

Signalling Record Society (Victoria) - SOMERSAULT
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Deadline for September issue is 14 August 1988.

NEXT MEETING: Friday, 15 July 1988.

VENUE: A.R.H.S. Library Room, Windsor Rly Station.

MINUTES OF MAY 1988 MEETING

HELD AT: A.R.H.S. Library Room, Windsor Railway Station.

HELD ON: Friday, 20 May 1988.

MEETING COMMENCED: at 2008 hours.

PRESENT: Jack McLean, Stephen McLean, Wilfrid Brook, Jim Brough,
Jon Churchward, Roger Jeffries, Alan Jungwirth, Colin
Rutledge, John Sinnatt, Andrew Waugh, Brad Wooding and
visitor Andrew McLean.

MINUTES OF PREVIOUS MEETING: received (Rutledge/Brook)

BUSINESS ARISING: Nil

CORRESPONDENCE: Jack and Alan received personal letters from Ralph Montagu in
England.

GENERAL BUSINESS: 1. The following decisions were made relating to the opening
of a new bank account at Trafalgar:-

On the bank form, we prefer our application for an account to
be made "by agreement of the members of an association which
does not have a constitution".

The person to sign cheques, etc. is to be one of the
President, Vice President or Treasurer, provided we have the
accounts properly audited. (Rutledge/Brough)

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The meeting appoints Jon Churchward as Honorary Auditor.
(Jungwirth/Rutledge)

The Treasurer and President shall consult and decide the best sort of account to open. (Wooding/Jeffries)

REPORTS AND DISCUSSION: 1. A recent question in NEWSRAIL referred to a collision and derailment near Maribyrnong River Junction in 1942. Alan Jungwirth supplied a photo of the accident.

2. John Sinnatt asked if we knew the exact layout of Birchip (so as to better understand the W.N. instructions). No one knew exactly.

3. Due to the unavailability of railway-type speed boards, a road-style speed board (white with red circle and black numbers) with the specially painted figure of "65" has been used at Tourello Loop.

4. Jack described the present actual layout at Epping, compared with the one pair of points shown on the diagram. This led to a discussion on the proposals for Keon Park-Epping, with power signalling and later CTC. Reservoir will become two platforms only, when surplus track is removed. The new facilities may enable a 20-minute service.

5. John Sinnatt wondered if the frame at Broadmeadows had been removed. The meeting didn't think so, and no one knew of any plans for alterations there.

6. Tenders have been called for the design and supply of Computerised Absolute Block System (C.A.B.S.). C.A.B.S. is the official name for the new electronic safeworking. Questions asked included the following:

- * Will a radio installation on, say the Mildura line, be good enough to work on an adjacent line, say the Sea Lake line, as well?

- * How do we install the loco equipment in steam locos? (Answer - battery powered loco equipment is used.)

7. For the Melbourne Steam Festival in October, three steam trains are to run parallel from Somerton to Dysart; the train on the wrong line presumably runs under absolute occupation.

MEETING CLOSED: at 2121 hours.

SYLLABUS ITEM: Stephen McLean screened a selection of slides taken from India, Thailand, Malaysia and Indonesia. Some of these showed the safeworking and signalling of the countries (Neale's Ball Token, Key Token, lots of bracket semaphore signals) and others showed some other features typical of this part of the world (crowds, passengers on locos, roofs, etc.).

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SIGNALLING ALTERATIONS

- 29.3.1988 BUNYIP. The following alterations were carried out:-
1. Nos 1 and 2 roads were abolished.
 2. Plunger locked points "C", No 2 road to Main Line at down end, were abolished.
 3. No 9 motor operated points at the up end were abolished.
 4. Up home signal No 12 was abolished.
 5. Levers 9 and 12 were sleeved normal. (O 230/88)
- × 29.3.1988 DIAMOND CREEK. Signalling diagram No 13'88 (Watsonia-Hurstbridge) became effective and diagram No 3'87 was cancelled. The following alterations were carried out:-
1. Boom barriers and pedestrian barriers were brought into operation at Hurstbridge Road.
 2. The existing down home signal was converted to a home (light) signal and is controlled from the quadrant lever on the platform or at the up end points.
 3. The existing up starting signal was converted to an automatic (light) signal and is controlled by push buttons located in a box on the wall of the station building and also adjacent to the up end points. Both boxes are secured by 5P padlocks.
 4. When an up train departs from the loop, the push buttons must be operated from the box at the up end points.
 5. An up train departing from the platform will automatically restore the signal to Stop but for a train departing from the loop, the signal must be manually restored to Stop. (O 2133/88)
- × 31.3.1988 LEONGATHA. The scotch blocks at the up and down ends of No 2 road were removed. (O 232/88)
- × 7.4.1988 MANGALORE. The following alterations were carried out:-
1. The LH arm on post 4, lever 48, was removed.
 2. The top RH disc on post 5, lever 46, was removed.
 3. The bottom LH disc on post 9, lever 29, was removed.
 4. Post 13, lever 27, was abolished. (O 242/88)
- × 12.4.1988 WALLAN. Post 2 was converted to a light signal. (O 243/88)
- WN 14/1988 "H" CARS - POWER DOOR OPERATION. Modification will be carried out to all sets to enable the power doors to be controlled from any doorway. The Key Control Station will be located in the Brake Compartment and at each passenger door, and is operated by a 6P key which is already part of a Passengers Guards Kit. To release the doors turn the key switch to the left and to close doors turn key to the right. To remove the key, the key switch must be in the centre position. (O 228/88)
- WN 14/1988 ASPENDALE. A marker board displaying the figure "2" has been erected adjacent to the siding and the driver of the second train into the siding must stop adjacent to the board which will enable pedestrians using the Second Avenue crossing to have a better vision of approaching trains. (TD 31/88)

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WN 15/1988 BARNAWATHA. Signalling diagram No 2'88 became effective and diagram No 11'84 is cancelled. (D xxx/88)

WN 15/1988 NUMURKAH. On Saturdays the signalman will cease duty immediately after the departure of No 8324 up Cobram train. The Shepparton-Numurkah staff used for No 8324 may also be used for No 8335 without being placed through the instruments. (D 245/88)

WN 15/1988 MANGALORE-NAGAMBIE-MURCHISON EAST-SHEPPARTON. The following is the full working of the Composite Electric Staff for these sections:- (D 265/88)

DAY	TRAIN No	REMARKS
Tuesday-Friday	9365	Ticket "A" portion
	9380	Ticket "B" and Staff portions
	8327	Full Composite Staff
	9332	Full Composite Staff
Saturday	9380	Full Composite Staff
	8308	Full Composite Staff
	8307	Full Composite Staff
	8324	Full Composite Staff
	8335	Full Composite Staff
Sunday	8330	Full Composite Staff
	8345	Ticket "A" portion
Monday	9355	Ticket "B" and Staff portions
	8327	Full Composite Staff
	9332	Full Composite Staff

WN 15/1988 VIOLET TOWN. On Sundays the signalman will cease duty immediately after the departure of No 8339 down Albury train. The Violet Town-Benalla staff used for No 8339 may also be used for No 8326 without being placed through the instruments. (D 247/88)

X 17.4.1988 BELL-RESERVOIR. Signalling diagram No 7'88 (Northcote-Reservoir) became effective and diagram No 3'88 was cancelled. The following alterations were carried out:-

1. The double line block system was abolished and replaced by three position permissive (oops sorry, automatic) signalling.
2. Automatic signals Nos T351, T365, T376, T379, T391, T394, T408, T409 and T424 were provided.

