

# Mortdale

# Matters

PLATFORM  
TWO



**January 2018**

**Australian Model Railway Association New South Wales Branch Inc. News**

# Mortdale Matters



## January 2018

## Editorial

Welcome to the latest edition of *Mortdale Matters*. It has been a long time between issues and this has been for a number of reasons both club related & personal. One of the biggest problems has been having articles & pictures to publish. Whilst this issue has an additional 2 pages from the "normal" 12, most of this has come from report & articles in relation to recent events that would have gone into the issue from this time of year anyway. Its all well & good for members to keep asking when is the next issue of *Mortdale Matters* coming out, but as I said in a recent issue of journal, "*members have to remember that they are only going to get out of Mortdale Matters what members are prepared to put in .*" As the editor, I am happy to "pad out" as well as edit stories & articles, but it *not* my job to write everything that goes into *Matters*. This issue has been discussed amongst the MC & moving forward *Matters* will return to a regular release of every 2 months, and it will reduced or increased to include whatever articles etc. that have been submitted. With the rise of social media, it has also been suggested that *Matters* become a members-only publication.

*Stoney Creek* is progressing at a very rapid pace as it does with improvements in the control system & new functions coming "online" all the time. The construction of this layout in some respects is a very steep learning curve. As the construction progresses, things that the layout committee thought would be suitable for the task they were installed for have let the side down over time. One such instance of this was the train detectors. The boards originally installed have done a sterling job right up to the point DCC was brought online. It was discovered that these boards were not as reliable working on DCC or with some DCC decoder fitted locos. As such a program is in place to modify the detectors to a more reliable design. This is just another time we as a club can chalk up to lessons learnt.

The final thing I want to mention is that from the issue of *Mortdale Matters*, I will be introducing a 'letters to the editor' section. This is an open forum for anyone to offer a suggestion, voice an opinion on current club events or anything else you might wish to write. As usual, defamatory, derogatory or inflammatory comments will *not* be published. That said, this will be a forum for anyone to have a voice even if they don't regularly attend the clubrooms or forum days.

Hope you enjoy the read!

Until next issue,

**Damien George**

Editor

**Glenn Percival**

Assistant Editor

**Nest Issue:** Expected release w/e 11th March 2018

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**Front Cover:** TRMS Railmotors @ Moss Vale on the branch Diamond Jubilee Weekend. (*Steve Burrows*)

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### **PLEASE NOTE:**

*Images captured in the operational environment are done so with permission and adhering to the appropriate rail safety procedures & guidelines.*



## Submissions and Subscriptions

With so much continually happening at our Clubrooms, its easy for something to slip through the cracks. *Mortdale Matters* especially needs photos of Branch activities/events, members' models and covers; however any prototype photos or information will be considered for use as space permits. Email [matters@amransw.asn.au](mailto:matters@amransw.asn.au), or leave media in the *Journal* pigeonhole in the office, with the photo and a brief description.

All submissions must be original material, i.e. photos that you've taken or articles that you have written, and are published at MC's discretion.

*Mortdale Matters* is an e-newsletter, meaning simply that it is electronic news. To subscribe please send an email request to our Publicity Officer, Philip Lee, at [publicityofficer@amransw.asn.au](mailto:publicityofficer@amransw.asn.au). Please note that the file can exceed several MB; and that Adobe 8.0 (PDF) or later compatibility is required, to minimise file size. *Mortdale Matters* is also available online from the [AMRA NSW website](#).

If you do not have capable internet or email, please contact the Secretary to have a B&W printed copy available for you to collect from our clubrooms. Please note that this service is only available for those without capable internet.

