



MAIN LINE

National Model Railroad Association

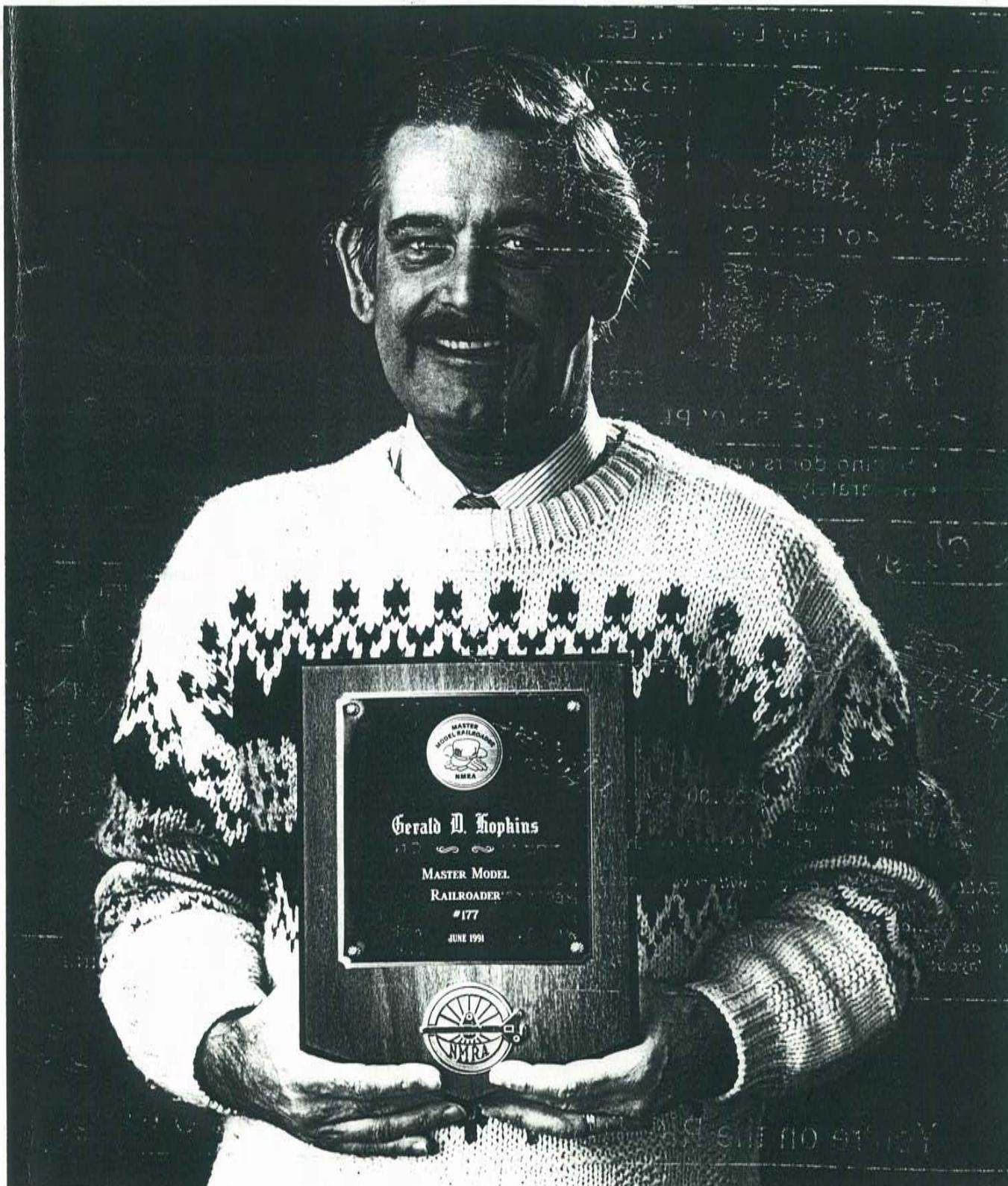
Volume 8 Number 3

Registered By Australia Post

Australasian Region

Jul, Aug, Sept 1991

Publication # NBH 7190



AUSTRALASIAN REGION DIRECTORY

PRESIDENT

Sowerby Smith 174 Fullers Rd
(02) 411 5726 CHATSWOOD 2067

VICE PRESIDENT

Glen Coventry 16 Lanai Pl
(02) 452 2131 BEACON HILL 2100

SECRETARY

Gary Norwood 271 Vardys Road
(02) 622 5859 BLACKTOWN 2148

TREASURER

Phillip Moore 32 Reading Ave
(02) 624 8332 KINGS LANGLEY 2147

TRUSTEE

John Saxon 37 Beatrice St
(02) 949 4767 CLONTARF 2093

ACHIEVEMENT PROGRAM

Richard Roth 1 The Crescent
(042) 94 2133 HELENSBURGH 2508

MEMBERSHIP & RENEWALS

Jack MacMicking 247 Eastern Valley Way
(02) 958 5988 MIDDLE COVE 2068

TAPE SLIDE DISPATCHER

Bill Cooper 2 Mason Ave
(02) CHELTENHAM 2119

CONTEST CHAIRMAN

Gerry Hopkins 7 Booralie Road
(02) 450 1033 TERREY HILLS 2084

COMPANY STORE

Shirley MacMicking
(02) 958 5988 MIDDLE COVE 2068

PUBLICITY

Peter Webb
(02)

LIBRARIAN

Glen Coventry 16 Lanai Place
(02) 452 2131 BEACON HILL 2100

EDITOR "Main Line"

Gerry Hopkins 7 Booralie Rd
(02) 450 1033 TERREY HILLS 2084

Div 1

Ian Venables 7 Aberfoyle St
(07) 378 3647 KENMORE 4069

Queensland

Div 2

Kerry McPherson 21 Crossley CIs
(062) 58 1421 MELBA ACT 2615

NSW/ACT

Div 3

Paul Richie 28 Ascot St South
(053) 32 1138 BALLARAT 3350

Vic/Tas

Div 4

Bob Nelson 36 St Michael Terrace
(09) 364 4417 MT PLEASANT WA 6153

NT/SA/WA

Div 5

Bruce Seddon 112 Great South Rd
(09) 520 1923 REMUERA AUCKLAND 5

New Zealand

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, Mainline, 7 Booralie Road, TERREY HILLS. N.S.W. 2084. or by Fax No. (02) 805 0387.

Articles can be submitted on a computer disk (IBM Compatible) 3.5" or 5.25". Most WP packages can be read at this time. This magazine is prepared on a Canon A200SV (386SX) computer and LBP-4 laser printer using Wordperfect 5.1 and Drawperfect 1.1.

Paid advertising is welcomed. Current rates for four issues are \$130 for a full page, \$70 for a half page, \$40 for a quarter page and \$150 for the back cover. All enquiries regarding advertising should be directed to the secretary:- N.M.R.A. P.O. Box., EPPING NSW

Cover:

Master Model Railroader #177 = Gerry Hopkins (photo by Sowerby Smith)

WAYBILL

2	Crew Roster	10	Steam Club Running Days <i>Laurie McLean</i>
3	Waybill Meeting Schedule	11	Dreams to Reality <i>Kathy Norton</i>
4	President's Report <i>Sowerby Smith</i>	12	Video Library News Letters to the Editor <i>Roger Johns</i>
5	Meeting Reports <i>Glen Coventry</i>	14	Foldaway Control Panel <i>Fred Gill</i>
6	Denver Convention <i>John Saxon</i>	16	Bill's Bumbleings <i>Bill Cooper</i> Library News
7	Division Reports <i>Paul Richie</i>	18	Mobile Work Bench <i>Fred Gill</i>
8	Membership Report <i>Jack MacMicking</i> U2 Can Laugh	19	Monthly Quiz
9	Convention Contest Results Just A Thought - Meters <i>Gerry Hopkins</i>	20	Designs for a Transient Time <i>Phil Morrow</i>

MEETING SCHEDULE

14th Sept Scout Hall 02 450 1033
Abbots Rd
CURL CURL. NSW
Gerry Hopkins HOn30"
Laurie McLean HOn3'
+ Module Meet

This meeting starts at 1.00pm and ends about 8.00pm. Videos will be running in the afternoon, Slide presentations will be shown after tea - Troll & Elfin, Gory & Daphetid etc. During the day there will be clinics on hand laying points in code 40, 55, and 70 as well as fitting and wiring point motors to them.

5th Oct Liverpool Exhibition NSW

13th Oct Adelaide Exhibition SA
(SA members can meet the Editor)

16th Nov Rob Dall 03 801 6034
7 Muchison Ave
Vermont South VIC
BYO BBQ start from 11.30am

9th Nov S.N.S.M.R.C. 02 450 1033
Ramsgate Road
RAMSGATE NSW

The club rooms will be open from 1.00pm. Come and see a large club layout in action:-

- * Despatcher
- * Through Passenger Trains
- * 50 car passing loops
- * 4 track Horseshoe Curve
- * Australias most complete Model Railroad library

Don't miss this one!

14th Dec George Paxon 02 337 6093
31 Hopetoun Avenue
Valcouse NSW

GERRY HOPKINS MMR

Our esteemed Editor, Gerry Hopkins, has been honoured by being awarded the Regions second Master Model Railroader award under the NMRA Achievement Program. As most of us know, Gerry is a superlative modeler and well deserves this prestigious award. The Achievement Program was established many years ago to recognise superior modeling by NMRA members and Gerry's award is number 177 only in the long history of this program, so giving some indication of the prestige attached to the award of Master Model Railroader.