BELL

3. The down starting signal No 16 was abolished.
4. Illuminated letter "A" lights were provided on posts BEL102, BEL107, BEL108 and BEL111.
5. Posts BEL108 and BEL110 were converted to three position home signals and provided with Low Speed Lights.
6. Up repeating signal T360 was converted to automatic signal - BEL113.
7. Switching facilities were provided - lever 100.
8. Pedestrian gates were provided at Bell Street.

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9. SP key operated switches were provided on both platforms to enable the departure signals to be placed at Stop to prevent unnecessary operation of the boom barriers in advance.

PRESTON

10. Up home signal post 2 was abolished.

11. A SP key switch was provided on both platforms to enable the up and down automatic signals to be held at Stop in the event of a train remaining at the platform for a longer than normal period of time.

REGENT

12. The up and down home signals were abolished.

13. Up automatic signal T398 was abolished.

14. A SP key switch was provided to control T394.

15. Pedestrian boom barriers were provided at Regent St, and at the pedestrian crossings at each end of the station.

RESERVOIR

16. The down distant signal was converted to an automatic signal T421.

17. The up starting signal was abolished.

(NOTE:- On Diagram 7'88 post 9 has been incorrectly drawn as a down home signal but in fact has been erected as an automatic signal T421.) (02164/88)

x18.4.1988 RESERVOIR. Down automatic signal, T421, was converted to a controlled signal, worked by lever No 1 at Reservoir. Amend diagram 7'88. (0 2172/88)

20.4.1988 BUNYIP. The following alterations were carried out:-
1. The lever control of D2463 was removed.
2. Down home signal No 6 was relocated 270 metres in the up direction.
3. Dwarf signal No 8 leading from the up line to No 1 road was abolished.
4. Levers Nos 4 and 8 were sleeved normal. (0271/88)

26.4.1988 WARRNAMBOOL-DENNINGTON. The Train Staff will be withdrawn and the line will be worked under siding conditions. (0 291/88)

27.4.1988 BENALLA. BP and Mobil Oil Coys sidings were abolished. Amend signalling diagram No 2'72 accordingly. (0 290/88)

WN 17/1988 MANGALORE. The following points, lockbars and signals have been abolished:-

1. Points Nos 20, 34, 36, 40, 42, and 43 were abolished.

2. FPLs Nos 17 and 18, and Lockbar No 41 became pilot levers.

3. FPL No 37 was abolished.

4. Home signals Nos 8, 47 and 48 were abolished.

5. Disc signals Nos 24, 28, 29, 30, 31, 32, 44, 45, 46, and ground disc signal No 25 were abolished.

6. Levers Nos 8, 20, 24, 25, 28, 29, 30, 31, 32, 34, 36, 37, 40, 42, 43, 44, 45, 46, 47 and 48 were sleeved normal.

Amend signalling diagram No 50'86 accordingly. (0 292/88)

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- X 27.4.1988 EPPING. A new No 1 platform and track were commissioned and available for service. Points "B" were equipped with plunger locking and the normal position of the points will be for No 2 road. Two quadrant levers were provided to operate the down home signal, one lever was installed on the platform and the other adjacent to the points. The above arrangements are indicated on signalling diagram No 15/88 which will be issued at a later date in conjunction with power signalling between Reservoir and Keon Park. (D 2178/88)
- X 27.4.1988 TRAWALLA. The closing lever was abolished. (D 313/88)
- X 28.4.1988 BOLTON-ROBINVALE. The following alterations were carried out:-
- Bolton
1. The up and down end staff locks and rodged derails were abolished.
 2. The main line points were equipped with hand locking bars, pins and padlocks.
 3. Up and Down location boards were provided.
- Annuello
1. The up and down end staff locks were abolished.
 2. No 2 road was abolished and the down end main line turnout and scotch block were relocated 145 metres further out.
 3. The main line points were equipped with hand locking bars, pins and padlocks.
 4. Up and Down location boards were provided.
- Bannerton
1. The up and down end staff locks were abolished.
 2. The up end rodged derail and the down end catch point were abolished.
 3. The down end main line points were relocated 145 metres in the down direction.
 4. The main line points were equipped with hand locking bars, pins and padlocks.
 5. Up and Down location boards were provided.
- Robinvale
1. The down home signal and up end plunger lock were abolished.
 2. The up and down end main line points were provided with hand locking bars, pins and padlocks. Scotch blocks were provided at the up and down end of Nos 2 and 3 roads.
 3. A Down location board was provided. (D 314/88)
- X 30.4.1988 FRANKSTON. Siding "A" and the lead from the siding to No 2 road were taken out of use (delta abolished). The following alterations also became effective:-
1. Signal post No 17 was abolished.
 2. Discs on Posts 13 and 14 were removed, together with the two right hand discs on post 12.
 3. The disc on post 19 was secured at Stop.
 4. Points 18, 19, 20 and 25 were secured normal by 8P padlocks.
 5. The lead from the Stony Point line to No 3 road was taken out of use and spiked normal.
 6. Levers Nos 14, 17 and 21 were converted to pilot levers.
 7. Up home signal to No 3 road and Down Home signal from No 3 road were secured in the stop position.
 8. Levers Nos 5, 6, 7, 8, 9, 15, 16, 18, 19, 20, 25, 28, 29, 30, 31 and 37 were sleeved normal. (D 2179/88, D 2199/88)

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X 2.5.1988 WARRAGUL. The following points, lockbars and signals were abolished:-

Warragul "A"

1. Points Nos 10 and 11 were abolished.
2. No 9 FPL was abolished.
3. Home signals Nos 2 and 24 were abolished.
4. Disc signals Nos 3, 4, 5, 21 and 23 were abolished.
5. Points No 17 were spiked normal and will be removed later.
6. Levers Nos 2, 3, 4, 5, 9, 10, 11, 17, 21, 23 and 24 were sleeved normal.
7. Lever No 16 became a pilot lever.

