tehachapi Loop"*



## ON THE COVER

Shay Number 4 with load on Geoff Nott's famous Leigh Creek, races at 10mph over trestle Number 2 in an effort to avoid the approaching stormy weather while the diesel semi below is also conscious of what heavy rain can do to that winding narrow gravel track.  
Photo David Jupp

## Schedule of Divisional Meetings for 2002 / 2003

### New South Wales

Sydney meetings organiser John Baker (02) 9629-2349. Meetings start 2.00 Saturday unless indicated differently

24 hour recorded message meeting information line now in operation for NSW Group (02) 9975-5565

November 9 <sup>th</sup>	Erik Bennett	33 Kananook Ave	Bayview	(02) 9997-7971
December 14 <sup>th</sup>	Christmas Party Baulkham Hills Uniting Church Hall			
	Ruth Garbutt	Cnr Edgar & Charles St	Baulkham Hills	(02) 9686-4270
		\$7.50 per head Tickets from Ruth Garbutt.		
January 11 <sup>th</sup>	Colin Upton	6 Welland Close	Jamison Town Penrith	(02) 4731-3921
February 15 <sup>th</sup>	Laurence Nagy	4 Larra Cres	North Rocks	(02) 9872-6301
March 15 <sup>th</sup>	Lyndon Spence	53 Springfield Ave	Figtree	(02) 4272-9245
April 13 <sup>th</sup> (Sunday)	Rodney Smith	26 Peel Street	Baulkham Hills	(02) 9624-3912
May 10 <sup>th</sup>	Gerry Hopkins	15 Narara Cres	Narara	(02) 4329-0242

### Victoria

All meetings start 11.30 Sunday unless indicated differently

November 10 <sup>th</sup>	Laurie Green (MMR)	20 Nambour Drive	Sunbury	(03) 9744-5188
December 8 <sup>th</sup>	Grant McAdam	194 Booran Rd	Ormond	(03) 9578-8685

2003 Schedule not available at time of publishing

### Canberra

November 23 <sup>rd</sup>	Stephen O'Brien	138 Namarang Cres	Waramanga ACT	(02) 6288-3614
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2003 Schedule not available at time of publishing

### Queensland

November 9 <sup>th</sup>	Garth Fraser	28 Sylvan St.	Buderim	QLD 4556
December 8 <sup>th</sup>	Division 1 Christmas Lunch			

For details of Queensland meetings and venue addresses, please contact Glenn Stevens. (07) 3207-2442

2003 Schedule not available at time of publishing

## OFF THE RAILS?

A guy named Pete gets a job as a switchman with the railroad, and undergoes weeks of training. The supervisor then takes him into the switch booth to test his readiness. The following exchange takes place:

Supervisor: "Imagine you were sitting here alone and you learned there was a train coming from the North on that track, and another coming from the South on the same track. What would you do?"

Pete: "I'd throw this switch right here and put one train on the other track."

Supervisor: "And what if that switch didn't work?"

Pete: "I'd go down to the track and throw that big switchlever there, putting one train on the other track."

Supervisor: "And what if that switchlever didn't work?"

Pete: "Then I'd come back here and call the dispatcher To stop both trains."

Supervisor: "And what if the phone didn't work?"

Pete: "Then I'd go to that gas station across the street and use their phone."

Supervisor: "And what if their phone didn't work?"

Pete: "Then I'd go get Uncle Joe."

Supervisor: "Uncle Joe??? What would he do?"

Pete: "Nothing, but he ain't never seen a train wreck."



## MainLine

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of the

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Editor David Jupp  
Publisher John Saxon



**SUBMISSIONS:** *MainLine* welcomes articles, photographs, drawings, cartoons, letters to the editor and other related material as contributions to the mutual enjoyment of the hobby by the membership. Material should have wide appeal and preferably be sent by email or post to the editor. Articles may be submitted on either 3.5 inch floppy or CD in any Windows format. Preferably include hard copy of your contribution. Sharp photos, either B&W or colour are welcome. Type written articles are also welcome.

The Editor *MainLine*  
51A Greene Avenue  
Ryde NSW 2112

editor @nmra.org.au

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Send address changes to  
Toni Saxon  
186B Davistown Road  
YATTALUNGA NSW 2251  
jsaxon1@bigpond.com  
02 4369-7453

Australasian Region  
National Model Railroad Association  
PO Box 382  
Forestville NSW 2087

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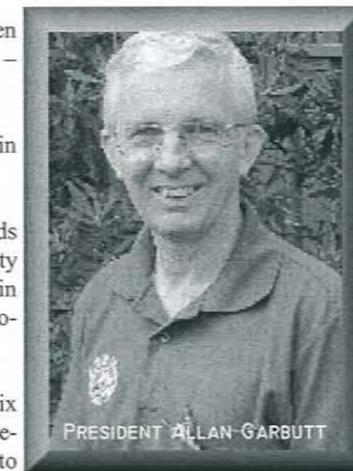
# President's Report

Highlights of the past few months have been the Region exhibiting its DCC operated layout – Sweetgrass – formally owned by Gerry Hopkins.

It was exhibited at Castle Hill in July, Broadmeadow in August and Liverpool in October.

At each location we were able to give visitors 'hands on' experience with DCC. This gives us an opportunity to show how the NMRA standards benefit us by again allowing various brands of DCC decoders to work together.

Experience has shown that youngsters as young as six years of age were keen to use the DCC handset. I believe it is technology such as this that will continue to attract new blood to our hobby.



PRESIDENT ALLAN GARBUTT



Engrossed youngsters with Dads at Liverpool

Considering the impact DCC has had on our members, especially any associated with the Module SIG, is it too much to suggest that most locos will come already fitted with decoders in the near future? Atlas are already doing this on some of their models.

These exhibitions have enabled us to make contact with potential new members and invite them to our meetings.

Following the Broadmeadow exhibition, Lauris & Gerry Hopkins generously hosted a meeting for interested visitors from the Central Coast and Newcastle area.

My personal thanks to all who volunteered their time and talents in preparing and staffing the Region's exhibit.

A recent new initiative is the formation of the Narrow Gauge SIG. This group is organizing the Sixth Australian Narrow Gauge Convention on 19-20 April – Easter 2003. This is a win/win situation for the narrow gauge modelers as well as members of the Australasian Region as we benefit from each others strengths. I look forward to seeing many of our members at this convention.

The many comments about the *MainLine's* colour cover are encouraging to the Editor and the BOD. The warm summer months ahead may be a great time to put pen to paper, fingers to the keyboard and write an article, large or small, for inclusion in the *MainLine*.

Best wishes to all members and your families for the holiday season. Happy holiday, safe driving and enjoyable modeling.

*Allan Garbutt*



UP and Rio Grand manifests await dispatcher orders whilst Santa Fe has the road... Layout John Baker... [Photo Gerry Hopkins]

## From your Editor: (In training)



Our magazine is a great way of communicating with the membership and passing information we as individuals have gained through our own experiences to those who perhaps have not yet had the opportunity to gather such knowledge or who are yet to build a layout. Everyone has something to contribute and with contributions you provide I'll try to provide balanced and interesting reading through my role as editor. The Internet is one such source of information which has grown at a startling rate in the last 7 years and contains a vast amount of helpful knowledge for our hobby. If you have found something that could be of use to others, please let me know (editor@nmra.org.au) about it. I too browse regularly and will bring what I find to you. Remember that not all have access to this electronic medium, so what you may take for granted, others could find interesting. The snippet you provide may just solve that problem for someone else..... The quality of new product now available continues to just get better and better. Take for example the Trix Big Boy and the Kato SD90/43MAC locomotives reviewed last issue. These two products are undoubtedly among the best the industry has to offer and rival brass for out of the box detail. The Rivarossi Allegheny too, without doubt the best locomotive Rivarossi have ever produced and the latest offerings from Atlas and Athearn / Genesis are excellent products. We are indeed fortunate to have such detail and smooth running in these products along with compatibility for Plug & Play DCC. One new locomotive though, sets totally new standards. I am talking about the Broadway Limited NYC Hudson. We are lucky to have a report on it this issue and you will find that it is just a giant leap forward in design and features. On page 21, you will see some of the other locomotives all with sound in both DC and DCC expected from Broadway Imports before the US summer 2003. Take too the imminent start of production weathering from Bachmann and sound. It is a shame though that these advances come at a cost coincident with the poor value of the Australian and New Zealand dollars. Yes, we do have a rather expensive hobby but it is never-the-less a very satisfying one and we are getting quality. I guess we can always save funds somewhere else in the layout construction through ingenuity and techniques learnt at sessions such as our own NMRA Conventions and through our MainLine. Mike Bartlett has taken the Train Length Challenge and now sits at the top of the table. If you have a large layout, give it a try. I'm sure you'll find it to be a lot of fun. This is the last issue for 2002, so may I take the opportunity to wish you and your families a Happy Christmas and New Year. If you are frequenting the roads over the break, drive safely. We want you fit and well and in one piece ready for the next issue of MainLine in February. Please support our advertisers, and thanks to all of you who have made comments on my first effort with MainLine. I am encouraged and motivated by that feedback. My sincere appreciation again to all the contributors this year. Thank you and enjoyable reading.

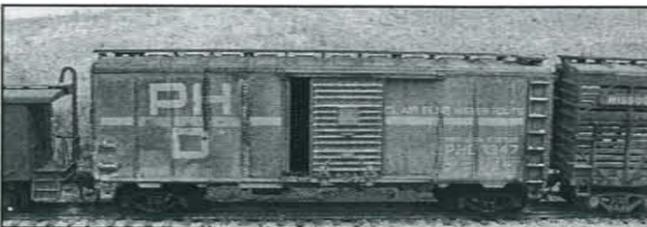
Please note that a 24 hour message telephone service has been set up so that NSW members can call and be advised of any late meeting changes. This has become necessary because of the large number of attendees who need to be contacted and advised of changes. Unfortunately from time to time it is necessary to make late changes. The phone number to call is (02) 9975-5565. It is a message playback ie listen only service.

David Jupp

## LETTERS & COMMENTS

The Fading Freight Cars article from Mike Rose was read with interest and as I am keen on the weathered look I thought I'd give it a test on an old wagon. I started reluctantly but carefully and was amazed at the outcome. I found it to be easy, extremely quick and the end results are very convincing. Colours react differently to the process giving a totally non-uniform realistic look. I have now faded quite a few pieces of rolling stock and recommend the process completely. I now look forward to attempting the Rusting technique in the November issue. An example of my attempts are shown in the accompanying photo. I am more than happy with them.

Rodney Smith



I have to fully compliment and congratulate "MainLine" on the absolutely magnificent front cover presentation of August 2002 - "Pair of SD90/43's" I really had to look and look and try to decide, is this prototype or model? I know that many people were involved and part of this presentation. Excellent and well done by all involved.

I am also guilty of a NOSTALGIC EMOTIONAL ADMIRATION for the "Big Boy", Union Pacific's 4000's. Just to help us realize what a "4000" could do, with a mean, behind schedule engineer and a fireman keeping 300lbs right up there creating a very angry "Big Boy" and he would thus pull equal to the 2 "MODERN TECHNOLOGICAL BRUTES" once the tractive effort got it all moving. This was from "OLD TECHNOLOGICAL BRUTES" 43 years ago.

Then we drop right into Erik Bennett's great and inspiring "BRUTE HORSE

POWER" article. Great stuff Erik and the two "BIG BLOW" Turbine Engineers Andrew and David are right up there encouraging us and maybe even invite challengers?

This "Train Length" article is very strong and I have a weakness for Locomotive Horse Power. The venues of challenges that can be challenged is a real challenge. I see some interesting categories flashing:

Eg.

1. Prototypical Locomotive Performance (ie Two "Big Blows" could pull 1,340 cars empties 50% level haul at 10 mph.
2. A Big Boy would move a 4-1/2 mile train in to motion and up to rolling 50% empties.
3. UP Grade hauls 1.5 - 2.5%
4. Tonnage hauls and convert to Qty or number of cars.
5. Let the imagination take over now with prototype basis.

There is even an opportunity to look at Claremont Model Club Competition W.A. 3 June 1996 with 650 hopper cars around the track, regardless of H.P. Keeping 650 cars from misbehaving is a challenge on its own.

It would be wonderful to be able to pit all my trained horses against an identified Challenge Category in a Standard Test Layout some place, somewhere but preferably not Claremont W.A. The East Coast is food for thought.

The Chairman of the Ladder, Disputes and Rules Committee wins hands down with his entry on the ladder. Would the Chairman envisage or consider categories with prototypical basics on an identified one only "Challenge Track"? This could be something that would bring out some very, very interesting modeling opportunities and some real pit your wits on tractive effort. After all, EMD and GE do it every day.

Again, a great and powerful article Erik, the engines are running, just waiting for the "HIGHBALL"

Christian Nielsen

We now have a new leader on the challenge leader board this issue Christian, although I suspect it may be temporary. This is not just a Union Pacific thing. MainLine welcomes challengers from any railroad. Ed.

# Regional Roundup

Division 1 Queensland Glenn Stevens

The July "Double Header" in Toowoomba was an outstanding success, with seven members and three visitors travelling up for the day. The first meeting was hosted by Mark Ward, for the first public display of the OMA Belt. OMA Belt is a freelanced railroad set in the pacific north-west of the United States. In it's modern day form (1982 is the time period modeled) it is a bridging line connecting the Burlington Northern and the Canadian Pacific enabling a variety of freight and commodities to be shipped in both directions, with the modeled portion being the "Rock Ridge Sub-division". Mark has applied a lifetime of ideas to the construction of the Rock Ridge Subdivision, with the actual 'doing' of those ideas proved to be an exciting challenge.

Construction on the layout proper commenced at the very end of December 2000, with Mark and one other doing all of the work on the layout to date. At the time of our visit, all the baseboards, roadbed, backdrops and lighting had been installed, with the only track being the main yard and his test track.

Mark employed the "one level at a time" technique. This approach entailed each part of the layout being seen through to completion before progressing to the next stage. Mark was quite pleased with the outcomes of this method, the main drawback being the very large degree of patience required, particularly when you just want to run trains!

After much pressure from his guests (ha, ha) Mark demonstrated three of his sound equipped loco's. (an SD40-2, F7A, and a 2-8-0). It was unbelievable, and if anything is going to lead the author to DCC, it's going to be sound.

Everyone came away very impressed with the scope of the layout, and the workmanship and the detailed planning that Mark has obviously put into his layout. We left with the threat that we are returning in 12 months expecting to see trains running.

Many thanks to Mark and Heidi for their hospitality from all of us.

After lunch, we all then adjourned to the Darling Downs Model Railway Club (DDMRC) where we participated in their monthly Saturday "Running Night". Since our last visit of over 12 months ago, the N Scalers have moved the DualtraiN module layout into the main room and have attached it to the permanent Yangi Valley RR. The HO modular Drayton Valley RR layout has consequently moved into storage. There were two prime reasons for this rearrangement. Firstly the HO Drayton Harbour RR is structurally complete and with enough wiring to run trains. Secondly, the N Scale DualtraiN display layout has grown considerably, and when connected to the permanent portion of the Yangri Valley, makes a humungous N Scale layout. As always the members of the DDMRC were excellent hosts, and for those of us who took trains (me), it was very good seeing them have a long run.

Our thanks to Bob and all the members for their hospitality for what has become a not quite annual event.

### Toowoomba Model Train Show

As mentioned in last month's Newsletter, Division 1 hosted an NMRA information stand at the June Toowoomba Model Train Exhibition. Grahame Davis and I made a weekend of it, with support at various times over the weekend by Denis Lane,

Graham Prideaux, Bob Brown and Nick Negerevich. We used the NMRA's Achievement Program as the theme for the stand, and we had on display two of Grahame's Silverton San Juan modules, along with an 'O' scale passenger coach and freight wagons from Garth Fraser's Copper Canyon RR. Sample copies of the MainLine were available, along with "Why Join" and Achievement Program brochures.

Grahame and I had a good weekend and, from an NMRA point of view, we were extremely visible, however from a membership point of view, I am not so sure. We interested the people who were interested - if you know what I mean. If people were not interested, we couldn't hold their attention.

Two things came out of the weekend. We are going back next year, but on a different track. Grahame and I have decided that next year we will take along some of our modeling chores, and while working, we can discuss the merits of being an NMRA member in addition to discussing what we are doing.

It would be interesting to get some feedback from other regional members on their experience when manning NMRA information booths at other shows. As I said, Grahame and I had a good time at one of the best SE Queensland train shows, and if DDMRC invites us, we will be back next year.