Gerry qualified for the award with Achievement Awards in the required seven categories of Civil Engineering, Electrical Engineering, Scenery, Structures, Prototype Models, Cars and Author. Gerry was presented with his well deserved MMR plaque, certificate, patch and pin at our meeting at Garry Norwood's on 13 July.

John Saxon,
Trustee.

PRESIDENT'S REPORT

Sowerby Smith

First I would like to take this opportunity of congratulating Gerry Hopkins on being the second of our number to attain "Master Model Railroader" status. Well done Gerry! In addition it was with great pleasure I was able to recognise exceptional service to the Region by presenting the "Presidents Awards" recently. Toni Saxon, Shirley MacMicking and Gerry Hopkins were this years recipients. Thank you for your commitment to the Region.

As I mentioned at the AGM I do not have any radical changes planned for the direction of our association. What I would like to do in the coming weeks is to receive the opinions of the general membership to ensure that we progress in a way that best reflects the members wishes and aspirations. To that end included with your magazine is a questionnaire. Please take a few minutes to let us know your thoughts on the subjects raised.

Last months visit to Garry Norwood's was an all time record for the number of members attending a normal meeting, only Christmas or conventions have rated better. It was very gratifying to see so many new faces and I would like to welcome all the new members and I hope that it will be an interesting and enjoyable experience for them.

The Newcastle show will just be over when you read this and we will have some idea how our new exhibition display has fared. As I mentioned at the last meeting the stand will be an unmanned display with application forms available from a dispenser attached to the stand. This is a trial only for the two exhibitions in NSW. Our displays at the last 2 exhibitions we attended resulted in so few new members ie 2 - 3 that I felt a change was justified. It seemed to me far better to focus our membership drive on our direct activities like our annual conventions where last time we picked up over 30 new members. After the October long weekend we should have an idea of the success or otherwise of the new format.

EDITORIAL

By Gerry Hopkins

As you can see, there are a few new names appearing in the index. This is very encouraging for an editor of any magazine. I still require more articles for future editions - the more I have to choose from - the better the magazine. We have a letter from one of our members (*Letters to the*

Editor) I you be happy to print any replies from the membership, Roger has been given some interesting view points. I will be exhibiting at the Adelaide Exhibition this year, and would like to meet any of our S.A. members - come and introduce yourself.

MEETING REPORTS

June – Jack Macmicking

Most of our members model in HO scale so it was quite a revelation to enter Aladdins Cave (mind your head) and see O Scale Colorado & Southern trains rolling around the room. The occasion was the June members meeting, the location Jack MacMicking's.

The railroad room is under the house and to prepare it Jack first had to excavate the crawl space deep enough for head clearance along the centre aisle, with the railroad built on benchwork either side. Track is hand laid (over 4000 ties so far) going around three sides of the room. Jack hasn't always modelled Colorado & Southern in On3. He used to run Gauge 1 British Steam, and he had on show a Great Central Railway 4-6-0 live steamer and a Great Northern Railway 0-6-2 also several coaches in Gauge 1. Jack said he even ran live steam in the railroad room at one stage – I bet that cleared the sinuses!

We were treated to two mini-clinics. Peter Burrows showed us a box he built for his airbrush gear. Sick of being unable to find bits and pieces every time he wanted to paint, he's built a nesting box in three pieces to hold everything together. For those poor mugs like me who hardly know their watts from their ohms, Gerry Hopkins gave us an introduction to using meters for trouble shooting layout wiring and monitoring loco performance. Laurie McLean brought along a partly completed model of Durango Station that he is building in styrene, I found it interesting to see the techniques he used.

This was also the occasion of our Annual General Meeting, financial details will be covered in a separate report. Shirley MacMicking and Gerry Hopkins were presented their Presidents award for service to the region. Sowerby also announced that Gerry Hopkins had become the region's second Master Model Railroader.

So thank you Shirley and Jack for having us at your place it was a great day.

1992 Mini Convention – Notice of a Meeting

Come and participate in the planning of your next Mini Convention. We need lots of new faces, "No Experience Necessary". Inject new ideas for an

even bigger and better mini convention, 8 pm Sowerby Smith's place, 174 Fullers Road Chatswood. Monday September 16th.

July – Gary Norwood

After a week of rain it was a relief to have a fine and sunny day for our Sydney meeting. In a partitioned off area about 20' x 8' at the back of Gary's garage lies the Rio Grande Southern in HOn3. Gee they're tiny! The interesting thing is that at the previous meeting at Jack MacMicking's we saw 3' gauge Colorado & Southern in O scale, but I reckon these little guys looked less than half as big. All track is laid and the layout is about half scened, trackwork is a mix of railcraft with hand built stubb turnouts. It's the first layout I've noticed that has used Homosote for roadbed, straight out of the US magazines, but not being available here, Gary has had to import it directly.

A good spot for a meeting. Though any more than a dozen in the layout room was a squeeze, Gary had thoughtfully extended the track at either end of the run to staging yards in the garage. There was room for more people, afternoon tea and enough parts to build 3 more Minis. Now I see why he drives a Mini – It's the only car that will fit in the garage after he built the layout.

Deanne shut the side gates so we couldn't get away so we had our usual short meeting – i.e. announcements and presentations with interjections from the dogs next door! Most of the presentation related to the recent Convention, but one that especially deserves comment was to Gerry Hopkins, who has become the Australasian Regions second Master Model Railroader. Toni Saxon received her Presidents Award for Service to the Region as she missed the AGM.

After the announcements Gary presented a mini-clinic on how to use rubber molds for rock casting. He killed two birds with one stone by using part of his layout for the demonstration.

Even though some of our regular members were still in the US after attending the Denver Convention we had a record attendance for a normal meeting, with many new faces in the crowd. Thanks to Deanne and Gary for inviting us to their home.

Glen Coventry

1991 DENVER BOARD OF TRUSTEES' MEETING

The NMRA Executive Council and Board of Trustees met in Denver over the two days and nights preceeding the 1991 Convention. Areas of interest to the Australasian Region included the following:

- * A model railroad insurance program will be made available as soon as formalities can be finalised. This will apply to all members, not just those in the Continental USA as will the NMRA credit card program and life insurance arrangements. (These latter benefits have particular application to the US where the securing of credit cards and life insurance can be more difficult than that we are used to in Australasia.) There will be more news in a future Bulletin.
- * The Australasian Region gained a net 20 members between September, 1990 and May, 1991 to a new total of 285. We actually gained 57 new members in the period but unfortunately 37 let their memberships lapse. Australia has 245 members and New Zealand 40.
- * An O scale study group was formed to investigate ways of improving the attraction of the NMRA to O scalers. Only 6% of the 16,499 members who responded to a recent survey gave their main scale as O. HO scored 79%, N 12%, S 1.4%, G 0.7% and "Other" 0.8%. Standard gauge was shown as main preference by 97% and Narrow Gauge by a miserly 3%. (Makes you think that the narrow gaugers were included in the 8,501 who didn't respond)
- * The 1996 Convention will be held in the Long Beach area of Los Angeles.
- * Improvements are under way in the Publications Department following a detailed review by a Board of Trustee committee of its performance. The Editor has committed himself to now publishing a Directory of Information each December in the Bulletin and the popular calendar will be continued. The last Directory was published in 1980! However, the full list of all NMRA members we used to get each year will not be yet reintroduced due to budget restraints.
- * Good progress has been achieved in setting Recommended Practices for G Gauge. (Notice I did not say "Scale".)
- * Our Treasurer has promised our long awaited audited accounts (for the prior year, by August.) These accounts will be helpful in securing further funds for the Library.
- * The balance outstanding on the NMRA Headquarters Building was \$US 76,714 at 31 May. 400 Program pledges will cover \$65,070 of this leaving only \$11,634 to be yet found. The 400 Program has been an outstanding success in extinguishing the debt on an asset which must be worth now substantially more than the half million dollar cost. Thankyou to the small group of Australasian members who contributed either directly to the building appeal or to the 400 Program.
- * The 1991/92 Budget was adopted forecasting income of \$660,000, mainly from membership dues. Of this, \$299,000 will be spent in the Publications Department and the balance for all other departments excluding \$30,000 to Investments. I am happy to report that the Budget will allow the Library to provide the Region with copies of all video tapes currently available to US and Canadian resident members. However, cost of conversion from NTSC to PAL format will have to be met locally.
- * The Region was again complimented on our Main Line. It is in the top three or four regional newsletters published by the seventeen regions of the NMRA.

THE NATIONAL CONVENTION

Some 24 Australians and it is said about 18 or so New Zealanders attended the Denver Convention, this being a record for attendance from "Downunder" as our American cousins are fond of saying.

As usual, there was far more to see and do than the time available and some first timers were surprised that they had to have a rest break in the middle of the week to prepare for the next feeding frenzy of model and prototype railroading.

Apart from the excellent clinics provided by some of the top names in the hobby, we saw some really excellent layouts with naturally a majority emphasising the narrow gauge scene in Colorado.

The Train Show itself was full of bargains available merely for use of plastic cards of some type or other but unfortunately on returning there were real bills waiting payment in Australian Dollars!!!!!!