Warragul "B"

1. Points Nos 44, 48 and 54 were abolished.
2. FPLs Nos 47, 49 and 55 were abolished.
3. Home signals Nos 29 and 69, and Calling on arm No 28 were abolished.
4. Disc signals Nos 2, 4, 6, 7, 27, 61 and 70 were abolished.
5. Levers Nos 2, 4, 6, 7, 27, 28, 29, 44, 47, 48, 49, 54, 55, 61, 68, 69 and 70 were sleeved normal.

Amend signalling diagram No 44/86 accordingly. (D 317/88)

X 3.5.1988 REGENT. Pedestrian boom barriers were brought into use at the up and down ends of Regent station. (D 2206/88)

X 3.5.1988 WARRAGUL "A" BOX. Disc signal No 6 on post 4 was taken out of use and will be removed at a later date. Lever No 6 was sleeved normal. (D 334/88)

WN 17/1988 WODONGA "A" BOX. The points and signals at Wodonga Loop are operated by the Standard Gauge Controller, Control. The down home departure signals are controlled by the signalman at Wodonga "A" box.

a) When a down train arrives at signals WOD/6 or WOD/UA and such signal is at the stop position and there is no sign of a train approaching in the opposite direction, the second person must immediately contact the signalman at Wodonga "A" Box via the telephone located at the signal.

b) Should the signal have failed, the following steps must be taken:-

i) The signalman at Wodonga "A" must confer with the Train Controller and come to a definite understanding as to what is to take place.

ii) The Train Controller will, if the indicating lights show the points ahead of the defective signal to be in the correct position, apply the "Blocking Command" to secure the points for the passage of the train, and inform the signalman at Wodonga "A" accordingly.

iii) The signalman Wodonga "A" after being informed that the points are set and secured for the passage of the train, will dictate via the telephone to the second person a Caution Order as authority to pass the defective signal. The second person will take down the Caution Order as dictated by the signalman (copies of which will be found in the telephone cabinet) and repeat it back to the signalman to ensure it is correct (the time of repeating back to be endorsed on the Caution Order).

iv) In the event of the points having failed at the crossing loop and the Train Controller be unable to ascertain the position of the points, he will direct the signalman at Wodonga "A" that the second person of the train will be required to operate the dual control point machine as required. The signalman will then direct the second person of what is required. After the second person has operated the points into the hand operated position and they are in the correct position for his train, he will receive authority to pass the signal from the signalman Wodonga "A" as per clause (iii).

c) As soon as practicable a competent employee must be appointed to take control of the crossing loop acting under the instructions of the signalman Wodonga "A".

Insert the above as a new instruction under Wodonga on page 263 of the General Appendix. (D 308/88)

- X 4.5.1988 LITCHFIELD. The following alterations took place:-
 1. The plunger locks and all fixed signals were abolished.
 2. Staff locks were provided inlieu on the main line points.
 3. Level crossing predictors were provided at Borung Highway level crossing.

NOTE: Healthy state indication lights will not be provided at this stage. (D 316/88)
- X 5.5.1988 DONNYBROOK. Levers nos 5 and 8 were removed from the interlocking frame.
- X 5.5.1988 BROADFORD. Levers nos 4, 6, 8, 9, 12, 14 and 15 were removed from the interlocking frame. Pilot lever No 16 now controls the down starting signal on Post 16.
- X 5.5.1988 DONNYBROOK. The down home signal post 4 was abolished. Amend signalling diagram No 12'86 accordingly. (D 318/88)
- X WN 18/1988 UPPER FERNTREE GULLY. A Hayes derail and wheel crowder have been provided at the up end of No 3 road inlieu of the turnout, and will be controlled by No 19 lever. (D 2180/88)
- X 8.5.1988 SEYMOUR CONTROL. Seymour Control was closed and the control of the area north of Seymour was transferred to Transport House. (D 355/88)
- X 8.5.1988 RESERVOIR-KEON PARK. Signalling diagrams Nos 15'88 (Ruthven-Epping) and 17'88 (Northcote-Reservoir) became effective and diagrams Nos 5'88 and 7'88 respectively are cancelled. The double line block telegraph system was abolished and replaced by three position automatic signalling. Further alterations are shown below:-

Reservoir

 1. The signal box and interlocking machine were abolished.
 2. All mechanical points and signals were abolished.
 3. Automatic signals T431, T440, T445, T456, T457, were brought into service.
 4. A 5P key switch to contro. automatic signal T445 was provided on the down platform.
 5. Pedestrian crossing gates were provided at the down end pedestrian crossing and also at High Street level crossing.

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Ruthven

1. The up and down home signals, and platform quadrants were abolished.
2. Automatic signals T486, T470, T471, were brought into service.
3. A SP key switch for T470 was provided at the up end of the platform.

Keon Park

1. The mechanical interlocking frame was abolished.
2. All mechanical points and signals were abolished.
3. A miniature lever control panel to operate the points and signals was provided. The panel also contains express/stopping push buttons for the Barry Road boom barriers.
4. Automatic signals T487, T501, T504 were brought into service.
5. Dual control electro-hydraulic points at the up end, lever 002, and down end lever 007, were provided.
6. The speed restriction for down trains between Keon Park and Settlement Road was cancelled.
7. Automatic pedestrian gates were installed at the Keon Parade level crossing. (O 2211/88)

X 9.5.1988 MURCHISON EAST-STANHOPE LINE. The following alterations took place:-

Murchison

The up and down end staff locks were abolished.

Rushworth

The flashing lights at Goornong-Murchison Road (168.157 km) and the up home signal were abolished.

Stanhope

The up end annett locked points were abolished. The flashing lights at Midland Highway level crossing (185.769 km) were abolished. (O 337/88)

X 9.5.1988 NUMURKAH. The following alterations took place:-

1. The plunger locked Picola junction points were abolished.
 2. The LH arm on post 4 (to Picola line) and the up home signal post 2 were abolished.
 3. Levers Nos 2 and 3 were sleeved normal.
- Amend signalling diagram No 16'73 accordingly. (O 338/88)

X 11.5.1988 KYABRAM. Container Limited siding was abolished. The staff lock and rodded catch points were removed. (O 340/88)

X 11.5.1988 NORTH BENDIGO JUNCTION-BENDIGO RACECOURSE PLATFORM. The flashing lights at Heinz Street level crossing were moved 50 metres in the up direction. (O 336/88)

X 12.5.1988 ECHUCA. The Up Home (Light) signal post No 8, located on the down side of the Murray River, was moved to the left hand side of the track. (O 356/88)

X 13.5.1988 BENDIGO RACECOURSE. The up and down end staff locks and rodded connections were abolished. The points were secured normal and will be removed at a later date. (O 341/88)

X WN 20/1988 DONNYBROOK - Block Hours. (O 361/88)
Mon to Fri - from 1545 hours until 0000 hours.