Division 2 Sydney Kim Bradley

The August meeting at Ken and Jenny Scale's Baulkham Hills home, was held on a Sunday for the first time in a long time. About 60 members were present on a sunny day along with 5 visitors, the result of interest gained at the Hills District Model Railway Club Castle Hill show held last month where the NMRA was present with the new exhibition layout purchased from Gerry Hopkins. A number of bring and buy stands were set up and by all accounts some went home with many more dollars than they came with and some went home with considerably less. The formal part of the meeting chaired by Allan Garbutt included reports from Trustee David North regarding the recent convention in Fort Lauderdale (summarized in the August MainLine) and a rundown from Ray Walter on the forthcoming SIG Narrow Gauge Convention to be held over the Easter Weekend in Sydney April 2003. John Baker presented the host plaque to Ken and Jenny which was followed by a delicious afternoon tea. Ken showed off his NCE controlled DCC layout which proved most popular and ran flawlessly. Thanks to Ken and Jenny for a great afternoon.



PS. As a result of the Castle Hill Show, a total of 43 possible new members showed interest in the activities of the association, some of whom are new to the hobby. Thanks to those who gave up their time and manned the stand over the two days of the show.

Newcastle also invited the NMRA to exhibit and once again lots of interest was shown in our activities with approximately 30 expressing interest in membership. There was no shortage of volunteers to man the stand yet again. Thanks to all who made the trip and gave their time.

Another beautiful day except for the smoke enveloping Sydney after back burning operations the previous day, but still

over 60 members and visitors made the trek into the Blue Mountains to Bob and Carol Best's



residence at Blaxland for the *September* meeting. Bob models N gauge and is well known for the detail he applies to the interiors of his scratchbuilt structures. I understand that this will be the last time this layout is viewed in its current state as Bob has plans for a redevelopment and the hopeful addition of DCC. A presentation was made by Allan to Christopher Eagle for his help in producing documentation with his dad for the NMRA Convention. This work is much appreciated and involved



photocopying and binding. Thanks Christopher. Hope you enjoy the LBF convention freight car. John Baker kindly donated two decoder equipped locomotives to use on the 'show layout.' I have since learn't that John has also donated an NCE DCC system. Thank you John. Your generosity is appreciated by the association. Thanks also to Gary and Maria Spencer-Salt from *The Model Railroad Craftsman* for their donation of a Cornerstone building kit for the show layout. On a more serious note, NMRA president Allen Pollock recently suffered a mild heart attack whilst leading an NMRA organised tour to Alaska. John Saxon spoke about his long standing friendship with Allen and on behalf of the down under membership, wished Allen a speedy recovery. Allen also recently lost his father suddenly, just after the Fort Lauderdale Convention. The local hobby shop, *THE SIGNAL BOX* kindly kept its doors open until 5pm for the benefit of members. John Baker presented the meeting plaque with the request that it be protected from any layout renovation. Bob and Carol, many thanks for your very pleasant hospitality.

### Division 2 Canberra

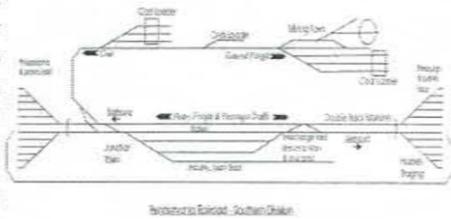
Viv Brice

In *July*, we met at my place, still the sight of framework with very little progress. Currently, I have the L-girder framework built and have started laying the roadbed as the picture shows, complete with cob-web and storage for wandering off-spring! The road bed is 1/4" (or 6 mm to you new fangled folk!) cork, cork incidentally bought years and years ago when I lived in the USA. My theme for this meeting was a layout rationale describing what I wanted to model and how I plan to squeeze that into the space available. Briefly, I am modeling the mythical



Southern Division of the Pennsylvania Railroad, based the assumption that when the Pennsy took over the South Penn Railroad from the New York Central, they did not abandon it (to later become the route of the Pennsylvania Turnpike,

one of the world's earliest freeways), but rather completed it as an alternative route over the Alleghenies from Harrisburg to Pittsburgh, paralleling the famous Middle Division to the south. Incidentally, it is precisely this scenario that the past President of the NMRA, Bob Charles modeled. The layout is based on a junction between a branch to some coal mines and the mainline, a point-to-point but with neither point modeled! The mainline is a double track folded dog-bone at about lower chest height with hidden staging tracks, while the branch line will amble around the walls to the town at the end which will be at eye level. Sounds good in theory but how it will turn out is anyone's guess! I have attached an outline of the track plan for anybody who may be interested. Period will be early to mid fifties, covering the change over from steam to diesel, with some of both present. Coal is the main activity but the double track mainline allows for effectively anything to be included, from express and local passenger trains to general merchandise and TOFC. Maybe at the next meeting, I will have done sufficient work to warrant an update.



In early *August*, we met at John Pratts's home. John's theme was all about writing a book. John is an editor for a team of people writing a book about the steel works of Lithgow. He described the process being used to create the book, and the problems of coordinating several writers who each write separate sections. Trying to massage the individual styles to get some cohesion throughout the book, yet not upsetting authors or changing their intentions has been and still is a task requiring considerable tact and diplomacy. John's very deep knowledge of the subject is also of great importance in picking out errors and inconsistencies. Writers email him with their sections, which John edits and marks up and returns to each author for their correction and update. Inevitably, by the time the corrections have been made, new research has added some extra detail that was previously missing and the whole process repeats. Add that up for some seventeen sections (I think that's right, John) and the task is quite a challenge. I wish John all success. Afterwards, we visited John's layout, had some operating fun and the usual networking, which to many is a prime reason for attending these meetings.

At the end of *August*, we met at Ken Macleay's home. Before the meeting started, Rob Nesbitt ran a train of around a dozen Intermountain cylindrical Canadian covered grain hopper cars around Ken's layout behind one of Ken's C&O locomotives. Rob wanted to see if the train would make it around the layout without derailing, as he had previously experienced difficulties with the Intermountain trucks. He has substituted other brands and made some modifications which resulted in no derailments,



Two scenes from Ken MacLeay's Layout

so he was happy with the results. Stephen O'Brien brought a Walther's Fairbanks-Morse H10/12-44 switcher along and later ran it around the layout with one of Ken's trains in tow without problems. Ken opened his presentation with a short session on the wide range of railway and railroad books available from the ACT public library service. These ranged from some excellent picture books, through the Kalmbach "How To" series to huge volumes such as John White's history of "The American Railroad Passenger Car". This book is the definitive publication on passenger cars with a very readable text and is profusely illustrated with drawings, plans and photos. Ken then discussed his plans for a future N scale layout which he hopes to have operating in two and a bit years. He will continue to do a bit more scenery for his HO scale C&O layout, but will not be investing in any further structures or equipment. Ken talked about adapting a layout to a particular location, in his case an N scale layout that would be largely built in modular format over the next two years. He mentioned that Chuck Hitchcock's ATSF layout featured in *Great Model Railroads 1991* and *Model Railroad Planning 1997*, had many of the features that most modellers are after including a continuous run around a room with one large yard and some form of operational focus, in this case the passenger traffic on the ATSF in 1952-53. Mr Hitchcock subsequently decided he needed a different focus for his layout, demolished his previous layout and changed his focus to 1960s industrial and yard operations based on Kansas City as reported in *Model Railroad Planning 2002*. This layout is point-to-point with transfer runs between yards and got Ken thinking. He recalled the earlier Kansas City Terminal Railway layout of Jim Senese from *Model Railroad Planning 1999* which featured four yards and five railroads, which featured a major yard with smaller transfer yards and an industrial area – and this really got Ken thinking. He wanted to have the C&O as his major focus again, but wanted to have some operating variety with other railroads. He bought a Steam Powered Video RR atlas and decided that Cincinnati, Ohio offered the scope and flexibility he was after – the C&O and 7 mainline RRs. He then began a process of scaling down what he wanted from Cincinnati and ended up with a continuous run, two large bridges over the Ohio River, the large Union terminal passenger station, one main freight yard and four or five other yards plus a variety of RRs which would allow him to run some of his favourite locomotives. His layout will feature the C&O, B&O, PRR, L&N and N&W. Ken also gave us an indication of how he plans to operate the layout. It was a very interesting and enjoyable afternoon. Ken admits he's got a lot of work to do, but is encouraged with the plan he's developed and the operating variety it will offer. Ken had a display of his N scale locomotives and some passenger equipment which will operate on the new layout.

I should add that I was sick and unable to attend this meeting so my thanks go to John Gillies for this write-up.

Kerry MacPherson was our host for the *September* meeting, in the back blocks of Queanbeyan among the parrots. Kerry is an owner / builder and is building a three storey mansion. Currently, the basement is fitted out to a level suitable for living in while he completes the remainder of the house. We started off in the train room, concrete floor, sheeted and ceilinged and half full of boxes of models and modelling gear. Several members had plenty of suggestions on how a layout could be designed into the space but for Kerry, that is in the future, after he has made much more progress towards finishing his dwelling. The only guide so far is that Kerry will model the B&O, either around M&K junction or the stretch between point of Rocks and Harper's Ferry. After the layout

room, we assembled for show and tell and I produced a carry case that I came across in Melbourne recently at the Sunshine Model Railway Club exhibition. There was someone there selling them off very cheap and they looked very useful, so my good wife bought me one. On showing it to the group, see picture, the interest was extraordinary and I have undertaken to track down where I can get some more of them. Then it was back to Kerry and he gave us a very



comprehensive dissertation on adhesives and their applicability to model railroading. He first talked of nitro-cellulose glues, such as Tarzan's Grip, still available but now largely superseded by other newer glues, such as white glues and cyano-acrylates. Aquadhere is probably the most well-known of the white glues and has long been used in benchwork; however, it will slowly slip under shear and will soften with water. Yellow glues are an improvement on this, with Gorilla Grip being among the best, with unfortunately a price to match. Kerry next discussed the cyano-acrylates, more commonly known as super glues. He noted that there was a wide variety of quality available and advised that best results would normally be achieved with a good quality glue, and in his view, the original, Eastman 610, is probably still the best. You should note that super glue joints are somewhat weak in shear and are not suitable by themselves for gap filling. To fill gaps with super glue, add talc or cornflour or fine sanding dust, and use a 'kicker', which speeds up the setting process. When using a kicker, ensure that ventilation is good and always have some de-bonder around when using these glues.

Plastic glues tend to be very specific in the type of plastic that they will act on, eg one suitable for styrene is not suitable for other plastics such as delrin or PVC. Perhaps this is why some manufacturers such as Bowser are now recommending that super glue be used for their kits. Kerry then described a new type of glue known as cyano-epoxy, which has been developed for the US military as a means of assembling stealth aircraft – to date, this is only available in very expensive, very small quantities.

Finally, Kerry talked about joining wood pieces by screwing into end grain – not a good idea since it is a very weak joint. Where such a joint is unavoidable, use blocks or gussets to join both pieces of wood inside the joint or put dowels into the end grain piece and then screw into that. Given his experience with sheeting his new house, Kerry then extolled the virtues of a screw gun, without which he would long ago have given up putting up plaster board with a bad case of RSI!

### Division 3 Victoria Grant McAdam Photos by John Dennis

The *July* meeting of Division 3 was held at the home of Gavin and Louise Hince at Clifton Hill. Members are always keen to visit Gavin's to see the progress on his indoor On3 layout and his G scale garden layout. Unfortunately Gavin's work some times takes him interstate and he had just returned from a recent four-month stint in Canberra. He had been back for a couple of weeks which allowed him to check the operation of the garden railway before our visit and several trains traversed the circuit throughout the day. He had managed to make

reasonable progress on his On3 layout before heading for Canberra. The enforced stay away from home allowed him to work on several projects for the layout. However he has quickly discovered the need to take accurate measurements because at least one of his nine buildings will need to be modified to fit into the desired location. Many of the members took the opportunity to run the layout. It makes use of Digitrax



DCC, with most of the locomotives fitted with sound chips. Some of the locomotives traveled on parts of the layout that they had not previously visited which highlighted some problems with the track work and clearances with the

Dunkirk not fitting under one of the bridges and it will need to have its chimney lowered.

The day started out reasonably bright but as it progressed the cloud came in keeping the temperature down but at least the rain stayed away. So the sixteen members present spent the day between Gavin's layout room, above his garage, and in the garden. The formal part of the meeting was kept reasonably brief with Grant McAdam explaining about the operation of the division to several prospective members and reminding the members that the next meeting is at Geoff Trueman's in Hoppers Crossing.

Mario Rapinett gave a report on the recent NMRA Convention in Sydney and explained about the videos available for loan from the Region's collection.



Good to see you guys so deeply into the MainLine!

The items for display had a common theme as the majority of them were works in progress rather than completed models. Laurie Green, when not working on layouts, is now tending toward assembling highly detailed dioramas. His latest in O scale is of "Barlow Motors" that features a garage and associated yard. He also had the body of a small 'A' class Climax. More O scale items were brought along by Grant McAdam who has been working on a single room school, complete with typical school desks. He also brought along an O scale Model 'T' Ford 2-seater "runabout" by IXO Models. This company also produces several other period models and their web site is at [www.ixomodels.com](http://www.ixomodels.com). John Dennis brought along a girder bridge for use in HO on 30. Another advantage of attending meetings is that there is wealth of experience on



hand. Rod Hutchinson brought along a Walther's Gas-Electric in HO that he had painted with Steam Era Models paint and he had problems with the finish, which was textured rather than smooth. Rod got several suggestions of

how to overcome this problem. He also had a flier advertising the pre-publication release of "Steam on the Lens".

The Division 3 meetings keep going from strength to strength. Twenty members and visitors attended the August meeting at the home of Geoff Truman in Hoppers Crossing. There were also half a dozen apologies from members, so attendance's at meetings are up. Visitors are encouraged to attend meetings to see if Division 3 of the NMRA is for them. This try before you buy policy appears to be working as some of the new members of Division 3 have joined via this path. The weather was overcast but the rain stayed away for most of the day. What can you expect after all it is Melbourne and it is winter. Most of the members spent the day in Geoff's family room that contains two layouts. The first is in HO and is still under construction. The other is Geoff's contribution to the Sunbury Model Railway Club's modular On30 layout. It consists of two modules, one of which features a station area and the other scenic country side. The meeting part of the afternoon was once again kept brief to allow the socialising to continue. Grant thanked Di and Geoff Truman for their hospitality. Grant also explained about the recent confusion over the meeting dates for Division 3. If there is any doubt in your mind please either call Grant or the meeting host to confirm the date for the meeting. Mario Rapinett gave a brief report about the recent convention in Sydney. He also is explained about the CD on the convention and took orders. The video library is now in full operation in Division 3. Those videos that were borrowed last month were returned and many of them went out again. There were many items for display this month. The mind was stimulated with reading material from Rod Hutchinson (Australian wildlife card, Australian Journal of Railway Modeling, Puffing Billy book fair flier 15/9/02), Paul Richie (Mainline Modeler, Rhb track plans, Rhb rolling stock plan book), John Dennis (Narrow Gauge and Shortline Gazette Jul/Aug 02 - containing John's photos of Kim Marsh's layout No Hope Coast) and Grant McAdam (Narrow Lines, Narrow Gauge & Industrial Railway Modeling Review). Locomotives came from Steve Cullen (converted Bachmann HO Baldwin to an 0-6-0T in On30) and Ken Hughes (vertical boiler Class "A" climax). Bob Backway had a home-made rotary table chopper. "Barlow Motors" a highly detailed diorama in O scale by Laurie Green was nearing completion. Paul Richie also brought an S scale combine, HO Walther's wood caboose, and an S scale structure by Crystal River of "Carlow Drapery Store". The items for display are always a good way of stimulating discussion as the members find out how different facets of the models were constructed.

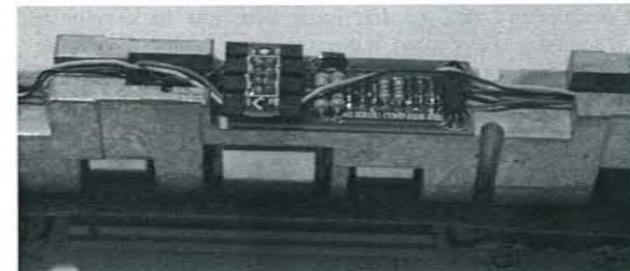
I was very pleased to see twenty three members and visitors in attendance at the September meeting of Division 3 held at the home of John Dennis. Meeting attendance's now regularly exceed twenty, which is a high percentage of the Division 3 membership. This was our second meeting held at John Dennis' and since our last visit a number of changes have taken place to his home layout. Parts of this layout formed parts of the Dutton Bay Tramway that has been seen on the exhibition circuit. The layout makes use of Easy DCC. Many of the members present took the opportunity to run the layout. I am sure there were trains in particular locations where they had never been or intended to be and it will take John some time to get things back into order. If there are any faults in a layout it only takes visitors for them to appear and John was seen adding to his list of items to be fixed during the day.