The scenery of Colorado has to be experienced to be believed as no amount of photographs or video can do justice to it. The Banquet on the Saturday night was well organised and the guest speaker, Charlie Getz of NG & SL Gazette fame, was alone worth the price of the meal.

Caboose Hobbies must have had their best business in one week ever. They ran a 48 seat coach every hour between the Convention hotel and their store and there were always people

standing. Again, unfortunately, they accepted plastic money.

There were a minimum of 2700 full registrations at the Convention and apart from some small glitches in the layout tour arrangements it was a Convention to be long remembered by those of us lucky enough to make it to Colorado.

Once again I managed to fill up several 8mm video tapes of the Convention highlights (including some clinics) plus two top layouts in San Francisco and 15, 7.5 and 5 inch gauge live steam. Any one interested should contact our Librarian for a lend of the full size VHS tapes covering these adventures.

John Saxon, Trustee.

DIVISION 3 REPORTS

On Saturday, February 23rd there was a gathering of members and friends at Graeme Nitz' home where books on Pennsylvania Railroads, as well as the latest magazines, were perused. Graeme told us of his visit to the Newcastle meeting and what was seen in that part of the country.

We decided it was to our advantage to be a member of the AVMRC. An inspection of Graeme's railroad, which is under construction, was followed by afternoon tea provided by Graeme's mother. We viewed slides of N.S.W. railways, and an enjoyable visit was had by all.

Thanks Graeme.

On April 20th David and Jenny Goddard's home at Mt Helen (Ballarat) was the destination for the barbecue and informal meeting. The day turned out to be a perfect day for a barbecue – not what

some people seem to expect Ballarat's weather to be! There were books to peruse, showing David's main interest in railways, being B & O and narrow gauge.

The meeting discussed the manning of a NMRA stand at the next Camberwell Exhibition. We felt there would be little problem in manning; we may be able to get more volunteers closer to the exhibition next year.

A further discussion was how some of the achievement awards could be earned; also' more judges will be needed for modelling competitions so all can be involved.

Later in the afternoon some members visited my railroad to see the progress made since the last visit. Some scenery has been added and control system altered.

Afternoon tea ended and enjoyable day.

Paul Richie.

MEMBERSHIP LISTING

Included with this issue of Main Line you will find a list of current members. The list is up to date (as far as possible). If your details are incorrect, please drop me a line (or Phone or Fax) with the correct

details. We would like to add an extra column, showing the scale and gauge in which you model, next time you correspond with a committee member please advise of your preference.

MEMBERSHIP REPORT

Change of Address

To avoid confusion when members change their address, they are requested to supply both the old and new addresses as shown below.

E.G. ADAMS. John T. (N.M.R.A. No.)

WAS 1 Short Street
SYDNEY NSW 2000

NOW 22 Long Street
PARRAMATTA NSW 2150

This information is necessary due to the fact that there are a few members in more than one State who have both the same first and surnames, resulting in the wrong member's address being changed.

Jack Mac Micking.
Membership officer.

WELCOME ABOARD

We would like to welcome the following new members to the Australasian Region of the NMRA.

Lyndon Spence
53 Springfield Ave
Figtree NSW 2525

Peter Jenkins
14 Kent Street
Berkley NSW 2506

Barry Russell
26 Wilson Street
Katoomba NSW 2780

Chuck Bowman
264 Linlithgow Road
Toorak VIC 3142

U2 CAN LAUGH

Paddy was working on the railway line when suddenly a train came speeding towards him along the track. He took off down the line but of course he was knocked down by the train and badly injured. When he woke up in hospital his friend Mick asked him why he hadn't run up the bank at the side of the track.

*"Don't be a fool," said Paddy,
"If I couldn't beat it on the
flat, what chance had I
running up a slope?"*

Irish Railway Announcement:-

*"There will be no trains
running between Limerick
and Mallow on Sunday next
and delays of 30 minutes can
be expected."*

Sign in Railroad yard:-

*"This track is one way at
both ends."*

Paddy had the following advice for engineers on narrow country tracks:-

*"The best way to pass a herd
of sheep on the tracks is to
keep behind them."*

There was a crash on the old single-line West Clare Railway and Paddy was reading the official regulations to see what the legal position was. At last he found the relevant paragraph and it read as follows:

*"If two trains approach each
other on the same track then
neither shall proceed until
the other has got off the track
and given way to it."*

'91 Convention – Contest Results.

As you may be aware, the contest this time was split into two separate categories – Modellers and Masters. You can see from the results below the decision to have two categories was a wise one. There are many new names this time.

MASTERS CONTEST

Freight Cars

1	Gary Norwood	RGS Boxcar
2	Gerry Hopkins	SR&RL Flatcar
3	Greg Hiley	DRGW Boxcar

Cabooses

1	Hal Saxon	NCNG Caboose
---	-----------	--------------

Displays

1	Warren McLean	Derelict Store
2	Laurie McLean	Durango Yard
3	Warren McLean	Logging Scene

MODELLERS CONTEST

Steam Locos

1	Hal Saxon	SP 4-4-0
2	Gary Spencer Salt	DSL Mallet
3	Hal Saxon	SP 2-6-0

Diesel Locos

1	Gary Norwood	CN FA1
2	David North	ATSF F7 ABBA
3	David North	ATSF SD40-2

Cabooses

1	Bruce Heinzel	DRGW Caboose
---	---------------	--------------

Passenger Cars

1	Gerry Hopkins	Excursion Car
2	J Gibson	VR Carriage
3	J Gibson	VR Carriage

Freight Cars

1	Claus Kleinhapl	RGS Block Car
2	Mike Hallinan	DSP&P Gon
3	Phil Knife	Sassen Tankcar

Maintenance Of Way

1	Claus Kleinhapl	KC Plow
---	-----------------	---------

Structures – on line

1	R Asprey	ATSF Depot
2	George Paxon	Bridge

Displays

1	Paul Willis	VR Coal Stage
2	Shirley MacMicking	House

Structures – Off line

1	Bruce Heinzel	5 stamp Mill
---	---------------	--------------

Best in Show went to Warren McLean for his Derelict store in O scale.

Congratulations to all the above entrants and as the new Contest Chairman I look forward to seeing more models from you in future contests.

Gerry Hopkins
Contest Chairman

Just A Thought – Meters

By Gerry Hopkins. MMR

On a number of occasions I have been asked about the use of meters on a model railroad. Here are a few ideas on how to connect them. There are two types of meter which can be used:

- one for measuring current draw = Ammeter
- one for measuring the voltage = Voltmeter.

Ammeter (Fig 1)

Most of the common meters available are for use on DC, their zero is on the left and their top reading on the right. Meters with a centre zero

are rare and expensive (\$50). So that we can use a DC meter in the throttle circuit (the current changes direction when you reverse the loco), we must use a bridge rectifier as shown in Fig. 1. The meter should be capable of reading up to 5 amps for standard gauge or 1 amp for narrow gauge (scale is not important).

Voltmeter (Fig 2)

Again, most meters are for DC so we use another bridge rectifier for the voltmeter. This meter is connected across the track to show the

voltage.

After you get used to reading the meters, you will be able to recognise when a loco needs attention; pickups/wheels dirty, motor needs cleaning/lubricating, mechanism needs oil etc. In time you could mark the face of your voltmeter

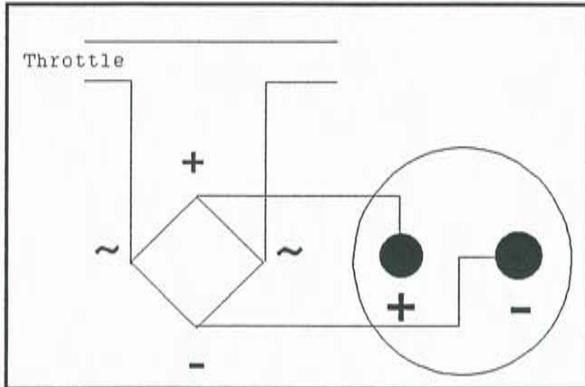


Figure 1

as a speedometer and drive your train through speed restrictions and the like. You can check the output of each of your throttles, sometimes a throttle does not pass enough power to the track.

Add another dimension to your operation. Have fun.

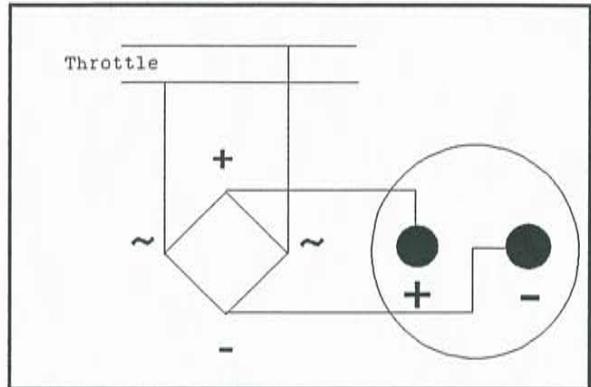


Figure 2

Running Days of Model Engineering Clubs

by Laurie McLean

The following clubs have running days as shown below. I have no idea how many or of what type of trains are run but if any of you visit these clubs please give me a report as others may be interested.

Blue Mountains Railways Society Co-op Ltd
Grahame Street, GLENBROOK.

