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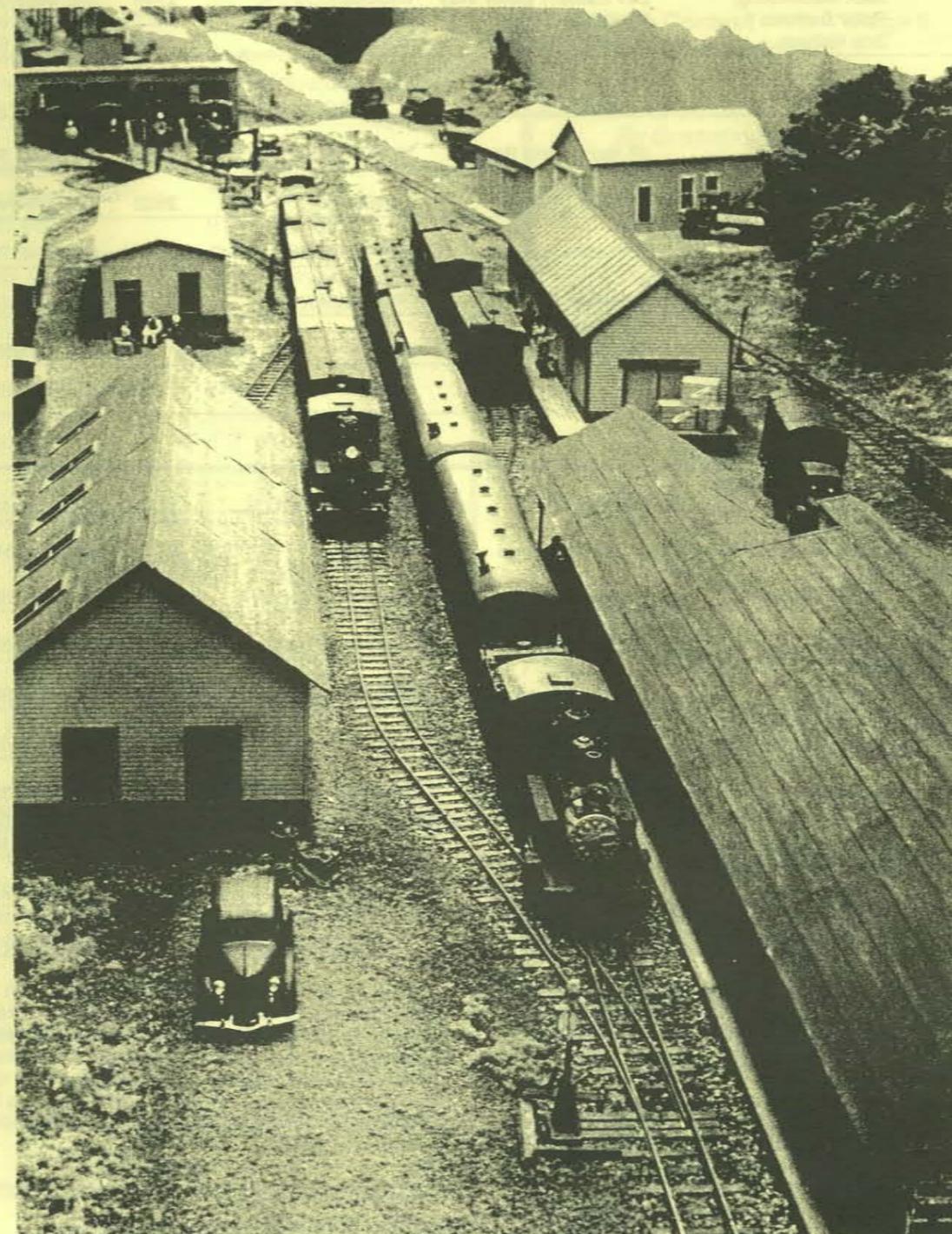
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Main Line

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Australasian Region Directory
 NMRA Inc. P.O. Box 714, Willoughby NSW 2068
<http://www.iinet.net.au/~espee/ar.html>

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

Articles can be submitted on a computer disk 3.5" or 5.25". Most WP packages can be read at this time. This magazine is

prepared on a 486DX4(100) computer (540M HD) running under Windows 95 and prepared on a BJ10ex Bubble Jet printer using WINWORD 6. Articles can also be sent to my Email address as shown above. Paid advertising is welcomed. Current rates for four issues are \$130 for a full page, \$70 for a half page, \$40 for a quarter page and \$150 for the back cover. All enquires regarding advertising should be directed to the Editor.

FRONT COVER

Franklin, Somerset & Kennebec Railroad.

REGION SCHEDULE

15th March Geoff Hoad 2.00 pm	Baulkham Hills 55 Kimberley Cres (02) 9838 8590
22nd March John Prattis 2.00 pm	MaCarthur ACT 159 Jackie Howe Cr (06) 291 7898
19th April John Baker 2.00 pm	Kellyville NSW 12 Roseberry Road (02) 9629 2349
19th April Ken MacCley 2.00 pm	Isaacs ACT 31 Shepherdson Pl (06) 286 2624
17th May Ian Henderson 2.00 pm	Mosman NSW 7 Mitchell Road (02) 9969 2815
17th May Graeme Hodges 2.00 pm	Queanbeyan NSW 15-11 McKeahnie St
13th July (Sunday) Don Davis 2.00 pm	King's Park NSW 5 Wake Place (02) 9671 4351 Park in Madagascar Drive

WANTED

Reporter required to write the meeting reports. No previous experience required. Spelling does not need to be that good as this computer has a spell checker. Reports need to be supplied on a computer disc or sent by email. All interested members please contact the Editor ASAP.

WAYBILL

President's Reports <i>by Fred Gill MMR</i>	Page 4
Welcome Aboard <i>By Jack MacMicking</i>	
Convention Update <i>By John Saxon MMR</i>	Page 5
..To Machu Picchu <i>By Peter Burrows</i>	Page 6
The Photo Contest <i>By Sowerby Smith</i>	Page 8
Mirrors <i>By Grame Hodges</i>	Page 10
Elk Run 2 or E.R. II. <i>By Peter Weller Lewis</i>	Page 15
Tips & Techniques <i>By Gavin Hince</i>	Page 22



NMRA Sydney Convention 1997

Queen's Birthday Weekend June 7th-9th
 Special Guest Speakers from the USA

Bob Hayden & Dave Frary

Editor of "Fine Scale Modeler" Magazine &
 Co-Builders of the Carrabasset and Dead River Rly

Two Full Days of Clinics and Demonstrations
 Several New Layouts at the Venue, Trade Stands
 BBQ Friday During Pre-Registration and Saturday Evening
 Convention Dinner Sunday Evening
 followed by Bob Hayden & Dave Frary's Keynote Address
 Monday Open House Visits to Many Notable Sydney Layouts
 Plenty of time will be allowed in the program to catch up
 with old friends and make lots of new ones

Venue:- John Paul II High School, Marayong (A suburb of Blacktown in Sydney's West)
 Registration:- \$65.00 or \$70.00 non NMRA members, \$15.00 Non Rail Partners
 Contact:- Toni Saxon, 37 Beatrice St., Clontarf, N.S.W. 2093 Australia
 Ph (02) 9949 4767. E-mail jsaxon@acay.com.au
 Dinner Sunday, BBQ's and Non Rail Tours Extra Cost.

CONVENTION 97 UPDATE

The Hayden/Frary Double Whammy convention at Marayong NSW on the 6, 7, 8 and 9 June is fast approaching! Registrations are starting to flow in and we already have several people coming from Interstate and hopefully, a few from overseas.

As we are limited to approximately 180 attendees and we will shortly be extending our invitations outside the NMRA, we suggest you get your registrations in very soon if you do not want to be disappointed.

This time we are planning to have a more relaxed convention with plenty of time between clinics to inspect the hobby outlets, check the silent auction, talk to our US clinicians and generally catch up with friends, both old and new.

There will usually be a choice of between local clinics BUT we are not planning any clinics to coincide with the Hayden/Frary presentations as we are sure everybody will want to attend these.

We will be accepting registrations, contest and display models plus silent auction items from the Friday night where will have a sausage sizzle operating for our volunteers and registrants. To maximise everybody's enjoyment, we are concentrating the convention on the Saturday and Sunday and running all layout visits on the Monday.

You will not have to miss a clinic or the close of the silent auction to see the many layouts we are planning to provide, including some not seen before. The layouts will be by self-tour, using your own transport, although we will make sure we secure lifts for any out-of-towners without their own cars. The emphasis is on informality and you will not be rushed through any layout, so you will be able to spend as much time as you like at each one.

