

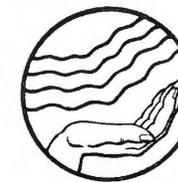


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Australian Broadcasting Control Board

TWENTY-SECOND
ANNUAL REPORT
FOR YEAR ENDED
30 JUNE 1970

COMMONWEALTH OF AUSTRALIA



TWENTY-SECOND ANNUAL REPORT

**AUSTRALIAN BROADCASTING
CONTROL BOARD**

YEAR ENDED 30 JUNE 1970

CONTENTS

	PAGE		PAGE
PART I: INTRODUCTORY	1	Grant of New Licences	44
Legislation	1	Renewal of Licences	47
Membership of the Board	2	Fees for Licences for Commercial Broad- casting Stations	49
Functions of the Board	2	Transfer of Licences and Leasing of Stations	50
Meetings of the Board	3	Ownership or Control of Commercial Broadcasting Stations	50
Staff of the Board	4	Limitation of Interests in Commercial Broadcasting Stations	51
State Organisations	5	Important Changes in Shareholdings in Broadcasting Stations	52
Location of Board's Offices	6	Memoranda and Articles of Association of Licensee Companies	53
Financial Accounts of the Board	6	Directorships of Commercial Broad- casting Stations	53
PART II: GENERAL	6	Networks of Commercial Broadcasting Stations	54
The Australian Broadcasting and Tele- vision Services	6	Operation of Country Commercial Broad- casting Stations as Relay Stations	55
Licensing of Commercial Broadcasting and Television Stations	7	PART IV: BROADCASTING—	
Annual Statistics of Stations and Receiving Licences	7	TECHNICAL SERVICES	56
Financial Results of Broadcasting and Television Services	8	Development of the National Service	56
Commercial Broadcasting Stations — Financial Results	9	Development of the Commercial Service	58
Commercial Television Stations — Financial Results	9	Directional Aerials	59
Expenditure on the National Broadcasting Service and National Television Service 1969-70	10	High Frequency Broadcasting Services	59
Revenue from Broadcasting and Tele- vision Services	10	Broadcasting Services in Territory of Papua and New Guinea	60
Receiving Licences	11	Interference to the Reception of Broad- casting Programmes	60
Employment	12	Standards for the Technical Equipment and Operation of Medium Frequency Broadcasting Stations	61
Further Development of the Services	12	Meetings of the C.C.I.R. (Comité Con- sultatif International des Radiocom- munications)	61
Frequency Modulation Broadcasting	16	Radio Research Board	62
Satellite Television Relays	18	Standards Association of Australia	62
Possible use of Space Satellites for Tele- vision Broadcasting	20	PART V: BROADCASTING—	
Educational Television	23	PROGRAMME SERVICES	63
Broadcasting and Televising of Political Matter	26	Types of Programmes	63
Availability to the Public of Records of Matter Broadcast and Televised	33	News	65
Cigarette Advertising	33	Religious Broadcasts	65
Consultation with Licensees' Representa- tives and Other Organisations	34	Community Service	66
The Australian UNESCO Committee for Mass Communication	35	Broadcasting in Foreign Languages	66
Australian/New Zealand Agreement on Medium Frequencies	36	Employment of Australians	67
Broadcasting and Television Overseas— Overseas Visits	38	Advertising	69
Cable Television	39	Medical Advertisements and Talks	70
Colour Television	39	Broadcasting of Objectionable Matter	70
Intrusions at Broadcasting Stations	42	Programme Research	71
Publications and Information	42	Hours of Service	71
PART III: BROADCASTING—		PART VI: TELEVISION—	
ADMINISTRATION	43	ADMINISTRATION	72
Current Licences for Commercial Broad- casting Stations	43	Current Licences for Commercial Tele- vision Stations	72

CONTENTS—continued

	PAGE		PAGE
Grant of New Licences	72	Censorship and Classification of Imported Programmes	107
Renewal of Licences for Commercial Television Stations	73	Family and Children's Programmes	108
Fees for Licences for Commercial Television Stations	74	Religious Programmes	109
Transfer of Licences	75	Advisory Committee on Religious Programmes	110
Ownership or Control of Commercial Television Stations	75	Advertising	111
Limitation of Interests in Commercial Television Stations	76	Televising of Objectionable Matter	113
Important Changes in Shareholdings in Television Stations	76	Programmes Encouraging Superstitious Beliefs	114
Memoranda and Articles of Association of Licensee Companies	78	Programme Research	114
Licences for Television Repeater Stations	79	Hours of Service	115
Development of Television Services	80	ACKNOWLEDGEMENTS	116
Television Translator Stations	82	APPENDICES	
PART VII: TELEVISION—TECHNICAL SERVICES	85	A—Commercial Broadcasting Stations in Operation on 30th June, 1970	117
Technical Facilities and Operation of Stations	85	B—National Broadcasting Stations in Operation on 30th June, 1970	122
Unattended Operation of Television Transmitters	86	C—Papua-New Guinea—Administration Broadcasting Stations in Operation on 30th June, 1970	125
Technical Conditions and Sites for Proposed Stations	86	D—Commercial Television Stations in Operation on 30th June, 1970	126
Provision of Permanent Television Service, Cairns Area	87	E—National Television Stations in Operation on 30th June, 1970	129
Television Translator Stations	88	F—Commercial Television Translator Stations in Operation on 30th June, 1970	132
Technical Aspects of Television Repeater Stations	91	G—National Television Translator Stations in Operation on 30th June, 1970	134
Standard Intermediate Frequencies for Television Receivers	92	H—Commercial Television Stations—Principal Shareholders in Licensee Companies	136
Colour Television	93	I—Multiple Interests of Newspapers and Others in Broadcasting and Television Stations	144
X-Ray Radiation from Television Receivers	94	J—Newspaper Interests of a Minor Nature in Commercial Broadcasting Stations and Commercial Television Stations	158
Interference to Reception of Television Programmes	96	K—Colour Television Questionnaire	160
Television Operator's Certificate of Proficiency	96	L—Technical Standards for the Australian Television Service—Explanatory Notes and Brief Specification	162
Experimental Investigations	97	M—Technical Standards for the Australian Television Service	165
Community Television Aerial Systems	97	N—Statistical Analysis of Broadcasting Programmes	177
Meetings of the C.C.I.R. (Comité Consultatif International des Radiocommunications)	98	O—Statistical Analysis of Television Programmes	181
World Administrative Radio Conference for Space Communications	98	P—Third Report to the Australian Broadcasting Control Board by the Advisory Committee on Religious Programmes	186
PART VIII: TELEVISION—PROGRAMME SERVICES	99	Q—Statement of Receipts and Payments for the Year Ended 30th June, 1970	195
Analysis of Programmes	100		
Television Programme Standards	101		
Employment of Australians	104		
News	106		

AUSTRALIAN BROADCASTING CONTROL BOARD

* TWENTY-SECOND ANNUAL REPORT

The Honourable the Postmaster-General:

1. In conformity with the provisions of section 28 of the *Broadcasting and Television Act 1942-1969*, the Australian Broadcasting Control Board has the honour to furnish its report, being the Twenty-second Annual Report of the Board, on its operations during the year ended 30 June 1970, together with financial accounts in the form approved by the Treasurer, and the report of the Auditor-General on those accounts.

2. The Report is arranged as follows:

- Part I—Introductory.
- Part II—General.
- Part III—Broadcasting—Administration.
- Part IV—Broadcasting—Technical Services.
- Part V—Broadcasting—Programme Services.
- Part VI—Television—Administration.
- Part VII—Television—Technical Services.
- Part VIII—Television—Programme Services.

PART I—INTRODUCTORY

LEGISLATION

3. The broadcasting and television services of the Commonwealth operate under the provisions of the *Broadcasting and Television Act 1942-1969*. Other relevant acts are the *Broadcasting Stations Licence Fees Act 1964-1966*, the *Television Stations Licence Fees Act 1964-1966* and the *Parliamentary Proceedings Broadcasting Act 1946-1960*. Under the latter Act, the Australian Broadcasting Commission is obliged to broadcast the proceedings of the Senate or the House of Representatives from one of the national broadcasting stations in each capital city and Newcastle and from such other national broadcasting stations as are prescribed, according to the determinations of a Parliamentary Joint Committee.

4. On 4 March 1970 the Postmaster-General introduced a Bill into Parliament to amend the *Broadcasting and Television Act 1942-1969*. The amendments proposed by the Bill are as follows:

- (a) amendments to the provisions of the Act dealing with the finances of the Board and the Australian Broadcasting Commission and certain other provisions affecting the Commission;

- (b) extension of concessions applying in respect of fees for broadcast listeners' licences for certain classes of pensioners to several additional small groups of pensioners; and,
- (c) amendment of the provisions of the Act governing the ownership or control of commercial broadcasting and television stations.

The proposed amendments of the provisions of the Act relating to the finances of the Board (and of the Commission) are designed to bring those provisions into line with the legislative provisions applying to other Commonwealth statutory authorities.

5. Information on the proposed amendments to the provisions relating to ownership or control of stations is given later in the appropriate parts of this Report.

6. At the time this report was being written, the Bill had not been debated by the Parliament.

MEMBERSHIP OF THE BOARD

7. The Act provides that the Board shall consist of three full-time and two part-time members. During the year the Board consisted of:

Full-time Members

- Mr. Myles Fortunatus Evelyn Wright, appointed Chairman for a period of five years from 15 March 1966.
- Mr. John Miskel Donovan, Vice-Chairman, re-appointed for a period of five years from 15 March 1966.
- Mr. Donald McDonald, B.Sc., re-appointed from 6 May 1970 to 23 June 1973.

Part-time Members

- Dr. William Cropley Radford, M.B.E., M.A., M.Ed., Ph.D., re-appointed for a period of three years from 6 November 1967.
- Mr. George Conrad Hannan, appointed for a period of three years from 30 August 1968.

8. As mentioned in the Board's Twenty-first Annual Report the Broadcasting and Television Act was amended in 1969 to provide for appointment of a full-time Member of the Board as Vice-Chairman. Mr. J. M. Donovan was appointed Vice-Chairman of the Board on 20 September 1969. In announcing the appointment the Postmaster-General referred to Mr. Donovan's long association with the Board, including membership since 1963 and extended his best wishes to Mr. Donovan in his new office.

FUNCTIONS OF THE BOARD

9. The principal functions of the Board under the *Broadcasting and Television Act 1942-1969* are briefly as follows:

- (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 stations and commercial television stations to serve the best interests of the general public, and to determine programme standards and standards subject to which advertisements may be broadcast or televised;
- (d) to detect sources of interference, and to furnish advice and assistance in connection with the prevention of interference with the transmission or reception of the programmes of broadcasting stations and television stations;
- (e) to make recommendations to the Minister as to the exercise by him of any of his powers under Part IV of the Act relating to the commercial broadcasting service or commercial television service; this part of the Act covers *inter alia* the grant, renewal, revocation and suspension of licences, including licences for television translator and repeater stations, and the provisions concerning ownership or control of commercial stations;
- (f) to hold public inquiries into applications made to the Minister for licences for commercial broadcasting stations and commercial television stations in areas for which the Minister proposes to grant licences, into any other matter within its functions if the Board thinks it necessary or desirable, and into other matters relating to the operation of the Act and regulations or to broadcasting or television or both, other than a matter relating to the Australian Broadcasting Commission, its affairs and operations, if the Minister so directs; and
- (g) to determine, subject to any direction of the Minister, the situation, operating power and operating frequencies of broadcasting and television stations;
- (h) to determine hours of service of stations and the periods during which licensees of commercial stations must transmit religious matter (free of charge if the Board so directs).

Other detailed functions of the Board are referred to, where appropriate, in this Report. There is some confusion at times in regard to the responsibilities of the Board and the Australian Broadcasting Commission in regard to programmes. It will be noted from sub-paragraph (c) above that the Board's functions in respect of programmes do not extend to the programmes of national stations. For these the Australian Broadcasting Commission is entirely responsible under section 59 of the Broadcasting and Television Act.

MEETINGS OF THE BOARD

10. During the year the Board, apart from its regular meetings, held a special meeting in Alice Springs, Northern Territory on 23 September 1969, for the purpose of holding a public inquiry into an application for the grant of a licence for a commercial broadcasting station in Alice Springs (see paragraph 201).

11. The Board also held meetings in Mt. Isa, Queensland on 24 February 1970, in Darwin, Northern Territory on 10 and 11 March 1970, and in Kalgoorlie, Western Australia on 8 April 1970, for the purpose of holding inquiries into applications for the grant of licences for commercial television stations in Mt. Isa, Darwin and Kalgoorlie respectively (see paragraph 337).

12. A meeting was also held in Cooma on 25 November 1969, concerning the application for renewal of the licence for station 2XL Cooma (see paragraph 216).

13. The Board met in Brisbane on 26 February 1970, in Perth on 7 April 1970, and in Sydney on 5 May 1970, when business included a meeting with the Commonwealth Film Censorship Board.

STAFF OF THE BOARD

14. The Head Office organisation of the Board consists of four divisions, namely the Secretary's Division, the Policy and Licensing Division, the Technical Services Division and the Programme Services Division. The staff at Head Office as approved by the Public Service Board numbers 127 and there are 59 officers in the State Offices.

15. During the year, the Board, in accordance with the usual practice, made available the services of members of the Board's staff on a considerable number of occasions to present papers, lectures, etc., to various organisations. Some of this work is outlined in the following paragraphs.

16. Mr. S. F. Brownless, Director, Technical Services Division, addressed the New South Wales Division, Television and Electronic Technicians Institute of Australia (TETIA) and the Research staff of Kodak (Australia) Pty. Ltd. on the choice of the PAL system of colour television for Australia.

17. Mr. Brownless also addressed a meeting of The Engineering Committee of the Federation of Australian Commercial Television Stations and chief engineers of commercial television stations in Melbourne in relation to current technical developments in television.

18. Mr. G. Morley, Senior Engineer, presented a lecture on colour television to the Brisbane Division of the Institute of Radio and Electronic Engineers. Mr. Morley also participated in a seminar on colour television sponsored by the Victorian Division of TETIA.

19. Engineering officers of the Board continued associations with certain educational institutions as lecturers. The Director, Technical Services Division (Mr. S. F. Brownless) became a member of an advisory committee established by the Department of Technical Education, N.S.W. in connection with its Television Studio Techniques Course.

20. At the invitation of the Australian Broadcasting Commission two members of the Board's staff, Messrs. Brownless and Dixon, constituted part of the Australian delegation to meetings of the engineering committee of the Asian Broadcasting Union (ABU), comprising national broadcasting organisations in the Asian-Pacific Area, in Sydney from 11-16 October 1969, at which twenty-nine delegates from fifteen countries were present.

21. Following the ABU meeting, a two-day Seminar on the development and operation of sound broadcasting services was arranged by the Australian Post Office, in association with the engineering committee meetings of the ABU, in response to the desire of the International Telecommunications Union for such meetings to be arranged as a form of technical assistance to developing countries. The Board's representatives led one of the three sessions.

22. Mr. D. A. Jose, Director, Programme Services Division, gave addresses to several groups of persons actively associated with broadcasting and television, and was a member of the organising committee for a UNESCO Seminar on Developing in Schools a Critical Study of Film and Television, held in Melbourne in June 1970.

23. Addresses were given by officers of the Programme Services Division to adult and student groups concerning television and children.

24. Mr. R. J. Powell, Senior Research Officer, Programme Services Division, presented a paper at the ANZAAS Congress—A Study of Television Viewing Behaviour of Children at the Early Stages of Secondary Education.

STATE ORGANISATIONS

25. The staff of the Board in the State Offices now consists of 35 officers of the Programme Services Division and 24 officers of the Technical Services Division. This staff is responsible, *inter alia*, for maintaining liaison with the managements and key staff of all commercial broadcasting and television stations in each State concerning the Board's standards in relation to the services, and for observations and inspections in relation to the requirements of such standards. The State Engineer in South Australia is responsible for technical matters in Western Australia and the State Engineer in Victoria for such matters in Tasmania.

26. In paragraph 18 of the Twenty-first Annual Report, reference was made to arrangements then being made for the Board's own staff to assume responsibility for certain technical duties in relation to broadcasting stations, including the important matter of technical inspections of stations, which had been carried out on behalf of the Board by engineering officers of the Post Office. It was reported that the Public Service Board had approved proposals for additional technical staff in State offices to undertake these duties; the proposals involve inspections of both broadcasting stations and television stations on an integrated basis by three technical staff teams in New South Wales and two in other States.

