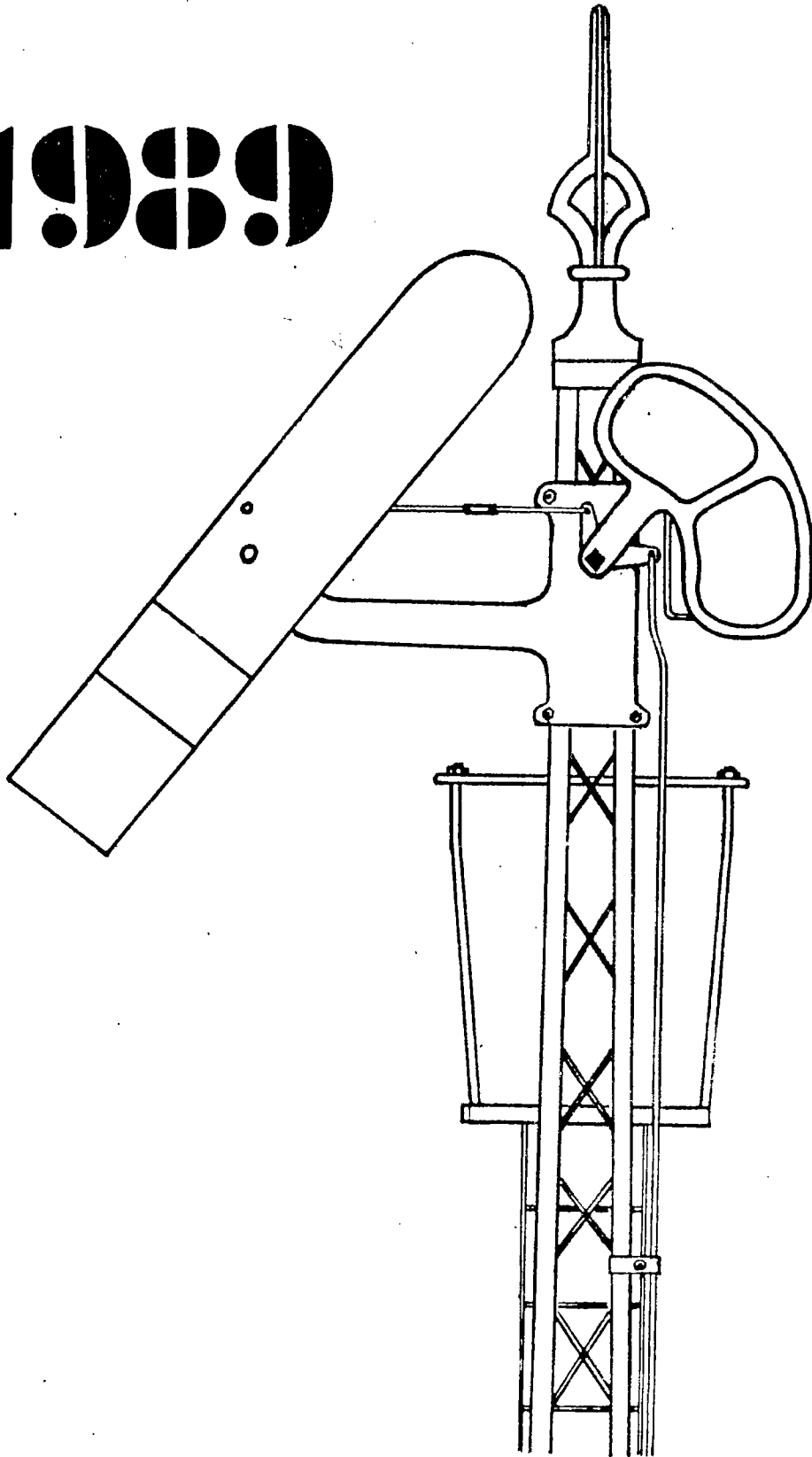


SOMERSAULT

1989



SRSV

SIGNALLING RECORD SOCIETY (VICTORIA)

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Deadline for March 1989 issue is 19 February 1989.
NEXT MEETING: Friday, 17 February 1989.
VENUE: A.R.H.S. Library Room, Windsor Rly Station.

MINUTES OF NOVEMBER 1988 MEETING

HELD AT: Camberwell Railway station.

HELD ON: Friday, 18 November 1988.

MEETING COMMENCED: at 2045 hours. The meeting moved from Windsor as we did not
have a key to get in.

PRESENT: A.Jungwirth, S.McLean, W.Brook, J.Brough, R.Jeffries,
A.McLean, C.Rutledge, R.Smith, R.Whitehead, B.Wooding and
visitor W.Turnbull.

APOLOGIES: J.McLean and J.Sinnatt.

MINUTES OF PREVIOUS MEETING: adopted as read (Smith/Rutledge)

BUSINESS ARISING: The Show Day tour ran well - although a loss of \$70 was
recorded.

CORRESPONDENCE: A.Jungwirth received a personal letter from Peter Pay.

GENERAL BUSINESS: 1. TRAIN ORDER WORKING - introduction said to be put back
from Sunday to Wednesday. No one knows if it actually came
in.
2. Discussion on how many automatic staff exchangers remain in
Australia. Only about 10-20 locations, all in Victoria.
3. South Geelong has been provided with switching facilities
but the installation has never been used.

4. At Longwarry a down train waiting for a previous train to reach Drouin can cause delays to road traffic as there is no facility for stopping the operation of the boom barriers. (Observations and reports of up to 10 minutes have become known. - Ed.)
5. The report that the Donald Freezer Siding had been abolished is incorrect. The connection from the single line has been removed and the flashing lights on the Sunraysia Highway abolished; a new connection not crossing the highway is to be constructed between the siding and Donald Loop.
6. Epping - first stage (main line signalling) is expected to be in use by mid-February.
7. A number of VCE students who did their computer case studies on Metrol were very enthusiastic about the system.

MEETING CLOSED: at 2110 hours.

SYLLABUS ITEM: Roderick Smith showed a selection of slides from some of the more unusual parts of the world he has visited. Slides of railway facilities of all sorts, and a few not of railways but of definite interest, were combined in an imaginative sequence and accompanied by an often-humorous commentary. The tour ranged from Mongolia to Antarctica, from sea level to the heights of La Paz, from buses on wheels to international expresses, and from "Km 0.000" to "The End".