## Branch Officers/Contacts 2018

<b>ELECTED Management Committee</b>	President	Robert Merrick	<a href="mailto:president@amransw.asn.au">president@amransw.asn.au</a>
	Vice President	Damien George	<a href="mailto:vpresident@amransw.asn.au">vpresident@amransw.asn.au</a>
	Secretary	Glenn Percival	<a href="mailto:secretary@amransw.asn.au">secretary@amransw.asn.au</a>
	Treasurer	Geoff Lanham	<a href="mailto:treasurer@amransw.asn.au">treasurer@amransw.asn.au</a>
	Exhibition Manager	<b>Vacant</b>	<a href="mailto:exhibition@amransw.asn.au">exhibition@amransw.asn.au</a>
	Publicity Officer	Philip Lee	<a href="mailto:publicityofficer@amransw.asn.au">publicityofficer@amransw.asn.au</a>
	Junior Development Officer	Graham Blake	<a href="mailto:juniordev@amransw.asn.au">juniordev@amransw.asn.au</a>
<b>APPOINTED</b>	<i>Journal</i> Sub-Editor	Damien George	<a href="mailto:subeditor@amransw.asn.au">subeditor@amransw.asn.au</a>
	<i>Mortdale Matters</i> Editor	Damien George	<a href="mailto:matters@amransw.asn.au">matters@amransw.asn.au</a>
	Building Manager	David Bennett	<a href="mailto:buildingman@amransw.asn.au">buildingman@amransw.asn.au</a>
	Librarians	John Smythe	N/A
	Exhibition Roster Clerk	Damien George	<a href="mailto:rosterclerk@amransw.asn.au">rosterclerk@amransw.asn.au</a>
	Historian	June Larmour	<a href="mailto:historian@amransw.asn.au">historian@amransw.asn.au</a>
	Webmaster	Damien George	<a href="mailto:webmaster@amransw.asn.au">webmaster@amransw.asn.au</a>
	<b>LAYOUT</b>	0 Scale (fixed)	Lance Pickering
<b>SUB-COMMITTEE</b> <i>Stoney Creek</i> (H0 fixed)		Denis Gilmore	<a href="mailto:stoneycreek@amransw.asn.au">stoneycreek@amransw.asn.au</a>
<b>CO- ORDINATORS</b>	N Scale	David Bennett	<a href="mailto:ngauge@amransw.asn.au">ngauge@amransw.asn.au</a>
	<i>Past and Present</i> (0 Exhibition)	Gordon Wallace	N/A
	<i>East Matelend</i> (H0 Exhibition)	Andrew Murphy	N/A
	<i>U-Drive</i> (H0 Exhibition)	Bill Whale	<a href="mailto:udrive@amransw.asn.au">udrive@amransw.asn.au</a>





# **P**residents Report

*For members on the NSW Branch of AMRA, here is a slightly abridged version of my report to members at the Annual General Meeting on 2 December 2017.*

This year has been one of considerable activity for the committee, much of it of an unusual or unexpected nature.

The issuing in September 2016 of an amended Act and the accompanying Regulations governing the affairs of incorporated associations like ours precipitated a review of the club's constitution (in common with every other incorporated association in Australia). The committee and others spent many hours working through a 47 clause document provided by the Department of Fair Trading as a prototype model constitution.

A new up-to-date constitution for our club is now mandatory and we must work to have our new constitution debated, agreed, adopted and registered if we are to avoid potential deregistration. The proposed constitution distributed last August to all members will be worked on further and discussed before it is re-presented for adoption. Until we have adopted and registered our own new constitution, we are required to comply with all mandatory clauses of the standard model constitution.

In January I received a reminder that a government grant had been approved in 2014 for a replacement wheelchair lift for our club. When this was not taken up, the grant application was held over. I met with our State Member of Parliament Mr Marc Couré, Member for Oatley, who assisted in facilitating the processes of reactivating the grant. With a new application for substituted equipment, and after 98 emails, the club now has a new drinks and snacks machine, a new chairlift, and an extra set of solar panels on the roof. Members will benefit from all these improvements. Marc's assistance through the process is much appreciated.

Remarkably, a bill for electricity used, and electricity fed back into the grid arrived just before the AGM. It showed a substantial reduction in overall cost which is the outcome of having the extra solar panels connected and working.

The committee had a major challenge when we lost the services of John Zubrickas as our exhibition manager for 2017. John volunteered to take up the position soon after the club's annual general meeting last year. His offer to fill a gap in our committee was greatly appreciated. When John withdrew later, while much of the preparatory work was done, it was a significant challenge to the committee to ensure continuity in the process of planning and finally executing the exhibition event.

Geoff Lanham assisted by Glenn Percival did an extraordinary job of coordination, planning, ordering, costing, and rostering, and under the difficult circumstances, the exhibition was a success, financially and socially. For their contributions, and to all the committee and others, my thanks.

Last year, we embarked on a new program of equipment sales as a way of assisting members or families of members who are disposing of model equipment. This venture has been outstandingly successful, almost too much so. Thanks to the efforts of Ken Auchterlonie and Bruce Harris, the club has benefitted through commissions and profit margin totalling over \$14,000.

