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This lovely three doll wooden mast carried the Up arrival signals at Frankston. The arm on the left hand doll, the highest speed route, lead to No 1 Road (the back platform). However, in 1939 a set of hand gates was installed across this road to provide direct pedestrian access to the island platform. These gates were controlled from the signalbox and by the time this photo was taken were rarely opened for rail traffic. Consequently the arm on the righthand doll was rarely cleared. Most movements ran to the main platform (No 2 Road) which was signalled by the arm on the centre doll. The rightmost arm lead to No 3 Road. The disc under the bracket lead to the remaining yard roads (4, 5, or 6). This mast was provided as late as 1922 when the back platform was installed. It lasted, in very good condition, until 1988 when the Down end of Frankston yard was rationalised. With this rationalisation the connection to the back platform was removed and the lead to the main platform slewed to be straighter. The wooden mast was replaced by a galvanised two doll lattice bracket. This photo was taken on 9 April 1985. More photos of wooden masts at Frankston can be found on page 74.

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SIGNALLING ALTERATIONS

The following alterations were published in WN 15/04 to WN 20/04 and ETRB A circulars. The alterations have been edited to conserve space. Dates in parenthesis are the dates of publication, which may not be the date of the alteration.

- 04.04.2004 **Glen Waverley** (SW 517/04, WN 13/04)
On Sunday, 4.4., pedestrian gates were provided at the foot crossing at Rose Ave (21.685 km). Diagram 17/04 replaced 9/04. (Note Diagram 9/04 was not distributed due to Alstom not supplying copies.)
- 05.04.2004 **North Shore** (SW 1076/04, WN 13/04)
On Friday, 2.4., and Monday, 5.4., pedestrian gates were provided at North Shore Road (67.235 km) and the station crossing. Amend Diagram 2/03.
- (13.04.2004) **Aspendale - Frankston** (SW 67/04, WN 14/04)
Diagram 19/04 replaced 11/01 "as in service". The major change is the removal of the crossover at Chelsea.
- 16.04.2004 **Sale** (SW 1082/04, WN 16/04)
The Staff Exchange Box may be used for the passage of Train 9441.
- 16.04.2004 **Sale - Bairnsdale** (SW 1082/04, WN 16/04)
From 1600 hours on Friday, 16.4., the level crossing protection equipment at Myrtlebank Rd (210.315 km), Yuill-Baxter Rd (211.348 km), Bundalaguah Rd (214.294 km), Munro-Stockdale Rd (233.012 km), Fernbank Rd (246.004 km), Lindenow South Rd (257.301 km), Hillside Rd (263.055 km), Buchanans Ln (265.874 km), Princes Hwy (270.944 km), and Bosworth Rd (272.484 km) will be available for use. SW 1036/04 is cancelled.
- 16.04.2004 **Bairnsdale** (SW 1084/04, WN 15/04)
On Friday, 16.4., the signalling was altered to be manually worked. A Signaller will be in attendance for all movements.
The normal position of the Homes on Posts 1, 2, and 3 was altered to be Stop. The VPSW keyswitches were altered to only be worked by a key held by the Signaller at Bairnsdale, except for switches 17, 18, & 19 adjacent to Points G which were disabled. Motor operation of Points E and F at the Bosworth Road Siding was disabled and the points secured normal by a locked point clip with the point machine in the 'Motor' position. The points will be hand worked by the Signaller when required. No 3 Road will be out of use and Points J and K spiked to lie for No 2 Road.
Prior to the arrival of a Down Bairnsdale train, the Signaller will place Homes 1 and 2 to proceed using the keyswitches. When running around at Bairnsdale, the Signaller will operate Points G from the keyswitch at the points and exhibit a green hand signal for the movement when the points are detected reverse. The points will self normalise. After the Driver has been issued with authority to enter the section, the Signaller will clear Home 3 from keyswitch 12 in the station building and go to Points G to display a green hand signal for the movement. The Signaller must restore Homes 1 and 2 to Stop until required for the next movement.
For a freight movement arriving into Bosworth Road Siding, the Signaller must place a signal on Post 1 to proceed (presumably the Home). When the train comes to a stand at Points E, the Signaller must wait until the 'Points Free' light illuminates and will then unclip the points and reverse the points using the hand lever. When the reverse indication light illuminates the Signaller will hand signal the train into the siding. The points are then to be restored to normal and clipped. When the locomotive is to run around,

the Signaller will operate Points F and then E in a similar fashion. The Signaller may give permission for the loco to run around provided a Down train will not be detained at Post 1 and an Up train has passed beyond the Location Board. Should Home 1 be at proceed, it must be placed at Stop by operating keyswitch 10 and waiting until the 'Points Free' light illuminates after the 3 minute rundown. When the train departs from Bosworth Road, Points E will be operated in a similar fashion.

Similar instructions apply for light loco movements from Bosworth Road to stable in No 3 Road at Bairnsdale and return. (Note, however, that No 3 Road is out of use.)

If a signal fails, the Driver must contact the Signaller. After checking that an opposing movement is not taking place and that the points are correctly detected for the movement, the Signaller will issue a special caution order. If the points are not correctly detected, they must be placed in the hand operating position.

17.04.2004 **Bacchus Marsh - Ballarat** (SW 1080/04, WN 15/04)

From 1000 hours on Saturday, 17.4., Absolute Occupation will be in force between Bacchus Marsh - Bank Box - Bungaree Loop - Ballarat for Regional Fast Rail track work.

The area of Absolute Occupation will extend from Down Home Departure 14 at Bacchus Marsh to Up Home Departure 54 at Ballarat. A concrete barrier will be installed across the line at Bacchus Marsh in advance of Home 14 and this Home signal will be fixed at Stop. At Ballarat, Up Home 54 will be fixed at Stop and Crossover 53 will be secured reverse by a lockable point clip. The key to the point clip will be held by the Track Force Co-ordinator.

All signals in the area of Absolute Occupation will remain in use. All protected level crossings will be altered to be operated only by the test switch.

During this work the track will be deviated in the vicinity of Ballan. Down Automatic A787 will be relocated in the Up direction to 78.440 km and placed on the Up side of the line. Up Automatic A690 will be relocated in the Down direction to 79.028 km. The flashing lights at Ingliston Rd, Mt Egerton Rd, and Ti Tree Rd will be raised to accommodate road works. The flashing lights at Windle St and Llandeilo Lane will be relocated to the new alignment.

21.04.2004 **Ararat, Horsham, Dimboola** (SW 1087/04, WN 16/04)

On Tuesday, 20.4, and Wednesday, 21.4., radio controlled yard lighting was provided at each of these locations.

22.04.2004 **Hernes Oak** (SW 1090/04, WN 16/04)

On Thursday, 22.4., No 2 Road was restored to use after a new telemetry system was installed. Points 13 and 21 were recommissioned. SW 1006/04 was cancelled.

30.04.2004 **Lara, Corio** (SW 1091/04, WN 16/04)

On Thursday, 29.4., and Friday, 30.4., the pedestrian boom barriers at Lara and Corio were replaced by pedestrian gates. Amend Diagram 2/01.

02.05.2004 **Upper Ferntree Gully** (SW 518/04, WN 17/04)

On Sunday, 2.5., Down Homes 22 (and its co-acting signal 22P) and 24 and Up Home 36 were converted to LED.

02.05.2004 **Selby** (A 10/04)

For the operation of trains during the Great Train Race, Selby will be opened as an Intermediate Block Post for trains L937 (the race train) and L939. The Signalman will be located at Long Pockitt Lane and the Up end yard limit will be relocated while Selby is open as a block post to the level crossing. The Signalman will not need to sight the Staff Ticket carried by the first train (the race train), but must note the locomotive number. When the train has arrived complete within the Up end yard limit, the Signalman will send the ACRE message in the following form: 'Train No L937, ACRE, Locomotive No # at hh:mm a.m.'. The Train Controller must satisfy himself that the locomotive number is correct from his records before authorising the departure of the following train.

03.05.2004 **Spencer Street** (SW 70/04, WN 16/04)

From Monday, 3.5., Crossover 436 between No 8 and 8A Tracks at the south end was replaced by a new Crossover 435 further south. New Crossovers 418 (north end) and 448 between No 8 and 8A Tracks were provided but not brought into use.

The signals in No 8 and 8A Tracks were rearranged. Homes 110 (Track 8A South) and 506 (Track 8A North) were abolished. Homes 507 (8 North), 509 (8A North), 536 (8), 548 (8A), and 555 (8A) were relocated and converted to LED heads. New Homes 508 (8 North to Home 536), 518 (8A to Homes 536 or 548), 519 (8A to Home 509), 529 (8 to Homes 507 or 509), 535 (8 to Homes 529 or 519) and 549 (dead end of 8 to Home 535) were provided. The signals will be prevented from displaying a route into the new Platform 8A.

Shunters push buttons for requesting routes will be provided for Homes 507, 509, 536, and 548.

Track circuits 110T, 423T, 434T, 435T, 436T, 448T, 506T, 507T, 509T, 511T, and 536T were decommissioned. Track circuits 110T, 115T, 422T, 429T, 434T, 448T, 467T, 506T, 509T, 518T, 522T, 536T, 555T, and 713T were commissioned.

Diagram 15/04 replaced 9/03.

07.05.2004 **Spencer Street** (SW 83/04 & 84/04, WN 17/04)

On Friday, 7.5., Home 121 and Automatic 126 on No 9 Track (Clifton Hill Loop) were converted to LED. The bracket supporting the B arm on Home 121 was extended for clearance purposes.

