CHAPTER XV

TRANSPORT AND COMMUNICATION

Note.—The statistics in this chapter relate in the main to the year 1962-63, with comparisons restricted to a few recent years. More detailed figures and particulars for earlier years are included in the annual bulletins, Transport and Communication, Commonwealth Finance, and State, Territories and Local Government Authorities' Finance and Government Securities published by this Bureau.

Current information on subjects dealt with in this chapter appears in the Quarterly Summary of Australian Statistics, the Monthly Review of Business Statistics, the Digest of Current Economic Statistics, the Monthly Bulletin of Registrations of New Motor Vehicles and two preliminary monthly statements on Registrations of New Motor Vehicles.

The detailed results of the Census of Motor Vehicles, 31st December, 1962 (see summary tables later in this chapter) are being published in mimeographed and printed bulletins for each State and Territory and for Australia (see Chapter XXX. Miscellaneous).

SHIPPING

§ 1. Control of Shipping

1. Commonwealth Navigation and Shipping Legislation.—By section 51 (i) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws in respect of "Trade and commerce with other countries, and among the States". By section 98, this power is further defined as extending to navigation and shipping. Section 51 (vii) empowers the Commonwealth Parliament to legislate in respect of "Lighthouses, lightships, beacons and buoys" and section 51 (ix) in respect of "Quarantine".

A review of the introduction and development of the Navigation Act 1912-1950 was given in Year Book No. 40, pages 110-2. Amendments to the principal Act were made by the Navigation Acts of 1952, 1953, 1956, 1958 and 1961.

Other shipping Acts under the powers of the Commonwealth are the Sea-Carriage of Goods Act 1924-1961, the Seamen's Compensation Act 1911-1960, the Seamen's War Pensions and Allowances Act 1940-1961, Pollution of the Sea by Oil Act 1960, the Australian Coastal Shipping Commission Act 1956, the Australian Coastal Shipping Agreement Act 1956 and the Stevedoring Industry Act 1956-1962.

The control of shipping during, and immediately after, the 1939-45 War and the establishment of the Maritime Industry Commission (abolished in 1952), the Australian Stevedoring Industry Board (replaced in 1956 by the Australian Stevedoring Industry Authority), and the Australian Shipping Board (replaced in 1956 by the Australian Coastal Shipping Commission) are described in Year Books No. 36, pages 121-30, and No. 39, pages 147-8.

2. Australian Coastal Shipping Commission.—This Commission was established in 1956 for the purpose of maintaining and operating interstate, oversea and territorial shipping services, and replaced the Australian Shipping Board. It operates the Australian National Line, a Commonwealth-owned merchant shipping service which, at 30th June, 1963, comprised 40 vessels totalling 172,261 gross tons. These included 15 vessels with a gross tonnage of 500 to 3,000, 12 vessels with a gross tonnage of 5,000 to 8,000, and the bulk ore carriers Mount Keira 10,229 gross tons and Mount Kembla 10,112 gross tons.

The Commission has currently on order a 7,500 ton deadweight bulk carrier, *Jeparit*, and a passenger vehicular vessel, *Empress of Australia*, of approximately 9,850 gross tons for operation between Sydney and Tasmania. The latter vessel will augment the service

already being provided between the mainland and Tasmania by the *Princess of Tasmania*, the vehicular container ship *Bass Trader* and the container vessel *South Esk*. The 21,400 ton deadweight bulk carrier *Musgrave Range*, now on the stocks, is expected to be in service during 1964.

In the year ended 30th June, 1963, the *Princess of Tasmania* carried 89,649 passengers, 19,760 accompanied vehicles, 7,410 commercial vehicles, 3,552 trade cars and 321 mail vans.

3. Australian Shipbuilding Board.—(i) Constitution and Functions. Originally established in 1941 under National Security Regulations, the Board has been reconstituted a number of times since its inception, and in 1948 was constituted on a permanent basis under the control of the Minister for Shipping and Transport. The membership of the Board consists of a Chairman, who is the General Manager, a Deputy Chairman, a Finance Member and two other members one of whom represents the Naval Board. The staff of the Board are employed under the Public Service Act 1922-1960 as officers of the Department of Shipping and Transport.

The existing functions of the Board, which have been summarized in earlier issues of the Year Book, are set out in detail in regulation 22 (4) of the Supply and Development Regulations.

(ii) Construction Programme. From its inception to 30th June, 1963, the Board had arranged for the construction of 75 merchant vessels totalling 513,142 deadweight tons. During the 1939-45 War, the Board was also responsible for the construction of numerous small craft and a 1,000-ton floating dock.

At 30th June, 1963, current orders for trading vessels placed by the Board were for the construction of seven vessels totalling 64,375 deadweight tons. The vessels consisted of one passenger vehicular vessel of 2,175 dw.t., two 21,400 dw.t. bulk carriers, one 7,500 dw.t. general purpose bulk carrier, two roll-off vehicular traffic vessels, each of 3,250 dw.t., and one "seatainer" vessel of 5,400 dw.t. A further order has since been placed for a 3,650 dw.t. motor cargo vessel.

Other types of ships under construction at 30th June, 1963, included a Naval Survey vessel of 2,300 tons displacement, two lighthouse supply vessels and a survey vessel for use in the Phillipines. Two further lighthouse supply vessels have been ordered since.

It is expected that orders will be placed this year for the construction in Australian shipyards of oil tankers for use on the Australian coast.

4. Australian Stevedoring Industry Authority.—In March, 1947, legislation established a permanent Stevedoring Industry Commission to continue in peace-time the functions performed during the war by the Commission established under National Security legislation. In June, 1949, legislation was enacted to abolish the Stevedoring Industry Commission, on which employers and employees were represented, and established in its place a Stevedoring Industry Board of three members, which attended to administrative matters formerly under the control of the Commission, such as the operation of labour bureaux at ports, payment of attendance money and provision of amenities. The industrial functions which previously came within the province of the Commission were assigned to a single Judge of the Commonwealth Court of Conciliation and Arbitration. In August, 1956, following a Committee of Inquiry into the stevedoring industry, the Stevedoring Industry Board was replaced by the Australian Stevedoring Industry Authority of three members, including a representative of the management side of industry and a representative of the trade union movement. At the same time, the judicial and non-judicial functions formerly exercised by the Commonwealth Court of Conciliation and Arbitration were divided between the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission respectively. Awards of the Conciliation and Arbitration Commission subsequently placed payment of sick pay, public holiday pay and annual leave under the administration of the Authority. Under amending legislation which operated from 6th June, 1961, the Authority became responsible for payment of long service leave to registered waterside workers, and its disciplinary powers were strengthened to reduce the time lost through unauthorized stoppages. The statutory provisions regulating the industry are now contained in the Stevedoring Industry Act 1956-1962 and in Division 4 of Part III of the Conciliation and Arbitration Act 1904-1961.

§ 2. System of Record

In the system of recording statistics of oversea shipping, Australia is considered as a unit, and therefore only one entry and one clearance are counted for each voyage, without regard to the number of States visited (see also § 4, p. 559). For the purpose of these statistics, the Australian mainland and Tasmania are treated as Australia and all external territories as oversea countries.

On arrival at, or departure from, a port in Australia, whether from or for an oversea country or from or for another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers and cargo. At the end of each month, the information so obtained is forwarded to the Bureau of Census and Statistics. This information relates, in the main, only to vessels engaged in the carriage of passengers and/or cargo between Australian States or between Australia and oversea countries.

The size of a vessel may be expressed in a number of ways. A vessel's gross tonnage, expressed in tons of 100 cubic feet, represents the total volume of the enclosed space, i.e. a ship of 25,000 tons has a total enclosed capacity of 2,500,000 cubic feet. Its net tonnage, expressed in tons of 100 cubic feet, represents the volume of enclosed space that can be used for cargo or passengers. Its displacement is its total weight and is expressed in tons of 2,240 lb. Its deadweight tonnage is the difference between the displacement of the vessel loaded to its summer deadline and the displacement light, i.e. it is the weight the vessel can carry, including the weight of bunkers and stores. Net tonnage is the concept generally used in the tables in this chapter, but since it can give a misleading impression of the size of ships which have a function other than carrying passengers and cargo (e.g. a tug has no net tonnage), some figures are given for deadweight tons and tons gross also.

Most of the cargo is recorded in terms of the ton weight of 2,240 lb. However, some additional cargo, mainly bulky commodities, is shipped and recorded on the basis of 40 cubic feet of space used representing one ton measurement.

Except in § 5. Shipping at Principal Ports (p. 562), intra-State (coastal) movements of vessels, including those of vessels engaged solely in trade within State limits, are excluded from the statistics in the following pages.

§ 3. Oversea Shipping

1. Total Movement.—The following table shows the number of entrances and clearances combined of oversea vessels at Australian ports, and the aggregate net tonnage, during each of the years 1958-59 to 1962-63.

OVERSEA SHIPPING: ENTRANCES AND CLEARANCES (COMBINED) OF VESSELS DIRECT, AUSTRALIA

Particulars	1958–59	1959–60	1960-61	1961–62	1962–63
Number of vessels Net tonnage '000 tons	5,463	5,945	6,778	7,210	6,762
	26,019	28,874	34,317	37,662	37,584

Particulars of the total oversea movement of shipping for each year from 1822 to 1920-21 were published in Year Book No. 15, page 507, and those for each year from 1921-22 to 1950-51 in Year Book No. 40, page 97.

2. Total Oversea Shipping, States.—The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels direct from and to oversea countries, and the aggregate net tonnage, during the year 1962-63.

OVERSEA	SHIPPING:	ENTRANCES	AND	CLEARANCES	OF	VESSELS	DIRECT,
			1962-6	3			

Par	ticulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances Clearances	No. '000 net tons No. '000 net tons	1,098 6,219 942 5,841	548 4,018 503 3,730	626 2,360 775 2,999	200 975 228 1,082	822 4,999 825 4,695	83 288 49 199	34 99 29 80	3,411 18,958 3,351 18,626

3. Shipping Communication with Various Countries.—A vessel arriving in Australia from overseas is recorded as coming from the country where the voyage commenced, irrespective of the number of intermediate ports of call. Similarly, a vessel leaving Australia is recorded as going to the country where the voyage is scheduled to terminate.

The following table shows statistics of the net tonnage entered and cleared, with cargo and in ballast, according to the principal countries where vessels commenced or terminated their voyages to or from Australia.

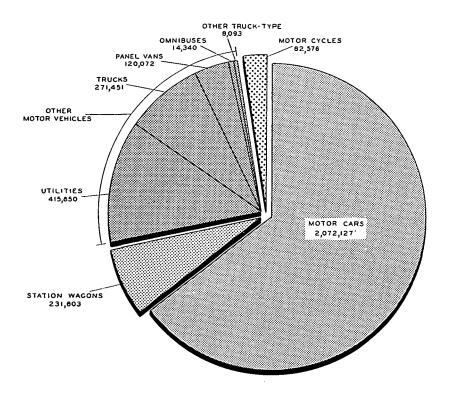
OVERSEA SHIPPING: COUNTRIES FROM WHICH ENTERED OR FOR WHICH CLEARED, AUSTRALIA

('000 net tons)

Country from which entered	With		Entered			Cleared	
or for which cleared	or in ballast	1960-61	1961–62	1962–63	1960-61	1961–62	1962–63
United Kingdom {	Cargo Ballast	1,714 54	1,607	1,627 18	2,137 64	2,197 10	2,014 25
Canada	Cargo Ballast	423	493	502 5	264	277	345
Nauru	Cargo	423	550	532	237	265	280
Nauru	Ballast		6		45	62	62
New Zealand {	Cargo Ballast	760 615	752 891	772 790	1,261 82	1,240	1,185 92
6 :}	Cargo	372	336	411	396	398	487
Singapore {	Ballast	87	107	133	356	482	623
Other Commonwealth countries {	Cargo	1,644	1,798	1,631	1,339	1,638	1,370
}	Ballast Cargo	328 2,180	357 2,012	297 3,158	226 140	310 118	333 139
Arabian States	Ballast	2,180	2,012	43	2.723	2.838	2,961
France	Cargo	82	104	84	105	138	141
· · · · · · · · · · · · · · · · · · ·	Ballast	3		357	336	407	368
Germany, Federal Republic of <	Cargo Ballast	386	347	337	330	407	13
Indonesia	Cargo	1,391	1,733	1,684	175	122	86
Indonesia	Ballast	186	354	193	858	1,010	964
Iran	Cargo Ballast	1,111	1,006	1,020	99 521	64 498	107 753
·	Сагдо	21 248	231	277	526	349	317
Italy	Ballast	1	1		11	1	11
Japan	Cargo	1,065	811	921	2,013	2,661	2,402
	Ballast Cargo	1,405	2,522	1,968 141	26 258	13 386	41 218
Netherlands	Ballast	100	221	141	236	380	210
New Caledonia	Cargo	217	191	192	205	155	171
}	Ballast	44	32	31	20 720	795	857
United States of America {	Cargo Ballast	982	812	890	45	24	18
Other foreign countries	Cargo	1,105	1,061	920	1,693	1,989	1,925
Other foreign countries {	Ballast	206	439	333	161	227	247
			l			·	
Total {	Cargo Ballast	14,289 2,980	14,071 4,787	15,119 3,839	11,904 5,144	13,199 5,605	12,412 6,214
Total with Cargo and in Ballast		17,269	18,858	18,958	17,048	18,804	18,626

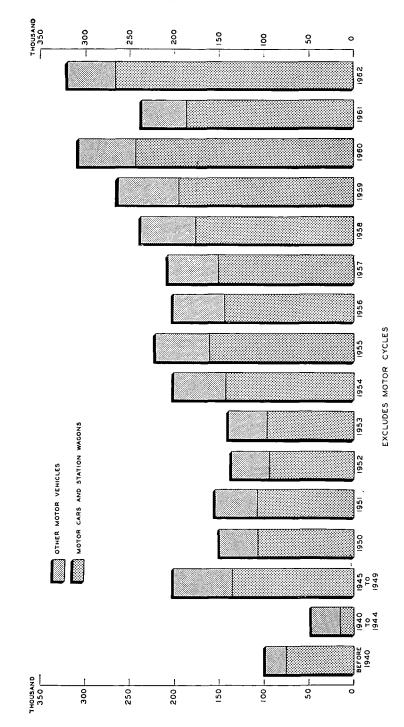
^{4.} Country of Registration of Oversea Shipping.—Particulars of oversea shipping which entered Australian ports during each of the years 1960-61 to 1962-63 are given in the following table according to country of registration of vessels.

AUSTRALIA CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962 TYPES OF VEHICLE



TOTAL MOTOR VEHICLES-3,216,112

AUSTRALIA CENSUS OF MOTOR VEHICLES,315" DECEMBER,1962 BY YEAR OF MODEL



OVERSEA SHIPPING: COUNTRY OF REGISTRATION OF VESSELS ENTERED, AUSTRALIA

('000 net tons)

Vessels registered at ports in—	1960- 61	1961- 62	1962- 63	Vessels registered at ports in—	1960- 61	1961- 62	1962- 63
Commonwealth countries—				Foreign countries—			
Australia	269	347	130	Norway	2,045	2,158	2,355
Hong Kong	327	585	466	Panama	462	439	524
New Zealand	343	343	341	Sweden	624	839	745
Singapore	63	95	49	United States of		١	
United Kingdom	7,390	7,497	7,413	America	307	278	335
Other	243	179	129	Other	237	244	212
In cargo	7.375	7.133	7,244	In cargo	6.914	6,938	7,875
In ballast	1,260	1,913	1,284	In ballast	1,720	2,874	2,555
			l				
Total, Commonwealth	0.00						
Countries	8,635	9,046	8,528	Total, Foreign	0.014		
Proportion of total	50.0	47.9	42.9	Countries	8,634	9,812	10,430
totat /o	30.0	47.9	42.9	Proportion of total %	50.0	52.1	57.1
Foreign countries—							
Denmark	493	561	566				
France(a)	324	456	276	All countries—			
Germany, Federal Re-			1	In cargo	14,289	14,071	15,119
public	245	307	312	Proportion of total %	82 7	74 6	79 7 3.839
Greece	725	1,212	933	In ballast	2,980 17.3	4,787 25,4	20.3
Įtaly	532	656	898	Proportion of total %	17.3	25.4	20.3
Japan	907	859	1,293	†		l	
Liberia Netherlands	736 997	886	1,150	Grand Total	17 260	18.858	18,958
Netherlands	791	917	831	Grand Total	17,269	10,038	10,938

(a) Includes New Caledonia (29 during 1962-63).

The Australian tonnage which entered Australian ports from overseas during the year 1962-63 represented 0.7 per cent. of the total tonnage entered and was confined mainly to the New Zealand and Pacific Islands trade.

§ 4. Interstate Shipping

1. System of Record.—Interstate Shipping comprises two elements: (a) vessels engaged solely in interstate trade: and (b) vessels trading between Australia and oversea countries and in the course of their voyages proceeding from one State to another. (However, these vessels, except under special circumstances, do not engage in interstate carrying. Numerous oversea vessels obtain single voyage permits or exemptions under the Navigation Act 1912-1950. Such vessels include oversea tankers carrying petroleum products interstate, and, since the withdrawal of interstate passenger liners, other oversea vessels, under permit, carrying passengers and frozen cargo on the interstate run.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the oversea vessels (b), some explanation is necessary. Each State desires that its shipping statistics should show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics of Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an oversea country-say the United Kingdom-via another State, is recorded in the second State as from the United Kingdom "Oversea via States", thus distinguishing the movement from a direct oversea entry. Continuing the voyage, the vessel is again recorded for the statistics of the third State as from the United Kingdom "Oversea via States". On an inward voyage, the clearance from the first State to the second State is a clearance interstate, and is included with interstate tonnage in conformity with the prefederation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movements, must for the individual States be recorded as "Oversea via States" or "Interstate" according to the direction of the movement. The significance of the record of these movements will be seen more clearly

from the following tabular presentation of the inward and outward voyages to and from Australia of an oversea vessel which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—via South Australia and Victoria. From the terminal port, the vessel will commence the outward voyage and retrace its inward track.

ITINERARY OF AN OVERSEA VESSEL ON THE AUSTRALIAN COAST

			Recorded as-		
Particulars	For the and Austr	for	For the States		
Inward Voyage—	1.		2.	3.	
Enters Fremantle from United Kingdom Clears Fremantle for Adelaide	Oversea	direct	Interstate direct		
Enters Adelaide from United Kingdom via Fremantle Clears Adelaide for Melbourne			Interstate direct	Oversea via States	
Enters Melbourne from United Kingdom via Adelaide			Interstate direct	Oversea via States	
Enters Sydney from United Kingdom via Melbourne				Oversea via States	
Outward Voyage— Clears Sydney for United Kingdom via Melbourne Enters Melbourne from Sydney			Interstate direct	Oversea via States	
Clears Melbourne for United Kingdom via Adelaide Enters Adelaide from Melbourne			Interstate direct	Oversea via States	
Clears Adelaide for United Kingdom via Fremantle Enters Fremantle from Adelaide Clears Fremantle for United Kingdom	Oversea	direct	Interstate direct	Oversea via States	

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows. (a) The aggregate of all ships recorded for each State as "Oversea direct" gives the oversea shipping for Australia as a whole; (b) the aggregate for all ships recorded in any State as "Oversea direct" plus those recorded as "Oversea via States" gives the total oversea shipping for that State; and (c) the aggregate for all ships recorded as "Oversea via States" may also be used, together with those recorded as "Interstate direct" (including those engaged solely in interstate movement) to furnish figures showing the total interstate movement of shipping.

2. Interstate Movement.—(i) Interstate Direct. The following table shows the number of entrances and the net tonnage of vessels recorded into each State and the Northern Territory from any other State (including oversea vessels on interstate direct voyages as in column 2 above) during each of the years 1960-61 to 1962-63.

INTERSTATE MOVEMENT OF SHIPPING: ENTRANCES OF VESSELS INTERSTATE DIRECT

				Number		N	et tons ('00	00)
State or Ter	ritory		1960-61	1961-62	1962-63	1960-61	1961-62	1962-63
New South Wales			1,883	1.933	1.844	5,780	6,149	5,946
Victoria			1,637	1.749	1.711	4,809	5,147	4,915
Queensland			799	748	772	2,030	1,930	2,195
South Australia			1,103	1,147	1,132	3,726	3,969	4,010
Western Australia			671	685	649	3,303	3,206	2,950
Таѕтапіа			1,100	1,223	1,200	1,472	1,675	1,739
Northern Territory			66	69	71	107	139	144
Australia		• •	7,259	7,554	7,379	21,227	22,215	21,899

(ii) Oversea via States. The figures in the following table show the number of entrances and clearances of vessels to and from oversea countries via other Australian States as in column 3 in the table in para. 1, p. 560, and their aggregate net tonnage.

INTERSTATE MOVEMENT OF SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS OVERSEAS VIA OTHER AUSTRALIAN STATES, 1962-63

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances No. '000 net tons Clearances No. '000 net tons	827	918	431	613	49	331	4	3,173
	4,237	4,655	1,987	2,901	290	1,447	12	15,529
	840	884	249	533	31	314	1	2,852
	3,716	4,429	1,063	2,483	153	1,341	6	13,191

(iii) Total Interstate Movement. In order to ascertain the aggregate movement of interstate shipping, including the total interstate movement of oversea vessels, the figures in the two preceding tables must be combined. The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels from and for other States (including the interstate movement of oversea vessels) during the year 1962-63, together with the aggregate net tonnage.

INTERSTATE MOVEMENT OF SHIPPING: TOTAL, 1962-63

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances No.	2,671	2,629	1,203	1,745	698	1,531	75	10,552
'000 net tons Clearances No.	2,814	9,570 2,686	4,182 1,054	6,911 1,838	3,240 703	3,186 1,574	77	37,428 10,746
'000 net tons	10,352	9,856	3,459	7,217	3,557	3,247	174	37,862

The following table shows the total interstate movement of shipping, including oversea vessels travelling overseas via States and interstate direct, for Australia for each of the years 1958-59 to 1962-63.

INTERSTATE MOVEMENT OF SHIPPING: TOTAL, AUSTRALIA

Particulars			1958-59	1959-60	1960-61	1961–62	1962-63	
Entrances		No.	9,446 30.932	9,866 32,857	10,225 35,791	10,551 36,974	10,552 37,428	
Clearances	••	No.	9,425 30,842	9,819 32,622	10,276 36,006	10,608 36,923	10,746 37,862	

3. Shipping Engaged Solely in Interstate Trade.—The following table shows, for each State and the Northern Territory, the number of entrances direct from other States of vessels engaged solely in interstate trade (i.e., excluding oversea vessels in continuation of their oversea voyages) during the year 1962-63, together with the net tonnage.

SHIPPING ENGAGED SOLELY IN INTERSTATE TRADE(a): ENTRANCES, 1962-63

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Ships entered Net tons	000	1,170 2,929	1,071 1,718	372 550		258 833		65 112	4,845 9,695

(a) Excludes vessels travelling interstate via ports in the same State.

4. Australian Trading Vessels.—The following table shows particulars of all Australian trading vessels of 200 gross tons or more engaged in the regular oversea, interstate or coastal (intrastate) services at 30th June, 1963.

AUSTRALIAN TRADING VESSELS(a) OF 200 GROSS TONS OR MORE, 30th JUNE, 1963

Vessels	No.	Deadweight tons	Gross tons
Interstate vessels—	05	547.502	400 000
Australian-owned, Australian-registered vessels New Zealand-owned, Australian-registered engaged	95	547,502	409,888
in Australian coastal trade	9	24,835	21,047
Total Interstate Vessels	104	572,337	430,935
Intrastate vessels	21	29,525	25,141
Total Coastal Trading Vessels	125	601,862	456,076
Oversea trading vessels—]]	
Australian-owned, Australian-registered operated]	
mainly on oversea services	7	25,982	23,811
Australian-owned, oversea-registered operated wholly			
on oversea services	14	150,116	109,896
Total Oversea Trading Vessels	21	176,098	133,707
Total Australian Trading Vessels	146	777,960	589,783

⁽a) Includes 14 vessels of 109,896 gross tons not registered in Australia.

§ 5. Shipping at Principal Ports

Note.—For details of Harbour Boards and Trusts in each State see Chapter XX.

1. Total Shipping, Australia.—The following table shows the total volume of shipping—oversea, interstate and coastal—which entered the principal ports of Australia during the years 1961-62 and 1962-63. The movements of warships and of other non-commercial vessels are excluded from the table.

TOTAL SHIPPING: ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA

		1961	-62	1962	2–63		1961	-62	1962	2-63
Port of entry		Num- ber	Net tons	Num- ber	Net tons	Port of entry	Num- ber	Net tons	Num- ber	Net tons
	_		,000		000			'000		000
New South Wales-	_			, ,		South Australia—	1 !		1	
Sydney(a)		4,395			14,683	Adelaide(b)	2,496	5,871	2,348	
Newcastle		2,119	5,417				312	477		434
Port Kembia		1,113	3,781	1,131	3,872	Port Pirie	423	1,071		
			-			Rapid Bay	96	237	110	
						Wallaroo	83	265	36	162
		l				Whyalla	497	1,721	474	1,718
Victoria—		{			f	Western Australia-	1			
Melbourne		2,852	11,094	2,862	11,288	Fremantle(c)	1,491	8,017	1,425	7,696
Geelong		600	3.330	657	3,495	Albany	144	672		674
_		1 1			I	Bunbury	126	499	114	472
		1 1		}		Carnarvon	71	110		
		i 1			1	Geraldton	146	493		
					1	Yampi	142	631	136	608
Queensland—		l 1				Tasmania—	1			1
Brisbane		1,406	4,870	1,488	5,303	Hobart	577	1,520	591	
Bowen		31	70	37	115	Burnie	365	686		
Cairns		327	626	300		Devonport	428	668		
Gladstone		96	450		450	Launceston	604	796	580	987
Mackay		107	294	127	486	1			1	1
Rockhampton		104	279	112	309	Northern Territory-			i	
Townsville		377	1.034	349	991	Darwin	114	224	109	255

⁽a) Includes Botany Bay.

⁽b) Includes Port Stanvac.

⁽c) Includes Kwinana.

2. Total Shipping—Australia, New Zealand and the United Kingdom.—The following table shows the total shipping tonnage which entered the principal ports of Australia, New Zealand and the United Kingdom during 1962-63.