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- X WN 20/1988 KILMORE EAST - Block Hours. (D 361/88)
Weekdays - from 0530 hours Monday until clearance of No 9308 or 9342 Saturdays.
Sat - from 0800 hours until clearance of No 9316 or 9344.
- from 1800 hours until clearance of No 8337.
- X WN 20/1988 BROADFORD - Block Hours. (D 361/88)
Weekdays - from 0530 hours Monday until clearance of No 9380 Saturday.
- X WN 20/1988 GLENROWAN - Block Hours. (D 361/88)
Wednesdays - for the passage of No 8305 and 8318.
- X WN 20/1988 BARNAWATHA - Block Hours. (D 361/88)
As arranged by the Train Controller, Central.
- X WN 20/1988 WODONGA COAL SIDING - Block Hours. (D 361/88)
Monday - from 0100 hours until 1700 hours.
Tue to Fri - from 0400 hours until 2000 hours.
Saturday - from 0400 hours until the clearance of No 9360.
- X WN 20/1988 ELTHAM - Shunting of Electric Trains. (D 2207/88)
Commencing forthwith the following will apply:-
Trains may be docked or shunted via the up or down ends at Eltham.
- X 20.5.1988 LONGWARRY. The goods siding was abolished and the annett key removed from the apparatus. (D 389/88)
- X WN 20/1988 ASPENDALE - Block Hours. (D 2205/88)
Weekdays - from 0700 hours until 0750 hours and from 1720 hours until 1815 hours.
Sat and Sun - as required and arranged by the Superintendent, Metrol.
- X WN 20/1988 FLINDERS STREET. Metrol is provided with a Special Fleeting facility whereby Dwarf Signals Nos 991-994-995-996 may be simultaneously cleared and left in a "switched out" situation. On cancelling the special fleeting facility, the dwarf signals will revert to Stop. (D 2232/88)
- X WN 20/1988 EURODA and WANGARATTA. The speed limit over the facing points when running on the straight road is now 95 km/h (other stations it is 115 km/h). The speed for the diverging move remains at 40 km/h like all other stations.
- X WN 21/1988 DIMBOOLA. In order to improve the aspects for terminating trains at Dimboola, the departure signal may be cleared (subject to permission from the Train Controller) for the terminating train thereby allowing a Normal Speed aspect on the home arrival signal. When the signalman has ascertained that the train has stopped, he must restore the signal levers to normal and after the approach locking has released, operate the necessary levers to allow the train to enter the sidings. (D 395/88)

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- X WN 21/1988 ELPHINSTONE was abolished as a double line block post and the signals and interlocking were abolished. The new block section is now Kyneton-Castlemaine "A". (O 397/88)
- X 31.5.1988 MARYBOROUGH. The annett locked points leading to the former loco sidings were spiked normal and the "B" pattern key cross-lock was taken out of service. New miniature staff locked points were provided on the main Mildura line at the down end of the yard. (O 408/88)
- X 31.5.1988 WARRAGUL. The following alterations were carried out:-
Warragul "A" Box
 1. Siding "A" was abolished.
 2. No 13 points leading from No 2 road to the up line were spiked normal.
 3. No 19 points, working in conjunction with No 13 points, leading from No 3 road to the up line were spiked normal and will be removed later.
 4. Disc signals No 20 on post 7 and No 26 on post 8 were abolished.
 5. Levers Nos 7, 8, 12, 13, 19, 20 and 26 were sleeved normal.
Warragul "B" Box
 1. Levers Nos 42, 53, 62 and 67 were sleeved normal. (O 410/88)
- X 1.6.1988 BROOKLYN. Boom barriers and pedestrian booms were added to the flashing lights at Kernot Street. (O 409/88)
- X 1.6.1988 BROOKLYN. Boom barriers and pedestrian boom barriers were added to the flashing lights at Kernot Street level crossing 12.528km. (O 409/88)
- X 1.6.1988 PYRAMID. No 2 road was abolished and the plunger locks were moved onto the points leading to former No 3 road which was renamed No 2 road. (O 461/88)
- X 2.6.1988 LOY YANG. Flashing lights were brought into service at Minidale Road level crossing (163.016km) on the down side of Traralgon (158.072km). Yellow whistle posts are provided indicating that a healthy state indicator has been provided. The indication will be a WHITE flashing light mounted on a post and its operation will indicate to crews that the operating systems are functioning normally. If the light is not flashing then the Train Controller must be informed and he in turn will inform the local Signal and Communications staff. (O 419/88)
- X WN 21/1988 KILMORE EAST. Delete the instruction under the heading "LINE CLEAR OR GIVING PERMISSION FOR A TRAIN TO APPROACH" in first column, page 218. Insert the following under the heading "MODIFICATION TO RULE 4" in first column, page 218, as a new instruction:-
 Kilmore East - At Kilmore East the "Is Line Clear" signal may be accepted for a down train in accordance with Rule 3 provided the line is clear as far as post 9. After permission has been given for a down train to approach in accordance with Rule 3, no obstruction of the down line between signal posts 3 and 9 must be allowed until the down train has been brought to a stand at the home signal, post 3, or has been shunted clear of the down line, or the cancelling signal has been received from the signal box in the rear. (O 407/88)

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- ✓ WN 24/1988 ESSENDON - Block Hours.
Mon-Fri: from 0800 until 0830 and from 1700 until 1830 hours.
Weekends: Not switched in. (D 2300/88)
- ✓ 3.6.1988 JEWELL. The pedestrian traffic lights at Brunswick Road were co-ordinated with the rotating red lights for the hand gates.
(D 2275/88)
- ✓ WN 24/1988 LILYDALE - Block Hours.
Mon: from 0420 until 0810 hours and from 1600 until 2000 hours.
Tue-Fri: from 0020 until last train shunted, from 0420 until 0810 hours and from 1600 until 2000 hours.
Sat: from 0020 until last train shunted, from 0420 until 0520 and from 1930 until 2000 hours.
Sun: from 0020 until last train shunted, from 0700 until 0915 hours and from 2250 until last train shunted. (D 2299/88)
- ✓ 14.6.1988 JEPARIT was closed as a staff station and the new section became Dimboola-Yaapect. The home signals and plunger locks were abolished and replaced by staff locks. (D 466/88)
- 16.6.1988 BROOKLYN. Boom barriers were added to the flashing lights at Somerville Road level crossing 15.497km. Trains may be held behind posts 2, 3, 4, 5, 6 and 7 without activating the boom barriers. For movements to or from Dalgety's and Watkins siding the booms are controlled by push buttons. (D 453/88)
- ✓ 27.6.1988 NORTH BENDIGO JUNCTION-SWAN HILL. The various electric and train staff sections between North Bendigo Jcn and Swan Hill are able to be converted into one section of Staff & Ticket. The last train for the week on the short sections is to be No 9080. Eaglehawk is to withdraw an electric staff and lock it and the Dingee section train staff away in the safe. Pyramid must lock away the train staff for the Dingee section away and Kerang must lock away the Swan Hill and Pyramid section staffs. As can be seen from the above, 9080 must travel on the staff except for the Kerang-Pyramid-Dingee sections when tickets are used. After the above has occurred, the Train Controller will authorise North Bendigo Junction to release the North Bendigo Junc-Swan Hill train staff. This staff will be used for the down Swan Hill on Fridays, the up and down Swan Hill on Saturday, the down and up Swan Hill on Sunday and the up Swan Hill on Monday. The Saturday night down and the Sunday afternoon up Swan Hill trains will run on ticket. (D 457/88)
- ✓ WN 25/1988 LILYDALE - New GA instruction.
During the period that the signal control panel is switched out, and immediately prior to the departure of an up train, the SP key switch adjacent to the barrier gate must be operated in order that the boom barriers at Maroondah Highway level crossing will lower and up home signal post LIL305 will assume the proceed aspect for the passage of the train. (D 456/88)
- ✓ WN 25/1988 BERWICK - Block Hours.
Commencing forthwith Berwick will be switched in as arranged by Current Operations Manager, Transport House. (D 455/88)
(continued on page 79.)