Concluded on page 15.

## PRODUCT REVIEW

PROTO 2000 SD-60M

The SD60, powered by a 16 cylinder engine and intended for heavy duty drag operation incorporated a number of improvements over the 50 series such as fuel efficiency, additional radiator capacity and two speed cooling fans. The most revolutionary improvement was the use of three separate microcomputers. The computer age had finally influenced locomotive design as these microcomputers now controlled engine speed, fuel economy and interactive troubleshooting. The SD60M introduced EMD's wide safety cab. It was first produced with a three piece windshield and was later redesigned with a two piece windshield. Four hundred SD60M's were produced for BN, Conrail, SOO and UP. Most are still in use today. The models tested were of the Union Pacific and Burlington Northern liveries. A big disappointment to me is that although the locomotive is designed for plug and play DCC, the fitted headlights are not compatible with DCC. The loco comes with directional 1.5volt bulbs, provided that way to give constant brightness in conjunction with a circuit board over the full speed range. The constant brightness thing does not quite work though, as headlamp fading is evident up to about half throttle before it stabilises. To operate with DCC you need to discard these 1.5



volt lamps and replace them with 12volt 40mA versions or alternatively fit Light Emitting Diodes. (LEDs) Admittedly this is an easy job and requires no soldering. Although LEDs are often criticised for being either excessively white or containing too much blue, they are kinder to the DCC driver transistors in that they do not draw as much current nor do they have the massive inrush current of a lamp. This inrush current can destroy function transistors in the decoder if the track is dirty, causing the light to turn on and off repeatedly. As a bonus LEDs last a lot longer too, eliminating the necessity to pull the body off for lamp replacement. For modern diesels, the LED is more than suitable but filters placed over the LED can better simulate the yellow effect of older type headlights or those on steam locomotives.

The SD60M is presented with the chassis and body separated in the box and comes with instructions for removing the two major components from the box and fitting them together as well as an exploded parts diagram and parts list. Lubrication and bulb replacement is discussed as well as the conversion to DCC. Included are user fitted detail parts such as a, winterization hatch, sunshades, wind deflectors, ditchlight lenses, snowplows, orange beacon and antennas. These are fitted by drilling a #76 drill hole with a pin vice. It seems that the detail packages are the same for all railroads but there are no instructions as to what is to be fitted to what prototype. I was disappointed that unlike the Kato SD 9043, the ditchlights are non operating. Horn hook couplers are also provided for the uninitiated. An all black crew is supplied

fitted to the cab but there is no other cab detail. The detail of these plastic models just gets better and better. Cut levers, air hoses, close to scale handrails, also painted white at step points, white edged steps and see through fan grilles on two of the four cooling fans and fitted grab rails make this probably the most detailed yet from LifeLike. Paint quality is good and the decals are sharp.

The chassis, mounted with plenty of lead weighs in at 740 grams and contains the usual skew wound balanced armature motor with dual machined flywheels. The screw mounted couplers need to be removed to fit the body and the trucks are well detailed with sand pipes fitted. Atlas still seem to me to lead the way in both truck and body detail. Aside, this is a very fine locomotive and the biggest yet from LifeLike. It's a smooth runner with excellent low speed characteristics as we have come to expect from the plastic manufacturers. Full 12 volt stall current at 950mA is just within the range of available 1 amp (1000mA) HO decoders. Average operating current under load is just 360mA. Fitting of a decoder is a simple process requiring a plug and play decoder. (I used an NCE PNP decoder) The plug is removed from the circuit



board at the top of the chassis, the lamps are replaced with 12 volt 40mA lamps or LEDs and then the existing constant voltage headlight circuit board (held with 2 screws) is removed and can be discarded. A recommendation worth considering. If you run DCC, then use lamps of a higher voltage than 12. 14 volt lamps run a lot cooler and will last longer too. Overall, this is a nice locomotive. A combination of detail features from Atlas, Kato and Proto 2000 in the one locomotive would be just perfect. One day?

What's available?

SOO Line

Union Pacific 3 numbers

BN & BNSF

Aus Price approx \$155

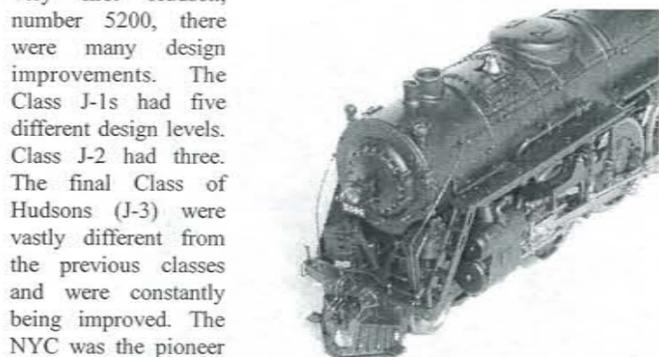
David Jupp



**PRODUCT REVIEW**  
**BROADWAY LIMITED HO NYC 4-6-4 HUDSON**

The New York Central is where the Hudson locomotive was designed and tested. Its development was due to the increase in passenger business on the NYC. In the mid 1920s longer trains were required and the existing motive power

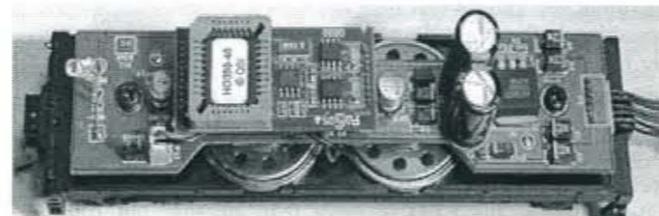
could not handle more than 12 cars. There was a need for a passenger locomotive which had the capability of pulling 16 to 18 cars. In 1926, the new chief mechanical engineer, Paul Kiefer, designed a 4-6-4 locomotive that had greater starting tractive effort and the ability not only of pulling longer trains but also of maintaining higher speeds. The first Hudson arrived 1927 and the last in 1939. The NYC numbered them in consecutive order starting at 5200 and even renumbered the ones on its subsidiaries so that there was an unbroken string of numbers that reached 5474. Of the 275 Hudsons in the fleet, 13 were streamlined. Number 5344 was the world's first streamlined locomotive having had its shroud installed in 1934. In 1945, after a grade crossing accident with a sand truck in East Chicago the shrouding was removed. From the very first Hudson, number 5200, there were many design improvements. The Class J-1s had five different design levels. Class J-2 had three. The final Class of Hudsons (J-3) were vastly different from the previous classes and were constantly being improved. The NYC was the pioneer of the 4-6-4 wheel arrangement and ultimately used nearly 56% of all the Hudsons ever produced. Many consider the Hudson to have been the most beautiful steam locomotive ever built. Unfortunately, the NYC did not save even one for posterity. Broadway Limited, associated with Oriental Limited a brass importer, is a new US importer manufacturer and promises to take model railroading to the next level. A major claim indeed. The first of 3 promised locomotives is now available in the form of the famous NYC J1e 4-6-4 Hudson. The plastic-and-metal ready-to-run locomotive features a built-in decoder that automatically senses if a DCC signal is present across the rails and automatically switches to either DCC or conventional DC operation, whichever is appropriate and has sound for both. Yes, that is correct. Sound for both. Comparable with Soundtraxx for sound quality this decoder designed by Qantum Sound (QSI) has many different features not found with Soundtraxx including adjustable levels for individual sounds such as bell and whistle. Another unique and nice touch is the Doppler effect of sound from a passing locomotive. This Doppler intensity changes with speed. Additional sounds such as Chuff, Whistle, Bell, Squealing brakes/flanges, Air let off (in neutral), Air pumps (in neutral), Water sounds (in neutral - blow down, pop off & injector) and Blower Hiss are heard through the two on-board speakers. A slave provision in the decoder mutes the whistle and bell for double heading. Pickup from the track is good from both the loco and tender with both sides of the drivers conducting and two of the three tender wheels from one truck conducting and the other two from the other truck. Additional features such as individual sound level adjustment is possible through clever use of CVs as the NMRA allocation of CVs is somewhat restrictive. Front and rear lights are white LEDs and the



headlight has a dim function. Other features of the QSI decoder include Back EMF where speed will be constant regardless of load together with excellent low speed response. Now this is where things get different. There was a hitch with the prototype locomotive when used on the NCE program track although this is fixed in the production run. Built in to the decoder is a voice response system so when you successfully program a CV on the Main, the decoder speaks back to you with the loaded value. Isn't that unique? The decoder also has 11 built in speed tables. Should satisfy most needs. Analogue DC mode sound is achieved by restricting movement from the motor until the volts reach a certain level. At about 4 volts on the track the sound springs to life. This 4 volt mark is considered neutral and as long as you don't go below it, the sound and lights will be present. Increase the volts a little more and the loco starts to move. If you're using a DCC throttle, you blow the whistle and ring the bell using the appropriate function buttons, just as with previous DCC sound decoders. On a DC layout, however, the chip makes a clever assumption - that you don't want to reverse the locomotive when it's running at any speed. It therefore lets you blow the whistle or ring the bell using only the reversing switch on a standard power pack. Move it to "reverse" and hold it to blow the whistle; move it to reverse and quickly back to forward and it triggers the bell. If you really want to reverse the engine, just bring it to a stop, then operate the reversing switch. Simple as that! Oh, yes - as you ease the Hudson to a stop, you hear the brakes squeal.

Summary of features, Powerful 5-pole can motor with flywheel, Die-cast locomotive chassis, Die-cast tender chassis, Detailed tender underbody, Plated bell & whistle, Deck plate from cab to tender. Many exceptional prototypical added-on details like piping and appliances, Prototypical cab interior, including backhead, etc. Operating headlight Directional backup light Constant speed control - keeps speed constant up or down hill, load independent. Authentic paint scheme and correct locomotive numbers Magnetic

knuckle coupler on tender RP-25 contour on drivers and wheels Will operate on Codes 70, 83, 100 rail and can be operated on minimum 16" radius curves. There is unfortunately only a dummy coupler on the pilot, disappointing given the consist slaving feature. The production model has provision for an operating coupler. Next to be produced will be one of the Pennsylvania Railroad's finest steam locomotives - M1a 4-8-2 and M1b 4-8-2. to be followed by a Norfolk & Western Class 'A' 2-6-6-4 early 2003 and E7A & B diesels. All will feature the same dual sound facility. This is one nice locomotive and I particularly look forward to the 2-6-6-4 when it is released. What's currently available from the US? (Australia / New Zealand unknown at this stage.)



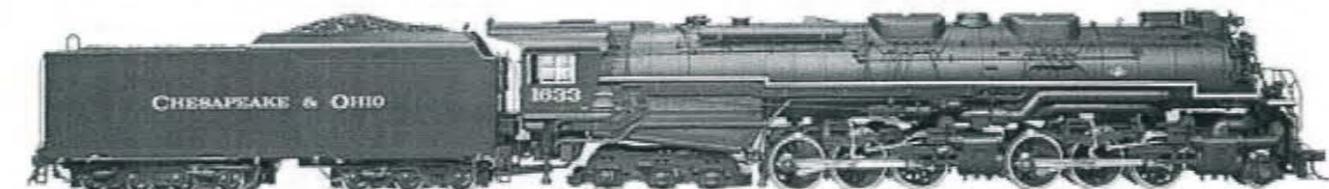
NYC Road number 5343, 5344 & Unlettered Discounted Price \$250 US It's very hard not to be impressed with this 'revolutionary' locomotive. You'll want one! Believe me!

David Jupp

**PRODUCT REVIEW**  
**RIVAROSSI HO ALLEGHENY 2-6-6-6**

Steep grades and heavy coal trains were the rule on the Chesapeake & Ohio Railway's Allegheny Subdivision. By 1940, the road's aging H-7 2-8-8-2s (built in 1923-24) were getting

and the really old unit motors complete with rolled mesh brushes protruded into the cab. Pickup from the tender on one side of the track was through a spring and pin affair in the drawbar. The



expensive to maintain. When C&O began looking for a replacement, Lima Locomotive Works proposed an all-new 2-6-6-6 H-8 articulated locomotive. Designed for speed and power, the design had 67" drivers, a monstrous firebox measuring 9 x 15' and an overall weight for engine and tender of 1,197,400 pounds heavier than Alco's soon-to-be-famous 4-8-8-4 "Big Boy." Behind the loco was an equally huge tender carrying 25,000 gallons of water and 25 tons of coal. To fit C&O's 115' turntables, the rear of the tender was raised, putting more weight on the rear truck and requiring a fourth set of wheels. C&O named the behemoth "Allegheny" to honor the mountain range where they would soon be working. The C & O took delivery of 60 H-8 class 2-6-6-6 locomotives, delivered in 4 groups between 1941 and 1948. These locomotives, amongst the largest and most powerful in the world ever built, were used for hauling coal from Hinton, West Virginia to Clifton Forge, Virginia, a distance of about 80 miles. The last 15 delivered were lighter than the previous ones and were used on the relatively flat line from Russell in Kentucky to Walbridge Ohio. The locomotive could produce 7500HP from 260psi pressure.

Now, on the 60th anniversary of the delivery of the first of these magnificent machines, Rivarossi has unveiled the first all-plastic



HO Scale model worthy of the name "Allegheny."

The long awaited HO model Allegheny 2-6-6-6 was released late last year and first impressions are that this locomotive is indeed the finest ever from Rivarossi. Although plastic bodied, it has great detail, really smooth running, low starting voltage with excellent low speed control and mid range running stability. Under tight curves, the Allegheny negotiated the punishing tight radius curves without signs of any problem. Movements through number 6 Peco turnouts at all speeds were uneventful.

Having many Rivarossi articulateds in my collection, I was suspicious of the engineering of the latest offering. That has fortunately proven to be unfounded. They have done a great job with the latest drive from a can motor, flywheel and gearbox. Initially, pickup from the tenders of the late Challengers were simply to run the directional tender light. There were minimal pickup driver wheels, two only in fact and the spring mechanisms connecting the wheel pickups to the motor were weak and too few. Wear resulted in deteriorating performance that proved disastrous. Earlier locomotives had non-can motors

spring weakened from short circuits and wear and then hey presto, running problems. Was I expecting too much with this newest model? Well I am pleased to say that although some spring contacts press against the driving wheels there are more of them and the tender has pickup as do the front and rear trucks of the loco. Unreliability should therefore be a thing of the past. All drivers are powered and there are 13 wheels picking up current. Three wires run between the loco and tender via a plug. A DCC ready to run NMRA socket in the boiler is provided and plenty of room for just about any decoder on the market. If you want sound then the speaker will have to be fitted in the tender. Construction is of plastic and metal and the loco will negotiate 16" radius curves without the supplied press fit brake shoes installed. These are part of a detail pack. A short non-prototypical cab is installed (required for the sharp radius) and a scale length cab is provided. This cannot be used on sharp radius curves because of the roof overhang. The cab is easily fitted and attached with a screw. Headlights are directional and a red LED in the firebox simulates the fire. It is also possible adjust the fire grate cover. As mentioned, a bag of extra detailing parts is supplied. The model weighs in at over 11lb 7oz without the tender and is 17" long. One point I did not like was the use of traction tyres. The tyres are fitted on the middle axle of the rear drivers and together with the weight make for pulling nearly 170 cars on the flat. The weight alone of the loco though should be sufficient without tyres to pull substantial loads. At some stage they will need to be replaced which could prove troublesome. Authentic Blackened 'I' Beam Style Valve Gear is fitted and there are working knuckle couplers on pilot & tender. Horn Hook couplers are included in the accessory pack. There are opening tender water hatches complete with tank interior details and a fully detailed & painted cab interior. Optional etched metal builder's plates are included for self-fitting. The cab windows also slide open and closed. The locomotive comes in a realistic matte black finish and the razor-sharp lettering & striping appears prototypical. It is packed in an attractive, protective display / storage box complete with history and instruction booklet and a numbered Certificate of Authenticity suitable for framing. The loco runs smoothly at all speeds and was tested on code 100 track. The drivers are slightly undersized specifically for swing action (typical of articulated models) and the ash pan over the trailing truck on the prototype is missing on the model but could easily be manufactured from styrene and fitted. However all aside this is a great model from Rivarossi, without doubt, the best they have ever done and rivals some of the brass available for detail. Available exclusively through Walthers in the US, a Timber and Glass display cabinet is also available at extra cost.

What's Available?