1st Sun of Month
10.30 to 16.30 5"

Bankstown Live Steam Loco Society
Hoskin Ave & Cotton Ave, BANKSTOWN

2nd Sat in Month
13.00 to 16.30 3.1/2" & 5"

Bathurst Live Steam Loco Society
Cnr Durham & Hope Streets, BATHURST

3rd Sun in month
12.30 to 16.30 3.1/2" & 5"

Hornsby & District Model Engineering Society
Mid Dural Road, GALSTON

2nd Sun in Month
12.00 to 16.30 5"

Illawara Live Steamers Co-op Ltd
Squires Way, Sturt Park Nth WOLLONGONG

4th Sun of Month
10.00 to 16.30 2.1/2", 3.1/2", 5"

Lake Macquarie Live Steam Loco Co-op Ltd
Vilinda Street, EDGEWORTH

Last Sun of Month
13.00 to 16.30 3.1/2" & 5"

Sydney Live Steam Loco Society Co-op Ltd
Anthony Road, WEST RYDE

3rd Sat in Month
13.30 to 16.30 3.1/2" & 5"

Sydney Society of Model Engineers Ltd
R53 Luddenham Road, St MARYS

Last Sun of Month
10.00 to 16.30 2.1/2", 3.1/2", 5"

Western Districts Live Steamers Co-op Ltd
Fairfield Showgrounds, Smithfield Road

3rd Sun of Month
10.00 to 16.30 3.1/2", 5" & 7.1/2"

When Does A Model Railroad Make That Giant Leap Into Reality?

By Kathy Norton

We all accept that a model railroad is never really done, but does it ever reach the point where it actually looks like a model railroad? I ask only because my M.R. (model railroader) has been doing something in the basement for six years now, and I'm still not sure what. He calls it building a railroad, and I hate to doubt him, but I want to see a train run before I get enthusiastic.

Yes, I've seen the beautiful layout photos in the glossy hobby magazines. They remind me of a fellow I saw on T.V. during the first moon landing. A reporter asked him what he thought of that "giant leap for mankind". He replied that he thought it was a hoax - the government had probably built a huge sound stage somewhere in Nevada and used trick photography to simulate the whole thing. Well, if a lunar landing can be faked, then surly a hobby magazine can take pictures of real, actual railroads and shrink them to HO scale. No problem.

It's just a theory. The only other theory I can come up with is that he has imagined this railroad so often he actually believes it really exists. I recall many occasions when I was summoned to the basement to "see" how a mountain would look here, with a building here and a stream there and a track running like so. Maybe I lack imagination, but my usual response is that anything anywhere would be such a vast improvement it would boggle the mind.

Let me tell you what my M.R. has accomplished so far: Benchwork built; benchwork

destroyed and rebuilt (six times); gold spike driven; golden spike pulled and re-driven (six times); mountain created and moved (twice); home workshop converted to RR design centre; RR design centre re-designed (four times); 76 car and engine kits bought; 11 car and engine kits built (none of which are compatible with the era and area of the railroad he currently imagines); 47 building kits bought; 6 building kits built (by me, back in the early days of the project, when even I could envision its completion); more paints, brushes and palettes bought than Michelangelo used on the Sistine Chapel; one square foot of backdrop painted.

The biggest improvement to date on this railroad was the installation of curtains under the benchwork. They are only temporary, mind you. Some day we are going to have shelves and cupboards...well, maybe not, because that would make it pretty tough to get at all the power tools that were moved out of the workshop when it was converted into the train design centre.

Keeping the railroad clean is another problem, one that I fear will eventually fall to me. This is complicated by the fact that our two cats do not see a railroad. They see a large platform relatively free of obstacles, perfect for napping. There is currently no reason to dissuade them of this notion. I think that by the time there is a railroad the cats will be too feeble to make the jump. But in the eyes of my M.R., they are causing considerable damage.

I hope I'm not giving the impression that my husband is lazy. It's more a case of being

involved in too many other projects, not to mention working for a living. And, quite frankly, his fellow railroaders are not helping any. The monthly division meeting, for example, fills his head with too many ideas for layout improvement. (So much so that I once accidentally referred to it as the Revision meeting).

Operating sessions serve the same purpose, as does working on another M.R.'s RR. But even more destructive are work sessions in our own home. Before the guys come over there is a week of frantic "hobbying", usually involving a complete redesigning of the design centre. Partitions are moved, shelves built, lights rewired, and perhaps a few feet of track relayed. The guys arrive. They spend four hours or so debating the advisability of each step of the project. They drink a lot of Pepsi and have a piece of cake and go home. The M.R. lays awake all night worrying about what they thought of his railroad. The next week is spent in frantic "hobbying", scrapping what little had previously been done and starting from scratch. I am asked to "forget the mountain that was going to be here. What do you think of having it there instead?" (ANYWHERE, please!!!).

My M.R. recently informed me that if he ever dies, I should call "the guys" for help in dismantling, appraising, and selling the railroad. Unless there is some serious progress made, that won't be necessary. I'll just hang a sign on the door and open my own hobby shop.

This article originally appeared in the Summer 1991 issue of the "HOTBOX", a publication of the North Central Region.

VIDEO LIBRARY



- * **Narrow Gauge & Shortline Convention 1990**
3 Hrs of clinics
 - Research by Gary Norwood
 - Trees by Ray Walter
 - Scenery by Gerry Hopkins
 - Structures by Geoff Nott

- * **New Zealand Convention 1990**
(Layout Tour) 30 mins

- * **Exhibitions 1982-1989**
by Gerry Hopkins.

A tour of some prize winning layouts at major exhibitions from Sydney, Adelaide, Newcastle, Bowral.

- * **Weathering Plastic Structures**
Videod by Keith McLaren

This is one of the popular tape/slide clinics transferred to video with **Australian** commentary and background music.

- * **Layout Tour #2**
By John Saxon

This tape takes you on a tour of some of the layouts at the Pittsburgh Convention '90. Also included are "Tuolomene Forks" of Bob Brown, San Diego Club Layout plus a host of others.

- * **Layout Tour #3**
By Gerry Hopkins

A compilation showing a few "well known" and "not so well known" layouts; Rio Grande Miniland; Franklin County; Diamond Valley Lines; D&RGW; Kennebec County; Cedar Valley Lines.

Available From Tape/Slide Dispatcher Bill Cooper, a small handling fee will be charged. Please specify VHS or BETA format (PAL SYSTEM only at this stage).

LETTERS TO THE EDITOR

Dear Sir,

I have been a member of the Australasian Region of the N.M.R.A. for four years, during this time I have seen many members come and go. Usually it is quite easy to see their enthusiasm and interest wane.

Recently I paid attention to just what is the reason for this. After spending a great deal of time in discussion and deliberation on this subject, I have reached the conclusion the main reasons are:

- *lack of club rooms;*
- *no layout on which members can run their equipment;*
- *no hands on modelling like that which would be available if members had a club layout.*

Many of our members must feel that they would be imposing on their wives good nature in asking them to put on an afternoon tea if wives are not model railroaders. Some members do not have the room for a layout (regardless of a recent letter in Main Line), nor maybe have the inclination to have other members checking out their worldly goods etc. Therefore the burden of where to hold meetings falls to a willing few.

Club premises, in my opinion, are absolutely essential in the well being of any group, a club house should bring new members and a new enthusiasm to current members. The building of a club layout would, in my opinion, bring to the fore those with the necessary skills with guidance to the keen but unskilled. Therefore appreciation in the art of model railroading should resolve. Where will the money come from? After inquiring of members and prospective members, I feel sure that the cost could be met if membership thought they were getting something for their cash, after all they get very little now. With premises at our disposal we could hold market days and seminars on model railroading all of which should enhance the club bank balance. Having our own rooms would allow weekly participation in modelling etc. which excels over nine meetings per year and a couple of exhibitions.

Well folks these are my thoughts on the matter and I would like to know whether yours are **YES** or **NO** for club premises and the building of a club railroad or roads. So let the committee know your thoughts.

Roger Johns.

PACIFIC BELT LINES

PO Box 796
CLEVELAND QLD 4163
AUSTRALIA

Factory & Sales: Cnr Bradman & Dulacca St, Acacia Ridge QLD

Phone: (07) 2738794 BH
(07) 8245145 AH
Fax: (07) 2737246

MODEL RAILWAY SUPPLIES - MAIL ORDER SPECIALISTS

PRODUCTS STOCKED BY PACIFIC BELT LINES

A R KITS

ATHEARN LOCOS & WAGONS

ATHEARN SPARE PARTS

ATLAS LOCOS & BODY KITS

ATLAS SPARE PARTS

ATLAS BUILDINGS, ACCESSORIES & TRACK

DESIGN PRESERVATION MODELS, BUILDINGS

HIGHLINERS BODY KITS

MICROSCALE DECALS & DECAL SOLUTIONS

MODEL DIE CASTING LOCOS & WAGONS

NORTH YARD WHEELS & PARTS

NWSL GEARS, PARTS & TOOLS

PACIFIC BELT LINES REPOWER KITS

PACIFIC BELT LINES FLYWHEELS

PECO TRACK & ACCESSORIES

PIKESTUFF CO BUILDING KITS & PARTS

RAILPOWER PRODUCTS, BODIES & PARTS

SPECTRONICS CONTROLLERS & ELECTRONIC ACCESSORIES

STEWART HOBBIES, LOCOS & PARTS

WALTHERS PRODUCT LINES

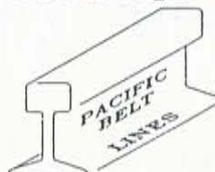
* * * * *

For a copy of our 46 page catalogue, post paid, please send a \$2.00 cheque or \$2.00 value in stamps. We look forward to hearing from NMRA members.