A special program is again planned for the non-rail attendees so please bring your significant other (an Americanisation, we know). The more the merrier and, who knows, we just might encourage more interest in what we are about.

If coming from out-of-town, remember to book your accommodation early as space is usually at a premium in these area this weekend.

Remember, this might be the only opportunity we ever have to meet Bob and Dave and share their secrets. Also, our policy of importing well known modellers from the United States is dependent on continuing local support, particularly from you, our members.

So please assist us by getting those registrations in promptly but if you have any questions, call, write or Email our registrar, Toni Saxon at 37 Beatrice Street, Clontarf NSW 2093, telephone 02 9949 4767, Email to <jsaxon@acay.com.au>.

oo

FROM THE PRESIDENT'S DESK

The NMRA's highest award - Honorary Life Membership - has been awarded to our Australasian Region's Trustee, John Saxon. John is only the sixteenth person to be granted this award and he received it for services to the NMRA over a long period of time. Congratulations, John!

At the Regional Christmas Meeting in Sydney, I had the honour of accepting a plaque from the AP National body in recognition of our Region being the 'Best Performing Region in 1995-1996'. This is recognition to all AR members who have participated in the AP during this period and I say thank you for your wonderful efforts.

A plaque was also awarded to me from the National AP Department in recognition of my earning all eleven certificates in the Achievement Program.

My wife and I paid a visit to Canberra for three days late last year and I was most impressed with the enthusiasm that abounds in the Canberra group of members. The layouts that were visited were most striking and one could visualise the potential that will eventually be seen in the scenery on the layouts when they are completed. AP Awards were also presented to our outgoing Superintendent Peter Weller-Lewis and John Gillies was welcomed as the new ACT Superintendent. Peter has now been appointed as AP Vice-Chairman for the ACT.

Our new AR cloth patches have arrived at the Company Store and only cost \$4 each. They can be sewn onto caps, shirts or jackets or you could swap them with other NMRA members from other countries.

Our Mobile Video Library is now up and running and currently the membership has borrowed 90% of our tapes. The collection is being added to and if you want to borrow a tape contact our Librarian, Bob Kollwyn. There has been a donation of thirty-six 'How to do' books from the estate of the late Ray Parr and these are also available for loan to members. Interstate and rural area members can borrow these items and it only costs you the return postage to Sydney.

The '97 Convention is now approaching fast and both our American Guests, Bob Hayden and Dave Frary, have confirmed they will be in

attendance. This should be one of the outstanding conventions that the AR has been involved in since its beginning in 1984. Send your registrations in early to Toni Saxon to make sure you don't miss out.

Happy Modelling
Fred Gill MMR

Welcome Aboard

Please welcome the following new members.

Peter Thomson.
162 Tranquil Dr
Neerabup. WA 6031
HOn3 D&RGW

Darren Newton
29 Judkins Ave,
Hoppers Crossing Vic 3029
HO Vic Rail

Arthur Scheurer
30 Botanic Dr
Glen Waverley Vic 3151
HO Western USA

Ken Gilles
2 Craigieburn Court
Craigieburn Vic 3046
HO Vic Rail

David Green
1/4 Sargood Street
Toorak Vic 3142
N European

Mal Carroll
27 Sandy Creek Rd
Riddells Creek Vic 3431
HO Australian

Patrick Compton
14 Lucknow Street
Willoughby NSW 2068
HO - Sn3 D&RGW

Peter Allen
318 Talbot St South
Ballarat Vic 3305
HO - HOe

Stephan Holian
6 Croxton Dr
Melton Vic 3337
HO Vic Rail

David Westwood
8 Piccadilly Close
Bell Post Hill Geelong Vic 3215
HO UP_ATSF Burlington

Ron Wrigglesworth
2 Terrigal Court
Bayswater Vic 3153
HO HO-9, O-9, O-16.5

Russell Casey
41 Scott St
Weston NSW 2326
HO - HOn3 Logging Shortline

Jon Cooper
Linden Park, Brooklyn RD3
Moteuka Nelson New Zealand
N Kettle Valley Rly

Ian Mitaxa
24 Yvonne Street
Wendouree Vic 3355
British HO/OO - Vic HOn3

Peter Jansen
2 / 26 Rogers Ave
Haberfield NSW 2045
HO Australian / European

NARROW GAUGETO MACHU PICCHU

A HIGH ALTITUDE RAIL JOURNEY TO
AN INCA FORTRESS
by Peter Burrows

In April 95 my wife and I were fortunate to celebrate our 25th wedding anniversary by touring South America (minus the kids). One of the many highlights of our tour was the visit to Machu Picchu, the famous Inca ruins high in the Andes mountains of Peru.

To reach Machu Picchu you must travel by air, road and rail (unless you are a very keen hiker with plenty of time to traverse the ancient Inca trail). The latter mode of transport is the subject of this article but first some geographical and historical information to put it all in perspective.

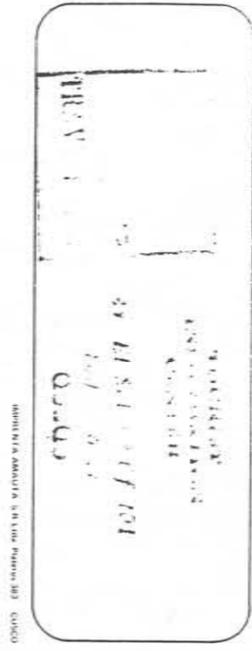
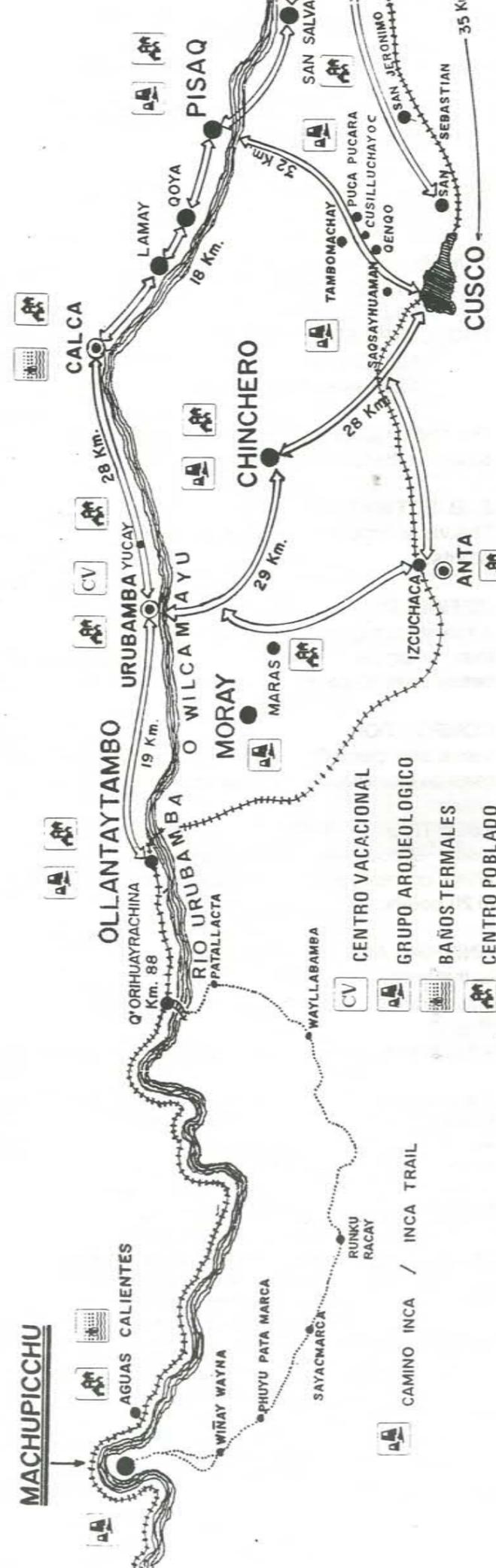
The "Gateway" to the famous Inca ruins of Peru is Cusco which is a large provincial town of approximately 300,000 people located at

an altitude of 3,400 metres in the Andes mountain chain. Cusco is a Quechan Indian word which means "centre of the world" and was the capital of the Inca Empire. It is easily accessed by commercial jet flights but on arrival the visitor must adjust to the sudden change in altitude (nausea, headache and shortness of breath are common - bad news for smokers).