- 08.05.2004 **Spencer Street** (SW 85/04, WN 18/04)
On Saturday, 8.5., the A and B arms of Home 505 (No 7 Track) were converted to R4 LED heads.
- 09.05.2004 **Upper Ferntree Gully** (SW 519/04, WN 17/04)
On Sunday, 9.5., Down Automatic L1161, Down Home 10, and Up Homes 16 & 18 were converted to LED.
- (11.05.2004) **Pakenham - Traralgon** (SW 2002/04, WN 18/04)
Commencing forthwith, Absolute Block Working will be in force for all services operated by Sprinters on the following sections: Pakenham - Bunyip (Up line), Bunyip - Longwarry, Longwarry - Warragul (Up line), Warragul - Moe (Up line).
Services operated by Sprinters are not permitted to approach the Bunyip - Longwarry single line while a train is approaching in the opposite direction. Should a train be approaching that single line section, the opposing Sprinter must be held at Pakenham or Warragul until the train has cleared the single line. Prior to placing the signals at Pakenham to proceed for a Down Sprinter to depart, the Signaller must confirm with the Signaller at Warragul and the Train Controller that no train is between Warragul and Bunyip. The Signaller at Warragul must sleeve the lever controlling Up Home 30 normal. Should an Up train have departed from Warragul, it must be confirmed that the train has departed from Bunyip complete before permitting the Down Sprinter to depart from Pakenham. Following the departure of the Down Sprinter from Pakenham, the Signaller must sleeve Homes 24, 26, and 28 at Stop and advise the Signaller at Warragul of the time of departure. When the Down Sprinter is complete and clear of the single line at Longwarry the Driver will advise the Train Controller who will advise the Signaller at Warragul. The Signaller at Warragul may then unsleeve lever 30 and permit an Up train to depart. When the Down Sprinter arrives at Warragul, the Signaller will advise the Signaller at Pakenham who may unsleeve levers 24, 26, and 28. Similar instructions apply to Up Sprinters between Warragul and Pakenham.
When a Sprinter departs from Moe and is clear of Points 7, the Signaller at Morwell must sleeve the lever working Home 8 normal. The lever must remain sleeved until the Signaller at Warragul advises that the Sprinter has arrived complete at Warragul.
All level crossings must be attended by hand signallers for Sprinters operating on the Up line between Pakenham and Bunyip, and Longwarry and Moe, and the single lines between Bunyip and Longwarry, and Moe and Morwell.
- 12.05.2004 **Spencer St** (TS 40/04, WN 19/04)
From 2200 hours Wednesday, 12.5., Tracks 1, 1A, and 1B were abolished to allow construction of the new station building and the new Track 1A.
Points 9 (Bank Sidings towards Nos 1 or 1A) will be removed and the head shunt made into a dead end. Points 75 (East Country Line towards Nos 1 or 1A) will be secured reverse. Points 82 (Main Country Lines towards Nos 1 or 1A) will be secured normal. Points 175 (Standard Gauge to No 1B or No 2) will be secured normal. Points 176 (Standard Gauge to No 1) will be secured reverse.
Homes 164 (from No 1), 167, 177 (from No 1) 183, 276, 278, and 280 and Dwarfs 3 (from No 1A), 11 (from Bank Engine Sidings), 163 (from dead end No 1), and U177 (from No 1B) were removed. Points 9, 10, 81, 170, 172, and 251 were removed. Track circuits 9, A9, 170, 177, 251, and 278 were abolished.
Levers 1, 3-17, 81, 82, 163, 164, 166, 167, 170, 172, 175, 177-180, 183-191 were sleeved normal. Levers 75 and 176 became pilot levers.
- 15.05.2004 **Spencer St** (TS 43/04, WN 19/04)
On Saturday, 15.5., Points 75 and 176 were reconnected to the interlocking frame and brought back into use. The signals applying over these points will be prevented from clearing for moves towards the abolished Nos 1, 1A, or 1B tracks.
- 20.05.2004 **Epping** (SW 102/04, WN 19/04)
On Thursday, 20.5., EPP 127 was converted to a tri-colour LED.
- 21.05.2004 **Clifton Hill** (SW 103/04, WN 19/04)
On Friday, 21.5., CHL 108 was converted to a tri-colour LED.

THE PROVISION OF YELLOW DISTANT ARMS AND LIGHTS

In Somersault Vol 27 No 2 the circumstances leading up to the decision to adopt the use of a yellow arm and light for distant signals was examined. The Commissioners had formally approved of this step on 26 September 1927. The necessary amendment to the Rules and Regulations was signed by the Governor in Council on 18 October and published in the Gazette on 26 October 1927.

When the alteration was signed by the Governor in Council the change in the Rule book was to become effective on the 1 November 1928. However, in early November 1927 it was decided that the new regulation would not become effective until the conversion had been completed. In the meantime, as each distant signal was converted the change was to be published in the Weekly Notice or special instruction.

In the meantime the Up Distant at Kilmore East was converted to a yellow arm and light on 28 September 1927 and the Down Distant at Warragul was similarly treated on 4 October 1927. While not in strict chronological order, mention might be made that the three remaining distant signals at Maryborough were converted to yellow arms and lights on 20 February 1928.

Mr Calcutt, Chief Engineer of Signals and Telegraphs, wrote to the S&T Works Manager on 14 November 1927:

The Commissioners have approved of the installation of Yellow Lights in Distant Signals - the work to be completed by 1st November 1928.

It will be necessary, therefore, for you to arrange for a regular supply of specs and glasses to the number of 520 to be supplied to Supervisors in batches before that date [...]

Endorsements on this memo show that the necessary instructions had been issued by 24 November 1927.

At the S&T Officer's meeting held on 25 November 1927, the S&T Supervisors were requested to forward a list to the Works Manager showing the number of distant arms required in each district. The list was to set out separately those which were metal and enamelled red as it was intended re-enamel yellow as many as possible of the red steel arms.

After much trouble, the Assistant Chief Engineer, S&T, eventually forwarded a list of arms required to the S&T Workshops Manager on 17 May 1928. This list was probably the following:

District	Enamelled	Wooden	Total
1 Flinders St	23	37	60
2 N. Melb.	12	98	110
3 Geelong	63	4	67
4 Ballarat	39	1	40
5 Seymour	3	61	64
6 Bendigo	31 (1)	35	66
7 Ararat	17 (2)	37	54
8 Dandenong	26	15	41

Note: (1) - 4 painted black on back; (2) - 3 painted black on back.

The individual responses are interesting for the side lights they give of each district. One immediate observation was that no two responses gave quite the same information, suggesting that what information was required and why it was required was not clearly conveyed to the Supervisors.

The response from the Seymour district included details of the wooden Home and Calling-on arms as well as the Distant signals. In the Seymour, Benalla, and Wangaratta depots here were 167 steel arms installed with 133 wooden arms still to be replaced. Curiously, no homes were shown

against the Shepparton depot; perhaps these had all been replaced by steel arms? There were four calling-on arms in the District and these were all steel.

The response from the Bendigo district noted the reason for painting the back of certain arms black: "Four of these [distant] arms are painted black for the back view from signal box". From the list given earlier it can be seen that only the Ararat and Bendigo districts had such arms; was the back sight bad only in those districts, or were black backs to arms a hobby horse of one particular supervisor?

The Ararat district supervisor listed the locations of the wooden and steel arms. The steel arms were fitted at Beaufort (2), Ararat (4), Murtoa (1), Horsham (2), Dimboola (3), Diapur (2), Kaniva (1), and Serviceton (2).

The program of conversions to yellow arms and lights did not commence until August 1928. The S&T Maintenance Engineer wrote to the S&T Supervisor of No 8 District (Dandenong) on 7 August 1928 instructing him to order the complete requirements of yellow arms for his district. Notification of alterations were required to be sent to the S&T Maintenance Engineer at least one week before any section is to be equipped. Presumably the other S&T Supervisors received the same instruction.

I am indebted to Keith Lambert for the table on the following pages that shows the dates of conversion of red arms to yellow arms and lights.

The first line to be converted was the Geelong - Ballarat line on 2 August 1928. The crew then followed the south western line between Geelong and Port Fairy and then proceeded to the isolated boxes at Hamilton and Coleraine Junction. The next week they returned to Ballarat, converting a couple of boxes on the western line just west of Ballarat. The next day saw them converting the Maryborough line to North Creswick. They probably stayed the night at Daylesford before converting that station and returning to Geelong via Cressy. The final day of the first campaign saw the crew starting at Ingliston and working west to Warrenheip, as well as doing the two distants at Ballarat East and the three at Newtown.

A break followed, possibly to give the S&T Works Manager a chance to repaint and re-enamel the recovered red arms. The conversion of the northern line started at the beginning of October 1928 working north from Clarkefield before reaching Korong Vale on the 9th. The isolated distant at Tooborac and those at Newport South were then converted. After the passage of a week, the distants between Sunshine and Baccus Mash were converted, completing the line between Sunshine and Ballarat. There was another week long break before the remaining distants on the northern line between Albion and Wildwoods were converted; completing the line between Melbourne and Bendigo.

The first suburban distants were converted in November 1928 when the stations on the Lilydale line were converted.

After another delay of nearly a month, presumably to restock with converted arms, the Eastern district was tackled. On the first day Korumburra and Nyora were converted, then most of signal boxes on the eastern line between Warragul and Stratford Junction. The next day Traralgon was converted, together with the distants between Oakleigh and Dandenong, before finishing with the Wonthaggi line. Given the number of boxes converted over these three days it is possible that there were now two gangs at work.