ELSTERNWICK AND GARDENVALE SINGLE LINE WORKING

By C.L.Rutledge.

At one time major engineering works caused massive disruption to train running. The manual methods employed in track laying, re-arranging, or bridge works were such that work could take many weeks. Generally in this day and age, mechanisation has allowed this work to be undertaken at night or in circumstances such that minimal disruption is caused to train running. It is usual for most work to be done in the period between last train on Saturday night and first train on Sunday morning under the cover of "Absolute Occupation". The taking of occupation is an arrangement whereby train running is prohibited in a defined area for a period of time and engineering staff are given possession of the line.

Work programmes are planned around the taking of occupation for the shortest practical time but for very large jobs it is sometimes necessary to take occupation after the last train on Friday night until the first train on Monday morning. When occupations are taken on some lines of a large yard or station, alternate lines are available for train running. When occupation of both up and down lines, or one line only is required for longer than Saturday night until Sunday morning, alternate arrangements for the conducting of traffic are necessary.

During the period of an occupation, a service is run as near as possible to the most convenient point on each side of the occupation. A bus service is provided to bridge the gap. Timetable allowances have to be made for the slower speed of the buses and for changing over time for passengers at each end of the trip. Needless to say the hire of buses cost money as does the additional staff required to direct passengers and assist in the termination and reversal of trains.

The costs of the alternative arrangements can be very significant in the cost of the whole job, therefore every avenue is explored to reduce this expenditure.

The widening of the Nepean Highway between Elsternwick Junction and Moorabbin required the rail over bridge at the up end of Gardenvale to be increased in length by a factor of three. The costs for this work were born by the then road constructing authority. As major disruption to rail services would occur during the lengthening of the bridge, it follows that any replacement service during the period of lengthy occupation would be very expensive. A replacement service run by buses would be needed between Brighton Beach and South Yarra (Windsor being unavailable after 1979). The alternative was a rail service over a single line, occupation being granted on the other line.

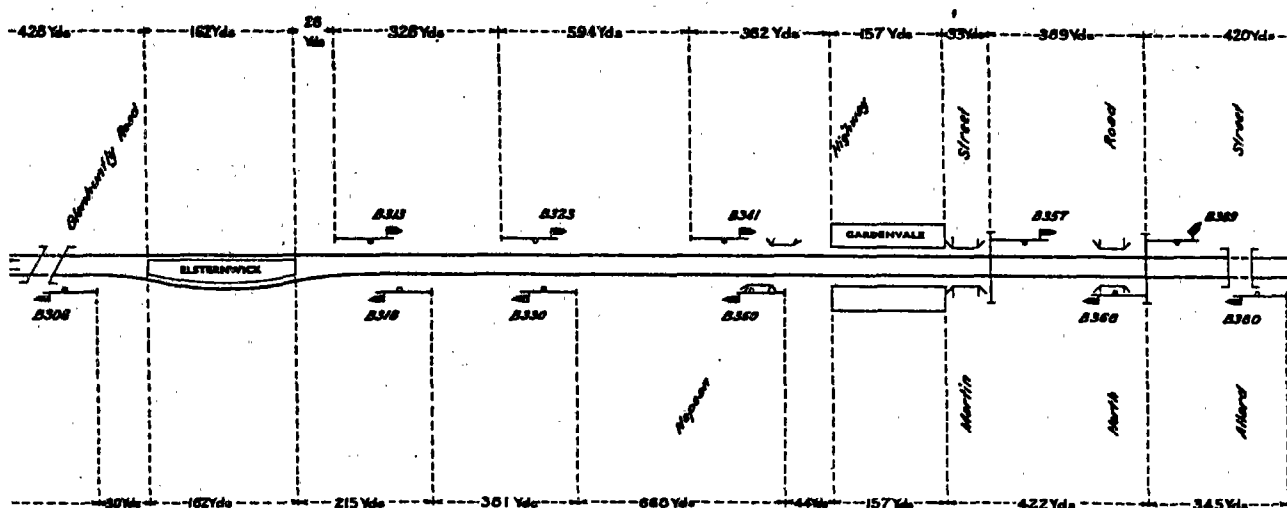
Single line working between South Yarra and Brighton Beach has a number of operational problems making it impracticable. The distance between South Yarra and Brighton Beach is such that the 40 minute Sunday service could not effectively work let alone the 20 minute Saturday timetable. In addition, there are five boom barrier protected level crossings in the section, all of which will not function correctly for trains travelling in the wrong direction on either line.

The solution to the problem was to create a short, manageable section of track which could be operated as a single line utilising the up or down track as required by engineering considerations. The provision of facing and trailing crossovers to avoid the need to set back to get from one line to another was also desirable.

A2383/83 announced that "An emergency crossover has been provided at Gardenvale to facilitate Single Line Working during bridge work at Nepean

Highway bridge". Shortly before, on 11.3.1978, B350 signal was moved sideways two metres, and then on 2.7.1978, B350 was relocated 110 metres in the up direction in order to be clear of bridge works.