Our annual exhibition exposes around 6,000 people to model trains. I meet many of them over 3 days at the exhibition raffle stand "No-Town" and many of these are potential new modellers. A number of them do make follow up visits, and become members. As well as that, the growing number of younger age members at our club is evidence that the club is appealing to new modellers, whose enthusiasm is apparent on most Saturday evenings. Perhaps this has something to do with new technologies in use.



The club's fixed layouts, improving each year, continue to impress visitors. The likeness of the Stoney Creek layout control room to that of a real railway system is a much-admired feature. When the club from time to time hosts visits from other clubs, the response is invariably positive. And learning the operations of Stoney Creek also brings members closer to understanding real railway practice which is unusual among model railway layouts, attractive as they are.

A visit around tea time on Saturday afternoon or any operating Sunday will show how much this club provides an opportunity for socialising. The virtues of radio control, DCC or DCS issues or the latest model release from China as well as many of the world's faults are aired and solved around a dining room table at Mortdale.

I wish to thank the committee members for their commitment of time and effort. All the business affairs of the association as a not-for-profit and non-commercial organisation are conducted diligently by this dedicated group. There is more to running this club than most members see. I also thank a core group of members who contribute to the practical maintenance of our club rooms. We all enjoy these facilities in what is probably the best equipped model railway club in Australia, but only because of the work put in by these members in their personal time.

## onstitutional Changes

As everyone would be aware by now, the NSW Dept. of Fair Trading changed the Incorporated Associations Act & Regulation over 18 months ago. As part of these changes the mandatory items each constitution for incorporated associations has to cover was updated to reflect modern social expectations. As a result the MC undertook a review of the NSW constitution to ensure it complied with the regulatory requirements. It was soon discovered that the easiest & quickest way to proceed with the process would be to start from scratch & whilst using the old constitution as a reference, write a whole new constitution.

A few people have said that there is no need to rewrite the constitution or to actually change it as the model constitution will cover any items we miss, the MC felt that this was a less than ideal situation as members would have to refer to 2 separate documents & this in itself would create confusion. This situation would not address the whole membership issue. Both AMRA Federal & AMRA NSW received legal advice that as the constitutions of both these associations stand, there is a very strong likelihood that AMRA NSW may not have any members under the current federal membership model. This creates a whole lot of other issues for AMRA NSW.

At the MC meeting held 24/1/18 it was decided to setup a members review subcommittee to go through the current & draft constitutions and try to come up with a workable & acceptable constitution for AMRA NSW.

This has certainly been a very emotionally charged topic amongst members from all states, with many people angry, upset or just plain confused by it all. The NSW MC understands the sensitivity of the matter & is working hard to ensure the outcome of this process is one that is acceptable for all members.

It has also been said by a few people that only certain opinions are being distributed in newsletters, journals & the such. I want to make one thing perfectly clear. *Any* letter, article etc. that is submitted to me for inclusion in *Matters* will be included in the next issue. That said, I will not publish anything that is derogatory to AMRA, is a direct attack of an individual or group of individuals, or is seen to be an attempt to cause hurt or upset. The only time I will edit any correspondence will be to fit it into the available space. Any comments etc. you wish to be published can be sent to [matters@amransw.asn.au](mailto:matters@amransw.asn.au)