After finishing the Eastern district the gang(s) started on the north east; converting the boxes between

(Continued on Page 73)

TABLE OF DATES DISTANT SIGNALS COVERED TO YELLOW ARMS AND LIGHTS

WN	Date	Locations
37/26	21/09/26	Maryborough (Castlemaine line, post 23), Newstead (U), Guildford (U & D)
52/26	17/12/26	Drouin (U)
4/27	21/01/27	Ringwood (D & both U)
41/27	04/10/27	Warragul (D)
9/28	20/02/28	Maryborough (Post 1 (Avoca line), 2 (Ballarat line) & 21 (Dunolly line))
33/28	02/08/28	North Geelong 'C' (U & D, posts 12 & 24), Moorabool (U & D), Gheringhap (D & U Ballarat line, posts 1 & 8 (Maroona line ???)), Bannockburn (U & D), Lethbridge (U & D), Meredith (U & D), Elaine (U & D), Lal Lal (U & D), Yendon (U & D), Warrenheip (D, Geelong line)
	07/08/28	Geelong 'B' (U), South Geelong (U, D & branch), Birregurra (U, D & branch), Irrewarra (U, D & branch), Timboon Junction (U, D & branch), Warrnambool (U)
	08/08/28	Hamilton (All), Coleraine Junction (All)
34/28	13/08/28	Burrumbeet (U & D), Windermere (U & D), Linton Junction (U, D, & branch), Ballarat North (Up distants),
	14/08/28	Waubra Junction (U, D, & branch), North Creswick (U, D, & branch), Creswick (U & D),
	15/08/28	Daylesford (All), Cressy (All), North Geelong 'A' (D), North Geelong 'B' (U), Geelong 'A' (D)
	16/08/28	Ingliston (U & D), Ballan (U & D), Gordon (U & D), Bungaree (All), Warrenheip (All), Newtown (All), Ballarat East (All)
44/28	01/10/28	Clarkefield (U & D), Riddell (U & D), Gisborne (U & D), Macedon (U & D)
	02/10/28	Woodend (U & D), Kyneton (U & D), Carlesruhe (U, D & branch)
	03/10/28	Redesdale Junction (U, D & branch), Malmsbury (U & D), Taradale (U & D), Elphinstone (U & D), Chewton (U & D)
	04/10/28	Castlemaine 'A' (U & D main line), Castlemaine 'B' (U), Harcourt (U & D), Ravenswood (U & D), Kangaroo Flat (U & D)
	05/10/28	Golden Square (D), Bendigo 'A' (D), Bendigo 'C' (U), Bendigo 'D' (D, U Echuca line & U Wallan line)
	08/10/28	Eaglehawk (U & D)
	09/10/28	Inglewood (U & D), Korong Vale 'A' (D), Korong Vale 'B' (U)
	10/10/28	Tooborac (D), Newport South (D & U Altona line)
	17/10/28	Rockbank (U & D), Melton (U & D), Parwan (U & D), Bacchus Marsh (U & D), Sunshine (U Ballarat line)
45/28	24/10/28	Albion (U) St Albans (U & D), Sydenham (U & D), Diggers Rest (U & D), Sunbury (U & D), Wildwoods (U & D)
46/28	01/11/28	Mont Albert (U), Box Hill (U), Blackburn (U & D), Tunstall (U & D), Mitcham (U & D), Ringwood? (U & D), Croydon (U & D), Mooroolbark (U & D), Lilydale (U & D)
48/29	26/11/28	Nyora (U), Korumburra (U & D), Warragul (U & D?), Moe (U & D), Sale (U & D), Stratford Junction (U & D)
	27/11/28	Oakleigh (U & D), East Oakleigh (U & D), Clayton (U & D), Springvale (D & U from Cemetery line), Sandown Park (U), Noble Park (U & D), Dandenong (U & D), Traralgon (U & D), Anderson (U & D), Dalyston (U & D), State Mine (U & D)
50/28	28/11/28	Broadmeadows (U & D), Craigieburn (U & D), Donnybrook (U & D), Beveridge (U & D), Wallan (U & D),
	29/11/28	Glenroy (U & D), Pascoe Vale (D), North Essendon (D), Essendon (U),
51/28	06/12/28	Armstrong (U & D), Great Western (U & D), Stawell (U & D)
	10/12/28	Heathcote Junction (U & D), Wandong (U & D), Kilmore East (U & D), Broadford (U & D), Tallarook (U & D)
52/28	17/12/28	Trawalla (U & D), Beaufort (U & D)
	18/12/28	Middle Creek (U & D), Buangor (U & D), Kooyong (U & D), Riversdale (U & D), Toorong (U & D), Heyington (U), Glen Iris (U), Gardiner (D)
	19/12/28	Dobie (U & D), Ararat (U & D)
2/29	26/12/28	Deap Lead (U & D), Wal Wal (U & D), Glenorchy (U & D), Lubeck (U & D), Horsham (U & D), Pimpinio (U & D), Dimboola (U & D)
	27/12/28	Murtoa (U & D), Jung (U & D), Dooen (U & D), Kiata (U & D), Nhill (U & D), Diapur (U & D),
	28/12/28	Kaniva (U & D), Serviceton (U & D)
22/29	21/05/29	Carrum (U & D), Seaford (U & D), Frankston (U & D), Baxter (U & D)
30/29	16/07/29	Caulfield 'B' (U Mordialloc line), Carnegie (D), Murrumbeena (U), Glenhuntly (U), Bentleigh (U), Highett (U), Ormond (U & D), Moorabbin (U & D), Cheltenham (U & D), Mentone (U & D), Parkdale (U & D), Mordialloc (U & D), Aspendale (U & D), Edithvale (U), Chelsea (U & D)
38/29	12/09/29	Mangalore (U, D & Branch), Avenel (U & D), Locksley (U & D), Longwood (U & D), Creighton (U & D), Euroa (U & D), Balmattum (U & D), Violet Town (U & D), Baddaginnie (U & D), Benalla (U, D & Branch), Glenrowan (U & D), Wangaratta (U & D), Bowser (U, D & Branch), Chiltern (U & D), Barnawartha (U & D), Wodonga 'A' (D), Springhurst (U, D & Branch), Toolamba (U, D & Branch)
43/29	09/10/29	Westgarth (U), Alphington (U), Ivanhoe (U & D), Heidelberg (U & D)
	10/10/29	Northcote (U & D), Thornbury (D), Bell (U & D), Regent (U & D), Reservoir (U & D)
	11/10/29	Eltham (U & D), Greensborough (U & D)
	15/10/29	Macaulay (U), Flemington Bridge (U), Royal Park (U & D), Brunswick (U), Moreland (U), Coburg (U)
46/29	23/10/29	Newport (U Williamstown line), Williamstown Beach (U), North Williamstown (D), Williamstown (D)
	30/10/29	Dudley Street (Viaduct Arrival post 8, Coburg Arrival post 109, and North Eastern Arrival and Northern & Western Arrival post 108), Weighbridge Junction (D Northern & Western post 107, D North Eastern post 108, U from South Kensington post 22 and U from Kensington post 123)

THE ASSISTANT GENERAL SUPERINTENDENT'S CORRESPONDENCE

For some reason the General Superintendent of Transportation, the head of the Transportation Branch, only corresponded with the Commissioners and the heads of the other branches. Correspondence with lesser beings, both inside and outside the branch, was handled by his off-sider, the Assistant General Superintendent of Transportation (AGST).

References to this 'lesser' correspondence occur frequently in memos and the Weekly Notice. Typical references would be 'AGST 11/317/2' (which dealt with the working of the Staff Exchange Box at Dookie) or 'ACTM 21/441/1' (which dealt with the relocation of the Home signal at the same place). (The Transportation Branch was renamed the 'Traffic Branch' on the 1 January 1950 and the head was then named the 'Chief Traffic Manager' with a similar alteration to the title of his Assistant.)

The AGST/ACTM correspondence covers the operation of the railways. This includes commercial matters (e.g. shunting charges), provision of new infrastructure, and operational instructions. Much of the contents would be of interest to readers of this journal. It does not, however, deal with staff matters within the Transportation/Traffic branch.

Unfortunately, the correspondence itself does not appear to have survived. What has survived are most of the Registers and associated Indexes used to manage this correspondence. These can be viewed at Public Record Office Victoria. The Registers are Series VPRS 12727/P1 'Register of General Correspondence, Traffic/Transportation Branch' and the Indexes are VPRS 12728/P1 'Index of General Correspondence, Traffic/Transportation Branch'.

The Registers are the more interesting of the two. Essentially each piece of incoming correspondence was registered into a volume and given a unique identifier. The reference given above, AGST 11/317/2, indicates that the incoming letter was registered in Volume 11, Folio (page opening) 317, Entry No 2. On the left hand page of each Folio a very short precis of the incoming letter was entered. On the right hand page short precis' of the resulting correspondence was entered. This precis covers both the outgoing letter and its response (if any), and includes the person to whom the letter was sent or received, the date, and a very short summary of the contents.

The following Registers are in the custody of PROV:

Volume	Start Date	End Date	Index
5	01.02.1924	17.02.1926	Yes
6	10.02.1926	28.07.1927	Yes
7	26.07.1927	16.01.1929	No
9	23.03.1932	08.12.1934	No
10	10.12.1934	11.09.1936	Yes
11	11.09.1936	02.09.1938	Yes
12	05.09.1938	26.10.1939	Yes
14	14.09.1940	27.04.1942	Yes
16	25.02.1944	29.11.1946	Yes
17	02.12.1946	18.10.1949	Yes
18	21.10.1949	05.08.1952	No
19	06.08.1952	15.10.1956	No
20	22.10.1956	25.11.1960	No
21	28.11.1960	10.12.1963	No
22	10.12.1963	15.04.1966	No
23	15.04.1966	19.06.1968	Yes
24	17.06.1968	15.02.1971	No
25	18.02.1971	18.11.1974	Yes
26	19.11.1974	19.09.1978	Yes

Each Register had a corresponding alphabetical Index, although some no longer appear to survive (the surviving Indexes are list in the table). This listed the subject matter of each incoming letter and gave the folio number where the letter was registered. The indexes can, of course, be used to identify entries for particular stations, or about particular topics.

To give a flavour of the information that can be found in the Registers, the following example has been drawn from Volume 5 (VPRS 12727/P1, Unit 1), the earliest held at PROV.

The inquistiveness of Lad Porter Trevellyn (AGST 5/321/3)

On 26 June 1925 the Metropolitan Superintendent reported to the AGST that while Traffic Inspector J. Buck was at Lower Ferntree Gully on 22 June 1923 [sic, probably a misentering of 1925] the Lad Porter there had demonstrated to him how to get a Staff out of the Bayswater instrument even though Lower Ferntree Gully was switched out at the time.

(Switching instruments had been provided at Lower Ferntree Gully in early April 1925. The short sections were Bayswater - Lower Ferntree Gully - Upper Ferntree Gully and the long section Bayswater - Upper Ferntree Gully.)

The AGST responded by instructing the Metropolitan Superintendent on 29 June to "Take up with Lad Porter why he interfered with the instrument and a description of how the staff was released". Lad Porter Trevellyn's report was received on 7 July; the report, of course, was not included in the precis.

