

MELBOURNE ON THE BRINK OF CHANGE

By Dale Budd

From October 1, 1997 Melbourne's tram system was corporatised and divided into two operations, Swanston Trams and Yarra Trams. It was planned that these two entities would be sold to the private sector by December 1998, but this date has recently been put back to March 1999.

Melbourne's trams are therefore undergoing the greatest organisational change since the formation of the MMTB almost eighty years ago. It is appropriate to document details of the operation as it was before this process began, to provide a record for future reference.

Apart from this major structural reorganisation, the tram system is already in the midst of change, with the introduction of ticket machines coupled with the phasing-out of conductors; the progressive conversion to pantograph operation; and the current overhaul program on Z1 & Z2 class trams, contracted out to Goninan. It is important also to record the status of these developments, as the system heads into the major organisational and ownership changes.

This article first records details of the tram fleet. It then documents operational aspects, including ticketing and driver-only operation.

The Fleet

The following tables give details of the tram fleet, as it was in mid-December 1997.

SWANSTON TRAMS: DEPOT ALLOCATION

BRUNSWICK

Z3

120,128,130,137,138,140,142,143,144,147,153,156,157,160,166,172,
179,182,183,185,187,196,197,204,205,209,210,211,214,218,223,230

Quantity

32

B2

2017,2022,2044,2048,2054,2056,2062,2064, 2066,2071,2072,2078,
2081,2086,2089,2091

24

TOTAL 56

ESSENDON

Z3

116,125,127,134,139,141,145,146,148,149,152,158,159,161,162,163,
165,167,168,169,174,178,186,193,194,198,199,200,201,202,203,207,
208,212,213,216,219,221,222,225,226,228,229

Quantity

43

B2

2003,2004,2005,2007,2008,2016,2025,2030, 2033,2041,2042,2051,
2055,2070,2074,2084,2085,2087,2088,2092,2096,2099,2110,2113,
2114,2115,2116,2118,2120,2122,2128

31

TOTAL 74

GLENHUNTLY	Quantity
Z1	
2,5,6,7,8,9,11,13,15,16,17,21,24,25,26,27,28,30,32,40,42,43,45,46,50, 51,53,56,58,59,61,66,69,70,72,73,74,75,76,77,78,79,80,81,83,84,85,86, 89,91,92,94,96,97,98,100	56
Z2	
110,112,113,114	4
	TOTAL 60
MALVERN	Quantity
SW5	
785,843,845,846	4
SW6	
852,854,864,865,869,870,881,883,884,896,899,905,907,908,916,918, 921,928,929,930,933,935,938,941,944,947,951,953,954,960,961,969	32
W6	
971,975,977,981,982,984,998	7
W7	
1005,1008,1010,1015,1022,1031,1036,1039	8
Z1	
1,3,4,10,12,14,19,20,22,23,29,31,33,34,35,36,37,38,39,41,44,47,49,52, 54,62,63,64,65,67,68,71,82,87,88,90,93,95	38
Z2	
101,104,105,106,107,108,111,115	8
Z3	
129,132,150,164,176,177,189,224,227	9
	TOTAL 106
STORED AT PRESTON WORKSHOPS OR THORNBURY	Quantity
SW5	
800,810,849	3
W6	
851	1
SW6	
861,874,880,885,891,893,895,901,906,949	10

W7			
1034			1
		TOTAL	15
<hr/>			
CLASS TOTALS	B2 = 55 W6 = 7 W7 = 8 SW5 = 4		
	SW6 = 32 Z1 = 94 Z2 = 12 Z3 = 84		
		TOTAL	296
<hr/>			
COMBINED CLASS TOTALS			
	B = 55 W = 51 Z1,2&3 = 190		
	FLEET TOTAL		296
	STORAGE		15
		TOTAL	311
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Scrubber car (based at Brunswick):			
10W			
YARRA TRAMS: DEPOT ALLOCATION			
CAMBERWELL			Quantity
A1			
231,232,233,234,235,237,239			7
A2			
271,290,291			3
B2			
2009,2010,2011,2015,2019,2026,2029,2031,2034,2037,2038,2040, 2045,2046,2050,2061,2063,2065,2079,2090,2093,2108,2129,2131,2132			25
Z3			
190,191			2
		TOTAL	37
<hr/>			
EAST PRESTON			Quantity
Z3			
117,118,119,121,122,123,124,126,131,133,135,136,151,154,155,170, 171,173,175,180,181,184,188,192,195,206,215,217,220			29
B2			
2006,2013,2014,2018,2024,2035,2039,2049,2053,2057,2058,2060,2073, 2075,2077,2080,2082,2083,2094,2095,2103,2107,2109,2111,2112,2121, 2123,2124,2125,2126,2127			31
		TOTAL	60

