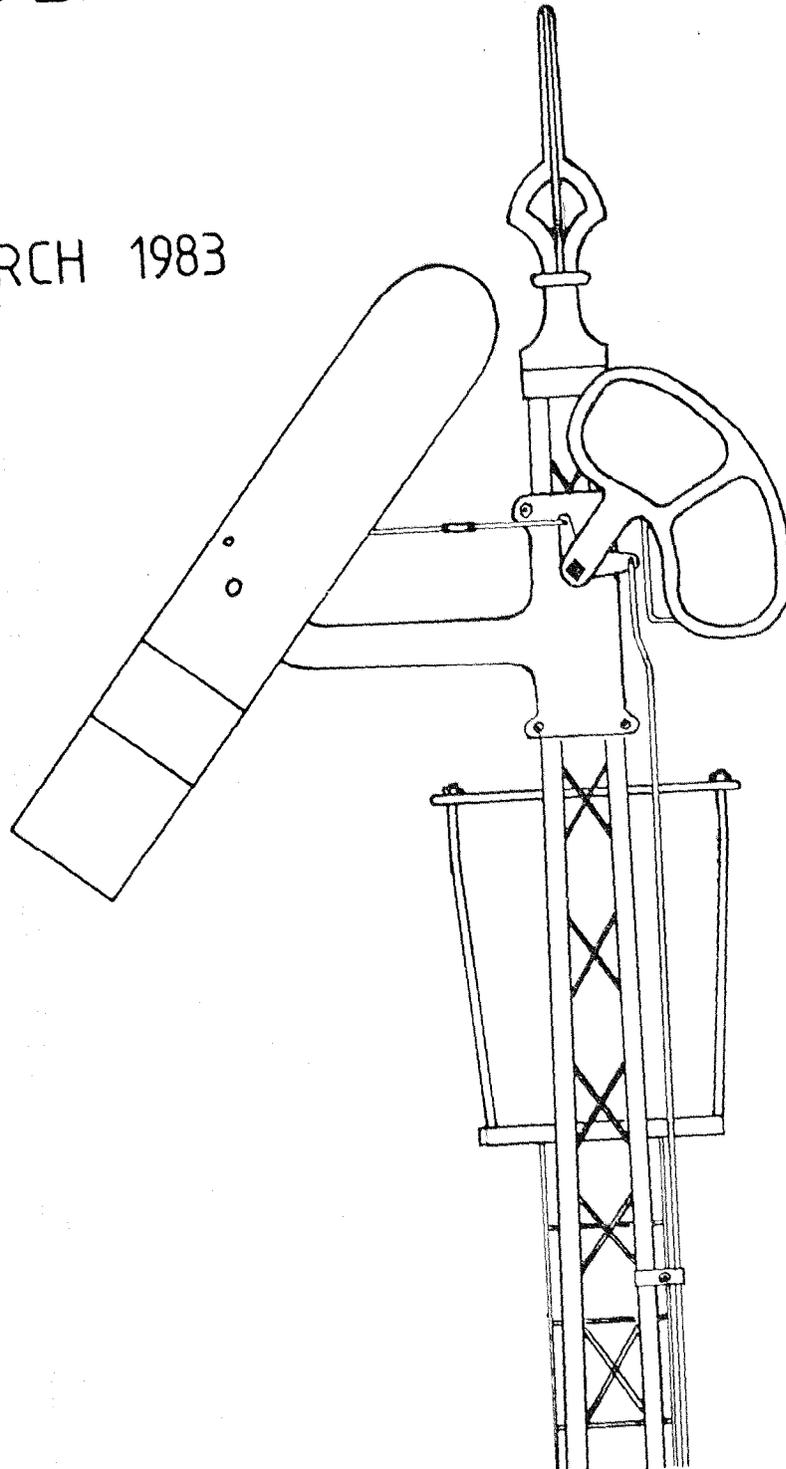


# SOMERSAULT

MARCH 1983



# SRSV

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Dead line for each issue is the 1st of the previous month.

NEXT MEETING: 18 March 1983.

VENUE: Mr. C. Guy's signalbox and backyard.

#### MINUTES OF JANUARY 1983 MEETING

HELD AT: A.R.H.S. Library Room, Windsor Railway Station. Meeting commenced at 2000 hours.

PRESENT: McLean, Michealson, Price, Jungwirth, Stoneham, Rutledge, Bates, Churchward, Inglis, Jeffries, Sinnatt, Brook.

MINUTES OF PREVIOUS MEETING: read and received. Jungwirth/Rutledge.

BUSINESS ARISING: S.A.R. Staff exchangers - further information has come to light from Bill Callaghan.