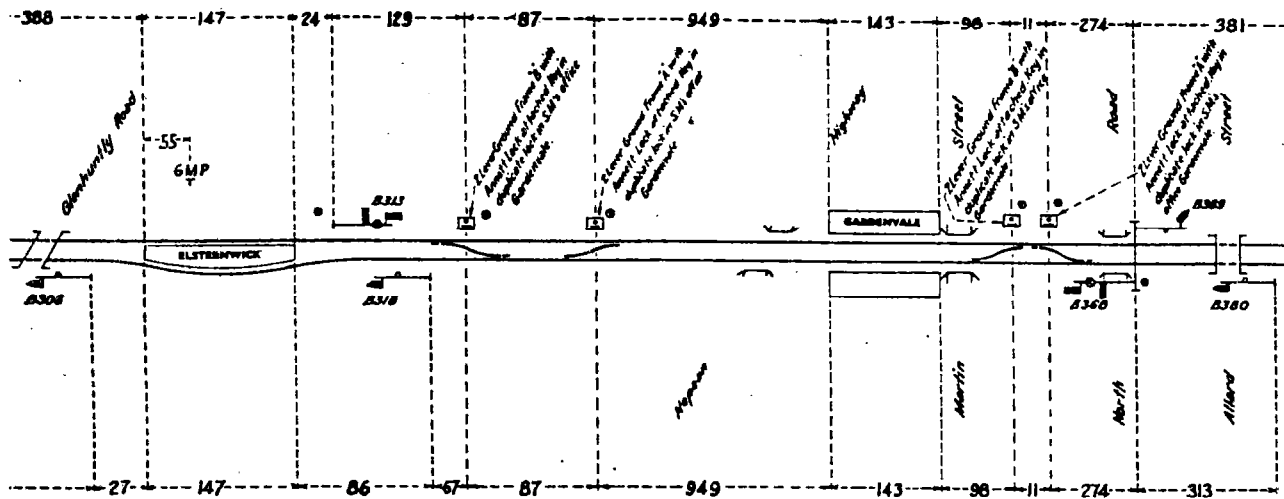
On 23 October 1978, a circular was issued announcing the provision of "Emergency Crossovers" at Elsternwick and Gardenvale to permit single line working during the reconstruction of the Nepean Highway bridge. At both stations, a facing and trailing crossover worked by two lever ground frames were provided. Telephones etc., were housed in a portable type building referred to as a signal cabin.



The first diagram (above) shows the signalling in use prior to the temporary arrangements. Signalling diagram No 18'66 was amended by the circular of 23 October 1978 to show the temporary signalling. Automatic signal B313 at Elsternwick and signal B368 at Gardenvale were converted to home signals by the placing of a second arm below the main arm. Both these signals had a very unusual appearance as the second arms were spaced much closer to the top arms than the standard 7' 0". In addition, the bottom arms were mounted on signal mechanisms giving the appearance of a working arm that, if it drove to yellow or green, would strike the arm above, however, the arms were fixed because none of the usual fixed arm brackets were to hand.

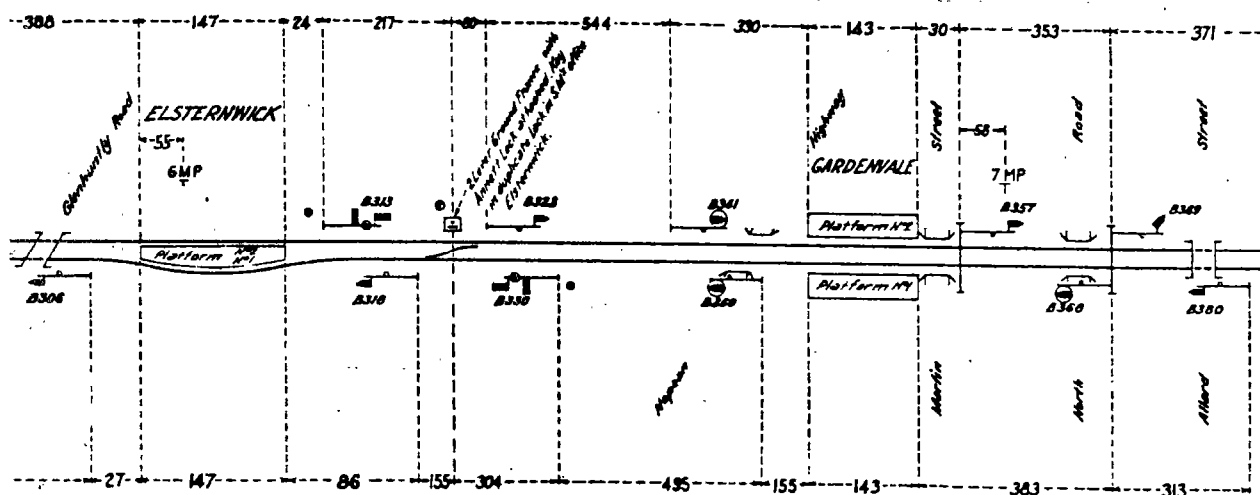
All intermediate signals between the crossovers had their arms removed, train stops secured in the proceed position and circuits altered so that the former signal control circuits between signals became section unoccupied proving circuits. The Home signals applied only to their respective lines and as far as the next automatic signal. The lay of the crossovers at each end of the section were detected in the home signal circuits.

Release of the crossovers was by either two "A" pattern Annett Keys for working over the down line, or two "B" pattern Annett Keys for working on the up line. The Annett Keys were in locks in the down side office at Gardenvale so arranged that only keys of one pattern could be released at a time. Removal of any key placed the home signals to stop and extinguished the illuminated letter "A". Electric locks on the facing crossovers at each end prevented the unlocking of the points if the track over the points was occupied or if a train had passed the home signal on the opposite line at the other end. The second diagram illustrates the temporary arrangements. Shortly after the implementation of the temporary arrangements, a new signalling diagram No 19'78 (next page) was issued in relation to the abolition of all sidings at Windsor.



The bridge work continued for nearly three years when a note was published saying that as from 10.8.1981 the facing crossover at Elsternwick will spiked in the normal position.

The temporary arrangements were finally dispensed with on Sunday, 14.3.1982 when the two crossovers at Gardenvale were removed and the intermediate automatic signals reconnected. The trailing crossover at Elsternwick was retained as was B313 as a Home signal. Automatic signal B330 was reconnected as a Home signal. The third diagram (below), portion of signalling diagram No 5'82, shows the arrangements applying after restoration of normal working. Since that time, all signals have been converted to GRS searchlight type signals.



SAFEWORKING ON THE BALLARAT ELECTRIC TRAMWAY SYSTEM

The following article was received from Peter Barry and is to be read as an appendix to the article published in the May issue of SOMERSAULT by Neville Gower.