KEW	Quantity
A1	
236,238,240,241,242,243,244,245,246,247,248,249,250,251,252,253, 254,255,256,257,258	21
A2	
259,260,261,262,263,264,265,266,267,268,269,270,272,273,274,275, 276,277,278,279,280,281,282,283,284,285,286,287,288,289,292,293, 294,295,296,297,298,299,300	39
TOTAL	60
SOUTHBANK	Quantity
SW5	
848	1
W6	
983,992	2
SW6	
855,862,892,897,932,946,963,964	8
W7	
1012,1019,1021,1027	4
B1	
2001,2002	2
B2	
2012,2020,2021,2023,2027,2028,2032,2036,2043,2047,2052,2059, 2067,2068,2069,2076,2101,2117,2119	19
CITY CIRCLE	
728,842,856,866,888,909,925,957,1000,1020	10
TOTAL	46
STORED AT PRESTON WORKSHOPS OR THORNBURY	Quantity
SW6	
919,924,931,936,956,965,968 (car 968 is at Hawthorn)	7
W7	
1011,1013,1017,1018,1023,1032	6
TOTAL	13

CLASS TOTALS	
CC = 10 SW5 = 1 SW6 = 8 W6 = 2 W7 = 4 A1 = 28 A2 = 42 B1 = 2 B2 = 75 Z3 = 31	TOTAL 203
COMBINED CLASS TOTALS	
A = 70 B = 77 CC = 10 W = 15 Z3 = 31 FLEET TOTAL STORAGE	203 13
	TOTAL 216
Scrubber car (based at Brunswick): 11W	

W Series Trams - driver-only, and repainted

This table lists all W series cars allocated to Swanston and Yarra Trams. With the exception of the ten City Circle cars, all these trams are painted in MMTB colours.

TRAMS CONVERTED FOR DRIVER-ONLY OPERATION

City Circle:

728,842,856,866,888,909,925,957,1000,1020 **TOTAL 10**

Others:

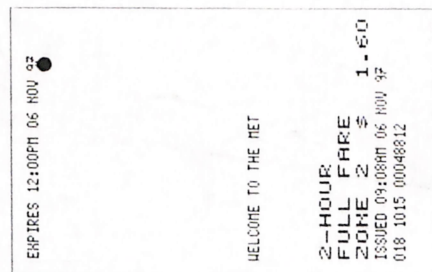
845,846,848,854,855,862,864,869,870,881,884,892,896,905,907,
928,929,932,935,938,946,953,954,960,961,964,971,977,981,982,
983,992,1005,1010,1012,1015,1019,1021,1022,1027,1031,1039 **TOTAL 43**

TRAMS REPAINTED IN MMTB COLOURS ONLY

(no driver-only conversion)

785,800,810,843,849,851,861,865,874,880,883,885,891,893,895,
897,899,901,906,908,916,918,919,921,924,930,931,933,936,941,
944,947,949,951,956,963,965,968,969,975,984,998,1008,1011,
1013,1017,1018,1023,1032,1034,1036 **TOTAL 51**

The front and back of a typical machine-issued Met ticket.



HISTORIC FLEET, STORED TRAMS AND MISCELLANEOUS CARS

Following is a list of cars not allocated to Swanston or Yarra Trams. The historic fleet is the responsibility of the Department of Infrastructure (formerly the Ministry of Transport). Cars HTT 8, S 164, T 180 and X 217 are on loan from the TMSV.

In this list classes are indicated only when necessary, e.g. to differentiate L 104 from Z 104.

ESSENDON

L 104, 469

Quantity

2

HAWTHORN

S 164, T 180, V 214, X 217, 380, 431, 504, 510, 600, 610,
611, 612, 646, 676, 759, 821, 840, 850, 900, 968 (Yarra Trams),
1040, 1041, 9W

22
(excl car 968)**PRESTON PAINT SHOP**

HTT 8, L 106, 613, 774

4

Two privately-owned trams, 568 and 650, are stored in the Preston paint shop. They are not counted in the totals of these tables.