TOTAL SHIPPING: ENTRANCES AT PORTS, AUSTRALIA, NEW ZEALAND AND THE UNITED KINGDOM

('000 net tons)

Port	Net tonnage entered	Port	Net tonnage entered	Port	Net tonnage entered
AUSTRALIA— Sydney (N.S.W.)(a) Melbourne (Vic.) Fremantle (W.A.)(b) Adelaide (S.A.)(c) Brisbane (Qld) Newcastle (N.S.W.) Port Kembla (N.S.W.)	14,683 11,288 7,696 6,159 5,303 4,811 3,872	New Zealand— Wellington Auckland Lytileton Otago Napier Bluff Taranaki	4,841 4,365 3,449 1,514 1,239 1,034 985	ENGLAND AND WALES— continued Manchester (including Runcorn) Hull Bristol Middlesbrough Swansea Cardiff	6,862 6,302 6,004 4,534 4,349 3,592
Geelong (Vic.) Whyalla (S.A.) Hobart (Tas.) Port Pirie (S.A.) Townsville (Qld) Launceston (Tas.) Burnie (Tas.)	3,495 1,718 1,382 1,062 991 987 980	ENGLAND AND WALES— London	47.978 25,791 22,533 7,998 7,154	SCOTLAND— Glasgow Northern Ireland— Belfast	8,067 8,266

⁽a) Includes Botany Bay.

§ 6. Shipping Cargo

1. Oversea and Interstate Cargo.—(i) Australia. The table hereunder shows the aggregate tonnage of oversea and interstate cargo discharged and shipped at Australian ports for the years 1958-59 to 1962-63. Most of the cargo is recorded in terms of the ton weight of 2,240 lb., the remainder, mainly bulky commodities, being shipped and recorded on the basis of 40 cubic feet of space occupied representing one ton measurement.

SHIPPING CARGO MOVEMENT: AUSTRALIA

('000 tons)

			Overse	a cargo	Interstate cargo				
Year	Year Discharged		Ship	ped	Disch	arged	Shipped		
		Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas
1958-59	٠.	14,232	2,666	8,646	1,469	12,236	1,288 1,562	12,345 12,923	1,04
1959–60 1960–61	••	15,458 17,265	3,263 3,801	10,108 13,748	1,479 1,551	12,535 13,130	1,622	13,713	1,36 1,47
1961–62 1962–63	• •	17,508 19,497	2,763 3,397	17,178 15,405	1,547 1,545	13,318	1,427 1,306	13,658	1,18 1,10

⁽b) Includes Kwinana.

⁽c) Includes Port Stanvac.

(ii) Principal Ports. The following table shows the tonnage of oversea and interstate cargo discharged and shipped at the principal ports of Australia during 1962-63.

CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1962-63 ('000 tons)

					(000 1	(2110)					
	Port				Disch	arged			Ship	ped	
	ron			Ove	rsea	Inter	state	Over	sea	Inter	state
				Wt	Meas.	Wt	Meas.	Wt	Meas.	Wt	Meas
Sydney				1.873	1,358	641	182	2,524	418	238	109
Botany Bay	::	••	• • •	3,941		5		93		907	
Newcastle	• •	••		311	••	1,958	••	1,318 1,038	••	1,768 738	
Port Kembla Other	• •	••	• •	410	•••	4,033	::	1,038	5	738	::
Other	••	••	• •								
Total,	New So	uth Wales	••	6,539	1,358	6,661	182	4,981	423	3,653	10:
Melbourne				3,589	1,256	1,689	399	1,006	524	794	43
Geelong		••	• •	3,575	1,200	492	24	1,772	2	1,073	1.5
Portland		•••		33	••	73		139	••	2	
Total,	Victoria			7,197	1,259	2,254	423	2,917	526	1,869	44.
				421	249	799	83	624	98	49	2
Brisbane Cairns	• •	••	• •	421 51	249	98	11	160	2	29	4
Gladstone	::	••	••	9		80		289		9	l
Mackay		••	••	14		57	٠	530		20	
Townsville	••	• •	••	31	''i	170 65	12	352 402	1 4	67 511	· · ·
Other	••	••	••								
Total,	Queens!	and .	••	535	251	1,269	109	2,357	105	685	2
Port Adelaide	٠	• •		335	340	1,492	58	421	193	146	2
Ardrossan	• •	• •	••	· 51		41	••	109 168	••	203	٠٠
Port Lincoln Port Pirie	••	••	••	14	::	180	::	539	::	180	::
Port Stanvac	::	••	• • •	402] ::		::	7	::	74	::
Rapid Bay		••	••			1 ::-		79		629	[
Whyalla	• •	• •		5		239		458	'i7	3,610	
Other	••	••	• •	42	<u> </u>	1		438		274	
Total,	South A	ustralia	••	849	341	1,953	58	1,781	210	5,145	2
Fremantle(a)		••		3,726	140	599	93	2,255	70	1,052	2
Bunbury	••	••	••	106		4		319 284	43 8	29	l
Geraldton Yampi	••	••	••	56	::	4		204	J	16 1,271	
Other	::	::	::	139	2	34	2	300	i9	3i	٠.
Total.	Western	Australia		4,027	142	641	95	3,158	140	2,399	3
											<u> </u>
Hobart Burnie	••	••	• •	113 58	14	421 152	103	134 44	109 14	193 64	9
Launceston	• • • • • • • • • • • • • • • • • • • •	••	::	123	29	259	83	25	13	74	5
Other		::	::	123	ī	183	232	1	3	252	23
Total,	Tasman	ia	••	301	46	1,015	438	204	141	583	46
Darwin, North	hern Te	rritor y	••	49		89	1	7		6	
Austral	lia		••	19,497	3,397	13,882	1,306	15,405	1,545	14,340	1,10

2. Oversea Cargo according to Country of Registration of Vessels.—The following table shows the total oversea cargo, discharged and shipped combined, according to the country in which the vessels were registered, during each of the years 1960-61 to 1962-63.

OVERSEA CARGO DISCHARGED AND SHIPPED: COUNTRY OF REGISTRATION OF VESSELS, AUSTRALIA

('000 tons)

Vessels registered at ports in-	1960	D-61	1961	1-62	1962	2-63
	Weight	Meas.	Weight	Meas	Weight	Meas.
Commonwealth countries—						
Australia	273	106	297	116	169	108
Hong Kong	606	68	1,092	27	695	71
New Zealand	507	404	487	358	515	407
United Kingdom	12,457	2,703	12,735	2,204	12,454	2,519
Other	612	167	457	173	396	116
Total, Commonwealth Coun-						
tries	14,455	3,448	15,068	2,878	14,229	<i>3,221</i>
Proportion of Total %	46.6	64.4	43.4	66.8	40.8	65.2
Familian Countries						
Foreign Countries— Denmark	1.042	33	1.283	36	1,333	50
France and New Caledonia	1,042	82	730	83	374	106
Germany, Federal Republic of	476	240	546	215	627	246
_ ·	1.468	30	2,422	47	1,800	18
1	384	84	864	52	1,300	56
1	1.879	210	1.697	216	2,622	205
Liberia	1.641	80	1,988	16	2,696	12
Netherlands	1,322	314	1,206	218	1,001	291
Norway	4,628	354	5,205	165	5,638	249
Panama	856	56	876	10	957	36
Sweden	1,108	152	1.884	257	1,621	325
United States of America	299	138	316	103	237	102
Other	990	131	601	14	448	25
Total, Foreign Countries	16,558	1,904	19,618	1,432	20,673	1,721
Proportion of Total %	53.4	35.6	56.6	33.2	59.2	34.8
Grand Total	31,013	5,352	34,686	4,310	34,902	4,942

§ 7. Vessels Registered in Australia

1. Australian-registered Trading Vessels.—The following table shows the number and gross tonnage of trading vessels of 200 tons and over registered in Australia at 30th June, 1963, classified according to—(i) year of construction, 1959 to 1963, and 1958 and earlier years, (ii) type of trade in which the vessels were engaged, and (iii) vessels built in Australian or in oversea shipyards. The statistics in this table have been compiled by the Commonwealth Department of Shipping and Transport. The Merchant Shipping Act 1894 (Imperial) under which vessels are registered in Australia, does not make it compulsory to register vessels under 15 tons burden if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners.

AUSTRALIAN-REGISTERED TRADING VESSELS, 30TH JUNE, 1963 (a)

`	Year of construction			int	rsea and erstate essels		rastate essels	Au	uilt in stralian yards	Built overseas		1	Fotal
				No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons
1958 1959 1960 1961 1962 1963	and c arl	ier	::	95 6 3 3 2 2	347,355 33,146 24,457 20,141 16,715 12,932	 1	23,145 1,996 	4	220,154 26,936 24,457 22,137 16,715 12,932	 	150,346 6,210 	115 6 3 4 2 2	370,500 33,146 24,457 22,137 16,715 12,932
	Total, Aust	Registered ralia	in 	111	454,746	21	25,141	70	323,331	62	156,556	132	479,887

(a) 200 gross tons and over.

Figures in this table relate to gross tons, and are therefore not comparable with those in the table following, which relate to net tons and to all registered vessels irrespective of tonnage and type.

2. Vessels Registered.—The following table shows the number and net tonnage of steam, sailing and other vessels on the register of each State and the Northern Territory at 31st December, 1963.

VESSELS REGISTERED, 31st DECEMBER, 1963

				Sail	ing		hu	ges, lks,		
State or Territory	Steam and motor		Propelled by sail only		Fitted with auxiliary power		dredges, etc., not self- propelled		Total	
_	No.	Net tons	No.	Net tons	No.	Net tons	No.	Net tons	No.	Net tons
New South Wales	308	48,306	29	2,058	147	1,837	12	1,849	496	54,050
Victoria	126	156,736	26	664	64	1,248	16	6,211	232	164,859
Queensland	86	35,121	33	594	56	658	5	1,321	180	37,694
South Australia	37	19,691	2	9	50	2,207	5	1,433	94	23,340
Western Australia	113	15,854	206	2,961	76	1,711	5	478	400	21,004
Tasmania	52	13,732	42	693	114	2,719	. 3	690	211	17,834
Northern Territory			16	154	11	227			27	381
Australia	722	289,440	354	7,133	518	10,607	46	11,982	1,640	319,162

3. World Shipping Tonnage.—At 1st July, 1963, the total steamships, motorships and auxiliaries of 100 gross tons and upwards throughout the world amounted to 39,571, with a gross tonnage of 145,863,463. Of these totals, steamships numbered 12,118 for 74,584,310 gross tons, motorship: 26,681 for 71,125,967 gross tons, and auxiliaries 772 for 153,186 gross tons. Included therein were 4,984 oil tankers of 100 gross tons and upwards, with a gross tonnage of 47,121,017. Australian steamships, motorships and auxiliaries, 293 for 557,052 gross tons, constituted 0.74 per cent. and 0.38 per cent. respectively of the total number and tonnage. This information has been derived from Lloyd's Register of Shipping.

§ 8. Miscellaneous

- 1. Lighthouses.—A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light so far as particulars are available, will be found in *Transport and Communication*, Bulletin No. 46.
- 2. Distances by Sea.—The distances by sea between principal ports of Australia and some important ports in other countries which trade with Australia were published in Year Book No. 48, page 525.
- 3. Shipping Freight Rates.—The Quarterly Summary of Australian Statistics shows a list of the current freight rates for general merchandise in respect of both oversea and interstate shipments.

The following table shows the freight rates from Australia to various countries for certain important commodities at 31st December, 1963.

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1963

(1 Ton measurement = 40 cubic feet)

	Article and co	ountry			Unit for which freight rate is quoted	Fre	ight rate
		F					Sierling
UNITED KINGDOM A Butter			-		Box 56 lb.	S.	
		• •	• •	•••			6
		• •	••		lb.	1,0	
Eggs, in shell			• •	•••	Ton measurement	342	3
Meats, preserved	by cold proc	ess—			11.	١ ۵	
Beef, refrigerat				•••	1b.	0	3.51
Lamb, refrigera	itor, excludin	g carton	• •	••	<u>1</u> b.	ŏ	4.33
Mutton, refrige	rator, exclud	ing carton	• •	•••	ib.	0	3.51
Beef, refrigerate Lamb, refrigera	or, carton	• •	• •	••	įь.	0	2.53
Lamb, retrigera	itor, carton	• •		•••	lb.	0	2.53
Mutton, refrige			• •	• • •	1b.	0	2.53
Rabbits		• •	• •	•••	Ton measurement	267	9
Preserved in tir		• •	• •	•••	Ton measurement	224	6
Sausage casings	i, aried, in ca	sks or case	3	•••	Ton measurement	353	3 Frozen
	_	_			Ton measurement	224	6 Dry
Meats, not frozen			• •		Ton measurement	224	6
Milk and cream,	condensed				Ton measurement	224	6
Fruit—							
Canned					Ton measurement	178	0
Dried					Ton measurement	178	0
Fresh						ł	
Apples					Standard bushel case	12	9
Citrus				1	Standard bushel case	13	11
Pears					Standard bushel case	12	9
Pears				1	bushel case	11	8
		• •		۲۱	Standard bushel case	13	11
_				- 11	∄ bushel case	12	7
Grapes, grap	erruit, orange	s, iemons	and plu	ms <	hushel case	9	Ò
				t i	1 bushel carton	8	5
Grain and pulse,	unprepared—	-		`	• • • • • • • • • • • • • • • • • • • •	I -	-
Barley, in bags					Ton weight	130	0
Wheat, parcels-					· · · · · · · · · · · · · · · · · · ·		
Bagged				l	Ton weight	107	6
Bulk						100	Ğ.
	• • •					107	
					Ton weight		
	• •	::	••	•••	Ton wei ht	152	6
Oats, in bags	nhusked	::	::	::	Ton weight	152 140	6
Oats, in bags Rice, paddy, ut	nhusked	::	••	•••	Ton wei ht	152	6
Oats, in bags Rice, paddy, ur Grain and pulse,	nhusked prepared	::	::	::	Ton weir ht Ton weight Ton weight	152 140 177	6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran	nhusked prepared	::	::	::	Ton weight Ton weight Ton weight Ton weight	152 140 177 167	6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran	nhusked prepared	::	::	::	Ton weight Ton weight Ton weight Ton weight Ton weight Ton weight	152 140 177 167 160	6 0 6 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran	nhusked prepared	::	::		Ton wei [°] ht Ton weight Ton weight Ton weight Ton weight Ton weight	152 140 177 167 160 147	6 0 6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hu	nhusked prepared	::	::		Ton weight	152 140 177 167 160 147 152	6 0 6 0 6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hus Jams	nhusked prepared sked				Ton wei' bt Ton weight Ton weight Ton weight Ton weight Ton weight Ton weight Ton meight	152 140 177 167 160 147 152 178	6 0 6 0 6 0 6
Oats, in bags Rice, paddy, un Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hus Jams Wine	nhusked prepared sked	::	::		Ton weight	152 140 177 167 160 147 152	6 0 6 0 6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hur Jams Wine Hides and skins—	nhusked prepared sked			::	Ton wei'bt Ton weight Ton measurement	152 140 177 167 160 147 152 178 213	6 0 6 0 6 6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hur Jams Wine Hides and skins—	nhusked prepared sked				Ton weight Ton measurement Ton measurement	152 140 177 167 160 147 152 178	6 0 6 0 6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hu: Jams Wine Hides and skins— Calf Cattle	nhusked prepared	::	::	::	Ton weight Ton measurement Ton measurement Ib.	152 140 177 167 160 147 152 178 213	6 0 6 0 6 6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hu: Jams Wine Hides and skins— Calf Cattle	nhusked prepared		::		Ton wei'nt Ton weight Ton measurement Ton measurement Ib. Ib.	152 140 177 167 160 147 152 178 213	6 0 6 0 6 6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hu: Jams Wine Hides and skins— Calf Cattle Fox Kangaroo	nhusked prepared sked		::		Ton weight Ton measurement Ton measurement Ib. Ib. Ib.	152 140 177 167 160 147 152 178 213	6 0 6 6 6 6 6 6 6 6 1 13/16
Oats, in bags Rice, paddy, un Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hu Jams Wine Hides and skins— Calf Cattle Fox Kangaroo Opossum	nhusked prepared sked				Ton wei' bt Ton weight Ton measurement Ton measurement Ib. Ib. Ib. Ib. Ib.	152 140 177 167 160 147 152 178 213	6 0 6 0 6 6 0 6
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hus Jams Wine Hides and skins— Calf Cattle Fox Kangaroo Opossum Rabbit and har	nhusked prepared sked		::		Ton weight Ton measurement Ton measurement Ib. Ib. Ib. Ib. Ib. Ib. Ib. Ib.	152 140 177 167 160 147 152 178 213	6 0 6 6 6 6 6 6 6 6 1 13/16
Oats, in bags Rice, paddy, un Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hus Jams Wine Hides and skins— Calf Cattle Fox Kangaroo Opossum Rabbit and har Wallaby	nhusked prepared				Ton weight Ton measurement Ton measurement Ib. Ib. Ib. Ib. Ib. Ib. Ib. Ib.	152 140 177 167 1667 147 152 178 213 0	6 0 6 0 6 0 6 0 6 1 13/16 5 15/32
Oats, in bags Rice, paddy, ur Grain and pulse, Bran Pollard Flour, wheaten Rice, clean, hu: Jams Wine Hides and skins— Calf Cattle Fox Kangaroo Opossum Rabbit and har	nhusked prepared				Ton weight Ton measurement Ton measurement Ib. Ib. Ib. Ib. Ib. Ib. Ib. Ib.	152 140 177 167 160 147 152 178 213	6 0 6 6 6 6 6 6 6 6 1 13/16

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1963—continued

Ari	icle and co	untry			Unit for which freight rate is quoted	Freight rate
						Raies—Sterling
Pearlshell Trochus and green	snail shell,	bags or	cases	••	Ton measurement Ton weight	224 6 337 6
Wool— Greasy, dumped					1ъ.	0 3.74
Scoured and was	hed. dumpe	ed	••	• •	lb.	0 4.69
Tops		••	•••	• •	16.	l 0 4.77 net
Bark, tanning Sandalwood, in bag			••	••	_ Ton weight	224 6
Sandalwood, in bag	3	• •	••	• •	Ton measurement	224 6
Apparel and attire, Oils—	circus	••	• •	• •	Ton weight or measurement	352 0
Eucalyptus					Ton measurement	254 0
Coconut	::	::	• • • • • • • • • • • • • • • • • • • •		Ton weight	254 0
Whale		••	••		Ton weight	254 0
Other	••	••	••	• •	Ton weight	254 0 254 0
Stearine Tallow, unrefined, i	a daima	••	••	• •	Ton weight	254 0 254 0
Ore in casks, bags			••	• • •	Ton weight Ton weight	139 0
Zinc-	or arang, r	1.0.1.	••	••	Ton weight	1.57
Ex Risdon					Ton weight	85 6
Other than above		• •			Ton weight	102 6
Dust in tins, scale			ed drums	••	Ton weight	319 0
Copper	• •	••	••	••	Ton weight	122 6 106 6
Lead Stee! billets—	••	••	••	••	Ton weight	100 0
1 In to 20 feet					Ton weight	20 0
Over 20 feet and	up to 30 fe	et			Ton weight	100 0
Tin clippings, hydra	ulically or	essed	••		Ton weight	113 0
Leather	••	• •	••	• •	Ton weight	494 0
Tiniher— Logs up to 40 fee	t long	•			100 super. ft.	78 2
Logs over 40 feet	and up to	50 feet	long	• •	100 super. ft.	83 11
Logs over 50 feet	and up to	60 feet	long	••	100 super. ft.	90 0
Sawn undressed u	ip to 30 fee	t—shipn	nent of less	than		
50 tons Toilet paper	::	••	<i>::</i>	::	100 super. ft. Ton measurement	41 5 240 0
Stationery— Note paper and/o	or envelope	s			Ton measurement	370 0
Other than above			• •	• •	Ton_measurement	384 0
Casein	••	• •	••	• •	Ton weight	294 0 287 0
Fertilizers Soap	••	• •	• •	••	Ton measurement Ton measurement	287 0 224 6
Gold and silver spe	cie	••	••	• • •	Ad valorem	15 0%
Cold and an or		•••	• •	• • •	1	,.
Flour, wheaten				••	Ton weight	144 0
Milk and cream—					Ton measurement	244 6
Condensed	••	••	••	• • •	Ton measurement Ton measurement	422 0
General cargo	••	••	••	• • •	Ton weight or measurement	244 6
	- •		- •	••		1
NDIA-						100 0
Milk products in ca			• •	••	Ton measurement	186 0 142 0
Wheat in bags Wool	••	••	••	••	Ton weight	144 0
Greasy	••				lb.	0 3 24
Scoured, etc.	::	::	::	• • • •	lb,	0 4.15
Zinc bars	••	••	••	••	Ton weight	117 6
General cargo	••	••	• •	• •	Ton weight or measurement	217 6
					l	İ
SOUTH AFRICA— Wool—						
Greasy		••			1ъ.	0 3.25
Scoured, etc.		• •	••		1b.	0 4 00
General cargo	••	••	• •	••	Ton weight or measurement	209 0
_					ĺ	Rates-
CHINA-					2 000 15	Australian
Flour Wheat	••	• •	••	••	2,000 lb.	145 0 150 0
Wheat	••	• •	••	••	Ton	150 0
Greasy					15.	0 3
Scoured, etc.	••		•••		_ 1b.	0 3.49
General cargo					Ton weight or measurement	262 6

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1963—continued

Artic	ile and cou	ntry			Unit for which freight rate is quoted	Freight rate
Hong Kong— Sugar Wheat		::			Ton weight Ton weight	Rates— Australian s. d. 147 0 150 0 net
Greasy Scoured, etc.	::	::	••	::	1b. 1b.	0 3 0 3.49
General cargo	••	••	••	••	Ton weight or measurement	262 6
JAPAN— Cattle hides, wet sa Coal	alted			••	Ton weight Ton weight	262 6 214 0
Copper ores and co	ncentrates	-	••		Ton weight	161 6
Bulk Iron and steel scrap	• •	••	••	••	Ton weight	126 0
Loose 4-cwt. drums	••	••	••	••	Ton weight Ton weight	240 0 190 0
Over 4-cwt. drun	ns	••	••	• •	Ton weight	170 0 105 0
Iron, pig Lead ores and conc		••	••	••	Ton weight	
Parcels Bulk	••	••	••	••	Ton weight Ton weight	161 6 126 0
Lead, pig Sugar	••	••	••	••	Ton weight Ton weight	160 0 147 0
Wheat	::	::	::	::	Ton weight	150 0 net
Greasy Scoured, etc.			••	••	lb.	0 3.32 0 3.86
Zinc ores and conc	entrates	••	••	••	1b.	l
Parcels Bulk	••	••	••	• •	Ton weight Ton weight	161 6 126 0
General cargo	••	••	••	••	Ton weight or measurement	262 6
MALAYA— Milk products— Condensed—					T	230 0
From eastern A From Western Powdered in bags	Australian	ports	••	::	Ton measurement Ton measurement	210 0
From eastern From Western Powdered in case	Australian	ports	::	::	Ton weight Ton weight	312 6 287 6
From eastern A From Western Flour—	Australian (Australian	ports ports	••	::	Ton weight or measurement Ton weight or measurement	230 0 210 0
From eastern Au From Western A General cargo—	stralian po ustralian p	rts Orts	••	::	2,000 lb. 2,000 lb.	137 6 127 6
From eastern Au From Western A	stralian po ustralian po	rts orts	••	::	Ton weight or measurement Ton weight or measurement	249 0 229 0
INDONESIA— Flour—						
From eastern Aus From Western Au General cargo—	stralian pos Istralian po	ts orts	••	::	2,000 lb. 2,000 lb.	137 6 127 6
From eastern Aus From Western Au	stralian poi istralian po	rts orts	••	::	Ton weight or measurement Ton weight or measurement	249 0 229 0
CANADA—EAST COAST	AND ST.	LAWRE	NCE PORTS	10		Rates— Canudian Dollars
Fruit— Canned	••		••		Ton measurement	39.10
Dried Preserved	••	••	••	::	Ton measurement Ton measurement	33.00 42 20
Wine Wool—greasy	••	•••		::	Ton measurement 100 lb.	47.50 4.375
General cargo	<u>::</u>			<u> </u>	Ton measurement	47.60

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1961—continued

Article an	d country		Unit for which freight rate is quoted	Freight rate	
UNITED STATES OF AMERIC		AND	GULF		Rates— U.S. Dollars
Beef, preserved by cold	process				4 65
Quarters, etc	• •			100 lb. gross weight	4.65
Cartons				100 lb. net weight	4.15
Casein			[Ton weight	47.00
Fish, preserved by cold	process—		- 1	_	
Loose				Ton weight	70.80
Cartons			1	100 lb. net weight	3.90
Lead-			- 1		
Ores and concentrates				Ton weight	24.80
Unwrought				Ton weight	19.00
Mutton preserved by co					
Carcasses			1	100 lb. gross weight	5.00
Cuts in cartons			1	100 lb. net weight	4.15
Pipes and tubes of iron			- ::	Ton weight	33.00
Wool-	A11-0 01001	• •	• •	ton weight	20.00
C				100 lb.	4.375
On the same	••	• •		100 lb.	5.25
C 1	••	• •	• • •	Ton weight or measurement	47.60
General cargo	• •	• •	•••	ton weight or measurement	47.00

Interstate rates per ton weight or measurement for general cargo at 31st December, 1963, (expressed in Australian currency) were:—Sydney-Melbourne, 159s. 6d.; Sydney-Brisbane, 155s.; Sydney-Adelaide, 185s.; Sydney-Fremantle, 250s.; Sydney-Hobart, 147s.; Sydney-Darwin, 258s. 6d.

- 4. Depth of Water at Main Ports.—A table showing the depth of water available and tides at principal ports of Australia is published in the annual bulletin, *Transport and Communication*. For some major ports, information is given in Chapter XX. Local Government.
- 5. Shipping Casualties.—Courts of Marine Inquiry are constituted by a magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping losses and casualties reported on or near the coast during each of the years 1959 to 1963 are shown in the table below.

SHIPPING CASUALTIES TO OVERSEA AND INTERSTATE STEAM AND MOTOR VESSELS(a): AUSTRALIA

		Shi	pping los	sses	Other s	hipping ca	sualties	Total shipping casualties		
Year		Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost
1958–59		3	444	1	200	570,129	9	203	570,573	10
1959-60					229	708,418		29	708,418	
1960–61					178	549,244		178	549,244	
1961–62]]]	147	569,644	1	147	569,644	1
1962–63		1			122	468,326		122	468,326	

(a) Vessels over 50 net tons.

^{6.} Ferry (Passenger) Services.—For particulars of ferry passenger services operating in several States see page 588.