Our retail outlet is now open in Acacia Ridge, Brisbane, on Thursdays (4 pm - 8 pm) and Saturdays (9 am - 5 pm).

Don Palmer
(member NMRA)

Created By Enthusiasts



For Enthusiasts

FOLDAWAY CONTROL PANEL

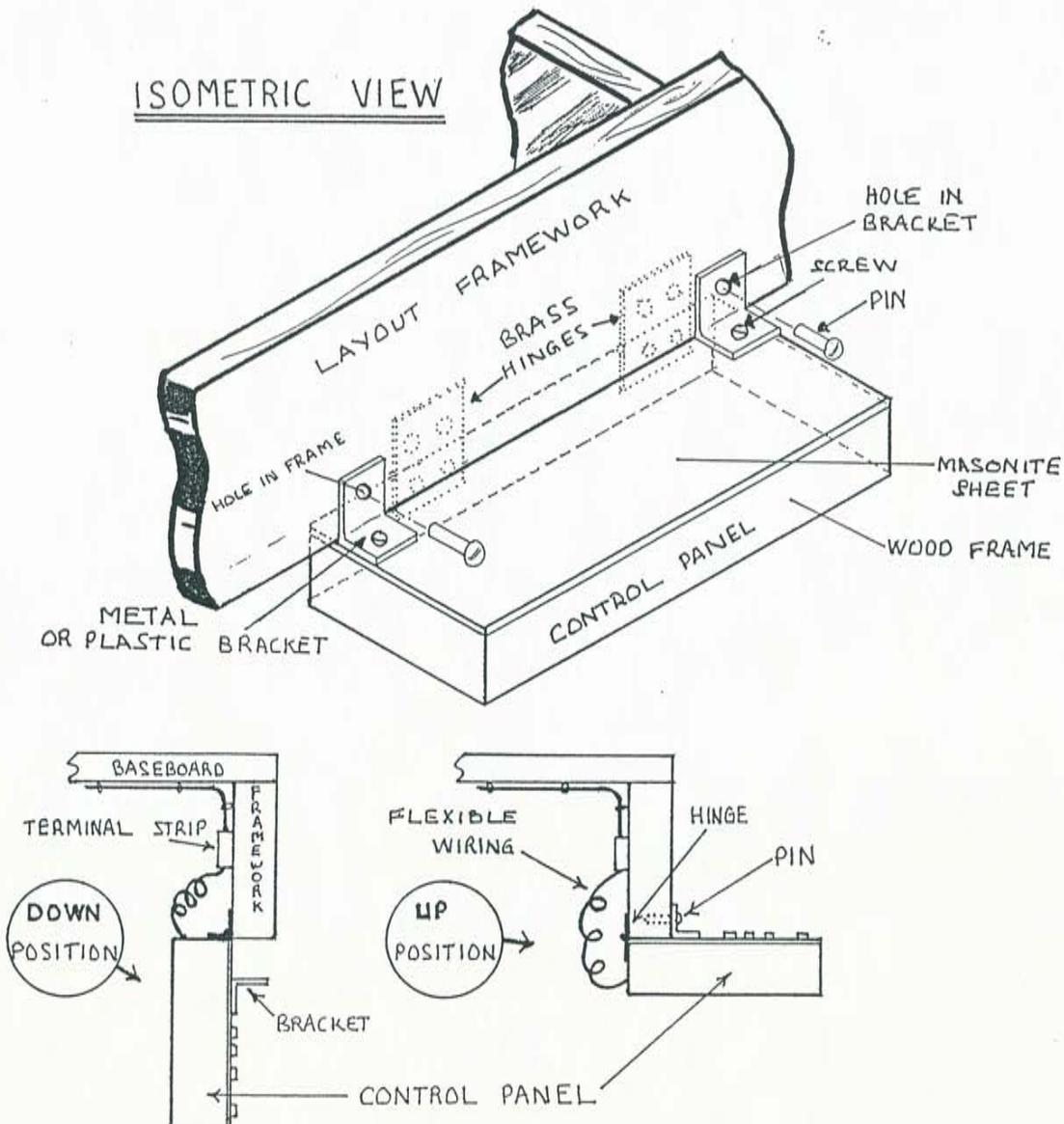
by Fred Gill

One of the problems of control panels that are used horizontally is that they take up a good deal of aisle space. I personally favour this type of panel, but as I have the need of three panels and aisle space is only one metre wide and my body size is not of the slim type, I decided on a new type of installation for two of the panels.

I do not intend to delve into the method of how I wired my control panel or what types of buttons or speed controller was used in its operation. This article is written and illustrated to show how a control panel can be used operationally in a horizontal position and when not in use it can be folded under the layout. Dimensions are not given, as each modeller's needs would be different for his own use, but the overall method used is quite clearly shown.

The basic framing of the control panel is simple (sketch 1), using 2" x 1/2" pine framing onto which a masonite sheet is secured by small screws (use screws as you may alter your board at a later date). Paint the panel with the colour you like best and then mask off or paint on any details that is required. Holes can be drilled for buttons or toggles, etc and the wood framing can be also painted your favourite colour.

Now the task of joining the panel to the layout framework can start in earnest. Firstly, two strong brass hinges are required and they should be screwed into place on the back of the panel frame so that the pivot line of the hinge is in line with the top of the masonite sheet. The control panel should then be held in place, at the spot where you intend to permanently install it, and marks made



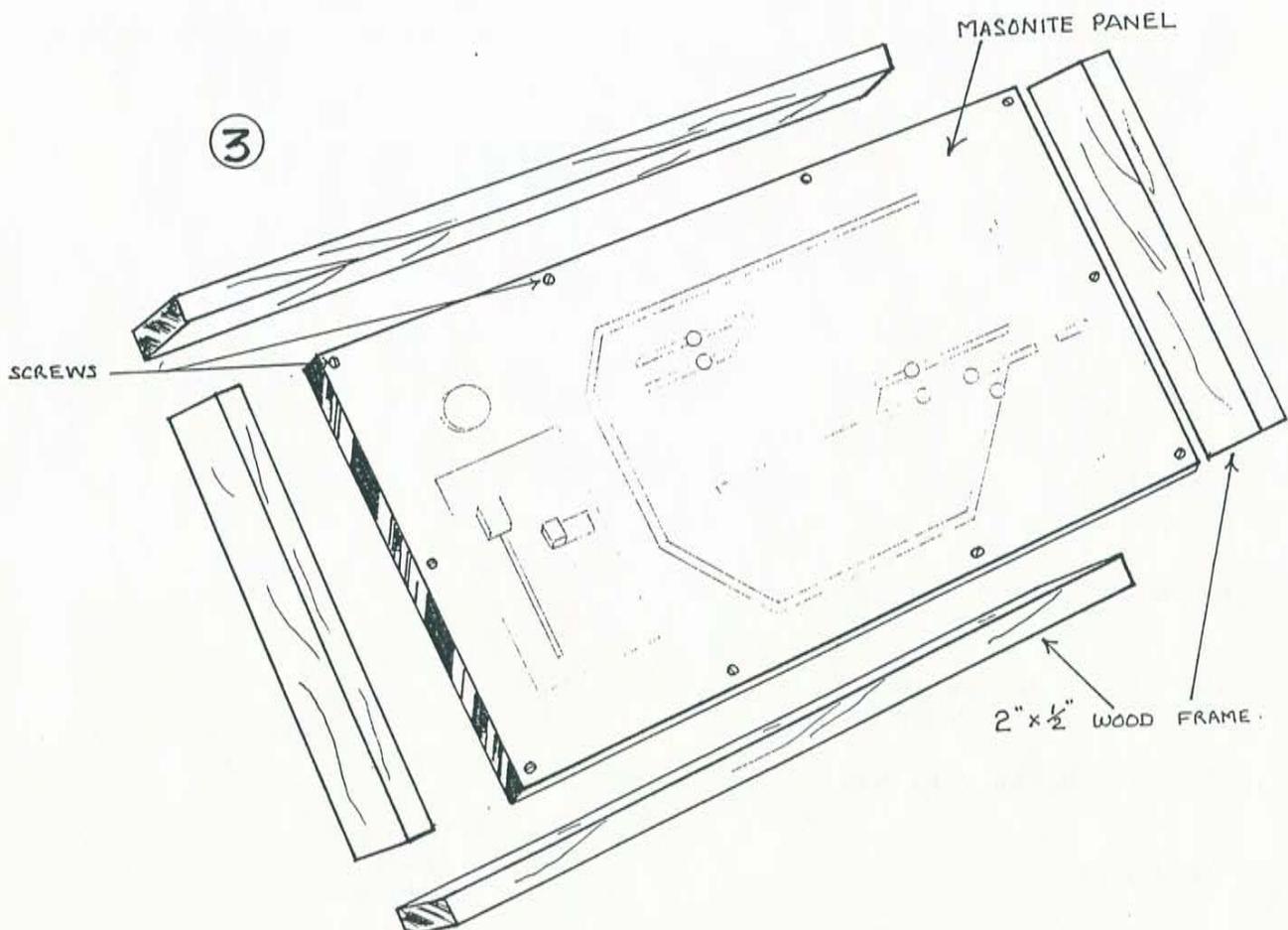
on the back of the layout framework through the holes in the brass hinges. With someone holding the control panel you can now screw home the hinges onto the layout frame. The control panel should now hang in a vertical position with none of the buttons, toggles or speed controller knobs extending beyond the front of the layout frame. If any item does extend out beyond the edge of the framework then you can place a piece of packing between the hinges and the layout framework thus taking the panel further under the layout.