NEXT MEETING: Friday, 17 February 1989 at the A.R.H.S. library room at Windsor railway station (upside).

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SIGNALLING ALTERATIONS

- WN 41/1988 END OF TRAIN MARKERS. Security of End of Train Markers will be improved by the substitution of 13P padlocks inlieu of "R" clips. Interstate trains will continue to have "R" clips. (O 870/88)
- X 2.10.1988 MOONEE PONDS. Automatic signal E372 was relocated 20 metres in the down direction and altered to a colour light signal. Amend diagram 49'87.
- X 5.10.1988 WODONGA "A" BOX. The following points and signals were abolished:-
1. Points 34 and 42 between the Main Line and the former Cattle Sidings.
2. Signals 31, 32, 36 and 37.
3. The Cattle Sidings were taken out of use. (O 874/88)
- X 10.10.1988 BRADMEADOWS. The hand points leading to Sidings "C" were spiked normal and the sidings will be out of use. Amend diagram 43'87. (O 2604/88)
- X 10.10.1988 VICTORIA PARK. The hand points leading to the public sidings were spiked normal and the sidings placed out of use. Siding "A" will still be in service. Amend diagram No 57'87. (O 2603/88)

- X 11.10.1988 WERRIBEE-LITTLE RIVER. Train Order Location Boards for test purposes only were located for viewing by Train Crews on the East and West lines between the above stations. (O 894/88)
- X 12.10.1988 SEYMOUR "B" BOX. The following alterations were brought into use:-
1. No 54, 55 and 56 points were abolished.
2. No 57 points were converted to hand operation
3. Disc signal 44 was abolished.
4. Disc signal 63 was converted to a ground disc and moved 48 metres in the up direction.
5. Nos 7, 8 and 9 roads were abolished.
6. A connection was provided between "X" and the dead end sidings at the down end.
7. Levers Nos 44, 54, 55, 56 and 57 were sleeved normal.
Amend diagram No 8'87. (O 881/88)
- X 13.10.1988 DUNOLLY. The WSA levers operating the points leading from Nos 2 to No 3 road in the middle of the yard were abolished and replaced with a non-trailable point machine in No 2 road and rodged to the points in No 3 road. The non-trailable points are fitted with a non-trailable type indicator which displays a large reflectorised green diamond when the points are normal and locked. Two red reflectorised discs are displayed when the points are reversed.
(O 902/88)
- 15.10.1988 INVERLEIGH. The End of Train detection devices that were under test at 96km were withdrawn from use. (O 930/88)
- 17.10.1988 BALLARAT NORTH-MARYBOROUGH. Electronic End of Train Detection was provided at Sulky Loop, Tourello Loop and Talbot. A train passing through the above area must exchange the standard End of Train Marker for a modified End of Train Marker. The trackside equipment will radio to the Driver via the End to End Radio the following message:-
ALERT TONE - note rising for up trains and falling for down trains.
LOOP NAME
DIRECTION OF TRAVEL
MESSAGE THAT TRAIN COMPLETE
A typical message will take the form:-
"Sulky Loop, up arrival complete" or "Tourello Loop, down departure complete"
Only trains in close proximity to the loop will hear the message as the power output of the transmitter is kept intentionally low.
Other messages that may be transmitted will indicate Low Batteries and/or Tail Light not Working, Faults in the transmitter equipment etc. The modified End of Train Marker will emit a continuous coded message that is picked up by the Track Detectors (two receiving magnetic coils in the track) and relayed to the computer controlled equipment in the Radio Mast. A solar panel is provided to charge the battery pack. (O 893/88)
- WN42/1988 BALLARAT NORTH-MARYBOROUGH. The electronic end of train devices that were to have been installed for testing at Sulky Loop, Tourello Loop and Talbot has been deferred until further notice. (O 912/88)

- WN43/1988 SOMERTON - FORD'S SIDING. Permission is granted for up to 12 vehicles to be pushed along the main line. (O 941/88)
- WN43/1988 BUNYIP-LONGWARRY. The instructions for the automatic operation were republished presumably with amendments. (The details will be published later in 'Somersault'.) (O 904/88)
- WN43/1988 ALBION LOOP, McINTYRE LOOP, TULLAMARINE LOOP, JACANA LOOP and SOMERTON LOOP. The Yale Keys to release the Pilot Staffs, previously located in the Train Control Cabins, have been relocated as under:-
ALBION, McINTYRE and TULLAMARINE LOOPS - Sunshine Signal Box.
JACANA LOOP - Broadmeadows Signal Box.
SOMERTON LOOP - Somerton Signal Box. (O 921/88)
- 25.10.1988 ECHUCA. The up home light signal No 8 located on the down side of the Murray River was relocated 20 metres in the down direction. The flashing light mast was also relocated to allow for the altered road approaches to the river bridge. (O 930/88)
- 26.10.1988 BALLAN. The up home departure signal was replaced insitu by a straight mast. (O 933/88)
- * 26.10.1988 DUNDOLLY. The following alterations were carried out:-
1. The up end "A" pattern annett locked crossover from the main line to the GEB sidings was taken out of service and the points were fitted with a non-trailable point machine and "F" pattern annett lock.
2. The points from No 1 road to siding "B" was placed out of service and the small point lever fitted with an "A" pattern annett lock and plunger lock, was abolished.
3. Up departure home signal post 6 was abolished.
4. The up end plunger lock points were spiked normal and will be removed at a later date account loop being lengthened at this end.
5. Trailable facing points "B", fitted with an "E" pattern annett lock, were provided at the new up end junction of Nos 1 and 2 roads.
6. A non-trailable point machine, fitted with an "F" pattern annett lock and rodded to derails and catches, was provided at the up end of the GEB sidings.
7. Up departure signal post 5 and down home arrival signal post 7 were abolished.
8. A new down home arrival (light) signal post 5 was provided. This signal is worked from SP key switches located on the platform and at points "B".
9. Dual miniature annett locks patterns "E" and "F" were provided on quadrants "H" and "G" at the down end points.
10. Quadrants Nos 1 and 2 on the platform were fitted with "F" pattern annett locks. (O 913/88)
- 27.10.1988 BALLAN. Levers 6, 10, 11, 13, 18 and 24 were disconnected from the interlocking and levers 2, 3, 9, 22, 27 and 29 were sleeved normal. Signals formerly controlled by levers 2, 3, 27 and 29 will now be controlled by levers 4, 5, 25 and 26 respectively. (O 933/88)