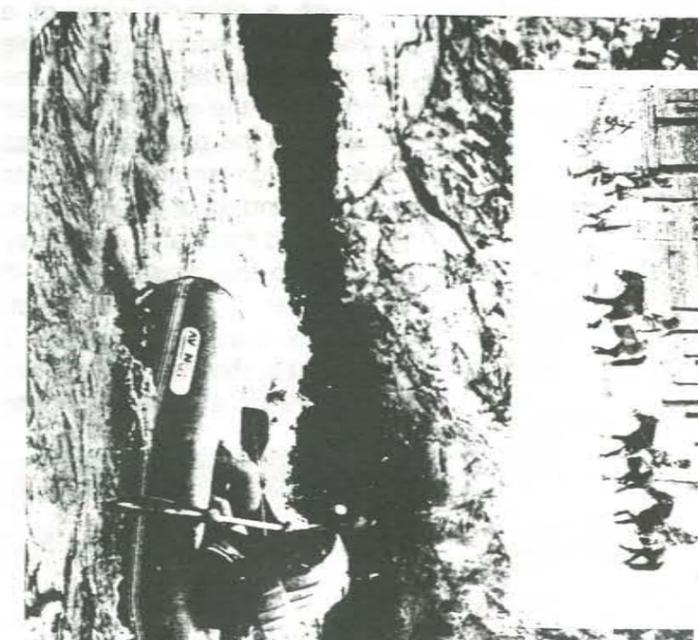
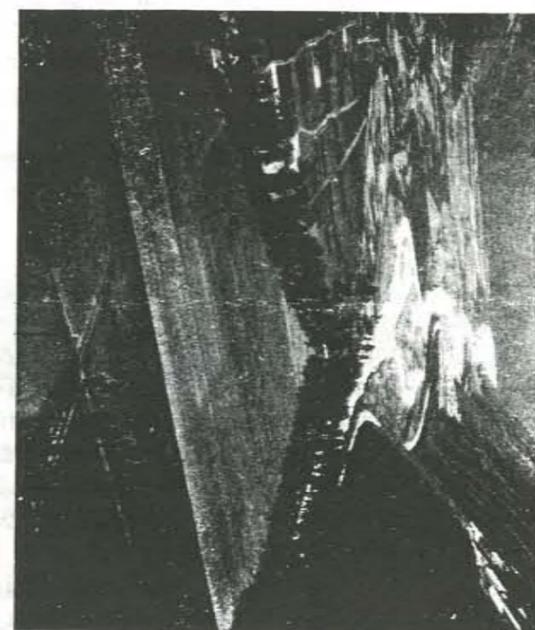
The word "Inca" means king and is generally used to label the Quechan Indians who were responsible for the impressive architecture and social structure of the Inca period which spanned 1100 to 1500 AD. The Quechan Indians were not popular with the other local tribes and had many enemies who wanted to get rid of them. However the Spanish beat them to it and their invasion some 500 years ago destroyed the Inca Empire and many of its cities. But Machu Picchu was not reached by the Spanish and was simply abandoned by the Quechans for reasons still unclear.

To reach Machu Picchu from Cusco we travelled by a narrow gauge (3 ft) railway that was constructed in the early 1900's. The railway runs for 220 km connecting Cusco with Quillabamba and commences with a steep 400 metre climb utilising 4 complete zig-zags to reach an altitude of 3,800 metres at El Aro just out of Cusco. Continuing North West through farming communities the railway descends via a single zig-zag and tight curves to the Urubamba river valley where it links small villages such as Pisaq and Ollantaytambo (also a significant archaeological site). From here the line follows the Rio Urubamba passing through 9 short tunnels before reaching the base of Mount Machu Picchu.

The railway operates narrow gauge, mixed consists powered by diesel to service the small villages along the route. For the important tourist trade the railway operates a modern 3 car (46 passengers per car) rail motor. In bright yellow livery, the rail motor is quiet, comfortable and each car has a snack bar with cold drinks and nibbles. There is even a video presentation about this fascinating region.



FONDO DE PROMOCION TURISTICA
OFICINA DESCENTRALIZADA CUSCO
FOPTUR



The journey to Machu Picchu (112 km) takes about 3 hours and the station is 2,100 metres above sea level (1,300 m lower than Cusco). To cope with the considerable international interest in Machu Picchu, the tourist train operates 4 return trips daily. It achieves this by doing an initial run from Cusco (departing 6am) then returning only as far as Ollantaytambo (half way - 1.5 hours) to collect visitors who have covered the first sector by bus. The afternoon schedule operates in reverse order with the last departure from Machu Picchu at 6pm for an arrival in Cusco at about 9.30pm.

To reach the lost city from the station there is a scary bus ride up a very basic serpentine dirt road with hairpin curves climbing 300 metres to the entrance of the ancient site. The city is in the cloud forest and features terraced gardens, stone buildings and irrigation channels (still operating) throughout the city and gardens. The quarry which supplied the stone lies in the centre of the city and lamas wander through abandoned temples and home sites.

Words such as mystical, incredible, awesome and spell binding spring quickly to mind when thinking back to our visit to Machu Picchu. Whilst there, one often sat at a high vantage point and just overlooked this incredible vista of ancient Inca architecture and engineering. From the main temple you can look down on modern man's engineering far below and see the narrow gauge rail line continue it's winding journey down grade to Quillabamba just 1,000 metres above sea level and 5 hours from Cusco.

Rarely is there such a splendid view of a narrow gauge railway from such an incredible platform. As you climb breathless through the city and listen intently to the guide, he takes you back 6 centuries to the peak of the Inca Empire with tales of huge engineering feats and incredible understanding of the seasons, agriculture, geology and the stars. Suddenly you are jerked back to the present when 3 longs echo up the river valley below. Then, looking down you spy a mixed consist as it crosses the Rio Urubamba far below your ancient platform, powering it's way up grade and home to Cusco.

THE PHOTO CONTEST

There are 4 categories in our photo contest, judged according to the NMRA guidelines

MODEL

- 1.11 Black and White Print
- 1.12 Colour Print

PROTOTYPE SUBJECT

- 1.21 Black and White Print
- 1.22 Colour Print

The NMRA judging guidelines and scoring are based on the following;

SUBJECT MATTER

The visual impact of the shot, up to **20 points**.

DIFFICULTY

A realist photograph of a model is more difficult than a simple prototype and should score better, up to **20 points**.

COMPOSITION

Visual arrangement of forms within the picture must be pleasing, up to **20 points**.

ARTISTIC APPROACH

Visual effects used to enhance the artistic or creative impact of the shot, up to **20 points**.

FINISHING AND TECHNIQUE

Is the image correctly printed, spotted and mounted etc. up to **20 points**.

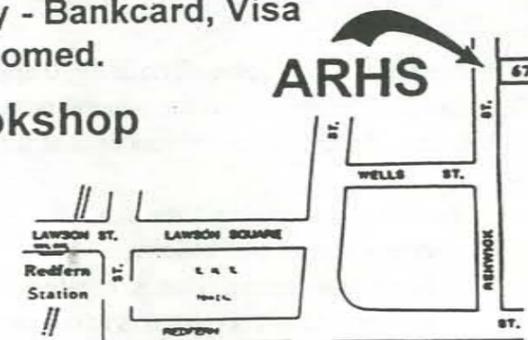
A few hints to help you maximise your score.

The minimum print size is 6x4 and it will have more impact if it is larger. Prints must be mounted if you want to win. A simple card mounting board will suffice. You will lose marks for not mounting and presenting your work to the best possible standard. Model photography gains points in scoring against prototype as it is much more difficult to do. This will only matter when Best in Show is close. Each category is judged on its own merits. Indicate if you made the prints yourself or if a commercial lab made them, it is only right you should gain extra points for scratch building the print! We do not accept transparencies because it is too hard to display them adequately. Last of all don't be put off from entering your shots. Have a Go!

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- ⇒ Plug-in walkaround memory throttles can program every function of the system, including assignment of channels without having to remove the loco body! The throttles can be used to set up multiple units, and run one or more trains at a time.
- ⇒ Loco receivers are available for Z through G scales, AC or DC, and from 1 to 6 amps.
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- ⇒ In addition to full service and support being provided by us we include our own professionally written operations manual with each system.

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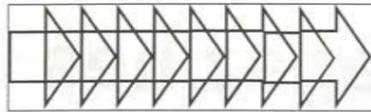


ANTON'S TRAINS

For Scale Model Railways

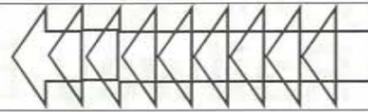
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MIRRORS

Reflections on Seeing



TWO-4-ONE: Modellers are well-familiar with using mirrors to double the apparent size of a scene; for instance, since 1981 at least 9 articles have appeared in *Model Railroader*, and others in *Railroad Model Craftsman* and *Model Railroading*.