CORRESPONDENCE: Inwards.

1. From D. Langley. \* request for payment of \$100.  
\* suggested that Nth Melbourne signalbox could become a suitable meeting place with enough space available for the S.R.S.V. Archives.  
\* suggested an alteration to meeting nights to assist in publication of SOMERSAUIT.
2. From Don Martin - currently researching Staff and Ticket in Queensland.
3. From Jim Brough - apology due to his 81st birthday. also wishes to purchase copies of the Technical Papers mentioned in the S.R.S.U.K. Newsletter No 77 and would be in any group action to buy copies in bulk. the A.R.H.S. meeting room rules are also mentioned, (see later).

- GENERAL BUSINESS:
1. Nth Melbourne Signalbox. After discussion it was moved that Colin Rutledge be appointed as a one-man sub-committee to investigate the use of this venue for meetings.  
Jungwirth/McCurry.
  2. Altered meeting nights. Following extensive discussion of the changes proposed, it was moved that the January meeting only transfer to the third Friday in February in 1984.  
Churchward/Price. carried.
  3. Staff Stations. John Sinnatt raised the question for discussion whether important stations, where railway personnel have been withdrawn, have remained Staff stations. Jack McLean suggested that compiling a list of former Staff stations and those still current might be an interesting exercise.  
It was moved that J. Churchward compile a list of Non-Commercial Staff stations. Jungwirth/McCurry.
  4. Parwan Loop. Jack McLean requested additional information concerning the installation of this new loop and whether or not the signals from Bank Box Loop will be used.
  5. Adelaide Daylight. It was observed that the cross at Nhill was done by running the westbound train forward at the down end and reversing into No 2 road while the Up train was held at the Up Outer Home signal.
  6. Footscray Frame. Colin Rutledge was co-opted to the Sub-Committee investigating acquisition of the frame from Footscray.
  7. A.R.H.S. Meeting Room Rules (directed to ALL users of the Library Room at Windsor)
    - a) All surplus papers of meeting to be removed.
    - b) Ash trays to be emptied. (Watch for smouldering butts!)
    - c) Chairs to be replaced in table positions.
    - d) Blackboard to be cleaned and the easel stowed safely.

- e) Check that the next scheduled meeting is recorded in the diary available at the table.
- f) Please Note! Books, papers and diagrams must not be taken from their storage places except by the Librarian or an accredited representative on the spot. Items are available for consultation during a meeting but must be restored to their correct position before leaving by carefully noting and marking position(s) prior to removal plus checking at the finish.

ITEMS OF POSSIBLE INTEREST:

1. Diamond Valley Railway. The DVR has installed a 42 lever miniature frame. Bruce McCurry mentioned that interested members could arrange to visit the box by contacting him.
2. White's Siding (Nth Ballarat). Alan Jungwirth reported the installation of an electrically released Annett's key to work this siding. Also the new Forest Street boom barriers have caused some signalling re-arrangements near Linton Junction.
3. Werribee. When track arrangements are completed, Werribee will have three bi-directional roads and six crossovers within station limits.
4. Lithographs. Colin Rutledge offered some of his surplus diagrams to members which were gratefully received.

NEXT MEETING: To be held at Chris Guy's residence on 18 March 1983. Alan Jungwirth will be running a bus from Box Hill, departing at 1900 hours from the Heidelberg Stop in Main Street, Box Hill (on the down side of the railway station).

MEETING CLOSED: at 2119 hours.

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#### MINUTES OF ANNUAL GENERAL MEETING - 1982

HELD AT: A.R.H.S. Library Room, Windsor Railway Station. Meeting commenced at 2025 hours.

PRESENT: J. McLean, Langley, Brough, Jeffries, S. McLean, Rutledge, Miller, McCallum, Sinnatt, Inglis, Smith.

Visitors - G. Price, B. Wooding and R. Sleightholme.

MINUTES OF PREVIOUS AGM: adopted as read. McLean/Inglis.

PRESIDENTS REPORT: Briefly reviewed the success of yet another year for the S.R.S.V. thanking all office bearers and members who had been quest speakers.

SECRETARYS REPORT: Referred to the situation of having little to do which therefore made it a good year!

TREASURERS REPORT: Due to rising costs, mainly postal, subscriptions have had to be raised, otherwise the Societies finances are quite healthy.

EDITORS REPORT: Five issues of Somersault were published in Volume 4 for 1981, the January and March issues were combined due to problems in getting the January issue printed in time. The same problem has occurred before and perhaps consideration will have to be given to combining these two issues or having the January issue prepared early in December and printed by Christmas. This will mean that it will contain only articles of historical interest.