*Damien George*  
*Editor Mortdale Matters*

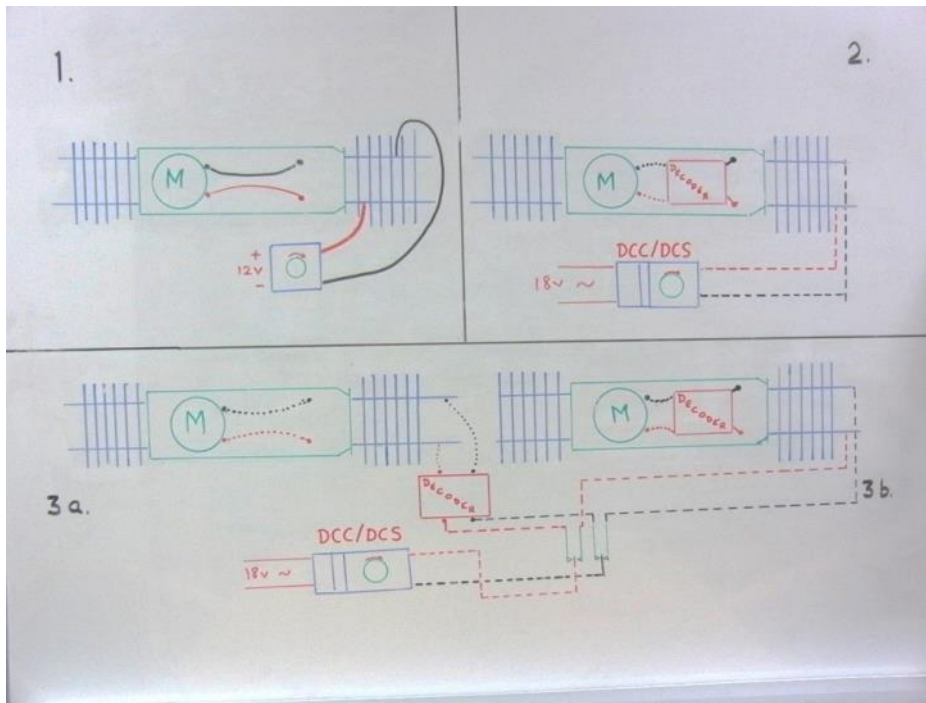


# Running DC & DCC together

When a new HO layout was planned for the 'new' AMRA NSW club rooms at Mortdale which we took over in 2002, very few members had any interest in DCC. Accordingly DCC was not adopted. A decade later and with a growing interest in DCC for HO scale models, a scheme was devised to provide DCC as well as DC control. Many layouts have been built with a hybrid arrangement to allow operations of both types of locomotive. Techniques include making the layout switchable so that DCC can run sometimes and DC at other times, or providing DCC on some tracks and DC on the rest. Our plan was to provide for both types of locomotive at the same time, on the same track, thus enabling a train pulled (or pushed) by a DCC or a DC locomotive to be followed by a second train with either a DC or DCC locomotive. Many other features were also to be incorporated. What follows is an explanation of how this has been achieved on the club's HO layout 'Stoney Creek'.

Interestingly there have been 'expert' opinions (freely offered) that such a thing is impossible! First, a note about DC motors fitted to HO scale locomotives other than Märklin. Almost all are permanent magnet motors which reverse by reversing the voltage to the brushes. As the name implies they run on direct current. They will also run on half or full wave rectified alternating current, pulsed square wave and many other forms of power. The point is that, although the voltage may vary, the polarity at the motor brushes is constant, ie +ve to one brush and -ve (or ground) to the other when running in one direction.

A second thing to note is that the motors in DCC equipped locomotives are the same type as the motors in DC locomotives. Anyone who has bought a 'DCC Ready' locomotive knows this because it runs under DC, but becomes a DCC locomotive by simply replacing the dummy chip with a DCC decoder chip. So let us look at these diagrams to see what is happening.



**Diagram 1** illustrates a DC loco on a track. Power is provided to the track via a DC controller which regulates the voltage across the rails, and through the wheels and pickups to the motor. The connections are shown in RED (+ve to the right-hand rail for forward) and BLACK (-ve to the other rail). There may be a small lighting circuit in the locomotive. Remember that the power to the motor could be half-wave or fully rectified AC, a pulse-width modulated supply, a chopped wave, or of course a basic regulated DC type (or even a battery).

**Diagram 2** illustrates a DCC loco on a track. Power is provided by a DCC controller and booster. The power at the rails is a complex high frequency square wave – being a source of power and embedded coded

messages. This complex wave form is conducted from the rails via the wheels to a decoder in the loco. The decoder interprets the coded information to control sounds, lighting etc. and directs power to the motor brushes. The power to the motor is not simple DC, but more like a pulse width modulated square wave with the +ve to one brush and the -ve (or ground) to the other. The motor in the locomotive is the same type as the motor in the previous case.

**Diagrams 3a and 3b** illustrate two sections of track with a DC locomotive on 3a and a DCC loco on 3b. The track sections are isolated so that the power to 3a is not fed to 3b. You will see that the motor in 3a is fed with the power output from a decoder which is at the side of the track. The motor in 3b is also fed from a decoder but in this case the locomotive is DCC equipped and the decoder is inside the loco. A relay switches between the two paths, sending decoded DCC power to the track section for the DC loco,

and sending DCC power to the section for the DCC locomotive with its on-board decoder. As is shown, the motors receive the same power – output from a DCC decoder.