27. The staffing positions were created in October 1969. Finality is now being reached in recruitment and training of staff and it should be possible for the work in question to be undertaken by Board staff later this year. The Board will then be directly responsible for all work in the States in connection with its statutory responsibilities, except a degree of field-strength survey work in relation to broadcasting stations, which it will take the Board's staff some time to absorb entirely, and matters relating to field activities in the correction of interference to reception. (Under the Broadcasting and Television Act the detection and prevention of interference to reception is a function of the Board but the Act provides that the Post Office may provide facilities and services for this work at the request and expense of the Board.) This will end a situation which has existed since the Board

was established in 1949 when the Post Office carried out various duties in the States on behalf of the Board. Transfer of these duties to the Board's staff began with the establishment of offices of the Board in each State in 1956-1957.

28. The new arrangements for the technical inspection of broadcasting stations will have many benefits both for the Board and stations, from the direct contact of the Board's staff with station operators and the closer integration of inspections with the Board's general activities.

29. The Board is most grateful for the services which the Postmaster-General's Department has rendered to the Board for many years in connection with the technical inspection of broadcasting stations.

30. During the year the Board paid the Postmaster-General's Department an amount of \$237,854 for investigations of interference, technical inspections of commercial broadcasting stations in all States and field strength measurements of national and commercial broadcasting stations, carried out by the Department on the Board's behalf.

LOCATION OF BOARD'S OFFICES

31. The Board's Head Office and Victorian State Office are located at 373 Elizabeth Street, Melbourne, 3000, and offices in the other capital cities are:

Sydney	109-113 Pitt Street, 2000
Brisbane	130 Petrie Terrace, 4000
Adelaide	97 King William Street, 5000
Perth	254 Adelaide Terrace, 6000
Hobart	148B Collins Street, 7000

FINANCIAL ACCOUNTS OF THE BOARD

32. In conformity with the provisions of section 28 of the *Broadcasting and Television Act 1942-1969*, a statement of financial accounts of the Board for the year ended 30 June 1970, together with the report of the Auditor-General as to those accounts, appears as Appendix Q of this Report.

PART II—GENERAL

THE AUSTRALIAN BROADCASTING AND TELEVISION SERVICES

33. The Australian broadcasting and television services comprise the national and commercial broadcasting services and the national and commercial television services. The national broadcasting and television services are provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department. The commercial broadcasting and television services are provided by stations operated under licences granted by the Postmaster-General. There are also eight broadcasting stations in Papua-New Guinea, authorised under the Wireless Telegraphy Act. These are conducted by the Papua-New Guinea Administration. Details of broadcasting stations (commercial, national and Adminis-

tration) and television stations, including translator stations (commercial and national) in operation on 30 June 1970 are contained in Appendices A to G respectively of this Report.

LICENSING OF COMMERCIAL BROADCASTING AND TELEVISION STATIONS

34. The statutory provisions relating to the licensing of commercial broadcasting and television stations are contained in Part IV of the *Broadcasting and Television Act 1942-1969*. The power to grant, renew, suspend, or revoke a licence is conferred upon the Minister who is required to take into consideration any recommendations which have been made by the Board as to the exercise of such powers. Licences are granted for an initial period of five years, and are thereafter renewable annually. In respect of the grant and renewal of licences, the Act provides:

- Before granting a new licence, the Minister is obliged to invite applications for the grant of the licence in the *Commonwealth Gazette*, and to refer the applications which are received to the Board, which must hold a public inquiry into the applications before making a recommendation to the Minister as to the grant of the licence.
- The Minister is not to refuse an application for the renewal of a licence unless he has considered a report by the Board made after a public inquiry into specified grounds which either the Minister or the Board thinks may exist for refusing the application.

Details regarding current licences and renewals of licences will be found in paragraphs 191 to 220 (broadcasting) and 336 to 345 (television) of this Report.

ANNUAL STATISTICS OF STATIONS AND RECEIVING LICENCES

35. The following table shows the progressive development in the number of broadcasting and television stations and listeners' and viewers' licences since the inception of broadcasting in 1923 and television in 1956:

Year Ending	Number of Broadcasting Stations in Operation		Number of Listeners' Licences	Number of Television Stations in Operation		Number of Viewers' Licences	Number of Combined Listeners' and Viewers' Licences
	National	Commercial		National Commercial			
Sealed Sets System							
30 June—							
1924	4	....	1,206	....	....	....	....
	Class 'A'	Class 'B'					
1925	7	6	63,874	....	....	....	....
1926	8	9	128,060	....	....	....	....
1927	8	12	225,240	....	....	....	....
1928	8	12	270,507	....	....	....	....
1929	8	12	301,199	....	....	....	....
	National	Com- mercial					
1930	8	13	312,192	....	....	....	....
1931	9	27	331,969	....	....	....	....
1932	12	43	369,945	....	....	....	....

Year Ending	Number of Broadcasting Stations in Operation		Number of Listeners' Licences	Number of Television Stations in Operation		Number of Viewers' Licences	Number of Combined Listeners' and Viewers' Licences
	National	Commercial		National	Commercial		
1933	12	48	469,477	.....	.....	.....	.....
1934	12	53	599,159	.....	.....	.....	.....
1935	12	57	721,852	.....	.....	.....	.....
1936	14	73	825,136	.....	.....	.....	.....
1937	20	80	940,068	.....	.....	.....	.....
1938	24	94	1,057,911	.....	.....	.....	.....
1939	24	98	1,131,861	.....	.....	.....	.....
1940	26	100	1,212,581	.....	.....	.....	.....
1941	27	96	1,293,266	.....	.....	.....	.....
1942	27	97	1,320,073	.....	.....	.....	.....
1943	27	96	1,370,000	.....	.....	.....	.....
1944	28	98	1,394,880	.....	.....	.....	.....
1945	29	100	1,415,229	.....	.....	.....	.....
1946	29	100	1,436,789	.....	.....	.....	.....
1947	32	101	1,678,276	.....	.....	.....	.....
1948	33	102	1,703,970	.....	.....	.....	.....
1949	37	102	1,762,675	.....	.....	.....	.....
1950	39	102	1,841,211	.....	.....	.....	.....
1951	41	103	1,884,834	.....	.....	.....	.....
1952	42	103	1,961,044	.....	.....	.....	.....
1953	44	105	1,985,655	.....	.....	.....	.....
1954	46	106	2,041,615	.....	.....	.....	.....
1955	50	106	2,034,676	.....	.....	.....	.....
1956	53	107	2,088,793	.....	.....	.....	.....
1957	55	108	2,107,253	2	4	73,908	.....
1958	56	108	2,137,865	2	4	291,186	.....
1959	57	108	2,263,712	2	4	577,502	.....
1960	57	108	2,283,183	6	10	954,995	.....
1961	60	110	2,255,842	6	10	1,217,286	.....
1962	61	110	2,220,462	6	20	1,424,435	.....
1963	62	110	2,239,786	10	22	1,655,325	.....
1964	65	110	2,301,790	18	24	1,882,099	.....
1965	65	111	1,927,628	24	30	1,614,611	430,014
1966	69	111	679,096	34	39	378,819	1,846,855
1967	70	111	549,714	38	41	416,809	1,988,326
1968	73	114	487,248	39	42	426,780	2,092,612
1969	73	114	440,529	39	45	459,774	2,189,683
1970	74	114	395,533	41	45	483,114	2,274,860

In addition to the abovementioned national broadcasting stations, there were, as at 30 June 1970, nine national high frequency (short-wave) stations providing services to listeners in remote areas.

FINANCIAL RESULTS OF BROADCASTING AND TELEVISION SERVICES

36. In the year 1968-69, the latest for which complete information is available, \$145,498,080 were spent on the operation of broadcasting and television services, by the Australian Broadcasting Commission, the Post Office and licensees of commercial stations. Revenue of commercial broadcasting and television stations totalled \$117,533,168 and their combined operational expenditure was \$92,829,808. Operational expenditure (by the Australian Broadcasting Commission, the Post Office and the Departments of Interior and Works) on the National Broadcasting Service and the National Television Service totalled \$55,833,978, less revenue of \$3,165,706 derived by the Australian Broadcasting Commission from public concerts, etc.

Commonwealth revenue in the same year from broadcast listeners' and television viewers' licence fees amounted to \$45,124,656.

COMMERCIAL BROADCASTING STATIONS—FINANCIAL RESULTS

37. The following particulars, which have been extracted from accounts submitted by the licensees of commercial broadcasting stations since 1942 in accordance with the provisions of section 106 of the *Broadcasting and Television Act* 1942-1969, show the financial results from the operation of such stations during the past 28 years:

Financial Year	Number of Stations in Operation	Stations Making a Profit	Stations Showing a Loss	Total Revenue	Total Expenditure	Net Result—Profit
				\$	\$	\$
1941-42	97	53	44	2,659,754	2,496,376	163,378
1942-43	96	66	30	2,596,594	2,314,588	282,006
1943-44	98	87	11	3,743,704	2,983,934	759,770
1944-45	100	89	11	4,369,372	3,517,810	851,562
1945-46	100	86	14	4,559,440	3,702,084	857,356
1946-47	101	85	16	4,777,174	4,026,726	750,448
1947-48	102	86	16	5,548,744	4,556,638	992,106
1948-49	102	90	12	6,424,506	5,238,948	1,185,558
1949-50	102	84	18	6,356,720	5,497,188	859,532
1950-51	102	88	14	7,214,996	6,184,518	1,030,478
1951-52	103	87	16	8,659,350	7,459,108	1,200,242
1952-53	105	93	12	9,833,114	8,276,026	1,557,088
1953-54	106	94	12	11,294,988	9,174,468	2,120,520
1954-55	106	95	11	13,373,848	10,505,662	2,868,186
1955-56	107	104	3	14,764,952	11,741,588	3,023,364
1956-57	108	104	4	14,914,310	11,917,260	2,997,050
1957-58	108	103	5	17,095,448	13,144,160	3,951,288
1958-59	108	107	1	18,950,530	14,187,502	4,763,028
1959-60	108	107	1	20,502,690	15,313,994	5,188,696
1960-61	110	107	3	21,958,906	16,665,630	5,293,276
1961-62	110	109	1	22,024,520	17,177,194	4,847,326
1962-63	110	108	2	22,718,394	17,808,312	4,910,082
1963-64	110	107	3	22,919,536	18,272,106	4,647,430
1964-65	111	105	6	24,549,697	19,205,468	5,344,229
1965-66	111	105	6	26,471,792	19,727,363	6,744,429
1966-67	111	107	4	27,906,545	21,179,084	6,727,461
1967-68	114	105	9	31,441,292	23,440,472	8,000,820
1968-69	114	103	11	34,548,366	25,232,151	9,316,215

COMMERCIAL TELEVISION STATIONS—FINANCIAL RESULTS

38. The following particulars, which have been extracted from accounts submitted by licensees of commercial television stations since 1957, in accordance with the provisions of section 106 of the *Broadcasting and Television Act* 1942-1969, show the financial results from the operation of such stations during the past twelve years:

Financial Year	Number of Stations in Operation	Stations Making a Profit	Stations Showing a Loss	Total Revenue	Total Expenditure	Net Result—Loss (-), Profit (+)
				\$	\$	\$
1957-58	4	3	1	5,957,004	6,070,798	- 113,794
1958-59	4	4	.....	11,888,402	10,311,920	+ 1,576,482
1959-60	10	5	5	20,638,436	17,508,984	+ 3,129,452

Financial Year	Number of Stations in Operation	Stations Making a Profit	Stations Showing a Loss	Total Revenue	Total Expenditure	Net Result Loss (-), Profit (+)
1960-61	10	9	1	\$ 29,236,146	\$ 23,557,692	+ 5,678,454
1961-62	20	10	10	30,117,412	25,183,874	+ 4,933,538
1962-63	22	11	11	37,571,948	31,578,394	+ 5,993,554
1963-64	24	18	6	41,902,702	36,154,916	+ 5,747,786
1964-65	31	22	9	49,695,326	44,049,610	+ 5,645,716
1965-66	39	26	13	57,643,433	54,138,155	+ 3,505,278
1966-67	41	32	9	66,394,178	61,294,874	+ 5,099,304
1967-68	42	33	9	76,419,851	67,597,657	+ 8,822,194
1968-69	45	37	8	82,984,802	67,597,657	+ 15,387,145

EXPENDITURE ON THE NATIONAL BROADCASTING SERVICE AND NATIONAL TELEVISION SERVICE 1969-70*

39. Expenditure in relation to the National Broadcasting Service and the National Television Service (including both programme and technical services) during 1969-70 was as shown hereunder together with comparative figures for 1968-69 and 1967-68:

	1969-70	1968-69	1967-68
<i>Operational Expenditure—</i>			
Australian Broadcasting Commission	\$ 47,354,686	\$ 42,833,968	\$ 38,718,186
Postmaster-General's Department—Transmission, technical and other services	10,065,945	9,478,305	8,172,112
Departments of Interior and Works	195,518	355,999	376,061
	57,616,149	52,668,272	47,266,359
<i>Capital Expenditure—</i>			
Australian Broadcasting Commission	2,000,009	1,600,003	1,500,134
Postmaster-General's Department	1,963,679	3,153,640	2,512,342
Departments of Interior and Works	1,429,508	2,543,668	3,680,058
	5,393,196	7,297,311	7,692,534
Total Expenditure	63,009,345	59,965,583	54,958,893

40. The gross operational expenditure of the Australian Broadcasting Commission was \$51,006,790 but revenue amounting to \$3,652,104 was derived from public concerts, subsidies for symphony orchestras, sale of publications, the sale of news services and miscellaneous sources.

REVENUE FROM BROADCASTING AND TELEVISION SERVICES

41. Commonwealth revenue received in 1969-70 from broadcasting and television services which excludes wireless telegraphy fees, amounted to \$51,251,309 as shown hereunder, together with comparative figures for 1968-69 and 1967-68:

* Compiled from details in the Budget Papers under broadcasting and television services, as being applicable to the national broadcasting and television services authorised under the Broadcasting and Television Act 1962, excluding the following expenditure also shown in the Budget Papers: Australian Broadcasting Control Board, \$1,529,139. Postmaster-General's Department, \$1,194,743 (being \$52,748 for subsidies to commercial broadcasting stations for landline services for news relays and \$1,091,995 for direct expenditure under the Wireless Telegraphy Act and \$50,000 for other costs of administration of the Wireless Telegraphy Act that are recorded in the Budget Papers with 'other administrative costs applicable to broadcasting and television activities').

	1969-70	1968-69	1967-68
Broadcast listeners' and television viewers' licence fees	\$ 48,389,146	\$ 45,124,656	\$ 39,182,168
Broadcasting stations' licence fees	345,358	309,598	299,233
Television stations' licence fees	1,491,104	1,392,432	1,143,681
Miscellaneous	1,025,701	917,192	845,415
	51,251,309	47,743,878	41,470,497

RECEIVING LICENCES

42. The following tables show the various classes of receiving licences which were current on 30 June 1970:

Listeners' Licences

Class of Licence	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Commonwealth
Ordinary	83,532	51,386	58,416	55,949	28,961	6,633	284,877
Hirers	94		31	17		1	143
Lodging House	8,543	4,196	3,492	1,533	1,447	615	19,826
Pensioner	31,287	16,143	19,483	10,519	7,236	2,791	87,459
Total	123,456	71,725	81,422	68,018	37,644	10,040	392,305
Short-term Hirers	447	326	785	1,580	56	34	3,228

Viewers' Licences

Class of Licence	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Commonwealth
Ordinary	74,189	61,425	29,746	13,934	10,923	5,774	195,991
Hirers	357	271	1,197	869	811	147	3,652
Lodging House	6,457	4,693	3,557	2,027	1,804	396	18,934
Pensioner	14,155	8,819	5,587	2,120	2,115	1,095	33,891
Total	95,158	75,208	40,087	18,950	15,653	7,412	252,468
Short-term Hirers	100,261	32,154	29,778	40,488	23,060	4,905	230,646

Combined Receiving Licences

Class of Licence	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Commonwealth
Ordinary	699,493	579,142	251,823	200,044	134,558	57,288	1,922,348
Pensioner	133,391	93,782	48,803	31,727	23,557	10,613	341,873
Free	3,436	2,533	2,118	1,150	864	538	10,639
Total	836,320	675,457	302,744	232,921	158,979	68,439	2,274,860

43. The fee for a broadcast listener's licence is \$6.50 for zone 1, which includes all places within a radius of 250 miles from broadcasting stations specified by the Board. All except 20,002 of the broadcast listeners' licences current on 30 June 1970 were issued in zone 1. The fee for such licences in zone 2, which comprises all other areas is \$3.30. The fee for licences granted to certain types of pensioners is \$1.00 in zone 1 and 70 cents in zone 2.