On the 10 July 1925 the AGST wrote to the Chief Engineer of Signals and Telegraphs who responded on either the 15 or 20 July "The seriousness of the defect has been brought under the notice of the manufacturers [presumably McKenzie and Holland] and no further cases should occur." So, whatever the problem, it was a real design defect.

The AGST wrote to the General Superintendent on 24 July "I agree with Metro Supt that it is fortunate the defect was noticed." This, presumably, saved the inquisitive Lad Porter.

The Transportation Branch was more direct with the Chief Engineer of Signals and Telegraphs writing on 12 August "I shall be glad to have your personal assurance that instruments are perfectly safe against attempts to withdraw staffs by irregular [force?] without using such force as to break the mechanisms". The Chief Engineer responded on 27 August "All instruments when received from the manufacturer are being thoroughly tested out and no further troubles of this nature should be encountered."

And there the correspondence ends. A fascinating vignette, but we never learn exactly what the problem was. There is, however, a reference to a Secretary's file (25/2955) which may throw more light on the matter if it still exists.

NOBLE PARK

David Langley

Noble Park (16 miles 19 chains 67 links, 27.3 kilometres and 34 metres above sea level) opened on 3 February 1913 and was named after the property "Noble Park" on which the station is located. Up and down home signals (provided 13 February) protected the station which was located in the Winter's Block Telegraph section Spring Vale - Dandenong A Box although Sandown Park could be open as a block station on race days.

At first Noble Park was a passenger station only but Weekly Notice No 9 of 1915 informs us that a dead end siding was provided, leading off the up line at the up end of the station. The points were worked from a two lever ground frame (noted as being commissioned on 5 January 1915). One lever worked the siding points and the other controlled the up home signal. The levers were interlocked and so the home signal had to be put to the Stop position before the siding points could be worked. This also protected the train whilst it was shunting the siding. The lever frame was secured by an annett lock, the key of which was kept by the signalman at Dandenong A Box and handed to the guard of goods trains that were to shunt at Noble Park.

In June 1922 (Weekly Notice 25 of 1922) it is noted that Noble Park was established as a double line block post dividing the section Spring Vale - Dandenong A Box. A block switch was provided so that during quieter periods the original section would be reverted to. Details of the signalling arrangements were published and have been reproduced below:-

Post	Particulars
1	Down Distant signal.
2	Up Starting signal.
3	Down Home signal, controlled by quadrant on down platform.
4	Up Home signal, controlled by auxiliary frame.
5	Up Home signal.
6	Down Starting signal.
7	Up Distant signal.

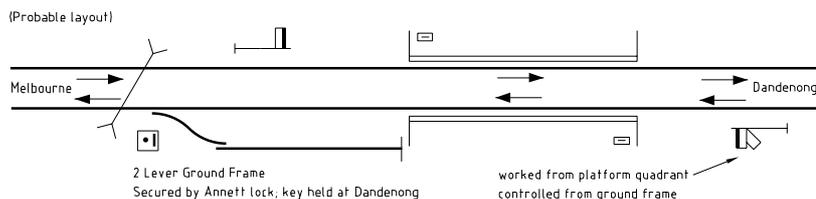
Amend particulars shown for Noble Park on page 333, Book of Signals, to read: Distant 2, Home 3 (1 down and 2 up), Starting 2.

Double line switching instruments are provided and subject to Block Rule 26, Noble Park will be opened as a Block Post as follows:-

Daily (Sunday excepted) from 3.15pm until the 11pm up Dandenong train clears Spring Vale.

While Noble Park is open as a Block Post, the sections will be Spring Vale-Noble Park and Noble Park-Dandenong A Box. When Noble Park is closed, the signals must be lowered from the quadrants on the up platform and the quadrants secured in the puller

Noble Park 1915



over position, in accordance with instructions on page 115 of the General Appendix.

Weekly Notice No 33 of 1922 gives the block hours as "7am until the 10.8pm down suburban clears Dandenong on Monday to Saturday", necessitating two shifts instead of just one. A further note said that "should switching out at this time cause any delay to goods traffic, the station is to remain switched in until the 11pm up suburban clears Spring Vale." Noble Park was still not switched in on Sundays.

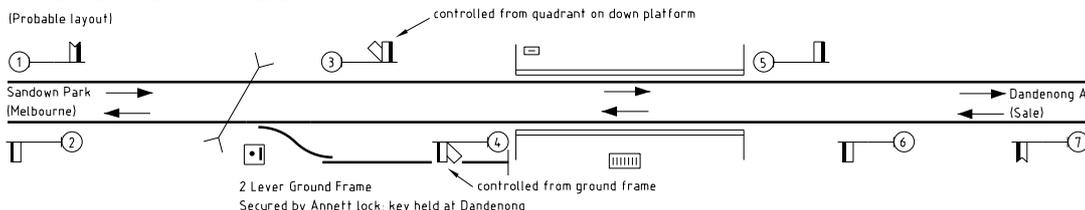
Additional signals were provided and all were worked from seven quadrant levers (four up and three down signals) located on the up platform adjacent to the upside office. The goods siding remained annett locked but now the key was located at Noble Park with the up home signal at the end of the up platform protecting the siding. This signal was controlled by the signal lever on the ground frame but we are not told whether this was the only interlocking between the ground frame and the station's signals. I would have expected the key to have been kept in a duplicate lock, perhaps on the distant signal quadrant lever, so that when the key was away from the lock, the distant signal was secured at caution, however, the instructions are silent on that matter.

The opening of Noble Park as a block station was probably caused by the impending electrification of this part of the suburban network. The wires had reached Oakleigh on 5 March 1922 and were extended through to Dandenong on 11 December 1922. The steam train service at this time was quite sparse (looking at the Monday-Friday up service only) with only 12 local steam trains to Oakleigh during the weekday from Dandenong whilst there was one through steam train to Flinders Street in the peak. The electric service onward from Oakleigh was, as expected, very frequent - roughly every 10 minutes spreading out to every 20 minutes in the off peak including the evening service. The Sunday service from Dandenong consisted of just three trains, all through steam trains to Flinders Street, one of the evening trains being the through train from Pakenham.

With the extension of the electrification to Dandenong, the service was shared between a number of through trains during the peak times and shuttle trains between Oakleigh and Dandenong at other times.

I don't have any figures for inwards and outwards goods traffic but goods traffic was apparently insufficient to war-

Noble Park 1922



rant the station remaining open for goods and the Weekly Notice announced that from 1 August 1925, Noble Park was to be "closed for goods in truck loads", implying that smaller items would still be handled. Almost immediately that order was rescinded and the siding remained open for goods traffic. Closure was again mooted for 1 April 1927 and was again deferred (twice) but finally it came on 30 September 1927. The annett lock was abolished and the siding, no doubt, was lifted soon after. Post 4 now was now referred to in the Book of Signals as a starting signal with post 2 becoming an advanced starting signal. Today we would merely abolish post 4.

A Station-master was appointed to Noble Park in late 1922 but the position was withdrawn from 9 January 1938 probably due to the low receipts through the depression era. A Station-master was again appointed on 10 November 1948 and the position remained until the late 1970's or early 1980's.

On 13 October 1947, the signal quadrants were replaced by a small interlocking machine located in a signal bay built on the front of the station building. It was a ten lever tappet frame and had seven signal levers with three spare. There were no changes to that configuration throughout its life. In line with Victorian policy, the down home signal was also controlled by a quadrant lever located on the down platform which was presumably secured reverse by a carriage lock. This would enable a guard of a down train to protect his train in the event of a delay to his train whilst the signal box was switched out. There was no corresponding up home control so it was probably expected that the guard would have access to the station or maybe there would always be someone on duty even if it wasn't a signalman.

The diagram on the previous page is a copy of the interlocking sketch A 712, dated 14 October 1946 but actually shown as 'In Service' on 13 October 1947. Why it took so long for the project to come to fruition is anyone's guess. Maybe money was tight so soon after WW2.

Post 3, the down home signal, was moved 150 yards further out from the station and the interlocking sketch confirms that it was previously located on the down side of Heatherton Road. We can only surmise that the local council authorities raised objection to the crossing being blocked if trains waiting line clear from Dandenong were forced to wait at the down home signal.

Post 3 was again moved, this time another 145 yards further out, on 28 March 1954 but this time it was in conjunction with the provision of flashing lights at Heatherton Road level crossing. The down distant signal was then relocated from its original post to the former down starting signal post for Sandown Park and was now motor worked. Sandown Park was still available for block working at this time but maybe it was considered that it didn't need a down starting signal, one down home signal being sufficient for block working. This took place on 8 April 1954, the same day that the flashing lights were commissioned at Heatherton Road. Further sets of flashing lights in the area

appeared at Corrigan Road (upside of Heatherton Road) on 23 December 1963 and at Chandler Road (near present day Yarraman station) on 24 September 1963.

A.1973/65 dated 11 November 1965 notified that:

Until further notice, in connection with Sandown Park Race Traffic, Noble Park for Up Return Race Traffic, is to be treated as a Block Terminal for Up trains [...]

During this period, Drivers and Guards running on this line will understand that line clear has been given by Noble Park as far as the up home signal only. In the event of a fog existing in the vicinity of Noble Park all trains must be dealt with in accordance with the ordinary block working under such conditions. Metropolitan Superintendent to please arrange for a Block and Signal Inspector to be in attendance at Noble Park to arrange for the Block Terminal conditions to commence and for ordinary Block Working to be resumed.

The down starting signal was moved 150 yards further in the down direction on 1 February 1970, and Gavin Potter remembers the uproar from local residents when the longer briquette started running in the late 1960's and kept blocking Heatherton Road whilst waiting line clear on the preceding train.