GOVERNMENT RAILWAYS

1. General.—The policy of government ownership and control of railways has been adopted generally throughout Australia, and, although a number of private railways exist, most of them are light railways intended primarily to transport goods involved in the commercial operations of their owners. There are three main gauges in use in the several States (5 ft. 3 in., 4 ft. 8½ in. and 3 ft. 6 in.), but in recent years considerable progress has been made towards the standardization of main trunk routes (see para. 3 below).

In the tables in this division, details of the four lines owned by the Commonwealth are grouped and shown with the totals for the various State-owned systems. Separate particulars for each Commonwealth line and more detailed statistics for all lines are shown in the annual bulletin, *Transport and Communication*.

- 2. Railway Communication in Australia.—An account of the progress of railway construction in Australia since the opening of the first line in 1854 was given in Year Book No. 6, page 681, and in No. 22, page 259. The main ports on the mainland are connected by lines running approximately parallel to the coast and are the focal points of lines which radiate inland to the agricultural, mining and pastoral areas of the continent to a distance of up to 750 miles. However, Darwin in the Northern Territory is not connected by rail to any other port. A 3 ft. 6 in. gauge railway extends southward from Darwin to Birdum, a distance of 317 miles, and from Port Augusta in South Australia a 4 ft. 8½ in. gauge railway of 217 miles extends northwards to Marree from where a 3 ft. 6 in. gauge of 540 miles continues to Alice Springs.
- 3. Standardization of Railway Gauges.—The first step towards uniform gauge railway communication between the capitals of the mainland States was effected in 1930 with the construction of the 4 ft. 8½ in. gauge line from Grafton to South Brisbane. The finance required for the construction was provided by the Commonwealth Government. For details of the agreement between the Commonwealth and New South Wales and Queensland, see Official Year Book No. 31, page 122. This line is operated by the New South Wales Railways, and details of operations in New South Wales are included with those of the New South Wales system. Details of operations on the Queensland portion are included with Queensland railway statistics unless otherwise specified.
- In March, 1944, the late Sir Harold Clapp, Director-General of Land Transport, Commonwealth Department of Transport, and formerly Chairman of Commissioners, Victorian Railways, was requested by the Commonwealth Government to submit a report and recommendation regarding the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge. A summary of his report and recommendations, made in March, 1945, together with an outline of the agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia regarding the standardization of railway gauges in their respective States, was published in Year Book No. 37, pages 146-9. The agreement, which was signed in 1946, was ratified by the Governments of the Commonwealth, of Victoria and of South Australia, but not by the New South Wales Government. After some time had elapsed and New South Wales had not ratified the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia, and the necessary legislation was enacted in 1949 by each Government concerned. The Commonwealth-South Australia Agreement provides for the same standardization work to be carried out in South Australia as would have been carried out had New South Wales ratified the original Commonwealth-Three States Agreement, and that the Commonwealth shall provide all funds required under the Agreement, with 30 per cent. of such moneys being repaid with interest by South Australia over 50 years, while the Commonwealth shall meet the full cost of works on Commonwealth railways in South Australia.

At the request of the South Australian Government, an amendment to the Agreement was approved to enable, as an interim measure, the narrow gauge (3 ft. 6 in.) lines in the South-Eastern Division of the State railways system to be converted to the broad gauge (5 ft. 3 in.). This work was completed in 1959 at a cost of £5 million. Construction and conversion work on the Central Australian Railway between Stirling North and Maree, 216 miles, has been completed by Commonwealth Railways at a cost of £12.2 million. In 1958, the Commonwealth Government made available £50,000 to South Australia for surveying the standard gauge line to be constructed between Broken Hill and Port Pirie, and in April, 1963, it announced its intention to provide funds for the standardization of the line. Preliminary work on this project has commenced.

In 1961, the Commonwealth undertook to provide £1.3 million, outside the Standardization Agreement, for the purchase of diesel-electric locomotives and ore wagons for use on the existing narrow gauge line on this route, the State to bear the cost of their subsequent conversion for operation on standard gauge track.

As a further step towards standardization, a committee consisting of members of the Federal Parliament was formed in March, 1956, to ascertain whether a scheme confined to the main trunk routes would be desirable. This committee recommended in October, 1956, that standard gauge (4 ft. 8½ in.) lines be provided from Wodonga to Melbourne, from Broken Hill to Adelaide via Port Pirie and from Kalgoorlie to Fremantle via Perth.

In 1962, the opening of a new uniform gauge line between Albury and Melbourne completed the standard gauge link between South Brisbane and Melbourne, and for the first time through services were operated between Sydney and Melbourne. There is an agreement on this project between the Commonwealth and the two States, New South Wales and Victoria, whereby the Commonwealth is to meet 70 per cent. of the cost of unification and the two States are to share equally the remaining 30 per cent., with the Commonwealth advancing the whole of the necessary funds initially, and the States' portion, plus interest, being repayable over 50 years. Legislation was enacted by the Commonwealth and the two State Governments in three separate Acts assented to towards the close of 1958. Estimated total cost for the project is £15 8 million. The cost of operations of, and the revenue derived from, the line are based proportionately on a Sydney-Melbourne mileage basis. Details of operations are included in the statistics of the respective States.

In 1961, the Commonwealth and Western Australian Governments enacted legislation to enter into an Agreement to undertake certain standard gauge railway works, including the provision of rolling stock, in that State, at an estimated cost of £41.2 million. The proposal is linked with the establishment of an integrated iron and steel industry at Kwinana in Western Australia, and the new railway facilities will be used to transport iron ore from the Koolyanobbing deposits some 33 miles beyond Southern Cross. These railway facilities will also link Kalgoorlie with East Perth and Fremantle by a standard gauge line. It has been agreed that the project has standardization and developmental components in approximately equal parts, and, initially, the Commonwealth will in effect provide finance for all of the standardization portion of the works and 70 per cent. of the developmental portion. The State will repay with interest 30 per cent. of the standardization costs over 50 years and all the advance for developmental works over 20 years. Work on the project commenced in 1962 and is planned to be completed by December, 1967.

4. Mileage Open for Traffic, all Lines.—The following table shows the route-mileage of Commonwealth and State lines open in each State and Territory at various periods since the inauguration of railways in Australia in 1854.

GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN

At 30th Ju	ine—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855(a)	•••	14	2		7					23
1861(a)		73	114	٠	56				٠	243
1871(a)		358	276	218	133		45			1,030
1881(a)		996	1,247	800	832	92	45			4,012
1891		2,182	2,763	2,195	1,666	198	351	145		9,500
1901		2,846	3,237	2,801	1,736	1,355	457	145		12,577
1911		3,762	3,523	3,868	1,935	2,376	470	145		16,079
1921		5,043	4,267	5,752	3,408	3,992	630	199	5	23,296
1931		6,247	4,514	6,529	3,898	4,634	665	317	5	26,809
1941		6,368	4,518	6,567	3,809	4,835	642	490	5	27,234
1951		6,354	4,445	6,560	3,805	4,682	613	490	5	26,954
1961		6,303	4,050	6,324	3,836	4,577	517	490	5	26,102
1963		6,296	4,024	6,077	3,838	4,251	516	490	5	25,497

(a) At 31st December.

At 30th June, 1963, 264 route-miles in Victoria and 234 route-miles in New South Wales were electrified.

5. Classification of Lines according to Gauge, at 30th June, 1963.—The next table shows the route-mileage of government railways open in each State and Territory classified according to gauge, and State totals in relation to population and area at 30th June, 1963.

GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, AT 30th JUNE, 1963 (Miles)

Gauge	N.S.W.	Vie.	Qid	S. A.	W.A.	Tas.	N.T.	A.C.T.	Aust
5 ft. 3 in 4 ft. 8½ in	(a) 241 6,055 	(b)3,814 202 	(c)69 5,978	1,676 (d) 871 (e) 1,291	(d) 454 3,797	 .516 	(d) 490	(d) ·· 5	5,731 7.656 12,072 8 30
Total	6,296	4,024	6,077	3,838	4,251	516	490	5	25,497
Per 1,000 of population	1.56	1.32	3.88	3.80	5.50	1.43	16.65	0.07	2.34
Per 1.000 square miles	20.35	45.79	9.11	10.10	4.36	19.68	0.94	5.32	8.58

⁽a) Portion of Victorian system. (b) Excludes 201 miles of 5 st. 3 in, gauge line which roughly parallels the uniform gauge (4 f'. 84 in.) line between Albury and Melbourne. (c) Queensland section of Grafton-South Brisbane Uniform Gauge Line. (d) Portion of Commonwealth system. (e) Includes 432 miles of Commonwealth system.

6. Summary of Operations.—In the following table, a summary is shown of the operations of government railways open in Australia during 1962-63. Figures for earnings exclude State government grants and certain other earnings payable to railways, while figures for working expenses exclude certain other expenses charged to railways (see para. 10, p. 577).

GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, 1962-63

Particulars	Common wealth railways	State railways	Total
Route-mileage (30th June) miles	2,252	23,245	25,497
Track-mileage (30th June) miles	2,461	29,736	32,197
Gross earnings £'000	6,979	205,397	212,376
" per revenue train-mile pence	657	545	548
Working expenses £'000	6,643	196,674	203,317
" ,, per revenue train-mile pence	625	522	525
Net earnings £'000	336	8,723	9,059
,, ,, per revenue train-mile pence	32	23	23
Revenue train-miles '000	2,549	90,389	92,938
Passenger-journeys '000	334	441,994	442,328
Goods and livestock carried'000 tons	2,230	53,679	55,909
Average number of employees	2.801	128,478	131,279
" wages and salaries paid per employee £	1,225	1,136	1,138

^{7.} Gross Earnings.—(i) General. Gross earnings are composed of earnings from (a) coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) carriage of goods and livestock; and (c) rents and miscellaneous items. State Government grants are excluded. Details of these grants made during 1962-63 are shown in para. 10, page 577.

(ii) Coaching. Goods and Miscellaneous Earnings. (a) Summary. In the following table, gross earnings are shown for the years 1958-59 to 1962-63, together with earnings per average route-mile worked and per revenue train-mile.

GOVERNMENT RAILWAYS: GROSS EARNINGS(a)

Yезг	 N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	C*wealth	Aust.
			Gross	EARNING	SS			
			(:	£,000)				
1958-59	 75,930	38,150	36,169	12,856	13,516	2,707	4,817	184,145
1959-60	 83,563	39,190	35,671	12,758	14,846	2,808	5,327	194,163
1960-61	 89,751	42,987	36,530	13,870	16,317	2,732	6,036	208,223
1961-62	 88,351	42,557	36,159	13,924	17,549	2,703	6,241	207,484
1962-63	 91,241	43,439	37,622	13,836	16,460	2,799	6,979	212,376

(£)

1958-59		12,441	8,756	5,628	5.075	3,283	4,782	2,139	6,987
1959-60		13,681	9,130	5,562	5,037	3,603	4,978	2,365	7,388
1960-61		14,806	10,020	5,751	5,476	3,958	5,127	2,680	7,964
1961-62		14,572	9,918	5,917	5,499	4,557	5,239	2,772	8,100
1962-63	••	15,069	10,185	6,191	5,465	4,335	5,425	3,099	8,330

GROSS EARNINGS PER REVENUE TRAIN-MILE

(Pence)

1958-59		517 78	496 89	444.96	447 80	420 87	421.99	572 76	484 13
1959-60		545 26	514 47	449.26	444 59	447 53	434.79	596 86	502 90
1960-61		568 37	565 88	478.77	482 09	500 86	432.50	618 32	537 21
1961-62	'	566 25	540 33	494.11	496 04	5'2 22	458.37	610 58	537 86
1962-63		586.11	535.26	502.96	493.67	523.19	508.07	657.12	548.43

⁽a) Excludes government grants; see para. 10, p. 577.

(b) Distribution. The following table shows gross earnings for the year 1962-63 classified according to the three main sources of earnings together with the percentage of the total derived from each source.

GOVERNMENT RAILWAYS: DISTRIBUTION OF GROSS EARNINGS(a), 1962-63

	Gross	earnings (£'000)	Proportion of total (per cent.)			
Railway system	Coaching	Goods and livestock	Miscel- laneous	Coaching	Goods and livestock	Miscel- laneous	
New South Wales	 23,792	63,323	4,126	26 08	69.40	4 52	
Victoria	 14,038	26,508	2,893	32.32	61 02	6 66	
Queensland	 4,812	31,731	1,079	12.79	84 34	2 87	
South Australia	 2,088	10,747	1,001	15 10	77 67	7.23	
Western Australia	 1,640	14,063	757	9 96	85 44	4 60	
Tasmania	 189	2,522	88	6.75	90 08	3.17	
Commonwealth	 1,182	5,331	466	16 93	76.39	6 68	
Australia	 47,741	154,225	10,410	22.48	72.62	4.90	

(a) Excludes government grants; see para. 10 p. 577.

8. Working Expenses.—(i) General. In comparing the working expenses of the several States and Territories, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the different systems of the State and Commonwealth railways, but also on different portions of the same system.

Working expenses, wherever presented in the Railways section of this chapter, include reserves for depreciation in South Australia, Western Australia and Tasmania but exclude interest, sinking fund, exchange and certain other payments (see para. 10, p. 577).

(ii) Working Expenses. The following table shows the total working expenses, the ratio of working expenses to gross earnings, and working expenses per average route-mile worked, and per revenue train-mile for the years 1958-59 to 1962-63.

GOVERNMENT RAILWAYS: WORKING EXPENSES(a)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	C'wealth	Aust.	

TOTAL WORKING EXPENSES

(£'000)

1958-59		71,102	38,119	37,461	15,102	16,307	. 3,215	3,647	184,953
1959-60		76,492	39,542	38,309	15,325	16,907	3,363	4,154	194,092
1960-61		79,556	41,627	38,529	15,310	17,147	3,545	4,629	200,343
1961-62		79,595	42,906	38,085	15,603	17,454	3,439	5,165	202,247
1962-63		79,326	43,500	37,718	15,492	17,303	3,335	(b)6,643	203,317

RATIO OF WORKING EXPENSES TO GROSS EARNINGS

(Per cent.)

1958-59		93.64	99 92	103.57	117.47	120 65	118 79	75 72	100.43
1959-60	!	91.54	100 90	107.40	120.11	113 88	119 77	77.98	99.96
1960-61		88.64	96.84	105.47	110.38	105 08	129 75	76 68	96.22
1961-62		90.09	100.82	105.33	112.06	99.46	127.21	82.75	
1962-63		86.94	100.14	100.25	111.97	105.13	119.13	<i>b</i> 95.19	95.73

WORKING EXPENSES PER AVERAGE ROUTE-MILE WORKED

(£)

1958-59	 11,650	8,749	5,829	5,962	3,961	5,680	1,620	7,018
1959-60	 12,523	9,213	5,974	6,050	4,103	5,963	1,845	7,385
1960-61	 13,124	9,703	6,066	6,044	4,159	6,652	2,055	7,663
1961-62	 13,128	9,999	6,232	6,162	4,532	6,665	2,294	7,895
1962-63	 13,101	10,199	6,207	6,119	4,557	6,463	(b)2,950	7,975

WORKING EXPENSES PER REVENUE TRAIN-MILE

(Pence)

1958-59		484.85	496 49	460.85	526 04	507.78	501 28	433 68	486 26
1959-60		499.12	519.09	482.50	534.03	509.63	520.72	465 43	502 72
1960-61		503.81	547.98	504.97	532.15	526 33	561 17	474 15	516.88
1961-62		510.14							
1962-63	• •	509.57	536 02	504.24	552.76	550 01	605.27	b625 52	525 04

(a) See para, 10, p. 577. (b) Includes depreciation previously not charged to the Railway working expenses.

(iii) Distribution. The following table shows the total working expenses for the year 1962-63 classified according to the four main expenditure headings.

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES, 1962-63 (£'000)

Railway sy	stem	 and	fainten- ce of way d works		Motive ower(a)		Traffic		Other	Total working expenses(b)
New South Wales			14,043		28,989	1	19,567		16,727	79,326
Victoria		 1	8,534	1	12,123	1	12,036	Į.	10,807	43,500
Queensland		 1	9,800	i	16,805		8,943	1	2,170	37,718
South Australia		 (c)	3,389	(c)	6,313	(c)	3,888	1	1,902	15,492
Western Australia		 (c)	3,839	(c)	7,658	-	3,857	1	1,949	17,303
Tasmania(c)		 1	848	1	1,264		823		400	3,335
Commonwealth			2,066		1,766		1,040	(c)	1,771	6,643
Australia		 -	42,519		74,918		50,154	1	35,726	203,317

⁽a) Includes maintenance of rolling stock, of reserves for depreciation.

9. Net Earnings.—The following table shows, for the years 1958-59 to 1962-63, net earnings, i.e., the excess of gross earnings over working expenses and the amount of such net earnings per average route-mile worked and per revenue train-mile.

GOVERNMENT RAILWAYS: NET EARNINGS(a)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	C'wealth	Aust.

TOTAL NET EARNINGS

(£'000)

1958-59		4,828	31	-1,292	-2,246	-2,791	Ī	508	1,170	- 808
1959-60		7,071	- 352	- 2,638	- 2,567	- 2,061	-	555	1,173	71
1960-61		10,195	1,360	- 1,999	- 1,440	- 830	-	813	1,407	7,880
1961-62	(8,756	- 349	-1,926	-1,679	95		736	1,077	5.238
1962-63		11,915	- 61	- 96	- 1,656	- 843	-	536	(b) 336	9,059

NET EARNINGS PER AVERAGE ROUTE-MILE WORKED

(£)

1958-59	 791	7	_	201	1-	887	<u> </u>	678	- 898	519	T-	31
1959-60	 1,158 -	83	_	412	_	1,013	_	500	- 985	520		3
1960-61	 1,682	317	_	315	[-	568	-	201	-1,525	625		301
1961-62	 1,444 -	81	_	315	 –	663		25	-1,426	478		205
1962-63	 1,968 -	14	-	16	-	654	-	222	- 1,038	(b) 149		35 5

NET EARNINGS PER REVENUE TRAIN-MILE

(Pence)

1958-59]	32.93	0 40	-15.89	_78.24	-86.91	- 79.29	139.08	-213
1959-60		46.14	- 4 62	-33 24	-89 44	-62.10	- 85.93	131.43	0.18
1960-61		64.56	17 90	-26 20	-50 06	-25.47	-128.67	144.17	20 33
1961-62		56.11	- 4.43	-26.31	-59 82	2 83	-124.73	105.30	13.58
1962-63							- 97.20		

⁽a) See para. 10, p. 577.

Note.-Minus sign (-) denotes loss.

⁽b) See para. 10, p. 577.

⁽c) Includes provision

⁽b) Sec footnote (b) to table on p. 575.

10. Net Earnings, Grants to Railways, Interest, Sinking Fund, Surplus or Deficit, 1962-63.—The following table shows, for each railway system for the year 1962-63, (i) net earnings as in para. 9 above, (ii) State grants and other items credited to railways accounts, (iii) loan interest, exchange, sinking fund, etc., payments charged against the accounts, and (iv) the net surplus or deficit after these items have been taken into account. Particulars of items (ii) to (iv) are not included in the preceding tables in this section.

The figures shown in this table accord with those published in the Annual Reports of the Railways Commissioners of the several systems. Because of the differences in governmental practice concerning costs other than operative charged against railways accounts, compensation for non-paying and developmental lines, etc., and the inclusion in some railways finances of the operations of ancillary transport services, direct comparison cannot be made between the results shown in the table.

GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT AT 30th JUNE, 1963

(£)

	Net earnings—	76	Less	other exper	ises charg	ed to railv	va ys	Surplus	
System State	excess of gross earnings over working expenses(a)	Plus grants and other income	Loan interest and exchange	Sinking fund	Loan manage- ment expenses	Other	Total	(+) or deficit (-)	
N.S.W. Victoria Queensland S. Australia W. Australia Tasmania	- 61,027 - 95,876	(g) 87,068 j 3,905,432 (l) 15,547	4,568,502 2,375,054	2,286,000 	::	c 164,020 (e) 27,308 h 683,547 (k)85,174	27,308 5,252,049 2,460,228	(f) = 74.092 (i) = 5,260.857 (f) = 211.089 (f) = 3,434.178	
Total, States	8,722,943	5,622,290	20,979,349	2,286,000	36,370	960,049	24,261,768	-9,916,535	
Commonwealth	335,591	(m) 25,098		••		(n)	••	360,689	
Australia	9,058,534	5,647,388	20,979,349	2,286.000	36,370	960,049	24,261,768	-9,555,846	

⁽a) See para. 9, p. 576. (b) Grants to meet losses on country development lines, £800,000, and to subsidire payments due from superannuation account, £800,000. (c) Loan flotation expenses, (d) Kerang-Koondrook Tramway recoup from Treasury. (e) Net loss on road motor services not included in previous pages. (f) Includes road motor services. (g) Adjustment for deficit on Queensland portion of Uniform Gauge Railway as included in foregoing tables. (h) Interest on unopened lines, £203,047; demelished assets written off, £334,667 and repayments to loan fund accounts for credit to closed lines account, £119,191: and net cost of closing branch lines, £26,642. (i) Excludes Queensland portion of Uniform Gauge Railway. (j) Grants towards working expenses £3,100,000 and debt charges, £800,000: and surplus from road motor services, £5.432. (k) Interest and repayment under Railways Standardization Agreement. (l) Net profit on road motor services, (m) Income from sale of assets. (a) Now charged to working expenses.

NOTE.—For further information on railways finance, in particular expenditure from loan and other funds, see Chapter XXII. Public Finance of this Year Book. See also the Reports of the several Railways Commissioners.

11. Traffic.—(i) General. The following table shows particulars of railway passenger and goods traffic for the years 1958-59 to 1962-63.

GOVERNMENT RAILWAYS: TRAFFIC

Year	N.S.W.	Vic.	Q'land (a)	S. Aust.	W. Aust.	Tas.	C'wealth	Aust.
					·			

PASSENGER-JOURNEYS (SUBURBAN AND COUNTRY)(b)

('000)

	ľ					(c)		i
1958-59	 236,030	163,483	33,457	16,805	14,615	2,344	259	466,993
1959-60	 236,573	158,294	32,347	17,038	13,879	2,292	275	460,698
1960-61	 235,416	149,929	28,876	15,574	12,661	2,103	303	444,862
1961-62	 234,638	152,768	26,700	15,176	11,906	1,816	315	443,319
1962-63	 235,169	152,727	26,081	14,922	11,537	1,558	334	442,328

Passenger-journeys (Suburban and Country) per Average Route-mile Worked (Number)

	1						(c)		
1958-59		38,674	37,522	5,207	6,634	3,550	4,141	115	17,720
1959-60		38,732	36,881	5,044	6,726	3,369	4,065	122	17,529
19 0-61		38,835	34,948	4,546	6,147	3,071	3,946	134	17,015
1961-62		38,700	35,602	4,369	5,994	3,092	3,519	140	17,306
1962-63		38,839	35,809	4,292	5,893	3,038	3,018	148	17,350

GOODS AND LIVESTOCK CARRIED

('000 tons)

1958-59	 19,700	9,295	8,373	4,207	3,913	1,138	1,405	48,031
1959-60	 22,127	9,687	8,116	4,036	4,533	1,191	1,482	51,172
1960-61	 24,104	10,977	7,981	4,537	4,833	1,192	1,738	55,362
1961-62	 24,050	10,350	8,153	4,616	5,342	1,096	1,958	55,565
1962-63	 23,641	10,841	8,736	4,503	4,793	1,165	2,230	55,909

GOODS AND LIVESTOCK CARRIED PER AVERAGE ROUTE-MILE WORKED

(Tons)

1958-59		3,228	2,133	1,303	1,661	950	2,010	624	1,823
1959-60		3,623	2,257	1,266	1,594	1,100	2,111	658	1,947
1960-61		3,976	2,559	1,256	1,791	1,172	2,236	772	2,118
1961-62		3,967	2,412	1,334	1,823	1,387	2,124	869	2,169
1962-63	}	3,904	2,542	1,438	1,778	1,262	2,257	990	2,193

(a) Traffic originating on the 3 ft. 6 in. gauge system and continuing on the Uniform Gauge Railway, or vice versa, has been counted once only.

(b) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys.

(c) Concession tickets are counted according to the proportion of the adult fare charged.

- (ii) Passenger Traffic. With the exception of the Commonwealth railway systems, which operate only country services, all systems provide both suburban and country passenger services. Traffic classed as "suburban" moves between stations within a classified suburban area around each capital city, whilst traffic classified as "country" originates or terminates at stations outside this suburban area. Particulars of suburban and country passenger traffic are shown separately in the two tables following.
- (a) Suburban Passenger Traffic. The following table shows a summary of suburban passenger operations for the years 1958-59 to 1962-63. Most of the suburban services in New South Wales and Victoria are operated within electrified areas.

GOVERNMENT RAILWAYS: SUBURBAN PASSENGER SUMMARY

						Subu	ırban pass	enger carr	nings
Year	Suburban passenger- journeys (a)	Suburban revenue passenger- train- miles	Suburban passenger- miles	Average number of passengers per train- mile	Average mileage per passenger- journey	Gross	Per pas- senger journey	Per pas- senger- mile	Per pas- senger train- mile
	('000')	('000)	('000)		(Miles)	(£'000)	(Pence)	(Pence)	(Pence)
	<u>, </u>							<u>'</u>	<u> </u>
			Ni	ew South	WALES				
1958-59	221,713		1		1	12,027	13 02	(b)	258
1959-60	221,788					12,222	13.23	(b)	262
1960-61	222,333		> (b)	(b)	(b) \{	12,755	13.77	(b)	274
1961-62	221,861	11,250	1			12,745	13.79	(b)	272
1962-63	221,960	10,915	עו	<u> </u>) (12,836	13.88	(b)	282
				Victor	NIA.				
1958-59	158,613	8.310	1,364,884	164	8.61	8,511	12 88	1.50	1 246
1959-60	153,660		1,349,319		8.79	8,826	13.78	1.57	265
1960-61	145,558		1,282,975		8.81	8,885	14.65	1.66	270
1961-62	147,977		1,299,379		8.78	9,006	14.61	1.66	261
1962-63	147,587		1,302,094		8.82	8,989	14.62	1.66	260
				QUEENSI	AND				
1958-59	28,398	2,127)			889	7.52	(b)	100
1959-60	27,548	2,131				865	7.54	(b)	97
1960-61	24,582	2,009	} (b)	(b)	(b) {	962	9.39	(b)	115
1961-62	22,890	1,850	1		l i	977	10 25	(b)	127
1962-63	22,413	1,706	J		<u> </u>	966	10.35	(b)	136
			S	оитн Аиз	STRALIA				
1958-59	15,704	2,087	125,391	60	7.98	1 706	10.79	1.35	81
1959-60	15,997	2,134		60	8.01	792	11.89	1.48	89
1960-61	14,584	2,082	117,423	56	8.05	795	13.08	1.62	92
1961-62	14,211	1,962	114,852	59	8.08	781	13.19	1.63	96
1962-63	13,978	1,941	115,219	59	8.24	789	13.55	1.64	98
			Wı	STERN AU	ICTD AT IA				
1050 50	12 000	1 220				424	7.50	. 1 11	70
1958-59	13,880	1,320 1,343	93,958 90,003		6.77	434	7.50	1.11	79 85
1959–60 1960–61	13,171 12,026	1,343	82,612	1	6.83	484	8.70 9.65	1.41	86
1961-62	11,308	1,357	78,469		6.94	469	9.85	1.41	83
1962-63	10,937	1,334			6.98	462	10.13	1.45	83
				Tasman	.TI 4				
	(c)			1 ASMAI	NIA				
1958-59	2,092	210	12,632	60	6.04	53	6.11	1.01	61
1959-60	2,031	206	12,438		6.12	51	5.98	0.98	59
1960-61	1,859	202			5.93	55	7.06	1.19	65
1961-62	1,585	188	9,778		6.17	56	8.41	1.36	71
1962-63	1,347	135	8,385		6.23	49	8.70	1.40	87
		et soles m	akina alla	wannes for	periodical	Alabasa.	Except in	T	<u> </u>

⁽a) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys.