C & O Allegheny #1633

Australian Retail price approximately \$900

David Jupp

## PRODUCT REVIEW ATHEARN GENESIS F-3

For the transition era fan, collector and modeler, Genesis has introduced their F Series locomotives. Santa Fe the most famous of all roads with this Classic Diesel, received its first F-3's in November 1946. Deliveries continued into 1949 when the F-3 was superseded by the F-7 now wearing the famous red and silver Warbonnet paint scheme. The F-3's were subject to continuous improvement. Early units featured the classic F-3 phase 1 appearance of raised radiator fans and slotted-type Dynamic Braking roof openings, "chicken wire" screens, and three portholes on the sides of both A and B units. The F-7 had the car body side appearance, but retained the F-3 style fans and D/B openings. They were delivered with single headlights, but many safety conscious roads installed a rotating Mars light in the upper casing, and a new headlight housing was added to the nose door.



These locomotives represent the pinnacle of prototype fidelity and drive operation. Every F Series locomotive features the Genesis Millennium II drive

system with German Buhler 5 pole can motor, blackened silver wheels, cab interiors, micro-sharp paint finishes, true-to-prototype lettering, stainless steel grills, etched fan housings, metal handrails and grab irons, and prototypical number boards. Features of the Athearn Genesis F-Series include. State-of-the-art tooling for body and accurate detail changes to suit the road represented. Blackened solid nickel silver wheels with correct profile are used. A constant directional lighting Circuit board can be removed and replaced with DCC decoder. Photo-etched stainless steel grills on side of locomotive Photo-etched fan housings on top of locomotive Cab interior Metal handrails and grab



irons Detailed fuel tank The F-3 / F-7 built by EMD is the classic Diesel of the 50s. Even against the big horsepower modern diesels, they still look beautiful and they probably always will such is the classic shape of the cab.

This latest Genesis model captures the elegant look of the prototype as well as all the subtle detailing which make these units unique. For example on the UP versions, 1410 had a red emergency lamp front end top and a single headlamp

below. 1449 had the upper red emergency lamp and dual headlights on above the other in the lower casing. Headlamps also have reflectors so they are quite bright. 1.5 volt lamps are fitted which need to be replaced if DCC is to be installed. Available in "A" only and "A & B" units in numerous roads this Genesis series locomotive impresses as soon as it is taken from the box. A big disappointment in that there were no instructions of any sort in some of the packaging. One unit had documentation, two other units did not. Documentation is however available on the Internet if you have that connection. Why this happened puzzles me but it seems to be quality control related. This is not a cheap locomotive and some will shudder at the price but Genesis have done a great job. This is not a toy looking model. At \$279 Australian for an



"A" unit and \$439 for the "A & B" set it is now comparable with Atlas and Kato prices. You won't be disappointed though, this is a very good locomotive. Probably the best ever from Genesis. Detail which includes very fine see through stainless steel grills are temperature sensitive and can buckle slightly with heat but return to their 'normal' shape with the reduction in temperature. I haven't seen the problem, but it is mentioned in a sticker on the plastic packaging. The grills look really good. The handrails and grabs too are very fine as are the fine lift rings on the roof. Windscreen wipers are the slimmest I have seen and even finer than most brass models. The cab is detailed but contains no crew. October Model Railroader magazine features an article on how to detail the cab however it's hard to see a crew through the small windows if you decide to man the cab. Radiator fans on the roof are see through with visible blades. The number plate on the front of the Missouri Pacific version in stainless steel is very authentic looking. Each railroad model has subtle differences and different style headlights, with the UP version having the double lights red at the top. Strangely enough the top Red light operates when the loco runs in reverse. Truck detail is good complete with visible brake shoes. Close fitting knuckle couplings are fitted at the rear of the "A" and both ends of the "B". An elongated knuckle is fitted at the front. When connected as an "ABA" These look really good. "B" units are also powered.



The body is easily removed once you have the instructions and have deciphered them. It is located by tabs and only the front coupler needs to be removed before access is obtained. The body is tethered to the chassis by the lamp wires as the bulbs are glued to their respective locations. The units weigh in at 502 grams and provide good pulling power. A printed circuit board sits above the skew wound twin flywheel motor and contains the constant brightness / directional switching diodes. The constant brightness thing works better than the Lifelike attempts and illuminates at about 1.5 volts and reaches full brightness at 2.5 volts. but the loco didn't start to move until 4.5 volts were present above the track. This board is easily removed and replaced with any suitable decoder. This is not a plug and play unit and the decoders will need to be soldered. A decoder with lighting effects makes the Mars Light on the UP version quite authentic looking.

Slow speed running is excellent with pickup from all wheels and it is smooth and quiet with plenty of pulling power. An "ABA" consist had no trouble pulling 40 NMRA weighted wagons up a 1% grade at just above the slowest speed setting on level track. On a single unit, full 12 volts stall current is 1000 mA and normal running average load current draw is 300 mA. An HO 1.3 amp DCC decoder will be required but as mentioned, get one with Mars simulation. Expect average current draw on an ABA consist to average 1000 mA.

What's available?

F3 NYC, SF Freight and Passenger, Southern, LV, UP, (Also available in ABB yet to be released) MP, B & Maine, SP "Black Widow", CB&Q, F7 SF Warbonnet, Pen, D&RGW, B&O, GN, B & Maine, RI Passenger and Freight, CB&Q. Price Australian (Road name Dependant) "A" \$279 "A & B" \$439 to \$499

David Jupp



Continued from page 10.

The day was overcast but fortunately the rain stayed away. The day was spent between John's train shed and back verandah. The formal part of the meeting was kept brief to allow the socialising to continue. Grant M<sup>c</sup>Adam thanked John and his family for hosting this meeting and reminded the members that we would soon be setting the dates for the coming year. The exchange of videos from the library was very active once again.

There were a large selection of items on display this month. Grant M<sup>c</sup>Adam had copies of the photographs of the models by John



Hunter that he had taken at the previous meeting as well as the books "Colour Schemes for Old Australian Houses" and "Australian House Styles". Other items to stimulate the mind came from Rod Hutchinson in the form of the books "Bush Tram to the Mill", "Echoes Through the Tall Timber" plus an assortment of dual gauge Tillig trackwork. Peter MacDonald has recently returned from an extended holiday where he picked up a QR screw coupler, assorted Ghan track spikes and a telegraph insulator. The modeling side was not forgotten with Steve Cullen bringing along a timber supply car, Laurie Green a scratchbuilt O scale steam engine and boiler destined for a new saw mill diorama; and John Hunter with an O scale hotel. (See page 2) Our electronics guru, Bob Backway had a DCC decoder programmer.

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# UNION PACIFIC 6000HP LOCOMOTIVES

THE SD90MAC-H and GE AC6000CW FLEET

by Don Zimmerman

During the mid-1990s, Union Pacific's Mechanical Department stepped forward to embrace a new breed of high horsepower locomotive, ordering the 6000hp AC6000CW from GE (UP calls these C60Acs). Not since Union Pacific took delivery of the DD40X Centennials in 1971 has the railroad embraced the concept of 6000 horsepower under the hood of a single locomotive. While GE's

higher tractive effort. EMD has stated that "one SD90MAC-H can replace two SD40-2s in both heavy haul and high speed freight operations, achieving a 16% improvement in fuel efficiency over an SD40-2's, 16-645E3B engine."

Apart from being very long locomotives, the SD90MACs are noticeably different in design to earlier units. The dynamic brakes which used to be housed above the

section between the cab and radiators is flat; the top of the SD90MAC-H is slanted. April 1999 saw the first SD90MAC-H units delivered in "Phase II" (8522 and above) with a new nose design which increases the height of the crew access door and also uses window glass the same size and shape as used in contemporary GE units.

Union Pacific ordered 25 so-called "convertible" SD90MACs (numbers 8000 - 8024) for delivery in late 1995 / early 1996, and soon increased this by another 50 (numbers 8025 - 8074) to be delivered before the end of 1996. At around the same time (late 1996), GM assembled the first two 6000hp SD90MAC-Hs, although they were used for extensive testing before being passed to UP.

UP's SD90MAC units are all numbered in the 8000s. The 4300hp units are numbered from 8000 upwards, but originally, the 6000hp units were to be numbered after them starting from 8160.

The first UP SD90MAC-H, UP 8160 was built in August 1996, without its engine, and displayed at the Railway Supply Association Chicago trade show during



UNION PACIFIC SD90MAC-H PHASE I

6000hp locomotive is impressive, it has been the 425,000lb 80 ft long SD90MAC-H that has caught peoples attention.

General Motors announced in the mid-1990s their intention to build both 5000hp (SD80MAC) and 6000hp (SD90MAC) locomotives using a common chassis. The SD80MAC was to use the existing 710G series engine with 20 cylinders, but the SD90MAC was to be the first to use the new GM16V265H or "H" engine. As the new engine was still under development, GM stated that they could provide an SD90MAC with the existing 710 series engine (rated at 4300hp) and when the new "H" engine was ready, shop the locomotives for a swap-out. Not only is the new "H" engine GM's first power unit to reach 6000hp in a single unit (the DD40AX used two 3300hp engine blocks) it is also GM's first 4 cycle diesel engine.

To differentiate between 6000hp and 4300hp SD90MACs, GM named the "H" engine units as SD90MAC-H, retaining SD90MAC for the 4300hp units. The SD90MAC-H is currently the most powerful railroad locomotive available. Though it has the same horsepower as the General Electric AC6000CW, the SD90MAC-H has a

engine in locomotives up to the Dash 2 series, were moved to behind the cab on the SD50. These have now been moved to a separate compartment at the far rear end of the long hood behind the radiators. These radiators are flared out similar to the old SD45s. Differences



UNION PACIFIC SD90MAC-H PHASE II

between the 4300hp SD90/43MAC and the 6000hp SD90MAC-H are minor. On the SD90/43MAC, the



September 14 - 16, 1996 then returned to EMD's La Grange, Illinois facility for completion, final checkout and testing. It was held at EMD as a test bed for SD90MAC-H concept and design. In the meantime UP placed orders for additional 4300hp units, eventually acquiring a total of 309 (8000 - 8308) with the last arriving in December 1998. Because of this, the first 6000hp unit was assigned number UP 8200 for a time, but it was renumbered directly from UP8160 to UP 8500 when finally delivered to the UP in August 1998. A new 6000hp "H" series engine was

installed at VMV Enterprises, Paducah, Kentucky during September 1998, and it was released from VMV October 10, 1998.

UP 8160 was renumbered directly to 8500, however the next few SD90MAC-H units actually preceded 8160/8500 in delivery arriving on the property between August 1996 and May 1997 as 8201 - 8207. All had operated as pre-production (prototype) units for EMD between 1996 and 1998 and all were renumbered 8501 - 8507 during 1998.

One unit in particular, the 8204 was painted in a special blue, white and black livery for display at EMD's 75th anniversary display at La Grange, Illinois in 1997. Operated as EMDX 8204, then as EMDX 8504 until September 1998, it was moved to MVM for upgrade during May 1998, and released in full UP livery on September 26, 1998.



EMDX 8504 along with 8502, 8503 and 8505 were tested at high altitude on UP's Moffat Tunnel route in early

1998. Before delivery to the UP, 8504 received standard UP armour yellow and harbour mist grey paint.

The first eight pre-production UP SD90MAC-Hs, built in 1996 and 1997, spent considerable time testing at EMD's La Grange plant, and on both the UP and the AAR test track near Pueblo, Colorado. UP 8500 - 8504 were sent to VMV at Paducah, Kentucky in early June 1998, to be reconfigured to match the production version, with UP



SD90 MAC-H Phase 1

8500 coming to VMV from La Grange in September. UP 8501, 8503, 8504 were released from VMV and delivered to UP during October with UP 8500 and 8502 remaining at VMV for additional testing.

In late December 1998, all of the UP's SD90MAC-H units operating on Union Pacific were recalled by EMD for further design improvements. It was rumoured that many of the problems with the new

"H" engine were actually computer problems. Further, UP was rumoured to be considering canceling additional orders and shifting the AFE money to GE for their 6000hp units.

From mid-June to mid-July 1998, UP received its first production examples of the SD90MACs, numbered UP 8508 - 8511. An additional 50 units, through UP 8561, were delivered throughout 1999. The first seven, UP 8508 - 8514, were assembled by Super Steel Schenectady, at Schenectady, New York.

UP uses the term SD90AC instead of EMD's SD90MAC-H (8500 - 8561) and makes no distinction between these and the SD90MAC-H IIs (8522 - 8561) in designating their EMD 6000hp AC



UNION PACIFIC GE AC6000CW

Continued on Page 18

## NEWS RELEASE

Bombardier Transportation, manufacturer of Amtrak's Acela electric train-sets on the Northeast Corridor, officially unveiled mid October its non-electric high-speed rail locomotive designed for proposed high-speed corridors in other parts of North America. Headquartered in Montreal, Canada, Bombardier Transportation, manufactures 20 intercity and high-speed products, including seven high-speed locomotives. Bombardier has participated in the development many high-speed rail systems, including four different TGVs, the ICE trains used in Germany and the Netherlands, Italy's ETR 500, China's Xinshisu, Spain's Talgo and America's Acela.

Bombardier showed off its "JetTrain" locomotive at Union Station in Washington D.C., calling it the first 150-mile-per-hour non-electric locomotive designed for the US continent. The locomotive is powered by a 5000HP gas turbine jet engine derived from a Pratt & Whitney PW 150. It calls JetTrain the first high-speed, non-electric locomotive designed for the North American market and uses a turbine engine to generate power, instead of the diesel engine used



in nearly all locomotives in North America for the past 40 years. According to a company release, the new locomotive meets all North American standards for high-speed rail. The initiative to build the locomotive was launched in 1998 as a public-private development partnership between Bombardier Transportation and the Federal Railroad Administration. Among its performance features, the locomotive is 20 percent lighter than a conventional diesel unit with twice the acceleration. It has already undergone extensive low and high-speed dynamic testing as part of the Bombardier/FRA research and development program. Bombardier believes its 240-kilometres-

an-hour JetTrain is the answer to providing high-speed rail service throughout North America using existing track and without the prohibitive cost of electrifying rail networks.

However, as Bombardier Transportation executives showed off the 21-metre-long prototype to authorities at Washington's Union Station on Tuesday, Amtrak officials could be excused for a certain skepticism. Amtrak and Bombardier are in a nasty legal battle over the troubled Acela Express high-speed electric train recently introduced on the northeast corridor linking Boston, New York and Washington.

There has been a rash of train delays and breakdowns with Acela, the first high-speed train service in North America. Amtrak ordered 18 from Bombardier and its French partner Alstom, and 15 have been delivered.

Although the train is popular thanks to its speed and comfort, Amtrak has vowed never to buy another.

The use of Gas Turbines is not new. Union Pacific was a big user of Gas Turbine locomotives generating up to 10,000HP for freight manifests. They replaced the 4-8-8-4 Big Boys.

locomotives, and SD9043AC instead of EMD's SD90MAC to designate their 4300hp AC locomotives (8000 – 8308). Currently UP's SD90MAC-Hs are to be found system wide, although, along with other AC units, they are especially suited for heavy,



UNION PACIFIC GE AC6000CW

slow trains such as coal from the Powder River Basin. All-told, with its size, horsepower and rugged utilitarian design, the SD90MAC-H is an impressive locomotive.

Lately UP has reportedly had problems with ride quality and the 8500 series SD90ACs have been taken off intermodal trains, and when leading, the units are restricted to 60mph. Until all of the problems are corrected, the "convertible" SD9043ACs are likely to receive the new "H" engine.

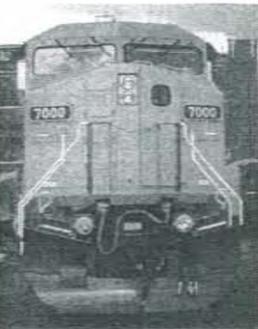
The SD90MAC-H Phase II weighs in at 425,000lbs, 15'8" high, 80' 2" long, has a top speed of 75mph and develops 170,000lbs continuous tractive effort and 200,000lbs starting tractive effort. Power is delivered to the rails through HCR II Radial Trucks with 45" diameter wheels with 3" thick rims for increased life. High tech in every detail, computers control almost every onboard function. Even an electric parking brake replaces the old manual parking brake. The new generation 'whisper cab' isolates the cab from the underframe structure utilizing rubber mounts, reducing sound levels and whole body vibration and features desk style electronic console.

General Electric Transportation Systems announced in the mid-1990s that they intended to build a breed of extremely high horsepower locomotives scooping EMD by several months. This became the AC6000CW. (UP calls them the C60AC) At 425,000 pounds, the 76 foot long GE AC6000CW is also a massive locomotive. Fitted with a standard North American Cab, the GE

AC6000CW's principal spotting feature, aside from its length is the massive cooling system radiator array that extends outward from the rear sides of the unit and sweeps back over the rear deck.

GE's new 7HDL 16 cylinder, twin-turbocharged, electronically fuel-injected engine delivers 6250hp to the alternator of the AC6000CW, making it the highest horsepower production freight locomotive in the world.