SOUTHBANK

Restaurant trams, leased to the Colonial Tramcar Company:

442, 937, 939

3

MALVERN

8W

1

BYLANDS

644,739,782,795,887,902,996,1001

8

BENDIGO

808, 976

2

NEWPORT**Z series**

18,48,55,57,60,103

6

W series

681,682,684,685,720,721,722,723,724,725,726,727,729,730,731,732,733,
734,736,737,738,740,741,742,743,744,745,746,747,748,749,750,752,753,
754,755,757,758,760,763,764,765,767,768,769,770,772,773,775,776,777,
780,781,783,784,786,787,788,789,790,791,793,797,802,805,806,807,809,
811,812,814,815,816,818,819,823,824,826,828,829,830,833,834,836,837,
838,841,844,847,853,857,858,859,860,863,867,868,871,872,873,875,876,
877,878,879,882,886,889,894,898,903,904,910,911,912,913,914,915,917,
920,922,923,926,927,934,940,942,943,945,948,950,952,955,958,959,962,
966,967,970,972,973,974,978,979,985,986,987,988,989,990,991,993,994,
995,997,999,1002,1003,1004,1006,1007,1009,1014,1016,1024,1025,1026,
1028,1029,1030,1033,1035,1037,1038

174

Historical

VR 20, W2 323, Brisbane FM 493, Sydney R 1845,
two Melbourne cable trailers

6
TOTAL 228

Summary by location:

Essendon:	2
Hawthorn:	22 (excl car 968)
Preston (historical):	4
Southbank:	3
Malvern:	1
Bylands:	8
Bendigo:	2
Newport:	
Z series:	6
W series:	174
Historical:	6
	TOTAL 228

Signs at the former South Melbourne Depot relating to the sale of the site. The four lots in the sub-division are shown diagrammatically on an aerial photo of the depot, apparently taken shortly after tramway operations ceased.

Both: Dale Budd



Non-passenger cars

Cars 796 and 890 have been converted for ticket machine training, and are used at various depots in turn, as ticket machine operation is introduced. They are not counted in the tables above.

Of the scrubber cars, 10W is allocated to Swanston Trams and 11W to Yarra Trams, but both continue to operate from Brunswick Depot. 9W has been withdrawn and is in storage at Hawthorn. Another withdrawn car is 8W, at the rear of Malvern Depot in a stripped condition with one controller missing.

Z Series Cars - Overhauls and Modifications

All Z3 class trams have been fitted for one person operation (OPO). All except those at Malvern Depot, and some at Brunswick, are equipped with pantographs, retaining a trolley pole at one end for emergencies.

102 Z1 and Z2 series trams are being overhauled by Goninan at Preston Workshops. By mid December, the program was at its mid point, with 51 cars overhauled (43 Z1s and 8 Z2s), and a further 51 scheduled (47 Z1s and 4 Z2s), with the program due to be completed in about June 1999. Z1s and Z2s being overhauled are not being converted to OPO. Conductors' consoles are being refitted (but are removed when ticket machines are installed - a separate program from these overhauls). Provision is being made for the easy fitting of pantographs at a later date.

Of the 13 Z1 and Z2 trams excluded from the program, cars 99, 102 and 109 have been scrapped following fires; six cars are stored at Newport in a stripped condition, and four cars (5, 53, 75 and 83) are excluded because the planned number of cars needed for traffic operations from these two classes is 102 and no more. Originally car 70 was among the group to be excluded, but this car was added to the overhaul program in lieu of 109, following its destruction by fire. Car 67, experimentally modified some years ago and fitted with a pantograph, has been converted back to the normal Z1 configuration, with two trolley poles and conductors' consoles, during its overhaul.

The overhauls of Z1 and Z2 cars include extensive modifications to their trucks, to improve the cars' riding qualities. The truck overhauls and modifications are undertaken at Goninan's Maintrain facility at Clyde in Sydney.

A view of the temporary deviation in Sturt Street during construction of Melbourne's Citylink underpass. Trams are diverted to a single ballasted track on the western side of the road. This picture is taken from the southern end. At this end the existing crossover near Grant Street is used to enable the resumption of double line running. Automatic signalling using conventional traffic lights controls the single-track operation. Road traffic through the diversion is one-way southbound.