(b) Not available.

(c) Concession tickets are counted according to the proportion of the adult fare charged.

(b) Country Passenger Traffic. The following table shows a summary of country passenger operations for the years 1958-59 to 1962-63.

COVERNMENT RAILWAYS:	COUNTRY PASSENGER SUMMARY

	i	<u> </u>		1		Con	intry pass		ince
Year	Country passenger- journeys (a)	miles (b)	Country passenger- miles	Average numberof passengers per train- mile	Average mileage per passenger- journey	Gross	Per pas- senger- journey	Per pas- senger- mile	Per pas- senger- train- mile (d)
	(,000)	(000)	(.000)	(c)	(Miles)	(£,000)	(Pence)	(Pence)	(Pence)
			Ni	w South	Wales				
1958-59	14,317	9,904)	1	(1	6,984	117.08	(e)	169
1959-60	14,785	10,007	l		il	6,570	106.64	(e)	158
1960-61	13,083	10,206	} (e)	(e)	(e) {	6,825	125.19	(e)	160
1961-62 1962-63	12,777 13.209	10,410 10,475				6,948 7,416	130.51 134.73	(e) (e)	160 170
	20,000	,,,,,,,	·	Victor	IA			,	
1958-59	4,870	4,711	414,539	88	85.12.	3,466	170 80	2.01	177
1959-60	4,634	4,599	394,690	86	85.16	3,291	170.44	2.00	172
1960-61	4,371	4,482	388,258	87	88.84	3,248	178.35	2.01	174
1961-62	4,791	4,726	413,435	87	86.31	3,473	174.01	2.02	176
1962-63	5,140	4,829	418,887	87	81.50	3,531	164.89	2.02	176
				QUEENSL	AND				
	(V)		<u> </u>		ſ				
1958-59	5,059	5,072	1]]	2,452		(e)	116
1959-60 1960-61	4,799 4,294	4,962 4,869	(e)	(e)	(e) {	2,273 2,406	113.70 134.50	(e) (e)	110 119
1961-62	3,810	4,714	1			2,378	146.56	(e)	115
1962-63	3,668	4,689	J	{	<u> </u>	2,349	150.18	(e)	114
_			Sc	outh Aus	TRALIA				
1958-59	1,101	2,101	106,506	51	96.70	778	169.55	1.75	89
1959-60	1,041	2,089	105,386	50	101.31	806	185.89	1.83	93
1960-61	990	2,039	100,683	49	101.69	822	199.31	1.96	98
1961–62 1962–63	965 944	2,043 2,014	100,591 99,761	49 50	104.24 105.69	838 846	208.50 215.18	2.00	99 101
		,,,		STERN AU					
1958-59	735	1,5911	79,155	501	107.64	653	213.23	1.98	99
1959-60	708	1,504	77,450	51	107.84	666	213.23	2.06	106
1960-61	635	1,304	73,900	59	116.34	641	242.11	2.08	123
1961-62	598	1,184	74,230	63	124.12	671	269.10	2.17	136
1962–63	600	1,121	75,684	67	126.19	669	267.71	2.12	143
				Tasman	IA				
	(g)	1	1			1		1	
1958-59	252	325	13,361	41	53.03	86	81.78	1.54	63
1959-60	261	325	13,805	42	52.92	86	79.07	1.49	63
1960–61 1961–62	244 231	323	12,940¦ 12,745	40 39	53.10 55.10	80 80	78.59 82.68	1.48	59 59
1962-63	211	324 318	12,745	39	58.19	78	89.13	1.53	59 59
		210		r footnotes			57.13		

Note.-For footnotes see next page.

GOVERNMENT RAILWAYS: COUNTRY PASSENGER SUMMARY-continued

			l .	1	•				
	1					Co	untry pass	enger eart	ings
Year	Country passenger- journeys (a) (*000)	Country revenue passenger train- miles (b) ('000)	Country passenger- miles ('000)	Average number of passengers per train- mile (c)	Average mileage per passenger- journey (Miles)	Gross (£'000)	Per pas- senger- journey (Pence)	Per pas- senger- mile (Pence)	Per pas- senger- train- mile (d) (Pence)
			С	OMMONWE	ALTH(h)				
1958-59	259	750	80,910	108	312.92	739	685 90	2.19	236
1959-60	275	798	84,371	106,	307.57	749	654 89	2 13	225
1960-61	303	825	93.540	113	309.07	838	664.51	2 15	244
1961-62	315	923	100,604	109	319.15	904	688.57	2 16	235
1962-63	334	939	107,991	115	322.991	957	686.59	2.13	244

(a) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys.
(b) Includes a proportion of mixed train-miles, (c) Passenger-miles divided by passenger train-miles inclusive of a proportion of mixed train-miles, (d) Passenger earnings divided by passenger train-miles inclusive of a proportion of mixed train-miles, (e) Not available.
(j) Traffic originating on the 3 ft. 6 in. gauge system and continuing on the Uniform Gauge Railway, or vice versa, has been counted once only.
(g) Concession tickets are counted according to the proportion of the adult fare charged.
(h) Railways controlled by Commonwealth Government.

Note.—Train-miles refer to revenue mileages only. Figures have been revised to include a proportion of mixed train-miles for all systems except Western Australia, where they do not apply. Mixed train-miles do not apply for Victoria also during 1962-63.

(iii) Freight Troffic. (a) Commodities Carried and Earnings. The following table shows the quantities of various commodities carried on the various systems and the earnings derived during 1962-63.

GOVERNMENT RAILWAYS: COMMODITIES CARRIED AND EARNINGS, 1962-63

Railway system	Coal, coke and briqueties	Other minerals	Agricul- tural produce (b)	Wool	Live- stock	All other com- modities	Total						
			TY CARRI	ED		-							
('000 Tons)													
lew South Wales 9,557 2,036 3,351 223 510 7,964 23,641													
(ictoria 2,120 111 3,075 115 293 5,127 10.841													
Queensland(c) 1,894 1,204 3,080 46 681 1,921 8.7													
outh Australia 60 1,344 975 44 181 1,899 4,													
Western Australia 682 346 1,882 76 125 1,682 4													
Fasmania 293 24 39 3 28 778													
Commonwealth . 1,486 58 33 4 72 577 2													
Australia .	16.002	5,123	12,435	511	1,890	19,948	55,909						
		Freigh	T EARNIN	GS									
·		(£'000)										
New South Wales .													
Victoria	3,208	162	7,402	554	990	14,192	26,508						
Queensland(c)	3,601	3.021	6,819	813	4,129	13,348	31,731						
South Australia .	47	3,426	1,721	238	680	4,635	10,747						
Western Australia .	1,178	641	4,456	485	386	6,917	14,063						
Tasmania	1460	27	95	14	75	1,851	2,522						
Commonwealth	851	204	175	23	206	3,872	5,331						
Australia .	(d)	(d)	(d)	(d)	9,511	-(d)	154.225						

(a) Includes sand and gravel.

(b) Includes wheat and fruit.

(c) Includes Queensland portion of Uniform Gauge Railway.

Tonnages carried over both systems have been counted once only.

(d) Not available.

(b) Freight Summary. A summary of freight traffic on each railway system for each of the years 1958-59 to 1962-63 is shown in the following table.

GOVERNMENT RAILWAYS: FREIGHT SUMMARY

					Good	ds and live	stock ear	nings	
Year	Revenue goods train- miles (a)	Revenue net ton- miles	Average train load (paying traffic) (b)	Average haul per ton (c)	Gross	Per average route- mile worked	Per revenue net ton-mile	Per revenue goods train-mile (d)	Density of traffic (e)
	(000)	(Million)	(Tons)	(Miles)	(£'000)	(£)	(Pence)	(Pence)	(000)
			New	У Ѕоυтн	WALES				
958-59	14,117	2,736	194	139	50,524	8,279	4 43	859	448
1959–60	15,563	3,216	202	146	57,598	9,430	4.30	925	526
1960-61	16,516	3,613	219	150	63,058	10,402	4.19	916	596
1961–62	15,786	3,576	227	149	61,424	10,131	4.12	934	590
962-63	15,971	3,743	234	158	63,323	10,458	4 06	952	618
				Victor	lA				
1958-59	5,406	1,353	250	146	22,126	5,078	3 93	982	310
1959-60	5,684	1,385	244	143	22,876	5,330	3.96	966	323
1960-61	5,847	1,612	276	147	26,582	6,196	3.96	1,091	376
1961–62	5,880	1,581	269	153	25,733	5,997	3.91	1,050	368
962-63	6,345	1,693	267	156	26,508	6,215	3.76	1,003	397
			Q	UEENSLAI	ND(/)				
1958-59	12,167	1,463	120	181	29,493	4,639	4 84	582	230
1959-60	11,795	1,515	126	196	29,420	4,637	4.66	586	239
1960-61	11,267	1,472	131	195	29,803	4,743	4.86	635	234
1961-62	10,832	1,461	135	189	29,467	4,877	4 84	653	242
1962-63	11,375	1,559	137	190	31,004	5,160	4.77	654	260
			Sou	лн Aus	TRALIA				
1958-59	2,701	605	224	144	10,054	3,969	3 99	893	239
1959-60	2,664	596	224	148	9,840	3,885	3.96	886	235
1960–61	2,784	645	232	142	10,906	4,305	4.06	940	255
1961–62	2,733	650	238	141	10,880	4,297	4 02	956	257
1962-63	2,771	679	245	151	10,747	4,244	3.80	931	268
			WES	TERN A	JSTRALIA				
1958-59	4,797	632	132	162	11,243	2,731	4.27	563	154
1959-60	5,115	705	138	156	12,251	2,974	4.17	575	171
1960-61	5,208	748	144	155	13,940	3,381	4.48	642	181
1961-62	5,526	831	150	156	15,114	3,925	4.36	656	216
1962–63	5,095	762	150	159	14,063	3,704	4 43	662	201
				TASMA	AIA			_	
1958-59	1,004	110		97	2,426	4,287	5.27	580	19:
1959-60	1,019	119		100	2,537	4,498	5.13	597	210
1960-61	991	114		95	2,456	4,601	5.19	595	213
1961–62	903	107	t	98	2,411	4,673	5.41	641	201
1962-63	869	112	129	96	2,522	4,887	5.41	696	217
			Co	MONWE	ALTH(g)				
1958-59	1,268	394	311	281	3,476	1,543	2.12	658	17.
	1,343	438	326	296	3,963	1,760	2.17	708	19
1959-60		1			4 627		1.98	717	24
1959-60 1960-61	1,519	549	362	316	4,331	2,015	1.70	1 /1/	:
	1,519 1,530	549		297	4,537 4,671	2,013	1.93	733	25

⁽a) Includes a proportion of mixed train-miles. (b) Net ton-miles per goods (including a portion of mixed) train-mile. (c) Net ton-miles per ton carried. (d) Goods and livestock earnings divided by goods train-miles, inclusive of a proportion of mixed train-miles. (e) Total ton-miles per average route-mile worked. (f) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (g) Railways controlled by the Commonwealth Government.

Note.—Revenue goods train-miles figures have been revised to include a proportion of mixed train-miles for all systems except Western Australia, where they do not apply. Mixed train-miles do not apply for Victoria also during 1962-63.

12. Rolling Stock.—(i) Each System, 1963. The following table shows the number of rolling stock on capital account of government railways at 30th June, 1963.

GOVERNMENT RAILWAYS: ROLLING STOCK(a) AT 30th JUNE, 1963

	,		L	ocomotive	s				
Railway system		Steam	Diesel- electric	Electric	Other (b)	Total	Coaching Good stock(c) stock		Service stock
New South Wales Victoria Queensland South Australia Western Australia Tasmania Commonwealth	::	763 258 667 188 270 46 23	187 105 86 75 75 35 45	41 35 	16 64 11 15 19 7	1,007 462 764 263 360 100 75	(d)3,491 dg 2,422 1,476 (g) 615 556 148 152	e 21,293 e 21,033 e 24,160 7,797 11,458 2,488 1,781	(f) 2,059 (h) 1,667 2,071 (h) 480 937 165 580
Australia		2,215	608	76	132	3,031	(i) 8,969	1 90,020	(i) 7,960

⁽a) Included in capital account. (b) Includes non-passenger carrying diesel power vans(c) Includes all brake vans. (d) Excludes 41 interstate coaching stock owned jointly by New South
Wales and Victoria. (e) Excludes 10 interstate goods stock owned jointly by New South Wales and
Victoria. (f) Includes all vehicles. Figures before 1961-62 have included only vehicles having a
capital value. (g) Excludes 68 interstate coaching stock owned jointly by Victoria and South
Australia. (h) Excludes one dynamometer car owned jointly by Victoria and South Australia.
(f) Includes jointly owned stock.

(ii) Australia, 1953 to 1963. The following table shows the numbers of rolling stock on capital account for all railway systems at 30th June of each of the years 1953 to 1963.

GOVERNMENT RAILWAYS: ROLLING STOCK(a), AUSTRALIA

			I	.ocomotive	S		Coaching	Goods	Service
30th J	une	Steam	Diesel- el.ctric	Electric	Other(b)	Total	stock(c)	stock	stock
1953		3,674	116	19	18	3,827	9,553	95,700	5,23
1954		3,598	161	36	22	3,817	9,545	100,569	5,25
1955		3,511	204	38	26	3,779	9,522	99,968	5,46
1956		3,366	257	37	26	3,686	9,399	99,137	5,41
1957		3,249	315	65	28	3,657	9,387	99,064	5,47
1958		3,077	367	76	37	3,557	9,358	97,361	5,78
1959		2,905	402	76	48	3,431	9.282	95,312	6,61
1960		2,775	451	76	71	3,373	9,287	94,443	6,60
1961		2,651	491	76 ¹	109	3,327	9,172	92,455	6,89
1962		2,456	541	76'	123	3,196	9,177	91,094	7,97
1963		2,215	608	76.	132	3,031	8,969	90,020	7,96

For footnotes see previous table.

13. Accidents.—The following table shows particulars of the number of persons killed or injured through train accidents and the movement of rolling stock on the government railways of Australia during 1962-63.

GOVERNMENT RAILWAYS: ACCIDENTS(a), 1962-63

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwth	Aust.
Persons killed	 49	54	23	10	9	5	1	151
Persons injured	1,087	670	140	30	106	5	31	2,069

(a) Excludes accidents to railway employees.

^{14.} Consumption of Coal, Oil and Petrol.—The following table shows the value of coal, oil and petrol consumed by the various government railways during 1962-63.

GOVERNMENT RAILWAYS: VALUE OF COAL, OIL AND PETROL CONSUMED, 1962-63

Coal Oil Petrol for Railway rail EVSLCITA Locomo-Other Lubri-Other CAIS Diesel(a) Fuel(b) purposes cation tives purposes (c) 548 1,359 739 New South Wales ... (c) 221 Victoria 324 115 137 Queensland 1,209 28 618 61 105 (d) (d) 2ŏ 180 (e) 224 398 (e) South Australia 115 99 Western Australia .. 583 10 303 (d) 14 28 Tuemania 3 QR 13 31 3Í8 (d) Commonwealth (d) ٠. 3.833 650 7 Australia (c) (c) (e) (e)

15. Staff Employed and Salaries and Wages Paid.—The following table shows details of the average staff employed and the salaries and wages paid by the government railways of Australia during 1962-63.

GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES AND SALARIES AND WAGES PAID, 1962-63

Railway system	Oı	erating st	aff	Con	struction s	Total salaries and	Average earnings per em-	
	 Salaried	Wages	Total	Salaried	Wages	Total	wages paid (£'000)	ployes (£)
New South Wales Victoria Queensland(c) South Australia Western Australia Tasmania Commonwealth	 9,111 (a)5,390 4,324 1,805 1,997 357 447	39,543 a 23,478 22,257 6,964 9,975 1,891 2,354	48.654 a 28.868 26.581 8,769 11,972 2,248 2,801	(b) 22 (d) 29	(b) 448 752 (d) 135	(b) 470 752 (d) 164	56,833 33,035 30,178 10,738 12,690 2,434 3,433	1,169 1,144 1,116 1,128 1,060 1,009 1,225
Australia	 e 23,431	e106,462	e129,893	51	1,335	1,386	149,341	1,138

⁽a) Includes construction staff. (b) Included with operating staff. (c) Excludes Queensland portion of Uniform Gauge Railway. (d) Construction work is carried out by private contractors and the staff engaged is therefore not under the control of the Railway Commissioner. (e) Includes construction staff. Victoria.

TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES

1. Systems in Operation.—(i) Tramway and Trolley-bus. Since 1st April, 1947, all systems have been operated by government or municipal authorities. During the year 1962-63, tramway systems were in operation in the following cities—Melbourne, Bendigo, and Ballarat, Victoria; Brisbane, Queensland; and Adelaide, South Australia. Trolley-bus services operated in Brisbane, Queensland; Adelaide, South Australia; Perth, Western Australia; and Hobart and Launceston, Tasmania. All systems were electric.

In many parts of Australia, private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present section.

(ii) Motor Omnibus. Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal omnibus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Waies: Maryborough and Rockhampton, Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern

⁽a) Used in internal combustion engines of locomotives and rail cars. (b) Used in oil-fired furnaces of steam locomotives. (c) Not available. The quantity of coal used in New South Wales was 705,000 tons for locomotives and 15,000 tons for other purposes. (d) Less than £500. (e) Not available.

Territory; and for country road services operated by the Western Australian Government Railways. In Sydney, the government tramway system has been replaced by omnibus services, and in Perth, the Metropolitan (Perth) Passenger Transport Trust has acquired all but one of the formerly privately owned metropolitan services. In Hobart, the government trolley-bus and omnibus services have replaced the government tramway service.

Particulars of motor omnibus services under the control of private operators are recorded for the States of New South Wales, Victoria, Queensland, South Australia and Western Australia. In New South Wales, particulars of private services are compiled for the Sydney metropolitan and Newcastle transport districts and the city of Greater Wollongong. In Victoria, particulars relate to the Melbourne metropolitan area only, and in South Australia to services licensed by the Municipal Tramways Trust and the Transport Control Board. In Queensland, they relate to all cities with a population of 10,000 or more persons. In Western Australia, particulars of all private services throughout the State are included.

2. Government and Municipal Services.—(i) Summary of Operations, States. Because of the development in recent years of the various forms of public road transport under the control of single authorities, and the gradual replacement of tramway services by motor omnibus services, it is no longer possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations. In this section, therefore, statistics of public tramway, trolley-bus and motor omnibus services are combined in single tables with separate details shown for each form of transport where possible.

Since October, 1960, the tramway gauge has been 4 feet 81 inches throughout.

The following table gives a summary of the operations of tramway, trolley-bus and omnibus systems controlled by government and municipal authorities, for 1962-63.

TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL, 1962-63

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-miles at 30th June-		1.00		_					
Tram miles		156	60	23	17	28	••	••	223
Trolley-bus "	556	123		115			35	59	5.829
Omnibus "	330	123	(4) 200	113	3,763	600	33	39	ال
Vehicle miles—		18,547	7,319	497					26,363
		18,547	1,143	704	(ii)	1.353	••	••	
Trolley-bus "	44,034	7,341		10,234	17,564		409	1,442	່
Omnibus ,,	44,034	1,341	3,770	10,234	17,304	4,003	405	1,442	٠ ر
Rolling Stock at 30th June-		758	301	28	1			i	1.007
Tram No.	••	130	36	39	63	70	•••	••	1,087
Trolley-bus .,	1.445	238	300	329		227	11	63	208
Omnibus "	1,745	236	300	329	561	221	11	6.5	3,474
Passenger-journeys-		168,275	67,133	2,521	- 1				022.020
Tram '000	• • •	100,2/3			(b)	(i)	••• [• •	237,929
Trolley-bus "	200 600	22.624	8,582	3,574		(0)		7 440	5 474,194
Omnibus "	265,569	32,634	29,372	51,944	52,146	25,145	781	4,447	
Gross revenue(c)—			1			- 1			ļ
Tram, trolley-bus and om-		0	2004		0.00			***	*****
nibus £'000	12,385	8,553	3,964	2,718	2,680	1,151	47	199	31,697
Working expenses(d)—			i 1						
Tram, trolley-bus and om-	40.004		2004			4 400			
nibus £'000	13,951	8,457	3,994	2,583	2,979	1,380	71	257	33,672
Net revenue—							1		
· Tram, trolley-bus and om-				426		اممما	أمم		4 00-
nibus £'000	-1,566	96	-30	135	-299	- 229	-24	- 58	-1,975
Ratio of working expenses to					- 1	ļ	1	- 1	
gross revenue—						- 1	- 1	i	
Tram, trolley-bus and om-			ا۔۔ ۔۔۔ا						
nibus per cent.	112.65	98.88	100.75	95.03	111.16	119.88	152.44	129.12	106.23
Employees at 30th June—		1					ŀ		
Tram, trolley-bus and om-							ا۔۔		
nibus No.	7,862	5,305	2,731	1,555	1,723	683	18	109	19,986
Accidents—									
Tram, trolley-bus and om-							1	i	
_ nibus(e)—			.]		1		- 1	į	
Persons killed No.	. 11	- 11	4	. 2	3	. 1	1		32
Persons injured	1,524	686	96	230	292	73!		14	2,915

⁽a) Decrease due to revision in method of calculating mileage. (b) Included with omnibus services. (c) Excludes government grants. (d) Includes provision of reserves for depreciation, etc., where possible. (e) Excludes accidents to employees.

(ii) Summary of Operations, Australia. The following table gives a summary of the operations of tramway, trolley-bus and omnibus systems controlled by government and municipal authorities, for the years 1958-59 to 1962-63.

TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL, AUSTRALIA

1	Particular	s 		1958-59	1959-60	1960–61	1961-62	1962-63
Route-miles at	30th Ju	ne						
Tram			miles	286	275	238	229	223
Trolley-bus			**	105	92	92	6.000	5,829
Omnibus	• •	• •	,,	5,664	5,773	5,551	5 0,000	3,027
Vehicle miles-	_							
Tram(a)			'000	37,659	34,379	30,010	28,034	26,363
Trolley-bus			,,	5,277	5,444	4,558	\$6 93,647	94,883
Omnibus	••	• •	,,	78,881	81,755	85,924	30 93,041	74,003
Rolling stock a	at 30th J	une—						
Tram			No.	1,584	1,514	1,227	1,158	1,087
Trolley-bus			,,	279	246	246	240	208
Omnibus	• •	• •	"	3,016	3,154	3,366	3,450	3,474
Passenger-journ	neys							
Tram(a)			'000	346,957	312,913	265,473	248,396	237,929
Trolley-bus				25,720	25,403	19,461	} 469,549	474 104
Omnibus(c)			**	404,676	420,360	440,822	469,349	474,194
Gross revenue(d)							
Tram, trolley	y-bus an	d omni	bus				1	
•			£'000	31,132	31,817	31,800	31,757	31,697
Working expen	ises(e)			·	,		1 1	-
Tram, trolley	y-bus an	d omni	bus				1 1	
			£,000	32,338	33,629	34,382	34,206	33,672
Net revenue—								
Tram, trolley	y-bus an	d omni	bus				i	
			£,000	-1,206	-1,812	-2,582	-2,449	-1,975
Ratio of work	ing expe	nses to	gross					
revenue-								
Tram, trolley	y-bus an	d omni	bus					
		pe	er cent.	103.87	105.70	108.12	107.71	106.23
Employees at 3	Oth June	—						
Tram, trolley			bus					
,	,		No.	22,569	21,555	21,455	20,607	19,986
Accidents-								
Tram, trolley-	bus and	omnib	us(f)—					
Persons ki			No.	38	40	25	42	32
Persons in		• • •	"	3,092	3,147	2,756	3,076	2,915
11	,	••	,,	2,0,2	-,,	_,,,,,,	5,5,0	2,713

⁽a) Includes particulars of New South Wales trolley-buses up to cessation of operation in August, 1959, and tramway services up to February, 1961. (b) Includes a small number of passenger-ferry miles for Western Australia. (c) Includes particulars for Tasmanian trams (to October, 1960) and trolley-buses. (d) Excludes government grants. (e) Includes provision of reserves for depreciation, etc., where possible. (f) Excludes accidents to employees.

3. Private Services.—Summary of Operations. The following table shows the operations of motor omnibus services under the control of private operators in New South Wales, Victoria, South Australia and Western Australia during each of the years 1958-59 to 1962-63, and in Queensland during the years 1959-60 to 1962-63. Particulars are not available for Tasmania.

MOTOR OMNIBUS SERVICES: PRIVATE

Persons employed
1,545
1,679
1,662
1,593
1,452
(J)
750
705
732
721
709
539
578
582
574
1
} (i)
ļ
<i>,</i>
287
272
273
82
74

⁽a) Metropolitan, Newcastle and Wollongong transport districts only.

(b) Nine months ended March. 1961: subsequent figures relate to the years ended 31st March.

(c) Partly estimated.

(e) Vehicles only.

(f) Drivers only.

(g) All cities with a population of 10,000 p rsons or more.

(h) Services licensed by the Municipal Tramways Trust and the Transport Control Board.

(f) Excludes Transport Control Board licensed omnibuses.

(j) Not available.

(k) Includes services operated in metropolivan and rural areas.

(l) Decrease due to Metropolitan Perth) Passenger Transport Trusts acquisition of services previously privately owned.