- 27.10.1988 MOAMA The Meninya Street-Shaw Street level crossing was relocated 20 metres in the up direction to 251.830km. Healthy state lights were provided. (O 931/88)
- 30.10.1988 ESSENDON. The down home signal post 8 will be moved one metre in the up direction and 600mm further out from the track. (O 2645/88)
- 3.11.1988 LAL LAL. The down distant signal was relocated 411 metres in the up direction. The down arrival home signal was relocated 165 metres in the up direction. The up end points No 9 were brought back into service in their new location, 263 metres further out in the up direction. The points are secured by an Annett Lock, the key of which is normally kept in a duplicate lock on the interlocking frame. (O 934/88)
- WN44/1988 NAGAMBIE-TOOLAMBA. New signalling diagram No 24'88 became effective and diagram No 14'73 is cancelled. The diagram is issued to show the current situation at the stations concerned. (O 947/88)
- WN44/1988 WUNGHNU-TOCUMWAL. New signalling diagram No 26'88 became effective and diagram No 16'73 is cancelled. The diagram is reprinted to show the current situation at the stations concerned, (O 948/88)
- WN44/1988 DUNOLLY. The speed limit for down trains arriving into No 1 road is 40 kmph, for up trains departing from No 1 road - 40 km/h and from No 2 road - 65 km/h, until locomotive has cleared the points. (O 951/88)
- WN44/1988 DUNOLLY. The up end trailable points are provided with an operative switch stand, the normal lie of the points being for No 1 road and the down home arrival signal is electrically detected with these points. For down movements into No 1 road the signal can only be worked from the platform but for movements to No 2 road, the signal is only worked from the points. A green hand signal must also be displayed similar to a plunger locked installation to show that the points are set for No 2 road. (O 952/88)
- WN45/1988 SAFEWORKING SYSTEMS. During November 1988 Train Orders will be introduced as a new safeworking system in Victoria. In order to avoid confusion, the Train Order forms 2368 (formerly TR13H) presently in use in other safeworking systems have been renamed TRAIN AUTHORITY forms. Old stocks of Train Order form 2368 are being withdrawn and are replaced with the new TRAIN AUTHORITY forms which are also numbered 2368. In the other safeworking system instructions, the words TRAIN ORDER where they appear are to be replaced by TRAIN AUTHORITY. (O 970/88)
- WN45/1988 GHERINGHAP-YENDON. New signalling diagram No 28'88 became effective and diagram No 22'84 is cancelled. The diagram is issued to show the extended loops at Lal Lal and Meredith. (O 964/88)

- WN45/1988 SULKY LOOP, TOURELLO LOOP AND TALBOT. The instructions regarding the provision of the electronic end of train detection to commence on 17.10.1988 were issued again. [Does this mean that the tests have in fact started?] (O 893/88)
- WN45/1988 SUNSHINE. A Hayes derail has been provided on the down side of Anderson Road on the lead between Sidings "B" and the Albion Sidings. (O 965/88)
- WN46/1988 WANGARATTA-SPRINGHURST. The 95 km/h speed restriction on the curve at Bowser is hereby cancelled. The curve boards will be removed. (O 986/88)
- 11.11.1988 HAMILTON. Large staff locks were converted to Master Key locks (similar to miniature staff locks).
- 13.11.1988 TRAIN ORDER WORKING. The following lines were converted to train order working:-
1. South Geelong-Warrnambool
 2. Ararat-Portland
 3. Maroona-Gheringhap
 4. Heywood-Mount Gambier

SOUTH GEELONG - WARRNAMBOOL

Train order working is in force on the following sections:- South Geelong-Waurn Ponds-Winchelsea-Colac-Camperdown-Terang-Warrnambool. Electric staff working on the sections South Geelong-Winchelsea-Colac and Staff & Ticket working on the sections Colac-Camperdown-Warrnambool has been abolished. The intermediate electric staff instrument at Waurn Ponds was removed.

Boards lettered "COMMENCE TRAIN ORDER WORKING" and "END TRAIN ORDER WORKING" have been provided at South Geelong and Warrnambool.

Until the signalling staff at Geelong "B" Box have been trained, the Train Controller will issue the train orders for Warrnambool line passenger trains to the signalman at South Geelong.

Trains may cross at Winchelsea, Colac, Camperdown or Terang as required and until the flashing light circuits have been altered, Winchelsea, Colac and Camperdown must be attended for ALL train movements.

Three master keys have been provided for the train order territory South Geelong-Warrnambool. Two master keys lettered SOUTH GEELONG-WARRNAMBOOL coloured orange and numbered 11 and 12 were provided, one key normally kept at South Geelong and the other at Warrnambool. The third master key lettered SOUTH GEELONG-WAURN PONDS coloured orange and numbered 13 will normally be kept at South Geelong.

The fixed signals at Winchelsea, Colac, Camperdown and Terang will be normally kept at proceed and until such time as the circuits have been altered, trains must proceed through the following level crossings at reduced speed:-

COLAC - Queen Street, Hart Street and Armstrong Street,

CAMPERDOWN - Cressy Road, Church Street and Micklejohn Road, and

TERANG - Thompson Street, speed boards indicating the permitted speed were erected.

At Wauru Ponds, trains must not cross until such time as the signalling requirements have been worked out, thus a local goods must return to South Geelong with the master key before another train is permitted to enter the section South Geelong-Winchelsea.

GHERINGHAP - ARARAT

Train order working is in force on the following sections:-

Ararat - Jacksons Loop - Maroona - Tatyoon - Pura Pura - Lismore - Cressy - Inverleigh - Gheringhap.

Automatic Electric Staff working on the sections:-

Maroona - Tatyoon - Westmere - Pura Pura - Derrinallum - Lismore - Berrybank - Cressy - Wingeel - Inverleigh - Gheringhap has been abolished.

Boards lettered "COMMENCE TRAIN ORDER WORKING" and "END TRAIN ORDER WORKING" were provided at Ararat and Gheringhap.