This 7HDL diesel engine is designed and manufactured for higher horsepower, greater fuel efficiency, lower emissions, improved reliability and easier maintenance. Elastic mounts isolate the engine and alternator from the platform to reduce induced vibration. This isolation



Early GE AC6000CW Test Unit

reduces stress on locomotive components and creates a more comfortable environment for operators. High-tech throughout, separate, computer controlled inverters – one per axle – regulate the AC traction motors for high-performance control. This single inverter per axle technology assures maximum tractive effort independent of wheel diameter variation. It offers the most reliable adhesion to the rail in all weather conditions. GE's new "ICON" control system seamlessly integrates locomotive electronics with train control functions serving as a platform for electronic braking and distributed power capabilities.

Union Pacific's first ten AC6000CW locomotives were constructed in 1996, as prototypes and test units for GE. Numbered 7000 – 7009, they remained in GE's possession until mid – 1998. In accordance with UP's system renumbering plan, they were renumbered from the 7000 series to the 7500 series, in order, by GE during 1998 – 2000 at its factory in

Erie, Pennsylvania, upon installation of upgraded engines.

Starting in the third quarter of 1998, UP began taking delivery of production C60ACs, numbered above the originals from 7510 on up. Units 7555 to 7559 were completed by GE during November and December 2000, but were held for additional testing and not delivered to UP until January 2001. All units in this final batch are painted with UP's new "Wings" image, including the lightning stripe colour separation line. While orders were originally projected to reach number 7614, number 7579 has been the last one to be received to date.

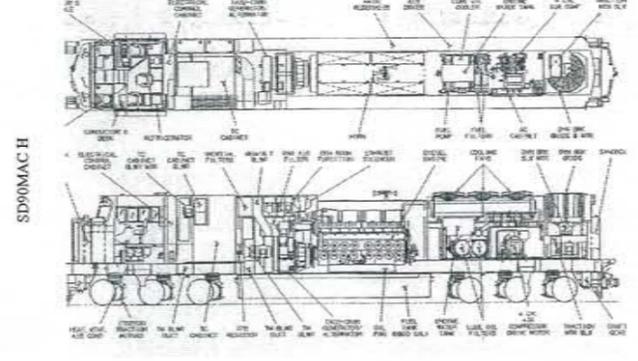
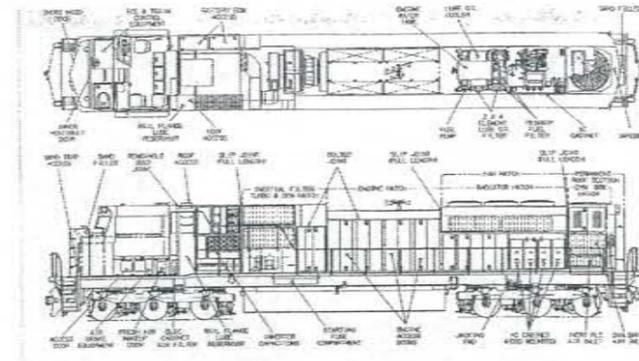
Similar to EMD's SD90/43 program, General Electric also offered a "convertible" AC4400/6000CW locomotive rated at 4380hp. UP's first C44/60ACs, as UP calls them, were delivered between November 1995 and September 1996, numbered 7010 – 7079. A second order of C44/60AC, delivered between March and May 1998 are numbered 7300 – 7335. Similar in appearance to the AC6000CWs, the C44/60ACs have one exhaust stack instead of two side by side on the 6000hp units. While the C44/60ACs were indeed designed to be converted, the high cost of making the conversions has made the possibility very unlikely. Several sources at the UP have indicated that these 4300hp locomotives from GE will remain at their original ratings throughout their operational lives.

UP's fleet of C60ACs have



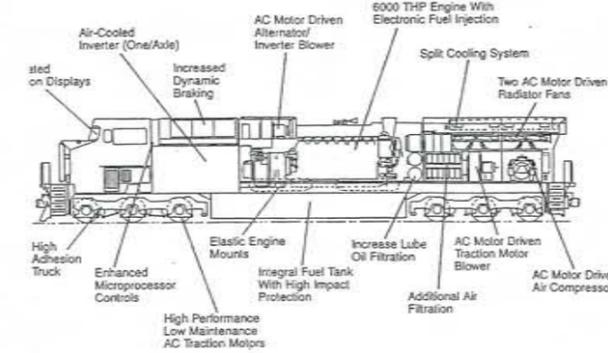
Early GE AC6000CW Test Unit

been features of the heavy haul coal business from both the Powder River Basin and the Colorado Rockies. More recently, a number of 7500s have been turning up on the Canadian Pacific in through unit train service. As of writing, there has been one casualty in the UP's fleet. The first UP7511 suffered fire damage on June 7, 1999. The cause of the fire was determined to be warranty related and upon retirement on June 16, 1999, the unit was shipped back



to GE at Erie, PA. The damage was repaired and the unit was repainted to GE's red and grey scheme and renumbered to GECX 6002 in April 2000. UP 7511 (2<sup>nd</sup>) was delivered to UP on January 7, 2001, as a warranty replacement for the fire damaged UP7511 (1<sup>st</sup>). This unit is painted in the new "Wings" image, including the new lightning stripe colour separation line.

A final note on UP's experiment with the 6000hp locomotive: while these units have attracted much attention, undergone extensive testing and seen considerable road service, the curtailment of the AC6000CW order and the recent massive orders for SD70s by the Union Pacific seems to indicate that the road is taking a different course. Much like the fleet of SD-40s of the past several decade, it appears that the SD70 will become the standard locomotive on the UP for some time to come. While UP always seems to be willing to push the envelope in locomotive development, it appears that for the no-nonsense day-to-day operation of the railroad, UP will continue to rely on proven,



medium range technology.

Thanks to the Union Pacific Historical Society and author Don Zimmerman for permission to use this article. Photos by Don Zimmerman. Cab interior by George Faithorn

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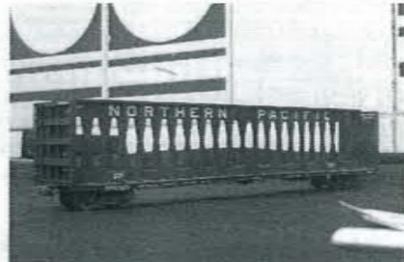
These fine models by John Hunter, Division 3. Photos Mario Rapinett

## CONVENTION 2002 CONTEST WINNERS

### FREIGHT CARS

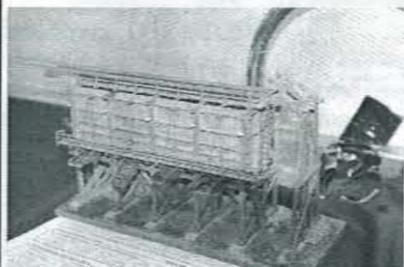


1st.  
Geoff Hoad

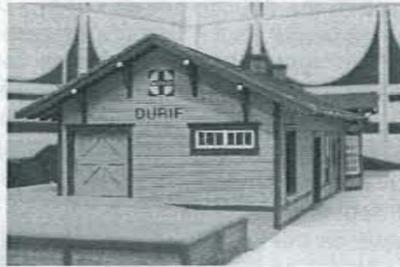


2nd.  
John Gillies

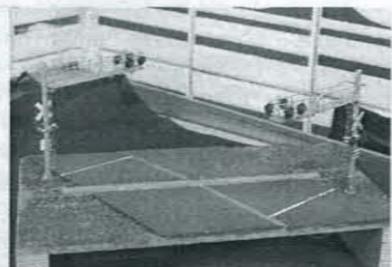
### STRUCTURES ON LINE



1st.  
Phil Calvert



2nd.  
David Latham



3rd.  
Rod Nesbitt

### STRUCTURES OFF LINE



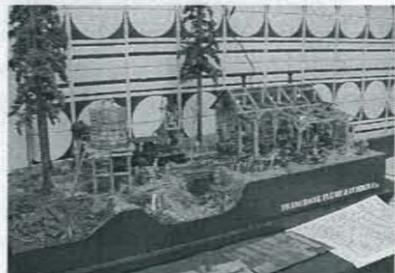
1st.  
Steve Reynolds

### DISPLAY



1st.  
Steve Chapman

### MODULE



1st.  
Steve Pettit

## Look for these New Products.

*Atlas* Decoder equipped HO Locomotives C424/5, H15-44 & H16-44 with Red/Green marker LEDs.

*Trix* HO Caboose, Box Cars and Hoppers all in Union Pacific livery.

*Digitrax* DCC Block Signaling Control.

*Proto 2000* Heritage Series 2-8-4 Locomotive.

*Kato* GE C44-9W "Dash 9" DCC ready new run.

*Kato* Corrugated Business Cars.

*Kato* EMD SD70MAC new run.

*Train Control Systems* DCC Sound Decoders coming 2003? Fact or Fiction!

*Train Control Systems* decoder to suit old Atlas Locos.

*American Model Builders* HO Dabler Mill Craftsman Kit. (Look for a review on this detailed kit next issue)

*CC Crow* adding Laser cut models\* to his famous Hydrocal Castings.

*Broadway Limited* HO PRR 4-8-4 with inbuilt sound DC and DCC.

*Broadway Limited* HO Norfolk & Western Norfolk & Western 4-6-6-4 with inbuilt sound DC and DCC.

*Broadway Limited* HO EMD Streamliners E7A followed by "B" with inbuilt sound DC and DCC.

*Broadway Limited* Pennsylvania 4-4-4-4. T1 Duplex diecast with full sound.

*Broadway Limited* Pennsylvania GG-1 Electric full die-cast construction with full sound!

*Proto 2000* just announced more E8/9 A+B Sets.

*Rivarossi* Big Boy 4-8-8-4 #4023 with the same internal mechanism as the Allegheny.

*Athearn* has now entered N scale production. First loco to be F-59 and passenger cars.

*Athearn* has bought *Railpower* including moulds, dies and inventory. *Railpower* has 15 locomotive body shells all designed for the *Athearn* chassis. Expect the first *Athearn* locos to be GP60s. SD90s too, soon? Expect also RTR road trailers, containers and a 56' intermodal well car that *Railpower* has developed. Locomotives will feature a new drive line. *Athearn* has also purchased the rights to a line of 4 freight cars from *Details West*. Expect new RTR product to be released starting January.

*Model Power* N Scale USRA 4-6-2 Pacific with tender in 10 road names.

*Rivarossi* HO 2 and 3 truck Heislars.

*Bachmann* announces HO 4-6-0 Baldwin DCC ready in 3 road names and unlettered.

*Atlas* N scale Fairbanks Morse road switchers.

*Intermountain* N scale EMD FT A and B units.

*Athearn* HO Genesis Gunderson Automax articulated RTR with working diaphragm in 3 road names.

*Bachmann* 1/20 scale GE 45 ton narrow gauge diesel w/ working side rods DCC ready features smoke.

*Kadee*. The hot rumour is that the DCC controlled knuckle coupler is not far from production.

*Roco*. HO scale Challenger, GG-1 and AC4400 coming. *Roco* made the P2K Heritage 2-8-8-2s.

*Proto 2000* is making a second run of URSA 0-6-0 locomotives B&O, CB&Q, CNR, NYC, SAL, SLSF, UP, and UNDEC.

*Walthers* is releasing CA-1 cabooses to be released this month.

*Atlas* HO Classic RS-11 in new paint schemes - D&H, DW&P, MEC, MP, NP, Undecorated.

*NCE* announces price drop in some of its popular decoders.

*Bachmann* to produce the following HO locos all with DCC Phoenix Sound Decoders. 2-8-0 Consolidation, 80 ton 3 truck Shay, 2-10-0 Decapod, 4-8-2 Mountain.

*Bachmann* 55-Ton Class B 2 Truck Climax w/Slide Valves.

*Bachmann* 80-Ton Class C 3 Truck Climax w/Walschaerts Valve Gear.

*Bachmann* USRA 2-6-6-2 All New Tooling, Die Cast, DCC Ready. Also weathered versions will be available.

*Bachmann* 4-8-4 GS-4 Daylight Steam Loco.

*Bachmann* EMD SD-45 Diesel Die Cast Frame. Due Fall 2003

*Bachmann* GE DASH 8-40C Diesel

*LBF* starting July this year will be producing its entire line of products as ready to run, no parts to be added.

*Concor* HO & HON3 Galloping Goose rail cars, Due in Dec 02.

*Dallee Electronics* sound boards for DC locos. [www.dallee.com](http://www.dallee.com)



## WELCOME TO THE FOLLOWING NEW MEMBERS

Trevor Triplow	Aberfoyle Park	SA	HO	Trans Australian
Brett Whelan	Burwood	VIC	Proto 48	IHB - Chicago
John Dimitrievich	Dapto	NSW	HOn30/HO/On30	Logging
Ray Brownbill	Gumeracha	SA	HO	Freelance
John Hunter	Corio	VIC	On3	Victorian NG
Kel Sherston	Porirua	NZ	HO	NKP
Keith Reynolds	Valley Heights	NSW	HO	NSW
Ian Phemister	Coffs Harbour	NSW	HO	UP
Ted Roberts	Stamford, Links	UK	HO	US Aust & Euro
			O, 7mm/ft, 1/43	UK
Colin Eggleston	Lane Cove	NSW	O	UP

## Finances in the NMRA Australasian Region

By Ken Scales Treasurer

Many members often ask, as I have, what is the purpose of sending money to the US and getting nothing back. This is not actually true as I discovered some time ago. The US actually spends a lot of the money we pay them on running our region.

The US pays some of the administration costs for the region, however we are currently revising our member information packs.

The US also pays the full cost of our public liability insurance.

The US also pays the cost of two return airfares every year to the US for our trustee to represent our region and speak for us at Board of Trustee meetings in the US.

Another benefit is that because we are actually part of the Association we have full and in most cases free access, to an enormous amount of information that is subject to Copyright laws for anyone else. Some of the money we pay goes toward providing and keeping this information up to date. This has been a real bonus in upgrading our Video library.

Our Board of Directors is currently researching every avenue to maximise the return we get for our money. This may be difficult due to the exchange rate but most of us see it as a challenge and hope that the current planing will provide increased benefits for members dollars. The BOD will certainly ensure that we make the most of every benefit the US provides.

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- Testors & Pacer – Glues.
- Tamiya & ModelFlex – Paint.
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- Chucks & Woodland Scenics – Ballast.
- Heki, Woodland Scenics – Scenery Materials.

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NMRA Gauges N to O Scale \$24.00

Visit <http://www.zip.com.au/~mrc> for product details.

## Modeling Rust

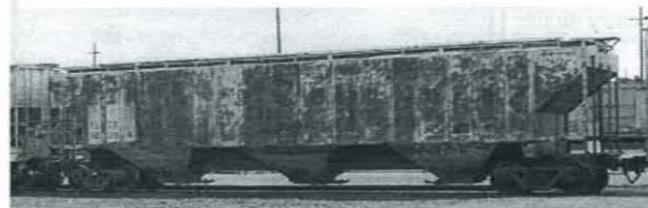
by  
 Mike Rose

I use a variety of methods to model rust, including oil colours, paints, and rub-on powders. Here is a brief overview of each method.

### I. Oils

I use the Winton brand of artist's oil colors, primarily involving Raw Umber, Burnt Umber, Raw Sienna, Burnt Sienna, Titanium White, and Black. I'd suggest starting with these primary weathering colours, and if you see some other rich brown that you'd like to try, by all means grab it! One tube of oil colours may last a lifetime, and it never seems to go bad. One tube I use I purchased when I was 16 years old and it's still good (I'm 44 now, to put that in perspective)! The above car used all these colors except white. I also use a variety of brushes, including a sharply angled end brush, a very tiny bristled brush, and a 1.2" wide soft brush for most of my effects.

The oils can be applied directly from the tube, or, if you plan on using a lot of the colours and doing more than one car or loco at a time, you can place a dab of each color on anything fairly non-porous to use as a palette. A piece of the thicker,



PLCX 16364 Prototype Photo, Barstow Yard on Santa Fe

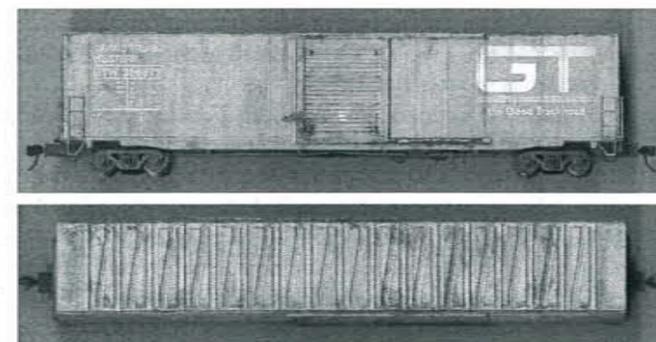


PLCX 16364 model

scrap Masonite will work fine, for example. Colours can be mixed to get the effect you are looking for, and I try to work from prototype photos to get a feel for that mix. As you can see, as intense as the model was, the prototype was even worse! For the above car, the various rust colours were dabbed on in layers and gently blended, then given a final wash down the side of the car with the 1/2" brush slightly wet with mineral spirits to get a "rust washed downwards" look. I was careful to avoid the area of the reporting marks, since that was to get a much lighter treatment. After letting the model dry for several days until the odour of the oils was no longer evident, I gave the car a couple of coats of Testor's Dullcote straight from the aerosol can to protect what I'd already done, then used a lighter rust treatment and a bit more mineral spirits to produce the effect on just the reporting marks. This also got a Dullcote sealer once dry.