FERRY (PASSENGER) SERVICES

- 1. General.—Ferry passenger services are operated in the following States—New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Derwent River at Hobart and on the Mersey River at Devonport. Control is exercised by both governmental authorities and private operators. In Victoria and Queensland the services operated are not extensive. There are no ferry passenger services in South Australia.
- 2. Summary of Operations.—The operations of ferry passenger services in New South Wales, Western Australia and Tasmania during the years 1958-59 to 1962-63 are summarized in the following table. Particulars of vehicular ferries are not included.

FERRY (PASSENGER) SERVICES

	Year		Number of vessels	Passenger accom- modation	Passenger- journeys ('000)	Gross revenue (£)	Persons employed	
		Ne	w Sou	TH WALES—	SYDNEY AN	d Newcasti	LE	
1958-59	··-			37	19,300	15,906	800,196	308
1959-60				37	19,191	15,365	835,700	298
1960-61				40	19,211	15,093	872,000	316
1961-62				39	17,641	14,452	830,000	295
1962-63		• •		38	17,653	14,456	836,000	300
1958-59				1 4 1	785	407	13,504	1
			,	Western Au	SI KALIA	EKIH		
1959-60	• •			4	785	362	12,219	1
1960-61		••	••	4	785	180	9,211	
1961-62	• •	• • •	• • •	4	800	168	9,889	
1962-63		<u> </u>	•••	4	800	192	11,221	<u> </u>
			Tasm	iania—Hoba	rt and De	VONPORT		
1958-59	···	••		4	1,482	416	12,701	1:
1959-60		• •		4	1,452	431	12,061	13
1960-61		• •		4	1,482	436	10,434	12
1961-62				4	1,482	406	9,419	1:
1901-02				4	1,482	380		

MOTOR VEHICLES

1. General.—The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority, or authorities, in each State and Territory. Particulars of registration, licences, fees payable, etc., in each State and Territory at 30th June, 1960, were given in Year Book, No. 47, pp. 553-6.

In all the capital cities and in most of the provincial centres, taxi-cabs and other vehicles ply for hire under licence granted by either the Commissioner of Police or the local government authority concerned, but particulars of their operations are not available.

In both urban and provincial centres, motor omnibus traffic has assumed considerable proportions during recent years, and there has been a considerable replacement of existing tramway and trolley-bus services by motor omnibus services. Tramway services by 30th June, 1963, had ceased to operate in New South Wales, Western Australia and Tasmania whilst in South Australia only 7 miles of route remained in operation (see p. 585).

2. Motor Vehicles on the Registers, etc.—The following table shows particulars of motor vehicles on the registers, licences issued and revenue received for 1962-63 and a summary for Australia for each of the years 1958-59 to 1962-63.

Figures for numbers of motor vehicles at 31st December, 1962, shown in the tables in this paragraph are as obtained from the census of motor vehicles and relate to motor vehicles as defined for the purposes of the census; figures for other dates are estimates on a basis comparable with the figures from the censuses of 1955 and 1962 (see p. 590).

MOTOR VEHICLES: REGISTRATIONS AND REVENUE

	Number	s of moto	r vehicle:	on the re	gisters	Number	Gross	revenue d	erived fr	om—
State or Territory, and year	Motor cars and station wagons	Utilities, panel vans, trucks and omni- buses	Motor cycles	Total	Per 1,000 of popu- lation	drivers' and riders' licences in force at 30th June	Vehicle regis- trations and motor tax	Drivers' and riders' etc. licences	Other sources	Total
					j	l	(£'000)	(£'000)	(£'000)	(6,000)
			STATES	AND TE	RRITORI	ES, 1962	-63			
N.S.W Victoria Queensland S. Aust W. Aust Tasmania	(a) 828,693 681,025 290,195 238,905 165,637 75,697	208,688 148,275 82,463 75,531	15,802 14,680 16,717 12,257	453.150 338.085 253,425	300 292 338 331	396,678 292,000	11,215 6,247 4,911 3,164	1,432 336 (e) 326	3,948 2,891 99 245	16,595 9,474 5,010
Nor. Terr. A.C.T	5,579 17,999		325	10,671	406	13,834	71			204
Australia	2,303,730	829,806	82,576	3,216,112	298	/3426499	(g)41,317	(h) 4,499	i 13,232	59,252
			s	UMMARY	, Aust	RALIA				
1958-59(b) 1959-60(b) 1960-61(b) 1961-62(b) 1962-63(c)	1,770,595 1,921,637 2,071,515 2,203,311 2,303,730	778,074 802,848 817,143	102,208 94,130 86,430	2,631,343 2,801,919 2,968,493 3,106,884 3,216,112	273 282 290	2,833,040 2,984,852 3,197,510 3,325,774 3,426,499	34,044 (i) 35,227 (g) 37,324	3,275 (1) 3,799 (h) 3,504	10,203	47,522 50,061 52,778

⁽a) Census of 31st December, 1962. (b) Numbers of motor vehicles are estimates as at 30th June on a basis comparable with the figures from the censuses of 1955 and 1962. (c) Numbers of motor vehicles at census of 31st December, 1962. (d) Not available. (e) Included in registration fees. (f) Excludes Queensland. (g) Excludes Australian Capital Territory but includes drivers, etc., licence fees for South Australia. (h) Excludes South Australia and Australian Capital Territory. (i) Excludes Australian Capital Territory.

Note.—All Commonwealth-owned vehicles are included except those belonging to the Defence Services.

The table following shows the number of vehicles (excluding motor cycles) registered per 1,000 of population in each State and Territory at 30th June for each of the years 1959 to 1962 and at 31st December, 1962.

MOTOR VEHICLES (EXCLUDING MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION

Date			N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
• • • • • • • • • • • • • • • • • • • •	1960 1961 1962		236 248 257 268 276	261 274 282 287 295	248 260 268 274 283	273 281 310 315 321	261 276 289 304 315	248 262 270 281 279	286 308 329 352 394	287 298 299 308 315	251 263 274 282 290

(a) Census of 31st December, 1962.

3. New Vehicles Registered.—(i) States and Territories, 1962-63. The following table shows the number of new vehicles registered in each State and Territory during 1962-63.

NEW MOTOR VEHICLES REGISTERED, 1962-63

Vehicles	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Motor cars(a) Other motor ve-	107,085	77,838	36,472	27,513	23,142	9,004	631	3,241	284,926
hicles(b) Motor cycles	21.059 1,834	14,260 656	9,762 1,178	5,647 859	6,367 773	2,005 52	445 67	512 27	60,057 5,446
Total	129,978	92,754	47,412	34,019	30,282	11,061	1,143	3,780	350,429

⁽a) Includes taxis, hire cars and station wagons. omnibuses and ambulances.

(ii) Australia. Particulars of the number of new vehicles registered in Australia during each of the years 1958-59 to 1962-63 are shown in the following table.

NEW MOTOR VEHICLES REGISTERED: AUSTRALIA

Veh	icles		1958-59	1959-60	1960–61	1961–62	1962–63
Motor cars, taxis and Other motor vehicles Motor cycles		n wagons	 176,314 66,336 10,036	69,080	223,142 59,169 7,879	52,121	284,926 60,057 5,446
Total			 252,686	302,824	290,190	273,361	350,429

⁽a) Includes utilities, panel vans, trucks, omnibuses and ambulances.

4. World Motor Vehicle Statistics, 1963.—At 1st January, 1963, there were 144,269,800 motor cars, trucks and omnibuses registered in various countries of the world. This was an increase of 6 6 per cent. on the figure for the previous year, 135,346,400. Of the 1963 registrations, 78,630,000 or 54.5 per cent. of the world total were in the United States of America, while Australian registration amounted to 2.3 per cent. This information is largely derived from the Automobile International, May, 1963.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962

1. General.—A census of motor vehicles on the register in each State and Territory at 31st December, 1962, was conducted by the Commonwealth Statistician in co-operation with the Deputy Commonwealth Statisticians and the motor vehicle registration authorities. The census covered items shown on the motor vehicle registration certificate such as make of vehicle, year of model, type of vehicle, horsepower, motive power, location (i.e. address on registration certificate), ownership (private, government, etc.), and for specific types of vehicles such items as unladen weight, carrying capacity, passenger capacity, and in some States gross vehicle weight.

The detailed results of the census are being published in mimeographed and printed bulletins for each State and Territory and for Australia, and in issue No. 54, 1962-63 of the annual bulletin *Transport and Communication*. Previous enumerations of this nature were the census of motor vehicles, 31st December, 1955, and the survey of motor vehicles, 1947-48. The results were published in a series of bulletins and, in summarized form, in issues of the annual bulletin *Transport and Communication* No. 48, 1956-57 (1955 census) and No. 40, 1948-49 (1947-48 survey). Year Book No. 44, 1958, contains on page 415 a summary, for each State and Territory and for Australia, of the vehicles of each type recorded at the census of 31st December, 1955.

⁽b) Includes utilities, panel vans, trucks,

2. Summary.—(i) Types of Vehicles. (a) Number. A summary for each State and Territory of the number of motor vehicles of each type on the register at 31st December, 1962, is given in the following table. The total number of each type recorded for Australia at the previous motor vehicle census (31st December, 1955) is included for purposes of comparison.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: TYPES OF VEHICLE

State or Territory	Motor cars	Station wagons	Utilities	Panel vans	Trucks	Other truck- type	Omni- buses	Motor cycles	Total motor vehicles
New South Wales Victoria Queensland South Australia Western Australia Tasmania Northern Territory Aust. Cap. Terr.	742,947 611,497 258,942 220,010 149,799 69,020 4,321 15,591	31,253 18,895 15,838	92,128 38,539 37,784 11,183 2,806	31,328 13,359 9,678 8,585 6,364	76,591 40,502 31,684 27,256	2,890 450 982 541 301	3,409 1,836 1,580 1,365 940	15,802 14,680 16,717 12,257 2,101	453,150 338,085 253,425 105,073 10,671
Australia, 31st Dec., 1962 No. Per cent.	2,072,127 64.4				271,451 8.4		14,340 0.5	82,576 2.6	3,216,112 100.0
Australia, 31st Dec., 1955 No. Per cent.	1,356,682 62.2		a361,970 16.6		250,630 11.5	5,884 0.3	10,142 0.4		2,182,193 100.0

⁽a) Includes panel vans, Queensland, with utilities.

(b) Relation to Population. The table below shows the number of motor vehicles (cars, station wagons, motor cycles, other motor vehicles, and total vehicles) registered per 1,000 of population in each State and Territory and Australia at 31st December, 1962, and in Australia at 31st December, 1955.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: TYPES OF VEHICLE PER 1,000 OF POPULATION

State or Territory	Motor cars	Station wagons	Other motor vehicles	Total motor vehicles (excl. motor cycles)	Motor cycles	Total motor vehicles
New South Wales	185	21	70	276	5	281
Victoria	203	23	70	296	5	301
Oueensland	167	20	96	283	9	292
South Australia	220	19	82	321	17	338
Western Australia	195	21	99	315	16	331
Tasmania	186	18	74	278	6	284
Northern Territory	164	48	182	394	12	406
Australian Capital Terri-			-			
tory	227	35	54	316	4	320
Australia, 31st December, 1962	192	21	77	290	8	298
Australia, 31st December, 1955	146	2	73	221	13	234

⁽b) Excludes panel vans, Queensland, which are included

(ii) Year of Model. (a) Motor Cars. In the following table, motor cars on the register in each State and Territory are shown classified by year of model.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: MOTOR CARS, BY YEAR OF MODEL

State or Territory				Yes	ar of mod	el				Total
Territory	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	Total
N.S.W. Victoria Queensland S. Australia W. Australia Tasmania N. Terr. Aust. Cap. Terr.	113,462 101,085 42,434 39,021 23,615 10,446 340 865	174,785 78,691 70,498 45,707 21,331 1,087 3,558	49,025 43,189 18,175 15,510 8,912 5,266 359 1,179	51,496 42,488 19,158 15,659 9,866 4,951 362 1,137		60,405 49,597 18,873 14,488 10,247 4,855 413 1,577	73,329 59,330 22,632 18,377 13,471 6,008 572 1,837	15.025 12,298 11,199 4,549 393 1,763	79,738 55,451 24,689 18,957 16,661 6,659 426 2,162	742,947 611,497 258,942 220,010 149,799 69,020 4,321 15,591
Australia No. Per cent.	331,268 16.0		141,615 6.8	145,117 7.0	154,809 7.5	160,455 7.7	195,556 9.4	144,610 7.0	204,743 9.9	2,072,127 100.0

(b) Station Wagons. Station wagons on the register in each State and Territory at 31st December, 1962, are shown in the following table in the same groups as those used for motor cars in the previous table.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: STATION WAGONS, BY YEAR OF MODEL

State or		Year of model											
Territory	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	Total			
N.S.W. Victoria Oueensland S. Australia W. Australia Tasmania Nor. Terr. Aust. Cap. Terr.	838 965 307 292 286 56 6 12	3,832 3,284 1,403 860 944 341 40 70	1,224 1,059 342 216 201 99 17 48	2,486 2,105 809 533 439 177 49 55	8,040 6,422 2,915 1,687 1,172 628 148 244	12,966 10,410 4,480 3,126 2,186 956 221 404	18,108 14,770 6,239 4,060 2,753 1,330 267 461	16,413 12,932 5,353 3,194 3,039 1,208 252 544	21,839 17,581 9,405 4,927 4,818 1,882 258 570	85,746 69,528 31,253 18,895 15,838 6,677 1,258 2,408			
Australia No. Per cent.	2,762 1.1	10,774	3,206	6,653 2.9	21,256 9.2	34,749 15.0	47,988 20.7	42,935 18.5	61,280 26.5	231,603 100.0			

(c) Utilities. Utilities on the register in each State and Territory at 31st December, 1962, are shown below in the same groups as for previous tables.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: UTILITIES, BY YEAR OF MODEL

			77.1	11//11	01 1110	DLD				
State or				Y	ar of mo	del				
Territory	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	Total
N.S.W. Victoria Queensland S. Australia W. Australia Tasmania Nor. Terr. Aust. Cap. Terr.	18,200 14,428 16,842 5,973 5,030 1,719 278 92	48,061 33,284 32,827 14,601 12,478 3,930 645 480	10,228 7,509 6,659 2,938 2,525 791 236 136	10,796 7,457 6,439 2,813 2,423 811 217 133	10,953 7,364 7,149 2,781 2,888 816 269 192	11,318 7,225 6,947 2,738 3,138 849 248 218	9,957 6,623 6,180 2,324 3,211 779 345 193	8,446 5,130 3,985 2,032 2,907 662 281 172	9,179 5,450 5,100 2,339 3,184 826 287 186	137,138 94,470 92,128 38,539 37,784 11,183 2,806 1,802
Australia No. Per cent.	62,562 15.0	146,306 35.1	31,022 7.5	31,089 7.5	32,412 7.8	32,681 7.9	29,612 7.1	23,615 5.7	26,551 6.4	415,850 100.0

(d) Panel Vans. The following table shows the number of panel vans on the register in the various States and Territories at 31st December, 1962, grouped as for previous tables.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: PANEL VANS, BY YEAR OF MODEL

State or		Year of model											
Territory	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	Total			
N.S.W. Victoria Queensland S. Australia W. Australia Tasmania Nor. Tert. Aust. Cap. Terr.	3,583 2,992 618 911 771 534 15	9,085 7,601 2,117 2,460 1,993 1,766 56	3,908 2,946 1,190 952 619 544 51 52	3,998 2,402 1,179 907 691 542 54 62	5,747 3,380 1,571 1,018 786 618 63 88	8.023 4,650 2,633 965 995 663 49 108	6,176 2,900 1,655 900 1,007 722 76 148	4,439 2,098 1,069 749 823 491 63 111	4,520 2,359 1,327 816 900 484 44 139	49,479 31,328 13,359 9.678 8.585 6,364 471 808			
Australia No. Per cent.	9,434 7.8	25,168 21.0	10,262 8.5	9,835 8.2	13,271 11.1	18,086 15.1	13,584 11.3	9,843 8.2	10,589 8.8	129,072 100.0			

(e) Trucks. The number of trucks on the register in each State and Territory at 31st December, 1962, is shown below, grouped as for previous tables.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: TRUCKS, BY YEAR OF MODEL

State or				Ye	ar of moo	iel				l
Territory	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	Total
N.S.W. Victoria Queensland S. Australia W. Australia Tasmania Nor. Terr. Aust. Cap. Terr.	25,679 22,838 14,464 10,717 8,152 2,320 254 117	23,727 19,772 10,310 9,839 9,016 2,493 240 197	4,964 4,362 2,367 1,746 1,375 549 132 43	4,447 4,050 2,002 1,563 1,031 498 110 63	4,461 4,817 2,253 1,445 1,305 514 96 75	5,122 5,071 2,257 1,607 1,369 540 97 93	6,910 6,279 2,627 1,773 1,788 600 115 128	4,509 4,580 1,740 1,514 1,545 440 170 105	4,851 4,822 2,482 1,480 1,675 533 112 114	84,670 76,591 40,502 31,684 27,256 8,487 1,326
Australia No. Per cent.	84,541 31.2	75,594 27.9	15,538 5.7	13,764 5.1	14,966 5.5	16,156 5.9	20,220 7.4	14,603 5.4	16.069 5.9	271,451 100.0

(f) Other Truck-type Vehicles. The following table shows the number of other truck-type vehicles on the register in each State and Territory at 31st December, 1962, grouped as for previous tables.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: OTHER TRUCK-TYPE(a), BY YEAR OF MODEL

State or					ar of moo	lel		····		
Territory	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	Total
N.S.W. Victoria Queensland S. Australia W. Australia Tasmania Nor. Terr. Aust. Cap. Terr.	1,224 1,442 216 267 283 127 25	497 510 73 193 87 73 17 11	140 131 19 69 23 14 5	97 69 15 50 14 11 4	138 123 22 93 23 22 1 2	132 137 16 98 29 13 5	260 185 35 49 34 17 6	187 159 28 85 22 15 10	147 134 26 78 26 9	2,822 2,890 450 982 541 301 73 34
Australia No. Per cent.	3,593 44.4	1,461 18.1	402 5.0	262 3.2	424 5.2	433 5.3	588 7.3	507 6.3	423 5.2	8,093 100.0

⁽a) Includes vehicles such as tankers, concrete agitators, tow trucks, mobile winches or cranes, fire engines.

(g) Omnibuses. The number of omnibuses on the register in each State and Territory at 31st December, 1962, is shown in the following table, grouped as for previous tables.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: OMNIBUSES, BY YEAR OF MODEL

State or		Year of model										
Territory	Before 1951	1951 to 1955	1956	1957	1958	1959	1960	1961	1962	Total		
N.S.W	1,741	755	161	243	356	467	587	376	318	5,004		
Victoria	1,124	748	224	176	222	177	264	196	278	3,409		
Queensland	653	264	96	126	132	134	138	132	161	1,836		
S. Australia	345	330	126	188	150	119	107	105	110	1,580		
W. Australia	480	404	59	54	82	61	72	66	87	1,365		
Tasmania	294	235	39	67	55	40	119	50	41	940		
Nor. Terr	11	14	5	4	5	12	12	14	14	91		
Aust. Cap. Terr.	14	6	9	10	5	12	21	22	16	115		
Australia No.	4,662	2,756	719	868	1,007	1,022	1,320	961	. 1,025	14,340		
Per cent.	32.5	19.2	5.0	6.1	7.0	7.1	9.2	6.7	7.2	100.0		

⁽h) Motor Cycles. The following table shows the number of motor cycles on the register at 31st December, 1962, in each State and Territory for which the data were recorded, grouped as for previous tables.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: MOTOR CYCLES, BY YEAR OF MODEL

State or	Year of model										
Territory	Before 1951 to 1956 1957 1958 1959 1960 1961 1962								1962	Total	
N.S.W	2,314	5,484	1,629	1,918	1,995	2,280	1,933	1,528	1,317	20,398	
Victoria(a)										15,802	
Queensland	1,906	3,840	1,127	1,335	1,697	1,333	1,325	1,065	1,052	14,680	
S. Australia(a)	•••						;			16,717	
W. Australia	1,163	2,836	659	977	1,615	1,851	1,454	862	840	12,257	
Tasmania	349	724	243	138	310	184	59	65	29	2,101	
Nor. Terr	24	65	26	19	42	36	39	19	55	325	
Aust. Cap. Terr.	6	59	21	24	31	48	48	35	24	296	

⁽a) Year of model not recorded.

ROADS AND BRIDGES

Information on the length of roads in Australia, the class of roads and their composition, together with particulars of the financial operations of the roads authorities in the several States, is included in Chapter XX. Local Government, of this Year Book.

ROAD TRAFFIC ACCIDENTS

§ 1. Accidents Reported

1. Accidents Involving Casualties.—(i) States. 1962-63. The following table gives a summary of accidents involving casualties in each State and Territory for the year 1962-63.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): ACCIDENTS RECORDED AND CASUALTIES, 1962-63

		. 1	Persons kille	d	Persons injured			
State or Territory	Accidents involving casual- ties	Number	Per 100,000 of mean popu- lation	Per 10,000 motor vehicles regis- tered	Number	Per 100,000 of mean popu- lation	Per 10,000 motor vehicles regis- tered	
New South Wales	17,891	894	22 1	8	24,580	612	220	
Victoria	12,330	803	27	8	17,149	567	179	
Oueensland	6,345	420	27	9	8,779	566	195	
South Australia	6,343	201	20	6	8,216	822	247	
Western Australia	3,926	164	21	7	5,360	701	216	
Tasmania	919	67	19	6	1,354	374	128	
Northern Territory	187	14	51	12	256	927 1	221	
Aust. Cap. Terr	411	12	17	. 5	593	857	259	
Total	48,352	2,575	24	8	66,287	613	204	

⁽a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death, or injury to an extent requiring surgical or medical treatment.

(ii) Riders, Drivers, Pedestrians, etc., Killed or Injured. The following table shows the number of persons killed and the number injured during 1962-63 in each State and Territory, classified into drivers, riders, pedestrians, etc. Responsibility for cause of accident is not indicated by this classification.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): DRIVERS, RIDERS, PEDESTRIANS, ETC., KILLED OR INJURED, 1962-63

FEDESI	KIANS,	EIC.,	RILLE	D OK	INJUR	ED, 19	02-03		
Drivers, riders, pedestrians, etc.	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
			PFRSON	is Killi	:D				
Drivers of motor vehicles Motor cyclists Pedal cyclists Passengers (all types)(b) Pedestrians Other classes(c) Total	267 35 249 318 1	279 19 42 212 246 5	134 25 24 127 109 1	10 13 50	57 12 4 51 40 	18 3 3 16 27 	5 2	4 1 4 3 	826 106 110 714 811 8
		F	PERSONS	Injure	D				
Drivers of motor vehicles	8,674 927 993 9,965 3,984 37	6,060 527 1,115 6,898 2,478 71	3,012 738 530 3,551 934 14	2,796 897 840 2,836 845	1,817 527 388 2,022 600 6	521 52 47 540 193	100 16 10 117 12	213 22 51 256 51	23,193 3,706 3,974 26,185 9,097 132
Total	24,580	17,149	8,779	8,216	5,360	1,354	256	593	66,287

⁽a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death, or injury to an extent requiring surgical or medical treatment. (b) Includes pillion riders. (c) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles.

(iii) Ages of Persons Killed or Injured. The following table shows the age groups of persons killed or injured in traffic accidents in each State and Territory during 1962-63.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): AGES OF PERSONS **KILLED OR INJURED, 1962-63**

5 and under 7 16 11 11 3 3 1 4 7 " " 17 62 59 39 19 12 9 1 1 20 17 " " 17 19 95 71 21 22 10 4 2 34 21 " " 30 155 110 73 29 28 8 5 4 41 30 " " 40 96 97 51 21 18 13 2 1 29 40 " " 50 94 106 43 20 14 6 2 1 28 50 " " 60 218 197 94 44 40 12 2 26	Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5 and under 7 16 11 11 3 3 1 4 7 ", ", 17 62 59 39 19 12 9 1 1 20 17 ", ", 21 119 95 71 21 22 10 4 2 34 21 ", ", 30 155 110 73 29 28 8 5 4 41 30 ", ", 40 96 97 51 21 18 13 2 1 29 40 ", ", 50 94 106 43 20 14 6 2 1 28 50 ", ", 60 105 94 32 29 21 6 2 8 60 and over 218 197 94 44 40 12 2 60			P	er s ons	Killed					
	5 and under 7 7 " " 17 17 " 21 21 " " 30 30 " " 40 40 " " 50 50 " " 60	16 62 119 155 96 94	11 59 95 110 97 106 94	11 39 71 73 51 43 32	21 29 21 20 29 44	3 12 22 28 18 14 21	10 8 13 6 6	1 4 5 2 2	2	78 45 202 344 412 299 286 287 607

PERSONS INJURED

Under 5			760	605	271	258	195	45 1	6	19	2.159
5 and under	. 7	::	466	408	133	165	122	33	6	ií	1,344
7 ,, ,,	17		3,037	2,264	1,167	1,177	723	177	17	89	8,651
17 ,, ,,	21		4,512	2,882	1,890	1,549	1,096	281	35	114	12,359
21 ,, ,,	30		5,104	3,698	1,757	1,399	994	294	94	153	13,493
30 ,, ,,	40		3,459	2,465	1,092	970	628	142	44	67	8,867
40 ,, ,,	50	!	2,852	1,865	931	844	526	115	32	69	7,234
50 ,, ,,	60		2,081	1,394	699	619	400	104	15	36	5,348
60 and over			2,004	1,326	659	493	351	90	i 7	22	4,952
Not stated			305	242	180	742	325	73		13	1,880
Total			24,580	17,149	8,779	8,216	5,360	1,354	256	593	66,287

⁽a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death, or injury to an extent requiring surgical or medical treatment.

(iv) Accidents Recorded and Casualties, classified according to Type of Vehicle, Road User, etc., Involved. The following table shows, for the year 1962-63, the number of accidents involving casualties in which each of several classes of vehicles, road users, etc., were involved-The persons killed and injured are similarly classified. As in the table in sub-paragraph (ii), p. 595, responsibility for cause of accident is not indicated by this classification.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a), CLASSIFIED ACCORDING TO TYPE OF VEHICLE, ROAD USER, ETC., INVOLVED: **AUSTRALIA, 1962-63**

Particulars	Motor vehicle	Motor cycle	Pedal cycle	Tram	Animal and animal- drawn vehicle	Pedes- trian	Fixed object	Other vehicle
Accidents involving casualties	46,377	4,262	4,018	148	387	9,172	3,942	277
	2,491	131	113	9	20	805	200	72
	64,106	4,749	4,058	201	469	8,974	5,420	329

⁽a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death, or injury to an extent requiring surgical or medical treatment.