44. The fee for a television viewer's licence is \$14.00 except in the case of certain classes of pensioners who pay a licence fee of \$3.00. The fee for a com-

bined receiving licence for both broadcasting and television, which is obtainable only in zone 1, is \$20.00, the fee for a pensioner's combined receiving licence is \$4.00.

45. Combined receiving licences are granted free of charge to blind persons and schools.

EMPLOYMENT

46. The number of people permanently employed by commercial broadcasting and television stations at 30 June 1970 was approximately 7,200; the fully employed staff of the Australian Broadcasting Commission numbered 5,772 and the Australian Post Office employed 608 in connection with the operation of transmitters for the national service. In addition, some 1,203 persons are employed full-time by the various independent production companies which are engaged in the production of commercials and feature programmes for broadcasting and television. No estimate exists of the number of people who earn all or most of their living as freelance performers.

Section 114 of the Act provides that:

- (1.) The Commission and licensee shall, as far as possible, use the services of Australians in the production and presentation of broadcasting and television programmes.
- (2.) Not less than 5 per centum of the time occupied by programmes of the Commission, and not less than 5 per centum of the time occupied by the programmes of a commercial broadcasting station, in the broadcasting of music shall be devoted to the broadcasting of works of composers who are Australians.
- (3.) In this section, 'Australian' means a person who was born or is ordinarily resident in Australia.

In connection with this provision of the Act, the Board has determined certain requirements for the Australian content of television programmes on commercial stations. Detailed comment on these matters will be found in paragraphs 306 to 314 (broadcasting) and 457 to 465 (television).

FURTHER DEVELOPMENT OF THE SERVICES

Broadcasting

47. The Board's Twenty-first Annual Report referred to an overall review of the development of the broadcasting services which had been commenced by the Board. The review is directed to ensuring that the technical structure of the medium frequency broadcasting services reflects, having regard to growth in the population and economic activity of the nation, the fullest use of frequency channels and the most comprehensive broadcasting service that can be provided from resources available in the medium frequency band. It was indicated that work on the review during 1968-69 had resulted in approval by the Postmaster-General of recommendations by the Board for the establishment of national broadcasting stations in the North Western area of N.S.W. and the Streaky Bay area of S.A.; however, further progress had not been possible at that stage due to the fact that negotiations were taking place with the New Zealand Administration on the agreement with that country designed to avoid mutual interference between broadcasting stations, which imposes certain restrictions on the uses of frequencies.

48. On 17 October 1969, the Postmaster-General, following recommendations by the Board, was able to announce approval of the establishment of national broadcasting stations at Julia Creek, Hughenden and Mossman in Queensland and at Leigh Creek in South Australia. The Postmaster-General's statement said that the total cost of the four stations would be nearly \$600,000. These proposals are further referred to in paragraph 254.

49. During 1969-70 field investigations were continued in various parts of the Commonwealth. Consideration of possible means of improving broadcasting services calls for very detailed technical surveys; optimum solutions can only be arrived at after consideration of various factors studied in the area including soil conductivity, population distribution, and topography. Areas visited included Gosford, Nowra, Taree and Moruya, New South Wales, Weipa, Cooktown and Thursday Island, Queensland, and Alice Springs, Katherine, Tennant Creek and Gove in the Northern Territory.

50. The agreement with New Zealand is referred to in paragraphs 153 to 158. On 19 January 1970 the Postmaster-General made a statement on the prospects which ratification of the agreement opens up for further development of the broadcasting services. The statement was reported as follows:

Significantly improved radio broadcasting services to some areas of Australia were fore-shadowed today by the Postmaster-General, Mr. Alan Hulme.

Mr. Hulme said that improvements would be possible following the signing of a new agreement between Australia and New Zealand on the use of medium frequencies.

Under International regulations, he said, only 108 frequencies are available for domestic radio broadcasting stations in the medium frequency band. Australia and New Zealand are equally entitled to make use of all these frequencies, but because of the proximity of the two countries, and the fact that broadcast waves travel for long distances at night, it is necessary that we co-operate closely.

The new agreement, which replaces one signed in 1950, takes note of modern techniques such as directional aerials which make possible closer sharing of frequencies.

Mr. Hulme said that Australia had already progressed a long way in the sharing of frequencies. At present there are 78 national and 117 commercial stations operating or approved in this country — sharing the 108 frequencies available.

However, now that the new agreement is finalised, the Australian Broadcasting Control Board has advised me that it will be able progressively to plan for improving the coverage of some existing stations, and to present to me plans for providing a service where there are deficiencies at present.

The Minister emphasised that progress would be gradual. The frequency spectrum was already so crowded that every move had to be most carefully prepared. In many cases a new station could not be considered until alterations had been made to the operating conditions of one or more existing stations.

However, Mr. Hulme said, the Control Board expects during this year to recommend to me the establishment of a number of new national stations, and one or two commercial stations. Further developments will take place over the next year or two.

The Minister added that it was not practicable at this stage to disclose areas where improvements would be made. This information would be made available progressively as planning proceeded.

51. On 26 February 1970 and 31 July 1970, the Postmaster-General on recommendations of the Board invited applications for licences for a commercial broadcasting station at Gosford, New South Wales, and at Nowra, New South Wales respectively. In statements on these matters the Postmaster-General indicated that the

Board's recommendations were results of the completion of the agreement with New Zealand. The invitations for applications for licences at Gosford and Nowra are further referred to in paragraphs 192 to 200.

52. On account of the complexities of interpolating into the medium frequency band the proposals which are necessary to allow authorisation of new stations and improved conditions for existing stations, progress with further development of the broadcasting services must necessarily be gradual, as the Postmaster-General indicated. As the Minister stated, the frequency aspects of these matters can involve alterations to existing allocations.

53. General reference has been made to the difficulties in the matter in recent Annual Reports. Nevertheless, the progress so far made is a matter for great satisfaction. The new national broadcasting stations and the proposed new commercial broadcasting stations referred to above will provide service in the case of the national stations to some 20,000 people in generally remote but important areas, and in the case of the commercial stations to some 100,000 people in the very important Gosford and Nowra areas.

54. Representations for the establishment of commercial broadcasting stations in a number of areas were referred to in the Twenty-first Annual Report. The invitation for applications for licences for a commercial station at Gosford and Nowra determined cases where there had been longstanding public interest. As the Board's review proceeds careful account will, of course, be taken of all proposals received in respect of other centres.

55. There have likewise been some pressing representations for improved operating conditions from some existing commercial broadcasting stations and for improvements of the national broadcasting service in certain areas. Reference to some decisions made in regard to the commercial service is contained in paragraphs 262 and 263. It is expected that it will be possible to make some further significant progress in examination of these matters during the year. As has been indicated in earlier reports, an additional consideration in regard to the extension of the commercial service by new stations is the necessity to establish the financial viability of a proposed station. Prospects of commercial success must be considered a prerequisite to the grant of a licence for a commercial station, as a station must be able to earn sufficient income to operate in accordance with the requirements of the Act and the Board's standards.

Television

56. Paragraphs 46 to 49 of the Board's Twenty-first Annual Report gave an account of matters relating to the Postmaster-General's invitation on 21 August 1969 of applications for the grant of licences for commercial television services at Mt. Isa, Kalgoorlie and Darwin, which are areas included in the sixth stage of television development, and the Postmaster-General's announcement on 15 May 1969 of plans for the establishment of national television stations in a further 38 areas in the seventh stage of development.

57. The Board held public inquiries into applications for commercial television stations in the Mt. Isa, Kalgoorlie and Darwin areas during the year. Reference is made to the matter in paragraphs 337 to 340.

58. The implementation of the seventh stage of television development represents a very formidable task. As the Postmaster-General's statement on the matter (paragraph 49 of the Twenty-first Annual Report) indicated, some of the low power stations to be established in the 38 areas concerned will be located along Post Office broadband communication routes using the normal television channel or, where one is not provided, the "standby" bearer for the telephony system; in other cases, however, the centres concerned are not on broadband telephone routes and require the provision of minimum type microwave links specially for the purpose of providing programmes to the stations. In all cases, technical surveys have been necessary by the Board's technical staff in conjunction with staff of the Postmaster-General's Department, which is involved both in regard to its responsibilities for the erection of national stations and the provision of programme relay facilities. This work has involved travel of some 14,000 miles for each staff member and vehicle engaged in the surveys and, because of the extreme remoteness of the areas concerned, activity by technical staff under conditions of some difficulty; likewise there were considerable logistical difficulties in the assembling of staff and equipment for the conduct of the work, including its integration with the Board's other commitments in the technical sphere. The necessary surveys have been carried out in all areas and the analysis of results and preparation of reports is proceeding.

59. The Postmaster-General indicated in his statement that the stations are to be established over the four year period to 1972-73. The Minister has said that he will make a statement on expected dates of commencement of services by the stations as soon as possible. It has not to this stage been possible to arrive at a firm timetable for completion of all the stations in view of the fact that the technical planning is, as outlined in the previous paragraph, such an extensive task. However, information on expected completion dates of some stations is given in paragraph 365.

60. There has been considerable representation in regard to the fact that national television stations in the seventh stage of television development will be of low power and consequently restricted in their areas of service. There have been many requests that the stations should be of high power. In its Twenty-first Annual Report, the Board commented "it is important that the special character of the services to be established in this further stage of television development should be fully appreciated. The low population density in the areas concerned would make it economically impracticable to provide high-power stations in such places. The only acceptable solution is therefore to provide transmitters to serve the small centres where most of the population is concentrated. Outside these centres it is not anticipated that the sparse, widely scattered population will receive a service. The extent of this problem is illustrated by the fact that the 38 stations are expected to serve only about 110,000 people."

61. The plan for the seventh stage was evolved after the most careful attention to the economics of the provision of service to remote areas and the Government's desire to extend the amenity of television to as many people as possible in these parts. It is clear that in the present state of technological development, the provision of television service to relatively remote areas of sparse population can be implemented only by means of low-power stations. In such areas, costly high-power stations would inevitably involve a very considerable wastage in capital expenditure.

62. The Board's Twenty-first Annual Report (paragraphs 51 to 53) referred to plans of the Mining Industry Council for the establishment and operation by mining companies of television stations in a number of remote localities on the basis that programmes will be provided on magnetic tape by the Australian Broadcasting Commission. It was indicated that the Broadcasting and Television Act had been amended to provide for the grant of licences for such stations which will be known as "television repeater stations", and for the Australian Broadcasting Commission to make programmes available on tape to the stations.

63. A great deal of consultation between the Board, the Council, individual mining companies and the Australian Broadcasting Commission took place during the year to resolve in detail the equipment and mode of operation of this special type of television station. The stations are an interesting innovation in the Australian television system which has since 1956 been confined to national and commercial services.

64. The Postmaster-General announced the grant of licences to five mining companies for eight repeater stations on 30 April 1970. Details of the proposed stations are given in paragraph 362.

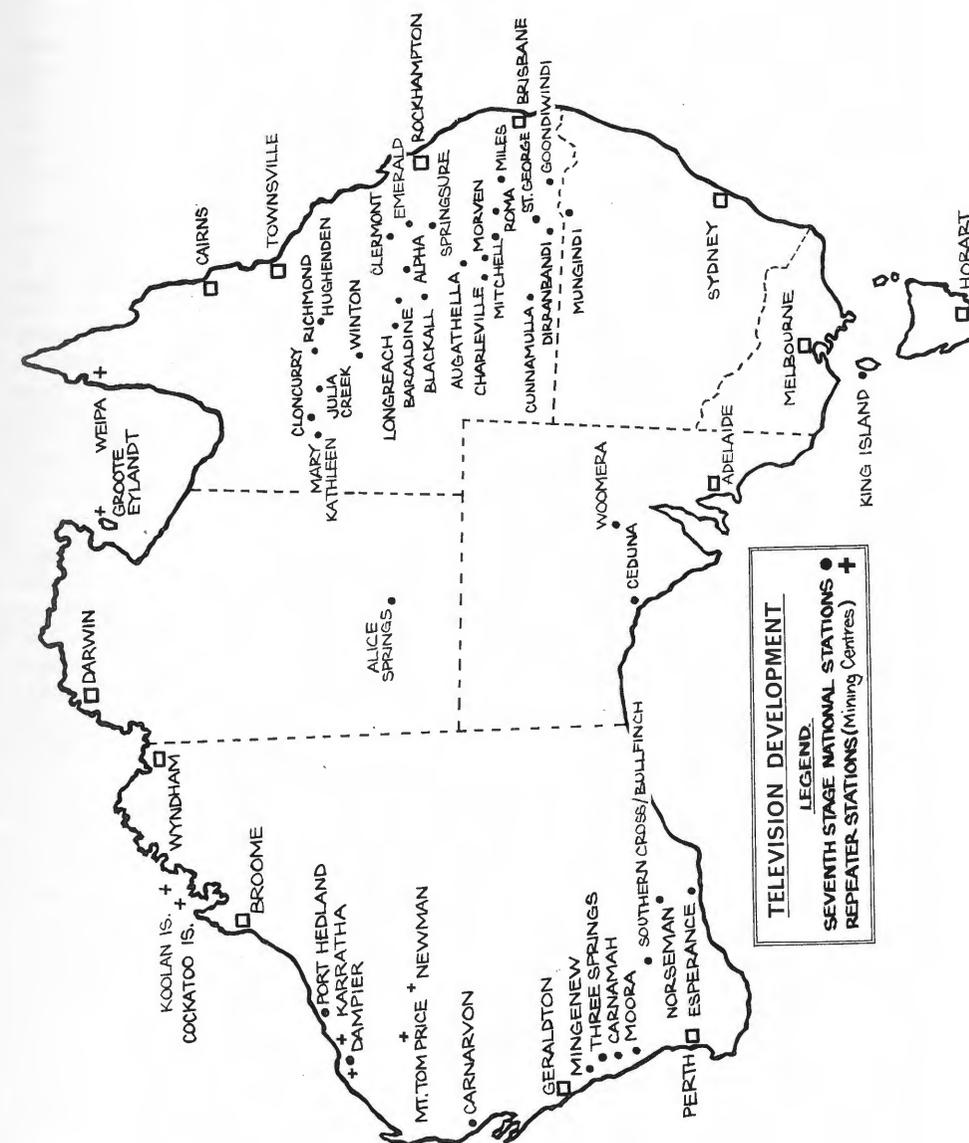
65. It is expected that these stations will commence operations progressively during the latter months of 1970. National television stations to be established in 38 areas in the seventh stage of television development and the television repeater stations to be established in eight mining centres represent a very significant extension of television to remote areas. See map showing the localities concerned on opposite page.

66. Television translator stations continue to prove a valuable means of extending television services. Cases in point are the proposals for the provision by this means of television service to the south coast area of New South Wales and the Wagin-Katanning Area of Western Australia of which an account is given in paragraphs 387 and 392 respectively. As indicated in paragraph 368, the Minister approved recommendations made by the Board during the year for the establishment of translator stations in 9 areas and investigations of the possibilities of using translator stations in other areas are proceeding as rapidly as time and available staff permit.

67. An important development of Australian television was the opening by the Postmaster-General on 9 July 1970 of the Post Office East-West broadband communication link which extends from Northam, Western Australia, to Port Pirie, South Australia. The link made possible direct relay of television programmes between eastern States and Western Australia. The inauguration of the television relay facility was marked by the televising on national television stations in all States of a special one-hour live television programme "Project Australia".

FREQUENCY MODULATION BROADCASTING

68. The Postmaster-General in reply to a question in the House of Representatives on 7 May 1970 announced that he proposed to request the Board to hold a public inquiry into frequency modulation broadcasting. The Minister said:



Mr. Speaker, as I have indicated to the House on a number of occasions, the Government regards as its first responsibility the provision of broadcasting and television facilities for all the people in this country. At the present time there are quite a number of areas in Australia which do not have a proper reception either of broadcasting or television. Many of these are outback areas of the larger states. The introduction of frequency modulation broadcasting would of course be an expensive operation.

There is no doubt that with this system there is high fidelity of sound, avoidance of static and so on, and that there are a large number of channels available in the ultra high frequency range. As to the economic aspects from the point of view of cost to the producer, the cost of establishment of stations, the cost to the individual who would purchase a set and the number who would purchase a set, I cannot express a view. It has been indicated to me that there is considerable doubt about the economics and that has been the experience in other countries. The situation would be more doubtful here in Australia.