Several other very rusty cars will be added here as time permits. These will include the Athearn PS-5344 boxcars from

the December and June 2001 issues of Railroad Model Craftsman, and the ex-PC X-72 boxcar which appeared in the June 2001 issue of Model Railroader.



GT Atlas boxcar, faded with techniques described in last issue and rust techniques described here.

### II. Other Methods

Acrylic Paint

I often use a combination of techniques to get an effect that I'm looking for. When it comes to paint, I generally use Polyscale and some Model Flex paints for weathering. The colours to get are 414329 Polyscale RR Tie Brown, 414323 Polyscale Rust, 414293 Zinc Chromate Primer, and Model Flex 16-172 Rust. (While I'm at it, might as well recommend a good "grime" colour, the always surprising Polyscale 414176, UP Harbor Mist Gray!) I generally start with RR Tie Brown, and add some Rust to it, either brand (yes, I actually mix Polyscale and Model Flex! Though they separate in storage, a quick shake and they're back together long enough to use.) If I'm looking for a "new" rust, I might add just a bit of the Zinc Chromate Primer, but go easy, a little goes a long way here. The two brands' rust colours are quite different from one another.

I try to never measure my mixing proportions, so that in service I get natural variations in the fleet. I have over one thousand freight cars and over 250 engines, and all (if they are in service) have Kadec couplers and either Jay Bee or NWSL wheels that are painted some rust color variant. These paints hand brush very well, and I often use a Paasche single action airbrush to do base rust coats on roofs and other parts.

### Weathering Powders

Lots of folks use powdered chalks for weathering, but this has the disadvantage of either rubbing off, retaining fingerprints, or "going away" when clear-coated to protect it. I've had great results with the weathering powders from Bragdon Enterprises (2960 Garden Tower Lane, Georgetown, CA 95634 Tel 0011-1-530-333-1365). Their powders have an adhesive component built into the powder itself, actuated by rubbing! When stroked on with a brush and "massaged" into place, they stay put, and look good. They also go a long way. If anyone has any comments or questions they can feel free to e-mail me at "miker@mrhobby.com".

*This is the second article on weathering from Mike Rose. Reprinted with kind permission Mike Rose Hobbies. (visit [www.mrhobby.com](http://www.mrhobby.com) for more)*



## USEFUL DCC TIPS

- ⇒ Did You Know, if you run a locomotive from a DCC controlled section of track to a section of track with reversed polarity DC, (related to the normal DC running direction) it will slow down using the deceleration rules, stop and wait until the DCC is returned to that section of track. Headlights if on will stay on with DC only applied. Great for automatic control to avoid running against that incorrectly set turnout. Use auxiliary contacts on the turnout motor to remove the DCC and apply DC. Use also to avoid over running a RED signal. Non reversed DC will not affect a DCC locomotive running against the RED signal. This is a really cheap and effective form of automation. Try it. The DC voltage recommended for injection is around 9 volts.
- ⇒ Soundtraxx Decoders can overheat, become inoperable and possibly be destroyed when used with Atlas DCC control systems. This is due to over voltage from the Atlas system. Seems the specifications on DCC Track voltage regulation are not set in stone and desperately need attention from the RP people. The absolute maximum voltage Soundtraxx Decoders like is 16 volts. Over voltage will destroy the decoders rectifier diodes.
- ⇒ Always deselect a locomotive from your controller when you've finished running it or intend to walk away from it. Replace it with a fictitious or non existent number like 0000. Could save a nasty accident if someone picks up the controller and starts playing.
- ⇒ F8 is the SOUND MUTE function for Sound Decoders.
- ⇒ Sectionalize your layout so that should a short occur somewhere, the whole layout will not shut down. It is a good idea to use numerous boosters or over current cutouts in these sections. This reduces the current available to produce damage.
- ⇒ Nickel Silver rail is resistive. Use droppers from your main feeders every six feet and DO NOT rely on rail joiners for carrying volts. Eventually the joiner will fail through oxidizing from the sparking that will occur. *D.J. 2002*



An impressive kit bashed Baking Powder Factory on the NCE layout of MMR Ken Scales.

Scratch built period shop fronts by Geoff Nott on Rod Smith's layout.



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## YOU KNOW YOU'RE A RAILFAN WHEN.....

1. You shop for a house by the tracks instead of away from them!
2. When planning your next vacation, you choose your travel route based upon the location of active railroads and railroad museums.
3. When you blow your horn two longs, a short, and a long through every intersection.
4. Speaking of intersections, you call the signals as you go through them.
5. You call zoning to ask if you can use a boxcar for a shed.
6. You wonder why automobiles don't come equipped with couplers.
7. While engaged in intimate relations, you suddenly find yourself mentally debating the relative merits of G.E. vs EMD engines.
8. Your wife tells you her water burst, and your first reaction is, "My God, her boiler will be ruined!"
9. When you wire up the fog lamps to flash alternately when you blow the horn
10. When riding with someone who's backing into a parking space, you say, "two cars, one car, that'll do."
11. When you get a shopping cart with a bad wheel, you tag it and set it aside for the shops to repair, or park it in an aisle and put up a blue flag in front of and behind it.
12. You curse the dispatcher when you're held up in traffic.
13. While driving your car, you put your arm on the window sill and wave your hand and blow your horn to all kids standing on the street.
14. Your wife opens her wallet to show the relatives photos of the children while you open your wallet to show them your latest rail photos from last weeks fan trip. by Russ Fox
15. You install a pedal operated bell in your car and ring it while driving across railroad crossings.
16. You open your refrigerator door only to find it full of film for the next fan trip.
17. You find yourself looking for old locomotives and color schemes during the obligatory chase scene through the rail yards when you're watching old cop shows and movies on TV.
18. The efforts of Hollywood to re-create an earlier era using trains is met with your derisive snort, "They didn't have GP40-2's in 1970! Can't they get it right?"
19. You're on Amtrak, you find out that the guy across the aisle is a railfan, and your wives look at each other, roll their eyes and sigh.
20. You're in your car and you come up to a railroad crossing. The crossing lights are not flashing and no trains are coming, but you slow to a crawl and look up the track both ways in hope of seeing a train.
21. You are on a rail facility tour and start talking to one of the mechanics on the shop floor only to find out that you know more than he does.
22. You rent certain movies at the video store because you know there is a very cool train scene in it.
23. You refuse to cross the tracks until your favorite train has passed by.
24. You BBQ using tie butts, for that special flavour!
25. You tell your wife you are going down to the corner bar to have a few drinks with the guys, however, you go to your favorite train watching spot to take a few photos.
26. You are on a highway overpass, at 60 mph you suddenly shout, "that's the Seaboard down there!", and you can't believe the others in the car didn't recognize it by the color of the ballast.
27. You tell your wife you would like take a nice ride to look at scenery, her interpretation being, "guess I'll take some magazines to look at while he



28. You can't understand why everyone else doesn't understand what "approach diverging" means.
29. It would not be to your advantage for the railroad police to come to your house and look around.
30. You get tired of explaining to people that you are not a fireman because you have a radio.
31. Your relatives only think of you when they see a train.
32. When you are out by the tracks with another railfan people ask, "Is the train coming?"
33. You get irritated at train wrecks because non railfans "invade" your special train watching spots.
34. You don't like imitation railfans who wear railroad patches all over their clothing. by Chris Evans
35. The train crews know you by first name.
36. When you're driving, you make "shooooo" sounds when you step on the brake, and "choooo" sounds when you take your foot off of it, imitating air brakes. (I think cement truck drivers do this too. 8-D)
37. At your house by the tracks you get some of the crews trained to blow the crossing alert to let you know they are going by, even though there is no crossing there.
38. You date your girlfriend because the view out the front window of her apartment is your favorite railroads mainline.
39. You later marry this woman knowing that she will understand you and won't mind having a house by the railroad tracks.
40. When the lights are activated at the railroad crossing you race to be first in line, so you get an unobstructed view, then at double track crossings wait a little while after they go up in hope that another train is coming the other way.



## LOOKING FOR THOSE ELUSIVE DETAIL PARTS?

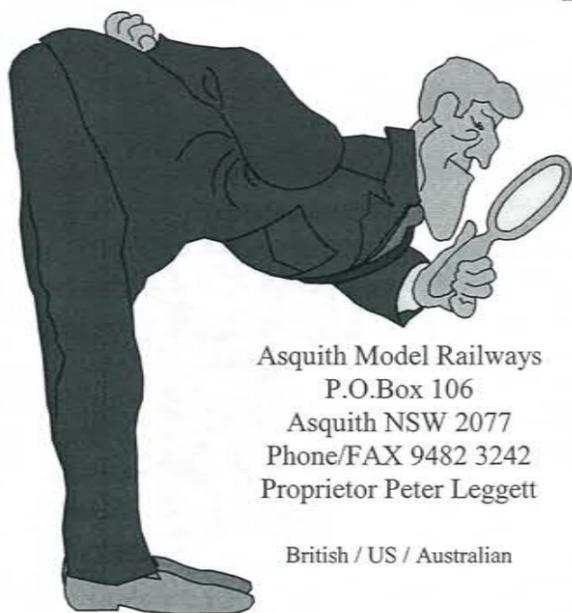
### THEN LOOK NO FURTHER THAN Asquith Model Railways

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## REUSABLE MOULDING MATERIAL

Copyright Donald Davis

This clinic is on how a product called "Gelflex" can be used in producing castings of a wide range of shapes and sizes and not have a large quantity of unwanted moulds in storage.

Some background on the need for using Gelflex. As I like to model scenery with a difference I started out making rock moulds, out of latex rubber and cheesecloth, for my layout and as not wanting any rock formations to be duplicated I ended up with approximately 100 moulds. I then turned to wanting to manufacture tunnel portals crib work etc. Several methods were tried with varying results one was making a reverse image wood mould which plaster was poured into this really didn't give the right result. Second was to use latex rubber and cheesecloth strengthened with wire mesh this also didn't give a good result but passable. When visiting a friend who does fibreglass work on boats, trucks etc, he had a sample of a plaster-ceiling rose, which he was going to duplicate in resin, and he was using the "Gelflex" as the molding compound. The other big advantage is that after residue is removed the "Gelflex" mould can be cut up and remelted into another mould with only a 10% loss of quantity



Photograph 2:  
The gas bottle, heating ring and pot ready for use.

per. each reuse. This makes it a true recyclable material unlike latex or RTV moulds.

Gelflex can be purchased from:

Daystar Australia Pty. Ltd.

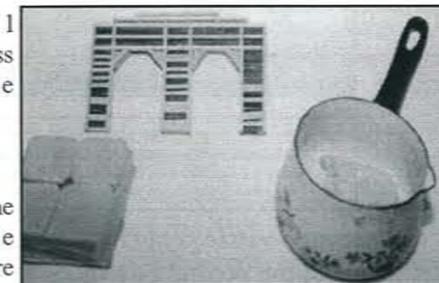
394-396 Princes Highway  
Rockdale 2216  
Phone: 9567 3328

or

Polymer Chemicals  
107 Kuurajong Ave.  
Mt. Druitt  
Phone: 9832 7555

A description of "Gelflex" is that it is a Vinyl compound, which is supplied in a block form. Read the included handout

from the supplier. The actual preparation process requires the following:



Photograph 1:  
Block of Gelflex, master and pot

- 1/ A master of the item to be duplicated, as there is a temperature element it is not recommended to make the master from plastic or other heat affected materials. I have made masters from plaster, resin, wood and white metal without any problems. When I attempted to duplicate a plastic roofing section it melted.
  - 2/ The Container to place the master in it will need to be big enough to allow a minimum of 15 millimetres from the surface of the master to the side of the container. This can be made from metal or wood Not plastic.
  - 3/ Heating pot: I use an old pot with a pouring lip on it. After using it for this purpose don't cook tonight's peas in it as I am not sure about the toxicity of any residue.
  - 4/ A metal stirrer I use a screwdriver or old chisel.
  - 5/ Heat source: As it is necessary to heat the compound to 160 – 170 degrees I use a portagas bottle with a heating ring attached.
- The item I have chosen to duplicate is a generic design of a timber tunnel portal. The master has already been constructed previously.

Step 1

Cut the "Gelflex" into small pieces (15- 20 m.m. square), as this will aid the melting process.

Step 2

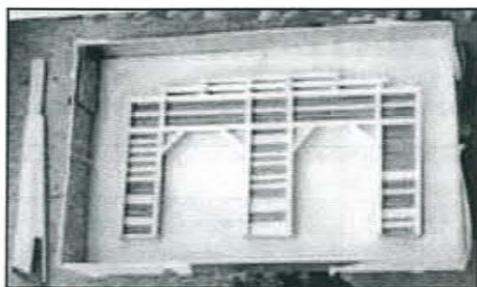
Having decided on the correct size container place the master in the centre of the container.

Step 3

Place the heating pot on to the gas ring and turn it on. Start placing the cut up Gelflex into the pot. Continually stir the melting Gelflex DO Not allow the Gelflex to start to burn on the bottom of the pot as this reduces the effectiveness of the material to be recycled

Step 4

After the Gelflex has completely melted and of a pourable consistency pour into the container holding the master. It is best to pour, very slowly to prevent air bubbles, in the space between the master and side of the container to allow the Gelflex to flow over the sides and top of the master. This will aid in the prevention of air pockets forming in the Gelflex. It is not necessary to attempt to completely cover the master in one pour. BUT if there is a need to melt more Gelflex it is best not to



**Photograph 3:**  
This is the master in the container. Note that the compound has only been allowed up the side of the master to prevent Any Distortion to the master face with too thin a coating of compound.

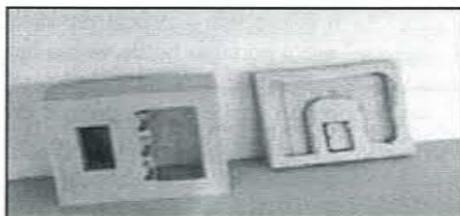
cover a surface only thinly with the first pour as when the second pour is done it will cause the first covering to lift and distort.

Step 5

This is the most important step. *Place the mould in a place where you will not be tempted to remove it before being completely cooled.* This is very critical, as the Gelflex is still not cured.

Step 6

Carefully remove the mould from the container. Then very carefully remove the master from the mould being especially



**Photograph 4:**  
Several completed moulds the one on the left is useless as it has too much distortion to the surfaces



**Photograph 5:**  
The final casting

careful around fine detail.

Step 7

Allow the mould to stand and cure for several hours the more the better. The mould is now ready for use.

Step 8

This step is up to you as to whether you use plaster or resin, however getting to this stage is the fun bit, as you have had to make a master and learn how to use another modeling medium.

A couple of important points:

Don't breath in the fumes it is best to work outside.

Don't touch the melted compound as it will BURN.

Follow safety steps when using a portagas burner.

If reproducing in plaster follow the same method as in the Rock Moulds article.

Since originally writing this article, I have purchased a single element stove from Aldi stores and it works well with better temperature control and no risk of burning yourself on the portagas flame.

Yours in Modeling, **Donald Davis**

## National Model Railroad Association Standards & Recommended Practices

### Introduction...

Before the 1930s, there were no common standards pertaining to model railroad equipment. One manufacturer's equipment would not necessarily work with another manufacturer's or even run on someone else's track. Many modelers built to their own standard or from their own designs and ideas. In many cases it was difficult, if not impossible, to take your cars or locomotives to another modeler's railroad and expect them to run without problems. There were nearly as many couplers as there were manufacturers. This situation could only work to the detriment of the hobby as a whole.

The NMRA came into being in 1935 with a gathering of model railroaders, manufacturer's, and publishers, in response to the need to bring order out of chaos. The NMRA Standards were developed as a way to help insure that equipment could be interchanged between one model railroad and another and that cars and locomotives of one manufacturer could run on the track of another manufacturer together with cars and equipment of still other manufacturers and modelers. Since 1936, many of these basic Standards have remained virtually unchanged from the time of their original publication. They have been added to and refined, but they have stood the test of time and have proven to have been of great benefit to the hobby of model railroading and have contributed greatly to allowing the hobby to develop to the point where it is today.