In *MR*, 1981, December, an article prepared by John Allen in 1970 appeared post-humously; in it John (and Bob Hayden) demonstrated the general principles of this management of perception. A listing of some other references is at the end of this article.

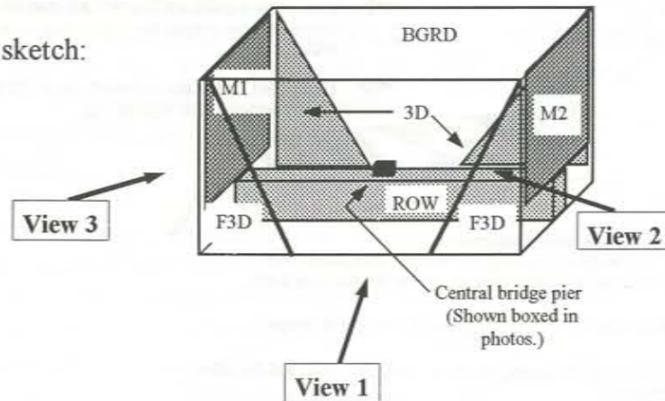
But Mirrors are far more versatile than just doubling, they can:

- create scenes into infinity;
- leave 'em waiting (that is, create a "drama" when a viewer doesn't see what is anticipated within an expected time);
- be a two-faced scene-divider;
- caste light into an otherwise dim scene.

In this article, I'll demonstrate the first two with the Moose Box (MB) of the *Dukane & RGW*. (It is so called because of a miniscene of moose feeding and a beaver lodge in a swamp.) The MB is at the end of an aisle, and is a self-contained scene in a removable box with no rail operations passing through. It does show evidence of the now-abandoned mainline - bridge piers and shoes, ties rotting, a collapsed tunnel portal; elements similar to those of the abandoned Moffat Road over Rollins Pass. The background itself is a representation of that line as shown in *Rails that Climb*, Edward Bollinger, Colorado Railroad Museum, 1979, page 7.

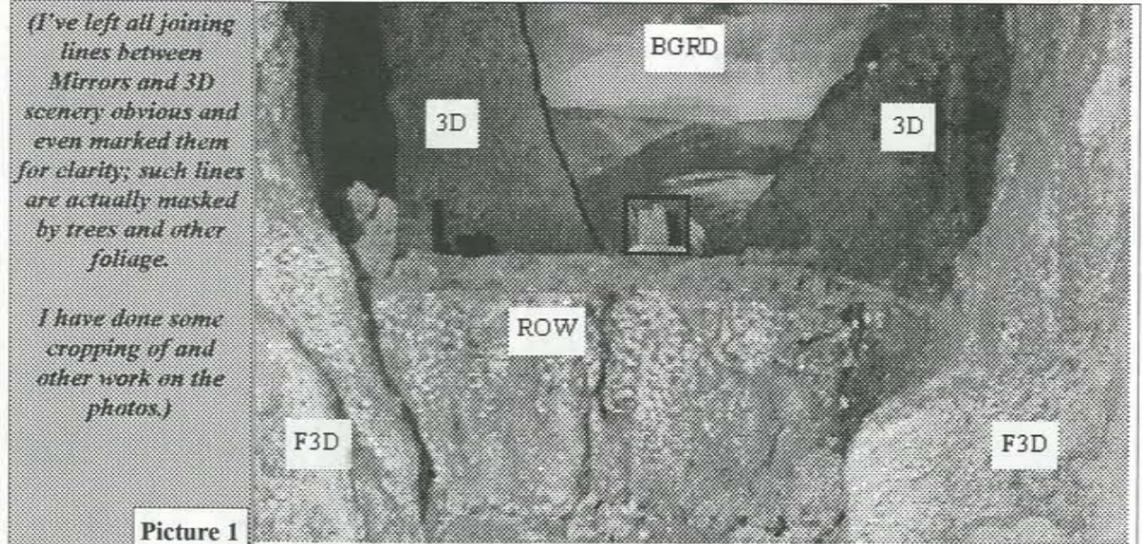
It is built around the butchers/fish shop window trick of mirrors *opposite* each other.

Here is a sketch:



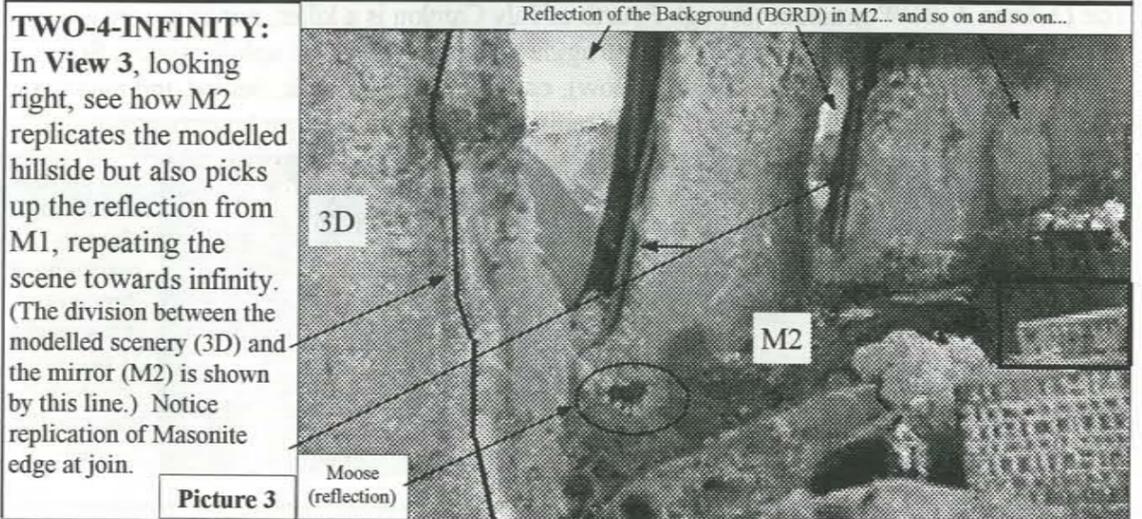
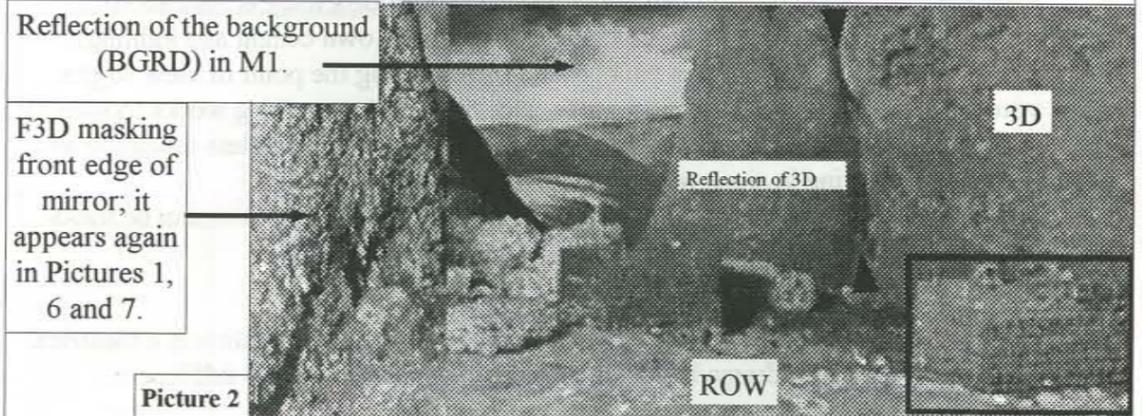
M1 and M2 are the opposed mirrors, ROW the abandoned right of way; 3D, the 3-dimensional modelled scene, BGRD the background. (The moose miniscene is behind the ROW in a small valley; foreground 3-D modelling (F3D) is omitted from this sketch for clarity. However, it is visible and important in the photos following.)