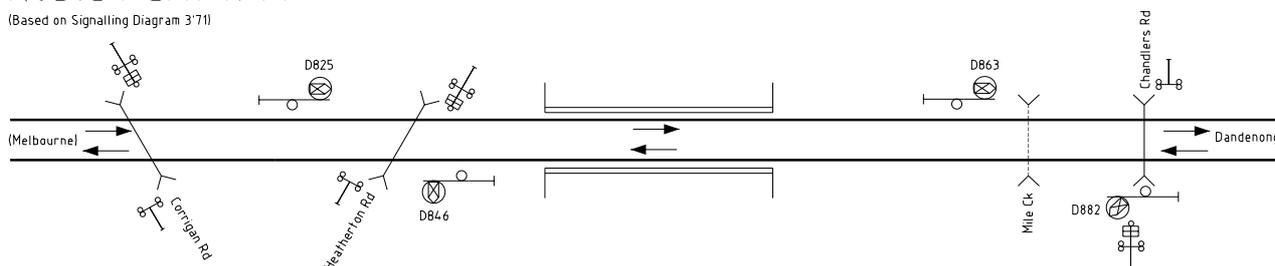
Vandals broke into the up side building on 22 August 1970 and set fire to it after ransacking the place. The signal box, booking and parcels offices were destroyed. A temporary booking office was established in the unburnt portion of the station building whilst a temporary building was erected over the signal levers in order that the signalling equipment could be restored to use as Noble Park was a vital block post dividing the otherwise lengthy section Spring Vale to Dandenong. The signal frame was apparently little damaged and was back in use the following day whilst the whole signal box was brought back into service within a couple of days with a small building constructed out of wood and cement sheets. This building remained in use until three position signalling was provided.

Three position signals were in the course of being installed to replace the double line block telegraph working between Oakleigh and Dandenong and the first section was provided between Oakleigh and Clayton on 6 December 1970, just three months after the fire. I believe that the project was interrupted at this point and a cheap three position signalling scheme was devised for Spring Vale-Dandenong. Only a pair of intermediate automatic signals were provided at Noble Park when three position signals replaced the double line block on 9 May 1971. All mechanical frames were removed along with the 10 lever interlocking frame.

These automatic signals effectively made Noble Park a permanent block post as only one train could be between Noble Park and Dandenong at the one time and the case was little better towards Spring Vale although there were an extra pair of signals at Sandown Park. It appears that a

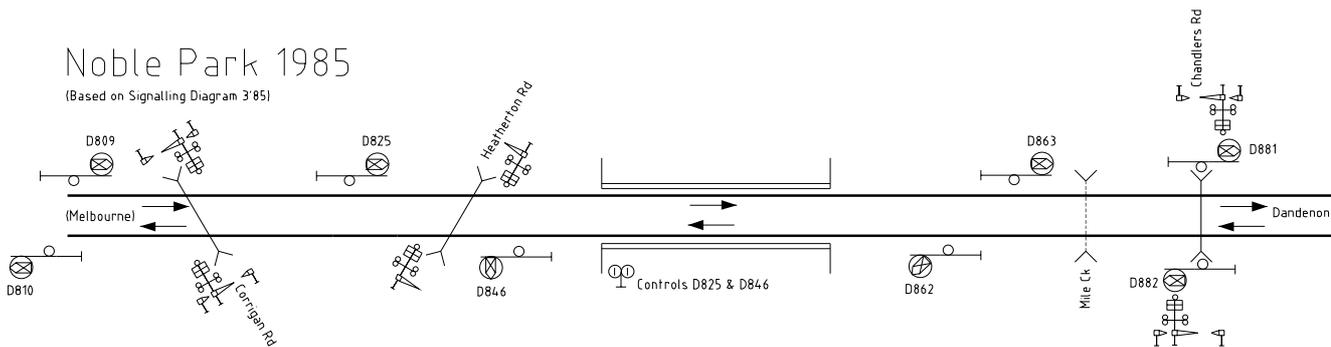
Noble Park 1971

(Based on Signalling Diagram 371)



Noble Park 1985

(Based on Signalling Diagram 3'85)



5P key switch may also have been provided to control the up automatic signal D848 although it is not shown on the litho, but the signal is shown as normally at stop.

The three position signalling project then resumed with Clayton-Westall being commissioned on 25 July 1971 and the final section Westall-Spring Vale being on 20 February 1972.

Boom barriers were added to the flashing lights at Heatherton Road on 16 October 1977 and traffic light coordination was provided on 8 June 1980. Pedestrian gates replaced the crib crossings in May 1993. Corrigan Road received boom barriers on 10 August 1985 as part of the

resignalling between Spring Vale and Dandenong where additional signal were added in order to reduce the headways between trains.

No further changes have taken place at Noble Park since then and I can't imagine any need for any changes except for the replacement of the searchlight signals with LED signals some time in the future, but probably not too long in the future going by the rate of conversion happening elsewhere in Melbourne.

As always my thanks to all those people that have furthered my knowledge of railway signalling in Victoria.

LYNDHURST (A1816/32 DATED 14 NOVEMBER 1932)

Dandenong - Cranbourne Section

Suspension of electric staff system and temporary conversion of the section Dandenong - Cranbourne into two staff sections to be worked under the rules of the staff and ticket system.

(S3583/32 - Cranbourne Turf Club's Races at Cranbourne)

On Thursday November 17th, the following special arrangements will be brought into force in connection with the running of the 11.0 am down special and No 12 up in the section Dandenong - Cranbourne.

The electric staff for the section Dandenong - Cranbourne will be suspended in order to permit of the above trains being crossed at Lyndhurst [Train Staff and Ticket sections Dandenong - Lyndhurst - Cranbourne].

Temporary train staff and ticket boxes for the sections Dandenong - Lyndhurst and Lyndhurst - Cranbourne will be provided and will be forwarded to the Block and Signal Inspector care SM Dandenong and will be placed and withdrawn by the Block and Signal Inspector who will arrange for the suspension and resumption of the electric staff system. The temporary train staffs and boxes will be in his charge until returned to the office of the Superintendent of Goods Train Service. Prior to the suspending of the electric staff system and arranging for the staff and ticket system to be brought into force the Block and Signal Inspector must

arrange for an electric staff for the section Dandenong - Cranbourne to be withdrawn in his presence. He must obtain possession of this staff and retain it in his possession this staff until he has withdrawn the temporary train staffs and boxes when he must again arrange for it to be placed in the instrument.

The Block and Signal Inspector must inform the signalment at Dandenong and Cranbourne when the electric staff system is suspended and again inform them when it is re-established and an entry to this effect, with the time the suspension and resumption is brought into force, must be inserted across the figure line of the Train Register Books at both stations. A line must be drawn across the TR Book to separate the entries for working under the different systems.

The attention of the Signalmen is directed to clause 16e, page 560, of the General Appendix re informing Drivers and Guards of the Temporary staff station at Lyndhurst and of the altered arrangements.

The Chief Engineer of Way and Works to please arrange for the points in No 2 Road to be unspiked and secured with Hand Locking Bars and Padlocks and for the scotch block in the lead from the Shed Road at the down end of the station to be secured back clear of the rail whilst the station is open as a staff station and for the points to be again spiked to lie for the shed road and the scotch block restored to its normal position when Lyndhurst is closed as a staff station. [...]

SIGNAL STANDARDISATION PROPOSALS 1910

This memo was incorporated into Secretary's Branch file 1925/20782 (PROV VPRS 421/P0, Unit 281). The file deals with the standardisation of signalling aspects in Victoria. It appears that this particular memo was a copy that properly belongs in another Secretary's Branch file as yet not sighted. The memo is incomplete, lacking the diagrams that were intended to illustrate the suggestions and it also lacks context as there are no supporting memos that indicate why the memo was compiled, who compiled it, or what was eventually decided. Fortunately the memo is dated so we know that it was compiled in July 1910. Internal evidence indicates that it was a formal submission to the Commissioners. That would mean that the notional author was the Chief Engineer of Way and Works, J.H. Fraser. Many of the changes in practice suggested in this memo were implemented in the short period before the first world war, and so this memo is of great interest in indicating why they were carried out. The reference in clause 12 to the Beaufort accident is extremely interesting and suggests an entirely different cause to the 'runaway' on 5 February 1910. The memo is copyright, State of Victoria, and is reproduced with the permission of the Keeper of Public Records, Public Record Office Victoria, Australia.

Memorandum

4 July 1910

Owing to the difficulty of obtaining competent interlocking fitters, our interlocking work has not progressed as fast as I would wish. Although we have increased Mr Calcutt's staff it will take a long time for his men to become sufficiently trained.

As there are some years work ahead and fitters cannot be obtained in Australia, there is no alternative but to get them from England. In order that Mr Calcutt might form an approximate idea of the volume of work before him and thereby be able to lay out his annual capacity for dealing with it and how many additional men he needs, I have gone over the whole question of likely interlocking requirements for the whole State with Mr Blazey and Mr Calcutt, and submit for the Commissioners' consideration the following recommendations out of which, if approved, Mr Calcutt can frame his programme for some years ahead:-

1. Distant signals have not yet been provided at some of our Double Line Block Posts, particularly so on the Mordialloc line. The Block posts not so provided have, however, their Home Signals well out from the platform, somewhat as is done at our non-interlocked staff stations on Single lines. Uniformity has a rather important bearing on the matter, and to bring us into line with the best practice, I think we should provide as shown hereunder:-

Name of Station	Line	Equipment to be provided
Toorak	Melbourne to Caulfield	Up Distant
Ormond	Mordialloc line	Up and Down Distant
Bentleigh	do	do
Highett	do	do
Cheltenham	do	do
Mentone	do	do
Hampton	Sandringham line	do
Tunstall	Lilydale line	do
Clayton	Dandenong line	do
Meredith	Geelong - Ballarat	Down Distant
Lethbridge	do	do

2. At interlocked stations on Single lines, although we provide Distant Signals, and a separate Home Signal for the main line and also for the crossing loop, we do not, as a rule, provide Home Signals to govern the fouling points of these roads at the opposite end to which the train arrives. In England this is compulsory and I find that New South Wales works closer to the standard than we do. Of course we so provide at depots like Stawell or Ararat, and at other stations such as Beaufort where there are facing points leading off No 2 Road; but on the whole it can be said that the fouling points for Nos 1 and 2 roads at an ordinary roadside

staff station are not protected by Home Signals. A judicious expenditure each year on the most important places is I think advisable. For instance our Down Adelaide express crosses at Diapur about 2 a.m. the second division of the Up Express when running, and the train which stands in the loop is not held clear of No 1 by a Fixed Signal as it should be.