The next step is to lift the panel up to a horizontal position and whilst in this position marks should be made on the panel top in line with the front edge of the layout frame. These marks will be your guidelines as to where the brackets will be placed on the panel top.

Now the brackets can be made either using plastic corner moulding or metal angles. Drill two holes in the bracket as shown, one for the pin to go through and the other for a screw or bolt to hold the bracket to the panel top. After screwing the bracket to the panel top swing the control panel up and down to see that there is sufficient clearance for the bracket to clear the layout framework.

You can now decide on what you want to use as a pin depending upon what size hole you have drilled in the bracket originally. I used two brass bolts which were shortened to suit the depth of the bracket and the layout frame. Holding the control panel in a horizontal position a hole can be drilled through the bracket hole into the layout frame. A trial fitting of the pin should be done and if all fits well then another hole can be drilled through the second bracket and the other pin inserted into the framework.

The final job left to do now is to join the wiring from the layout to the control panel. In my case I used a terminal strip attached to the back of the layout frame and attached the layout wiring to this. An umbilical core of wires were then strung from the terminal strip to the control panel allowing plenty of flexibility when the panel was moved into its two different positions. Now you should test your panel to see if all the wires have been joined correctly. Personally I always check my wiring out, one wire at a time, and I have found that there is less chance of an error occurring this way.



BILL'S BUMBLINGS

Whilst poring through some old magazines....doing 'research', rather than any actually useful modelling... I came across an editorial in the Railway Modeller (UK) for August 1964. It seemed to sum up the way I felt at the time quite well, as follows..

The Discouragement Factor

It would be pleasant to think that every layout progressed smoothly from the initial conception to completion; always assuming that completion is possible, let alone desirable. In practice, as most of us know, it moves in fits and starts, with odd periods when it seems impossible to get anything finished. We look at the layout, there are dozens of things to be done, any one of which we could easily complete in a couple of hours, yet we do not seem able to go anywhere.

This, we believe, is due to the discouragement factor. Even a modest layout is really quite a large, complex undertaking, and it is remarkably easy to arrive at a point where there are a number of small tasks of equal importance that need attention, yet, which individually make little overall impact on the layout itself. After a couple of evenings of

indecisive prodding, which appear to get us nowhere and may even set things back, it seems a lot easier to sit back and watch "Z Cars" instead. In short, a number of insignificant items often have a disproportionate discouraging effect simply because they are so small and do not seem worth the bother.

What is the answer? As we see it, the best thing to do is to spend a short time listing what has to be done, draw up a plan to attack and stick to it. As each task is completed and crossed off, and in a few hours you will have made quite a noticeable change in the list. Soon, you are back in the swing, getting on with some real modelling.

Damn right!

Only the discouragement for me comes not from being browned off with modelling, but rather with frustration from not having enough time to model. It is very hard to continue some project when there are large breaks in available time.

You seem to spend as much time setting up again, finding things again, as doing any more work. Oh well, perhaps when I retire....

Bill Cooper

LIBRARY NEWS

As notified previously, we now have the basis of a library. The stock currently stands at the following:

- * **Model Railroader,**
Bound volumes 1978 through 1985
- * **Railroad Model Craftsman,**
Bound volumes 1978 through 1985
- * **Painting Miniatures**
by Floquil
- * **Track Planning for Realistic Operation**
by John Armstrong
- * **Scenery for Model Railroaders**
by Bill McCanahan
- * **How To Wire Your Model Railroad**
by Linn Westcott
- * **101 Track Plans**

by Linn Westcott

- * **Easy To Build Railroad Structures**
by Willard Anderson

- * **Practical Guide To Model Railroading**
by Linn Westcott

- * **Classic Articles From Model Railroader**
by Mike Schafer

- * **The Encyclopedia of Model Railroading**
by Terry Allen

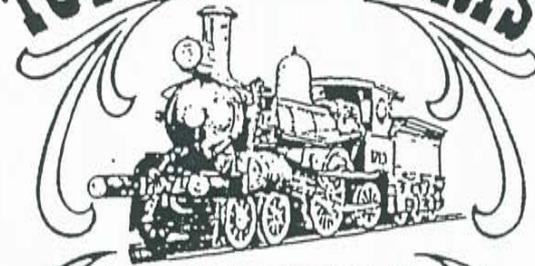
Our Librarian is Glen Coventry, of 16 Lanai Place, Beacon Hill, N.S.W. 2100. Phone (02) 452 2131. Books will be available at Sydney Meetings or by writing or phoning Glen.

Borrowing fees will be just sufficient to cover costs and postage. More details next edition or if you are keen to borrow immediately, call Glen.

COMPANY STORE

Track Gauges: O, N, HO _{n3} , HO, OO/On ₃ , Sn ₃	ea \$5.00
Cloth Badges: Member	ea \$5.00
Life Member	ea \$5.00
Tie Tac/Lapel Emblem: Gold	ea \$8.00
Silver	ea \$8.00
3 inch Decals (1 inside & 1 outside)	pair \$2.00
Belt Buckles: Brass	ea \$19.00
Pewter	ea \$19.00
Large Logo	ea \$2.00
Data Books	ea \$35.00
Clinic Notes Pittsburg Convention	ea \$15.00

TOYMAN IMPORTS



**YENNORA
HOBBIES**

6000 SQ FT WAREHOUSE FULL OF
TRAINS, BOATS, PLANES, R/C, TOYS

* * ALWAYS PLENTY OF SPECIALS * *

TOYMAN IMPORTS PTY LTD

TOY & HOBBY WAREHOUSE
76 RAILWAY ST YENNORA NSW 2161
(AT THE RAILWAY) Ph 02 632 5002

Payment/cash/Bankdraft
min order \$20

****POST PAID****

Kadee

#5 coupler	pkt 4.75
pkt of 10 NOW	43.00
231 Greasem	3.25
236 Speed cleaner	3.25
321 Uncoupler	7.00
307 Elec. uncoupler	15.00
634 centre springs	2.50

North Eastern

stripwood	pkt 2.00
weatherboard	
board & batten	4.00

Company Store

55E 55' modern log car	15.50
55F Less trk & cpr	13.00
Wrapped lumber packs	
60'flatcar load	9.00
50'flatcar load	7.00

GENERAL STORE

SPECIALISTS IN HO & N SCALE EQUIPMENT

Tel (64)-71-274212

Rail Power

SD60 - C30-7	23.00
CF7 - B23-7 - C32-8	21.00
Dash 8-40B dummy unit	50.00

Atheam Locos

SD40-2 - GP50	50.00
NEW	
SW1500 BN/SF/SP	50.00
NEW	
SW1000BN/Rio Grande	50.00
SW7	40.00

A/Line Thrall

26100 2 end cars	35.00
26102 2 centre cars	33.00
26103 5 car set	75.00

25a Hamilton Road
Cambridge
NEW ZEALAND

Gunderson

27100 2 end cars	38.00
27102 2 centre cars	36.00
27103 5 car set	85.00

Detail & decals Available

Caboose Hobbies

Ground Throws

HO 101R rigid	3.15
202S spring	3.50
N 105R rigid	3.35
206S spring	3.60

N Scale

ConCor and Interail containers
Thrall 5 car sets ----

Reserve Now!!

VISA

Catalogue \$2.00

MASTERCARD

LARGE selection *EASYWAY* Details, *Details West*, *Detail Associates*; *Smokey Valley*. also Patches

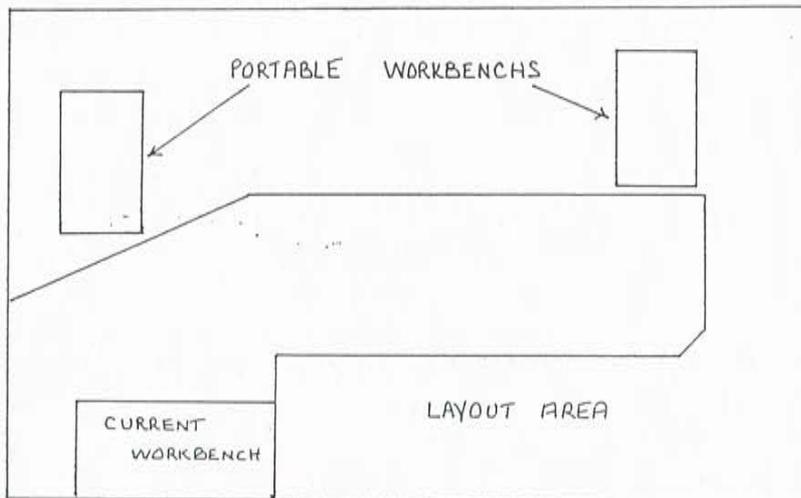
All prices shown are in Australian dollars.