Crossing loops that are currently in operation are:- JACKSON LOOP, MAROONA, TATYOON, PURA PURA, LISMORE, CRESSY and INVERLEIGH. Electronic end of train detection was installed at the above loops except Maroona. A symbol indicating the provision of this equipment is provided on the location boards for the respective loop. The crossing loops at WESTMERE, DERRINALLUM, BERRYBANK and WINGEEL have been temporarily spiked put of use.

Ten orange coloured master keys numbered 1-10 have been provided for train working in the Gheringhap-Ararat-Portland train order territory. The keys are normally kept at Gheringhap, Ararat, Heywood and Portland.

The signals at Maroona will be kept normally at proceed for through movements between Gheringhap and Ararat. Until flashing lights circuits have been altered, trains must pass the following crossings at reduced speed:-

CRESSY - Hamilton Highway and WESTMERE - Glenelg Highway, speed boards indicating the permitted speed have been erected.

MAROONA - PORTLAND

Train order working is in force on the following sections:-

Ararat-Jacksons Loop-Maroon-Willaura Loop-Glen Thompson-Dunkeld-Grampians Loop-Hamilton-Chrome Loop-Myamyn Loop-Heywood-Gorae Loop-Portland.

Automatic Electric Staff working on the sections:-

Ararat-Jacksons Loop-Maroon-Willaura Loop-Glen Thompson-Dunkeld-Grampians Loop, and Myamyn Loop-Heywood, and Train Staff and Ticket working on the sections Grampians Loop-Chrome Loop-Myamyn Loop and Heywood-Portland has been abolished.

Boards lettered "COMMENCE TRAIN ORDER WORKING" and "END TRAIN ORDER WORKING" were provided at Portland. Electronic end of train detection equipment will be provided at loops as it becomes available.

Miakite Loop has been renamed Chrome Loop and Gorae Loop (Heywood - Portland) has been brought into service.

Until the circuits have been altered, down trains must approach the Clay Street level crossing at Heywood at 50 km/h, speed boards have been erected.

HEYWOOD - MOUNT GAMBIER

Train order working is in force on the following sections:-

Heywood-Dartmoor-Glenburnie-Mount Gambier.

Staff & Ticket working on the section Heywood-Mount Gambier was abolished.

Boards lettered "COMMENCE V/LINE TRAIN ORDER WORKING" and "END V/LINE TRAIN ORDER WORKING" have been provided at Mount Gambier. A telecom phone will be provided in the Glenburnie amenities cabin.

At Heywood, the signalman must be on duty at least 30 minutes before a train from Mount Gambier arrives at the station. The train must not be permitted to pass the location board until the station is attended to avoid blocking nearby level crossings if the train is delayed at the home signal.

Dartmoor is shown as a Train Order station but must not be used for crossing trains, its sole purpose is to facilitate follow on moves. Drivers must report their arrival at Dartmoor to the train controller.

When trains are issued with a train order to proceed to Glenburnie, the order must state whether the train is to lock away or not. The shunter in charge of the movement must not advise the train controller that the train is clear of the main line until the points have been secured for the main line. A fresh order must then be obtained before the train enters the main line again. Whilst the train is locked away, the train controller may request the driver to perform a roll-by inspection of the passing train. In this case, the locked away train must be issued with a fresh order until it is ascertained that the passing train is complete.

To avoid being detained at the home signals at Mount Gambier thus blocking nearby level crossings, trains approaching Glenburnie must stop at the location board and contact the train controller via the radio. The train controller must ensure that the signalman is in attendance before permitting the train to depart for Mount Gambier.

The special instructions applying to AN movements between Mount Gambier and the South Australian Woods and Forests Department siding are cancelled. (O 990/88)

- WN47/1988 BOOK OF RULES AND REGULATIONS. The new book amended to December 1987 is now being issued to employees.
- WN47/1988 KILMORE EAST-SEYMOUR. Trial running of "G" and "BL" class locomotives has commenced and the speed limit will be 80 km/h. When passing over the bridge at the down end of Tallarook station the speed shall be 30 km/h. (O 1037/88)
- 13.11.1988 GORAE LOOP was opened for crossing purposes under the Train Order System.
- 14.11.1988 RAILMOTOR TRAINS. All railmotors will be operated by a Driver and a Conductor only. Amended instructions to the General Appendix were published for the operation of railmotors. (O 984/88)
- 14.11.1988 BRIGHTON BEACH. No 1 road (Back Platform) was booked back into service. No 9 points were unspiked and will operate as normal. (O 2672/88)

- 14.11.1988 MITCHAM. Siding "A" was booked back into traffic. Levers Nos 14 and 15 were unsleeved. (O 2671/88)
- 14.11.1988 RAIL MOTOR TRAINS. Trains operated by rail motors and/or trailers will be progressively converted to driver and conductor working. Amendments for the General Appendix instructions were published. (O 984/88)
- 16.11.1988 HAMILTON. Healthy state lights were provided at Mill Road, Tyes Street and Port Fairy Road. (O 987/88)
- 17.11.1988 BATMAN. Co-ordinated traffic lights were installed at Gaffney Street level crossing. A push button is provided in the signal box to permit the traffic lights to cycle to the correct phase. The gate stop lever is electrically locked reverse until that phase has been switched. (O 2683/88)
- 18.11.1988 EAST MALVERN-HOLMESGLEN. The temporary pedestrian crossing situated at 14.800 km and fitted with warning bells and lights, was abolished. (O 2691/88)
- 22.11.1988 LONGWOOD was disestablished as an electric staff station, the new section becoming Avenel-Euroa. The signal arms were removed and the points spiked normal. The interlocking frame will be retained until further notice. (O 997/88)
- 25.11.1988 CRANBOURNE. A notice board lettered "SPEED LIMIT TO LEVEL CROSSING 55 KM/H" was erected 310 metres on the down side of Camms Road and applies to up trains. A notice board lettered "SPEED LIMIT TO LEVEL CROSSING 50 KM/H" was erected 280 metres on upside of South Gippsland Highway and applies to down trains. (O 1043/88)
- 26.11.1988 WODONGA. The catch points in Milos Siding were replaced by a rodged Hayes derail and wheel crowder. (O 998/88)
- 27.11.1988 WODONGA COAL SIDINGS. No 5U catch points were replaced by a motorised Hayes derail and wheel crowder. (O 999/88)
- 27.11.1988 MORWELL. The following alterations were carried out:-
1. Double ended plunger locked points "A" leading from No 1B road to No 2A road were abolished.
2. Annett locked points "D" and "E", and compound points "C" leading from No 1 road to No 2 road were abolished.
3. A new annett locked crossover from No 1 road to No 2 road was provided 45 metres further out.
4. Double ended points "F" from No 1 road to Mirboo North dock were abolished.
5. Signal quadrant "A" was abolished.
6. Hand points from No 2 road to No 3 road at up end were moved 45 metres further out. (O 1046/88)
- WN49/1988 CITY LOOP OPERATING MANUAL. Various instructions were reissued. (O 1063/88)