This is what it looks like from **View 1**:

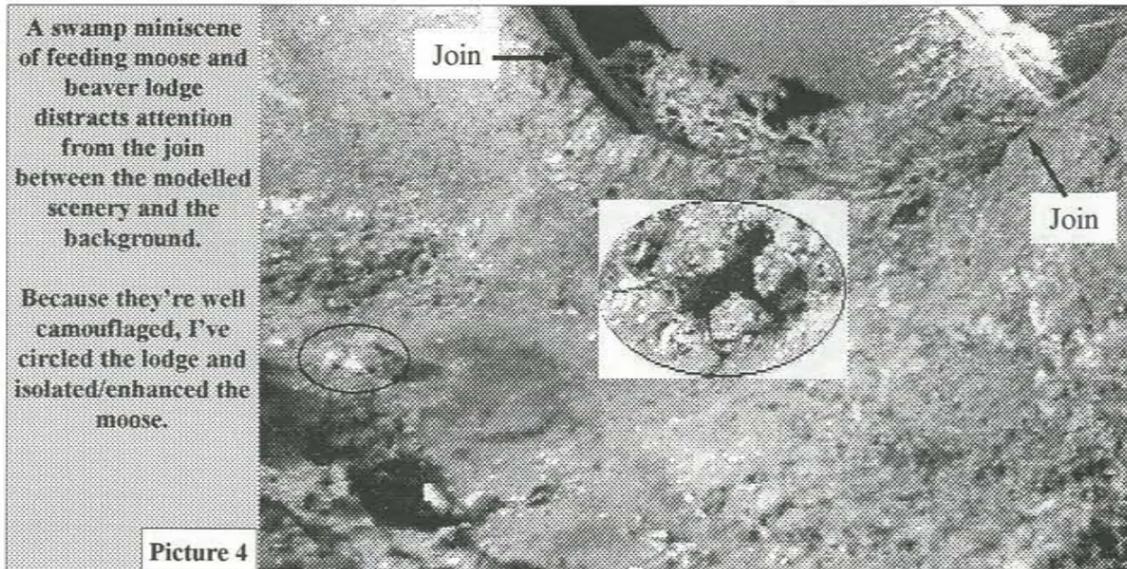


Picture 1
(In the box - centre - is one of three modelled bridge piers; it can be useful as a reference point. Whenever it appears, I've boxed it. These piers are one element repeated to infinity by the mirrors - sure beats building lots of them.)

TWO-4-ONE: In **View 2**, looking left, you can see how the mirror replicates the modelled hillside. The division between the modelled scenery (3D) and the mirror (M1) runs between the two arrowheads.



TWO-4-INFINITY:
In **View 3**, looking right, see how M2 replicates the modelled hillside but also picks up the reflection from M1, repeating the scene towards infinity. (The division between the modelled scenery (3D) and the mirror (M2) is shown by this line.) Notice replication of Masonite edge at join.



A swamp miniscene of feeding moose and beaver lodge distracts attention from the join between the modelled scenery and the background.

Because they're well camouflaged, I've circled the lodge and isolated/enhanced the moose.

Picture 4

My initial idea was to leave the space BGRD open to give a view through a valley to the other side of the peninsular, but in actual practice, the double mirrors work too well in revealing and replicating; as your angle of view changed (as you moved around) you could see just about everything throughout the entire layout.

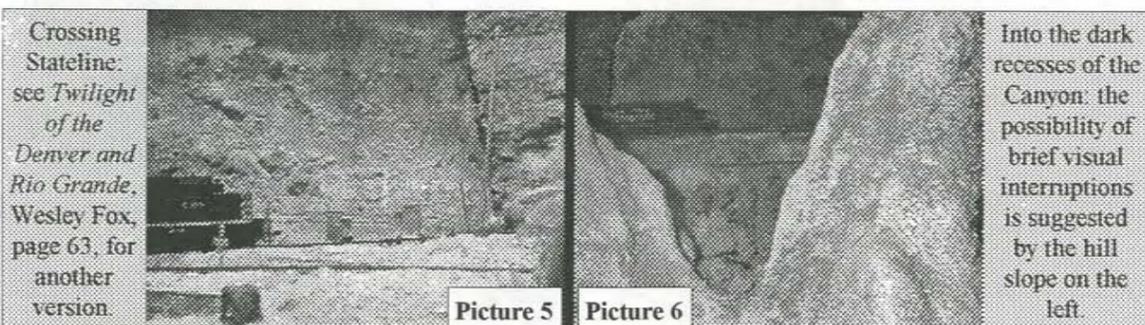
Obviously, then, it is best to use this kind of device with a few restrictions:

- keep the mirrored area small and confined (the Moose Box itself is only about 650cm wide, 480 cm deep and 340cm high, and has its own ceiling and lighting);
- cut off inadvertent angles by a background or restricting the point of view so that you can see from only certain positions. (Not often that something works too well!);
- natural rather than manmade (urban) scenery works best - the endless relocation and reversal of lettering in signs would be unavoidable and insoluble;
- joins between 3D modelling and mirror are seen from many angles so can be tricky.

LEAVE 'EM WAITING:

Always keeping in mind Frank Ellison's rubric that (model) railroad operation is a theatrical experience, a good writer of drama builds up expectations but then delays fulfillment.

The *Dukane & RGW* gradient through Fourth of July Canyon is a killer, not as severe as Saluda but not for want of trying. Trains struggle and grind their way uphill past the State border between Utah and Idarado (left, below), continue through a cut, behind and past the hill slope on the right (right, below). As in reading a story, a viewer can be drawn into the



Crossing Stateline: see *Twilight of the Denver and Rio Grande*, Wesley Fox, page 63, for another version

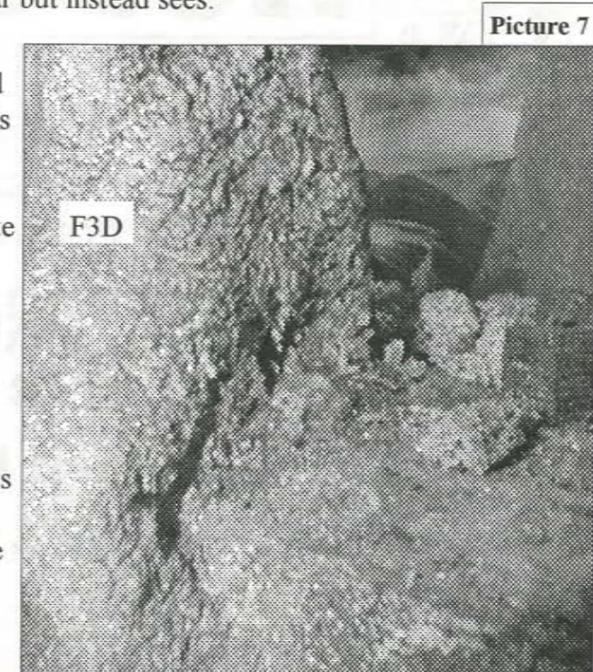
Into the dark recesses of the Canyon: the possibility of brief visual interruptions is suggested by the hill slope on the left.

Picture 5

Picture 6

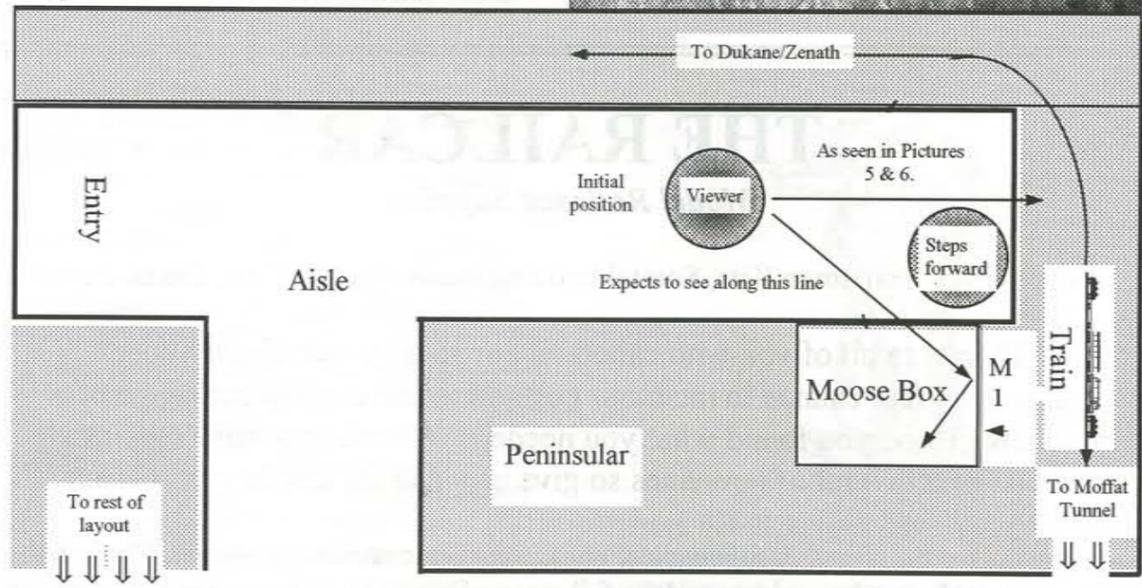
scene, steps forward to follow the train and involuntarily looks to the right, expecting to see the train continue past this hill and re-appear but instead sees:

The left-hand slope of F3D and M1 of the Moose Box; instead of looking forward and to the right, the viewer sees a scene which is now behind. The train has disappeared.