I know there is a good deal of public interest in this matter. The Australian Broadcasting Control Board did make an investigation and held an inquiry in 1957 or 1958. I think it was a public inquiry. A good deal of water has flowed under the bridge since that time. There seems to be a good deal of public comment on this matter. Much of it is I believe uninformed and merely picks up a catch-cry from the comments of those who may have some knowledge. I believe the time is opportune for a further public inquiry to be held and I will ask the Australian Broadcasting Control Board to conduct such an inquiry. Within the course of the next few days I will make available to the Parliament the terms of reference for that inquiry.

69. The Postmaster-General announced the terms of reference for the inquiry on 14 May 1970 as follows:

The Minister, pursuant to his powers under Section 18(2.) of the *Broadcasting and Television Act 1942-1969*, directs the Australian Broadcasting Control Board to hold an inquiry in accordance with the provisions of Division 3 of Part II of the Act into the desirability or otherwise of introducing frequency modulation broadcasting into the Commonwealth. The inquiry should embrace all the technical and economic factors involved having regard particularly to any existing shortcomings in the broadcasting services, and to the experience of overseas countries which are making use of frequency modulating services. As soon as possible after the conclusion of the inquiry, the Board shall make a report and recommendation to the Minister.

While the report will be made to me it is my intention to make the report available to Honourable Members and the public subsequent to its receipt by me.

70. The Board gave notice on 10 June 1970 in accordance with section 20 of the Act that the inquiry will be held in Sydney and Melbourne and in such other places as may be determined by the Board (if necessary), at dates and times to be determined by the Board. The notice was published in metropolitan and provincial daily newspapers throughout the Commonwealth on 17-18 June 1970. An appropriate press release was also made.

71. Any person wishing to give evidence at the inquiry must give notice to the Secretary of the Board in writing on or before 25 September 1970 and supply, with such notice, a statement of the evidence he intends to submit.

SATELLITE TELEVISION RELAYS

72. The past year saw several notable occurrences in regard to the relay of television programmes to Australia by satellite.

73. The year commenced auspiciously with the telecasts of the United States Apollo 11 mission including the first lunar landing and lunar walk. Historically this must be regarded as the most remarkable material ever to have been televised, and it

is of particular significance that the television coverage of "Man's first walk on the Moon" (from 12.56 p.m. to 3.17 p.m. on 21 July 1969) was brought to the world through Australian facilities. The C.S.I.R.O. radio-telescope at Parkes (N.S.W.) received the picture direct from the Moon; it was carried by landline to Sydney, where it was made available to the Australian television networks. The picture was then transmitted via the Overseas Telecommunications Commission (Australia) (The O.T.C.) earth station at Moree and the Pacific INTELSAT III Satellite to the United States of America: from the United States National Aeronautic and Space Administration (NASA) Flight Centre at Houston, Texas, the picture was transmitted via satellite to a total of 17 earth stations throughout the world, including the O.T.C. Station at Carnarvon (W.A.) from where it was relayed to Perth. In addition to this highlight, the Australian television services, in a co-operative effort between national and commercial stations, provided a most extensive coverage of the Apollo 11 events from 14 to 25 July 1969. At the important stages some stations maintained a twenty-four hour service. The Australian Broadcasting Commission converted the incoming 525 line signals to Australian 625 line standards in Sydney and distributed them to national and commercial stations in the eastern states and in Perth for distribution in Western Australia. For these telecasts the Australian television audience was, according to surveys, the largest daytime audience in the history of Australian television. It was an outstanding exhibition of the capabilities of the INTELSAT global communications satellite system, the events being viewed as they occurred by countless millions of people throughout the world.

74. Another notable programme transmitted by Australian stations via satellite was the investiture on 1 July 1969 of His Royal Highness The Prince Charles as The Prince of Wales. This programme extended for 4¾ hours and involved the first use of the Intelsat Indian Ocean satellite, to serve Australia (and also North America) via Japan and the Pacific Ocean satellite, when communication through the Atlantic Ocean satellite failed on the occasion. This BBC programme was awarded first prize in the Sixth International competition for outside reportage of events at the Cannes Film Festival, and was seen by an estimated 500 million viewers, throughout the world.

75. All television stations used satellite relays to cover highlights of the Apollo 12 moon mission in November 1969 and the events in connection with the abandonment of the Apollo 13 Mission in April 1970. Some stations remained open all night to convey to viewers the dramatic developments in connection with the latter event.

76. Another notable programme brought to Australian viewers by satellite was the telecast of Australia Day at Expo 70 in Osaka, Japan, on 8 May 1970. Australia Day was officially opened by the Prime Minister and his speech introduced the programme. The programme was telecast by the Australian Broadcasting Commission which made it available to commercial stations. In view of the fact that the occasion was a unique one of special interest, commercial stations were given permission to televise a repeat of the programme on Sunday morning, 10 May as an exception to the Board's rules governing Sunday morning programmes. A number of stations did this.

77. On 20 February 1970 the Postmaster-General, the Hon. Alan S. Hulme, opened a \$4 million satellite communications earth station at Ceduna, South Australia, for working through an INTELSAT III satellite located over the Indian Ocean. This

station, owned and operated by the O.T.C., provided the first direct satellite communications link between Australia, the United Kingdom and Europe. The station can provide up to 1,200 channels for all communication purposes and one television channel.

78. The opening of the O.T.C. earth station at Ceduna was celebrated by the relay throughout Australia of a special A.B.C. television programme which included a 15-minute contribution from the BBC in London containing a message from the Queen and news highlights from the United Kingdom and Europe. The programme was transmitted on an extensive network of national and commercial television stations. A programme was also relayed from Australia for televising in Britain.

79. The Australian television services immediately employed the Ceduna earth station for a short period for relay of television programmes from Europe. These programmes, in February/March 1970, included daily news services from the United Kingdom by news teams sent specially for the purpose and, by station TCN Sydney and associated stations, the relay of a series of entertainment programmes from countries on the European continent. This was the first occasion on which overseas entertainment material had been included in the normal schedules of Australian television stations per medium of satellite relay. Some considerations which have arisen in this connection are referred to in paragraph 456.

80. For the first time also during the year, as a result of the completion of the Post Office broadband communication link between Perth and Carnarvon, it became possible for television programmes received at Carnarvon in Western Australia via satellite to be relayed to television stations in that State.

81. A consequent new development during the year was the relay of television programmes via satellite from the Eastern States to Western Australia on several occasions. Television relay facilities to Western Australia had not previously been available. The first surface relay facilities to Western Australia were provided by the Post Office East-West broadband communication link which was opened by the Postmaster-General on 9 July 1970. These satellite relays to Western Australia were transmitted via the Overseas Telecommunications Commission earth stations at Moree, New South Wales, and Carnarvon, Western Australia, through the INTELSAT III satellite over the Pacific Ocean, the intermediate relay links being provided in each case by Post Office communication facilities. The special television programme opening the Ceduna earth station was transmitted to Western Australia in this way. Another event relayed to Western Australia was the Inter Dominion Trotting Championships in Melbourne in February 1970. This was the first commercial satellite telecast in the world between two points within the unbroken boundaries of a country.

POSSIBLE USE OF SPACE SATELLITES FOR TELEVISION BROADCASTING

82. Recent annual reports of the Board have dealt with this matter in some detail. It was indicated that direct transmission of television signals to home receivers has not yet reached the stage of practicability. Such direct reception would require the use of satellites of very much higher transmitting power than has yet been developed, and the use of augmented receivers. Paragraphs 69 to 72 of the

Twenty-first Annual Report gave an account of the results of the deliberations of the first session of the Working Group of the United Nations Committee on the Peaceful Uses of Outer Space as to the technical feasibility and user costs of direct broadcasting from satellites.

83. A second session of the working group held in Geneva from 28 July to 8 August 1969 dealt with the social, cultural, legal and kindred aspects of direct broadcasting from satellites and there was a UNESCO Meeting of Governmental Experts on International Arrangements in the Space Communications Field in Paris from 2 to 9 December 1969. Mr. J. P. Coker, Director, Policy and Licensing Division of the Board's staff, attended the meeting of the Working Group as a member of the Australian Delegation. Mr. J. M. Donovan, Vice-Chairman of the Board, attended the meeting of Governmental Experts as a member of the Australian Delegation.

84. The meeting of the Working Group stressed the potential of direct broadcasting from satellites for the benefit of mankind, especially in directions such as progress in communications and understanding between peoples and cultures, economic development and improvements in education and health. The special significance of the matter for the progress of developing countries was emphasised. The meeting also gave much attention to some difficult problems in the field of direct television broadcasting from satellites, which have been touched on in the Board's recent Annual Reports (see paragraph 73 of Twentieth Annual Report and paragraph 66 of Twenty-first Annual Report). These include the possible unsuitability of programmes radiated from satellites to particular countries by reason of material offensive to national sentiments and cultural, religious or social standards and interference in the sovereign affairs of States, including the broadcasting of propaganda material and inclusion of advertising material. Other problems relate to the protection of copyright, neighbouring rights in matter broadcast, and unauthorised retransmission and public use of satellite broadcasts. The meeting of the Working Group looked to the possible eventual formulation of standards and codes of conduct on such matters, although these would be very difficult to devise considering the diversity of national cultures and views. As would be expected the meeting stressed that international co-operation was essential for both the realisation of the benefits and the avoidance of the difficulties of direct television broadcasting from satellites. It was envisaged that such co-operation should take place in accordance with international law and existing international instruments, through established international organisations, and by means of further forms to be devised.

85. The Meeting of Governmental Experts on International Arrangements in the Space Communications Field examined the problems involved in the use of space communication for the free flow of information, the rapid spread of education, and greater cultural exchange, which are matters specifically coming within the field of UNESCO. The meeting advised on a possible convention to ensure legal protection of satellite television transmissions against uses not authorised by the originating body; defined the further studies which might be prepared by UNESCO on space communication; discussed the requirements of education, science and culture in the allocation of frequencies for space communication; and

made suggestions as to a draft declaration on the guiding principles which might govern the use of space communication for the furtherance of UNESCO's aims.

86. Mr. J. M. Donovan, Vice-Chairman of the Board, was Vice-Chairman of a Working Party set up by the Meeting of Government Experts to study ways to develop satellite television transmissions by ensuring their legal protection against uses not authorised by the originating body.

87. The problems in connection with direct television broadcasting from satellites which have been referred to above will become of greatest concern in the ultimate development of the technique, namely direct broadcasting with a global coverage (as distinct from domestic or regional coverage) into unaugmented home receivers. The difficulties are such that the international meetings saw the need for urgent further consideration. Accordingly another meeting of the Working Group took place in New York from 11 to 22 May 1970 to give further study to the non-technical aspects of direct broadcasting from satellites as well as the principles which underly and promote international co-operation in this field. The Board during the year took part in inter-departmental meetings for the purposes of preparing papers for presentation to the meeting of the Working Group and the brief for the Australian Delegation. The report of the meeting of the working group was issued on 25 May 1970. The meeting confirmed the estimates of the second meeting of the group in July/August 1969 on technical feasibility and estimated user costs of direct satellite broadcasting; the report indicated that it was apparent that broadcasting satellite services for community reception would be an important and practicable matter within a short time. The meeting confirmed views previously expressed by the working group on the benefits of satellite broadcasting, especially to developing countries, and the need for international co-operation. The meeting further explored the problems which will arise in connection with direct broadcasting from satellites which have been referred to in paragraph 84 above. The meeting looked to regional co-operation as the most practicable solution. It also noted that developments in technology were taking place which promised that by directional techniques it would be possible to confine the radiation of satellite broadcasts to particular areas. This would also greatly reduce the extent of the problems in question.

88. The possible use of satellites in the Australian scene for broadcasting or television purposes was dealt with in paragraphs 74 to 76 of the Twenty-First Annual Report as a matter for the future. As indicated above, direct broadcasting from satellites to individual homes will not be technically practicable in the near future.

89. Paragraph 73 of the Board's Twenty-first Annual Report referred to several proposals in other countries for the use of satellites for broadcasting services. The experimental village satellite broadcasting system proposed for India, which will use an A.T.S. (Applications Technology Satellites) of the United States National Aeronautical and Space Agency (NASA) is expected to be in operation in 1973; it will be the first use of a satellite for direct broadcasting. The service will be directed to some 5,000 villages.

90. During the year, a Seminar was held by the Postmaster-General's Department on the subject of communication satellites. Representation was invited from

other Commonwealth Authorities with an interest in this field, and representatives of the Board attended. Much of the discussion concerned the performance and cost of communication systems already developed for satellite microwave relay links, which could supplement existing terrestrial services. Features which emerged were the enormous cost of research and development if there were to be departures from established communication systems towards satellite links, and the fact that those contemplating satellite communication services at the present time are confronted by a virtually monopolistic situation in the availability of equipment and launch facilities. There was exploratory discussion on the potential interest of the organisations at the seminar in facilities which could be provided by a national geo-stationary communications satellite. The seminar is to be reconvened.

91. The international technical aspects of space communication, including direct broadcasting by satellite, are the concern of the International Telecommunications Union (ITU). The ITU is to hold a World Administrative Radio Conference for Space Telecommunications at Geneva in June 1971 the purposes of which will include the study of matters relating to space broadcasting services. The conference is expected to make decisions on the important matter of frequencies for space services, and on other technical questions such as the use of the geo-stationary orbit. The Union has not yet allocated any specific band of frequencies for space broadcasting. Further reference is made to the Conference later in this report—see paragraphs 434, et seq.

EDUCATIONAL TELEVISION

92. The Government's basic policy in relation to educational television has been stated in previous annual reports—see Eighteenth Annual Report (paragraph 251) and Twentieth Annual Report (paragraphs 77 and 78). Briefly, the Government decided that as education is the primary responsibility of the States, plans for the development of educational television must be formulated in consultation with the States, the special role of the Commonwealth lying mainly in the co-ordination of activities and facilities.

93. Consultation with State Governments was initiated at a conference of Commonwealth and State Ministers convened by the Postmaster-General in 1966. A statement issued following this conference indicated that State commitments now and in the immediate future on education were heavy and the extension of education by television would need to be explored thoroughly before firm commitments for increased expenditure could be made. A further conference convened by the Postmaster-General, the Hon. A. S. Hulme, took place on 17 November 1969.

94. The Postmaster-General issued this statement following the conference—

At a meeting in Melbourne today which was attended by the Postmaster-General (Mr. Alan Hulme), the Minister for Education and Science (The Hon. N. H. Bowen) and State Education Ministers (The Hon. C. B. Cutler, N.S.W.; The Hon. L. H. S. Thompson, Vic.; The Hon. A. R. Fletcher, Q'ld; The Hon. Joyce Steel, S.A.; The Hon. E. M. H. Lewis, W.A.; and The Hon. R. Mather, Tas.), appreciation was expressed for the manner in which the Australian Broadcasting Commission's educational programmes were prepared—in both content and quality.

State Education Ministers requested that additional finance should be made available to the

Australian Broadcasting Commission to expand its activities in the educational television area.

The meeting also studied, on a broad basis, new techniques which have become available since their meeting in July 1966.

It was agreed that the most recent of these technical developments should be investigated in detail to determine their particular application to Australia.

With this in view, members attending the meeting agreed that a special committee, comprising Commonwealth and State representatives should be established to study these recent developments and report to another meeting between Federal and State Ministers.

95. The recent technical developments affecting educational television to which the statement referred were mentioned in paragraph 81 of the Board's Twenty-first Annual Report. There has throughout the development of educational television been persistent interest in the merits of closed circuit systems, because of their greater flexibility in relation to the general organisation of school life compared with radiated transmissions. There is also a substantial advantage in cost, compared with the establishment of expensive transmitters. Closed circuit systems have now benefited from some remarkable technological developments in the provision of multiple copies of recorded televised matter at costs which are so low as to affect the whole economics of educational television. The original technique in this direction known as EVR (Electronic Video Recording) was referred to in the Twenty-first Annual Report. It permits the preparation from video signals of high resolution optical images on very narrow sprocketless film which can be reproduced on conventional television receivers by comparatively inexpensive replay electronic scanning units. Other techniques with similar advantages are in a developmental state in the United States, the United Kingdom, and Japan. Whilst these systems are not applicable to the recording of radiated television programmes, for which the videotape recorder remains the most efficient technique, the economic cost of purchase and operation of this equipment is also being steadily reduced by technical development.