A Standard is a figure, relationship or dimension that is mandatory, it is "cut in stone" so to speak and must be followed to facilitate interchange or interface, whichever the case may be. Standards can be changed from time to time but ONLY by the vote of the NMRA membership after proper policy procedures have been followed and the membership has been fully informed. RPs (Recommended Practices) are those figures, relationships or dimensions that the Engineering Committee has established through actual tests and feel are beneficial to operation. These are not required to be voted by the membership except when in a package such as the Module Standards and RPs. These are presented to the Board of Trustees (BOT) for their study and approval.

As charged by the NMRA CHARTER and CONSTITUTION, **NMRA STANDARDS** provide the primary basis upon which Interchange between equipment and various North American scale model railroads is founded. Under this requirement **NMRA STANDARDS** include only those factors that are considered vital to such Interchange. For less critical matters see the **NMRA RECOMMENDED PRACTICES**.

As members of this Region of the NMRA we are all contributors to setting these standards which makes for a more pleasant and satisfying hobby.

### EXHIBITION & CONVENTION CALENDAR

BURWOOD EAST – VIC.	Nov 16 – 17	World Vision Centre Vision Drive, 9 - 5
HORNSBY HEIGHTS – NSW.	Nov 16 – 17	St Lukes Church Galston Road, 9 - 5 Sat, 12 - 4 Sun
WARRNAMBOOL – VIC.	Jan 11 – 12	Archie Graham Centre Timor Street, 10 - 5 Sat, 10 - 4 Sun
FORESTVILLE – NSW.	Mar 1 – 2	Forestville Memorial Hall Warringah Rd, 9 - 6 Sat, 9 - 5 Sun
WOODEND – VIC.	Mar 8 – 10	Woodend Primary School High Street, 10 – 5, 10 – 4 Mon
CANBERRA ACT.	April 5 – 6	National Hockey Centre Mouat St Lyneham, 9 – 5.
Narrow Gauge Convention – NSW	April 19 – 20	Tara School, Mason Drive Nth Parramatta. Sydney
N Scale Convention – VIC	April 24 – 27	La Trobe University Melbourne
NMRA One Day Convention	July 5	Dence Park Epping

#### Modeling Snippets.

**Speed**  
(or Why don't you make it go faster?)  
Glenn Stevens

All of us at some time in our modeling life have heard some one say "Why don't you make it go any faster?" Well for all of us who run HO, here are some indicative figures based on the time over a four foot module:

Speed	Time
5mph	48 secs
10mph	24secs
15mph	16 secs
20mph	12 secs
25mph	9.6 secs
30mph	8 secs
40mph	6 secs
50mph	4.8 secs
60mph	4 secs
70mph	3.4 secs
80mph	3 secs



WM919

### 8<sup>th</sup> Australian N Scale Model Railroad Convention

The Eagle Conference Centre

La Trobe University

Bundoora

Melbourne



24<sup>th</sup> to 27<sup>th</sup> April 2003

Anzac Weekend

Layout Tours - Clinics

Web site: <http://nscaleconv2003.alphalink.com.au/index.html>

**Recommended Practices  
RP-20.1 Car Weight**

Carefully documented tests show a decided advantage in performance past obstructions in the track for cars weighted to an optimum weight. Since the radial forces tending to cause derailments are greater in longer cars, this optimum weight will vary with car length.

While cars of less than optimum weight will perform satisfactorily on good track work, increasing the weight to the optimum will improve the safety factor with which rougher track will be negotiated. Mixing light weight cars into a train of heavier cars is not recommended because of the possibility that the lighter weight cars may be pulled off the track in sharp curves.

Weight in excess of the optimum will seldom add to the ability of the car to roll down a given grade since the additional weight is almost exactly balance by the increased friction of the axles in their journals. Extra weight simply adds to the drag of a train and adds more weight to be lifted to the summit of a grade.

Cars should be constructed to keep the lowest possible centre of gravity. Supplementary weight added to bring the car to optimum weight should be kept as low as possible.

To find the optimum weight of a given car follow the table below in the desired scale and find the "Initial Weight". Then find the "Additional Weight" and multiply this by the number of actual inches in the length of the particular car body. Add this weight to the

"Initial Weight" for the total Optimum Weight of the car.

Note: Many factors besides car weight affect car performance:

- Track Railhead should be smooth, without obstructions and should conform to Standard S-3.
- Wheels should run freely and truly in free swiveling trucks and should be of good contour (RP-25) and conform to Standard S-4
- Weight on each wheel should be approximately equal. Springing if used, should permit free equalization of the trucks for the car weight used.
- Coupler and diaphragm bind due to un eased and immediate reverse curves should be eliminated.

NB: You may find that those cheaper knuckle couplers could break under the strain of the recommended car weights. Please note also that weight is the curse of model trains. The more weight the less the length we can consist with a given locomotive or locomotives. Adding weight is not the way to solve a problem car that derails frequently. It is more likely to be suffering from insufficient movement in the truck pivot point and or poor track work.

*Material from NMRA Documents.*

Over the next few issues we will look at some of these other standards, all of which complement each other to provide smooth and error free running. This is the kind of running required to reduce frustration and make that successful attempt at the "Train Length Challenge" issued by Erik Bennett last issue.

*David Jupp*

SCALE	INITIAL WEIGHT Grams (Oz)	PLUS	ADDITIONAL WEIGHT per inch of car body length in Grams (Oz)
O	150 (5)	+	30 (1)
On3	45 (1-1/2)	+	22.5 (3/4)
S	60 (2)	+	15 (1/2)
Sn3	30 (1)	+	15 (1/2)
HO	30 (1)	+	0.5 (1/2)
Hon3	22.5 (3/4)	+	11.25 (3/8)
TT	22.5 (3/4)	+	11.25 (3/8)
N	15 (1/2)	+	4.5 (15/96)

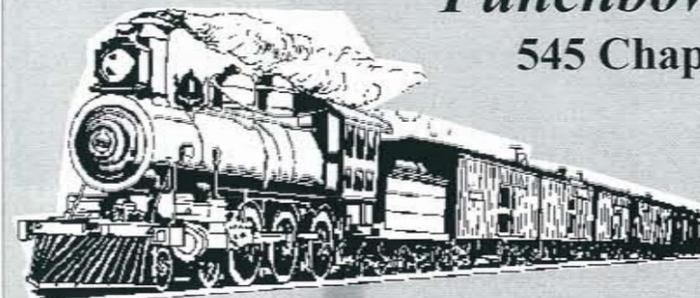


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## TRAIN LENGTH CHALLENGE LEADER BOARD

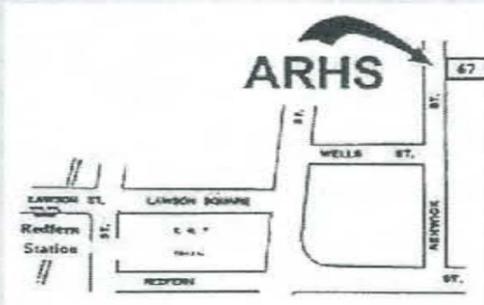
Position 1	Mike Bartlett	6/9/2002	417 Points		
		Total	Mult	Points	
Cars	100 50' box, 20 50' hopper, 30 assorted, 1 caboose	151	1.0	151	
Locos	Head end: Kato GP28, Kato SD40-2 At car 50: Katp SD40-2 At car 100: Kato SD40-2	4	3	12	
Train length	26.38m	26.38	4.35	115	
Sub Total					278
Layout	99.1m (325') double tracked mainline Two levels, 8" height separation	Cat 1		1.5	
Grand Total					417

Position 2	Erik Bennett	15/3/2001	347 Points		
		Total	Mult	Points	
Cars	36 tankers, 40 Reefers, 26 40' box, 8 50' box, 12 4-bay hoppers, 2 caboose	124	1.0	124	
Locos	Head end: 3 Unit OMI Turbine, 2 Kato SD45 At car 42: Atlas C30-7, Railpower SD90MAC (6000HP) At car 100: Kato Dash 9-44CW	7	3	21	
Train length	19.85m	19.85	4.35	86	
Sub Total					278
Layout	65.8m (216') single mainline double dogboned Two levels 110mm height separation Multiple turnouts	Cat 1		1.5	
Grand Total					347

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## Union Pacific Railroad Rainbow Flat Division

John Saxon. (MMR)

Mike & Carmel Bartlett recently moved from their lovely home at Newport to a 108 acre property at Rainbow Flat, close to Foster and Taree, north of Newcastle NSW. This meant the pulling down of his previously-visited UP inspired layout and its rebuilding in the 60 x 25 feet steel shed he had built to house the new layout and the usual paraphernalia to which Country Gentlemen aspire.

After leaving room for his tractor (a must!), a workshop and an office/hobby room he was left with only a miserly 38 x 25 feet for the new railroad. However, in his inimitable style, Mike has managed to fit in a double-tracked mainline of approximately 325 feet each with maximum grades of 1%, lots of opportunities for industries, reasonably generous aisles and only one duck-under of minimal inconvenience.

Both Toni and I visited the Bartlett's in early September and I was able to assist Mike with his attempt on Erik Bennett's Train Length Performance Ladder record as described in the last issue of MainLine. Mike is preparing a separate report on the mechanics of this attempt but I thought I would provide a little general background on the layout itself.

In the short time that Mike has had since he was able to occupy the shed, he has completed all the basic benchwork, which is of very substantial construction in Mike's usual way. He has laid the two mainlines that parallel each other around the extremities of the room and along and around the several peninsulas he has been successful in including. He has included all mainline turnouts but they were yet to be operable or connected to any subsidiary trackage.

He has run a cable all around the main and soldered it to the rail in the recommended DCC manner but he has yet to break it into sections to allow trouble-shooting or operation of more than one train at a time. Mike is now considering the benefits

of DCC with all the time it would save him in not having to install all the block controls and wiring a DC set-up would require on a layout of this size.

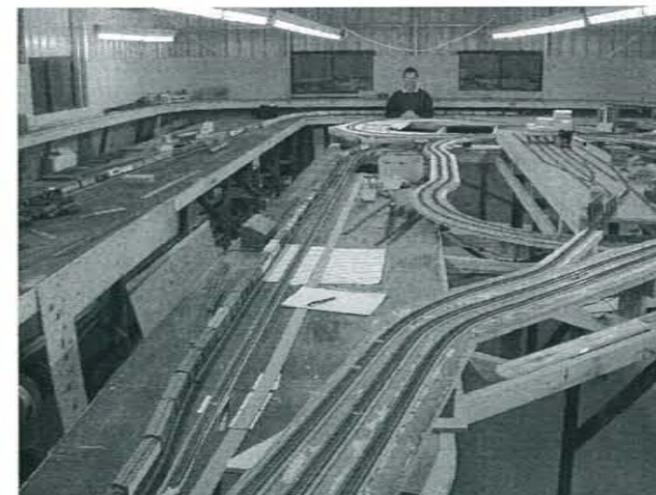
There was no scenery yet but Mike has given a lot of thought to his track design to allow later installation of prototypical scenery and industries expected on the UP. When completed, this will be one of the NMRA "show" layouts and plans are already under way for a NMRA meeting at Rainbow Flat sometime in 2003.

After some necessary adjustments to track-work, a culling of the chosen freight cars and using a transistorised EDA throttle to operate the two leading Kato locomotives and the two others spaced at car 50 and car 100, we were finally able to successfully run a 86 foot long 150 car train in accordance with the Bennett Formula. It really made a great sight and I have supplied a copy of the video I took to Mike for boasting purposes!

We enjoyed our visit and are looking forward to a return at some time in the future when more progress has been made.



Mike Bartlett's Rainbow Flat Division of the Union Pacific Railroad with SD-40s used as helpers in the Train Length Challenge trial. Shades of Tehachapi here! It's the same train.



Two views of Mike Bartlett's extensive continuous run 325' double track mainline. Code 100 and Peco Turnouts provide for reliable running with DCC and its wiring benefits being seriously considered before more progress is made.

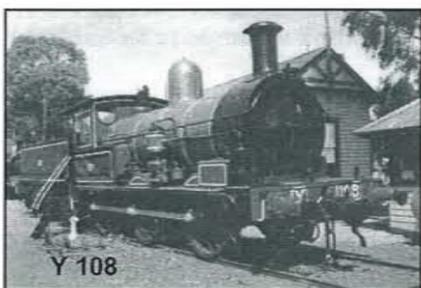
## A VISIT TO THE VICTORIAN REGION.

Phillip Moss

After reading Mario Rapinett's Dear Editor article in the Spring/Summer 2001 Mainline where he invited members who were going to visit Victoria to contact him, I decided to take him up on the offer. So prior to my trip I emailed him for information and he proved most helpful, even forwarding on my message to other local members in case they could be of assistance.

Following further e-mail's with other members I arranged to visit Gavin Hince while I was in Melbourne as he lived in the inner suburb of Clifton Hill. I would have liked to see a few other members' layouts while there but I was limited to ones I could reach by public transport, as I did not have a car at the time.

Gavin Hince's layout however was well worth the visit. His On3 logging layout the 'North Coast Narrow Gauge', is DCC controlled and built in a rough "G" shape measuring 18 x 17 feet. It is set in Northern California in the 1920's and depicts two railroads, the North Coast Narrow Gauge and the Big Sky Lumber Company who leases trackage rights for some of their long log runs.



I did get to meet several other members during my stay as one of the reasons I chose to go to Melbourne was to see the annual Model Railway Exhibition at Box Hill. While walking around the exhibition I came across a very good On3 logging layout called "McPhee Logging Company". Seated next to the layout was its owner Laurie Green, who with Grant McAdam were both busy constructing some new structures. The show, by some forty-six exhibitors was quite good, with some fourteen operating layouts and trade stands representing most of the Melbourne based shops and distributors.

One of the things I enjoy most in Melbourne is being able to travel around on the trams. However since I was last in Melbourne there has been a new style of low floor tram put into service, a Citadis 300 TGA 202 Class. These are amongst the most modern trams in the world and are built by Alstom in France, Europe's leading transport manufacturer. The trams are transported from France to Yarra Trams Preston Workshop where the final assembling, refurbishment and testing take place. Entering service on October 12, 2001 they mainly operate over two routes, #109 from Port Melbourne to Mont Albert and less frequently over #96 from St Kilda Beach to East Brunswick.

Unlike some other cities, Melbourne seems to cater to the railfan. When the Colonial Stadium was constructed several years ago an overhead walkway was built over the station to allow pedestrian access from Spencer Street. This has turned out to be a great spot from which to view all the train movements below. While not far away in Railway Place North Melbourne the city council has also built a special railway-viewing platform. Overlooking the vast North Melbourne yard it is

possible to see everything from interstate and suburban passenger trains coming in and out of Spencer Street station, to all types of rail freight activities associated with the Port of Melbourne.

Saving the best till the last day I decided to visit the ARHS Railway Museum at North Williamstown. The museum, which has been established for over thirty years, has an entrance through a replica 1887 Victorian railway station into a yard containing a large variety of locomotives and rolling stock.

The collection included some eighteen steam locomotives, six of which were built over a century ago between 1880 and 1893. Two of the oldest there were both built by the Phoenix Foundry in Ballarat. One, #Y108 was built as a general purpose locomotive in 1889, while the other #F176 was a suburban passenger locomotive built in 1880. But by far the biggest locomotive there was a 4-8-4 locomotive #H220 called "Heavy Harry", which was built by the Newport Workshops in 1941 and was the Victorian Railways heaviest conventional Australian steam locomotive, weighing in at 260 tons. Also on display was

an Australian standard Garratt, built in 1945, which was under restoration.

In addition to these ones, the museum has on display nine diesel locos, and seven electric locos of various types. Although most of them were locally built, one #L1150 came from English Electric in England in 1952 and spent most of its life as an electric mainline passenger locomotive. While their other exhibits consisted of twenty five pieces of rolling stock and included two wrecking cranes, a 1942 Melbourne tram #53, and passenger carriages ranging from an early wooden one built in 1880 to a modern steel Harris suburban train built in 1962.

So after an enjoyable week of trains in Melbourne, for a change I returned to Sydney by air.



## 3630Kms ACROSS EASTERN EUROPE BY PRIVATE TRAIN

John Collins

During August of this year my wife and I traveled with a group of 130 by private train, our journey beginning in Moscow. The train had nine cars comprising three dining cars and six sleeping cars, all of which were built in Germany and were air-conditioned in a European way, ie. You had to be told they were air-conditioned. They were not new, in fact they had probably been bought second hand. The dining cars were spaced throughout the train such that at the most we only had to pass through one other car to get to a diner. We stayed in hotels each night throughout the trip and the sleeping cars were used as day cars with just two people per compartment although there was seating for six in each. Accidentally they became essential later. Apparently coaches in Russia are almost all suburban types, not suitable for long distances. Moscow, and its history, is a fascinating place to be.