'Stoney Creek' is provided with a relay and decoder for each track section, and as each train moves from section to section, the relays are switched so that the DCC booster output is directed either to the track-side decoder OR to the track, according to the type of locomotive in each section. Thus both types of locomotive are provided for. There is a great deal more below the base board, but at least some of the mystery may be cleared up by the this explanation.

Robert Merrick  
Member 5036

## **M**ortdale Market

There are still plenty of items available for sale in the cabinet. If you are interested in any of these items please speak to Ken

## **N**Scale Layout

It is a slow process of installing the interconnecting wires for the signaling system, 280 connections for the signal boards alone, then the detector boards and ancillary components. We are going back over some of the already installed wiring and fitting cable identification labels to assist in fault finding in the future.

*David Bennett*

## **B**uilding Report

The fire extinguishers, hose reels and the fire blanket were examined last month, they all passed inspection. The emergency exit lights were inspected and two had new batteries installed. We need to purchase batteries for some of the emergency lights upstairs.

*David Bennett*





# H0

# Stoney Creek



"PIZZA DISCUSSIONS"  
(H0 FIXED LAYOUT)

13/01/2018, 15570 Hours Of Operation.

## LAYOUT OPERATION

With more & more of the layout becoming fully operational, and as such more & more members wanting to run their trains on the layout, at some time the layout gets quite full. The layout committee did foresee this all those years ago when the initial design for the layout was being prepared. The layout committee also presented to the members at the time the different possible control systems that could be installed on the layout. That is how the layout has arrived at the current state.

Once all that was decided on, it was agreed that there would need to be some rules put in place to ensure 1) the layout would be able to move with a full compliment of trains on the mainline. 2) The control system could operate as prototypically as possible. 3) Trains would operate safely & efficiently without derailments or collisions.

Whilst the enforcement of the rules has been a little forgiving up till now, it has come to the stage where the rules will be more stringently enforced. There has been several situations over the past month or two where people have blatantly disregarded the rules and this has created some not so favourable operational situations. The problem that seems to be the most prevalent is members putting over length trains on the layout. The limit on the layout is 4m. Any trains over this length will create issues with the signalling system and will slow or stop the mainline. The MC is currently reviewing the layout rules & will send them out as soon as possible.

*Please be considerate & respectful of others when using the layout and remember everyone is there for the same reason — To Have Fun*

## ACHIEVEMENTS

In the area of Fayenton Branch Main/Loop, and Fayenton—Sutton Branch, a great result has been achieved. The infrastructure Branch has handed over this interlocking to Traffic. In operation it is now possible for a train to come from the Main Line and transfer to the Fayenton—Sutton branch and visa-versa. Also, a train can be taken off the system and reinstated onto the system at Fayenton. This is 95% complete, with just a few cosmetic lights in the CTCC to be completed and the instruction manual.

*Denis Gilmore*  
Stoney Creek layout Coordinator

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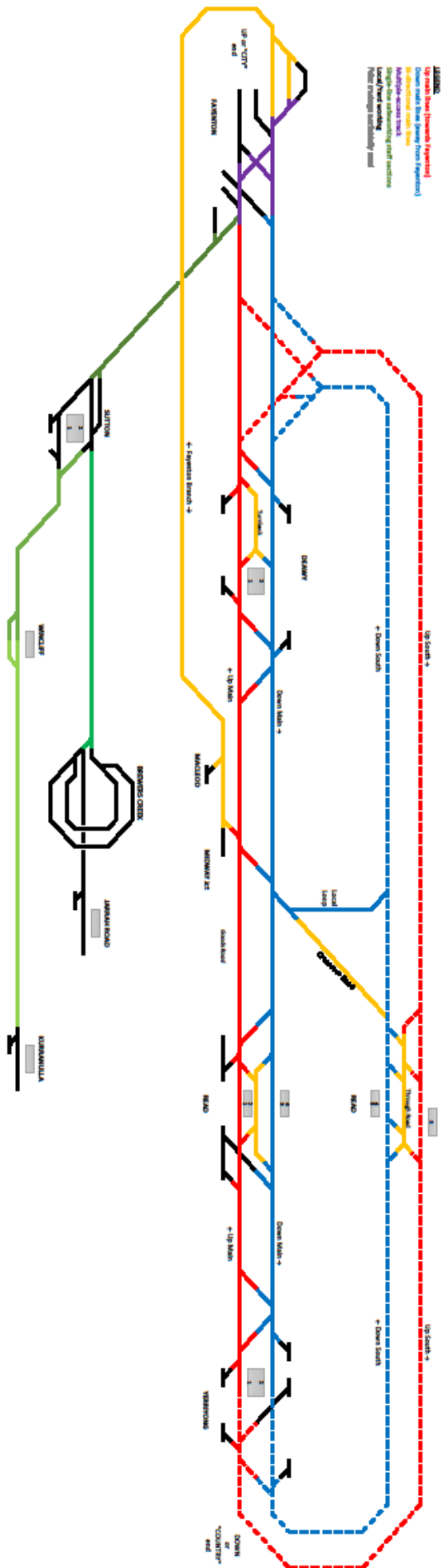
**Above:** Yerriyong has been "Spoiled". The spoil train is sitting in Yerriyong yard awaiting its next duty. (*Andrew Murphy*)