Dale Budd



Details of the operation of the system, and the status of developments such as OPO, ticket machines and the use of pantographs, can best be provided in tabulated form. The following presentation gives this information for each depot and the services provided by it, as at November 1997.

SWANSTON TRAMS							
Depot	Route	Class of Tram	Class when OPO	Weekend and night OPO	Trams with Pantographs	O'head fitted for dual	Ticket Machines
Brunswick	19	B	-	No	Yes	Yes	-
	22	Z3	Z3	Yes #	Some	Yes	-
	1	Z3	Z3	Yes #	Some	Yes	-
Essendon	59	B	-	No	Yes	Yes	-
	57	Z3	Z3	Yes	Yes	Yes	-
	55	B, Z3	B, Z3	Yes	Yes	Yes	-
	82	Z3	Z3	Yes (Note 1)	Yes	Yes	-
Sunday and Public Hols	Zoo	Y or L	-	No	No	Yes	-
Glenhuntly	3	Z1, Z2	Z1, Z2	Yes	No (Note 3)) Being) fitted for	-
	64	Z1, Z2	Z1, Z2	Yes	No) dual now	-
	67	Z1, Z2	Z1, Z2 (Note 3)	Yes	No) -	-
	78	Z1, Z2	Z1, Z2	Yes	No) Yes	-
	79	Z1, Z2	Z1, Z2	Yes	No) Yes	-
Malvern	16	W (Note 4)	-	No	No	-	-
	5	W, Z1 - Z3	Z1 - Z3	Yes	No	-	-
	6	W, Z1 - Z3	Z1 - Z3	Yes	No	-	-
	8	W (Note 4)	-	No	No	-	-
	72	Z1 - Z3	Z1 - Z3	Yes	No	-	-
	69	W, Z1 - Z3	Z1 - Z3	Yes	No	-	-

Ticketing and One Person Operation

At the time of introduction of Swanston and Yarra Trams, three ticket systems were operating in parallel, as follows:

- 1 Conductor issued tickets - daily, two hour and short trip tickets, validated by conductor's punch
- 2 Scratch tickets, purchased from retail outlets and validated by the passenger scratching the appropriate date and time - inspected by conductor or OPO driver
- 3 Ticket machine tickets - only on route 75 trams. Passengers purchase validated tickets from on-board

ticket machines. Drivers on trams fitted with ticket machines do not sell tickets or issue change.

As is well known, the introduction of OPO and on-board ticket machines has been a very long drawn out process, caused by technical problems with the machines.

At the time of the division of The Met into Swanston Trams and Yarra Trams, ticket machines were in use only on route 75, East Burwood. The machines had been fitted to all or most Z, A and B series cars. Of the 53 W series cars fitted for OPO, 43 are also scheduled

YARRA TRAMS							
Depot	Route	Class of Tram	Class when OPO	Weekend and night OPO	Trams with Pantographs	O'head fitted for dual	Ticket Machines
Camberwell	70	A, Z3, B (Note 5)	A, Z3, B	Yes (Note 6)	Yes	Yes	-
	75	B	B	Yes	Yes	Yes	Yes (Note 7)
East Preston	11	Z3	-	No	Yes	Yes	-
	86	B	B	Yes (Note 8)	Yes	Yes	-
Kew	109	A	-	No	Yes	Port Melb panto only	-
	48	A	A	Yes	Yes #	Yes	-
	99 (Daylight Saving Period)	A	A	Yes	Yes	Yes	-
Southbank	12	W, B	-	No	No	Yes	-
	96	B	B	Yes	Yes	panto only	-
	35	City Circle W	City Circle W	Yes	No	Yes	-

NOTES:

- # Indicates OPO after 8pm weekdays and all day Saturdays and Sundays
- 1 Footscray - Moonee Ponds is always OPO
- 2 Glenhuntly routes are currently being converted to dual overhead (leaving only Malvern routes)
- 3 Carnegie line has conductors 7 days a week from first car to 8pm. OPO after 8pm - 7 days a week
- 4 Z cars occasionally run on combined routes 8 and 16.
- 5 B class are used on Wattle Park route 70 when extra loading is anticipated (eg Australian Open etc)
- 6 The Wattle Park line has conductors: Mon - Fri only in AM and PM peaks, OPO at all other times
- 7 As of Nov 1997, only Route 75 has ticket machines
- 8 Bundoora line 86 has conductors Monday - Saturday until 8pm and is OPO all day on Sunday.

to be equipped with these machines. The remaining 10 are the City Circle cars which operate a free service.