96. Obviously the technological developments referred to in the preceding paragraph are of the greatest significance in relation to the view held in some quarters that there should be established in Australia a network of television stations devoted entirely to educational television. The Government did not accept the recommendation of the Weeden Committee on Educational Television Services (1964) that one frequency channel in the VHF band should be reserved for educational purposes in each capital city and in major provincial centres but indicated that the educational programmes of the Australian Broadcasting Commission should be continued and developed. The Committee's proposition for an educational television network is still the subject of some representations to the Minister and the Board, but it seems that the developments which have taken place in closed circuit systems since the Weeden Committee's investigations have confirmed the wisdom of the Government's decision. This is especially so considering the enormous capital outlay which such a network and the associated relay facilities would involve. Moreover in the years since the Weeden Committee made its report there has, as the Board understands it, been a general elaboration in scientific aids in the teaching field making possible choices among and complementary uses of a variety of techniques both from the viewpoint of teaching convenience and economics, rendering the idea of a television network less a panacea than formerly. Representations for a network of television stations also appear to the Board to under-rate the use which is already being made of television, both radiated and closed circuit, in Australian education.

tations for a network of television stations also appear to the Board to under-rate the use which is already being made of television, both radiated and closed circuit, in Australian education.

97. The decision of Commonwealth and State Ministers to institute a special study of new techniques in electronic aids to teaching was made in the light of these considerations. The Committee which comprises representatives of State Departments of Education, the Department of Education and Science, the Postmaster-General's Department, the Australian Broadcasting Commission and the Board was constituted recently. The Postmaster-General's Department will act as convenor.

98. The Board's Twentieth and Twenty-first Annual Reports referred to proposals by certain educational bodies for educational broadcasting and television services and to discussions with the Department of Education and Science and associated bodies, and the Postmaster-General's Department on the policy questions which arise. The aspect of frequencies for contemplated services is a matter of some difficulty. Examination of this aspect has been proceeding. It is expected that the interdepartmental consultations will be resumed shortly.

99. The proposals for institutional type educational radio and television services, referred to in the preceding paragraph, which the Board has on hand, were mentioned in paragraph 82 of the Twenty-first Annual Report (1968-69). These included a proposal from the University of Adelaide for an educational radio service; this applicant sought, during the year, for planning purposes, some clarification of the prospects of its application; the Board conveyed agreement in principle to the Post Office for the grant of a licence to the University under the Wireless Telegraphy Act (there is no provision in the Broadcasting and Television Act at present for the grant of such licences) subject to certain conditions and on the basis that the whole situation regarding the grant of licences for educational radio and television services is under review.

100. There has been some further interest in this field during the year in the form of an inquiry by the Royal Australian College of General Practitioners, South Australian Faculty, regarding the possibility of establishing a radio service directed to medical practitioners in Adelaide.

Educational Programmes on Commercial Television Stations

101. Educational matter has again been televised, to substantially the same extent, by commercial television stations. Much of this occurs during Sunday morning and deals with matters of general educational value as well as with syllabus subjects. The practice has continued of assisting studies in English literature by the transmission of authentic performances of drama, or of films based on books scheduled for study at senior levels. Metropolitan stations have devoted an average of 22 hours per station to educational matter, representing 0.4 per cent of total transmission time. Pre-school and kindergarten programmes have been presented in all State capitals and in a number of country centres. The Tasmanian Education Department availed itself of time on TVT Hobart and TNT Launceston for a series of midweek teacher-training telecasts.

Educational Programmes on National Television Stations

102. The Board's Twentieth and Twenty-first Annual Reports (1967-68 and 1968-69) detailed the development of the instructional television programmes of the Australian Broadcasting Commission and the co-operation extended by the State Education Departments and the independent school systems. All transmitters of the national service broadcast a comprehensive programme of educational telecasts in all States for almost the full duration of the school day. The number of transmissions varied from State to State according to the requirements listed by local authorities. During 1969, New South Wales with the greatest total, broadcast 765 different programmes, Queensland 408. In all nearly 3,500 programmes were transmitted of which about 2,500 were made by the Commission and nearly 1,000 purchased from Australian and overseas sources. Of these 3,500 programmes, some 1,850 were directed to secondary classes and 1,650 to primary grades. All programmes were repeated on different days and at different times to enable schools to make the best use of them in relation to the requirements of their time tables.

103. The number of schools equipped to receive the programmes increased considerably to a total of 5,864 which represents about 56%. The most significant aspect of this new total, however, is the proportion of primary to secondary schools, there being over 4,000 primary schools and about 1,700 secondary. Together with this growth in the numbers of primary schools using the programmes there has been a change of emphasis in relation to the needs of the schools. The stress on programmes is moving clearly from mathematics and natural science to English and social science. These two trends are now exercising the attention of the Commission's educational advisory committees.

104. A wide range of booklets of some 55 titles relating to the various radio and television educational series was produced by the Commission, supplemented by special notes for teachers which, in some States, were produced and distributed by the Education Departments. The total of these special Commission publications exceeded 1,300,000.

BROADCASTING AND TELEVISION OF POLITICAL MATTER

105. The provisions governing the broadcasting or televising of political or controversial matter are set out in sections 116, 117 and 117A of the *Broadcasting and Television Act 1942-1969*.

106. During the year, a General Election for the House of Representatives was held on 25 October 1969. In addition, General Elections for the States of Victoria and South Australia were held on 30 May 1970 and there were a number of by-elections for Federal and State Parliaments. Following its usual practice, the Board reminded licensees of their obligations under the Act in connection with the elections, and obtained from the Australian Broadcasting Commission and licensees of commercial stations details of time occupied by political matter on broadcasting and television stations during the election period for the general election for the House of Representatives and the State General Elections. This information in respect of the General Election for the House of Representatives is given on following pages.

COMMERCIAL BROADCASTING STATIONS

107. Information obtained from licensees shows that during the election period (29 September to 22 October 1969) political matter of some kind was broadcast by each of the 114 commercial broadcasting stations.

108. All or part of the policy speeches of the Government and Opposition parties was broadcast by 94 stations, and 10 stations broadcast all or part of one speech. All or part of the policy speech of the Democratic Labor Party was broadcast by 77 stations. A total of 10 stations did not broadcast any policy speeches at all. The total time occupied by the broadcasting of policy speeches was 193½ hours of which only 5 hours was purchased.

109. Apart from policy speeches, 267½ hours of station time was purchased for broadcasts of political matter on behalf of parties and candidates.

110. The total time occupied by broadcasting of political matter on commercial broadcasting stations during the election period amounted to 471¾ hours, made up as follows:

	Metropolitan Hours	Country Hours	Total Hours
Party Leaders' Policy Speeches	32½	161	193½
Broadcasts by Political Parties and Candidates	47½	220	267½
Broadcasts by Organisations Other than Political Parties	1½	9¼	10¾
	81½	390¼	471¾

111. The following table shows the proportions of time purchased from commercial broadcasting stations by the various parties for the broadcast of political matter other than policy speeches:

Percentage Distribution of Time Purchased by Parties and Candidates from Commercial Broadcasting Stations for Broadcasting of Political Matter (other than policy speeches) Election for House of Representatives 1969

	Common-wealth	New South Wales	Victoria	Queensland	South Australia and Northern Territory	Western Australia	Tasmania
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
<i>Metropolitan Stations</i>							
Australia Party	0.6	0.4	—	4.2	1.8	—	—
Australian Labor Party	28.0	24.2	20.6	66.2	45.3	—	50.4
Country Party	16.9	18.2	13.1	26.2	4.3	40.4	—
Democratic Labor Party	6.5	5.2	15.2	—	—	—	27.9
Liberal Party	46.6	50.4	51.1	3.4	48.6	59.6	14.1
Others*	1.4	1.6	—	—	—	—	7.6
TOTAL APPROXIMATE TIME PURCHASED, BY STATES	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	47½ hrs.	26¾ hrs.	4¾ hrs.	2 hrs.	6¼ hrs.	4¼ hrs.	3½ hrs.

	Common-wealth	New South Wales	Victoria	Queensland	South Australia and Northern Territory	Western Australia	Tasmania
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
<i>Country Stations</i>							
Australia Party	7.2	3.0	—	0.2	4.3	—	72.3
Australian Labor Party	47.1	34.0	83.4	54.6	26.8	24.5	17.3
Country Party	20.6	28.4	5.6	38.5	11.9	29.6	2.3
Democratic Labor Party	4.5	4.4	0.7	2.8	19.7	2.8	—
Liberal Party	18.8	28.3	10.1	3.9	27.8	43.1	8.1
Others*	1.8	1.9	0.2	—	9.5	—	—
TOTAL APPROXIMATE TIME PURCHASED, BY STATES	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	220 hrs.	73½ hrs.	54¼ hrs.	37½ hrs.	25¼ hrs.	12¼ hrs.	17¼ hrs.
<i>Metropolitan and Country Stations Combined</i>							
Australia Party	6.0	2.3	—	0.4	3.8	—	60.6
Australian Labor Party	43.6	31.3	78.3	55.1	30.4	18.4	22.7
Country Party	20.0	25.8	6.2	37.9	10.4	32.3	1.9
Democratic Labor Party	4.9	4.6	1.9	2.7	15.8	2.1	4.5
Liberal Party	23.8	34.2	13.4	3.9	32.0	47.2	9.1
Others*	1.7	1.8	0.2	—	7.6	—	1.2
TOTAL APPROXIMATE TIME PURCHASED, BY STATES	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	267½ hrs.	100¼ hrs.	59 hrs.	39½ hrs.	31½ hrs.	16½ hrs.	20¾ hrs.

*Including Communist Party, New England Country Party and Independent Candidates.

112. The following table shows the total amount of time occupied by political matter on commercial broadcasting stations in connection with elections for the Commonwealth Parliament since 1964:

Time Occupied by Election Broadcasts Preceding Commonwealth General Elections Since 1964

	Total Time Occupied by Political Matter During Election Period	Average Time per Station	Duration of Election Period	Proportion of Station Time During Election Period
	(HOURS)	(HOURS)	(WEEKS)	(PER CENT)
Senate—December 1964	233	2.1	5	0.3
House of Representatives—November 1966	526	4.7	3½	1.1
Senate—November 1967	236	2.1	6	0.3
House of Representatives—October 1969	472	4.1	3½	0.9

NATIONAL BROADCASTING STATIONS

113. Information supplied by the Australian Broadcasting Commission shows that during the election period time for political broadcasts from the national broadcasting stations was allocated on the basis of an equal division of a total of eight hours broadcasting time in each State between the Government and the Opposition parties. Broadcasts were made from the stations which normally carry the lighter types of programme in the metropolitan areas (the first Network), and on regional stations (the third Network). The time allocated to the Government parties was used on the basis of 3 hours on national relay and one hour for broad-

casts within each State. The time allocated to the Opposition was used on the basis of 30 minutes on national relay and 3½ hours for broadcasts within each State. A period of 45 minutes was allocated to the Democratic Labor Party; 30 minutes was used on national relay and 15 minutes for broadcasts within each State.

114. The total time occupied by Party Political broadcasts on national broadcasting stations during the Federal Election period amounted to 604 hours, made up as follows:

	Metropolitan Hours	Country Hours	Total Hours
Party Leaders' Policy Speeches	13	136	149
Broadcasts by Political Parties and Candidates	39½	415½	455
	52½	551½	604

Percentage Distribution of A.B.C. Allocation of Time for Party Political Broadcasts

Liberal and Country Party	46%
Australian Labor Party	46%
Democratic Labor Party	8%

115. The following table shows the total amount of time occupied by Party Political broadcasts on national broadcasting stations in connection with elections for the Commonwealth Parliament since 1964:

Time Occupied by Election Broadcasts Preceding Commonwealth General Elections Since 1964

	Total Time Occupied by Party Political broadcasts During Election Period	Average Time per Station	Duration of Election Period	Proportion of Station Time During Election Period
	(HOURS)	(HOURS)	(WEEKS)	(PER CENT)
Senate—December 1964	408	6.5	5½	0.9
House of Representatives—November 1966	569	9.0	3½	2.0
Senate—November 1967	441	6.5	6	0.9
House of Representatives—October 1969	604	9.0	3½	2.0

116. Information obtained from commercial television stations showed that during the Federal Election period all stations (15 metropolitan and 30 country) televised political matter of some kind.

117. All or part of the policy speeches of the Government and the Opposition parties were televised by 43 stations, and one station televised all or part of one speech. All or part of the speech of the Democratic Labor Party was televised by 40 stations. One station did not televise any policy speech. The total time occupied by the televising of policy speeches was 65½ hours, all of which was free time.

118. Apart from policy speeches, approximately 60¾ hours of station time was purchased for the televising of political matter on behalf of parties and candidates.

119. The total time occupied by telecasts of political matter on commercial television stations during the election period amounted to 126¾ hours, made up as follows:

	Metropolitan Hours	Country Hours	Total Hours
Party Leaders' Policy Speeches	19¼	46¼	65½
Telecasts by Political Parties and Candidates	24¼	36½	60¾
Telecasts by Organisations Other than Political Parties	¼	¼	½
	43¾	83	126¾

120. The following table shows the proportions of time purchased from commercial television stations by the various parties for political matter other than policy speeches:

*Percentage Distribution of Time Purchased by Parties and Candidates from
Commercial Television Stations for Political Matter (Other than policy speeches)
Election for House of Representatives 1969*

	Common- wealth	New South Wales	Victoria	Queensland	South Australia and Northern Territory	Western Australia	Tasmania
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
<i>Metropolitan Stations</i>							
Australia Party	0.4	—	—	—	1.3	—	—
Australian Labor Party	25.0	25.5	1.3	22.7	23.8	48.8	44.1
Country Party	4.0	3.1	3.2	1.0	—	27.6	—
Democratic Labor Party	15.3	21.7	42.0	10.4	5.4	11.7	—
Liberal Party	54.0	49.7	51.0	65.2	67.7	11.9	53.5
Others*	1.3	—	2.5	0.7	1.8	—	2.4
TOTAL APPROXIMATE TIME OCCUPIED	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	24¼ hrs.	4¾ hrs.	4 hrs.	3¼ hrs.	7¼ hrs.	2½ hrs.	2½ hrs.
<i>Country Stations</i>							
Australia Party	0.9	2.7	—	—	—	—	—
Australian Labor Party	23.8	24.0	23.1	22.6	32.0	2.7	—
Country Party	28.8	24.1	19.2	55.4	—	—	—
Democratic Labor Party	7.1	—	19.4	5.0	—	14.7	—
Liberal Party	39.1	48.6	37.8	17.0	68.0	82.6	—
Others*	0.3	0.6	0.5	—	—	—	—
TOTAL APPROXIMATE TIME OCCUPIED	100.0	100.0	100.0	100.0	100.0	100.0	—
	36½ hrs.	12 hrs.	10½ hrs.	10 hrs.	3½ hrs.	½ hr.	—
<i>Metropolitan and Country Stations Combined</i>							
Australia Party	0.7	1.9	—	—	0.9	—	—
Australian Labor Party	24.3	24.4	17.2	22.6	26.5	40.8	44.1
Country Party	18.8	18.2	14.9	42.3	—	22.7	—
Democratic Labor Party	10.4	6.2	25.5	6.3	3.7	12.2	—
Liberal Party	45.1	48.9	41.3	28.6	67.7	24.3	53.5
Others*	0.7	0.4	1.1	0.2	1.2	—	2.4
TOTAL APPROXIMATE TIME OCCUPIED	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	60¾ hrs.	16¾ hrs.	14½ hrs.	13¼ hrs.	10¾ hrs.	3 hrs.	2½ hrs.

*Including—Communist Party and Independent Candidates.

121. The following table shows the total amount of time occupied by political matter on commercial television stations in connection with elections for the Commonwealth Parliament since 1964:

*Time Occupied by Election Telecasts Preceding Commonwealth
General Elections Since 1964*

	Total Time Occupied by Political Matter During Election Period	Average Time per Station	Duration of Election Period	Proportion of Station Time During Election Period
	(HOURS)	(HOURS)	(WEEKS)	(PER CENT)
Senate—December 1964	54	2.1	5½	0.7
House of Representatives—November 1966	124	3.1	3½	1.3
Senate—November 1967	85	2.1	6	0.5
House of Representatives—October 1969	127	2.8	3½	1.1

NATIONAL TELEVISION STATIONS

122. Information supplied by the Australian Broadcasting Commission shows that during the election period time for Party Political telecasts on national television stations was allocated on the basis of an equal division of 4 hours in each State between the Government and the Opposition parties; the Democratic Labor Party was allocated 30 minutes in each State.