***** Remember Post Paid SAL or AIRMAIL - our choice *****

MOBILE WORKBENCH AND STORAGE/FILING CABINET

by Fred Gill

Recently a decision was reached to build a new layout in my den, which is in a 12' x 8' room. Thought was given to allowing much more easier access to the area under the layout baseboard, than had been available on the previous layout. On that layout all switch motors had been installed under the baseboard, along with all wiring to trackwork, etc. When a fault occurred (and who doesn't have one at sometime or another) there was the problem of clearing out books, magazines or boxes from shelves, for access to the troubled area. Management did not want a repeat performance of these problems, so "mobile plan" was instigated in two areas under the layout. This plan served a double purpose - easy access to a possible problem area under the layout and the availability of two portable workbenches and storage areas.



As can be seen by the accompanying sketch of the room area, *sketch 1*, a workshop unit had been squeezed onto the end of the layout. The actual workbench area was small and the need for further bench space was necessary so two units were constructed for positions under the layout.

Building the Unit

Dimensions are not given for the unit as each modeller would possibly have to construct a unit to suit his particular available space. Parts can be used as follows -

- Base 25mm thick pineboard or 5-ply sheet
- Corner brackets Galvanised sheet - cut to shape and screwed on to the base or plastic corner moulding can be fixed in the same manner

- Castors Any free rolling type castors (sold by all hardware stores) which are suitable to the builder's floor covering
- Cabinet 1, 2 or 3 drawer metal filing cabinet (lockable if suitable for those valuable pieces of rolling stock) OR a home-built wood cabinet to suit personal uses
- Workboard Pineboard OR 5-ply sheet with formica sheet glued to top side and dowelled

In my personal case, I used two 2-drawer filing cabinets, one to hold precious brass rolling stock under lock and key and the second one to hold filed away numerous plans, photos and other paraphernalia pertaining to model railroads. The mobile bases were then built to accept the base size of these cabinets - firstly the baseboard was cut to size and then the bracket cut and shaped. Plastic corner moulding was used, allowing for the depth of the wood base plus an extra length of 50mm above the board surface. Holes were drilled in the mouldings and these were then secured to the wood base by screws.

Next the castors were screwed to the underside of the wood base making sure that the wheels were not protruding outside the base edges when they were at any angle. This is necessary so as not to have the wheels come into contact with walls or layout support legs.

A piece of 25 mm pineboard was measured and cut to the exact size of the top of the filing cabinet. Two holes were drilled through the pineboard (*sketch 2*) and then the board was placed on to the metal top of the cabinet and the metal was marked with a scribe through the predrilled holes in the board. Two holes were then

drilled into the metal top, using the same sized drill as used on the board. Two wood dowels

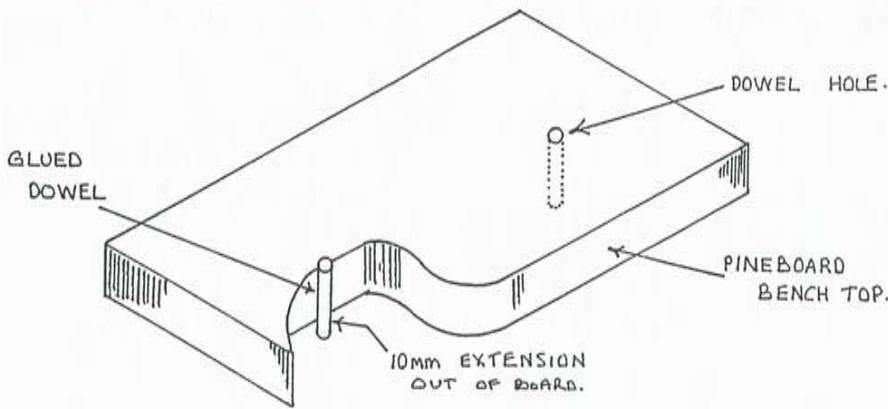


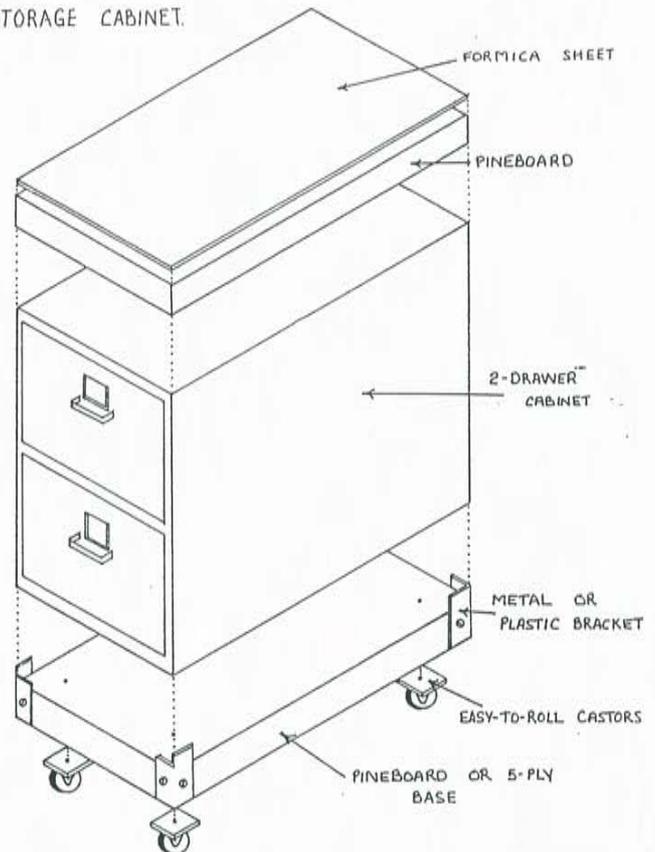
Figure 2

were glued into the board and 10 mm of the dowels were left protruding from the underside of the board. Next a piece of formica (offcut purchased from the local hardware shop) was cut to the size of the board and glued to its top surface.

Finally the edges of the board were primed and painted (to prevent moisture entering the board) and when dried the board was dropped into position with the dowels fitting into the holes in the cabinet.

If so desired a modeller could build his own sized cabinet from wood and construct shelves or small drawers for holding worktools or miscellaneous items for scratch building. No doubt the mobile principle could be used for a number of ideas under the layout (even just using a wood base or wheels and stacking boxes or cartons on it) but the main objective is that easy access is obtainable to the underneath of one's layout when a problem does occur.

**MOBILE WORKBENCH
& STORAGE CABINET.**



THIS MONTHS QUIZ

- A. What is a frost box on a water tank?
- B. Why are many stations called "Union"? (eg Chicago Union)
- C. What is a self cleaning smoke box and how does it differ from a normal smoke box?
- D. Most electric locos have 2 pantographs but only extend one. Why?

Last Months Answers:

- a. Shay locomotive.
- b. If it went the other way it would unscrew.
- c. John Allen.
- d. The Fairy Godmother.

Good Luck This Month.

DESIGNS FOR A TRANSIENT TIME – One for the Armchair Modeller.

by Phil Morrow

To many its armchair modelling, to the devotee its research, and my wife takes it as a signal to give me something to do; wash the car, mow the lawn, patch the roof. I'm talking about the mentally stimulating activity of reading the monthly magazines or latest text on some long disappeared prototype.

Whatever your attitude to this aspect of the hobby, research, reading or armchairing remains an important component of modelling railroads. The magazines and books that are a part of your armchair activities, require a place for orderly keeping and access. A bookcase is easy to build and can provide an ideal spot for a module or diorama to display your collections in a realistic setting. Alternatively, a set of bookshelves can be built as an integral part of your layout construction.

Shortly after I had built my Tyalgum module and workbench (described in the Jan - Mar,89 Mainline) I put together the bookshelf unit described here. This very simple design was the base for a diorama of an engine facility called the Chillingham workshops.