Our first stop was 650 Kms north to St. Petersburg. The train traveled fast, about 120 Kms per hour because the track is good, the country very flat, very few and no sharp curves. The scenery is green all the way with little variation. I found an open door in a dining car with a gate across it and so could lean out safely. There were very few obstructions close to the train. The track was well signaled but the villages we passed were few and run down. Many farms houses were deserted but they are being re-inhabited. Some politicians are suggesting a return to collectives. Hope they don't do it. St. Petersburg is called the Venice of the North, but it doesn't compare to the real Venice. It does have canals though, and a lot of classic history. There are also large palaces from the past with gold plated rooms and lots of artifacts from the time of the Czars.

Next stop Vilnius, Lithuania, passing through Latvia. We were told no visa



was necessary for Latvia except they stopped us at the border and demanded visas. We were held for the night and the Russian loco had to take us back to

Russia and leave us in a siding between a station and a freight yard. Our guides collected all our passports and drove back 120 Kms to a legation and got the necessary visas during the night. The engine driver decided to go home with the locomotive and took off north leaving us without power. Somehow the dining staff cooked dinner for us and breakfast too in the morning by using wood stoves which they stoked with old box wood. Even the car attendant boiled water for tea with a wood fire in the corridor. There was a fixture in the wall to allow this. Just as well to have options! I remember in the mid sixties, the Kalgoorlie express heading for Perth had a fire in the dining car because they were using a wood stove to cook with and it burned to the chassis before the train driver realised it was a light. All the cars were wooden then. There was a cartoon in the paper then next day. Two Aborigines were walking in the bush and he says to her "so you saw a flaming train last night, so what?"

Back in the bush in Russia, about nine in the morning after we walked the track for exercise and watched the freights depart, a loco from Lithuania arrived to take us away. The border guards were not happy to be photographed and confiscated one man's videotape which he managed to get back with a US \$20 note.

I opened a car door to look out on the station and was asked " You spik English?" "Yes." "Closs the door." I thought about this for just a few seconds then it dawned on me that I was the one without the gun. Apparently they are not used to tourists yet, as they have only been independent from Russia and out of the communist system a little while in many of the countries we visited.

In Vilnius we changed trains because the Russian gauge is 5ft. and the rest of Europe is 4ft 8 1/2. The next train was Hungarian, built in Spain no more than four years ago. We had coaches with one two across reclining seating and large windows with real air-conditioning. Very comfortable. They also had vertical and lateral shock absorbers and rode very well. Vilnius is a charming town and worth visiting. In January 1991 the Russians marched into Vilnius and

massacred thousands of locals because they wanted out of the Soviet Union and the communist system. People in places like Lithuania and Latvia must constantly live in fear of being overrun. It has happened to them many times but they still come up smiling, except maybe on train stations.

Next stop Warsaw 377 Kms. Still three dining cars without air-conditioning and no shocks so during meals we had a rough and noisy ride with open windows. I enjoyed it but the ordinary people were not so impressed! It went



just as fast and rocketed through points best appreciated in the diner. Warsaw is a well developed city with trams like many others we visited. The Jewish Ghetto and the old town were totally destroyed in World War 2 and have been rebuilt to look exactly like the original but about three feet higher because they built on top of the rubble from the original Ghetto.

From Warsaw 325 Kms to Krakow, Auschwitz and a salt mine with a cathedral in it and dinner in a great hall 150 metres underground. Auschwitz is sad. Krakow was undamaged in World War 2, has charm and great architecture.

Next Zakopane in the Tatra mountains of Poland and a rafting trip on the Dumajec River. Great scenery and gentle river.

Next 371 Kms to Budapest, a beautiful city on the Danube, which is not blue. The castle and other beautiful buildings on the heights overlooking the city of Pets and the bridges over the river are dramatically floodlit and look magnificent from Pets on the city side. The city has wide boulevards and lots of historic statues, beautiful gardens, large impressive squares and trams.

Next a long 607 Kms to the beautiful city of Prague, also undamaged and with

original centuries old architecture, lovely town squares and all these cities have churches with magnificent spires, which we don't have much of, except one in Johnston Street, Annandale, Sydney and two new medium size one on St. Mary's Cathedral in Sydney. Spires certainly give a lot to the city scape. Miles of trams here too with fast acceleration from every stop. While we were there they explained that the Danube was about three feet lower than normal because they had not had any rain. A week after we left you would have seen the pictures of floods on the television news.

Next 395 Kms to Berlin through some beautiful scenery with rivers and valleys, and past Dresden which was flooded very badly shortly after. Berlin in a great city with lots of both horrible and fascinating history. The architecture both old and new is electrifying, that is electrifyingly bad and good. The Reichstag rebuilding has been completed and you can now go in and look around.

It's still an old building outside, dramatically new inside with a glass dome and an inverted cone of glass so that you can look right down to the floor of the house. There are bullet holes in the outside walls like most of the old buildings in Berlin. They even reach up three floors because they were fighting

building-to-building at all levels.

When you cross the German border you can tell without seeing the border guards. The railway track is ice smooth, throughout turnouts too, and the speed is fantastic. We crossed over two tracks at speed by going through two consecutive crossovers and all you could feel was the lateral force for a few seconds each time, but no bumps.

At the Potsdammerplatz Barnhoff, ICE trains were going in and out like a fiddlers elbow! They are the smoothest finished trains I have ever seen, doors are perfectly flush, no protrusions and a beautiful aerodynamic shape front to rear. The white colour with thin red stripe are perfect for it and the letters ICE are on the loco sides. Very clever those Germans and they really know how to give you a thrill on trains.

We also visited Vienna but this was not by train although they have some great suburban units. A city well worth visiting, more beautiful churches with spires, trams and coffee with torts you could die for. If you kept eating them you probably would die of a heart attack.

Russian auto couplers have no knuckle, are large, look ugly and we couldn't figure out how they locked. There is an

inner locking device and it is difficult to see how they work. Passenger cars all have buffers and screw link chains, as are most European passenger cars except, ICE and TGV types that are self contained and do not couple to older cars.

Almost all locomotives were electric, just a few diesel switchers that looked like Alco RSC13s, high nose and all.



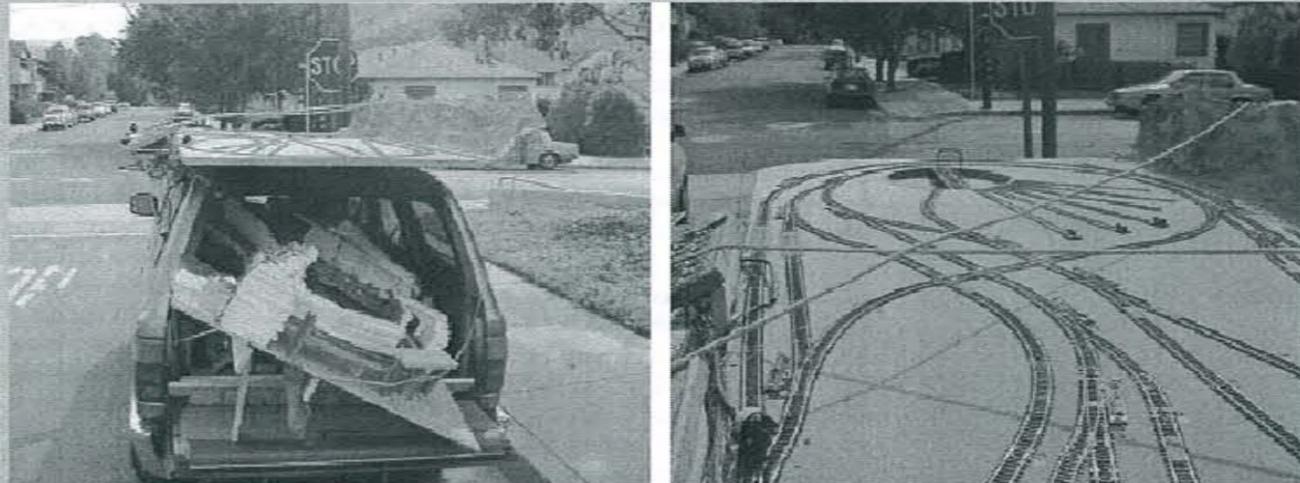
Go and enjoy yourself before George W gets to work it over.

The tour was organised through a Melbourne Company the Captains Choice Tour.

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Bye for now.  
John Collins.

## TAIL PIECE



I promise you Allan, I'll drive carefully all the way to the Newcastle Show. Should be there in about an hour. No it couldn't possibly be raining in Newcastle. The sun is shining in Sydney. Do we have to bring it back too?

This layout was purchased by the San Luis Obispo Model Railway Club on the West Coast of the USA California. They had to get it to headquarters somehow. Thanks for the picture to the club's 'SLO TRAINS' monthly publication.

# THE LIBRARY CAR

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Video List as at 18 September 2002

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VT14	USA Railroad Layouts (compilation videos 1-6)	VT49	Scenery Tips No.3 by Donald Davis
VT15	USA Railroad Layouts (compilation videos 7-13)	VT50	Prototypes To Make You Comfortable by John Armstrong Memorable Locomotives by Charlie McCoy Frequently Seen, Seldom Modeled by Jim Cope
VT16	Airbrushing for Model Railroaders	VT51	Signals Made Simple by Mark Hanslip Computer and Railroad Together by Mark Hanslip
VT17	Weathering Railroad Models by Malcolm Furlow	VT52	Trees from Weeds by Louis Godbold
VT18	Scenery Tips No.1 Rock Moulds by Donald Davis		Weathering and Aging with Pastels by Robert W Baily Jr.
VT19	Scenery Tips No.2 Backgrounds by Donald Davis		Rolling Stock from Cardboard by W Meijndert Van Alphen Foamcore Buildings by Robert Hubbard
VT20	NMRA Australasian Region 1993 (Tony Koesters Clinic) by Kevin Brown	VT53	The Art of illusion by C J Riley
VT21	Waitemata (Auckland NZ ) Convention 1990 by Gerry Hopkins		N Scale and N Track by Jim Fitzgerald and Ben Davis
VT22	Piki Piki Tram (visit to famous NZ NG layout of Merv Smith)	VT54	Model Railroad Photography by John Allen
VT23	Diamond Valley Lines (visit to famous layout of Fred Gill) by Gerry Hopkins	VT55	NMRA National Convention 1998- Kansas City Layout Tours
VT24	US Pittsburgh Convention by John Saxon		Convention at Marayong 1995 and Clinic Presentations by Allen McClelland
VT25	All Aboard An Introduction to Model Railroads by Madeline Trimby ( Kevin Brown's video conversion of tape/slide clinic)	VT56	Union Pacific BIG BOYS volume 2
VT26	Optimum Use of Space by John Allen (Kevin Brown's video conversion of tape/slide clinic)	VT57	Southern Pacific 1941 volume 1
VT27	Gorre & Daphetid Railroad by John Allen (Kevin Brown's video conversion of tape /slide clinic)	VT58	Santa Fe 3759 Final Run Over Cajon Pass
VT28	NG&SL 1991 Convention Clinic by Gerry Hopkins	VT59	Santa Fe - War Bonnets Through Raton Pass
VT29	Exhibition Layouts 1982 to 1989 by Gerry Hopkins	VT60	Santa Fe Odyssey Vol.1.
VT30	Layout Tours No 3 by Gerry Hopkins (Visits to Sowerby Smith's & Geoff Nott's layouts	VT61	Santa Fe Odyssey Vol 11.
VT31	Realism with plastic Structures (video conversion)	VT62	Santa Fe - Seligman Sub and New Mexico Main Scenery & Water - Convention 1997
VT32	Convention 1993 and Three Layout Tours	VT63	1997 National Convention, Madison USA
VT33	The Clinic (Woodland's)	VT64	Little Engines of NZ
VT34	Distinctive Rolling Stock by Dean Freytag	VT65	The Two Foot Gauge Tramway (NZ)
VT35	Convention 1995 at Marayong & Layout Tours	VT66	Model Railways of Australia
VT36	Rocks & Basic Scenery Made Easy by Dave Frary	VT67	Gateway 2001 USA Convention Models, etc
VT37	Painting Model Structures by Dave Frary	VT68	Modelling The Prototype (Gerry Hopkins)
VT38	Finishing Your Scenery by Dave Frary	VT69	Great Northern Vol 1
VT39	Southern Pacific Vol.2 (Tennessee Pass)	VT70	Great Northern Vol 2
VT40	Union Pacific Vol.5 (The LaGrande Subdivision)	VT71	Great Northern Vol 3
VT41	Santa Fe's Arizona Mainline	VT72	The Milwaukee Road Vol 1
VT42	Santa Fe's Mojave Mainline	VT73	The Milwaukee Road Vol 2
VT43	Burlington Northern's Crawford Hill	VT74	The Milwaukee Road Vol 3
VT44	NMRA Australasian Region 1998 Thornleigh Mini Convention (Rolling Stock, Soldering, Weathering Your Models & Pine Trees.)	VT75	Utah Midland - GMR#4
VT45	Trains On Location Stevens Pass	VT76	L&N Henderson Div - GMR#9
VT46	Toronto To Chicago Railfan Way	VT77	Cumberland Valley - GMR#10
VT47	Tehachapi Trains on Location (MISSING!)	VT78	Virginian & Ohio - GMR#11
VT48	Great Layouts US Prototype	VT79	Piedmont Div of WM - GMR#12
		VT80	Yosemite Valley - GMR#15
		VT81	Cat Mountain & SF - GMR#17
		VT82	Erie Railroad - GMR#18
		VT83	F & SM - GMR#24
		VT84	Rock Island Railroad (Pentrex)
		VT85	

No	TITLE	No	TITLE
VT91	California's Baldwin Diesels	VT107	Lou Sassi West Hoosac / Lee Nicholas Utah Colorado
VT92	Santa Fe's Raton Route		
VT93	Santa Cruz Northern - GMR#35	VT108	Golden Spike - Nickel Plate Story / Railroads & National Defence
VT94	ATSF Argentine Div - GMR#29		
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VT102	Union Pacific	CD1	DCC Forum Chaired by Peter Jensen
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Requests from interstate are most welcome and at no cost to members. Requests for specific videos will be given priority when they are returned from loan.

**NOTE :** A \$5 overdue fee per tape is applicable to borrowings longer than 2 months

**Library Report September, 2002**

The number of tapes in the library has risen to nearly 100. A new archiving system, whereby any NTSC tapes and other masters are converted to PAL for the Australian market, has been very successful. Few members have noted any quality loss in the conversion process but generally everyone is grateful to see videos of their favourite railroads regardless of the quality.

There have been several more donations of videos from members and their names will be noted on the video jacket. A big thank you to those members.

I recently have started a rotation system of spreading the library interstate. Both Victoria and ACT have been loaned 6 tapes each to circulate among the Division members. They have been well received and will be replaced on a regular basis. See your division superintendent for details and requests for any particular tapes. The updated list of tapes available from the library is included in this issue of the Mainline.

The library has also commenced a levy system in the Sydney area for late returns of tapes. Any tape not returned within two months of being borrowed will attract a \$5 fine. This rule does not apply for inter- and intra-state loans, however early return of videos would be greatly appreciated.

I am always looking for suggestions for tapes to be included. The narrow-minded among you should be happy before Christmas.

*David Latham* Librarian NMRA (Australasian Region)

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Membership Officer	Toni Saxon	186B Davistown Rd	Yattalunga	2251	(02) 4369-7453
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Web Master	Wayne Eagle	PO Box 294	Riverstone	2765	(02) 9627-9892

**EMAIL COMMUNICATION**

Allan Garbutt	president@nmra.org.au	David Latham	videos@nmra.org.au
Julian Israel	vicepresident@nmra.org.au	David Jupp	books@nmra.org.au
Rob Barker	secretary@nmra.org.au	David Jupp	editor@nmra.org.au
Ken Scales (MMR)	treasurer@nmra.org.au	Steve Chapman	memberaid@nmra.org.au
Ken Scales (MMR)	apchair@nmra.org.au	Convention Chair	convention@nmra.org.au
David North	trustee@nmra.org.au	Michael Nott	comms@nmra.org.au
Mario Rapinett	mario@nmra.org.au	Toni Saxon	membership@nmra.org.au
Richard Roth	richard@nmra.org.au	Sowerby Smith	publicofficer@nmra.org.au
Rod Smith	rodney@nmra.org.au	Gerry Hopkins (MMR)	contest@nmra.org.au
Laurie Green (MMR)	apvicelaurie@nmra.org.au		



Machine shop detail in Steve Pettit's Convention Contest winning module  
 Photo Gerry Hopkins