Note.—As accidents and casualties classified according to one type of road user, etc., may also be classified according to another, these totals cannot be added across to obtain grand totals.

The 46,377 accidents involving casualties in which motor vehicles were involved comprised 17,520 collisions with other motor vehicles, 2,975 with motor cycles, 3,507 with pedal cycles, 96 with trams, 285 with animals and animal drawn vehicles, 8,741 with pedestrians, 3,709 with fixed objects, 239 with vehicles other than those mentioned, 8,876 instances of overturning or leaving the roadway, and 429 accidents to passengers only.

2. Road Traffic Accidents Involving Casualties, and Persons Killed or Injured.—The following table shows the number of road traffic accidents involving casualties and persons killed or injured in road traffic accidents in each State and the Australian Capital Territory during each of the years 1958-59 to 1962-63, and for the Northern Territory for the year 1962-63.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a), AND PERSONS KILLED OR INJURED

				KILLEL	OK IN	JUKED)			
			1					1	To	otal
Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Num- ber	Per 10,000 motor vehicles regis- tered
			Acc	idents I	NVOLVING	G Casua	LTIES			
1958-59 1959-60 1960-61 1961-62 1962-63	15,216 16,871 16,599 15,300 17,891	12,462 12,267 12,140 11.639 12,330	5,603 5,720 5,424 5,915 6,345	3,984 5,340 6,117 6,184 6,343	3,450 3,656 3,602 3,571 3,926	791 743 844 872 919	n.a. n.a. n.a. n.a. 187	260 322 326 302 411	41,766 44,919 45,052 43,783 48,352	162 164 155 143 150
				Pers	sons Kili	LED				
1958-59 1959-60 1960-61 1961-62 1962-63	833 939 934 887 894	661 698 773 818 803	333 359 353 341 420	185 203 203 179 201	178 180 197 187 164	68 79 75 72 67	n.a. n.a. n.a. n.a.	6 10 7 7 12	2,264 2,468 2,542 2,491 2,575	9 9 9 8 8
				Pers	ons Inju	RED				
1958-59 1959-60 1960-61 1961-62 1962-63	19,854 22,330 22,244 19,886 24,580	16,784 16,595 16,757 16,074 17,149	7,700 8,054 7,607 8,137 8,779	5,183 6,856 7,665 7,913 8,216	4,506 4,788 4,806 4,856 5,360	990 1,004 1,157 1,207 1,354	n.a. n.a. n.a. n.a. 256	342 477 513 451 593	55,359 60,104 60,749 58,524 66,287	214 219 209 191 204

⁽a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death or injury to an extent requiring surgical or medical treatment.

§ 2. Road Safety Organizations

1. Australian Road Safety Council.—(i) Origin, Objectives and Organization. The Australian Road Safety Council was formed in 1947 by the Australian Transport Advisory Council, which comprises Commonwealth and State transport ministers and Commonwealth ministers with associated interests, to conduct a nation-wide road safety public education campaign. It was re-constituted in February, 1961, by the Australian Transport Advisory Council, in order to provide a smaller, more effective, organization.

The objectives of the reconstituted Council are:-

- (a) to conduct a continuous programme of public education, aimed at improving the knowledge, skills, attitudes and practices of all classes of road users;
- (b) to encourage a better understanding and observance of State and Commonwealth traffic laws by road users;
- (c) to stimulate greater public interest, support and active participation in road accident prevention;
- (d) to co-ordinate, in a balanced programme, the Commonwealth and State public education campaigns, and to integrate with these campaigns the support accorded by non-governmental bodies and the general public;
- (e) to collect, collate, publish and distribute educational and informative data regarding road accidents; and
- (f) to advise on specific road safety matters referred to it by the Australian Transport Advisory Council.

The Australian Road Safety Council comprises 16 members, representing the Commonwealth and State Governments and the major categories of organized road users. It meets approximately three times each year and has established a number of temporary subcommittees to investigate and report upon particular aspects of its activities.

The Department of Shipping and Transport provides the central executive for the Council. Each section represented on the Australian Road Safety Council—Commonwealth, State and community/commercial—exercises full control over its own activities. One of the Council's principal functions is to co-ordinate the Commonwealth and State public education campaigns and to integrate with these campaigns the support accorded by commerce, industry, and community service organizations.

A sum of £150,000 is provided annually by the Commonwealth Department of Shipping and Transport for the promotion of road safety practices; £50,000 is distributed to the State Governments for public education in road safety, and the remaining £100,000 is used for the national public education campaign. The £50,000 grant to the States is allocated in the following proportions:—New South Wales, £12,500; Victoria, £10,000; Queensland, £9,250; South Australia, £6,250; Western Australia, £8,250; Tasmania, £3,750.

(ii) Mode of Operation. The media used by the Australian Road Safety Council in its national campaigns include metropolitan daily press and metropolitan radio and television, platform and pulpit, plus a wide variety of posters, pamphlets, booklets, publications and films. The official publication of the Council is the Australian Road Safety Council Report which is published monthly. Close liaison is maintained with State and Commonwealth educationists in the preparation and distribution of road safety instructional material for schools.

The Council, through its Central Executive in the Department of Shipping and Transport, works in close collaboration with two companion Committees, established by the Australian Transport Advisory Council. These are the Australian Road Traffic Code Committee, which prepares model regulations with the object of attaining national uniformity of traffic laws; and the Australian Motor Vehicle Standards Committee, which devises national standards for the construction, equipment, and operational efficiency of all road vehicles.

Because of the great increases in population and vehicle numbers, the exposure to risk of road users is considerably greater today than ever before. This is the basic problem confronting the Australian Road Safety Council, and in its efforts to deal with it, the Council has recognized the consideration that, notwithstanding advances in road and vehicle design and traffic laws, road safety still remains essentially a problem of human behaviour.

The primary aim of road accident prevention, as envisaged by the Council, is thus to create a state of mind in which all classes of road users realize the imminence and consequence of road accidents, and are willing to accept the restraints necessary to prevent them. It is the Council's belief that, for the most part, this can best, and often only, be done effectively through education in the broad and practical sense, by improving knowledge, skill, attitudes and habits of all classes of road users, and by creating a public conscience about road accidents. The current national public education campaign is based on the theme "Road Safety Starts With You".

2. National Safety Council of Australia.—The Council, founded in Victoria in 1927, was registered as a company limited by guarantee and later as a foreign company in New South Wales, Queensland, Tasmania and Western Australia. In 1959, new articles of association were adopted, placing the National Safety Council of Australia on a more truly federal basis reflecting the expanded character of the Council in the 35 years since its formation. It is a membership organization whose members include transport, education and other authorities as well as numerous industrial concerns. Membership is open to any person or organization wishing to further the objects and purposes of the Council.

The objects of the Council, summarized, are:-

- (a) to devise and encourage the adoption of safety measures of all kinds;
- (b) to promote discussion of all matters relating to safety measures;
- (c) to conduct an educational campaign among the people of Australia to stimulate the adoption and observance of safety measures; and
- (d) to consider, initiate and support improvements, calculated to prevent accidents, in the laws of the Commonwealth of Australia, the States and local governing bodies.

The Council is now registered in Canberra, with Divisions established in all States. It is managed by a Federal Council, whose members are appointed by the State Divisions. The Federal Council is responsible for those objectives which are of a national character, and each State Division controls its own affairs which are of State or local character.

The Council is a non-profit making organization and, apart from fees which may be charged to members and others for services provided, its work is financed by subscriptions, grants and donations, which in general are received at State level by the various State Divisions.

CIVIL AVIATION

1. Historical.—A short review of the progress of civil aviation in Australia up to the date of foundation of a Civil Aviation Administration was published in Year Book No. 16, pages 334-5, and a brief account of the foundation and objects of this Administration was published in Year Book No. 19, pag. 299. Year Book No. 38 and earlier issues contain information on the control of civil aviation by the Board (1936) and later (1939) by the Department of that name. The Acts defining the broad principles of operation of the administration of civil aviation and the Regulations amplifying them, and the principal functions of the administration are also described.

The Department has 12 Divisions as follows:—Air Transport; Ir ternational Relations; Aviation Medicine; Flying Operations; Airworthiness; Airways Operations; Communications and Air Traffic Control; Airport Engineering; Finance Management; Air Safety Investigation; Navigational Aids, Electrical and Mechanical Engineering; and Administrative Management.

2. International Activity.—(i) International Organizations. A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council and the South Pacific Air Transport Council appeared in Year Book No. 37, and particulars of subsequent activity in the international field were included in No. 38. The International Civil Aviation Organization had a membership of 101 nations in November, 1963. Australia has continued her representation on the Council, a position which she hald since I.C.A.O. was established in 1947. Further details will be found in Year Book No. 40 and earlier issues.

(ii) International Agreements. In November, 1963, there were 17 air services agreements in force between Australia and other countries.

A list of the agreements at 30th June, 1961, was given on pp. 555-6 of Year Book No. 48. The countries concerned were:—Canada, United States of America, Pakistan, India, Ceylon, Netherlands, United Arab Republic, Lebanon, South Africa, Japan, Germany, Ireland, United Kingdom, Malaya and Thailand.

Since Jun2, 1961, two further agreements have entered into force and the routes which may be used by Australia and the reciprocal routes granted in return are as follows.

- New Zealand—separate Australian routes to Auckland, Wellington and Christchurch and optionally beyond; separate New Zealand routes to Sydney, Melbourne, Brisbane, Norfolk Island and optionally beyond.
- Italy—an Australian route via specified intermediate points to Rome and beyond via specified points to London; an Italian route via specified intermediate points to Sydney-Melbourne.
- (iii) International Air Services. Qantas Empire Airways Ltd. has an operational fleet of 11 Boeing 707 jet aircraft and 4 Lockheed Electras. The Boeings operate a round the world service through the United States of America and the United Kingdom and to Hong Kong, Japan and Noumea. The Electras are used on services to New Zealand, Fiji and South Africa. Qantas was operating aircraft over 67,903 unduplicated route miles on international services in June, 1963. A summary of the operations of oversea services wholly or partly Australian-owned appears on page 604.

Three Lockheed Electra aircraft operated by Tasman Empire Airways Ltd. link Sydney with Auckland, Christchurch and Wellington; Melbourne with Auckland and Christchurch; and Brisbane with Auckland.

A total of eleven international airlines operate services into and out of Australia, mainly to and from Sydney.

3. Australian National Airlines Commission.—The Commonwealth Australian National Airlines Act 1945 constituted the Australian National Airlines Commission for the purpose of establishing, maintaining and operating airline services for the transport of passengers and goods between Australian States and/or Territories and within Australian Territories. The Commission may, with the approval of the Minister, undertake services between Australia and places outside Australia, and, in certain circumstances, may engage in intra-State operations.

The operating organization set up to give effect to the Act is Trans-Australia Airlines.

- 4. Regular Air Services within Australia.—Domestic airline services throughout Australia and the Australian sector of Papua-New Guinea are provided by three distinct groups of airlines, operating over a route network of some 95,000 miles. The three groups are as follows.
 - Trans-Australia Airlines—operated by the Australian National Airlines Commission on behalf of the Commonwealth Government. T.A.A. operates on the main interstate routes throughout Australia and on territorial air services, as well as intrastate services in Queensland and Tasmania, and internal services in the Australian sector of Papua-New Guinea.
 - Ansett Transport Industries airline group—a private enterprise organization. This group comprises Ansett-A.N.A., also operating on the main interstate and territorial air routes, and six subsidiary airlines which operate basically intrastate services in Queensland, New South Wales, South Australia, Western Australia and the Australian sector of Papua-New Guinea.
 - Small private enterprise airlines—this group comprises three independent feeder type airlines operating basically intrastate services in New South Wales, Western Australia, Northern Territory and internally in Papua-New Guinea.

Competition between the two major domestic airlines, T.A.A. and Ansett-A.N.A. is controlled by Commonwealth legislation and Airline Agreements. These controls are designed to prevent uneconomic competition between the two companies. The two principal Acts which establish the legislative basis of this controlled competition are the Airlines Agreement Act 1952-1961 and the Airlines Equipment Act 1958. The Airlines Equipment Act establishes the machinery for the achievement and maintenance of comparable aircraft fleets between T.A.A. and Ansett-A.N.A., and is designed to prevent the provision of excess aircraft capacity. The Airlines Agreement Act establishes the basis of the control of the two-airline competitive system and extends this machinery until 1977, and also establishes certain requirements covering the introduction of jet aircraft to Australian domestic services after 1st July, 1964. Under the terms of this Act, on 19th November, 1962, T.A.A. and Ansett-A.N.A. applied for, and received, government approval for each to buy two Boeing 727 jet airliners for introduction on Australian domestic services in late 1964 or early 1965.

A summary of the operations of regular air services within Australia appears on page 604.

5. Air Ambulance Services.—A brief statement on the foundation and objects of the Air Ambulance Services will be found in Year Book No. 32, pages 145 and 146.

During the year 1962-63, the Air Ambulance and Royal Flying Doctor Services continued to provide medical aid for the outback regions of Australia. The Royal Flying Doctor Service of Australia, operating from Broken Hill, New South Wales, Cloncurry, Queensland, and Alice Springs, Northern Territory (operated in conjunction with the Department of Health) covers a wide area of inland Australia. The Bush Church Aid Society for Australia and Tasmania, supported by funds from the Church of England, operates from Ceduna in South Australia. The federal Methodist Inland Mission operates services from Meekatharra, Western Australia, and the Queensland Ambulance Transport Brigade operates a service from Cairns in Queensland. A Flying Surgeon Service is in operation in Queensland.

For further information see Chapter XVIII. Public Health.

6. Training of Air Pilots.—Since 1926, the Commonwealth has subsidized flying training in Australia largely through the Aero Club movement. In 1961 the Government altered the basis of financial assistance to flying training organizations. The new system provides for the payment of £637,000 in subsidies to Australian flying training organizations, including the Aero Clubs, flying schools and the Gliding Federation of Australia, spread over a four-year period from 1961 to 1965. A feature of the new subsidy arrangements was the establishment of the Australian Flying Scholarship scheme which is designed to train career pilots for the Australian commercial aviation industry. The scholarships provide financial assistance in much the same way as Commonwealth scholarships provide for people undertaking other professions. Of the 182 flying scholarships awarded for 1963-64, 138 were scholarships to take the student through to the commercial licence standard, 35 were to commercial licence plus instructor rating and nine were for agricultural rating.

During the year 1962-63, pupils of the Australian flying training organizations (aero clubs and commercial flying schools) received 456 private licences, 102 commercial licences, and 45 instructor licences. Subsidized hours flown by aero clubs and flying schools totalled 116,061 hours out of a total of 157,773 hours flown and their subsidy earnings totalled £93,914. A limit placed on the subsidy restricted the total payment to £75,000. During the year. 19 clubs were also assisted with the purchase of 22 aircraft and 3 aircraft radios. The value of this assistance under the Aircraft Replacement Fund was £20,000. The permanent secretariats of the Royal Federation of Aero Clubs and the Commercial Flying Schools also received £8,000 and £1,000 respectively during 1962-63 as additional financial assistance.

Thirty-three clubs were affiliated with the Gliding Federation of Australia in 1962-63. Membership rose from 1,117 to 1,247 and 363 Certificates and Awards of Competency were obtained during the year. In 1962-63, Australia was represented in the Ninth World Championships at Junin in Argentina by a team of three pilots flying an Australian built "Arrow" glider, assisted by Australian team crews.

During 1962-63 the Commonwealth assisted gliding clubs to the extent of £6,500. This amount was allocated as follows:—£3,000 on the basis of active membership and

certificates and awards gained, £1,000 to the National Gliding School, £2,000 for development and design work and secretarial functions, and £500 towards the costs incurred by the Australian team at the Ninth World Championships.

The Federation Aeronautique Internationale, whose headquarters are in Switzerland, sets certain standards of efficiency which the glider pilot has to attain before he qualifies for an F.A.I. certificate (e.g., certificates are obtainable for height, distance and time aloft). The administrative authority in Australia for F.A.I. is the Royal Aero Club of Australia.

The total of all subsidy payments and financial assistance to flying training organizations and the gliding movement during 1962-63 was £149,000.

Airways Engineering.—The field of airways engineering includes the provision of radio navigation facilities, radiocommunication systems, and airport lighting systems.

Approvals were given during 1961-62 for extensions and improvement of Australia's airways navigation and communications system. Long-range air traffic control radar units are being installed at Sydney and Adelaide at a cost of £770,000. Both units were expected to be in operation by the end of 1963, and similar units are planned for Melbourne, Brisbane and Perth as part of a radar programme costing £2.5 million. This coincides with the introduction of airborne radar which is a mandatory requirement for all Australian airliners from June, 1963. These two steps will enable radar surveillance of Australia's controlled air space by pilots and controllers to be considerably extended. Approval was also given during the year for the second stage of the Department of Civil Aviation's navigational aids plan. This involves the installation, over the next four years, of 22 visual omni radio ranges for primary directional guidance, and four international standard distance measuring equipment units at Sydney, Melbourne, Brisbane and Perth. In the communications field, work is proceeding steadily to improve further the high quality direct speech facilities between ground controllers and aircraft operating in controlled air space, and improve generally the communications system throughout the entire Australian aviation area.

The international transmitting station at Llandillo, near Sydney, provides air to ground and point to point communications on the international frequency bands for places as far away as Honolulu, Manila and Singapore.

Members of the South Pacific Air Transport Council have agreed that the Commonwealth Pacific Cable should be used for civil aviation purposes. This should enable the existing radioteletype services between Sydney, Nadi, Auckland and Honolulu to be closed down, and result in improved services between these points. Radio equipment and radio frequencies in the high frequency band will also be released for use on other circuits.

8. Airports.—Government approval, in principle, during November, 1962, of a £30 million programme of aerodrome development throughout the Commonwealth marked the beginning of a new phase of increased activity in this field. During recent years, airport development has involved an expenditure of approximately £2 million a year. The new programme, to be spread over five years, includes major projects at Sydney, Melbourne and Launceston, as well as other works in all States and in the Territory of Papua-New Guinea.

Considerable planning and design work has already been done. Much of the works proposed for Sydney, Melbourne and Launceston has already been put before the Parliamentary Standing Committe on Public Works for review, in accordance with the requirement that the Committee should review all major new works involving expenditure over £250,000. Construction work on these three principal projects was planned to start during 1963-64.

At Sydney the north-south runway will be extended from 5,500 feet to 7,500 feet to provide better facilities for the operation of large jet aircraft. This work will be followed by the construction of a new international terminal building with aprons, roads, car parks and engineering facilities, on reclaimed land in the north-western corner of the airport. The project is scheduled for completion in 1968.

At Melbourne, a new airport at Tullamarine for domestic and international aircraft will be developed on a 5,300 acre area, with runways of 7,500 feet and 8,500 feet. The airport is expected to be in use by 1967.

The runway at Launceston will be extended to 6,500 feet and strengthened. Other works include a new terminal, operations building, taxiways and general area development. The project is planned for completion in 1966.

Other aerodromes where major developmental projects are in progress are Alice Springs, Bankstown, Jandakot (near Perth), Meekatharra, Mt. Isa, Perth, Port Moresby and Wyndham.

The number of aerodromes in Australia and its Territories increased by 14 during the year to 634. One hundred and forty-two are owned by the Commonwealth and 492 by local authorities or private interests.

Aerodrome development at Commonwealth aerodromes during 1962-63 continued at about the same rate as in previous years with expenditure totalling £1,653,000. For the same period, the maintenance cost of these aerodromes totalled £2,267,000.

- 9. Meteorological Services.—The Department of Civil Aviation is the major user of meteorological services in the Australian Commonwealth and its Territories, and therefore the requirements for civil aviation purposes have played a big part in determining the form of meteorological organization that exists at the present time. The Department and the Commonwealth Bureau of Meteorology have completed working arrangements designed to meet the very precise requirements of modern civil aviation in Australia, which specify the standards of service, times and places of operation and facilities required for the provision of meteorological services for civil aviation.
- 10. Search and Rescue.—The Department of Civil Aviation has assumed responsibility for co-ordination of search and rescue activity throughout all Australian flight information regions, and also arranges for the availability of search and rescue facilities. Particulars of systems and methods of operation were published in Year Book No. 48, page 558.
- 11. Statistical Summaries.—(i) Registrations, Licences, etc. The following table provides a summary of the civil aviation registrations and licences in force in Australia at 30th June in each of the years 1959 to 1963.

CIVIL AVIATION: REGISTRATIONS, LICENCES, ETC., AUSTRALIA(a)

		:	30th June-		
Particulars .	1959	1960	1961	1962	1963
Registered aircraft owners	642	745	850	938	1,006
Registered aircraft	1,246	1,360	1,502	(b) 1,600	(b) 1,787
Pilots' licences					
Private	2,801	3,001	3,206	3,627	4,066
Private helicopter			2	2	3
Commercial	910	948	973	1,090	1,159
Senior commercial	130	132	147	154	176
Helicopter (commercial)	17	30	34	33	42
Student	3,461	3,696	4,151	4,433	4,845
Student helicopter	4	14	10	12	15
1st class airline transport	652	618	659	690	684
2nd class airline transport	389	418	471	432	464
Flight navigators' licences	177	168	142	141	135
1st class flight radio-telegraphy	ĺ	1			İ
operators' licences	56	55	43	37	20
Flight radio-telephone opera-		i i			
tors' licences	2,203	2,651	3,679	5,370	6,552
Flight engineers' licences	189	193	200	175	168
Aircraft maintenance engineers'					1
licences	2,266	2,382	2,492	2,485	2,521
Aerodromes, Australia-	_,		,		-,
Government(c)	168	149	132	124	122
Licensed(d)	304	323	351	359	380
Flying boat bases(e)	13	13	13	13	13

⁽a) Except for aerodromes and flying-boat bases, includes the Territory of Papua and New Guinea.
(b) In addition, there were 125 gliders on the register. (c) Under the control and management of the Department of Civil Aviation. (a) Aerodromes under the control and management of a municipality, shire, station owner, private individual, etc. Includes emergency aerodromes. (e) Includes alighting areas.

(ii) Types of Aircraft and Gliders on the Australian Register. The various types of aircraft and gliders on the Australian register at 31st December, 1961, were shown in Year Book No. 48, p. 559.

Details of aircraft and gliders on the Australian register at 30th June, 1963 may be found in *Transport and Communication* bulletin No. 54, 1962-63.

(iii) Operations of Regular Internal Services. The next table summarizes the flying activities of regular internal services operating within Australia during each of the years 1958-59 to 1962-63.

CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA(a)

Partic	ulars			1958-59	1959–60	1960–61	1961-62	1962-63
Hours flown Miles , Paying passengers Paving passenger-miles Freight—	::		*000 *000	229,396 40,287 2,235,070 944,379	225,050 43,199 2,660,412 1,132,517	219,918 42,301 2,639,080 1,109,552	207,210 41,176 2,666,160 1,119,430	217,897 43,700 2,832,934 1,221,178
Tons(b) Ton-miles(b) Mail—	::	::	'oòò	62,755 28,841	65,402 29,240	62,971 28,220	57,207 26,076	59,373 28,270
Tons(b) Ton-miles(b)	::	::	°000	2,727 1,472	4,825 2,567	5,956 3,064	6,311 3,198	6,467 3,324

⁽a) Includes only services operating within the Australian mainland and Tasmania. of short tons (2,000 lb.).

(iv) Operations of Oversea Services wholly or partly Australian-owned. The following table furnishes a summary of oversea services wholly or partly owned by Australian interests during the years 1958-59 to 1962-63. This table incorporates aggregate particulars of all traffic originating on oversea services of Qantas Empire Airways Limited and Tasman Empire Airways Limited, which, in the case of Qantas, includes considerable traffic which does not enter Australia. The transfer of the Australian Government's shares in Tasman Empire Airlines to the New Zealand Government on 25th July, 1961, made TEAL a wholly New Zealand-owned airline, and statistics of its operations are therefore not included in Australian statistics after 1960-61. An air services agreement was signed whereby air traffic rights into and through the two countries were exchanged at the same time, and on 1st October, 1961, both airlines commenced joint scheduling arrangements for trans-Tasman services. The table also includes traffic between Australia and Papua, New Guinea and Norfolk Island.

CIVIL AVIATION: OPERATIONS OF OVERSEA SERVICES(a)

Partic	ulars			1958-59	1959-60	1960–61	1961-62	1962-63
Route miles (unduplica Hours flown		: 30th Ju	000 000 000 000	74,704 68,811 16,486 176,120 534,728 3,431 15,381 1,647 8,834	76,125 54,668 16,992 232,714 720,099 5,150 24,625 2,015 10,351	72,290 57,385 20,068 291,258 847,713 6,575 30,134 2,335 11,269	69,712 51,066 19,240 247,517 836,570 6,432 30,429 2,015 11,622	71,676 48,669 20,343 294,908 1,014,867 6,756 33,135 2,468 15,191

⁽a) Airlines wholly or partly owned by Australian interests.

⁽b) In terms

⁽b) In terms of short tons (2,000 lb.).

⁽v) Accidents and Casualties. The number of accidents involving aircraft on the Australian register, in which persons were killed or injured, is shown in the following table for .he years 1958-59 to 1962-63.

CIVIL AVIATION:	AUSTRALIAN AIRCRAFT(a),	ACCIDENTS INVOLVING
	CASUALTIES	

Particu		1958-59	1959-60	1960-61	1961–62	1962-63	
Number			39	43	40	46	32
Persons killed		;	21	44	28	52	16
Persons injured	• •	;	30	42	38	38	26

⁽a) Aircraft on Australian register and gliders irrespective of location of accident.

12. Territory of Papua and New Guinea.—For brief particulars of civil aviation in Papua and New Guinea see Chapter V. The Territories of Australia, pages 126 and 132.

POSTS; TELEGRAPHS; TELEPHONES; OVERSEA TELECOMMUNICATION SERVICES

Note.—In this division, particulars for the Australian Capital Territory are included with those for New South Wales and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated.

§ 1. General

1. The Postmaster-General's Department.—Under the provisions of the Post and Telegraph Act 1901-1961, the Postmaster-General's Department is responsible for the control and operation of postal, telegraphic and telephonic services throughout Australia. The Postmaster-General's Department is also responsible for the provision and operation of the transmitters and technical facilities required for broadcasting and television services by the Australian Broadcasting Commission (see pp. 617-21), and co-operates with the Overseas Telecommunications Commission (see pp. 612-3) in providing facilities for communication with oversea countries. Subsidiary to its major activities, the Postmaster-General's Department performs a number of important functions for other Commonwealth and State departments, including the payment of pensions, child endowment, and military allotments, the provision of banking facilities on behalf of the Commonwealth Savings Bank, the sale of tax and duty stamps, and the collection of land tax.