**Right:** An updated schematic of Stoney Creek, showing all major trackage now in use. (*Glenn Percival*)

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# Scale Fixed Layout

## Universal Layout.

Currently, the two tracks operate in tandem. They can operate in any one of the two rail modes, 2-rail or 3-rail and any one of the traction power modes, AC, DC or DCS. This unfortunately limits the versatility of operation.

This has been redesigned and is undergoing modification to allow each track to be operated independently in either 2-rail or 3-rail mode with any one of the AC, DC, DCS or Legacy power traction modes.

This will allow two operators to run trains in modes of their choice. Cross-over between the two tracks will only be possible when the two rail modes are the same as are the traction power modes.

Cross-over to the Heritage Layout will only be possible when the Universal Outer Track is in 3-rail and DC power traction mode.

Current state of these modifications is as follows :

Construction of traction, point and lighting power supplies completed.

Star-wiring of traction power feeds to both tracks completed and connected to current controls.

Operation of trains under existing layout has shown improvement in control, particularly in the case of DCS operation – there are no “dead spots” evident.

The cross-over point between the two tracks and associated wiring has to be checked and probably re-wired by M. Haynes.

Design of the two control panels is under way by G. Wallace. Assistance will be required to produce appropriate CAD drawings to allow production of the panels of the same type as used on the HO layout.

Control logic will require production of either professionally manufactured circuit boards for which electronic CAD drawings are required or the logic circuitry can be manufactured using Vero board construction techniques.

The long delay in these modifications has been primarily due to difficulties in getting assistance when required from technical AMRA members.

## Turntable for Universal Layout.

The turntable was purchased some time ago and will be installed in the inner track of the universal layout. The turntable will be available only for 3-rail operation and no access will be possible for 2-rail operation.

Installation of the turntable will commence when the modifications are complete and commissioning of the re-wiring, cross-over logic and control panel operation has been satisfactorily completed. This depends largely on designing and manufacture of the two control panels.

Another option is the make mock-ups of the two new control panels whilst awaiting appropriate drawings to be made available.

Some discussion is still necessary to decide on the way the turntable operation is to be conducted. When this is finalised the appropriate positioning can be decided.



## Heritage Layout.

There are some issues on this layout due to the age and type of relays and switches employed. This has required an increasing amount of “break down” maintenance.

Traction power controllers require re-location to prevent overheating of the output transistors, 2N3055, which have been mostly replaced by higher breakdown voltage and output power equivalents. The heat sinks are still mounted in areas where air circulation is almost non-existent so new mounting areas will be chosen.

The centre-rail requires replacing and/or fixing in a number of areas. This will commence when work on the Universal layout permits. At the moment temporary repairs are instituted. The purchased Voltage/Current meter will be installed when traction power controllers are re-sited.



**Above:** NSWGR 1805 working hard shunting the dairy siding on the O Gauge fixed layout. *(Bruce Harris)*





**Above:** 3 Generations of XPT liveries lined up ready for service @ Fayenton (Steve Burrows)

**Below:** There has been extensive testing of the layout during the construction stage. However this was an unplanned test of the catch points in Dewey Down Yard (Aaron Hobson)



**Back Cover:** A London Underground Piccadilly Line service to Upminster waiting for the road. The old style indicators still going strong next to the more modern rollingstock. (Damien George)