- 27.11.1988 ESSENDON. No 11 points leading from the down line to Siding "A" were abolished. Dwarf signal No 12 was also abolished. (NOTE: The siding had been out of use and removed for some months prior to this abolition.)
- 4.12.1988 MELBOURNE-BAIRNSDALE. All passenger trains between Melbourne, Traralgon, Sale and Bairnsdale were converted to Driver and Conductor operation. (D 936/88)
- 9.12.1988 DONALD. The following alterations were brought into service:-
1. A new crossing loop was commissioned and is located between the Sunraysia Highway and Campbell Street level crossings. Trailable point machines were provided at both ends set for right hand running.
 2. A non-trailable point machine, secured by an "E" pattern annett lock, is provided on the points leading from the down loop to the Donald Freezing Works siding.
 3. At Donald station the up end plunger locked points were converted to non-trailable point machine and secured by an "F" pattern annett lock, whilst the down end points are worked from a two lever ground frame.
 4. A new down home (light) signal was provided on the upside of the Sunraysia Highway level crossing and is worked from the platform or up end of loop.
 5. A new down home (light) signal was provided on the upside of Campbell Street level crossing for down trains departing from the loop and is worked from the platform or the down end of the loop.
 6. At Sunraysia Highway and Campbell Street level crossings HXP's replaced the relay operation of the flashing lights.
 7. Flashing lights were provided on the Freezing Works Siding at Racecourse Road level crossing and is manually operated by key switches.
 8. Up home (light) signal "K" was abolished.
Amend diagram No 10'83 accordingly. (D 1075/88)
- 6.12.188 SUBURBAN TRAINS. Guards on the Sandringham line suburban trains will operate from the leading centre motor compartment of suburban electric trains with the exception of the refurbished Harris sets. This arrangement will gradually be extended across the remainder of the suburban network.
- 7.12.1988 OUYEN. The following alterations were brought into service:-
1. Plunger locked points "A" and "B" leading from the Murrayville line to Nos 1 and 2 roads were abolished.
 2. The stockyard siding was abolished.
 3. Plunger locked points "C" leading from "X" No 2 road were abolished.
 4. The compound points in No 2 road leading to the yard were replaced by a simple turnout to the yard.
 5. The right hand signal on Post 3 (lever 4) leading from "X" to Murrayville line was abolished and lever 4 was sleeved normal.
 6. A new plunger locked crossover leading from the main line to No 2 road was provided on the upside of Ouyen Highway level crossing.
(D 1066/88)

- 8.12.1988 NEWMARKET. The top unit on E212 was lowered 300mm. (O 2734/88)
- WN50/1988 BALLAN. A short dead end cripple road has been provided leading off No 2 road. The annett locked points are facing in the up direction and, are provided with a rodged derail and wheel crowder. The annett key is secured in a duplicate lock on No 20 lever. When reverse, the signals leading to No 2 road are locked normal. (O 1087/88)
- 11.12.1988 PAKENHAM. Siding "A" was abolished. The down end of No 9 crossover was converted to a catch point. Amend diagram No 35'88. (O 2749/88)
- 11.12.1988 BERWICK. No 9 points leading from No 2 road to No 3 road at the up end were abolished. Up home signal No 12 and dwarf signal No 8 were removed. The down end points lleading from the up line to Nos 2 and 3 roads are still temporarily out of service. (O 2748/88)
- 11.12.1988 TRARALGON-BAIRNSDALE. The electric staff system on the following sections:- Traralgon-Sale-Stratford-Bairnsdale will be abolished and train order working will be brought into use. Train order crossing stations will be Sale and Stratford. The fixed signals at Sale and Stratford will normally be at proceed and a signalman will be required at Stratford for all trains at this stage. When trains are to cross, a qualified employee will start one hour prior and place the signals to stop and test as per the regulations. Boards lettered "COMMENCE TRAIN ORDER WORKING" and "END TRAIN ORDER WORKING" are provided at Traralgon and Bairnsdale. Three master keys lettered "TRARALGON-BAIRNSDALE", coloured orange and numbered 16, 17 and 18 have been provided and will be kept at Traralgon (2) and Bairnsdale (1). Until flashing light circuits have been altered the following speed restrictions will apply:-
SALE - RAGLAN STREET (209.149km) - 80km/h for up trains.
STRATFORD - McALISTER STREET (223.574km) - 40km/h for up trains.
STRATFORD - HOBSON STREET (223.968km) - 30km/h for down trains.
STRATFORD - PRINCES HIGHWAY (224.269km) - 50km/h for down trains.
- WN50/1988 STRATFORD JUNCTION. When it is necessary for a train to be locked away on the Maffra Siding, a "signalman" will be in attendance at Stratford Junction and on arrival of the train, he will receive the Master Key from the driver.
After setting the points, he will hand signal the train to the Maffra Siding and when clear, relock the points and advise the Driver that he is in possession of the Master Key. On arrival at Maffra, the Driver must not fulfil his Train Order until he is in possession of the Master Key.
On arrival back at Stratford Junction, the employee will receive the Master Key from the Driver and then communicate with Train Control to receive a Train Order for the train. When this has been issued, he will unlock the points and signal the train to depart for Stratford.
After the train is clear of the points, he must relock them for the main line and advise the Driver that he is in possession of the Master Key. At Stratford the Master Key must be handed to the Driver.

In the case of a light engine, the Driver will receive the Train Order to proceed to either Stratford or Sale. Then he will hand the Master Key to the secondman who will set the points for the move. When the engine is clear and the points have been relocked for the main line, the engine may depart for the place named on the Train Order.