Picture 7

This momentary visual disorientation is quite effective in also dislocating one's sense of time because in the seconds during which one works out what happened and steps further forward to locate the train, it is already passing into the lower end of the Moffat Tunnel and exiting this Canyon/gradient scene. It re-appears some moments later and behind the viewer; simply, the device stops the viewer's eyes following the train as it traverses one end of an oval but without putting it into a tunnel, and lengthens time. Here is a sketch:



SOME REFERENCES to MIRRORS as space expanders:

Model Railroader:	1981 December	The art of using mirrors	John Allen / Bob Hayden
	1988 June	Two scenes for ...one	Dave Bigge
	1991 January	Mirror Magic	Charles Laman
Railroad Model C'man	1988 November	A...mirror and... illusion	Roger Baker Jnr
Model Railroading:	1985 Nov/Dec	Operating Thomasville	Staff
	1988 August	Scene Site	Ken Wheeler/staff
	1991 June	Forced Perspective	Larry Smith



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ELK RUN 2.

OR E.R. 11.

By P.Weller - Lewis.

Some of you may remember an earlier layout of mine which I called Elk Run. A 21ft. x 9ft. Exhibition layout. I really enjoyed that layout from the construction of the baseboards, the splined road bed. and just about everything else to do with the construction. However I would be telling a lie to say that I enjoyed the wiring aspect of the layout. Like most good things there is always a "but". With Elk Run I always needed people to help me move the layout to exhibitions and then to help in the erection of the layout as well as the operation of the layout. Likewise I was reliant upon their good natures to dismantle and remove the layout back home again. I would also have to beg and borrow rolling stock from other modellers as my considerable amount of rolling stock was soon gobbled up when you are running twenty five to thirty car trains. So the obvious big "but" was I had a club sized layout for a one man band. It was not planned that way but that's what happened. Even so I still enjoyed it as a layout was proud of my achievements and most of all I learned one hell of a lot from my efforts.. Alas Elk Run is no more and at this point of time is nothing more than the shells of baseboards in different stages of being dismantled down to the bare baseboard. Hopefully these will be utilised in construction of the permanent new home layout to be constructed in my garage. The walls have been lined and insulated it awaits the false ceiling layout lighting and of course roof insulation in the form of bats. My next door neighbours were horrified to see me dismantling Elk Run to build another. But without any genuine buyer it seemed the obvious choice of action. So hopefully from this sorry looking mess I will be able to produce a layout to portray the Chesapeake and Ohio running through the New River Gorge in West Virginia circa. 1945 - 1955.

The basics of the new home layout have been kicked around for years with numerous revisions and soul searching. Ideas have been evaluated to see if they would fit in or indeed if at all practical for the overall aim that I wish to achieve. A "Walk In" layout was originally thought to be the most desirable way to go. However after weeks and months of different

track plans being tried out for the obvious size available all being found to be to me at any rate as unsuitable from the visual prototypical aspect as well as the operational aspect. I decided to put all the plan books to one side and to have a good look at the prototype itself. So with the Help of that great body of friends in Clifton Forge Virginia at the Chesapeake and Ohio Historical Society. I obtained more books on the New River area especially those with track plans and details of on line structures and as it has been said before. "paydirt" or whatever is your favourite saying at this point in discovering the obvious in front of your eyes. I had choices of on line locations track plans of the real thing and all relevant history and text that I needed. So track layouts were manipulated to fit into the available space and looking at other modellers efforts. I eventually came up with a compromise with an around the wall layout with a huge central tonsil for the two level storage loops. access being through a hinged baseboard section which will be supported on furniture caster wheels to reduce the stress on the hinged section.



I have based my plan with the usual modellers licence(for which I am a fully paid up financial member) on Thurmond in West Virginia nestled against the bank of the New River. With the space that I have available 21ft x 15ft. It would be impossible to model Thurmond to scale as indeed would be the case with some ninety five percent of all prototype locations. However with modellers licence and selective compression. A reasonable similar concept can be arrived at to fit the space available, be operationally interesting and most of all to me to still look prototypical and still capture the feel and flavour of the Chesapeake and Ohio New River subdivision. We then select an area along the route of the C & O and insert my concept into

the New River Subdivision and like magic its all real. I then give it a name and West Virginia scores another hamlet very similar to Thurmond but you will not find it on any maps of the area (Indeed in Colorado a large narrow minded mob do this all the time) for those who are more theatrically minded its a bit like playing producer for the movie "Brigadoon" this was based on a mythical village in the foggy mists in a time warp in the beautiful Highlands of Scotland.



The period to be modelled will be Autumn 1945 - 1955. This will allow me to blow off the cobwebs of my few brass locos and to get them out of the display case and running again (Brass locos from my experience do not like display layouts with baseboard joins. Not to mention very tight curves) I look forward to getting them all operational once more. I will also be able to run my first generation diesels which I also like very much (I'm afraid the latest model diesels are huge brutes of locos but they are all starting to look alike. Just think unisex locos you would have to put them in the bath to discover which sex they are?) I have a very soft spot for Alco's (Courtesy of Mr. Atlas) I also very much like the General Motors GP7 and GP9 and I have a real liking for the covered wagons in the form of F7 A-B-A lashups that the C & O ran. I still live in hope that as atlas has put out the RSD 3, RSD4/5, RSD12. They will get serious and put out the RSD7. The RSD7 for all intents and purposes is virtually from external appearances anyway, an RSD12 stretched out another seven feet in length. I believe they had different engines to the RSD 12s but the crews called them the "Dragon Ladies" on the C & O due to the noise of the exhaust and were apparently popular with the crews for the mine run duties they performed. So you see all this fits into a fictitious location its sort of what you could perhaps call "Prototypical

Freelancing". I personally find this easier to follow and an easier road to tread than to attempt to build a model of the real thing when firstly you do not have access to your own basket ball hall and unlimited modelling budget. So even if you do attempt to build something just like the prototype. Before you know it along comes that bloke.... You know you must have met him. Yes you remember "Him" He's just about the worlds leading expert on anything you care to mention he will no doubt bore you with his tales of having been everywhere. I mean just what are you supposed to do when you are confronted with such soul searching questions .. "Hey mate, is this Chesapeake and Ohio yank crap?" or this "Hey mate, where do you get yellow and red gum trees in New South Wales they look weird". But as we used to say when I was in the Royal Navy "Nil - Illegitimus Carbourundum" which in matelots Navy speak means "Don't let the bastards grind you down. So you can imagine how refreshing it is at an exhibition to find someone who not only visited West Virginia but even lived there and worked there and they tell you That you really have captured the look and flavour of those hills and hollers of the coal country in West Virginia it all seems worthwhile.

Many and hour has been spent juggling and fitting in prototype scenes of the C&O Into the overall concept working again from photos and drawings of track locations etc. I have also included the typical C & O traits such as the bi-directional centre passing track situated between the East and West bound main lines. Despite having spent a small fortune on track planning books a subscribing to other magazines of the model press over the years such as R.M.C. R.M. Mainline Modeller as well as the C&OHS Newsletter. I have also been known to buy the odd copy of Railway Modeller (I subscribed to it for years) Railway Model Journal (I find it a rather snobby pommy mag. It does have some good modelling ideas and very good B&W photography) and the Continental Modeller. Even so I still prefer the British concept of the off the board and out of sight fiddle yard/holding sidings or storage concept that we are now giving the tag of staging tracks or staging yard. As opposed to even trying to simulate a yard in model form (again another basket ball court) The British idea is to try and model as prototypical as is possible a very small station with very fine detail and attention to the structures etc. Unfortunately many of these British modellers choose a tiny hamlet

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that even prior to the "Beeching" axe that even in its hay day would be proud to boast four or five stopping trains per day with a once weekly freight trip. Not so in model form there before your eyes is some tiny little hamlet with a population of a few hundred with trains arriving and departing and freights switching yards and finitem as you watch the stressed out operators bashing away on the preferred bell code operation to inform the bloke next to you that you have sent him your train that he just sent to you"? Indeed some of the layouts would have a traffic density comparable to Wimbledon on the approach roads to Waterloo Station with its twenty six platforms?? I am not rubbishing them for what they do they obviously enjoy that concept I never did enjoy bell code operation. to me it was just playing at signalman. So to my mind they had lost the plot. Others who to my mind in what used to be the L.M.S. Society of Modellers had a better grasp of reality by omitting stations altogether. They had members who modelled the passing sidings of Ais Gill or Blea Moor on the Settle and Carlisle route. Another modelled the retaining walls and the numerous overbridges as the four track main funnelled trains in and out of Liverpool. So why does everyone have to model a station terminus? The beauty of this hobby is you do not have to do anything you don't wish to do. So if you want to model the Feather river canyon with trains appearing and disappearing into the hidden staging are go for it. What about Keddie Y? Or a signal cabin controlling a helper station you just model as realistically as you possibly can a tiny section of an empire don't stuff it up with to many ingredients. I have always tried to pursue when modelling either British or U.S.A. prototype. That is having realistic consist of trains of realistic looking length travel through realistic looking scenery at realistic looking speeds.