The article situation remains at a critically low level having lifted from the disastrous level with the submission of an excellent article written by John Sinnatt.

On the subject of authors, 1981 saw only three successful in having their material published mainly because they were the only ones who "put pen to paper". There were three articles by Jack McLean (one of these being a reprint from Newsrail), one article by Graeme Reynolds on Winter's Block Telegraph and three articles by myself. I am indebted to Jack and Graeme for saving me from having to write the entire years collection of articles.

The series of reprints from the Australian Railway Enthusiast (covering articles written by John Sinnatt early in the '60s) briefly covered the safeworking systems in use in Victoria from Staff & Ticket through to Lever Locking and Track Control. When I started to do the part on Automatic & Track Control, I realised that the article was a bit dated with many changes recently in this area and so I approached John to undertake an update, as well as describe more fully the AFB system. The result is the excellent series starting soon in Somersault.

I would like to thank Jack McLean for continually being allowed to peruse his vast collection of signalling diagrams enabling my research to culminate in articles for Somersault.

An Archivist is still urgently required for the societies collection which is currently being housed under the East Highlands Railway in Avenel which is a better place than the previous room but still not suitable. Unfortunately due to family, sporting and other railway interests I find that I do not have the time to devote to the sorting and maintenance of the collection, much and all as I would like to. The preparing and writing of Somersault takes about six weeks to do, leaving precious little time to devote to my other interests. The Archives location in Avenel makes it almost impossible to the bulk of the membership to visit although nobody has shown any interest in doing so so far.

**BUSINESS ARISING:** Archives. Because of present arrangements access to the Societies archives is relatively limited so members were asked to seriously consider alternative locations to improve accessibility and perhaps the writing of articles.

**ELECTIONS:** Jim Brough moved that the present Office bearers be thanked for their work over the previous year and that their willing offer to continue in those positions for the next year be accepted.  
Brough/Miller. carried.

**GENERAL BUSINESS:** Jim Brough proposed a donation of \$20 to the A.R.H.S. for again allowing us the use of the meeting room at Windsor Railway Station.  
Brough/Miller. carried.

**MEETING CLOSED:** at 2043 hours after which the Bi-Monthly meeting commenced.

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#### SOCIETY NEWS

Available for purchase by anybody interested are some back copies of the SRSUK Newsletter. Issues available are: Jan 1980, May 1980, July 1980, May 1981, July 1981, September 1981, November 1981, January 1982, March 1982, May 1982, July 1982, September 1982 and November 1982. The cost is \$1.50 inc postage.

As a follow up to the 53 questions asked previously by Alan Jungwirth he is going to supply a question for each issue from now on. The answer will be in the following issue.

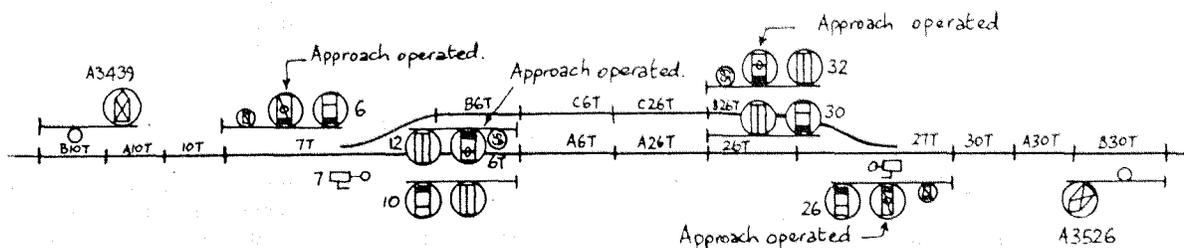
**QUESTION:** Where is there a two position home (light) signal with a route indicator?

ARARAT-SERVICETON LINE  
Centralised Traffic Control  
Signalling Proposal

Principle Features

The diagram below indicates the typical layout of signals at the proposed crossing loops to be constructed between Ararat and Serviceton. The principle features to be provided which differ from the North East Standard Gauge installation are:-

- a. Each crossing loop has standing room of 1450 metres between departure signals with 100 metres overrun at each end giving an effective crossing loop length of 1550 metres.
- b. The installation of high speed turnouts and signalled for 40 Km/h in the facing direction and 60 Km/h in the trailing direction.
- c. The provision of an illuminated 60 Km/h indicator associated with the medium speed aspect on the departure signals from No 2 road.
- d. Two opposing trains may simultaneously be signalled into the crossing loop onto different roads on approach operated and speed proved medium speed aspects (40 Km/h) on the home arrival signals. This situation requires that both trains will have passed the arrival automatic signal displaying a normal speed warning before the home arrival signal is cleared.