11.12.1988 CRANBOURNE-LEONGATHA. The electric staff system on the following sections:- Cranbourne-Koo Wee Rup-Lang Lang-Korumburra-Leongatha will be abolished and replaced by Train Order working. Train order crossing stations will be Koo Wee Rup, Lang Lang and Korumburra. The fixed signals at Koo Wee Rup, Lang Lang and Korumburra will normally be at proceed and a qualified employee will attend at least one hour prior to a crossing in order to place the signals to stop and test as per the regulations. Boards lettered "COMMENCE TRAIN ORDER WORKING" and "END TRAIN ORDER WORKING" will be provided at Cranbourne & Leongatha. Three master keys lettered "CRANBOURNE-LEONGATHA", coloured orange and numbered 19, 20 and 21 have been provided. They will be kept at Cranbourne (1) and Korumburra (2). Until flashing light circuits have been altered the following speed restrictions will apply:-

CRANBOURNE - CAMMS ROAD (44.679km) - 55km/h for up trains.

CRANBOURNE - SOUTH GIPPSLAND HIGHWAY (45.277km) - 50km/h for down trains.

KOO WEE RUP - ROSSITER ROAD (67.346km) - 80km/h for down trains.

LEONGATHA - McCARTEN STREET (126.511km) - 65km/h for up trains.

Suitable speed boards have been erected.

When a goods train will terminate at Korumburra, the Train Controller will arrange for a signalman to be on duty and place the home signals to stop before the arrival of the train.

The special Staff & Ticket working in force between Dandenong and Lang Lang on Saturdays and Sundays has been abolished and Nyora is no longer a telephone block post as required. (O 1076/88)

12.12.1988 SEYMOUR. All railmotor services will be staffed by a driver and conductor only. Empty railmotor services will be operated as for freight trains i.e. with a driver accompanied by another driver, conductor or second man. The safeworking duties previously performed by the passenger guard will now be performed by the driver. Shunting of railmotors at Spencer Street will be carried out by the Passenger Yard Shunters. (O 854/88)

17.12.1988 KYNETON. The Saturday railmotor services will be staff by a driver and conductor only. Other instructions as for the Seymour services will apply to these trains. (O 1094/88)

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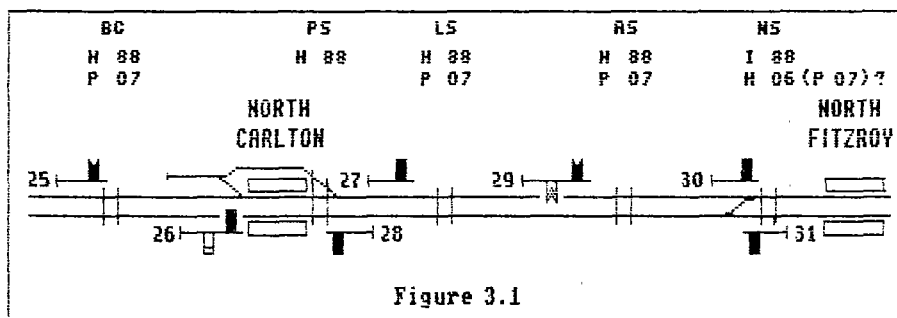
LEVEL CROSSING PROTECTION

by John Sinnatt

3. AUTOMATIC WARNING BELLS

3.1 HISTORICAL

Automatic Warning Bells were installed in place of gates at four crossings between Royal Park and North Fitzroy during 1907. This was a move of historic importance as being the first use of an automatic protection device at a level crossing to obviate the need for control by a Gatekeeper or Signaller; it pre-dated the first Wig-wag by some 16 years.



Referring to Figure 3.1, the crossings and dates in 1907 when the gates were abolished and the bells installed were Bowen Crescent (BC) (2 Sep), Lygon Street (LS) (29 July), Amess Street (AS) (22 July), and Nicholson Street (NS) (date unknown). The gates at the first three crossings were hand-worked, but those at NS were worked from the adjacent original North Fitzroy A Box. (The interlocking here was abolished in 1906 (13 April), but it is assumed that the gates continued in place, but worked by hand, until the Warning Bell was installed.) The alterations followed from the diversion of the Preston suburban service to run from Princes Bridge via the Northcote Loop, opened in December 1904, instead of from Spencer Street via Royal Park. A new service was instituted at the same time from Princes Bridge to North Fitzroy, but only the Whittlesea trains and suburban Goods trains now ran through North Carlton.

Ground Bells (bells actuated by rail contacts) had been installed in signal boxes from around 1880 onwards. But for use at level crossings the bell had to be robust enough for outdoor mounting, and loud enough to be heard by road users. Moreover, the complete system would have to be highly reliable. A "Chicago Bell" was used, understood to have been housed in a louvred wooden box. However, no chances were taken here as a speed limit of 5 mph (8 km/h) applied at crossings fitted with these bells. A brief note in the *Victorian Railways Magazine*, October 1924, states that the automatic crossing bell started ringing when the approaching train was a quarter of a mile (400m) away, and stopped when it reached the crossing. One would expect the warning to have been suppressed while a Starting signal close to the crossing was at Stop.

Whether the Bell was controlled by rail contact (treadle) or by track circuit is not clear. In the Semi-Automatic system of signalling installed between East Richmond and Hawthorn later in 1907 (8 Dec), the signals were fitted with the newly-patented Reid's Reverser and controlled by track circuits. Use of the Block Instruments was initially discontinued, but soon restored. The trouble in the reverser or the track circuit must have been corrected by 1910, because track-locking of Starting signals on a large scale commenced then.

In the "List of Cattle Pit and Cattle Grid Crossings" included in the General Appendix for 1908, a footnote referring to the four crossings described above reads "Automatic Warning Bells are fixed at these Crossings". A similar footnote appears in the General Appendix for 1913, except that BC is omitted. (No such list is included in the 1919 GA.) Regrettably, while relevant dates are given in the Weekly Notices for the first three crossings, no mention has been found there of a Chicago Bell having been installed at, or recovered from, Nicholson Street. Nevertheless its existence is attested to by the footnotes quoted. The dates given in the second paragraph suggest that the bell could have been installed at NS early in July 1907. At present we can say only that Amess Street, or possibly Nicholson Street, gained the first Automatic Warning Bell.