123. The total time occupied by Party Political telecasts on national television stations during the Federal Election period amounted to 175½ hours, made up as follows:

	Metropolitan Hours	Country Hours	Total Hours
Party Leaders' Policy Speeches	9¾	54¼	64
Telecasts by Political Parties and Candidates	17¼	94¼	111½
	27	148½	175½

124. The following table shows the proportions of time made available by the Commission to political parties:

Liberal and Country Party	47%
Australian Labor Party	47%
Democratic Labor Party	6%

125. The following table shows the total amount of time occupied by Party Political telecasts on national television stations in connection with elections for Commonwealth Parliament since 1964:

*Time Occupied by Election Telecasts Preceding Commonwealth
General Elections Since 1964*

	Total Time Occupied by Party Political telecasts During Election Period	Average Time per Station	Duration of Election Period	Proportion of Station Time During Election Period
	(HOURS)	(HOURS)	(WEEKS)	(PER CENT)
Senate—December 1964	69	3.5	5½	1.0
House of Representatives—November 1966	171	4.5	3½	1.7
Senate—November 1967	129	3.5	6	0.7
House of Representatives—October 1969	175.5	4.5	3½	1.7

Operation of Section 116 (4.) of the Act

126. *The Broadcasting and Television Act* No. 2 of 1969 inserted the following sub-section (4A) in section 116 of the Act:

Where, in respect of—

- (a) an election of a member of the House of Representatives that is not a general election; or
- (b) an election of a member or members of a House of the Parliament of a State; the Board is of the opinion that programmes broadcast from a particular broadcasting station or televised from a particular television station are not ordinarily received in the part of the Commonwealth to which the election relates, the Board may, by notice in writing served on or sent by post to the Commission or the licensee of the station, as the case requires, exempt the Commission or the licensee, as the case requires, from compliance with the last preceding sub-section in respect of the broadcasting or televising from that station of election matter relating to that election.

127. Section 116 (4.) of the Act states that “. . . the Commission or a licensee shall not at any time between the end of an election period and the close of the poll on the day on which an election is held broadcast election matter”. The Act defines the election period as the period commencing on the day of the issue of the writ or writs for an election and ending at midnight on the Wednesday next preceding the day of the poll and defines election matter as:

- (a) matter commenting on or soliciting votes for, a candidate at an election;
- (b) matter commenting on, or advocating support of, a political party to which a candidate at an election belongs;
- (c) matter commenting on, stating or indicating any of the issues being submitted to the electors at an election or any part of the policy of a candidate at an election or of the political party to which such a candidate belongs; and
- (d) matter referring to meetings held or to be held in connection with an election.

The effect of sub-section (4.) of section 116 is that at no time on the Thursday and Friday preceding an election and on the Saturday up to the close of the poll may stations broadcast or televise election matter unless exempted by the Board under sub-section (4A) from the operation of section 116 (4.). Sub-section (4A) applies in respect of by-elections and State elections. It became effective on 4 June 1969.

128. During the year the Board determined exemptions under section 116 (4A) of the Act in respect of thirteen elections. It appears to the Board that the Postmaster-General's expectation expressed in his second reading speech on the legislation that the amendment would alleviate considerably the difficulties formerly experienced by station operators in the presentation of programmes in the days immediately before an election has been realised.

129. During the campaign for the general election for the House of Representatives in October 1969 the Prime Minister undertook that he would have re-examined the principle of a silent period on broadcasting and television before elections as provided for in section 116 of the Act.

AVAILABILITY TO THE PUBLIC OF RECORDS
OF MATTER BROADCAST AND TELEVISED

130. Requests are made to the Minister and the Board from time to time by persons, or by their legal representatives, for the supply of a record of programmes transmitted by commercial broadcasting or television stations on the grounds that the programmes are thought to have contained comments which were defamatory. In every case the applicant has been informed that the Broadcasting and Television Act does not authorise the Minister or the Board to make any script available to a private organisation or individual, and that neither the Minister nor the Board has the right to obtain such scripts other than for purely official purposes in connection with the administration of the Act. This policy has been based on Commonwealth legal advice.

131. Section 117A of the Broadcasting and Television Act, inserted in the Act in 1960, provides that station operators must retain for a period of six weeks, a record of matter broadcast or televised on a political subject or on current affairs, which is in the form of news, an address, a statement, a commentary or a discussion. The section further provides that if a person considers that such a record may be admissible in evidence in legal proceedings instituted or contemplated, he may serve a notice on the station that it may be required for that purpose, in which case the station must retain the record until the proceedings are determined or for three months, if by that time proceedings are not instituted. There are no other provisions in the Act in regard to the availability of records of matter broadcast to persons who may feel aggrieved thereby. The matter of the provisions of the Act on this matter has been the subject of most careful consideration by the Government on a number of occasions and section 117A, which was inserted in the Act in 1960, is the most recent outcome. The Postmaster-General in reply to a question in Parliament on 8 April 1970 stated that the question of whether there should be some further provision had frequently been raised with him and as a result he had put a re-examination of all aspects of the matter in hand.

CIGARETTE ADVERTISING

132. The Board's Twenty-first Annual Report (paragraphs 95 to 103) referred to proposals for restrictions on or prohibitions of cigarette advertising, in connection with public concern in regard to the health issues involved in cigarette smoking. The Board reported its view that very careful consideration would have to be given before the Board as a single agency of the Commonwealth could take any action on its own initiative, particularly in view of the intensive study of the subject being undertaken by the National Health and Medical Research Council. The Board added that the nature and scope of the considerable discussion in the numerous organs of public expression and in the national Parliament leaves no doubt that the questions involved are ones of broad public policy.

133. The Board notes that in reply to questions in Parliament in April-May 1970 the Minister for Health stated that the National Health and Medical Research Council had stated that health education is probably the most effective way to attack the health problems in cigarette smoking but that other action was under consideration by the Government.

134. The Board set out for general information in paragraph 102 of its Twenty-first Annual Report the situation in overseas countries in relation to the advertising of cigarettes on radio and television. A later development has been the passing of legislation in the United States of America prohibiting cigarette advertising on broadcasting and television stations from 2 January 1971.

CONSULTATION WITH LICENSEES' REPRESENTATIVES
AND OTHER ORGANISATIONS

135. Section 16 of the *Broadcasting and Television Act 1942-1969* requires the Board to consult representatives of commercial broadcasting stations and commercial television stations in exercising its powers and functions in relation to those stations. The Federal Council of the Federation of Australian Commercial Broadcasters represents the licensees of commercial broadcasting stations and the Executive Committee of the Federation of Australian Commercial Television Stations represents the licensees of commercial television stations at these discussions.

136. The Board conferred with the Federal Council of the Federation of Australian Commercial Broadcasters on 10 September 1969 and 18 March 1970. The first meeting was held to convey to the Federation the general terms of the agreement reached with the New Zealand Administration on the use of medium frequencies (see paragraphs 153 to 158). At the meeting on 18 March 1970 a considerable number of matters were discussed. These included the arrangements for the Board to assume from the Post Office responsibility for technical inspections of commercial broadcasting stations, certain amendments to the Broadcasting Programme Standards and the Federation's examination of the question of the possibilities of greater opportunities for Australian musicians in commercial broadcasting.

137. Members of the Board again attended the Annual Convention of the Federation of Australian Commercial Broadcasters which was held in October 1969 at Surfers Paradise, Queensland. The Board appreciates the Federation's practice of inviting the Board to this important annual gathering and the opportunity which attendance at the convention provides for meeting broadcasters as a body. The occasion also provides an opportunity through discussions with individual station representatives for gaining the latest information on developments of broadcasting service and requirements in the communities served by the stations and the manner in which these are being met.

138. The Board met the Executive Committee of the Federation of Australian Commercial Television Stations on 23 October 1969 principally for the purpose of discussion of a final draft of the Board's proposals for revision of the Television Programme Standards. Discussions with the Federation on this matter had commenced in July 1969 at working party level and the Federation had put forward submissions on various matters for the Board's consideration. The meeting involved a very wide-ranging and detailed discussion of the many aspects of television programmes covered in the Board's Standards. A considerable number of other matters in connection with the Board's administration of the television services were also dealt with and the Federation put before the Board its views on policy on the important matters of requirements for Australian content in television

programmes, permissible advertising content in programmes and Sunday morning television programmes. The Board had another meeting with the Executive Committee on 21 May 1970 to hear further views from the Federation before proceeding to a determination on the Standards.

139. The Board was unable to accept in 1970, as it had done in the previous year, an invitation from the Federation of Australian Commercial Television Stations to meet its members socially at their Annual General Meeting. The occasion coincided with the Board's visit to Western Australia to conduct an inquiry in Kalgoorlie.

140. The matters discussed at meetings with the Federation of Australian Commercial Broadcasters and the Federation of Australian Commercial Television Stations are referred to in other parts of this report where appropriate.

141. In pursuance of an offer made by the Board to the Federation of Australian Commercial Broadcasters, officers of the Board visited commercial broadcasting stations in all States for discussions with managements and company officers on the new provisions incorporated in the Broadcasting and Television Act in 1969 on the ownership and control of commercial broadcasting stations. The matter is referred to in paragraph 231.

142. The Chairman and members of the Board again visited many broadcasting and television stations in all parts of Australia. Their travel included visits to distant centres of Queensland and the Northern Territory and comprehensive itineraries of broadcasting and television stations in Western Australia. This activity was valuable in maintaining the first hand knowledge of station operations and the communities they serve which is essential to the Board's exercise of its responsibilities. Meetings which the Board and individual members had with station representatives in the Board's Offices, both formal and informal, also provided valuable liaison with stations. There were a great number of such meetings.

143. The Board conferred with the Commonwealth Film Censorship Board in Sydney on 5 May 1970. By arrangement between the Postmaster-General and the Minister for Customs, the Film Censorship Board classifies imported film for television on the basis of the provisions of the Board's Television Programme Standards.

144. Informal consultations took place during the year between the Chairman and officers of the Board, the Australian Association of Advertising Agencies and the Australian Association of National Advertisers on matters of mutual interest in regard to the Associations' interests in the media.

145. The Board and its officers have continued to maintain close relations with the Postmaster-General's Department and the Australian Broadcasting Commission; frequent consultation took place on a large range of matters.

146. The Board's further consultations during the year with the television industry on system standards for colour television are referred to in paragraph 176.

THE AUSTRALIAN UNESCO COMMITTEE FOR MASS COMMUNICATION

147. The Australian UNESCO Committee for Mass Communication is a joint committee consisting of the committees for Press, Film, and Radio and Television.

148. The Committee met on 29 May 1970. The Board was represented by Mr. D. A. Jose, Director, Programme Services.

149. Plans for a seminar on methods of developing a critical study of film and television in schools at the primary and secondary level were referred to in the Twenty-first Annual Report (paragraph 113). The seminar was held at the State Film Centre, Melbourne, from 1 to 5 June 1970. The seminar was attended by the Chairman of the Board (Mr. Myles F. E. Wright), the Director Programme Services (Mr. D. A. Jose) and other officers. Mr. Wright was chairman of one of the public lectures held at the seminar—a lecture on Television and the Child. Mr. Jose was a member of the sub-committee responsible for planning the seminar.

150. Two overseas consultants attended the seminar—Professor A. W. Hodgkinson of the University of Boston was there as a UNESCO consultant (under the UNESCO Programme of Participation in the Activities of Member States) and the attendance of Mr. R. F. Knight of Bede College, University of Durham, was sponsored by the Australian Council for the Arts. Both consultants undertook visits and discussions in several Australian States after the seminar.

151. The aims of the seminar were set out in paragraph 113 of the Twenty-first Annual Report. The recommendations of the seminar will be forwarded to interested organisations in due course. They will also be incorporated in the Report of the Seminar.

152. Mr. Jose is a member of a working group appointed by the Mass Communication Committee to follow up the recommendations of the Australian UNESCO Seminar on the professional training of television and film scriptwriters, producers and directors (held in Sydney, November 1968). The recommendations of this working group are now under consideration by the Interim Council for a proposed National Film and Television Training School.

AUSTRALIAN/NEW ZEALAND AGREEMENT ON MEDIUM FREQUENCIES

153. The Board's Twenty-first Annual Report referred to meetings which took place in Wellington, New Zealand, on 3 to 7 March 1969 and 14 to 18 July 1969 directed towards a new agreement between the Australian and New Zealand Administrations on the use of medium frequencies.

154. As explained in the Twenty-first Annual Report, an agreement in this matter was originally made in 1948 and was revised in 1950, as a result of a conference between the Administrations. The object is to avoid mutual interference between broadcasting services in the two countries. The principal features of the 1950 agreement in relation to the Australian broadcasting services were that so far as New Zealand was concerned Australia had freedom with respect to the use of 62 channels not then occupied by New Zealand stations, and the maximum power which could be allocated to stations in either country on the 45 channels used jointly was determined. The arrangements in the agreement had been varied in minor detail from time to time by mutual consent in accordance with the developments which have taken place in broadcasting services in the two countries.

155. The meeting in March 1969 was of an interim nature in connection with problems faced by the New Zealand Administration in regard to the availability

of channels for broadcasting stations in a new service; New Zealand legislation in 1968 provided for the grant of licences for private broadcasting stations. The effect of a preliminary agreement which was reached at this conference was to make available for New Zealand use 16 frequency channels which up to that time had been used only in Australia.

156. At the second meeting a new agreement was arrived at. The agreement was ratified in December 1969 by exchange of letters between the Australian and New Zealand Postmasters-General. A statement by the Postmaster-General, Mr. Alan S. Hulme, M.P., on the agreement on 19 January 1970 has been given in paragraph 50 of this report.

157. The Australian delegation to the New Zealand meetings comprised Post Office Engineering officers and Mr. D. McDonald, Board Member and Mr. N. J. Medlin, a Sectional Engineer of the Board's staff. The Postmaster-General's Department is the authority which in Australia deals with international arrangements concerning radio frequencies.

158. The general nature and effect of the agreement with the New Zealand Administration is indicated in the statement hereunder provided on 14 April 1970 to the Federation of Australian Commercial Broadcasters for the information of member stations. The Act requires that the Board shall consult representatives of the commercial broadcasters in exercising its powers and functions in relation to such stations. The Board had accordingly met the Federation on the agreement on 10 September 1969 prior to ratification.

During 1969 two conferences were held to reach agreement on the joint use of medium frequency broadcasting channels in Australia and New Zealand. The primary reason for the conferences was the decision by New Zealand to introduce commercial broadcasting by private interests, making necessary the use of an increased number of frequency channels. As both countries have the right to the use of all channels in the medium frequency band, a planned use of channels is essential if mutual interference is to be kept to a minimum. At the time of the conferences only 47 of the available 108 channels were used in New Zealand, but it is anticipated that many more channels will be used over the next few years, necessarily being shared with existing Australian stations.

The approach adopted by the Australian delegation was that no frequency channel could be regarded as being unavailable to either country, the important factor being the limitation of any resulting mutual interference to an acceptable value. The basis used in agreeing to the use of specific powers by New Zealand stations was that to Australian stations already sharing the use of channels the interference from New Zealand should not exceed that already existing between the Australian stations themselves, and to Australian stations at present having the exclusive use of channels any interference should not adversely affect the service inside the distance where serious fading occurs at night, i.e. the distance beyond which a station interferes with itself.

Agreement was reached on the maximum power which would be used on each frequency channel by stations using omnidirectional radiating systems. The agreement does not preclude the use of higher powers where directional aerials are used to limit the effective radiation in the direction of either country to the agreed value.

The agreement does not make it necessary for any existing Australian station to install a directional aerial system except where some improvement to coverage is planned with a change of operating frequency. In the case of any new stations however, particularly in the more heavily populated south eastern area of Australia, it is most likely that directional aerials will be required—e.g. the planned commercial station at Gosford will be required to use a directional aerial not only to give protection to New Zealand, but also to the Australian station with which it will share a channel.

Although the agreement may not make necessary the use of a directional aerial on a particular channel, the Board will probably discuss with station representatives from time to time the use of such aerials where improvement to coverage or more effective use of channels can be achieved.

The agreement plans for development of broadcasting services over a long period; some details may be changed by negotiation and others may not be proceeded with. Accordingly the details are confidential and will not be published. As any changes to existing stations, or establishment of new stations are approved the details will, of course, be published in the usual manner.