Signalling Aspects

The following signal aspects apply for movements into or through the crossing loops:

a. Arrival Automatic Signal

This signal is located within four kilometres of the crossing loop and displays the following aspects:-

- (i) Stop (R/R) Displayed when the block or safety overrun track sections are occupied, or an opposing movement is signalled or is in course.
- (ii) Normal Speed Warning (Y/R) Displayed when the arrival home signal is at Stop and the track sections unoccupied up to the departure signal for opposing movements (300 metres overrun).
- (iii) Clear Normal Speed (G/R) Displayed for through movements via No 1 road and requires both the arrival and departure home signals at proceed.

b. Arrival Home Signal

This signal controls the entry to the crossing loop and is located 100 metres from the facing points. It has three working arms (the lowest being normally extinguished) from which the following aspects are permitted:-

- (i) Stop (R/R) Displayed when the control has not been set or the track sections in the block up to the departure signal or safety overrun are occupied and the emergency low speed control has not been set.
- (ii) Medium Speed Warning (R/Y) Applies to both roads and is approach operated and speed proved with the occupation of the approach berth track circuit. It requires the facing points to be set and locked and the track sections up to the departure signal and safety overrun beyond, unoccupied for the road set.

The points at the down end of the loop are required to be set and locked for the crossing movement, or the down departure signal control set proving no opposing movement is in course in the single line section.

- (iii) Clear Normal Speed (G/R) Applies to No 1 road only and requires the departure signal from No 1 road to be displaying a proceed aspect.
- (iv) Emergency Low Speed Warning (R/R/Y) Applies to both roads and is approach operated and time cleared with the occupation of the approach berth track circuit. This aspect is provided for failure conditions only, eg. track circuit failure, or point failure at the remote end of crossing loop or for a movement into an occupied road. The Train Controller is required to set the low speed control in addition to the signal control for the movement.

Simultaneous opposing low speed movements into the same road are not permitted. The first train is required to be within the loop before the second is entitled to a low speed aspect on the arrival home signal. In the event of a track circuit failure within one road, it is possible to signal a train into that road on a low speed aspect whilst the opposing train is signalled into the other road on a medium speed warning aspect.

#### CTC Failure and Emergency Operation

In the event of the failure of the CTC remote control system, the crossing loop will assume an automatic mode to permit arrival trains to be admitted to the loop providing the vital field signalling circuits are operational. It will also introduce a system whereby train crews under the direction of the train controller will be able to set a route and initiate the clearing of a departure signal. The proposed sequence is as follows:

##### a. CTC Failure

On failure of the CTC system all signals at the loop at proceed will automatically be restored to the Stop position and after a pre-determined time interval in which all approach locking has been released, the loop will assume an automatic operational mode.

##### b. Automatic Mode - Arrival Signals

Following a CTC failure, the first train to occupy the approach section from either direction will be automatically signalled into No 2 road (providing it is unoccupied) with the usual speed proving and approach operation applying.

If the second train is from the opposite direction then it will be automatically signalled into No 1 road with the usual conditions applying.

The above movements are permitted to happen simultaneously when in this automatic failure mode. However if a second train is from the same direction as the first, then it is held at the arrival signal until the first train has departed and the overrun track circuit is clear. It will then be signalled into No 2 road even though No 1 road has been clear all the time.

During the remote control system failure the signalling will not permit one train to pass another. If this is necessary then a caution order will be required to pass the arrival home signal.

##### c. Manual Mode - Departure Signals

The departure signals will not operate automatically when a remote control system failure occurs. A manual control will be provided via a 5P key switch for each signal, which will be located in the Telephone Cabins at the respective ends of the crossing loop.

The key switch will be normally in a central position (12 o'clock). By turning it to the right to a 2 o'clock position a call will be placed on the points to run to the road for which the key switch applies. This call will only be effective providing there is no opposing movement in the single line section. If the single line section is unoccupied then the points are then

(continued on Page 18)

THE FIRST COMPOSITE ELECTRIC STAFF

CROYDON-LILYDALE, 1907.

by Jack McLean.

My grandparents considered that it was wicked to do just about anything on Sundays, particularly if it was enjoyable and it was equally wicked to travel because it caused people to work. So, it is likely that the running of the first Sunday train to Healesville in 1893, was accompanied by predictions of hellfire and damnation, but the train ran just the same and with a few gaps has been running ever since. Apparently not in 1901 when the line was opened, but certainly before 1905 there were Sunday trains to Warburton, too, which, of course didn't survive.