The Chicago Bells continued in service until gates were restored or other protection was provided. The hand gates were replaced at BC as early as 1911 (30 Oct) (bad visibility?). Interlocked gates were provided at LS in 1916 (also 30 Oct) with the opening of the North and East Coburg electric tram line; these gates were worked from a new signal box which replaced the levers at North Carlton station. (The Goods siding points were also now worked from this box and protected by Disc signals). A Wig-wag signal was erected at AS in 1923 (22 Aug), and interlocked gates were restored at NS earlier in the same year (4 May); these were worked from a new box known as North Fitzroy C. The moves at AS and NS resulted from the institution of an electric service from Princes Bridge to North Carlton in 1921 (31 July), replacing the North Fitzroy steam service. The Wig-wag at AS was superseded by Flashing Lights in 1944 (5 April).

Some mystery surrounds the crossing at Park Street (PS), known to the Railways as Langridge Street. This did not receive a Warning Bell, and was not shown on either the 1908 or 1913 List of Cattle Pit Crossings, but it was shown on Diagram 15/16. So it must have retained its original gates - perhaps these were worked by the station staff while North Carlton was attended, but were left locked across the roadway at other times (they cannot be found on any list of Privileged Gates). It is assumed here that the Park Street crossing was closed early in 1921 before a crossover was built for the new North Carlton electrics to return. But it is still shown in the 1927 Book of Gradients and Curves!

This completes the history of Automatic Warning Bells (except where provided in conjunction with Wig-wags or Flashing Lights), as no other installation at a public vehicular crossing is known. But a Chicago Bell, said to have been recovered from the North Fitzroy line, was mounted outside Ballarat B Box (Lydiard Street) for some years; this one was switched on/off by the signalman.

The remaining history of the line itself from 1948 was mostly quite depressing. In that year all passenger trains were discontinued, and the two stations were closed to passenger traffic from 15 November. The establishment in 1956 (March) of a tramway crossing at Nicholson Street, equipped with full protection facilities as described in 2.4, did create some interest. But in 1961 the railway was effectively de-electrified, and in 1965 (May) it was singled as far as North Fitzroy, and was closed beyond, except for the Fitzroy branch, so that only one side of the triangular Northcote Loop Junction then remained. All signal boxes were abolished, and the gates or Flashing Lights were removed from all crossings, trains now having to stop until signalled forward by a Flagman. Final closure of the Royal Park - Fitzroy line came in 1981 (11 July). The junction at Royal Park was taken out in 1983, but the Home signals remained and the interlocking frame was not recovered. It was still in place at January 1988 with the necessary "Signal Box Closed" notice displayed.

3.2 SIGNALLING ARRANGEMENTS

Figure 3.2 shows the signalling during the period 1913-1916; the only differences from Figure 3.1 are at the North Fitzroy end. When the first box at NS was abolished in 1906, the crossover shown in Figure 3.1 was retained and worked from a new ground frame, cross-locked from the box at Rae Street at the other end of the station, now designated A Box; it was used for the engine of the local train to run round. In 1912 a replacement crossover was installed on the other side of the crossing, now worked direct from A Box; Posts 30A and 31A were also provided. Then in 1913 (4 July) a Disc was mounted under the arm on Post 31 to govern shunting movements. Special Instructions remained in force that the Shunting Porter was to guard the crossing during such movements.

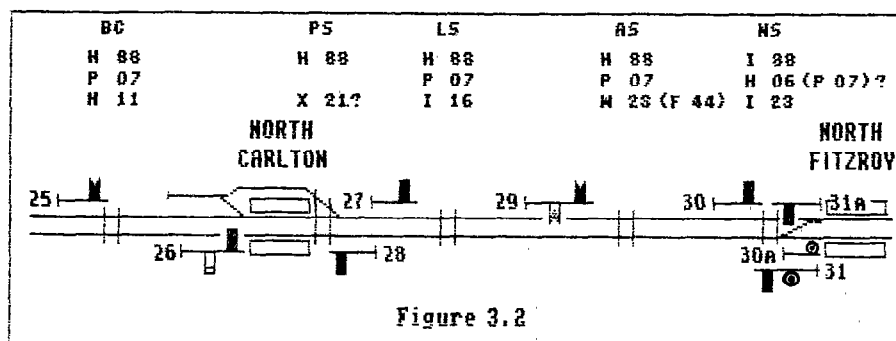


Figure 3.2

For normal movements in the Up direction the Bell would be controlled through the Home signals on Posts 31 or 31A. For run-round movements, where an E class 0-6-2 tank engine could be short enough to fit between Post 30A and the crossing (Figures 3.1 and 3.2 are drawn only roughly to scale), the Bell would not be controlled by the Disc on Post 31. This would prevent it from sounding unnecessarily, which would occur every half-hour throughout the day. The Shunting Porter would be present to protect a movement which actually fouled the crossing.

A new Up Home signal, Post 29, was provided at Lygon Street when the box and interlocked gates were established in 1916. Existing Post 29 was abolished, the Down Distant being transferred to Post 27 and the Up Distant to Post 31. Then in 1920 (4 Aug) a new Post 29B was provided closer to AS; this carried a new Down Starting signal with lower co-acting arm (a footbridge existed between LS and AS), and the Down Distant from Post 27. Signals were provided at North Carlton station in 1921 (27 June), with some confusing re-numbering, to protect the new crossover; the Homes applying from each platform were fitted with reversers controlled by local track circuits. The Gatekeeper at BC in 1924 gained a Home arm above the Down Distant on Post 25; the Distant was converted to motor operation at this or some other stage.

When North Fitzroy C Box was established in 1923 (4 April) to work gates at NS, no new signals were provided, but C Box controlled all of A Box's signals at the Up end shown in Figure 3.2 except the Disc on Post 30A, and it also cross-locked the crossover. This crossover was abolished in 1924 (15 Sep) along with associated signals; the platforms could then be lengthened. The position between Lygon Street and North Fitzroy was then as shown in Figure 3.3. The Starting signal on Post 29B was controlled as an outer Home by the box at NS when the tramway crossing was

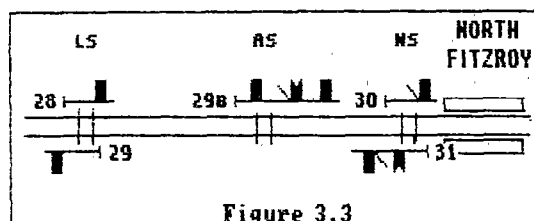


Figure 3.3

3.3 POSTSCRIPT

Readers who recall the series of three articles titled 'Royal Park - Northcote Loop Junction' in the ARHS *Divisional Diary*, June - August 1965, may wonder why only one passing reference was made there to the Chicago Bell (replacement by W/W at AS), when much emphasis is given to it here. The reason is that the writer did not then know enough to say anything more than he did.