SEBASTOPOL LOOPS AND OPERATIONS

The final locations of crossing loops on the Ballarat Tramway system gave the Sebastopol route the following running times:-

Section	Running Time	
	Stopping	Non-stop
	minutes	minutes
Hospital Corner-Urquhart St Loop	3	2
Urquhart St Loop-Bell St Loop	5 1/2	3
Bell St Loop-Grey St Loop	4 1/2	2 1/2
Grey St Loop-Sebastopol terminus	9	5

Thus a 20 minute frequency was the maximum possible with recovery time at the terminus for the dead end section beyond Grey Street Loop. However, with care and determination, a 10 minute service was achieved, but not sustained, in the peaks between the city and Grey Street Loop (see the non-stop times!)

The final timetable for the whole system, from Monday 16 March 1970, shows these features. Two extra cars ran in the peak - the first outward car was at 10 minute interval, but it reversed at Grey Street then waited until the following car arrived. The extra car then led the regular car from Sebastopol back to the city. Thus a three car cross at Grey Street occurred at 8.12am and 4.12pm!! The second extra car followed the regular car from the Hospital (am) or city (pm). In either case they met the inward bound two car convoy at Urquhart Street, making a four car cross at 8.22am and 4.22pm. The second car of this outward bound pair reversed at Grey Street and followed the next regular car from Sebastopol, making a three car cross with the next down Sebastopol at Urquhart Street at 8.42am and 4.42pm.

Between 9am and 12noon weekdays, five cars stowed in the City Loop while a 30 minute service operated. This gave crossings at Bell Street and the City on the Sebastopol-Lydiard Street North route, while the 20 minute service gave crossings at Grey Street, Urquhart Street and the end of the double track near the railway station.

LYDIARD STREET NORTH & THE EASTERN ROUTES

These routes were better endowed with loops at approximately three minute intervals. The minimum frequency was thus about six minutes, however, the crossing loops in the Gardens were five minutes apart. This became the limiting factor on the two routes involved - Victoria Street via Sturt Street West to Gardens (clockwise) and return via Drummond Street North, crossing the cars from Mount Pleasant, which ran anti-clockwise around the lake.

The basic 20 minute service required 10 cars - four for Sebastopol and Lydiard Street North and three for each of the other two routes. One less car on each route sufficed for the 30 minute service.

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The two extra cars did all the special peak working. One just did Depot-Grey Street-City then stable in the morning, while the other did Depot-Lydiard Street North, crossing in each direction (7.22am and 7.32am) at the second loop - Gregory Street, then the first of the two Grey Street workings. After arriving at the city it then continued to Victoria Street, following a Mount Pleasant car, crossing at King Street loop in each direction (8.34am and 8.44am), then through to Hamilton Avenue on the Sturt Street West route to the Gardens, crossing in each direction at the first loop on the single line section - Parker Street - at 8.59am and 9.09am and finally stabling at the city loop.

The evening peak saw one extra car run from City to St Patrick's College - between the first and second loops on the Gardens via Sturt Street West, crossing at Parker Street Loop in both directions (3.38pm and 3.48pm). On return to the city it waited there for 10 minutes and then led the next Victoria Street car to King Street from where it returned to the city. It followed the next Sebastopol car to Grey Street Loop, then returned in convoy to Hospital Corner from where it headed directly to the Depot, crossing at the second loop on the Drummond Street North route.

The second extra evening peak car ran as the 10 minute frequency car to Grey Street, then returned in convoy to the city but reversed in Lydiard Street rather than in Bridge Street and followed in convoy the next Gardens via Drummond Street North to the Depot. This gave a three car cross at the loop just east of the depot.

Allegedly the last inbound car from Lydiard Street North (11.10pm) was the only car rostered to run to the depot via Ripon Street (View Point) but I only saw it follow the last car ex Mount Pleasant via Drummond Street North. This last car from Lydiard Street North was also the second last car, reversing in the city at the long Dawson Street crossover before heading back to Lydiard Street North, while the last car from Sebastopol to the city reversed in Lydiard Street at the city and formed the last to Sebastopol.

SATURDAYS AND SUNDAYS

Saturdays had a 20 minute service until 2pm thence 30 minutes. As the changeover occurred, the Lydiard Street North car was supposed to be five minutes behind the Mount Pleasant car on their run via Drummond Street North to the Depot. This would have produced crosses at both loops in Drummond Street - Duncan Street and High Street - however, I only saw them run together on the earlier path thus avoiding the Duncan Street cross. The third car (ex Victoria Street) ran to the Depot via Sturt Street West and the Gardens, which is its normal route. No extra cars were scheduled for either peak.

Thus the following loops were not timetabled for crosses:-

Route	Loops
MOUNT PLEASANT	GRANT STREET
LYDIARD STREET NORTH	SEYMOUR STREET (1st loop)
DEPOT VIA DRUMMOND ST NTH	MARTIN AVENUE (3rd loop)
DEPOT VIA STURT ST WEST	RUSSELL STREET (2nd loop)
	GARDENS LOOP (5th loop)

Charter tours operated during the final months of the Ballarat system managed to provide crosses at all the loops except Duncan Street.

Signalling Record Society (Victoria) - SOMERSAULT

Some of the time quoted by Neville Gower were in use (all Mon-Fri).

0-20-40 Mount Pleasant inbound, and
Gardens via Sturt Street West outbound.
8-28-48 Mount Pleasant outbound.
10-30-50 Gardens via Sturt Street West inbound, and
Gardens via Drummond Street North outbound.
11-31-51 Victoria Street inbound.
19-39-59 Victoria Street outbound, and
Gardens via Drummond Street North inbound.

VIEW POINT

In the shelter at the City, a board gave the following times for services to View Point et al.

Mon-Fri: 12noon, 12.35pm, 1.05pm, 1.35pm, 4.35pm, 5.05pm, 5.35pm.

Mon-Sat: 11.20pm.

Haddon Street: 12.02pm, 1.02pm and 10.40pm.

A similar board (at the View Point Terminus?) is shown in Keith Kings booklet "The Ballarat Tramways" 1971, p55, but as all times shown are 10 minutes later than the above Monday to Friday service, this must be for yet another timetable. If the one car covered this service, the eight minutes minimum between City departure and View Point departure meant some very slick work as my graphs show View Point Junction on the Gardens via Drummond Street North route as being 10 minutes from the City! On p58 of the same book, Kings states that the View Point service ceased on Friday, 13 March 1970, i.e. at the finish of the timetable prior to that discussed in the text. Certainly, during the final timetable, crews were reluctant to use this route late at night due to cars being parked across the line.

SIGNALLING SYSTEM

The signalling system put up a green light behind the car entering the section, and a red light facing any car at the other end of the section. In Bendigo, two car and larger convoys carried a white disc on all but the last car, thus indicating to a waiting car that another car was following. I did not observe this procedure with the two and more car convoys in Ballarat, but someone else may dispute this.