In 1898, the Staff and Ticket between Ringwood and Healesville (with Winter's Block between Ringwood and Lilydale) was superseded by large electric staff, so that the two down morning trains and the two up evening trains could run no closer than the running time for the electric staff section Croydon-Lilydale, which was about 17 minutes.

For instance, in January 1907, the 11.0am Warburton which reached Lilydale at 12.15pm, was followed by the 11.20am Healesville which left Croydon at 12.17pm. Similarly, the up evening Healesville passed through Croydon at 3.07pm allowing the up Warburton to leave Lilydale at 3.08pm.

Later in 1907 a third train was considered, a 10.40am down and an 8.10pm up Lilydale which would enable the Warburton and Healesville trains to run more or less non-stop between Prince's-Bridge and Lilydale, and I can see the timetable compilers and the safeworking officers casting about for some means of reducing the headway below 17 minutes, other than the unnecessary luxury of having Mooroolbark as a permanent staff station. Today, the composite staff is the obvious answer to such problems, but as I think this was the first one in Australia, the idea may then have seemed revolutionary. More than one train in the one electric staff section could have seemed to be a serious breach of principle.

The method of working with composite staffs has changed little and details may be found in any General Appendix since then. Normally, only one electric staff can be free from the two staff instruments at the two ends of the single line section and this is the authority for the train to be there. When two or three trains require to follow more closely than the running time of the electric staff section, the composite staff is withdrawn in the normal manner. It is then unscrewed into three portions - "Ticket A", "Ticket B" and "Staff" and as they would in a Staff & Ticket section, the drivers of the first and second trains are given "Ticket A" and "Ticket B" and shown the "Staff", which is retained to give to the driver of the third train.

When the three trains have cleared the section, the three portions are re-assembled, placed in the staff instrument and normal working resumed. One or two intermediate stations may be opened as Block Posts (originally telegraph, now by telephone) and the second and third trains are held at the Staff Station or Block Post until the previous train has arrived at the next Block Post or Staff Station. In the case of the first composite staff, the section was Croydon-Lilydale and the Block Post was Mooroolbark. In other places, time interval working has been used.

The Composite Staff (as it is now called in Victoria), the Divisible Staff (as it is called in NSW and Queensland), the Permissive Electric Staff (as it is called in Tasmania) and the Divided Staff (as it was originally called in Victoria and as it was called when patented in England in 1897) are virtually the same, but must not be confused with the Divided Staff now used in Victoria. In order to avoid confusion, the term "Composite Staff" will be used in the remainder of this article.

It was patented by F. W. Webb and A. M. Thompson (the C.N.E. and Signal Engineer of the London and North Western Railway, whose names are a sort of synonym for electric staff working) and G. Edwards, the Managing Director of the Railway Signal Company, by whom the staff was first made. A later Managing Director, W. S. Roberts when writing to me in 1938, said he thought its first introduction into Australia was on the W.A.G.R. in 1900, which I have been unable to confirm. Mr. Roberts could find no record of its introduction into Victoria and I look like remaining curious about who brought the idea here between 1897 and 1907.

One of the first, if not the first, signaller to work at Mooroolbark was the late Mr. "Tommie" Lalor, friend of the late Mr. Gavan Duffy and father

One of the first signalmen, if not the first, to work at Mooroolbark was the late Mr. "Tommie" Lalor, friend of the late Mr. Gavin Duffy and father of A.R.H.S. member Mr. Len Lalor, who until recently was Manager, Passenger Operations. One of my treasures is a page of a Train Register Book, given to me many years ago by Mr. Lalor Snr. and showing entries for Mooroolbark during February and March 1908. It shows the signalman arrived on the first train and immediately signed on. "ACRE" and "APIX" messages were sent to and received from Croydon and Lilydale on the arrival and departure of each of the three trains, the drivers of which I can imagine showing their "Ticket" or "Staff" to the signalman, who, in turn, showed them a green hand signal if the line was clear. There had been home signals at Mooroolbark in the Staff & Ticket era, but these had been removed in 1899, after the installation of the electric staff and although they would have been useful when the place was a Block Post they were not replaced until 1914.

After signalling the three trains, the signalman was apparently free until the parade of up trains commenced about 7.50pm, Healesville, Warburton and Lilydale, in that order. The signalman (and his family?) joined the last. On 23 February 1908, for instance, the Healesville passed at 7.58pm, the Warburton at 8.12pm and the Lilydale arrived at 8.22pm departing two mins. later.