Some may be asking what has this to do with planning a layout. To my mind it has everything. Sure you can go to your local hobby shop pick up book on planning and go home select a plan that fits your space and build it. Its that easy or you can go another step further and buy one of the concepts of "Model Railroad You Can Build" These books tell you all you need to know and what locos to buy and the type of rolling stock that is required. You can follow the project from start to finish. But unless you spend time looking around at what you really like . What you really dislike. What you can get on with and what you personally find tedious. It could mean

the difference between a great layout or a lot of dollars and time wasted or worse still getting fed up with the hobby and going back to the big Yuppie craze of period Dolls Houses with antique miniature furniture.



Planning is everything believe me or read the book of John Allen about his famous Gorre & Daphetid. He was great in his day and I can still read his book over again or watch the video of his layout he was so far ahead of his time in modelling that even after all this time after his tragic death I would guarantee you would still learn something from his book. Planning is not just drawing tracks on a bit of paper to fill every available space with dubious industries and the transferring that concept into reality in your available space. It involves everything that you want it to involve and delete which is of no interest but if you wish to model a prototype then pick and follow a prototype. The real railroads built everything with and for a purpose and the move tonnage from A to B. Bearing in mind cost and safety.

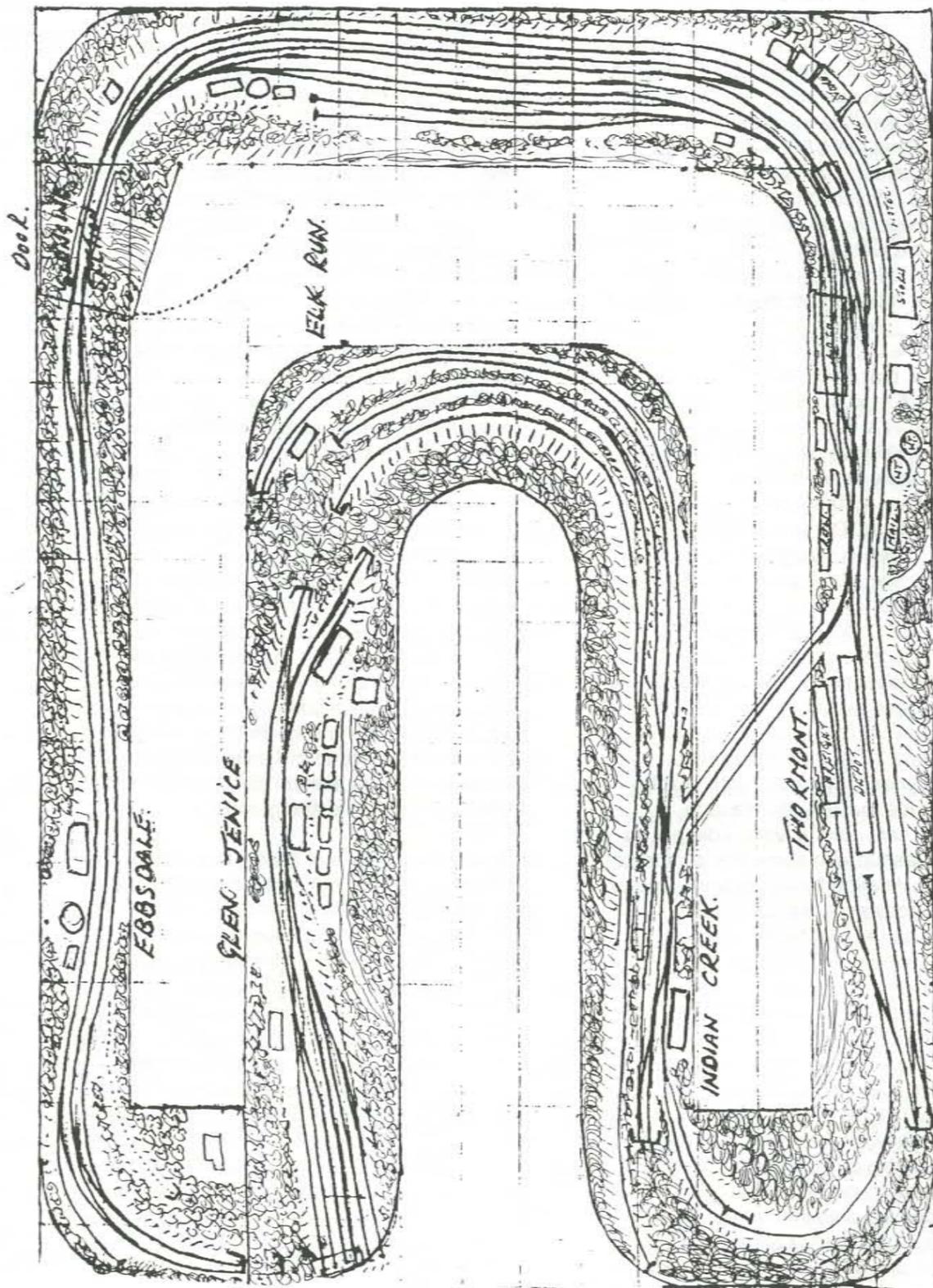
So what have we got so far? An around the wall concept with a opening section supported on casters wheels for ease of opening. Originally I was going to have a hinged section again on casters so as not to have dropped hinges. However Fred Gill gave me the idea of a push in plug arrangement that is aligned with drawer runners as in a kitchen drawer. Many thanks for the tip Fred. I can now plan my layout based on Thurmond W.VA. With operational interest passing sidings with a basic and simple track plan remember the old saying "kiss" keep it simple stupid". You will see on the track plan one area of complexity this being the switch back from the main line up to the third level. These switch backs were quite common in the Hills and Hollows to set up mountain sides. I also thought it would be both operationally and scenically interesting. Another feature is access to all hidden trackwork for maintenance

because with Murphy's Law the hardest to set to section or point motor will be the one that is the most troublesome. The hidden staging tracks will be set out in ladder loops for ease of maintenance. On Elk run I could run up to thirty three car consists. I hope to exceed this on the home layout. Indeed one of my questions to Allan McClelland was that he states in his book the V & O Story that the C&O Allegheny's overwhelmed a layout. I put the question to him personally at our convention as to why he thought that was so. Again he just stated that as a loco they are just to big. However before I could fire off my follow up question other persons present rudely interrupted and changed the subject.

My question was that if you think a class H.8. Allegheny 2-6-6-6 is to big a loco as is a Big Boy, Challenger, N & W Class A,G.N. Yellowstone etc. Why do people like yourself run double and triple headed diesels with some fourteen or perhaps sixteen cars in the train consist. Then even ADD more locos as helpers or pushers??? When in reality one switcher or one road engine should be able to handle that many cars on flat tangent track. On Elk Run an Allegheny with thirty hoppers (Atheam 34ft models)and a caboose looked OK to me because as the caboose was coming on stage so to speak the loco was about to enter a tunnel and exit the stage. All this on a visible twenty one foot long layout. This would not be the case on the proposed layout but with reliable rolling stock I hope that we can manage consists of forty cars plus at least. I did get an Atheam A-B-A lashup with some fifty cars to get around Elk Run. Admittedly with difficulty due to the drag of the consist on the curves. I do not weight my cars as the NRMA recommends. I find that to do so makes a small consist so very heavy for a loco to pull. By not weighting cars but fitting them with KD wheelsets and KD couplers the stock standard Atheam or MDC cars will run great keep the track clean and you will also find that your loco's can handle the weight of some thirty or so cars which in themselves can be considerable. Layout control at this point is worth a lot of thought with so many new concepts of loco control either coming onto the market or already on sale at what I call hideous prices. For some the price is right and of course they talk highly of the system they have purchased. Of course being cynical no person is going to shell out mega - bucks on a system fit out numerous loco's and only have to re mortgage the home

once and tell you he or she is not at least cocker - hoops about the new gadget. Be that as it may my criticism is of course the cost. secondly all those tiny buttons, pressure pads for speed and direction, braking etc. I may be old fashioned but I still prefer a switch with the toggle indicating train direction of travel. I still prefer a knob or handle for the throttle which again gives a visual indication of your loco's speed. This coupled up with a voltmeter and an Ammeter you can read at a glance just what your loco is or isn't doing. Another thing I dislike is the idea of a decoder for each loco(if you can find space to fit it in) Many people from all walks of life have great difficulty in running their right hand in an anti clockwise direction over their tummy while patting themselves on the head with the other hand standing on one leg. So what makes them think that they can control several trains simultaneously. One at a time no problem. perhaps two trains or one to travel at set speed through open blocks while you are switching with the second train. I can do all that with simple cab control. I know that there are many people out there who have expended large amounts of money on the system of their choice, that's OK I hope they are all happy with it. For me plain simple cab control with sound effects and structure lighting will do me until someone comes along with a well tried and proven system which does not cost an arm and a leg. Which is tiny enough to fit into existing locos without having to mill away the loco body weights to make space for the required doohickeys , gadgets and gummins.