You will note from the plan that the bookshelf is

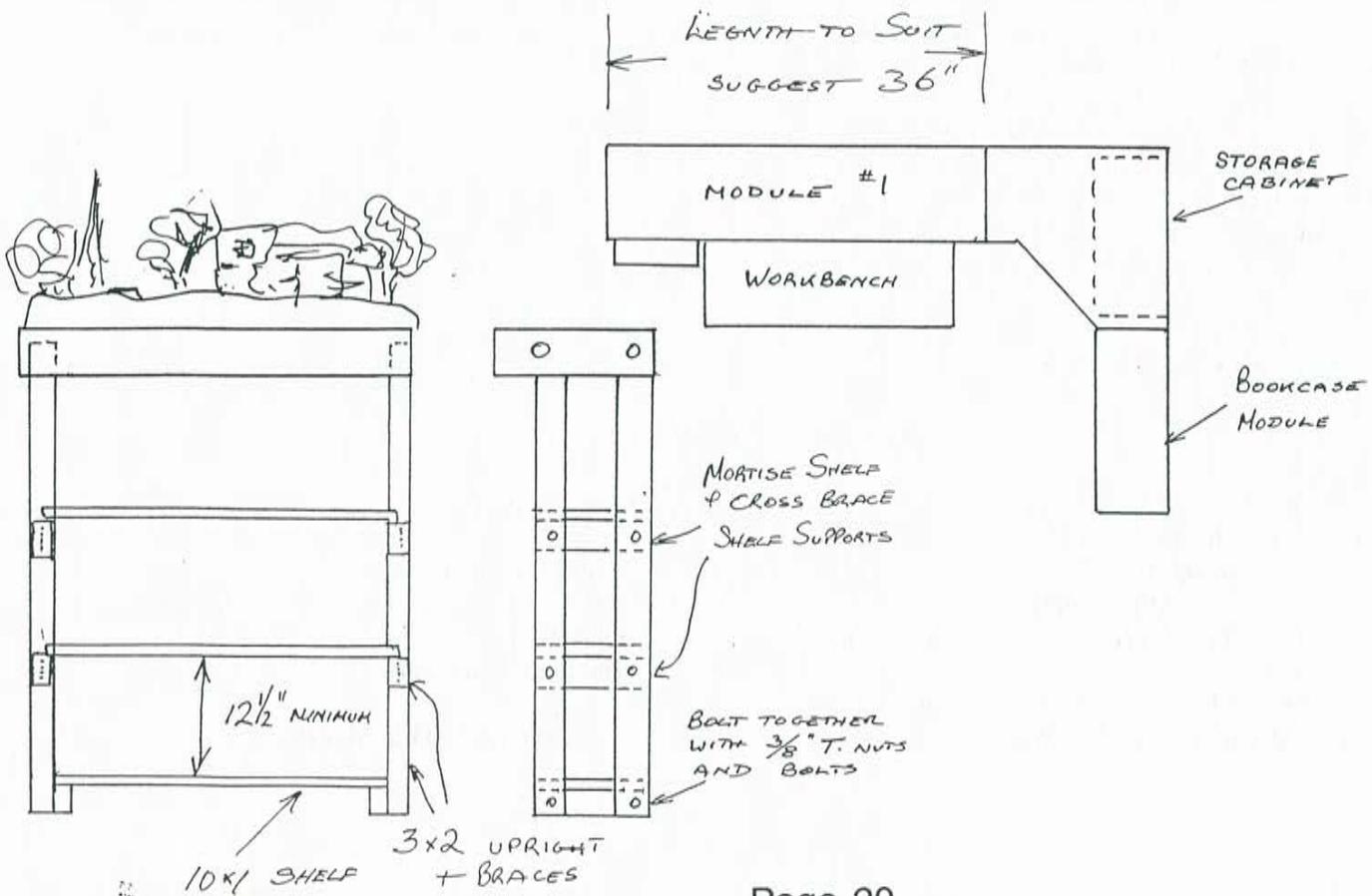
made from four 3x2 uprights and three 1x10 shelves. The uprights are braced with 3x2s mortised into them. You don't have to mortise these if you don't want to. They can be bolted directly to the uprights. However, mortising will preserve bookspace height, and this is probably worth the effort. I used 3/8th T-nuts to secure the bolts.

Make your dimensions to suit your own purpose but I suggest the following;

- * A 25cm wide shelf is a good size for most books
- * A minimum shelf spacing of 31cm is needed for most magazines and magazine holders.
- * Uprights 117cm high (46"), provide three shelves and room to bolt on a diorama frame or benchwork.

Just to finish off, I've included a schematic for the beginnings of a layout using modules attached to both this bookshelf unit and my previously described workbench.

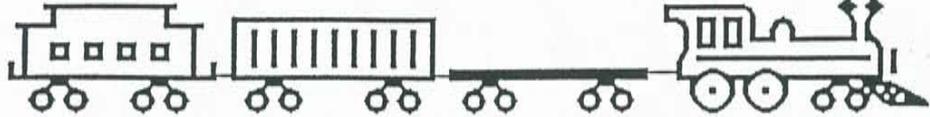
Well, hope one of you finds some small value from this.



RAILWAY BOOKS

Do railways hold a special fascination for YOU!

For Sydney's best and cheapest range of Australian and overseas railway books visit the *ARHS* Sales Centre.



Conveniently located close to Central Station, the ARHS Sales Centre is operated by Australian Railway Historical Society New South Wales Division, a "non - profit" company dedicated to the publication of books and magazines on the railways of Australia. A large range of video tapes are also available.

OPEN

ARHS SALES CENTRE

182 Redfern Street, REDFERN
Telephone and Fax number (02) 699 1714

MONDAYS TO FRIDAYS

12.00 TO 17.30

SATURDAYS

9.00 TO 16.00

Mail order enquires most welcome.

Write for a booklist

Postal address:-

PO Box E129, St James, NSW, 2000

Junction Hobbies

MAIL ORDER MODEL RAILWAY SERVICE

P.O. BOX 903, GOULBURN, N.S.W. 2580

Specialists in detail parts , range includes :-

DETAIL ASSOCIATES , DETAILS WEST , GRANDT LINE , CARY ,
CANNON & CO., CAL SCALE , P.S. CO., UTAH PACIFIC , TRACKSIDE PARTS .

Dealer in BEV - BEL CORP. products of custom painted loco's & rolling stock.

Decal lines supplied :-
CHAMPION DECAL CO., HERALD KING , MICROSCALE , WALTHERS .

Other lines carried :-

ATHEARN
ATLAS

AR KIT CO.
BACHMANN

BROAD GAUGE MODELS
CENTRAL VALLEY

NORTHWEST SHORT LINE
BOWSER

KADEE
PECO

STEWART HOBBIES
ORIENTAL LTD.

Large range of books carried :- Australian & U.S. Titles
VIDEOS also carried - covering Railway subjects worldwide

Mastercard , Bankcard
welcome

Punchbowl Hobby Centre Pty. Ltd.

545 Chapel Road, Bankstown, N.S.W.
Australia 2200
Telephone: (02) 709 5082



HAS

O GAUGE!!

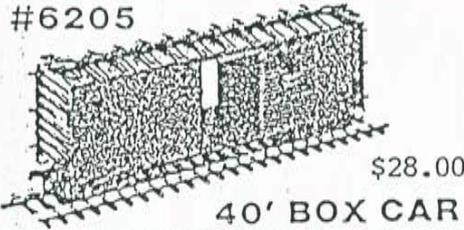
O Scale

FREIGHT CARS

O Scale

Finely Detailed, Easy to Assemble, Undecorated Kits

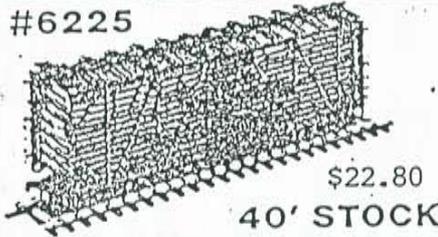
#6205



\$28.00

40' BOX CAR

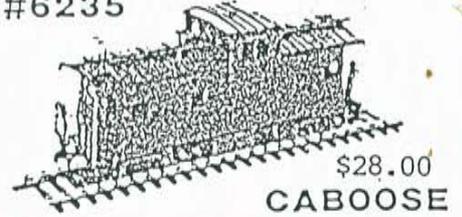
#6225



\$22.80

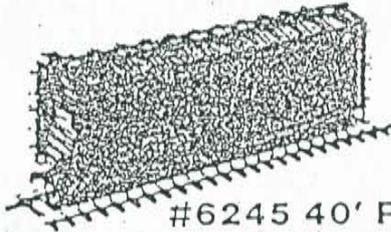
40' STOCK

#6235



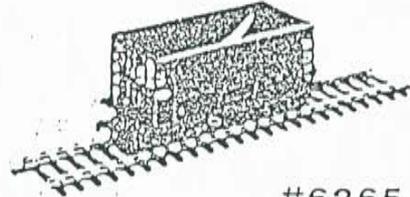
\$28.00

CABOOSE



\$22.80

#6245 40' PLUG DOOR



\$21.50

#6265 70 TON ORE

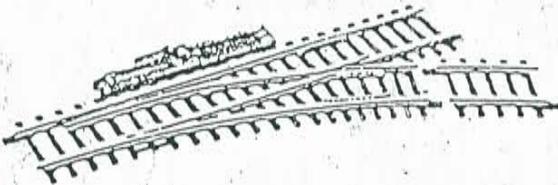
- Sliding doors on prototypical guides
- Separately applied brake rigging

- Murphy diagonal roofs
- Easily snaps together

O Gauge

TRACK

O Gauge



SWITCHES

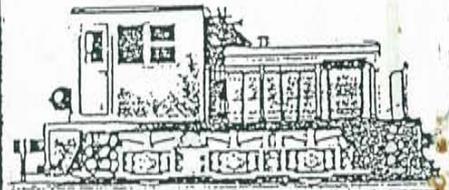
- #6021 Left hand Remote } \$20.00 each
- #6022 Right hand Remote }
- #6023 Left hand Manual } \$9.50 each
- #6024 Right hand Manual }

IDEALLY SUITED for O gaugers with severe space problems. Short-wheelbased diesels, 0-4-0 and 0-6-0 switchers easily negotiate the 24" radius curves. Great for trolley and Interurban layouts and layouts that have to be taken up and put away.

TRACK SECTIONS

- #6000 36" Flex Track \$10.90
- #6001 12" Straight Section \$2.40
- #6004 4" Straight Section \$1.20
- #6010 24" Radius Section \$2.40
- #6014 1/2-24" Radius Section \$1.20
- #6018 Terminal Track Section \$2.75

PLYMOUTH SWITCHER ea \$85.00



Pre-painted, pre-lettered plastic body, metal wheels, 6-wheel drive, 12v DC motor, operating headlight. Two rail operation only.

- 150-6121 Santa Fe
- 150-6122 Illinois Central
- 150-6123 Reading
- 150-6124 Union Pacific
- 150-6125 Midvale Steel

METAL RAIL JOINERS

#6041

\$2.75 per Pkt.



You're on the RIGHT TRACK...with ATLAS O Gauge