The use of the composite staff on this section continued until Mooroolbark was opened as an interlocked electric staff station in 1922 and over the years the service varied quite a bit. In 1918 there were no Lilydale services but three Warburton and two Healesville trains ran and for three of these five trains the composite staff was used. The sections (and the compo) were converted to Miniature Electric Staff in 1915 and a second composite staff was provided about this time. Ticket 32A was lost in 1917 and apparently never found. By 1922, the composite staffs were still not exactly common; there were probably 10, although I cannot find the exact date, Bacchus Marsh-Ingliston seems to be the second early in 1908. But 1922 was also the year of the first successful VR Rail Motor and on some of the long sections found on branchlines there were, for the first time, two trains with different overall speeds. When the Rail Motor overtook the goods, the composite staff was a convenient way of getting the goods to follow promptly and this, I think, accounts for the 60 or so in the 1936 General Appendix. The reasons for the reduction in their number to about 40, at present, I would say are - goods trains are nearer passenger trains in speed, there are fewer of these lines with Rail Motors (or any passenger trains) and a number of suitable intermediate stations have now been closed.

Len remembers going to Mooroolbark with his father in 1918 when he was six. There were five Sunday trains then - two Healesville trains both with A2 class engines and three Warburton trains all double-headed with Dd class engines. As a result, at La La around 2pm Sunday there were eight engines, the other two being for Monday's up passenger and up goods.

Mr. Lalor Snr's. first duty was to remove the cross from the down home signal, then after the five trains had gone their way, they would boil the billy and have lunch. Perhaps in the afternoon there would be an unofficial trolley ride up the bank towards Croydon bringing back apples or gumleaves, or perhaps a visit to Mrs. White's lollyshop. During the lunch break, the cross would be replaced on the down home signal and taken off the up home. The afternoon would be punctuated by the arrival of the farmers with their milk cans to be loaded onto the last up and taken to Camberwell where the Milk Platform (still there) had recently been built.

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ARARAT-SERVICETON LINE  
Centralised Traffic Control (continued)

free to run and once detected in the correct lie, they will be locked and the signal will be permitted to clear.

The signal will be cancelled with the passage of the train but may also be manually cancelled if necessary by turning the key switch applying to that signal to the left to a 10 o'clock position.

The key switch will be spring return to the 12 o'clock position from which the key may be withdrawn. The key will be locked into the switch in both the 10 and 2 o'clock positions.

A notice will be installed above or beside the key switches to read: 'Train crews must obtain permission from the Train Controller prior to the operation of these 5P key switches'.

(This article was prepared from a circular issued by the Signal and Communications Division, 7 October 1981.)

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Interlocking Frames at Flinders Street

Original Name	Levers	Date	Remarks
Flinders Street West	51	27/5/1883	
	56	16/6/1889	
	148	28/10/1894	new frame
	260	17/9/1905	new frame
	280	2/12/1917	
		4/11/1978 12/12/1980	relay panel installed mech. frame abolished
Flinders Street East	23	11/3/1883	
	24	22/9/1883	
	30	20/2/1887	new frame
	90	25/11/1894	new frame
	62	4/1/1903	
	180	24/9/1905	new frame
	184	6/2/1910	
		27/6/1981	relay panel installed
		18/6/1982 4/7/1982	mech. frame abolished relay panel moved to "B" Box
Flinders Street "B"	100	29/9/1901	
	109	6/3/1910	
	114	24/1/1915	
	149	16/6/1918	
		26/2/1982	relay panel installed
		27/3/1982 4/7/1982	mech. frame abolished relay panel moved from former "C" Box.
Princes Bridge	49	18/11/1883	
	54	13/1/1884	
	68	13/12/1886	
	69	8/12/1895	
	68	13/10/1907	
	58	1/5/1910	new frame
	55	11/4/1926 27/3/1966	new frame (power) relay panel installed in new building.
Jolimont (Junction)	25	1/10/1882	
	14	10/5/1884	new frame
	39	13/3/1887	new frame
	51	26/7/1891	
	100	6/10/1901	new frame
	116	22/3/1914	
	65	31/5/1919 28/2/1976	new frame relay panel installed in new building.

SOME NOTES REGARDING THE SIGNAL BOXES AT FLINDERS STREET

by David Langley.

The signal boxes around the yard have at various times carried different names. Existing Flinders Street "A" Box has its origins in a signal box that was located on the site of present platform one somewhere near the Elizabeth Street entrance. This box was extended in 1889 but was replaced in 1894 by a new box which appears to have stood right in front of the present building. This box was provided for the opening of the double line viaduct to Spencer Street on 17 December 1894 and most likely was renamed "A" Box at this time, previously being known as Flinders Street West Box. This possibly the time when the other existing signal boxes at Flinders Street (but not Princes Bridge) were also lettered. The interlocking register compiled in 1899 shows that "A" was "A", "C" was "B" and "E" was "C", thus suggesting that Princes Bridge was still not regarded as part of Flinders Street yard until the large alterations associated with the rebuilding of Flinders Street station in the early years of the century.