In the model press over recent years there have been published articles of different modellers and how they built themselves their own C.T.C. Panel. Some even buying the original American Switch Company authentic panel switches and lighting indicators. At something like US\$5-00 per switch indicator one could plan a really top looking C.T.C. panel with track occupancy indicators, switch and signal indicators for the cost of a couple of diesel locos (not the Non ferrous metal kind either) Again if one has a relatively simple track plan likewise the C.T.C. panel would also be rather simple and thus the price would not be prohibitive. The top- section would display the schematic track plan of the New River Division Section to be modelled. As the baseboard height will allow a rather low seated inclusion of a dispatchers desk under the layout as opposed to the high control panel situated over the layout integral with the layout lighting valance. Many



years ago I made an overhead control panel it looked good with its schematic track plan. I used brass screws as terminals and an old "Biro" pen with the hot wire soldered to the tip of the pen. By touching the brass screws with the tip of the pen the selected points would throw on the layout. On the downside was the fact that the extra wire required to run under behind and over the layout was quite staggering. Reels of wire was just gobbled up. It was also a pain soldering upside down as is often the case when one has to go underneath the baseboards on the layout.

I also hope to include under the layout a small work area for fixing up those annoying little jobs such as the lost KD coupler spring, Broken Kd gunked up wheels etc. I also have to build and include a spray painting booth as despite all my good wife's help and encouragement for the hobby she cannot stand the smell of my model paints and thinners etc. Especially the smell of "Dullcoat" which can reduce her to a coughing choking mess. I must admit that I do not particularly relish their aromas and a squirrel exhaust fan to get rid of all the fumes is a top priority as I do a lot of painting and detailing of my models.

The layout room as such, I hope to fit out to make as comfortable as is possible without going overboard on the cost and the topless waitress. Firstly I have to put up the false ceiling I have insulated and paneled all the sides so it is imperative to add some insulation to the already installed insulating paper that lines the existing roof. That should help with the temperature variations that we endure in the Queanbeyan = Canberra region. I already have carpet and cupboards that have to be fitted in beneath the new concept of the cupboards fitted under the baseboards and the aisles are to be carpeted.

Of late much has been written in the model press in relation to layout lighting and the types of lighting available for ones particular needs. Personally I think layout lighting is imperative for all home layout and indeed for exhibition layouts. However costs again are an important issue. I have read recently in the M.R. of modellers using a combination of lights for varying the lighting effects for photography. I already have some ten three foot long fluorescent tube lights which I hope to use over the layout fitted behind a valance. These are not capable of being dimmed so it will be

permanently noon with the light overhead. So for photographic purposes hand held or fixed lights could be utilised for different effects. When one thinks that O. Winston Link would photograph the prototype at night because he could then control the lighting as opposed to mother nature dictating the terms. So maybe a leaf from his experience may be the way to go without expensive permanent assorted lights not to mention the cost in power consumed by some of these lights when compared to modern fluorescent tube lights indeed the latest quartz halogen 12 volt lights are good they are very directional give off a surprising amount of heat for such small lights and work out at around thirty dollars a pot.

So there we have it an insight to layout planning as I do it. I dearly hope that in time to come the good organisers of our convention will invite Mr Jack Parker of "Central Valley" fame who to my mind has the best looking model railroad ever seen by me in the model press. He models the Northern Pacific which should also appeal to all the hoards of modellers who model western roads in the meantime I will not hold my breath but I will keep my fingers crossed. I hope that you may have found my ramblings of interest or even more so of use in helping you plan your layout.

Happy modelling.
Peter A. Weller - Lewis.

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STRUCTURE TIPS & TECHNIQUES

Gavin Hince

Unless you model the plains of Kansas, your model railroad is going to need lots of structures. There are hundreds of different kits, using styrene, plaster, wood and other materials, or you can create your own design from kit parts or basic materials. In any case, good results can be achieved with a little patience, the usual hobby tools, and a basic set of techniques. The clinic presents techniques I have used (by no means exhaustive - there are innumerable other ideas you might want to try - if it works, share it!), and some "low tech" tools to make the job easier.

THEORY

A little planing goes a long way! When designing a structure or considering changes to a kit, think about what you see most - the roof, interesting roof lines; details such as chimneys and drainpipes, and a mix of roofing materials add interest and character to any structure.

Mixing materials can also apply to walls - many stone structures have later additions of wood or brick. This helps build in a "history" of the structure - viewers can see the original design has been added to, adapted, and so on. Boarded-up windows and doorways add further to this atmosphere.

Foundations are important - don't have your buildings sitting on top of scenery, "bed" them in. Foundations can be brick or stone; again, use a different material to that of the building. Sloping foundations add character and are required for uneven ground.

Start by assembling and painting plastic kits, then progressing to "kit-bashing" your own designs from kit parts. "Craftsman" style kits are mostly wood and are suitable for more experienced builders to produce contest-class models. Good kits for your first craftsman kit are supplied by Builders In Scale - these are US prototype, and come with detailed assembly and painting instructions.

STRUCTURE TECHNIQUES - Brick Structures

Plastic brick sheet is the usual choice, although printed paper or card sheets are fine for structures further from the viewer. Add mortar lines to plastic sheet by brushing or wiping thinned paint (usually light grey or tan) over red-painted sheet. Or, paint the sheet grey and "dry-brush" red over it. To finish the colouring, pastel chalks are ideal for adding subtle shadings and weathering. Other common brick colours are yellow and dark grey - just don't make all your structures the same colours!

Turn them to Stone

I like foam sheet - mine came from Train World, to represent stone. This sheet is 3 mm thick and is readily bun-joined with white glue. Additional stones can be

drawn on the exposed wall end with a pencil, and the join hidden with a drain pipe..

Rather than adding lintels & sills in separate pieces, impress them around window and door cut-outs, with a small screwdriver - when painted, they look fine. Don't forget to only use acrylic-based paints on foam sheet! I use cheap artist colours, dabbing various brown and tan shades on individual stones. It's laborious, but good work for in front of the TV.

Wood Structures

Most plastic kits have little grain or contrast. Scratch wood grain parallel with the boards, paint with the base colour then dry-brush sparingly with brown and white paints, to give the effect of peeling colour with bare wood showing through in patches.

Nothing looks more like wood than wood... I use both commercial basswood and balsa sheets with success. Working with wood is much like any other material, but the colouring techniques (to me) allow greater realism.

My favourite colouring technique is brown and black shoe dye (from local supermarket) copiously diluted in rubbing alcohol from the chemist. The two colours are brushed on with the direction of the grain in random fashion. The brushing action blends and streaks the shades together to good effect colour with the grain. Allow some "bare wood" to show through, with the grey/brown also blending into the wall colour. It's much harder to describe, than to do - the only difficult thing is starting at all.

Most older wood buildings suffer "dry-rot" in the bottom of the wooden walls. Represent this with dark brown streaks up from the bottom of the wall, easily done by brushing thinned paint along the bottom edge of each wall. The paint soaks up the grain for a realistic result.

It's quicker and neater to paint trim colour items such as windows, corner posts and doors, prior to adding them. I prefer Grandt Line windows (mail ordered from US suppliers), adding plastic glazing with white glue. White woodworking glue dries clear and won't fog the window "glass".

Other useful painting techniques are:-

"Weather-It" from A-West This is available at larger hobby shops, and gives lovely grey-silver tones. One point - structures finished in Weather-It seem to darken over time.

Floquil Driftwood. If you painted your car with this stuff, it would look like wood! Driftwood everything, then streak on some darker browns and black for instant realism. Artist Textas such as Pentel pens are also useful. Some modellers use these both for bare wood and for colouring painted walls. The fumes are strong, so you'll want to use them only in well-ventilated areas.

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