Shortly after the division into Swanston and Yarra Trams it was announced that the ticket machines had achieved an acceptable standard of performance. The phased introduction of these machines, and the withdrawal of conductors, has since begun, and is scheduled to be completed by mid-1998.

At the time of the division into Swanston and Yarra

Trams, the application of OPO was inconsistent across the system. Some lines had OPO throughout weekends, while others had it after 8.00 pm on weekdays, and all day on Sundays. Details are given in the tables. Public holidays, when traffic is light and wage costs high, saw total two man operation, with the exception of routes 70, 75 and 82. Each depot, except Camberwell, had at least one route operated by two person crews at night time and weekends. This was understood to be part of an industrial agreement in the implementation of OPO, made at the time of introduction of scratch tickets.

Pantograph Operation

Melbourne is in the midst of system-wide introduction of pantographs, except on W series trams. Details of the progress of infrastructure modifications on the various routes are given in the tables. Details of the equipping of trams were given in the earlier section on overhauls and modifications of Z series cars.

It appears that most routes will ultimately be equipped for dual operation, with the East Brunswick line, the most recent extension of the Bundoora line and the Port Melbourne and St Kilda light rail routes being the only lines on which cars with trolley poles cannot run. This is a change from earlier plans, which would have seen only those routes regularly used by W series cars remaining available for trolley pole operation.

The unanswered questions

Current information on the system and on the plans for privatisation leaves many questions unanswered. Here are a few.

Will new owners be allowed to replace trams with buses, either on a part-time basis (off-peak, weekends) or permanently?

What is the future of Preston Workshops? This facility is not part of either Swanston Trams or Yarra Trams, and therefore presumably will not be included in the forthcoming sale.

Transport Minister, Robin Cooper, has stated recently that private operators will be required to invest in rolling stock, improve services and invest in infrastructure. What incentives will there be for such investment - or penalties - and how will decisions be made on route extensions, including those currently being discussed in near city areas?

The Minister has also stated that current trams with their high floors do not meet current accessibility standards and will all have to be replaced. He has stated that the special needs of passengers with disabilities should be recognised and respected. At the same time he has stated that "Melbourne's full operational fleet of 53 W class trams will be kept in service".

What is the future of the 51 W Series trams not fitted for one person operation? At present 23 of these cars are in service at Malvern and Southbank depots.

Will the new owners be happy to keep them in service with conductors? Will they be fitted with ticket machines? Will the new owners improve fleet availability so as to phase these cars out of service?

What is the future of the historic fleet - and the unrestored potential additions to this fleet at Newport? And what is the future of the 174 W series trams at Newport? Will new private owners have any interest in them? Does the Government have any interest in them?

What is the future of the four Z1 series trams (5, 53, 75 and 83) not currently scheduled for overhaul? Will they be withdrawn - or added to the overhaul program?

Answers to these questions will no doubt become apparent as the privatisation of the system takes place - or possibly not for some months or years, as the new arrangements settle down. Only one thing is certain: Melbourne's tram system will never be the same again.

A Brief Update - March 1998

Since the period to which this article refers, around the time of the advent of Swanston Trams and Yarra Trams, the introduction of ticket machines and validators, and the phasing-out of conductors, has proceeded rapidly. By late March 1998, trams operating from Camberwell, Glenhuntly, Malvern, Kew and Preston depots (introduced in that order) were using these machines. The planned order of remaining conversions is Southbank (route 96), Brunswick and Essendon.

Routes 5, 6 and 72 are always operated OPO with Z series cars. Routes 8, 16 and 69 are always rostered for Ws with conductors - but some Zs may also operate on these routes, with conductors. The use of Ws on Route 69 is an unusual reversion. Scrubber Car 11 W has been transferred to Southbank depot.

Car 956, without bogies, was used as a kiosk at the Australian Open tennis championships at the tennis centre in January 1998. In March it was noted at Preston Workshops on shop trucks.

Thanks are expressed to Graham Jones and other Melbourne correspondents for their substantial contribution to the compilation and checking of this article.