Flinders Street East Box was located somewhere near where "C" Box stood and perhaps became "B" Box in 1894, the 90 lever frame being provided most likely in a new building at this time. With the opening of New "B" Box in 1901 it became Old "B" Box and with a reduced frame lasted until "C" Box was opened in 1905. On 1 May 1910 a 10 lever auxiliary frame was installed crosslocked from "C" Box and worked some connections following the transfer of the Country Passenger trains from Princes Bridge to Flinders Street. This frame was removed on 18 December 1910 when permanent alterations were made to "C" Box. No diagram showing this frame has been found yet.

Flinders Street "B" Box was opened in 1901 in connection with the rearrangement of the yard and with only a couple of extensions over the years lasted until 1982 when the relay interlocking panel was installed. This box took over, in 1903, some of the functions of Old "B" Box thus accounting for the reduction of the latter frame in that year. On 22 March 1914 a four lever auxiliary frame was opened due to additions to the yard and was extended to 25 levers on 16 June 1918 when additional sidings were laid in to the Electric Car Running Sheds. This frame was absorbed into "B" Box on 31 May 1931.

Princes Bridge was interlocked in 1883 and appeared to retain its independency even when the viaduct was opened in 1894 and the subsequent re-naming of the signal boxes in the area. The name Flinders Street "D" Box was applied in 1910 when the tappett machine was installed. The register shows the name change and the litho for 1911 also shows the new name, the litho for 1907 showing the name to be Princes Bridge signal box. There is an old photograph (reproduced in VR to '62 on p183) of Princes Bridge taken before the turn of the century showing that the two stations were separate and that the running lines were separate probably back to Jolimont Junction. The two yards were brought closer together with the alterations in 1910 for the transfer of the country trains to Flinders Street. This is nine years after the Collingwood line had opened and there must have been a few tangles at Princes Bridge with the countries having to fit around the intensive suburban service then operating to Collingwood and beyond.

The name Jolimont Junction is now near enough to 100 years old and suggests that this was the site for the junction of running lines leading to Princes Bridge and Flinders Street from at least 1865. Prior to this it seems that Flinders Street and Princes Bridge were not linked and when they were the junction was taken back a bit because Princes Bridge was near street level but the Flinders Street line had to pass under Swanston Street. Transfer Junction seems to have been applied between 1884 and 1887 but then Jolimont Junction was reverted to and although the official name is now Flinders Street "E" the most used name is Jolimont Junction. The name "C" Box was probably applied in 1894 becoming "E" Box in 1905 when new "C" Box was opened. It will be noted that "D" remained unused for five years but no doubt was reserved for the new Princes Bridge signal box of 1910.

From about 1911 until the middle 1960's, except for the power frame at Princes Bridge, saw little alteration at Flinders Street. Control panels, where relay interlocking replaced the mechanical interlocking, were becoming popular and at Camberwell a new design of relay interlocking - a route setting panel - was installed. Following the success of this panel, a larger panel was installed, this time in Flinders Street yard, a location where there intensive traffic movements. The power frame at Flinders Street "D" Box was selected for replacement probably not because of age but because of the semi-isolated nature of Princes Bridge.

With the advent of construction for the Underground Rail Loops, the signalling throughout the yard, still very much mechanical and fast wearing out, was not suitable for the new control system about to be introduced. The mechanical signalling has been phased out and replaced by three position signalling throughout the yard. The new layout is worked from five relay panels installed in the original boxes pending the transfer of controls to the new Metrol complex.

The panel in Flinders Street "D" was altered drastically to suit the new layout and certain controls transferred to the "C" Box panel.

Two small panels were installed in "E" Box, one on 10 May 1960 to operate additions brought about by the provision of additional running lines beyond Richmond to South Yarra and Burnley and the second on 27 July 1969 to cater for the alterations for the extension of the Burnley Through Lines to the city. These were supplementary to the mechanical frame but the whole lot was replaced by the existing panel box, using geographically circuitry, in 1976.

The "A" Box panel was installed in 1978 to handle the Port Melbourne and St Kilda platforms and over the next two years gradual transfers for made from the mechanical frame until 12 December 1980 when the 280 lever mechanical frame was silenced forever.