If we track lock, however, I hardly think the expenditure on these additional Home Signals would be justified, for if the train in the loop stood foul, the incoming signal applying to No 1 could not be lowered; and if the Driver of the train in the loop carelessly allowed his engine to roll foul, the incoming signals for No 1, if off, would automatically go to Danger owing to the Track Circuit.

The rough illustration hereunder will show what I mean :- [Diagram not included on the original]

Subject to the question of Track Locking the following stations might be equipped with the necessary Home Signals during the next year or two, followed later by others as funds permit,-

Name of Station	Equipment to be provided
Diapur, Jung	Home signals for Nos 1 and 2 Roads at the fouling points at each end of the station.
Armstrong, Parwan,	
G. Western, Melton	
Ingliston, Middle Creek,	
Trawalla, Burrumbeet,	
Windermere, Buangor.	

3. The question of interlocking stations such as Hamilton and Colac, where one main line passenger train runs through No 2 and backs on to the other passenger train which is standing at the platform, is worthy of consideration, as those two station yards get congested at times. It is not infrequent for two goods trains to be in the yard at the same time as the passenger trains cross there.

4. Some of our busy single lines stations are Junctions as well, and as a measure of protection the gradual interlocking of such should be considered. For instance, Junction stations such as Korong Vale, Toolamba, Numurkah, Echuca, Moe, Morwell, and Korumburra, or non-junction stations with bad view and falling grade such as Creswick might I think claim early attention.

The partial interlocking at Birregurra and Lancefield Junction has never been very satisfactory and their claims might also be considered with those above mentioned.

5. At a number of our non interlocked stations where an engine is stabled, we have put in the pit and turntable roads without any protection given to the main line in the shape of Fixed Signals, Chock Block, Catch-Blade, or Catch Siding. It would appear the latter should be provided wherever possible with the points rodded together and Annett locked with the Home Signal so as to prevent the engine

fouling the main line without authority.

Example hereunder:- [Diagram not included in original memo].

6. At no-one-in-charge stations and private sidings we originally placed catch points in the siding clear of the fouling point, and rodded them and the points in the main line together, and worked them from a lever fixed close to the main line points, the latter being secured by either an Annett, Tablet, or Staff Lock as the case required.

Then when the drought struck us we departed from the practice somewhat, by merely rodding and securing the main line points and putting a chock block in the siding instead of the usual rodded catch blade.

There is always a risk through neglect on the part of Guards to properly place and secure the Chock Block across the siding, frequently through the padlock getting out of order or the key lost and not being reported. We might arrange that all these cases not yet dealt with shall be secured as previously arranged for and when such has been done we could then gradually make our practice uniform by abolishing the Chock Blocks and replace them with the rodded catch blade.

7. We are somewhat behind English practice with regard to the provision of separate Distant Signals at Interlocked Junctions applying to the facing end. At places like Williamstown Racecourse Junction, Burrumbeet Park Junction, Coleraine Junction, Timboon Junction, &c, we provide a separate Home Signal for each line, but make one Distant serve the two Homes. Our conditions of climate, taken in conjunction with our reasonable speeds and high percentage of braking power on all trains, do not make the provision of a Distant for each line a very urgent one; but at such a place as Brighton Beach on the Down where one of the two roads to be accepted is a dead end, I think a separate Distant should be provided.

8. We have also departed from the English standard with regard to providing Fixed Signals at non-staff station on lines worked under the ordinary Train Staff and Ticket System. Prior to 1898 we used to provide, at least, Home Signals at all Single Line stations, but early in March of that year it was decided that we would not provide any Signals at all at non-staff stations, on Staff and Ticket lines, provided the points were staff locked or Annett locked with the key attached to the staff and that the ordinary Block System was in force. Two or three years ago, however, we again departed from our then practice, by abolishing quite a number of Home Signals at Intermediate, and also at Terminal Stations, on Staff and Ticket lines where ordinary Block System was not in force, and where the points were not even Staff or Annett locked. This has introduced a certain amount of risk. For instance on the Mansfield line we frequently have the ordinary train running on a staff ticket shunting of necessity at the intermediate non-staff stations, whilst through live stock trains travelling on the staff follow them later on, but with a suitable interval intervening. We ought to have Home Signals at all staff stations.

9. With regard to the signalling arrangements between Burnley and East Richmond on the Up whereby the Up Starting Signal from Burnley is also the Up Home Signal to East Richmond, I find that two other places are signalled somewhat similarly. For instance the Footscray "A" Box Down Starting Signals for both the Williamstown and Northern Lines are each controlled from Footscray "B" and "C" respectively as the Down Home Signals to those Posts. This is unavoidable, as the Junction Box must have Down Starting

Signals for each line so as to permit of a Down train being allowed to go forward on either line to clear the junction should Line Clear not be obtained and a following train be waiting to approach for the clear road. Then between No 1 Box and Franklin Street Junction switching engines of necessity have to work out on the Down country line whilst carrying out the necessary switching at Spencer Street Passenger Station, consequently the Down Home Signal at Franklin Street Junction for the centre line is also called the No 1 Box Down Starting Signal to prevent [sic probably 'permit'] the switching being done without asking for Line Clear for each such movement. For Down Passenger trains, however, going out on the Centre line No 1 Box has to first get Line Clear before allowing the train to go forward to Franklin Street Junction. Also between Franklin Street and North Melbourne Junctions a special arrangement is in force whereby North Melbourne Junction on the Down controls the three Down Starting Signals (1 for each line) from Franklin Street Junction, but has his own separate Down Home Signals protecting the North Melbourne Station Platforms. Franklin Street Junction on the Up similarly controlling the three Up Starting Signals from North Melbourne station and at the same time has his own Up Home Signals which protect his Junction for these roads. Again, for many years the Up Home Signal at Toorak has been controlled from Armadale as the Starting Signal for the latter station, but this arrangement was abolished a month or two ago.

10. At Kilmore Junction the Up Branch trains from Heathcote approach the Junction for the last 3 or 4 miles on a falling gradient of 1 in 60. The Branch line prior to reaching the Junction is supplied with a short Catch siding to prevent any Branch train from coming into collision with a North Eastern Line train through over-running the Junction. The approach from the Branch is an unsuitable one, and it would appear to be desirable to either extend the Catch siding so as to give a decent margin for a Branch Line Driver to pull up should his train get a bit out of hand, or failing that, introduce the Winter's Block between Kilmore Junction and Kilmore and arrange that after Line Clear had been given to the latter station the Junction must be kept clear until that train arrives. In the meantime no trains should leave Wandong on the Up until the Up branch train had cleared the Junction, and on the Down that a train could not leave Wallan for the Junction until the Up Branch train had passed through.

11. It is correct practice to interlock Distant Signals with the Home and also other Signals ahead of the Home if they apply to the same line. Of late we have been doing this but at present quite a number of places still require attention.

As an illustration, it might be remembered that at Beaufort when the collision occurred there in February last, it was brought out that the Distant, Home, and Disc Signal for the dead end siding were at "All Right" for the Up train which ran into the buffer stops. It is obvious that in such a case it would have been better for the Distant Signal to have been at Danger whilst the points were set, at the Up end of the station, from No 2 to the Siding.

On Double lines I understand we have some 123 Starting Signals or Home Signals largely doing the duties of Starting Signals and which for this purpose may be classed as Starting Signals only 38 of which are at present interlocked with the Distant leaving 84 still to be attended to. On Single Lines we have about 34 signals placed in advance of the usual Home Signal which are not interlocked with the Distant, some of the Stations such as Beaufort and Baddaginnie having their No 2 Road terminating in a dead end in addition to the usual connection with the Main running line. I

think we should properly interlock the Distant Signal at all of the above places with as little delay as possible.

12. In Clause 3 of the Board of Trade requirements it is laid down that "When the main or more important line is not the one on the left hand, separate signals posts to be provided or the arms to be on the brackets". This we conform to on our Double Lines in many cases. On Single Lines, however we usually place the two arms applicable to Nos 1 and 2 Roads one above the other on a single mast, and even in cases where a Branch line junctions with the main single line, we have not always placed the two arms on a bracket post. At places where we are not in line with the standard practice I think we should provide the arms on a bracket signal thus - [diagram of standard bracket signal] the arm on the shorter bracket mast to apply to the Branch line. The English practice is thus [same diagram of standard bracket signal] whilst ours as a rule is [diagram of two armed straight mast]. The English Signals show a Driver at a glance which Signal is for the Branch and which for the Main line, but ours does not.

13. In the United Kingdom the Board of Trade insist on points and signals being interlocked on all lines not classed as "light".

A number of our Double line stations have no interlocking all all, and at such places careless Guards or Shunters might easily shunt through a non-interlocked crossover leading from one Main Line to the other after the Block worked

in the office had accepted a train coming from the opposite direction. Of course such a crossover should be secured by hand-locking bar and padlock; but experience proves that, frequently, a padlock is unlocked, or out of order, which it should be otherwise. Again, if the crossovers were connected up and interlocked with the Signals they could be promptly pulled over if the post in advance notified that vehicles had broken away from a train and were running back on the wrong line. Cheltenham and Mentone should be two of the first batch to receive attention, and I think we should do a few each year and so gradually level up our practice on Double Lines to that of the Board of Trade.

14. In conclusion experience in the United Kingdom goes to show that disasters have necessitated the Board of Trade making a Regulation to the effect that, at stations on Double lines where trains frequently have to shunt for more important trains to overrun them, a refuge siding be provided whereby the train concerned may be shunted into such, instead of from one Main line to the other. In doing the latter, not only is an undesirable risk accepted owing the liability of the shunted train being forgotten, but if not forgotten it causes congestion on busy divisions through a train due in the opposite direction not being permitted to be accepted until the shunted train had been placed on the proper line again. It seems, therefore, as if we could give some consideration to this matter each year, particularly between Melbourne and Bendigo and Melbourne and Seymour.

WORKING OF SINGLE LINES OF RAILWAY BY CAR STAFF AND TICKET SYSTEM

The following clauses have been extracted from the Victorian Railways manual "Instructions re Working of the St. Kilda and Brighton Electric Street Railway", 1927 edition.