# AMRA NSW Branch Inc. Programme - February to April 2018

## FEBRUARY

Fri 2nd	Layout Operation / <i>Programmed Running</i> (see Notes)	7:30pm until 11pm
Sat 3rd	General Activities / <i>Layout Construction</i> (see Notes)	10am until late
Fri 9th	Layout Operation / <i>Programmed Running</i> (see Notes)	7:30pm until 11pm
Sat 10th	<b>Layout Operation</b> (see Notes)	10am until late
Sun 11th	General Activities (see Notes)	10am until 4pm
Fri 16th 11pm	Layout Operation – <b>Australian Diesel</b> / <i>Programmed Running</i> (see Notes)	7:30pm until
Sat 17th	General Activities / <i>Layout Construction</i> (see Notes) - <b>Monthly Forum (3:30 pm)</b>	10am until late
Sun 18th	Layout Construction / Work Day <i>No Facility Fee</i>	10am until finished
Fri 23rd	Train Maintenance and Testing Night	7:30pm until 11pm
Sat 24th	<b>Layout Operation</b> (see Notes)	10am until late
Sun 25th	General Activities (see Notes)	10am until 4pm

## MARCH

Fri 2nd	Layout Operation / <i>Programmed Running</i> (see Notes)	7:30pm until 11pm
Sat 3rd	General Activities / <i>Layout Construction</i> (see Notes) - <b>Stoney Creek Layout - Q &amp; A (1 pm)</b>	10am until late
Fri 9th	Layout Operation / <i>Programmed Running</i> (see Notes)	7:30pm until 11pm
Sat 10th	<b>Layout Operation</b> (see Notes)	10am until late
Sun 11th	General Activities (see Notes)	10am until 4pm
Fri 16th	Layout Operation – <b>American</b> / <i>Programmed Running</i> (see Notes)	7:30pm until 11pm
Sat 17th	General Activities / <i>Layout Construction</i> (see Notes) - <b>Monthly Forum (3:30 pm)</b>	10am until late
Sun 18th	Layout Construction / Work Day <i>No Facility Fee</i>	10am until finished
Fri 23rd	Train Maintenance and Testing Night	7:30pm until 11pm
Sat 24th	<b>Layout Operation</b> (see Notes)	10am until late
Sun 25th	General Activities	10am until 4pm
Fri 30th	<b>CLOSED</b> – Good Friday	<b>Closed</b>
Sat 31st	<b>Open Day – Preparation</b> / <i>Layout Construction</i> (see Notes)	10am until late

## APRIL

Fri 6th	<b>Open Day – Preparation</b>	7:30pm until 11pm
Sat 7th	** <b>OPEN DAY</b> ** visitor entry by gold coin donation	<b>10am until 4pm</b>
Sun 8th	Post Open Day Clean-up / General Activities (see Notes)	10am until 4pm
Fri 13th	Layout Operation / <i>Programmed Running</i> (see Notes)	7:30pm until 11pm
Sun 14th	General Activities / <i>Layout Construction</i> (see Notes)	10am until 4pm
Sun 15th	Layout Construction / Work Day <i>No Facility Fee</i>	10am until finished
Fri 20th	Layout Operation – <b>Electric Traction</b> / <i>Programmed Running</i> (see Notes)	7:30pm until 11pm
Sat 21st late	General Activities / <i>Layout Construction</i> (see Notes) - <b>Monthly Forum (3:30 pm)</b>	10am until
Sun 22nd	General Activities (see Notes)	10am until 4pm
Fri 27th	Train Maintenance and Testing Night	7:30pm until 11pm
Sat 28th	<b>Layout Operation</b> (see Notes)	

## NOTES

- **DAYLIGHTERS: every Wednesday - 10am until 5pm**, the facilities may be used *as permitted* e.g. layout construction, limited running, modelling, etc.
- GENERAL ACTIVITIES: the facilities may be used *as permitted* e.g. layout construction, building maintenance, limited running, modelling, etc.
- WORK NIGHTS: every Monday night, please check with the appropriate layout supervisor, 7:30pm until 11pm, No Facility Fee
- Layout Operation: O and N Gauges operational, HO (fixed) *as permitted during construction*
- Programmed Running: Destination, Sequenced or Timetabled operation as organized for each layout
- Facility Fee unless otherwise indicated: Adults \$8 - Juniors/Seniors (70+) \$5 - Visiting Interstate Member Free.
- Guests are always welcome unless otherwise indicated.
- This program may be subject to change without notice where necessary. Updated programmes available from the Clubrooms, or from [www.amransw.asn.au](http://www.amransw.asn.au)
- Address: 48 Barry Avenue (PO Box 277), Mortdale NSW 2223 - Phone (02) 9153-5901, Fax (02) 9153-5905