2. Postal Facilities.—(i) Relation to Area and Population. The following table shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices), and the number of inhabitants to each 100 square miles in each State and in Australia at 30th June, 1963.

POSTAL FACILITIES: RELATION TO AREA AND POPULATION AT 30th JUNE,

	Particulars			N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Number of post	offices-	,								
Official				515	326	229	170	147	54	1,441
Non-official	••	••	• •	1,937	1,871	1,010	754	492	448	6,512
Total		••	••	2,452	2,197	1,239	924	639	502	7,953
Number of squa	re miles	of territor	y per] }		- 1				
office			• • • • • • • • • • • • • • • • • • • •	127	40	538	978	1,527	52	374
Number of inha				1,681	1,391	1,264	1,124	1,209	720	1,373
Number of inha	ibitants j	per 100 so	quare				- 1			
miles	• •	• •		1,328	3,477	235 ₁	115	79	1,378	367

(ii) Employees and Mail Contractors. The number of employees and mail contractors in the Central Office and in each of the States at 30th June, 1963, is given in the following table.

NUMBER OF POSTAL EMPLOYEES AND MAIL CONTRACTORS AT 30th JUNE, 1963

Particulars	Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Employees Mail Contractors	1,576	35,857 2,112	27,794 1,097	14,023 1,123	9,967 279	6,971 315	3,925 219	100,113 5,145

3. Gross Revenue, Branches—Postmaster-General's Department.—(i) States, 1962-63. The gross revenue (actual collections) in respect of each branch of the Department during the year 1962-63 is shown in the following table.

POSTMASTER-GENERAL'S DEPARTMENT: GROSS REVENUE, 1962-63(a) (£'000)

Source	 Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Postal Telegraph Telephone Miscellaneous	 2,695 979 1,348	19,257 2,401 36,491 39	13,409 1,787 26,353 72	5,843 1,179 11,838 6	4,138 796 8,254 23	2,914 596 5,426 28	1,171 181 2,605 7	49,427 7,919 92,315 175
Total	 5,022	58,188	41,621	18,866	13,211	8,964	3,964	149,836

⁽a) The figures in this table relate to revenue actually collected during the year as recorded for Treasury purposes.

(ii) Australia. The following table shows the gross revenue (actual collections) of the Department for each of the five years 1958-59 to 1962-63.

POSTMASTER-GENERAL'S DEPARTMENT: GROSS REVENUE, AUSTRALIA(a) (£'000)

		Source			1958-59	1959-60	1960–61 (b)	1961–62	1962-63
Postal					33,165	39,167	45,890	47,104	49,427
Telegraph					6,321	6,804	7,275	7,448	7,919
Telephone					59,717	71,209	82,732	85,166	92,315
Miscellaneo	us		• •		(c) 4,264	(c) 4,451	224	96	175
Tota	١			••	103,467	121,631	d 136,121	139,814	149,836

⁽a) See footnote (a) to previous table. (b) Figures not entirely comparable with those for earlier years. (c) Includes items allocated to other headings after 1959-60. (d) An amount of £43,625 has been excluded from 1960-61 figures published in Year Book No. 48. This amount represents receipts under the Wireless Telegraphy Act which are now credited to broadcasting and television revenue.

^{4.} Expenditure, Postmaster-General's Department.—(i) States. The following table shows, as far as possible, the distribution of expenditure (actual payments) in each State during 1962-63, as shown by records kept for Treasury purposes. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

POSTMASTER-GENERAL'S DEPARTMENT: DISTRIBUTION OF EXPENDITURE, 1962–63(a)

(£'000)

Particulars	Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Expenditure from Ordinary Services Votes—Votes—In the nature of salary Administration Stores and material Mail services Engineering services (other than capital works)	815 226 59 6,881	2,509 661 1,907	13,881 1,720 444 997 9,640	7,416 596 259 907 4,678	4,869 570, 197 440 3,045	3,225 339 110 253 2,269	1,803 191 67 133	6,151 1,797 11,518
Other services	140		i					140
Total	9,029	36,777	 26,682	13,856	9,121	6,196	3,479	105,140
Rent, repairs, maintenance		606	575	223	202	98	59	1,763
Capital works and services— Plant and equipment New buildings, etc	927	21,162 2,486	15,762 1,404	6,011 953	5,672 475	4,280 294	1,983 331	55,797 5,943
Grand Total	9,956	61,031	44,423	21,043	15,470	10,868	5,852	168,643

⁽a) The figures in this table represent actual payments made during the year as recorded for Treasury purposes.

POSTMASTER-GENERAL'S DEPARTMENT: EXPENDITURE, AUSTRALIA(a) (£'000)

Particulars	1958-59	1959–60	1960-61	1961–62	1962-63
Expenditure from Ordinary Service:	3		! !		
Salaries and payments in the nature o	f	ł	1	[
salary	42.042	48,174	48,691	50,430	51,128
Administration	4,784	5,318	5,811	6,115	6,151
Stores and material	2,508	2,563	2,567	2,373	1,797
Mail services	8,741	9,637	10,376	10,885	11,518
Engineering services (other than capita	l	1	1	1	
works)	36,342	40,604	41,006	43,185	34,406
Other services	88	108	142	125	140
Total	95,305	106,404	108,593	113,113	105,140
Rent, repairs, maintenance	1,376	1,374	1,543	1,659	1,763
Capital works and services—	ł]	1	1	1
Plant and equipment	32,209	35,658	37,296	40,511	55,797
New buildings, etc.	4,144	4,279	4,849	5,428	5,943
Other expenditure, not allocated to State	3,799	3,832	3,928	(b)	(b)
Grand Total	136,833	151,547	156,209	160,711	168,643

⁽a) See footnote (a) to previous table. Department.

⁽ii) Australia. The following table shows the distribution of expenditure (actual payments) of the Department for Australia as a whole for each of the years 1958-59 to 1962-63. The item "Administration" incorporates the items "General Expenses" and "Proportion of Auditor-General's Expenses" which had previously been shown separately.

⁽b) Items no longer debited against Postmaster-General's

5. Profit or Loss, Postmaster-General's Department.—The foregoing tables of gross revenue and expenditure represent actual collections and payments made, and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch, after providing for working expenses (including superannuation, pensions and depreciation) and interest charges (including exchange), are shown in the following table for the years 1961-62 and 1962-63.

POSTMASTER-GENERAL'S DEPARTMENT: PROFIT OR LOSS, BRANCHES (£'000)

		1962	-63		1961-62
Particulars	Postal	Tele- phone	Tele- graph	All branches	Ali branches
Earnings	49,922	93,554	7,993	151,469	140,206
Working expenses— Direct working expenses Management and administration ex-	43,667	48,804	5,389	97,860	97,142
penses	1,538	1,830	378	3,746	3,906
Depreciation Superannuation liability and pensions	696 2,728	21,044 3,906	568 506	22,308 7,140	13,706 7,328
Total Working Expenses (excluding Interest)	48,629	75,584	6,841	131,054	122,082
Profit or loss before charging interest	1,293	17,970	1,152	20,415	18,124
Interest	768	19,911	499	21,178	20,086
Profit or loss after charging interest	525	-1,941	653	-763	-1,962

Note.—Minus sign (-) denotes loss.

6. Fixed Assets.—The following table shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1962, to 30th June, 1963.

POSTMASTER-GENERAL'S DEPARTMENT: FIXED ASSETS

Class of plant	Value at	Adjust- ments to	Additions during	Instalments of plant	Value at 30th June, 1963	
	1962	values	year	written out	Amount	Per cent.
Telecommunications plant Postal plant Engineers' movable plant Motor vehicles Other plant and equipment Buildings Land	£'000 499,526 2,525 11,667 10,780 7,757 56,612 8,701	£'000 +17,862 +29 +101 -1,075 +3,284 +1,181	£'000 +59,040 +533 +1,689 +1,983 +1,141 +6,278 +347	£'000 -5,590 -31 -307 -1,219 -259 	£'000 570,838 3,056 13,150 10,469 11,923 64,071 9,044	83.6 0.5 1.9 1.5 1.8 9.4 1.3
Total	597,568	+21,382	+71,011	-7,410	682,551	100.0

Posts 609

§ 2. Posts

1. Postal Matter Dealt With.—(i) States, 1962-63. The following table shows a summary of the postal matter dealt with in each State during the year 1962-63. Mail matter posted in Australia for delivery therein is necessarily handled at least twice, but only the number of distinct articles handled is included in the following table.

POSTAL MATTER DEALT WITH(a), 1962-63

(0000)

State		Letters (b)	News- papers and packets (c)	Parcels (d)	Regis- tered articles (e)	Letters (b)	News- papers and packets (c)	Parceis (d)	Regis- tered articles (e)
		Posted fo	or delivery	within A	Lustralia	Post	ed for deli	very over	scas
New South Wales Victoria Queensland South Australia Western Australia Tasmania Australia	::	617,948 519,132 212,952 147,962 118,270 42,548 1,658,812	123,958 78,411 27,250 14,185 9,857 6,822 260,483	5,598 4,773 2,251 1,253 954 201 15,030	3,692 2,961 1,368 749 533 373 9,676	16,710	860 847 1,228 75	250 123 31 40 22 12 478	699 173 25 61 53 2 1,013
		Re	ceived fro	m oversea	ıs	Total	postal ma	tter dealt	with
New South Wales Victoria Victoria Oueensland South Australia Western Australia Tasmania Australia	::	49,623, 40,084 4,886 3,241 3,036 2,107 102,977	31,980 10,400 4,914 4,977 5,963 2,285 60,519	484 325 75 72 57 24	1,027 500 63 28 28 4	705,055 575,926 225,363 156,727 127,595 45,203 1,835,869	91,826 33,024 20,009 17,048 9,182	6,332 5,221 2,357 1,365 1,033 237 16,545	5,418 3,634 1,456 838 614 379

⁽a) Number of distinct articles handled.
enclosed in envelopes and sorted with letters.
(b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters.
(c) Includes newspapers and postal articles not included in letter mail.
(d) Includes registered, cash on delivery and duty parcels.
(e) Includes registered articles other than parcels.

(ii) Australia. The next table shows the total postal matter dealt with in Australia in relation to the mean population during each of the years 1958-59 to 1962-63.

TOTAL POSTAL MATTER DEALT WITH: AUSTRALIA

	Letters, po and letter						Newspapers Parcels(a		els(a)	article	Registered articles other than parcels	
Year		Total ('000)	Per million of mean popula- tion	Total ('000)	Per million of mean popula- tion	Total ('000)	Per million of mean popula- tion	Total ('000)	Per million of mean popula- tion			
1958-59		1,599,400	161	317,633	32	18,903	1.9	15,156	1.5			
1959-60		1,602,830	158	319,831	31	16,433	1.6	13,671	1.5			
1960-61		1,700,544	164	318,614	31	15,976	, 1.5	12,935	1.2			
1961-62		1,748,054	165	324,694	31	15,854	1.5	12,357	1.2			
1962-63		1,835,869	170	337,644	31	16,545	1.5	12,339	1.1			

(a) Includes registered, cash on delivery and duty parcels.

During 1962-63, the total amounts paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, were as follows:—road £4,123,000; railway £1,425,000; sea £255,000; air—internal £1,360,000, oversea £5,490,000; grand total £12,653,000.

2. Money Orders and Postal Notes.—The issue of money orders and postal notes is regulated by sections 74-79 of the Post and Telegraph Act 1901-1961. The maximum amount for which a single money order payable within Australia may be obtained is £40, but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent by any one person to a person or persons outside Australia is £A.10 a week. A postal note is not available for a sum larger than twenty shillings.

The following table shows the number and value of money orders and postal notes issued in Australia in each of the years 1958-59 to 1962-63.

MONEY OF	RDERS AN	POSTAL	NOTES:	TRANSACTIONS,	AUSTRALIA

			Money order	s	Postal notes				
Year		Iss	ued	Net	Issue				
		Number	Value	commission received	Number	Value	Poundage		
		'000	£,000	£'000	'000	£'000	£'000		
1958-59		9,420	87,034	643	18,012	8,845	347		
1959-60		9,535	94,335	805	16,492	8,380	324		
196061		9,652	100,760	867	15,959	8,194	307		
1961-62		(a) 10,176	(a)132,496	876 ,	15,514	8,096	307		
1962–63 .	• •	(a) 11,076	(a)153,433	929	16,330	8,620	321		

⁽a) Includes official money orders used in bringing to account telephone accounts and collections on War Service Homes repayments.

Of the total money orders issued in Australia during 1962-63, 10,683,000 valued at £152,209,000 were payable in Australia, and 393,000 valued at £1,224,000 were payable overseas. Of the total money orders paid in Australia during 1962-63, 10,660,000 (£151,889,000) were issued in Australia, and 168,000 (£1,045,000) were issued overseas.

Of the total postal notes paid in Australia during 1962-63 (16,624,000 valued at £8,803,000), 11,488,000 (£6,376,000) were paid in the State in which issued, and 5,136,000 (£2,427,000) were paid in States other than those in which issued.

§ 3. Telegraphs

- 1. General.—A review of the development of telegraph services in Australia up to 1921 appeared in Year Book No. 15, page 625, and subsequent developments of importance have been dealt with in later issues. During the past few years, substantial improvements in both the speed and grade of telegraph services throughout Australia have been effected, the entire system being subjected to intensive re-organization, and these matters have been dealt with in some detail in recent issues of this Year Book.
- 2. Telegraph and Telephone Mileage.—At 30th June, 1963, the combined single-wire mileages for both telegraph and telephone purposes were:—aerial, underground and submarine cables, 10,976,000 miles; trunk telephone and telegraph cables, 561,000 miles; aerial wires, 1,379,000 miles. There were 123,000 miles of pole routes. Joint use is made of poles for power and telephone reticulation.

- 3. Telegraph Offices.—The numbers of telegraph offices, including railway telegraph offices in the various States at 30th June, 1963, were:—New South Wales, 2,797; Victoria, 2,261; Queensland, 1,679; South Australia, 1,028; Western Australia, 954; Tasmania, 502; total, 9,221.
- 4. Telegrams.—The following table shows the number of telegrams dispatched to places within Australia and to adjacent islands and to ships at sea, according to the class of message transmitted.

TELEGRAMS DISPATCHED WITHIN AUSTRALIA, 1962-63 ('000)

		Paid and collect									
State	Or- dinary	Meteoro- logical	Urgent	Radio- grams	Press	Letter- grams	Total	(depart- mental)	tele- grams		
New South Wales Victoria Queensland South Australia Western Australia Tasmania	6,060 3,639 3,231 1,537 1,512 418	241 164 221 111 158 53	211 123 94 38 14	50 5 91 23 96 1	50 20 43 16 17 2	26 11 18 12 17 6	6,638 3,962 3,698 1,737 1,814 492	216 123 139 45 36 23	6,854 4,086 3,837 1,782 1,850 515		
Australia	16,397	948	492	266	148	90	18,341	582	18,924		

With the steady expansion of telephone and radio communication networks since the second world war, the number of telegrams dispatched to places within Australia and to adjacent islands and to ships at sea has decreased, with few interruptions of trend, since the peak of 35,970,000 in 1945-46.

For particulars of telegrams received from, and dispatched to, other countries, see § 5 para. 2, pages 613-4.

§ 4. Telephones

- 1. General.—Particulars of the total mileage of lines used exclusively for telephone purposes are not available, but are combined with all other line mileage. Particulars of the total single wire mileage used for telephone, trunk and/or telegraph purposes are shown in § 3, para. 2, p. 610. Developments in the telephone system in recent years have been dealt with in previous issues of this Year Book.
- 2. Summary.—Particulars relating to the telephone services in each State at 30th June, 1963, are shown in the following table.

TELEPHONE SERVICES: SUMMARY, 30th JUNE, 1963

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Exchanges Services in operation '000 Instruments in operation '000 (i) Subscribers' instruments '000 (ii) Public telephones '000 (iii) Other local instruments '000 Instruments per 100 of population	2,105	1,723	1,278	740	765	371	6,982
	695	569	226	162	106	54	1,812
	999	772	306	225	145	75	2,522
	979	753	296	218	140	72	2,458
	10	7	4	2	2	1	26
	10	12	6	5	3	2	38
	24.2	25.3	19.5	21.7	18.8	20.7	23.1

Of the total telephone services (1,812,181) in operation at 30th June, 1963, 688,790 or 38 per cent, were connected to exchanges situated beyond the limits of the metropolitan telephone networks, and 1,445,578 or 79 per cent, were connected to automatic exchanges.

During 1962-63, 1,809 million local calls and 84.5 million trunk line calls were made within Australia, averaging 998 local calls and 47 trunk calls per service.

- 3. Oversea Telephone Services.—Telephone circuits to other countries are provided by the Overseas Telecommunications Commission (see §5, para. 1) for conduct of these services by the Postmaster-General's Department. At 30th June, 1963, telephone calls could be made from Australia direct to 126 countries. International telephone calls to and from Australia during 1962-63 numbered 201,175, an increase of 65,511 or 48 per cent. over 1961-62. Switched radiotelephone services were established with Peru, West Irian and Guam during the year. The marked increase in traffic on the oversea service was brought about largely by the introduction of cable working to New Zealand in July, 1962.
- 4. World Telephone Statistics, 1963.—The following table shows the number of telephones in use in various countries with two million or more telephones at 1st January, 1963, together with the number per 100 of population and the proportion in each country to the world total.

	Соц	untry		Number of telephones ('000)	Telephones per 100 of population	Proportion of total (per cent.)	
United States	of Americ	a	••		80,969	43	50.9
United Kingd	om(b)	••	••		8,911	17	5.6
Japan(b)					7,356	8	4.6
Germany, Fed	leral Repu	blic of			7,047	12	4.5
Canada		•••	• •		6,330	34	4.0
U.S.S.R.					5,769	3	3.6
France					4,978	11	3.1
Italy	••				4,655	9	2.9
Sweden	••			[3,054	40	1.9
Australia(c)	•••	•••	•••		2,522	23	1.6
Spain				[2,096	7	1.3
Other			••		25,513		16.0
Total	••		••		159,200	••	100.0

WORLD TELEPHONE STATISTICS(a) AT 1st JANUARY, 1963

§ 5. Oversea Telecommunication Services; Radiocommunication Stations Authorized

1. General.—The Overseas Telecommunications Commission (Australia) is the authority responsible for the operation of Australia's external telecommunication services by cable and radio.

The Commission was established under the Overseas Telecommunications Act 1946-1948. This Act implemented, in Australia, a recommendation of the 1945 Commonwealth Telecommunications Conference for national ownership of the external telecommunication services of the British Commonwealth countries concerned and for the establishment of a representative advisory board, the Commonwealth Telecommunications Board, to coordinate their development.

⁽a) Partly estimated. Information derived, in the main, from The World's Telephones compiled by the American Telephone and Telegraph Company. (b) At 31st March, 1963. (c) At 30th June, 1963.

The Commission provides telegraph, telex, photo-telegraph, and, in conjunction with the Postmaster-General's Department, telephone services with oversea countries and Australian Territories. Leased one- and two-way circuits are also provided for large commercial users. In addition, it operates the Australian coastal radio services for communication with ships at sea in Australian waters and high frequency radio services for communication with ships in any part of the world. The Commission's coastal radio stations also provide certain services to a number of remote stations within Australia and its Territories.

Details of oversea communication systems operating in Australia prior to 1946 and developments leading to the establishment of the Commission were published in Year Book No. 37, pages 220-4.

To meet Australia's increasing demand for oversea communication channels, and because of limitations to performance and capacity inherent in current forms of telegraph cables and high frequency radio systems, the Commission, in partnership with the oversea telecommunications authorities of Britain, Canada and New Zealand, installed a large capacity telephone cable across the Pacific Ocean, connecting Australia, New Zealand and Canada via Suva and Honolulu. This project stemmed from the Pacific Cable Conference between representatives of Britain, Canada, Australia and New Zealand held in Sydney, 28th September to 20th October, 1959. Work was commenced in August, 1960, and the first section, between Australia (Sydney) and New Zealand (Auckland), opened in July, 1962. The next section, between New Zealand (Auckland) and Fiji (Suva), was opened in December, 1962, and the remaining section in December, 1963. This cable forms part of the British Commonwealth round-the-world large capacity cable scheme, in which a complementary cable between Britain and Canada (CANTAT) was officially opened in December, 1961. The two cable connexions are linked across Canada by a microwave system.

The Commonwealth cable system feeds into the United States of America network at Hawaii, and into the European network at London.

The Pacific Cable project is administered by a management committee consisting of representatives of the oversea telecommunication authorities of the four partner Governments.

2. International Telegrams.—(i) Number of Telegrams. The number of telegrams received from and dispatched overseas in each State during 1962-63 is shown hereunder.

INTERNATIONAL	TELEGRAMS,	1962-63
('000)	

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Received Dispatched	•••	737 725	(a) 400 475	104 107	72 80	80 85	(a) 21 21	1,414 1,493
Total	••	1,462	875	211	152	165	42	2,907

The traffic in international telegrams to and from Australia has not varied greatly in recent years.

(ii) Number of Words. Particulars of the international business, originating and terminating in Australia, transacted over the cable and radio services during 1962-63 are shown in the following table.

INTERNATIONAL TELEGRAMS: NUMBER OF WORDS, AUSTRALIA, 1962-63(a)
('000 words)

O .			Word	s transmitted	Word	rds received from-		
Class of	telegram		United Kingdom	Other countries	Total	United Kingdom	Other countries	Total
Letter			4,112	11,446	15,558	3,850	10,248	14,098
Ordinary			4,006	10,246	14,252	3,882	8,376	12,258
Press			5,811	2,167	7,978	7,142	2,611	9,753
Greetings			685	593	1,278	563	830	1,393
Government			62	632	694	216	1,267	1,483
Urgent			236	374	610	142	310	452
Other		• •		8	8	••	130	130
Total			14,912	25,466	40,378	15,795	23,772	39,567

(a) Year ended 31st March.

Words transmitted to "Other countries" included 10,676,000 words to other Commonwealth countries and 14,790,000 to foreign countries. Words received from "Other countries" included 10,928,000 words from other Commonwealth countries and 12,844,000 from foreign countries.

- 3. Oversea Telephone Services.—See § 4, para. 3, page 612 for particulars of these services.
- 4. Coast Stations.—At 30th June, 1963, there were 111 radio stations established at points around the Australian coast and 18 about the coast of Papua and New Guinea and other External Territories. During the year ended 31st March, 1963, the radio telegraph service of these stations handled 17,168,000 paid words, of which 6,104,000 were classified as ship traffic and 11,064,000 as fixed point to point traffic. The radio telephone service traffic extended over 96,217 paid minutes, 12,943 of which were taken up with ships calls and 83,274 to Australian Territories.
- 5. Radiocommunication Stations Authorized.—The following table shows particulars of the different classes of radiocommunication stations authorized in Australia and the External Territories at 30th June, 1963. Figures relate to radiocommunication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners' licences are shown on pages 619 and 623 respectively.

RADIOCOMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1963

Class of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	Ext. Terr.	Total
	•	Transi	MITTIN	G AND	RECEI	VING					
Fixed(a)— Aeronautical Services with other countries Outpost(b) Other	36 58 229 237	6 13 186	15 440 173	6 187 72	15 11 370 99	 16 30	12 192 33		98 82 1,434 833	26 44 566 85	124 126 2,000 918
Land(c)— Aeronautical Base—	56	27 947	33 631	11 387	15	7	7	1	157	18	175
Land mobile services Harbour mobile services Coast(d) Special experimental Mobile(e)—	1,354 28 30 114	17 14 114	22 16 36	8 14 40	244 23 13 40	164 9 21 11	 3 2	 	3,806 107 111 357	 18 10	3,838 107 129 367
Aeronautical Land mobile services Harbour mobile services Outpost Ship Amateur	319 14,405 176 202 1,205 1,497	229 9,658 120 328 1,414	222 5,066 54 288 710 496	92 4,181 43 178 254 586	124 2,363 75 260 230 331	28 1,037 38 37 210 152	30 235 542 15 22	169 45	1,044 37,114 506 1,507 /3,128 4,543	38 205 21 77 170 64	527 1,584
Total	19,946	13,073	8,202	6,059	4,213	1,767	1,109	282	 54,827 (f)	1,374	56,201
			RECEI	VING (ONLY						
Fixed(a) Mobile(e)	147	178 43	115 25	18 6	50	1	5		514 74	::	514 74
Total	147	221	140	24	50	1	5		588		588
		Fotal	Statio	ons At	JTHORI:	ZED					
Grand Total	20,093	13,294	8,342	6,083	4,263	1,768	1,114	282	55,415 (/)	1,374	56,789

⁽a) Stations established at fixed locations for communication with other stations similarly established.
(b) Stations established in out-back areas for communication with control stations such as those of the Royal Flying Doctor Service.
(c) Stations established at fixed locations for communication with mobile stations.
(d) Land stations for communication with ocean-going vessels.
(e) Equipment installed in aircraft (aeronautical), motor vehicles (land mobile services), harbour vessels (harbour mobile services) and ocean-going vessels (ships), and mobile equipment of organizations such as the Royal Flying Doctor Service.

(f) Includes 176 stations which cannot be classified according to State, etc.

BROADCASTING AND TELEVISION

§ 1. General

Broadcasting and television services in Australia operate under the Broadcasting and Television Act 1942-1963 and comprise the National Broadcasting Service, the National Television Service, the Commercial Broadcasting Service and the Commercial Television Service. General control of these services is a function of the Australian Broadcasting Control Board (see p. 616). Details of each service will be found on pages 617-22. Licence fees for commercial broadcasting and television stations are payable under the Broadcasting and Television Stations Licence Fees Act 1956.

The Australian Broadcasting Control Board, which was constituted on 15th March, 1949, consists of five (including two part-time) members and operates under the Ministerial jurisdiction of the Postmaster-General. No person shall be appointed a member of the Board who—

- (a) has any financial interest, whether direct or indirect, in any company which is the licensee of, or an applicant for a licence for, a commercial broadcasting station or a commercial television station, or manufactures or deals in equipment for the transmission or reception of broadcasting or television programmes;
- (b) is a member of the governing body of any company or other association of persons which is the licensee of, or an applicant for a licence for, a commercial broadcasting station or commercial television station; or
- (c) is a licensee of, or an applicant for a licence for, a commercial broadcasting station or commercial television station.

The Board's principal functions, as set out in Section 16 of the Broadcasting and Television Act 1942-1963 are—

- (a) to ensure the provision of services by broadcasting stations and television stations in accordance with plans from time to time prepared by the Board and approved by the Minister;
- (b) to ensure that the technical equipment and operation of such stations are in accordance with such standards and practices as the Board considers to be appropriate;
- (c) to ensure that adequate and comprehensive programmes are provided by commercial broadcasting and commercial television stations to serve the best interests of the general public; and
- (d) to detect sources of interference, and to furnish advice and assistance in connexion with the prevention of interference, with the transmission or reception of the programmes of broadcasting stations and television stations.