BROADCASTING AND TELEVISION OVERSEAS—OVERSEAS VISITS

159. Overseas administrative practice in the broadcasting and television fields is of profound significance for the Minister and the Board in relation to their responsibilities under the Broadcasting and Television Act. The frequency spectrum is world property and the subject of international frequency assignment agreements. In every country broadcasting and television are the subject of Government regulation because frequencies are limited and are a community resource. The activities of administrative authorities and the conduct of station operators in other countries in relation to questions of public interest and policy affecting the services are therefore most instructive for the Australian administration.

160. Under Section 17 of the Broadcasting and Television Act, the Board is empowered to do all such things as it thinks fit in exercising its powers and functions. Among the steps which the Board must take, is the maintaining of a close knowledge of the overseas position in broadcasting and television. This calls for overseas visits by members and executives of the Board and, because the situation overseas must be absorbed on a broad and thorough basis, capacity within the organisation for continuous study of the overseas field.

161. Mr. J. M. Donovan, Vice-Chairman, undertook an overseas tour in October-December 1969 for the purpose of studying the introduction of the second colour television service of the British Broadcasting Corporation and the introduction of colour television on the stations of the Independent Television Authority in Britain, as well as discussions with those organisations on a range of matters relating to broadcasting and television which are of direct interest to the Board. Mr. Donovan also visited Canada and the United States of America for studies in connection with colour television and discussions with broadcasting administrative and operating bodies on matters of mutual interest.

162. In particular, Mr. Donovan made first hand contacts with the newly established Canadian Radio/Television Commission and with the Federal Communications Commission of the United States.

163. Mr. Donovan also attended, as a member of the Australian delegation, a UNESCO meeting of Governmental Experts on International Arrangements in the Space Communications Field in Paris from 2 to 9 December—this meeting is referred to in paragraph 83.

164. Mr. D. McDonald, Board Member and Mr. N. J. Medlin, Sectional Engineer, visited New Zealand from 14 to 18 July 1969 in connection with negotiations with the New Zealand Administration for a new agreement on the use

of medium frequencies in the two countries. The matter has been referred to in paragraphs 153 to 158.

165. Mr. J. P. Coker, Director, Policy and Licensing Division, attended, as a member of the Australian delegation, the second session of the Working Group on Direct Broadcasting from Satellites of the United Nations Committee on the Peaceful Uses of Outer Space in Geneva, from 28 July to 8 August 1969.

166. As mentioned in paragraph 278 of this Report, Mr. C. G. Elworthy, Assistant Director, Technical Services Division, attended the final Study Group meetings of the C.C.I.R. in Geneva in September-October 1969 and the XIIth Plenary Assembly of the C.C.I.R. in New Delhi in January-February 1970. Following his attendance at the C.C.I.R. meetings in Geneva, Mr. Elworthy spent some five weeks visiting several European countries, Britain, United States of America, Canada and Japan, to make first hand studies relating to technical aspects of broadcasting and television operations in those countries, including Government administration of commercial operations on the technical side.

CABLE TELEVISION

167. The term cable television refers to systems for distribution of television programmes and other material over wide areas. These systems are to be distinguished from community television aerial systems which distribute radiated programmes from a single antenna to restricted areas. Community television aerial systems are referred to in paragraphs 429 to 432.

168. The Board has received a number of enquiries regarding the possible authorisation of cable television systems in Australia. Last year AUSA International Pty. Ltd., which is controlled by United States of America interests, put forward a proposal for the establishment of a cable television system in the eastern suburbs of Sydney providing programmes from television stations and other services.

169. The Board is of the view that it would not be appropriate at this stage to consider proposals for widespread dissemination of television programmes and other services by cable television systems. The general matter has been under discussion with the Post Office which is interested in respect of the provision of cable facilities for any such services.

170. The Postmaster-General has requested a report from the Board and the Department on the matter and this is in the course of preparation.

171. AUSA International Pty. Ltd., was informed that the Board would be prepared to consider only an application for community television aerial type systems which, under the Act, can be established only in areas of inadequate television reception.

COLOUR TELEVISION

172. The Twenty-first Annual Report (paragraph 119) reported that the Board had determined that the PAL (Phase Alternation Line) system should be used for colour television in Australia on the basis that it is the most suitable system for existing services in the VHF band and any development which may occur in the

UHF band in Australia. A statement by the Postmaster-General of 27 February 1969 announcing the decision was given. The decision followed studies of the practical operation of the various systems in overseas countries, views expressed by the television industry, and laboratory and field investigations by the Board.

173. The Board is pleased to report that the Board's determination has been very favourably received by the television services, the manufacturing industry and the public.

174. The Postmaster-General's statement announcing the determination of the PAL System by the Board indicated that necessary work by the Board on the technical aspects of the introduction of colour television would then proceed in two stages, namely the preparation of "draft system standards" and secondly the formulation of detailed standards for the equipment and operation of stations under colour operation. The Postmaster-General indicated that both tasks would be undertaken in consultation with industry.

175. In paragraph 121 of the Twentieth Annual Report, it was indicated that draft system standards for colour television had been distributed to the television industry for advice and comment. Consultation with industry was then proceeding by means of an Industry Committee. The Committee had been formed, following meetings of industry representatives in Sydney and Melbourne, to make recommendations to the Board on standards for radiated signals, required transmission tests and (later) detailed equipment standards. The committee comprised a small "steering committee" and four sub-committees or working parties dealing respectively with transmitters, receivers, relays and studio equipment.

176. The Board received the reports of the sub-committees with a letter from the Committee of 9 December 1969. After study of the Committee's recommendations, and having regard to current requirements, the Board determined new system standards for the Australian Television Service on 21 April 1970. The standards are contained in Appendix M of this Report. The new standards contain system specifications and performance requirements for both monochrome and colour television and replace standards for the Australian television services determined by the Board in 1950. The standards are in sufficient detail to assist station engineers in their assessment of the extent to which existing transmission equipment would need to be replaced or modified for colour television operation.

177. The Board is most grateful for the services rendered by the Industry Committee. The four sub-committees met on 18 occasions with an average attendance of twenty persons. Their work required a great deal of effort and a considerable personal burden was placed upon members.

178. The revised standards include changes to certain parameters of the present monochrome system which are discussed in paragraph 410 of this Report. These changes will be implemented gradually on a time scale to be fixed by the Board after consultation with the industry and the first phase, the operation of all Sydney and Melbourne television stations with a vision to sound power ratio of 10:1 compared with 5:1 formerly, has been effected. The Board has informed the Federation of Australian Commercial Television Stations of this decision and that it is the

Board's intention to consider fixing a date for mandatory change to this ratio by all television stations.

179. The activities of the Industry Committee and its working parties are not yet complete as it is proposed that they should review draft revisions of the existing "Standards for the Technical Equipment and Operation of Television Stations"; upon completion of these reviews the Board will be in a position to determine the new version of these standards to provide the detailed technical specification for monochrome and colour equipment for use in the Australian television service.

180. In view of the fact that the Government will need to have the fullest information on all aspects before making a definite decision on the introduction of colour television, the Minister requested the Board to make a full report to him on the question before the end of June 1970. The Board, on 9 October 1969, forwarded to licensees of television stations, programme producers, manufacturers, retailers and other parties who may be concerned with the introduction and operation of colour television services, a circular and questionnaire. These were designed to obtain information to assist the Board in making a completely informed report to the Postmaster-General on the issues which will be involved in the introduction of colour television including technical, economic, social and other aspects. A copy of the circular and questionnaire are contained in Appendix K. The views of the Postmaster-General's Department and the Australian Broadcasting Commission as the operating authorities for the National Television Service, were also obtained. The Board's report was submitted to the Minister on 12 June 1970.

181. In reply to a number of recent questions on a likely date of introduction of colour television, the Postmaster-General indicated that he would in due course be making recommendations to the Government in the light of the Board's report; it was not possible to make any statement or determination on the matter until this report had been studied.

182. Some apprehension has been expressed from time to time as to possible effects which the introduction of colour television might have in regard to the effectiveness of monochrome (black and white) television services and the provision of these services. On the former aspect, it is perhaps not entirely clear to all viewers that while programmes will not be receivable in colour on a monochrome receiver, colour programmes will be receivable in black and white on a monochrome receiver and monochrome programmes will be receivable in black and white on a colour receiver. The Board mentioned the aspect of "compatibility" of colour television signals, i.e. the quality of reception of colour programmes in black and white on present day receivers in its last annual report (see paragraph 125). The Board said that the colour television system proposed for Australia will permit the reproduction on existing monochrome receivers (with the possible exception of some very old or maladjusted models) of fully acceptable black and white pictures. The following statement by the Postmaster-General in reply to a question in Parliament on 9 April 1970 is of interest on another aspect of colour television in relation to monochrome service: "the transmission of colour programmes by television stations should not affect their quality or range of reception on monochrome receivers. In areas where difficulties are experienced at present with reception of programmes transmitted in monochrome the difficulties could be

slightly increased for reception of colour programmes on a colour receiver. In many such cases it would be expected that attention to the receiving installation would enable improvement to be obtained at reasonable cost." On the question of the further extension of monochrome television, the Postmaster-General has given assurances that this matter will not be affected by any decision on the introduction of colour television; of course it has to be appreciated that under plans so far approved television service will already be available to 97.9% of the population, and that the remaining areas are distant and isolated and consequent difficulties apply.

183. Technical material in relation to colour television is given later in this Report (see paragraphs 409 to 414).

INTRUSIONS AT BROADCASTING STATIONS

184. Between March and December 1969 the transmissions of Melbourne commercial broadcasting stations were interrupted by interference at the stations' Heidelberg site with their equipment and radiating systems.

185. Two persons were charged by the Victoria Police before the Eltham Magistrates Court on 23 April 1970 with four counts of interference with the broadcasting of programmes from a broadcasting station, and with three counts of malicious damage under the Crimes Act 1958 of Victoria. Both persons have been committed for trial at the Melbourne County Court.

186. The case involved the first prosecutions under Section 124A of the Broadcasting and Television Act which was inserted in the Act in 1969 to provide that it shall be an offence under the Act for any person knowingly to obstruct or otherwise interfere with the broadcasting or televising of programmes or in any way to interfere with the operation of stations.

187. In November 1969 intruders set off an explosive charge at the base of the main transmitting mast of national broadcasting stations 2BL/2FC at Liverpool, New South Wales, causing serious damage resulting in the mast being out of service for over four months. During this period, service from both stations was maintained on reduced power from standby masts.

PUBLICATIONS AND INFORMATION

188. As would be expected from the Board's important responsibilities to the community and the significance of the broadcast media in the modern world, the Board receives a great many requests for information.

189. The publications listed hereunder are available from the Board's offices; some are also held by the Government Publications Branch Bookshops in Canberra, Sydney and Melbourne.

Annual Reports. Reports for the years ending 1950, 1952 to 1954, 1956, 1958 to 1963, 1965 to 1967 are available. Reports for other years are out of print but are available for study in the Board's Library.

Reports and Recommendations to the Postmaster-General regarding grant of licences for broadcasting and television stations.

Technical Standards for the Australian Television Service.

Television Channels, Standard Intermediate Frequencies and Standards for limits of Radiation from Receivers.

Standards for the Technical Equipment and Operation of Medium Frequency Broadcasting Stations.

Standards for the Technical Equipment and Operation of Television Stations.

Notes on the Use of Community Television Aerial Systems.

Broadcasting Programme Standards (1967 edition).

Television Programme Standards (1970 edition).

Religious Telecasting in Australia (an account of a consultation held at Ormond College University of Melbourne, August 1966).

Religion and the Broadcast Media (a report by the Board's Advisory Committee on Religious Television Programmes).

Report of the Advisory Committee on Educational Television Services to the Australian Broadcasting Control Board (the Weeden Report).

Helping Children to use Television Wisely (leaflet).

Television Tension Programmes (David Martin), (a study based on a content analysis of Western, Crime, and Adventure Programmes televised by Melbourne stations 1960-61).

Attitudes to Television (a programme research report based on surveys made in Sydney and Melbourne, 1968 and 1969).

190. The Board's library, at its offices, 373 Elizabeth Street, Melbourne, is available for reference purposes to the industry and the public. The Board subscribes to a comprehensive range of current literature, both Australian and overseas, on broadcasting and television and the library also contains a wide range of other published material, including much valuable material of a specialised character.

PART III—BROADCASTING—ADMINISTRATION

CURRENT LICENCES FOR COMMERCIAL BROADCASTING STATIONS

191. On 30 June 1970 there were 114 licences for commercial broadcasting stations in force. A list of licensees is contained in Appendix A of this Report. A map of Australia showing the location of all broadcasting stations in operation at 30 June 1970 is included after Appendix Q. The disposition of the licences is shown in the following table:

Area	State Capital Cities	Country Areas	Terri- tories	Total
Australian Capital Territory	—	—	1	1
New South Wales	6	31	—	37
Victoria	6	14	—	20
Queensland	4	21	—	25
South Australia	3	5	—	8
Western Australia	4	10	—	14
Tasmania	2	6	—	8
Northern Territory	—	—	1	1
Commonwealth	25	87	2	114

GRANT OF NEW LICENCES

192. No new licences for commercial broadcasting stations were granted during the year. However, Ministerial approval for the grant of new licences is referred to below. Also, arising out of the Board's continuing review of the broadcasting services (see paragraph 47 et seq.), it was possible to make recommendations to the Minister that he should invite applications for the grant of a licence for a commercial broadcasting station at Gosford, New South Wales and Nowra, New South Wales.

193. In each case there has been a longstanding demand for a commercial broadcasting service.

194. Since 1933 there have been 32 requests for the grant of a licence in the Gosford area. The estimated daytime coverage of a station in the area would be 77,000 people, excluding the Sydney metropolitan area. Commercial activity in the area is strong and broadly based. There is a considerable tourist trade. Average annual growth rates for the area are impressive and future growth and prosperity seem assured. The existing service from the Sydney and Newcastle commercial broadcasting stations is generally of a secondary nature with bad fading and consequent distortion at night.

195. There have been 13 requests for the grant of a licence in the Nowra area since 1936. The area does not at present receive a satisfactory commercial broadcasting service. It is a significant primary producing area and substantial light secondary industry is also established there. There is a high annual growth-rate which should be maintained. The estimated day-time coverage of a station in the area would be 26,000 people.

196. Following the recommendation of the Board, in respect of Gosford, the Minister in the Commonwealth *Gazette* of 26 February 1970 formally invited applications for the grant of a licence for a commercial broadcasting station at Gosford pursuant to section 82 of the Act. The Minister announced the matter to the press on the same day. The closing date for applications was 29 May 1970. Applications were received from the following:

Allan David Faulkner on behalf of Radio Gosford Limited (a company in the process of incorporation).

Alexander John Baz on behalf of Raftan Ltd. (a Company to be formed).

Leslie Raymond Hood.

Brisbane Water Broadcasters Pty. Limited.

Gosford Wyong Broadcasters Pty. Limited.

Central Coast Broadcasting Pty. Limited.

197. Pursuant to section 83 (1.) of the Act, the Minister, by instrument in writing dated 2 June 1970 referred the applications to the Board for its recommendation as to the exercise by him of the power conferred by sub-section (1.) of section 81 of the Act. The Board's inquiry into the applications in accordance with section 83 (2.) of the Act will commence in Gosford on 11 August 1970.

198. The grant of a licence for a commercial broadcasting station at Gosford will be subject to the following technical conditions determined by the Board:

- (a) The station will operate on the frequency of 1310 kHz, which is at present used and will continue to be used, by stations 5AD Adelaide, South Australia, and 1ZH Hamilton, New Zealand.
- (b) Power to a maximum of 2,000 watts will be used.
- (c) A directional aerial designed and constructed to limit radiation in the direction of Adelaide, South Australia, and Hamilton, New Zealand, to not more than 50 millivolts per metre at one mile from the station, and which shall meet with the requirements of the Board, will be used.
- (d) A minimum field strength of 30 millivolts per metre is to be provided in Gosford.

199. Following the recommendation of the Board in respect of Nowra, the Minister in the Commonwealth *Gazette* of 13 August 1970 formally invited applications for the grant of a licence for a commercial broadcasting station at Nowra pursuant to section 82 of the Act. The Minister announced the matter to the press on the same day. The closing date for applications will be 27 November 1970. Applications must be submitted to the Secretary of the Board on or before 27 November 1970 and as soon as possible after that date the Board will commence a public inquiry into applications as is required by section 83 of the Broadcasting and Television Act.