"B" Box went through many alterations to its layout and the mechanical frame was retained for most of them. The panel was installed in 1982 to take over control of Nos 5A, 6 and 7 roads from "C" Box. The panel was then extended to include the original layout and the mechanical frame was removed shortly after.

"C" Box received a panel in June 1981 to take over the controls for Nos 1 and 2 platforms from "D" Box. This panel was expanded to take in the rest of the "C" Box area except for the section transferred to "B" Box and mentioned previously. The mechanical frame was abolished in 1982 and shortly after the panel was moved bodily across to "B" Box but is still known as "C" Box - two signal boxes in one. The "C" Box building was rapidly demolished to permit the continued construction of the Northern Loop tunnel and connections.

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These notes are very brief but serve to give the reader a broad history of the signal boxes at Flinders Street. It is very likely that much information could be further published on this subject and the author would be very pleased to hear from anyone wishing to contribute a little to the signal box history of Flinders Street.

David Langley.

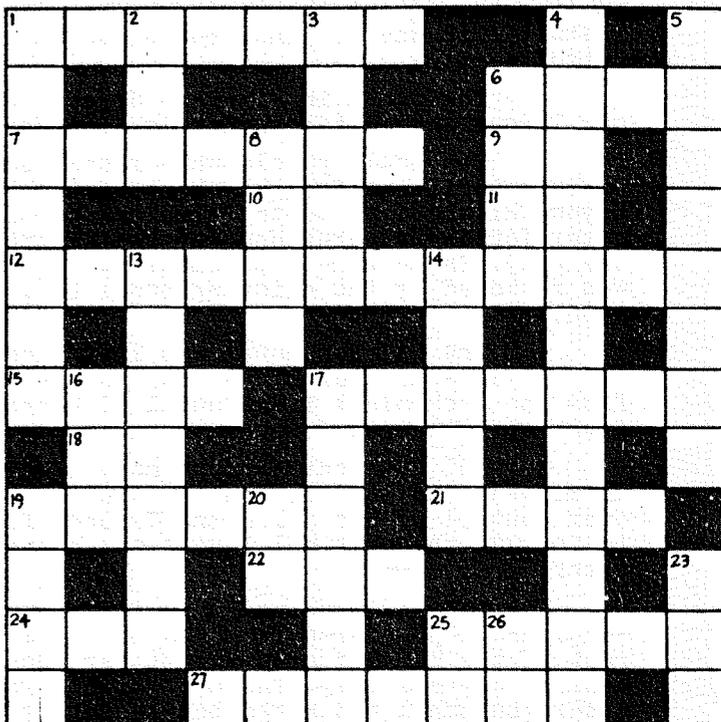
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S.R.S.V. CROSSWORD No 3

compiled by S. McLean

Across

1. Sends a message with arms and posts (7)
6. It rings at Thornbury and the next station, too (4)
7. This seat isn't fixed for sleeping (7)
9. First class car found in the past (2)
10. Van which was about in Latin times (2)
11. Caulfield line at the end of the viaduct (2)
12. I rent link,
15. You may not shunt with this part of the door open at Warrenheip (4)
17. Gnu and boar mingle at this crossing station (7)
18. These trains run from
19. X or Y, for example, but not K or L (6)
21. Conspire to show trains on a graph (4)
22. Standard safeworking system (3)
24. He has engines, but no carriages (3)



25. Sends a letter supporting arms (5)
27. Tend not to be level (7)

Down

1. Army man found under some old signal boxes (7)
2. Bloke who builds signal boxes (3)
3. Short distance train from Mordialloc always returns (5)
4. This breaking system uses no weight, strangely! (12)
5. Divers ways of securing facing points (8)
6. At Melton they often set this (4)
8. Race around to give train arrival (4)
13. They are found in 12's (7)
14. Applaud softly for old commissioner (5)
16. French agreement in Drouin (3)
17. Loco found between Sweden and Finland (6)
19. Child's toy found on bracket (4)
20. Van comes up in an empty train (2)
23. It's almost work to request line clear (3)
25. Indian-Pacific comes up into platform one.
26. No change - stop (2)

Solution to Crossword No 2.

Across: 2. Serviceton, 8. Amex, 9. AN, 10. NG, 13. Litho, 14. Finial, 16. Nar-Nar-Goon, 17. Arm, 19. McLean, 21. Mat, 23. Coactor, 25. Bay, 26. Shunt, 27. Island, 28. Lara.

Down: 1. Ballan, 2. Sent, 3. Exchanger, 4. Van, 5. In, 6. EC, 7. Nhill, 11. Pilotman, 12. Sinnatt, 15. Branch, 18. Murtoa, 20. Class, 22. Actil, 24. Out, 26. Sun.