In addition, the Board may exercise such other functions as are prescribed in relation to broadcasting and television stations.

The Board may make recommendations to the Minister as to the exercise by the Minister of any power under Part IV (The Commercial Broadcasting Service and the Commercial Television Service) of the Act.

The Board has power-

- (a) subject to any direction of the Minister, to determine the situation and operating power of a broadcasting station or television station;
- (b) subject to any direction of the Minister, to determine the frequency of a broadcasting station and the frequencies of a television station, within bands of frequencies notified to the Board by the Postmaster-General as being available;
- (c) to determine the hours during which programmes may be broadcast or televised;
- (d) to determine the conditions subject to which advertisements may be broadcast or televised by licensees;
- (e) subject to any direction of the Minister, to regulate the establishment and operation of networks of commercial broadcasting stations or of commercial television stations and the making of arrangements by licensees for the provision of programmes or the broadcasting or televising of advertisements;
- (f) to conduct examinations as to the competency of persons to operate the technical equipment of broadcasting stations and television stations and to charge fees in respect of those examinations; and
- (g) to make recommendations to the Minister, regarding the grant of licences for television translator stations in areas where, in the opinion of the Board, satisfactory reception of television programmes is not being obtained from commercial television stations.

The Board is obliged to hold public inquiries into applications, made to the Minister, for licences for commercial broadcasting and commercial television stations in areas for which the Minister proposes to grant licences and into any other matter within its functions if the Board thinks it necessary or desirable, or the Minister so directs.

In exercising its powers and functions in relation to commercial broadcasting and commercial television stations the Board is obliged to consult representatives of those stations.

The Australian Broadcasting Commission, which consists of seven members, at least one of whom must be a woman, controls the activities of the National Broadcasting Service and the National Television Service.

§ 2. Broadcasting

- 1. The National Broadcasting Service.—(i) General. In sound broadcasting, the programmes of the National Broadcasting Service are provided by the Australian Broadcasting Commission, and the provision and operation of transmitters and technical facilities in the studios are the responsibility of the Postmaster-General's Department.
- (ii) Technical Facilities. At 30th June, 1963, the National Broadcasting Service comprised the following 72 transmitting stations, of which 62 were medium frequency and 10 high frequency.

Medium Frequency Stations-

New South Wales-2BL and 2FC, Sydney; 2AN, Armidale; 2BA, Bega; 2CO, Albury; 2CR, Orange; 2GL, Glen Innes; 2KP, Kempsey; 2LG, Lithgow; 2ML, Murwillumbah; 2NA and 2NC, Newcastle; 2NB, Broken Hill; 2NR, Grafton; 2NU, Tamworth; 2TR, Taree; and 2WN, Wollongong. Victoria—3AR and 3LO, Melbourne; 3GI, Sale; 3WL, Warrnambool; and

3WV, Horsham.

Queensland-4QG and 4QR, Brisbane; 4AT, Atherton; 4GM, Gympie; 4MI, Mount Isa; 4QA, Mackay; 4QB, Maryborough; 4QL, Longreach; 4QN, Townsville; 4QS, Toowoomba; 4QY, Cairns; 4RK, Rockhampton; 4SO, Southport.

South Australia-5AN and 5CL, Adelaide; 5CK, Port Pirie; 5LN, Port Lincoln; 5MG, Mount Gambier; 5MV, Renmark; 5PA, Penola; and 5WM, Woomera.

Western Australia-6WF and 6WN, Perth; 6AL, Albany; 6GF, Kalgoorlie; 6GN, Geraldton; 6NM, Northam; and 6WA, Wagin.

Tasmania-7ZL and 7ZR, Hobart; 7NT, Launceston; and 7QN, Queenstown. Northern Territory—8AL, Alice Springs; 8DR, Darwin; 8KN, Katherine; 8TC, Tennant Creek.

Australian Capital Territory—2CN and 2CY, Canberra.

Territory of Papua and New Guinea-9PA, Port Moresby; and 9RB, Rabaul.

High Frequency Stations-

VLI Sydney, New South Wales; VLG, VLH and VLR Lyndhurst, Victoria; VLM and VLQ Brisbane, Queensland; VLW and VLX Perth, Western Australia; and VLK and VLT Port Moresby, Papua.

The medium-frequency transmitters operate in the broadcast band 525 to 1,605 kilocycles per second. The high-frequency stations, using frequencies within the band 3 to 30 megacycles per second, provide service to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland, and in Papua and New Guinea and adjacent islands.

Many of the programmes provided by country stations are relayed from the capital cities, high-quality programme transmission lines being used for the purpose. A number of programme channels are utilized to link national broadcasting stations in the capital cities of Australia, and, when necessary, this system is extended to connect both the national and commercial broadcasting stations.

In June, 1963, 48 of the Australian medium-frequency stations were situated outside the six State capital cities. Additional country stations are to be established, and, when these additions are complete, the medium-tre uency and high-frequency stations together will provide for clear reception of the programmes of the National Broadcasting Service in practically every part of Australia.

- (iii) Programme Facilities. (a) General. The programmes of the Australian Broadcasting Commission cover a wide range of activities, which are indicated briefly in the following paragraphs. The proportion of broadcasting time allocated to the various types of programme during 1962-63 was as follows:—Classical music, 26.2 per cent.; light entertainment, 18.0 per cent.; light music, 10.3 per cent.; news, 7.3 per cent.; talks, 6.3 per cent.; sporting, 5.3 per cent.; drama and features, 3.7 per cent.; education, 3.6 per cent.; religious, 3.5 per cent.; Parliament, 3.5 per cent.; children's session, 2.8 per cent.; rural, 1.8 per cent.; and non-departmental, 7.7 per cent.
- (b) Music. The A.B.C., in addition to its extensive activities in the field of musical broadcasting, is one of the largest concert-giving organizations in the world. Its regular broadcasts command a large audience, and a total of 1,017,232 people attended A.B.C. concerts during 1962-63. There are symphony orchestras in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart, which have developed from the studio broadcasting orchestras set up in 1936.
- In 1962-63, the A.B.C. organized 638 public orchestral concerts (including 191 free concerts for school children and 38 free concerts for adults) and 170 public recitals by famous artists throughout the Commonwealth.
- (c) Drama and Features. Drama programmes are designed to give listeners opportunities, which they might not otherwise have, of hearing the world's great plays as well as adaptations of the best modern stage plays and also those written specially for broadcasting. The main regular radio drama programmes are broadcast on Sunday afternoons and Sunday and Monday evenings, and special series of longer plays are also given at various times. In recent years, the technique of the feature programme has also been developed. The feature is a form of entertainment which is unique to radio, consisting of specially written programmes designed to present information in an interesting way.
- (d) Youth Education. The A.B.C. provides a regular series of broadcasts to schools in all States as an addition to normal class-room education. The total number of listening schools at the end of June, 1963, was 9,944 or about 94 per cent. of all schools, State and private, throughout the Commonwealth. (See also Chapter XIX. Education, Cultural Activities, and Research, on this subject.)
- (e) Talks. The aim of the Talks Department is to provide programmes which will keep the listener well informed on current affairs, literature, science and general topics. Many of the talks in the first category are now presented in a magazine type of session consisting of a number of short items linked by a narrator. An extension of this type of programme is the documentary. Controversial issues are covered in sessions such as "Wednesday Forum", and "Any Questions" as well as in the commentaries. The weekday "News Review" and the weekly session, "World Report" give the background to current news developments recorded over landline from all States in the Commonwealth, or by radio telephone or cable from abroad.
- (f) Rural Broadcasts. The Rural Broadcasts Department exchanges programmes with several oversea countries and provides service, educational, and entertainment programmes all designed to be of value to the man-on-the-land and industries allied with primary production. Special programmes are designed for country women and junior farmers, while urban dwellers are provided with gardening programmes and shopping guides. A complete weather and marketing service is provided. Rural programmes are broadcast on a national, State, and regional basis, in the Territory of Papua-New Guinea, and on the Overseas Service (Radio Australia). The 23 officers at regional stations present specific information and educational programmes in relation to their own regions. During 1962-63, a total of 7,886 rural talks and interviews, as well as 8,934 weather reports and 7,128 market reports were broadcast.
- (g) News. The Commission collects all its Australian (including Papua and New Guinea) news through its own staff journalists and part-time correspondents. It also maintains a news room in London for the selection and transmission of news obtained from major oversea agencies, and has special representatives in south-east Asia. Regional bulletins are broadcast from country centres and also from capital cities to cover near-city districts. Radio Australia (the Overseas Service of the A.B.C.) broadcasts Australian and oversea news daily in English, French, Mandarin, Indonesian, Japanese, Cantonese, Vietnamese and Thai, with special attention to Asia and the Pacific. Each day, the A.B.C. broadcasts two news bulletins from the British Broadcasting Corporation. The A.B.C. broadcasts more than 186 news bulletins each day, including those given over Radio Australia.

(h) Other Activities. The proceedings of the Federal Parliament are broadcast regularly on one of the two national transmitters in each capital city, one in Newcastle and one domestic short-wave station (VLR).

The National Children's Hour, presented seven days a week, is composed of over 40 programme items, including stories, music, games, art, literature, natural history and sport.

In co-operation with the various religious denominations, the A.B.C. broadcasts several religious sessions each week-day in addition to those given on Sundays. These religious broadcasts include relays of normal church services and a variety of special programmes of talks and sacred music. The modern trend towards the use of religious drama is also followed.

The variety and sporting programmes of the A.B.C. provide the lighter side of the service. With its variety session, the policy of the A.B.C. is to assist local artists in order to increase the amount of first-class talent in this country, and encouragement is also given to Australian composers of light music.

A comprehensive coverage of sport at home and abroad is provided by the A.B.C. On Saturday afternoons, the sporting panel provides listeners with progress results, scores and descriptions from several fields of sport. Events of international interest such as Test matches and the Davis Cup are covered by simultaneous descriptions from A.B.C. commentators.

- 2. The Commercial Broadcasting Service.—Commercial broadcasting stations are operated under licences granted and renewed by the Postmaster-General after taking into consideration any recommendations which have been made by the Broadcasting Control Board. The initial period of a licence is five years and renewals are granted for a period of one year. The fee payable for a licence is £25 on the grant of the licence, and thereafter £25 a year plus one per cent. of the gross earnings of the station from the broadcasting of advertisements or other matter during the preceding financial year. Licensees of these stations rely for their income on the broadcasting of advertisements and other publicity.
- 3. Oversea Broadcasting Service. —There are eight high-frequency stations at Shepparton, Victoria, which provide the oversea service known as "Radio Australia". As in the case of the National Broadcasting Service, these stations are maintained and operated by the Postmaster-General's Department, and their programmes are arranged by the A.B.C. The programmes, which give news and information about Australia presented objectively, as well as entertainment, are directed mainly to south-east Asia and the Pacific. The oversea audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad.
- 4. Broadcasting Stations.—The following table shows the number of broadcasting stations in operation at 30th June, 1963.

Type of station	N S.W.	Vic.	Qld	S.A.	' W.A.	Tas.	N.T.	A.C.T.	Papua and New Guinea	Total
National— Medium frequency High frequency—	. 17	5	13	8	7	4	4	2	2	62
Domestic Oversea Commercial	37	3 8 20	2 21		2 14		:: 1			10 8 110

BROADCASTING STATIONS, 30th JUNE, 1963

Tables showing the call sign, location, frequency and aerial power of national and commercial broadcasting stations in operation at 30th June, 1963, are shown in *Transport and Communication*, Bulletin No. 54.

§ 3. Television

- 1. General.—Television services in Australia operate under the *Broadcasting and Television Act* 1942–1963 and comprise the National Television Service and the Commercial Television Service.
- 2. The National Television Service.—(i) General. The National Television Service is provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department. At 31st December, 1963, sixteen stations had been established.

Australian Capital Territory—ABC channel 3, Canberra; New South Wales—ABN channel 2, Sydney; ABHN channel 5, Newcastle-Hunter River area; ABWN channel 5a, Illawarra area; Victoria—ABV channel 2, Melbourne; ABEV channel 1, Bendigo area; ABRV channel 3, Ballarat area; ABLV channel 4, Latrobe Valley area; ABGV channel 3, Goulburn Valley area; Queensland—ABQ channel 2, Brisbane; ABDQ channel 3, Darling Downs area; ABRQ channel 3, Rockhampton area; South Australia—ABS channel 2, Adelaide; Western Australia—ABW channel 2, Perth; Tasmania—ABT channel 2, Hobart; ABNT channel 3, North Eastern Tasmania area.

Additional national television stations which had been authorized but had not commenced to operate at 31st December, 1963, are as follows.

New South Wales—Central Tablelands area (channel 1); Richmond-Tweed Heads area (channel 6); Bega-Cooma area (channel 0); Broken Hill area (channel 2); Grafton-Kempsey area (channel 2); Central Western Slopes area (channel 3); Murrumbidgee Irrigation area (channel 7); Upper Namoi area (channel 7); Manning River area (channel 1); South Western Slopes and Eastern Riverina area (channel 0); Victoria—Upper Murray area (channel 1); Mildura area (channel 4); Swan Hill area (channel 2); Queensland—Townsville area (channel 3); Cairns area (channel 9); Mackay area (channel 4); Wide Bay area (channel 6); Southern Downsarea (channel 1); South Australia—South East area (channel 1); Spencer Gulf North area (channel 1); Western Australia—Bunbury area (channel 5); Central Agricultural area (channel 4); Southern Agricultural area (channel 2).

It is planned that all services will be in operation by the end of 1966.

- (ii) Programme Facilities. (a) General. The television programmes provided by the A.B.C. cover a wide range of activities. The proportion of television time allocated among the A.B.C.'s various departments to 30th June, 1963, was as follows:—Drama and features, 22.1 per cent.; talks, 18.4 per cent.; sport, 11.1 per cent.; children's session, 10.8 per cent.; news, 9.1 per cent.; light entertainment, 8.0 per cent.; education, 7.4 per cent.; music, 3.2 per cent.; religion, 2.8 per cent.; rural services, 2.5 per cent.; non-departmental, 4.6 per cent. A summary of the activities of the departments in the field of television is given in the following paragraphs. Transmission hours for the year ended 30th June, 1963, totalled 20,765.
- (b) Talks. In television, talks also cover a wide and growing field, ranging from public affairs type programmes such as "Four Corners" to commentaries on international and Australian affairs and outside telecasts of public events. Film and studio documentaries, discussions on literature, art and science, topical programmes, interviews, magazine programmes, and demonstrations are all part of the regular output.
- (c) Drama and Features. A considerable proportion of television time is devoted to drama and features, and "live" television plays featuring Australian artists may usually be seen fortnightly in all State capitals. A Television Writers' Workshop gives writers practical advice on television writing. Of 29 live plays produced during 1962-63, 7 were by Australian authors.
- (d) Music. Extensive development has taken place in the A.B.C.'s television music programmes. Major operas, which are regularly produced in the studios, have achieved a progressively higher standard, and are now fully comparable with oversea productions. Television programmes by resident ballet companies have also been encouraged and further advances in this field are envisaged. The number of telecasts of A.B.C. and visiting oversea symphony orchestras has been increased, while telecasts of oversea and resident artists have become an established part of programme output.

(e) Rural Services. Weather reports and forecasts are telecast six evenings a week on National T.V. stations. In Sydney and Melbourne, there are two half-hour magazines each week, namely "Country Call" and "Town and Country". These include rural film items from all States, topical interviews and demonstrations. Gardening programmes are telecast weekly in Sydney and Canberra. Outside broadcast programmes are devised in all States at Royal Shows and other places of rural interest. The National Junior Farmer Radio and Television Competition is a major annual event. Film items are regularly exchanged with member countries of the European Broadcasting Union. In all States, a weekly programme is "To Market, To Market", a practical buying guide for housewives. A half-hour magazine programme, "Town and Country", which includes local interviews, demonstrations and films, and films syndicated from Sydney, is telecast weekly in Brisbane, Adelaide, Perth and Hobart.

The aim of rural broadcasts in television is to provide consumer-interest material for urban viewers and to convey to them aspects of food production and country life and to provide a rural news and extension service to farmer viewers.

- (f) Education. The A.B.C. provides daily television programmes for schools in all Australian States with certain series repeated to meet their convenience. Programmes for primary schools are of a supplementary type, while those for secondary schools are designed to contribute more directly to classroom instruction. In addition, there is a daily programme for pre-school children entitled "Kindergarten Playtime". At the adult level, there are two television programmes weekly, designed in series and known as "University of the Air" which are presented in the evenings. Initial programmes of a series based on university extension activities have also been transmitted.
- (g) News. Television news bulletins and newsreels have been included in the programmes presented in both Sydney and Melbourne since the television services began in November, 1956. Since then, those news items have been included in the programmes of other State capitals. The A.B.C. is a member of the British Commonwealth International Newsfilm Agency (B.C.I.N.A.), through which it receives world-wide television newsfilm and provides newsfilm of Australian origin for international distribution.
- (h) Other Activities. Special television programmes are presented for children, including filmed material obtained on an exchange basis from oversea television organizations. Special religious services and programmes have also been televised. Outside television cameras have covered a number of sporting events, including the Olympic Games, Davis Cup tennis, Test and Sheffield Shield cricket, swimming championships and the Commonwealth Games.
- 3. The Commercial Television Service.—Commercial television stations are operated under licences granted by the Postmaster-General. Licences for commercial television stations have been granted as follows:—Australian Capital Territory—Canberra area CTC (channel 7); New South Wales—Svdney ATN (channel 7), TCN (channel 9); CBN (channel 8), Central Tablelands area; NBN (channel 3), Newcastle-Hunter River area; RTN (channel 8), Richmond-Tweed Heads area; WIN (channel 4), Mlawarra area; Victoria—Melbourne GTV (channel 9), HSV (channel 7); BCV (channel 8), Bendigo area; BTV (channel 6), Ballarat area; GLV (channel 10), Latrobe Valley area; GMV (channel 6), Goulburn Valley area; Queensland—Brisbane BTQ (channel 7), QTQ (channel 9); DDQ (channel 10), Darling Downs area; TNQ (channel 7), Townsville area; RTQ (channel 7), Rockhampton area; South Australia—Adelaide ADS (channel 7), NWS (channel 9); Western Australia—Perth TVW (channel 7); Tasmania—Hobart TVT (channel 6); TNT (channel 9), north-eastern Tasmania area.

The initial grant of a licence is for a period of five years and thereafter the licence is renewable annually. The fee payable is £100 for the first year and thereafter £100 a year plus one per cent. of the station's gross earnings from the televising of advertisements or other matter during the preceding financial year.

4. Extension of Television Services.—On 22nd February, 1962, the Postmaster-General invited applications for the grant of a third commercial television station licence in the Sydney area, the Melbourne area, the Brisbane area and the Adelaide area and for a second commercial television station licence in the Perth area. Licences have been granted in respect of the Sydney and Melbourne areas and the Australian Broadcasting Control Board concluded its inquiries into applications received in respect of the other three areas on 19th September, 1963.

In accordance with the Government's policy of providing both a national and commercial service in each area to which television is extended, the Postmaster-General, on 4th October, 1962, announced that the Government had authorized him to grant licences for commercial television stations in the following areas.

New South Wales-Upper Namoi area, South Western Slopes and Eastern Riverina area, Grafton-Kempsey area; Victoria-Upper Murray area; Queensland-Wide Bay area.

On 18th September, 1963, the Postmaster-General announced the approval of the grant of the following further commercial television station licences.

New South Wales—Manning River area, Central Western Slopes area, Murrumbidgee Irrigation area, Broken Hill area; Victoria—Mildura area; Queensland—Cairns area, Mackay area, Southern Downs area; South Australia—South East area; Western Australia—Bunbury area.

The grant of licences for the Spencer Gulf North area and the Bega-Cooma area have been deferred, as the only applicant for a licence in each area did not desire to proceed with the application at present. The only application for a licence for the Murray Valley area was made on the basis that the applicant would accept licences for both the Murray Valley area and the Mildura area, but not for one area only. As the applicant was unsuccessful in obtaining the licence for the Mildura area, the grant of a licence for the Murray Valley area was deferred. No applications were received for the Southern Agricultural area and the Central Agricultural area of Western Australia.

When the stations commence operation, it is estimated that 91 per cent. of the Australian people will be able to receive a television service.

§ 4. Licences, Revenue from Fees, etc.

1. Broadcast Listeners' and Television Viewers' Licences.—(i) General. Broadcast listeners' and television viewers' licences are issued at post offices in accordance with the provisions of the Broadcasting and Television Act 1942–1963, which stipulates that, except as prescribed, a person shall not use, maintain or have in his possession a broadcast or television receiver unless there is in force a licence which applies to that receiver. A broadcast listener's licence authorizes the operation of any broadcast receiver, and a television viewer's licence any television receiver, which is—(a) in the possession of the holder of a licence, or of a member of his family, at the address specified in the licence and/or ordinarily kept at that address; (b) installed in a vehicle which is ordinarily in the possession of the holder, or a member of his family, and is ordinarily kept at that address while not in use.

The fee for a broadcast listener's licence or a renewal thereof is:—Zone 1, £2 15s.; Zone 2, £1 8s. Zon: I is the area within approximately 250 miles of specified broadcasting stations and Zone 2 is the remainder of the Commonwealth. The fee for a licence granted to certain types of pensioners is 10s. in Zone 1 and 7s. in Zone 2.

A licence may be granted free of charge to a blind person over 16 years of age or to a person or authority conducting a school. Inmates of a hospital or charitable institution are covered by the licence held by the institution.

The fee for a television licence is £5 except in the case of certain classes of pensioners who pay a fee of £1 5s. Licences are granted free to blind persons and to schools.

Each broadcast or television receiver let out on hire (except under a hire purchase agreement) must be covered by a hirer's licence held by the person or firm from whom the receiver is hired. Rented receivers are not authorized by an ordinary listener's or viewer's licence. A hirer's licence may be granted in respect of one or a number of broadcast receivers or in respect of one or a number of television receivers for any period not exceeding twelve months.

The keeper of a lodging house (which includes a hotel, motel, boarding house or any other premises where lodging or sleeping accommodation is provided for reward) must take out a licence for each broadcast or television receiver (other than a receiver provided by a lodger or tenant for his own use) installed in any room or part of the lodging house occupied or available for occupation by lodgers or tenants.

(ii) Broadcast Listeners' Licences. (a) Number in Force. The following table shows the number of broadcast listeners' licences in force at five-year intervals from 1925 to 1960 and for 1963.

At 30	At 30th June—		N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
1925			34,857	20,290	1,267	3,331	3,562	567	63,874
1930			111,253	140,072	23,335	25,729	5,755	6,048	312,192
1935			279,166	237,247	67,546	76,515	41,257	20,121	721.852
1940			458.256	348,264	151,152	124,928	87,790	42,191	1,212,581
1945(c)	••		548,074	394,315	180,089	146,611	98,210	47,930	1.415.229
1950(c)	••		683,271	505,078	260,033	195.261	133,199	64,369	1.841.211
1955`	••		746.050	549,690	293,542	223,593	150,199	71,602	2,034,676
1960		••	832,659	606,587	344,198	249,148	171,693	78,900	2,283,185
1963			802,046	607,036	334,566	256,741	165,637	73,760	2,239,786

BROADCAST LISTENERS' LICENCES IN FORCE

(b) Revenue Received from Fees. The following table shows the revenue received from broadcast listeners' licence fees for the years 1958-59 to 1962-63.

REVENUE RECEIVED FROM BROADCAST LISTENERS' LICENCE FEES (£'000)

Year		N.S.W.(a)	Vic.	Qid	S.A.(b)	W.A.	Tas.	Aust.	
1958–59		2,116	1,528	812	621	422	192	5,691	
1959–60		2,023	1,545	846	626	420	196	5,656	
1960–61		1,992	1,488	827	619	419	191	5,536	
1961–62		1,957	1,452	797	615	407	185	5,413	
1962–63		1,937	1,493	792	626	407	179	5,434	

⁽a) Includes the Australian Capital Territory.

(iii) Television Viewers' Licences. (a) Number in Force. The following table shows the number of television viewers' licences in force each year at 30th June, 1958 to 1963.

TELEVISION VIEWERS' LICENCES IN FORCE

At 30th June—		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.	
1958 1959 1960 1961 1962 1963			143,422 300,871 409,334 488,516 564,707 637,766	147,721 270,073 353,091 401,395 460,558 530,256	360 67,337 113,954 142,422 178,391	6,124 84,967 124,808 143,794 167,502	35,604 69,628 83,951 95,907	(a) { 43 74 4,662 18,985 29,003 45,503	291,186 577,502 954,995 1,217,286 1,424,435 1,655,325

⁽a) These licences were for television sets in the north coast area of Tasmania which were able to receive programmes from Victoria,

Of 1,655,325 television viewers' licences in force at 30th June, 1963, 71,309 were held by short-term hirers, and therefore could not be separated into metropolitan licences or country licences. Persons living in the metropolitan area held 1,161,693 or 73 per cent. of the remainder. Short-term hirers' licences (included above) at 30th June, 1963, were:—New South Wales, 18,343; Victoria, 13,029; Queensland, 13,064; South Australia, 16,956; Western Australia, 6,960; and Tasmania, 2,957.

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⁽a) Includes the Australian Capital Territory. (b) Includes the Northern Territory. (c) Excludes licences for receivers in excess of one. These licences were introduced in July, 1942, and were abolished on 31st December, 1951.

Of the 2,239,786 broadcast listeners' licences in force at 30th June, 1963, 1,312,174 or 58.6 per cent. were held by persons living in metropolitan areas and 927,612 or 41.4 per cent. by persons in country areas. Short-term hirers' licences (included above) at 30th June, 1963, were:—New South Wales, 504; Victoria, 100; Queensland, 150; South Australia, 581; and Western Australia, 13.

⁽b) Includes the Northern Territory.

(b) Revenue Received from Fees. The following table shows the revenue received from television viewers' licence fees during the years 1958-59 to 1962-63.

REVENUE RECEIVED FROM TELEVISION VIEWERS' LICENCE FEES (£'000)

Year		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1958-59 1959-60 1960-61 1961-62 1962-63	::	1,449 1,994 2,292 2,623 2,993	1,298 1,717 1,938 2,170 2,491	(a) 321 542 664 827	27 406 594 651 7 92	165 324 380 462	(b) 21 91 138 213	2,775 4,624 5,781 6,626 7,778

(a) £262,

(b) £356.