REVERSING IN THE SECTION

Apart from the depot, Ballarat had at least four points where cars reversed in mid-section:-

Terminal Point	Route	between
Haddon Street	Gardens via DSNth.	2nd and 3rd loops
Hamilton Avenue	Gardens via SSWest	2nd and 3rd loops
St Patrick's College	Gardens via SSWest	1st and 2nd loops
Rubicon Street	Sebastopol	2nd and 3rd loops

The first and second were late night workings, the second also had a reversal in the morning peak whilst the third location was featured in the evening peak. Rubicon Street, between the 2nd and 3rd loops on the Sebastopol route, was used extensively in earlier timetables as a reversal point. Not

Signalling Recreational Society (Victoria) - SOMERGAULT

always was the car in the section visible from this loop, thus the car at the loop waiting for the arrival of the car which had reversed in the section could be confronted with a green light, despite the section being occupied by the returning but out of sight car! A cornfield meet in the making unless Ballarat had a written rule to cover this situation. (Perhaps a reader could let the Editor know.) I certainly observed cornfield meets in Bendigo where non-interval insertion of cars into service was standard practice. An empty car ahead of schedule, or a late running heavily loaded car, could make an out of course crossing a possibility on the Eaglehawk route which was lavishly endowed with crossing loops. By comparison, the Sebastopol route in Ballarat, was very much the poor relation and could well have done with another loop midway between Grey Street and Sebastopol to make a 10 minute service on the whole route a practicality.

EASTERN ROUTES

As cars left the city for Victoria Street and Mount Pleasant via Bridge Street, they faced three sets of signal lights - one for the section to the junction, and one for each of the branches. Here two unusual situations occurred:-

1. Cars reversing to gain the sanctuary of the City Loop, and
2. the evening peak car which turned back at King Street Loop on the Victoria Street line.

This latter car followed an up Mount Pleasant car along Bridge Street by two minutes and crossed a down Mount Pleasant car at the city end of double line. The rule might have been that cars should not enter the section if ANY light shows red and/or Enter and Reverse only if green or no light shows in the Bridge Street section signal.

Bendigo had its differences and similarities to the Ballarat system but that is another story!

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SIGNALLING ALTERATIONS

(continued from page 72.)

15.6.1988 WERRIBEE-LITTLE RIVER. Train Order Location Boards for test purposes were located for viewing on the East and West Lines between Werribee and Little River. (D 472/88)

X 29.6.1988 WARRAGUL. The following signal alterations were carried out:-

1. Points 39 and 40 were disconnected from the interlocking frame and are now worked by WSA hand levers.
2. No 15 catch points in the engine roads were abolished.
3. Disc signals Nos 14, 21, 26, 37, 41, 45 and 46 were abolished.
4. A dwarf (light) signal, lever 22, was provided at the down end and controls movements from Nos 2, 3 and Goods Yard roads to the down line.
5. Levers Nos 14, 15, 21, 26, 39, 40, 41, 45 and 46 were sleeved normal. (D 481/88)

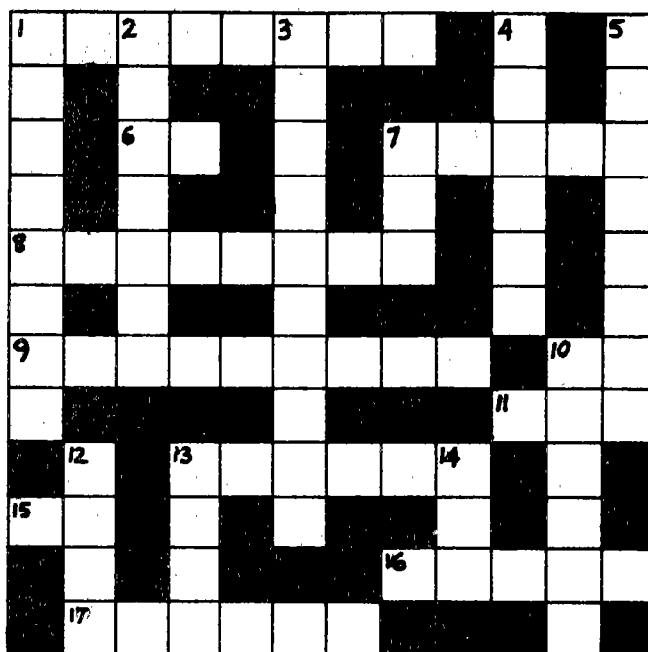
X WN 25/1988 CARRUM - Block Hours.
Mon-Fri: from 0430 until 0730 hours, from 1735 until 1920 hours and
from 2350 until 0035 hours.
Sat: from 0600 until 0730 hours, from 2000 until 2030 hours and
from 2359 until 0045 hours.

S.R.S.V. CROSSWORD No 24 - A SPECIAL B.R. PUZZLE

compiled by Stephen McLean.

Across

1. Timetable was b_____ hard to decipher. (8)
6. A system which operates Pay-trains! (2)
7. Commissioner has argument in economy carriage. (5)
8. Only B or K may be seen on N-S loop. (8)
9. Use broken Lego to build NSW station. (9)
10. System on which The Rocket can be seen running today. (2)
11. Italian junction would be good in Sweden. (3)
13. Hill in NSW where tramway once terminated. (6)
15. Ye travellers may be found on this system. (2)
16. Nine trains depart from this Portugese terminus. (5)
17. Well, I'm bright enough to hide the name of a closed NSW crossing station. (6)



Down

1. I grab mob rioting between Keith and Bordertown. (8)
2. Or station could be same, Rob. (7)
3. Hook blazer untidily up the mountain from 9 across. (10)
4. 254 (6)
5. Yea, this closed station is farther from Melbourne. (8)
7. Use brain - no first class in buffet car. (3)
10. Jim - reliable leader in the branch. (6)
12. Apt, that tilting train was developed here. (4)
13. Train enters this station soon after Hal comes back. (4)
14. Scottish system seen in Spean Bridge. (3)

--oOo--

Solutions to Crossword No 23.

ACROSS: 1. Hawthorn, 7. West, 9. Axle, 10. Light rail, 13. NH, 14. Woy, 15. Stop, 17. Ace, 18. Stalls, 22. Shap, 24. Colin, 25. AM, 27. Neale, 28. Valve gear, 30. ES, 31. Two, 33. Stephensons.

DOWN: 1. Hall, 2. Waugh, 3. Hartwell, 4. Relay, 5. MEX, 6. Steep, 7. Walschaerts, 8. SL, 11. Inst., 12. RD, 16. Tea, 17. AS, 18. Slave, 19. AC, 20. Louvre, 21. Sing, 23. Pelton, 26. Mass, 27. NA, 29. Eye, 32. WD.

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EDITOR'S NOTE: The previous three issues this year have incorrectly shown the volume number as 10 whereas in fact it should be 11. My thanks to all who read the issues so thoroughly and saw the error.