92. (a) The object of the Car Staff and Ticket System is to prevent Cars travelling in opposite directions on any Section of any Single Line at the same time.

(b) The whole of the Single Line may form one Staff section or may be divided into a series of such Sections; in the case of there being two or more Staff Sections, they are numbered consecutively, No. 1 being at the Up end (the Melbourne end) of the Single Line.

(c) A Car Staff, which consists of a metal symbol, is provided for each Staff Section, and except as shown in clause (b), Instruction 93, or Instructions 97, 101, 103, and 104 no Car is allowed to enter on any Staff Section unless the Motorman is in possession of the Staff for such Section; each Staff is stamped with a distinguishing number corresponding to the number of the particular Section for which it is provided.

(d) Unless otherwise ordered Staff Tickets are provided for the Section, in order that, where necessary, two or more Cars may run in the same direction on, or through, the Section before a Car travels in the opposite direction; in such case the Motorman of each of the Cars, except the last, shall carry a Staff Ticket and the Motorman of the last of the series of Cars shall carry the Staff and on its arrival at the other end of the Section, the Staff or Staff Tickets will be available for one or more Cars to enter the Section from that end.

93. (a) **Crossing Places.** - Crossing Places which are situated between Staff Sections, consist of a short length of double track on which Cars travelling in opposite directions may pass each other.

(b) When entering a Crossing Place, the Motorman must, unless otherwise ordered, travel on the left-hand road in the direction the Car is travelling.

(i) When Cars that have to pass each other, are approaching a Crossing Place at, or about, the same

time, the Car that is proceeding in the Up direction must have precedence, and the Motorman of the Down Car must not pass over the Facing Points at the entrance to the Crossing Place until he has seen that the Up Car has been brought to a stand clear of the fouling point at each end on the proper road.

During a fog or when from any similar cause the Motorman cannot clearly see a distance of 100 yards ahead, the Motorman of an Up or Down Car must before entering a Crossing Place send his Conductor forward to see that the fouling points are clear and to prevent any Car from entering at the opposite end, until his own Car has been drawn in and is standing clear of the fouling point at each end on the proper road. If the Conductor of each Car meet at the Crossing Place precedence must be given to the Car proceeding in the Up direction, and the Conductor of the Down Car must take measures to prevent his Motorman from entering until the Up Car is standing clear on the proper road.

(ii) A Motorman must always be prepared to find a preceding Car standing outside a Crossing Place, and have his Car under such control as to enable him to stop clear of the obstruction.

(iii) Except as prescribed in section (iv) hereof no Car must be allowed to foul the Single Line by passing outside the fouling point from any Crossing Place or Terminal unless the Motorman be in possession of the Staff.

(iv) Should it become necessary for a Motorman to foul the Single Line for Shunting purposes, in the absence of the Staff, he must first arrange for, and see that the Conductor or some other competent

employe is stationed a sufficient distance out, to stop any Car which may approach on the Line about to be obstructed.

94 (a) At the entrance to each Section, a Staff-box in which the Staff and Staff Tickets are secured, is fixed on a post designated the Staff Post. The Staff-box contains two drawers in which the Staff Tickets are placed. The Staff-box is fitted with a Special Lock of which each Motorman is provided with a key; the Staff forms the key for opening the drawer containing the Staff Tickets, so that a Ticket shall not be available unless the proper Staff for the Section is in the Staff-box.

(b) Unless specially authorised the Ticket-drawer must not be opened by any Key, instrument, or means, other than by the Staff for the Section to which the Tickets apply, and a Motorman must not use any Ticket as authority to enter any Section except one withdrawn by himself in the regular way by means of the proper Staff; the Ticket-drawer must be locked after each ticket is taken out.

(c) Staff Tickets must be detached and used in the order of their progressive numbers and only one Ticket must be taken from the Ticket-drawer at one and the same time. The Motorman must at once fill in and initial the Staff Ticket when he obtains it from the Staff-box; if a Ticket be taken out and not used it must be cancelled, marked with the words "Not used," and attached to a report explaining the circumstances to the Officer-in-Charge who must forward it with other Cancelled Tickets to the Block and Signal Inspector.

95. (a) Unless otherwise specially arranged the Motorman is responsible for Staff and Ticket Working, and in every instance of irregularity he must immediately communicate with the Officer-in-Charge on the Telephone and await instructions; if, however, he is unable to notify the Officer-in-Charge he must act as laid down in these Instructions.

(b) Except where Special Instructions are issued to the contrary, the Motorman is the sole person authorised to deal with the Staff and Staff Tickets, or open any Staff-box or Ticket-drawer.

(c) The Motorman must in every instance consult his Run Book and ascertain whether he should travel on the Staff or on a Staff Ticket.

96. (a) When a Car is ready to proceed into a Section and no other Car is intended to follow before the Staff will be required for a Car in the opposite direction on that Section, the Motorman must obtain the Staff for the Section and keep it under his observation on the Car bulkhead, until he arrives at the Crossing Place next in advance and except as shown in sub-sections (i) and (ii) hereof he must lock the Staff in the Staff-box at that end of the Section.

(i) If when the Motorman arrives at the other end of the Section the Staff is immediately required by the Motorman of a Car about to proceed in the opposite direction, the Motorman arriving with the Staff may hand it to the Motorman of the other Car, but this will not relieve the latter of responsibility for compliance with clause (c) of Instruction 95.

(ii) Before disposing of the Staff as laid down above, the Motorman must see that the full number of vehicles (if one or more trailers should be attached) comprising his load has arrived complete.

(iii) The Motorman of the last Car to pass over any Section at night, must not leave the Staff for such Section in the Staff-box, but must deposit it in the authorised receptacle at the Depot for safe custody overnight; the Motorman of the first Car in the morning must distribute the various Staffs

properly, with due regard to the proper running of Cars.

97. (a) If a Car is to be followed over the Section by another Car before the Staff can be returned, the Motorman must carry a Staff Ticket (see Specimen Form at end of this Instruction) indicating that the Staff is following, but before entering the Section he must see that the Staff applicable to such Section is in the Staff-box; he must then replace and lock the Ticket Book in its proper drawer, and securely lock the Staff in the Staff-box. On arrival at the Crossing Place next in advance the Motorman must at once cancel the Ticket by writing the word "Cancelled" across the face, and attach the Cancelled Ticket to his Run Sheet.

(i) A Staff Ticket must not be used for any Section or direction other than that printed thereon, nor for more than one journey.

(ii) Motorman [sic] must observe whether the supply of Tickets for any Section is likely to become exhausted, and, if so, must immediately communicate the circumstances to the Officer-in-Charge.

(b) The Officer-in-Charge must see that all such Staff Tickets are checked with the schedules, and forward them to the Block and Signal Inspector daily.

(Specimen Form of Staff Ticket referred to in Clause (a) of Instruction 97.)

Down. Progressive No

ELECTRIC STREET RAILWAYS.

STAFF TICKET.

Sandringham to No. 1 Staff Post.

No. 1 Section Down.

Date Time Run No.

Motorman's Initials

This Ticket must not be used for any Section or direction other than that printed hereon, and must be cancelled by the Motorman and attached to his Run Sheet immediately after use.

98. (a) The Motorman must not overcarry the Staff beyond the Staff Post at which, ordinarily, it should be left, and any breach of this Instruction will be considered as serious neglect.

(b) In the event of a Motorman overcarrying a Staff beyond the Staff Post at which, ordinarily, it should have been left, he must communicate with the Officer-in-Charge for instructions immediately on arrival at the Staff Post in advance; if, however, he is unable to gain the attention of the Officer-in-Charge he may hand the overcarried Staff to the Motorman of a Car proceeding in the opposite direction (who, however, must be in possession of the proper Staff or Ticket for the Section he about to enter) and draw special attention to the overcarried Staff before handing it over, and both Motormen must report the circumstances.

The Motorman in whose charge the overcarried Staff has been placed must not enter the Section to which the overcarried Staff applies, until instructed to do so by the Officer-in-Charge.

99. If, after having passed into a Section, the Motorman should find that he omitted to obtain the Staff for the Section, or that he is in possession of another Staff, he must exercise due care for the protection of his Car in the advance direction, and instruct his Conductor to do likewise in the rear; the Motorman may, however, drive the Car towards the Crossing Place in advance or in the rear according to his schedule or as may be advisable, but he must travel cautiously, making frequent use of his Gong, and send his Conductor to precede the Car when approaching or passing

around any curve at which his view of the Line ahead is obscured.

In the event of the Motorman having a wrong Staff he must, as soon as possible, arrange for it to be despatched to its proper Staff Post. See Instruction 98.

100. If on arrival at a Crossing Place the Motorman should find that the Staff for the Section in advance is not at the Staff Post when, according to the Schedules, the Staff should be available for his Car, or should he find a Staff for another Section at such Staff Post, he must at once communicate with the Officer-in-Charge. See Instruction 104.

101. (a) **Car Staff Lost or Damaged.** - If the Staff for the Section should be lost, arrangements must be made to work the traffic over the Section by Pilotmen. The Officer-in-Charge will institute and supervise the Working by Pilotman in accordance with the directions contained in Rule 14 of Appendix II., Book of Rules and Regulations; the Forms referred to in such Rule, altered, in ink, as required, may be used for the Electric Street Railways. A sufficient supply of such Forms must be kept on hand at the Depot by the Officer-in-Charge.

102. **Disabled Car.** - (a) In the event of a Car that is carrying the Staff breaking down between the Staff Posts, the Motorman must (if the disabled Car can be moved by another Car) hand the Staff to his Conductor and instruct him to take it in the direction whence Relief can most expeditiously be obtained. The Conductor must fully explain the circumstances to the Motorman of the Relief Car, hand him the Staff, and ride with him to the point at which the disabled Car is standing.

(b) If the Motorman of the disabled Car be in possession of a Staff Ticket, he must, unless Relief can be more readily obtained in advance, arrange Relief by sending his Conductor back to stop the next following Car; the Conductor must fully explain the circumstances to the Motorman of such Car, and ride with him to the point at which the disabled Car is standing.