Mr C D Gavan Duffy in his article 'Memories of a "Great Way Round"' (ARHS *Bulletin*, No 142, Aug 1949), which had been read and duly acknowledged, wrote: 'Nicholson Street Box and gates were abolished on April 13, 1906, and the gates were removed from the other three remaining crossings, warning bells being provided'. The author of the D.D. article kept wondering how these bells worked. Did a Gatekeeper, perhaps one on light duties, simply throw a switch rather than fling gates? Or were additional line wires provided, and did the signalmen at Royal Park (for Down Trains) and North Fitzroy (for Up trains) switch on/off the crossing bells at what they judged were the appropriate times? Thinking in these terms may seem foolish, but the date given for the bells was 1906, and the prevailing folklore was that the first automatic level crossing device was the Wig-wag, known not to have been introduced into Victoria until 1923.

It was around 1977-78, when the writer had become interested in level crossings generally, that he discovered the Lists of Cattle Pit Crossings in the 1908 and 1913 GAs mentioned earlier, and the footnote that the bells were automatic. Pity that Mr Gavan Duffy didn't choose to mention this in his article!

Some further details were still desirable of when the gates were removed and the bells installed, and member Alan Jungwirth is to be thanked for supplying the three dates in 1907 given in the second paragraph of 3.1.

(End of Part 3)

Solution to Crossword No 24.

ACROSS: 1. Bradshaw, 6. BR, 7. Brown, 8. Brooklyn, 9. Glenbrook, 10. BR, 11. Bra, 13. Broken, 15. BR, 16. Braga, 17. Limbri.

DOWN: 1. Brimbago, 2. Ambrose, 3. Hazelbrook, 4. Brolga, 5. Kanumbra, 7. BRN, 10. Brough, 12. BREL, 13. Brim, 14. NRR.

Notes to the solutions:

10 ac. The Rocket is a present day named train on the Bangladesh Railways.

11 ac. "Bra" is one of the Swedish words meaning "good".

15 ac. Ye is the southernmost station on the Burma Railways.

16 ac. Nine is a Portuguese town.

4 dn. Brolga is the Bluebird railcar numbered 234.

10 dn. Well he was before he forgot the key!

12 dn. I confess that I made up this crossword so long ago that I've forgotten the point of the clue here!

Notwithstanding 12 dn. and the obscurity of some of the other clues, I would like to think that the inclusion of BR in every answer would have helped a bit.

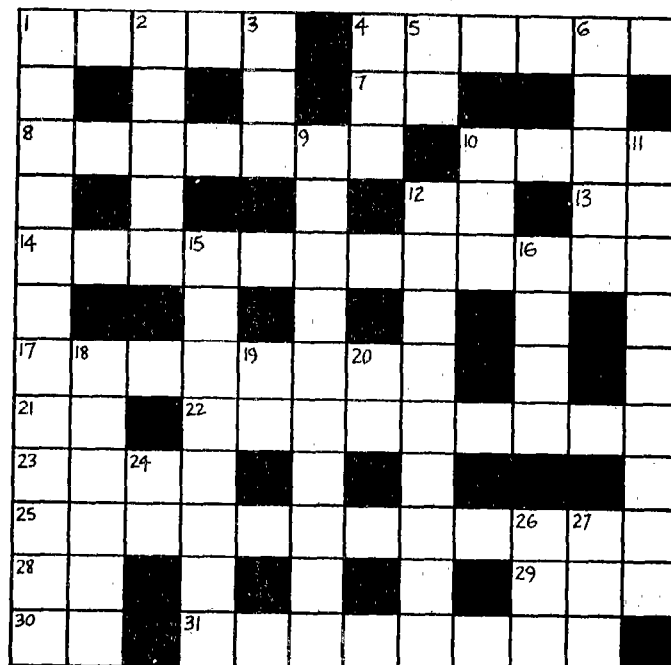
S.R.S.V. CROSSWORD No 25
compiled by Stephen McLean

ACROSS

1. Keep an eye on a disappearing species (5)
4. Station in which I's dare to wait for a train to Salisbury (6)
7. One hundred thousand parcels could be found in it (2)
8. Rex pressed for removal of "red" so train won't be stopped (7)
10. Rudi changes before getting to Tamworth (4)
- 12 and 13. Running sheet is indefinite about Southport departure of 12 down (2,2)
14. It detected trains, even when Carrick cut it wrongly (5,7)
17. Noise had unusual part in getting train up grade (8)
21. If the French ran the Southern Aurora, would this be its number? (2)
22. They have booms with no noise or a grade you can't climb (9)
23. Thanks to two tender locos, this isn't a tender loco (4)
25. First P.E. on peg exchanged at this main-line station (6,6) (2)
28. Wheat wagon for grower use partly
29. This sort of train may have 14 across and little else (3)
30. Eve departs? - Never on this Indian system (2) (8)
31. Gapes at D struggling up this bank

DOWN

1. A strange tree cultivated on the line to Ipswich (5,7)
2. Bet a station with Greek name is nearby (5)
3. Descriptive of SRS subscriptions (3) (and see 18 down)
4. Catches two articles removed from City Circle train (3) (2)
5. I leave him in Indian-Pacific van
6. Rod comes back with first class sleeper (5)



9. Gasp! Notice discontinuity in overhead wiring (7,3)
10. Self-propelled vehicle could be semi-direct (3)
11. Service has this high frequency, yet isn't in disarray (9)
12. The delight of our hobby (9)
15. Testing at Franklin Street (8)
16. Haul another coal train around this NSW location (4)
18. Station where the question "Are you paid up?" could be asked (6)
19. The railway system to the south of Victoria (2)
20. Lists of safeworking systems - most include this one (2) (2)
24. Two V Line locos are part of BN
26. Ate up peanut butter when it was 3 down (3)
27. Turner was first when new line was constructed (3)

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