If, however, Relief can be more readily obtained from the Staff Post in advance, the Motorman of the disabled Car must fill in an "Emergency Relief Order" (see Specimen of Form at end of clause (c) hereof) and hand it to his Conductor with instructions to proceed to the Crossing Place in advance and deliver it to the Motorman of the Car which is to be used for Relief purposes; the Conductor of the disabled Car must ride with the Motorman of the Relief Car to the point at which the disabled Car is standing.

The "Emergency Relief Order" is sufficient authority (when filled in) for the Motorman of the Relief Car to enter the Section for Relief purposes-

- (i) In the cases referred to in clauses (a) and (b) of this Instruction the Motorman of the Relief Car, when proceeding on the obstructed Section, must proceed cautiously, and, if starting from a Crossing Place, he must first communicate the circumstances to the Officer-in-Charge and receive instructions as to the disposal of the disabled Car.
- (ii) At night or during foggy weather the Motorman of the disabled Car must see that a Red Light is showing on the front and rear of his Car.
- (iii) The Emergency Relief Order must be retained by the Motorman of the Relief Car until the obstruction has been removed and the Section is clear, after which he must write the word "Cancelled" and his signature across the face of the Order, and attach it to his Run Sheet with a report to the Officer-in-Charge, who, after investigating the circumstances, must forward the Order and reports to the Block and Signal Inspector.

(iv) The Motorman of the disabled Car must not allow his Car to be moved until the Relief Car arrives, unless satisfactory arrangements have been made to prevent the Relief Car from coming to his assistance, and when a written order has been issued, until the man to whom the order was given has returned and handed the order back to the Motorman.

(c) The disabled Car must be dealt with as expeditiously as possible, consistent with these Instructions, but unless the Motorman be in possession of the Staff, or otherwise arranged by the Officer-in-Charge, the disabled Car must be taken to the Crossing Place in advance.

(Form referred to in clause (b) of Instruction 102.)

ELECTRIC STREET RAILWAYS.

EMERGENCY RELIEF ORDER.

Date Time

To Motorman of Car at Staff Post.

You are hereby authorised, as per clause (b), Instruction 102, to enter Section No for the purpose of Relieving Car No. which is travelling on Staff Ticket from Staff Post to Staff Post, and which is disabled and stationary near street. I will not allow my Car to be moved until the arrival of your Relief Car.

Signed

Motorman of Disabled Car No.

Countersigned

Motorman of Relief Car No.

103. **Section Obstructed.** - (a) If, due to an accident, repairs, or obstruction, traffic is likely to be stopped for a considerable time, special arrangements must be made for working Cars to and from the Staff Post on each side of the point of obstruction; the Staff must be obtained to work Cars between the point of obstruction and the Staff Post on one side, and, on the other side, the traffic must be conducted by Pilotman. The Officer-in-Charge will institute and supervise the working of traffic on each side of the obstruction in accordance with the directions contained in Rule 18 of Appendix II., Book of Rules and Regulations; the Forms referred to in such Rule, altered, in ink, as required, may be used for Single Lines on the Electric Street Railways. A sufficient supply of these Forms must be kept on hand at the Depot by the Officer-in-Charge.

(b) During any period of darkness or fog, the person in charge of the obstruction must see that a Red Light is exhibited on each side of the obstruction.

104. **"Suspension of Staff Order."** - (a) In any instance in which the Staff for a Section is at the opposite end to that from which a Car is required to be despatched, and there are no means of transferring the Staff in time to avoid serious delay, the Officer-in-Charge may suspend Staff and Ticket Working for one Car, in accordance with the following instructions:-

- (i) The Motorman of the Car that requires to be so despatched must inform the Officer-in-Charge of the circumstances, and give his name, the number of the Car, and the trip (Up or Down) as contained in the Run Book, and the Officer-in-Charge will personally instruct the Motorman as to what course to pursue, according to the circumstances.
- (ii) In the event of the Officer-in-Charge deciding to suspend the Staff and Ticket Working by the issue of a "Suspension of Staff Order," he must first communicate personally with the Motorman or other responsible employe at the end of the Sec-

tion opposite to that from which the Car is to be permitted to proceed, and definitely ascertain that the Car Staff for the Section is locked in the Staff Box at that end. He must then prepare the "Suspension of Staff Order" (See Specimen Form at end of this Instruction), have it countersigned by another official at the Depot, and issue it either by personally handing the Order to the Motorman, or by telephoning it to him. In the event of the order being telephoned the Motorman must fill in a copy of the Order and repeat the message back to the Officer-in-Charge, after which both the Motorman and the Conductor must sign the Order in the space at the bottom of the Form. The other official at the Depot and the Conductor must each listen to the messages, and if necessary have them corrected before countersigning. The Motorman may then run the Car through the Section at a reduced speed, and at every curve or other place where the view is obscured, he must arrange for the Conductor to go forward before signalling the Car ahead.

(b) In any instance in which a "Suspension of Staff Order" is issued, the Staff for the Section must not be released until the Car travelling on the authority of the Order has reached the Staff Post, at which the Staff is secured, and on arrival at such Staff Post the Motorman must cancel the "Suspension of Staff Order" by writing the word "cancelled," together with the date and time, over the face, signing his name, and obtaining the signature of the Conductor under the word "Cancelled." The Motorman of the first Car waiting to proceed in the opposite direction must see the cancelled "Suspension of Staff Order" before releasing the Staff, subject to the exception that if the Car travelling on the Suspension of Staff Order become disabled on the Section and require assistance from the front, the Motorman of the disabled Car may issue an "Emergency Relief Order" and send it forward by the Conductor to the Motorman of the Car at

the Staff Post in advance; the later may then release the Staff and give the necessary assistance. The Conductor of the disabled Car must ride with the Motorman of the Relief Car and point out where the disabled Car is located.

(c) Unless the "Suspension of Staff Order" is issued, the ordinary Instructions must be adhered to; failure to obtain communication with the Officer-in-Charge or to obtain a satisfactory reply will not justify any departure from the ordinary Instructions.

(Specimen of Form referred to in section (ii) clause (a) of Instruction 104)

ELECTRIC STREET RAILWAYS.

CAR STAFF AND TICKET SYSTEM.

SUSPENSION OF STAFF ORDER

Date Time
 To Motorman
 at Staff Post.

The Staff for the Section No. is locked away in the Staff-box at Staff Post and I hereby suspend Staff and Ticket Working for Staff Section No. in order that you may proceed over that Section on the authority of this Order and in accordance with Instruction 104. On arrival of your car at Staff Post, the Staff and Ticket Working must be resumed. Signed Officer-in-Charge. Countersigned Depot Witness. Signature or Motorman Motorman and Conductor
 Receiving this Order Conductor Time received.

On completing the journey over the Section the Motorman must write the word "Cancelled" on the face of this Order, and both he and the Conductor must sign their names underneath.

Every Motorman must carry three of these Forms when on duty.

THE PROVISION OF YELLOW DISTANT ARMS AND LIGHTS

(Continued from Page 62)

Broadmeadows and Wallan on the 28 November before returning to convert between Essendon and Glenroy the following day.

A break of a week then eventuated before, curiously, the isolated section between Armstrong and Stawell was converted on 6 December. Attention then returned to the north eastern line, completing the line north to Tallarook on the 10 December.

Another week's break then eventuated before conversions started again. Now there is definite evidence of two gangs at work. One gang started at Trawalla and worked west on the Serviceton line; completing that line just before the new year.

The second gang spent a day converting the Glen Iris line.

After this there was a long break of nearly five months before the section between Carrum and Baxter was converted. A further break of nearly two months then ensured before the remaining boxes on the Frankston line were converted, together with Carnegie and Murrumbeena (which completed the eastern line).

Next, attention turned to the northern suburban lines. The Heidelberg line between Westgarth and Heidelberg was completed on 9 October 1929, then the Whittlesea line between Merri and Reservoir on the following day. The remaining two stations on the Hurstbridge line were converted

on 11 October, and the Coburg line was converted on the 15 October.

The penultimate section to be converted was the Newport to Williamstown on 23 October. The very final distants to be converted were, ironically, the closest to head office. On 30 October 1929 the fixed distants at Dudley Street and Weighbridge Junction were converted.

However, there was to be an unexplained delay of four months before the S&T Office officially informed the Transportation Branch that the conversion had been completed. On 5 March 1930 the Chief Engineer S&T, formally notified the General Superintendent that the conversion had been completed. The General Superintendent then took his time. Circular C 12/30, containing the amended Regulation 47, was dated 8 May 1930, but was not issued to staff until the beginning of June. The amendment was formally brought into force with the issue of Weekly Notice 23/30 on 10 June 1930. The instructions on Page 104 of the General Appendix dealing with the 'Colour of Semaphore Arms' were simultaneously amended.

(I'd like to thank Keith Lambert for researching and supplying the table of dates that distants were converted to yellow arms and lights.)



Two more photographs of wooden signals at Frankston in 1985. (Above) The signal bridge at the Up end of Frankston carried the Up signals from No 1 Road (Post 8), No 2 Road (Post 9), No 3 Road (Post 10) and the yard (Post 11). The signal bridge was a modified overhead structure, not a standard signal bridge, and was consequently enormously tall; it dwarfs the large three story signalbox alongside. The bridge was obviously provided in conjunction with electrification in 1922, but was equipped with wooden dolls despite the additional weight and wind surface compared with lattice dolls. Even more curiously, the arm from No 2 Road (the straight road at this end) was higher than the other two arms. The mechanical Homes on the dolls were replaced by two position light signals in 1976 when the double line block to Carrum was replaced by automatic signals; note that the discs to the stabling siding were not replaced. The signalbridge still stands, but the wooden dolls have been replaced by short tubular steel dolls. (Left) Wouldn't I like Post 17 in my garden? Complete with McKenzie and Holland final, Post 17 controlled movements Siding A (the shunting neck at the Down end) into No 2, 3, 4-6 Roads. Post 19 can be seen in the background. Post 17 was removed in 1988 with the rearrangement at the Down end. Both photos taken on 9 April 1985.