200. The grant of a licence for a commercial broadcasting station at Nowra will be subject to the following technical conditions determined by the Board:

- (a) The station will operate on the frequency of 1,000 kHz which is at present used and will continue to be used by 6PM Perth, Western Australia and 1ZD Tauranga, New Zealand. The frequency will also be used by 2NB Broken Hill and 2TR Taree, New South Wales, both with directional aerials.
- (b) Power to a maximum of 2,000 watts will be used.
- (c) A directional aerial designed and constructed to limit radiation in the direction of 1ZD Tauranga, New Zealand, and 2NB Broken Hill, to not more than 100 millivolts per metre at one mile from the station, and in the direction of 2TR Taree to not more than 50 millivolts per metre at one mile, will be used.
- (d) A minimum field strength of 20 millivolts per metre is to be provided in Nowra.

201. Reference was made in paragraph 131 of the Twenty-first Annual Report (1968-69) to an invitation by the Minister for the grant of a licence for a commercial broadcasting station in the Alice Springs area, Northern Territory. The closing date of applications was 29 August 1969. An application was received from Alice Springs Commercial Broadcasters Pty. Ltd.

202. Pursuant to section 83 (1.) of the Act, the Minister, by instrument in writing dated 4 September 1969, referred the application of the Board for its recommendation as to the exercise by him of the power conferred by sub-section (1.) of section 81 of the Act. The Board's inquiry into the application, in accordance with section 83 (2.) of the Act, was held in Alice Springs on 23 September 1969.

203. The Board submitted its report and recommendations to the Minister as to the grant of a licence on 21 October 1969. The Board recommended the grant of a licence to Alice Springs Commercial Broadcasters Pty. Ltd.

204. In the Board's report to the Minister on its inquiry into the application the following conclusions were reached:

It is the Board's view from its experience of the financial results of commercial broadcasting stations in country areas that, with competent management a commercial broadcasting station operating in the Alice Springs area should derive sufficient advertising revenue to enable it to operate successfully in accordance with the Board's technical and programme standards. It is estimated that a station in the area should provide service to a population of the order of 9,000; this population coverage should increase with the growth of the area, which seems assured. In addition to the permanent population of the area, there is also a substantial holiday or transient population in the area which at present is of the order of some 65,000 persons per annum.

205. The Minister approved the grant of a licence in accordance with the Board's recommendation on 21 January 1970 on the condition that the company is constituted in accordance with the proposals made in the application for the grant of the licence and at the inquiry into the application.

206. The constitution of the successful applicant at the time of the approval for the grant of the licence was as follows:

Authorised capital of \$200,000 comprising 200,000 shares of \$1 each. At the time of the inquiry a total of 31,000 shares, paid to 10 cents each, had been allotted to a total of seventeen individual shareholders as follows:

E. J. Connellan	5,000
E. M. Marron	5,000
G. and N. E. Brown	2,000
M. O. Hughes	2,000
P. A. and J. A. Leunig	2,000
I. McFarlane	2,000
Murray Neck Pty. Ltd.	2,000
Cluna Pty. Ltd. (Melbourne)	2,000
Nine other residents of the Alice Springs area (1,000 each)	9,000
	<hr/> 31,000

All of the shareholders, with the exception of Cluna Pty. Ltd., are residents of the Alice Springs area. It was proposed that a further 49,000 shares would be issued to local residents. In addition, the company had received expressions of a desire to participate from several companies with varying degrees of association with the Alice Springs area. Calls on the 80,000 issued shares of the company would be made in accordance with the financial requirements of the company.

207. The company accepted the proposal for the grant of a licence and is proceeding with matters in relation to the constitution of the company and with steps towards the establishment of the station. The station will use the call sign 8HA Alice Springs. The operating conditions of the station are given in paragraph 261.

208. It was reported in the Board's Twenty-first Annual Report (paragraph 142) that Gladstone District Broadcasting Pty. Ltd. and Eyre Peninsula Broadcasters Ltd. had accepted the Postmaster-General's offer of the grant of licences for commercial broadcasting stations at Gladstone, Queensland and Port Lincoln,

South Australia, subject to certain conditions. The Minister's approval for the grant of licences followed public inquiries by the Board into applications received in response to an invitation by the Minister for applications.

209. Progress towards establishment of the Gladstone station was delayed by difficulties associated with the selection of a site for the transmitter. Under plans of the Gladstone Electricity Authority, high tension power lines of the Authority would have traversed the optimum area for a site. These would have rendered the area unsuitable for the directional aerial which the station must install. A decision by the Authority to re-route the power line cleared the way for the establishment of the station.

210. The Board has not been satisfied with action by Eyre Peninsula Broadcasters Ltd. on the Minister's offer of the grant of a licence for a commercial broadcasting station at Port Lincoln. The Postmaster-General, on the basis of a report from the Board, informed the company that the matter would be reconsidered unless the company took immediate steps towards establishment of the station. The matters involved are at present under discussion with the company.

211. The stations will use the call-signs 5EP Port Lincoln and 4CD Gladstone.

212. The station at Alice Springs is expected to commence operation by the end of the year. The station at Gladstone will commence operations on 17 August 1970 and the station at Port Lincoln should be in operation early in 1971.

RENEWAL OF LICENCES

213. The Board is required by the Act to submit a recommendation to the Minister on each licensee's application for the renewal of his licence; before doing so it makes a complete review of the service which has been provided by the licensee. The form of application for renewal of licence was revised during the year to provide information concerning the constitution and ownership of the licensee company with reference to the new provisions incorporated in the Act on this matter in respect of broadcasting stations (Division 2 of Part IV of the Act) in 1969. The form also provides information regarding the technical and programme performance of stations. Reports made to the Board by its technical officers during the year concerning the technical equipment of stations have indicated that, in general, a very high standard of technical efficiency has continued to be maintained in the commercial broadcasting service. Indeed it has been pleasing to note the very extensive effort that has been made by stations to ensure that their technical plant conforms to the generally more stringent requirements of the new standards for the technical equipment and operation of stations. The standards are referred to in paragraphs 274 to 276 of this Report. Reports concerning programme service indicated that stations have, generally, observed the requirements of the Broadcasting Programme standards. At the time of the renewal of the licence for 2BE Bega for 1968-69, the Board informed the Minister that although the station was not then providing a local news service, it was taking steps to improve this situation. In reporting to the Minister on the application for renewal of licence for 1969-70 the Board was pleased to advise him that observations of the programmes then being presented by the station indicated that substantial improvements had

been made in the direction of local news services. The Board was satisfied with the action that had been taken by the licensee in the matter.

214. With the exception of station 2XL Cooma which is referred to in the following paragraph, the Board's reviews of the performance of stations in connection with the applications for renewal of licences did not reveal any serious deficiencies in station operations.

215. Application for the renewal of the licence for station 2XL Cooma which expired on 10 December 1969 was due on 10 September 1969. The application was not received until 5 November 1969 whereas sub-section 2 of section 85 of the Act provides that application for renewal must be made not less than three months before the expiration of the licence. Sub-section 3 of section 85 of the *Broadcasting and Television Act 1942-1969* provides that the Postmaster-General shall refer applications for renewal to the Board and sub-section 4 provides that if the Board is not satisfied that an application for renewal should be granted, it shall hold an inquiry into the application and make a report and recommendation to the Minister. The Board was not satisfied that the application for renewal in respect of station 2XL should be granted.

216. The Board considered that grounds existed for refusing the application on account of its lateness, and unsatisfactory conduct of the licensee in that it continuously failed to reply within a reasonable time to communications from the Board during the period 19 August 1968 to 29 October 1969. In accordance with sub-section 5 of section 85 of the Act the licensee was notified of these grounds and an inquiry into the application was held in Cooma on 25 November 1969.

217. Evidence was given at the inquiry by each of the directors of Cooma Broadcasters Pty. Ltd., and by the company's business manager, Mr. N. J. Allam. The Chairman of Directors informed the Board at the inquiry that the Board of Directors of Cooma Broadcasters Pty. Ltd. had, at a meeting on 25 November 1969, appointed Mr. N. J. Allam as Secretary and public officer of the company. Mr. Allam would also be appointed to the Board of Directors.

218. Undertakings were given by the company at the inquiry for steps to ensure the more efficient administration of the station and its compliance with requisitions of the Board and the requirements of the Act. These included the appointment of Mr. Allam as Secretary which was advised at the inquiry and as a Director. On the basis of these undertakings, the Board concluded that the licence should be renewed, but that the Minister should advise the company that, if at any time during the currency of the licence, the licensee fails to reply adequately, within reasonable time, to communications from the Board, he will, using his powers under section 86 of the Act, suspend the licence, and ask the Board to investigate the station further. The report recommended accordingly.

219. The Minister approved the Board's recommendation and renewed the licence for station 2XL on the basis proposed by the Board. The company subsequently advised that Mr. N. J. Allam had been appointed a director of Cooma Broadcasters Pty. Ltd. in accordance with undertakings given.

220. The Minister on the recommendation of the Board, granted renewals of the licences for all other stations for periods of one year.

FEES FOR LICENCES FOR COMMERCIAL BROADCASTING STATIONS

221. Fees for licences for commercial broadcasting stations are payable in accordance with the *Broadcasting Stations Licence Fees Act 1964-1966*. Under this Act the annual fee for a licence for a commercial broadcasting station is \$50, together with:

- (a) An amount equal to 1 per cent of the gross earnings of the station up to \$1,000,000 during the year ended 30 June (or where the licensee has with the approval of the Board adopted an accounting period ending on some other day than 30 June ending on that day) preceding the anniversary of the grant of the licence or the period for which the licence is renewed as the case may be.
- (b) An amount equal to 2 per cent of the gross earnings over \$1,000,000 but not exceeding \$2,000,000.
- (c) An amount equal to 3 per cent of the gross earnings over \$2,000,000 but not exceeding \$4,000,000.
- (d) An amount equal to 4 per cent of the gross earnings exceeding \$4,000,000.

The Act makes provision for the money value of any consideration in connection with any transaction otherwise than in cash to be deemed to have been paid or given for the purposes of the Act. The Act gives a discretionary power to the Minister in certain circumstances in order to ensure that all income properly attributable to the licensee is included in his gross earnings for the purposes of the Act.

222. The Act defines 'gross earnings' as follows: "gross earnings" in relation to a commercial broadcasting station in respect of a period means the gross earnings of the licensee of the station during that period in respect of the broadcasting from the station of advertisements or other matter, including the gross earnings of the licensee during that period in respect of the provision by him of, or otherwise in respect of, matter broadcast from the station'.

223. The total amount of licence fees payable by broadcasting stations during the period 1 July 1969 to 30 June 1970 based on earnings in the previous financial year, was made up as follows:

State	Fees Payable by—		
	Capital City Stations	Country Stations	Total
	\$	\$	\$
New South Wales and Australian Capital Territory	84,155	52,777	136,932
Victoria	70,102	25,779	95,881
Queensland	20,534	33,038	53,572
South Australia and Northern Territory	22,088	2,690	24,778
Western Australia	18,916	3,984	22,900
Tasmania	5,170	7,123	12,293
Commonwealth	220,965	125,391	346,356

In the previous financial year the total amount of licence fees payable was \$309,598.

TRANSFER OF LICENCES AND LEASING OF STATIONS

224. Section 88 (1.) of the *Broadcasting and Television Act* 1942-1969 provides that a licensee of a commercial broadcasting station may not, without the consent in writing of the Minister, transfer the licence or admit another person to participate in any of the benefits of the licence.

225. During the year the Minister approved the transfer of the licences for commercial broadcasting stations as follows:

	<i>From</i>	<i>To</i>
2CH Sydney	New South Wales Council of Churches Service	Council of Churches in N.S.W. Broadcasting Co. Pty. Ltd.
6IX Perth	} W.A. Broadcasters Pty. Ltd.	TVW Ltd.
6BY Bridgetown		
6MD Merredin		
6WB Katanning		

226. The *Broadcasting and Television Act* No. 2 of 1969 amended section 81 (1A) of the Principal Act to provide that a licence for a commercial broadcasting station shall be held by a company formed in Australia, having a share capital. A similar requirement was already in the Act in respect of licences for commercial television stations. The transfer of the 2CH licence arose out of the amendment of the Act. No change in ownership of the station was involved. The only other station affected is 2KY Sydney the licence for which is held by Trustees for the Labor Council for N.S.W. and the Secretary of that body; the licensee is taking steps for the formation of a company to hold the licence, as required by the Act.

227. Changes in ownership of stations 6IX, 6BY, 6MD and 6WB prior to the abovementioned transfer of the licences for the stations are referred to in paragraph 235.

228. At 30 June 1970 the following four stations were, with the consent of the Minister, pursuant to section 88 (1.) being operated by persons other than the licensee:

<i>Station</i>	<i>Licensee</i>	<i>Date of Original Consent</i>	<i>Date of Expiry of Existing Consent</i>	<i>Operating Company or Persons</i>
2CH Sydney	Council of Churches in N.S.W. Broadcasting Co. Pty. Ltd.	14.4.36	31.12.71	Amalgamated Wireless (A'asia) Ltd.
3KZ Melbourne	Industrial Printing and Publicity Co. Ltd.	12.2.32	6.9.70	3KZ Broadcasting Co. Pty. Ltd.
3XY Melbourne	Station 3XY Pty. Ltd.	17.5.35	1.5.73	Efttee Broadcasters Pty. Ltd.
2WG Wagga	Riverina Broadcasters (Holdings) Pty. Ltd.	29.6.64	30.6.74	Riverina Broadcasters

OWNERSHIP OR CONTROL OF COMMERCIAL BROADCASTING STATIONS

229. On 12 December 1969 the Postmaster-General made a statement that the *Broadcasting and Television Act* is to be amended to prevent employees' superannuation and provident funds being used to evade the intentions of the ownership and control provisions. The Postmaster-General said that Parliament

had determined that there should be restrictions on the number of television or broadcasting stations that can be controlled by a particular interest. There was obviously a close association between employees' pension funds and the interests that had caused such funds to be set up. The Government believed it undesirable that there should be any appearance of the pension funds being used to add to such interests.

230. In accordance with the Postmaster-General's statement of 12 December 1969, the Bill to amend the *Broadcasting and Television Act* 1942-69 introduced into Parliament on 4 March 1970 (see paragraph 4) includes the following proposed new section 90AA to deal, in respect of broadcasting, with the matter to which the Minister had referred in his statement. The proposed section reads:

For the purposes of this Division, a company shall be deemed (but not to the exclusion of any other person) to be beneficially entitled to, or to an interest in, shares in another company where the shares are, or the interest is, owned by the trustees of, or otherwise held directly or indirectly for the benefit of, a fund maintained wholly or partly for the purpose of providing pensions, retiring allowances or other personal benefits to or in respect of all or any employees or directors of the first-mentioned company.

The new section will provide that shares owned or held prior to 12 December 1969 will not be affected by the amendment. A proposed new section 91AB to cover the same matter in respect of television is also included in the Bill.

LIMITATION OF INTERESTS IN COMMERCIAL BROADCASTING STATIONS

231. As referred to in paragraph 4 of the Board's Twenty-first Annual Report the *Broadcasting and Television Act* No. 31 of 1969 introduced new provisions relating to ownership or control of commercial broadcasting stations. The scope of the provisions as set out in the Postmaster-General's second reading speech on the legislation was contained in paragraph 155 of the Twenty-first Annual Report.

232. Section 90c of the *Broadcasting and Television Act* 1942-1969 provides that a person shall not have a prescribed interest in licences for:

- (a) more than one metropolitan commercial broadcasting station in any State;
- (b) more than four metropolitan commercial broadcasting stations in Australia;
- (c) more than four commercial broadcasting stations in any one State; or
- (d) more than eight commercial broadcasting stations in Australia;

provided that a person may continue to hold prescribed interests in licences in excess of those specified if he held those interests prior to 24 September 1968. Interests of the latter nature may not be increased in any manner and the persons concerned may not acquire prescribed interests in any further licences.

233. A prescribed interest in a licence as defined in the Act (section 90 (2.)) is broadly a shareholding or voting interest in excess of 15 per cent.

234. During the year the Board observed only one transaction which had the effect that the provisions of section 90c restricting the prescribed interests which a person may hold in licences for commercial broadcasting stations was contravened. The company involved in the contravention was advised by the Board of its position in relation to the provisions of section 90c and it took the necessary action to remedy the contravention.

235. Details of organisations with majority or substantial interests in two or more commercial broadcasting stations, and newspaper interests in stations, will be found in Appendix I.

IMPORTANT CHANGES IN SHAREHOLDINGS IN BROADCASTING STATIONS

2BS Bathurst—Bathurst Broadcasters Pty. Ltd.

2MG Mudgee—Mudgee Broadcasting Company Pty. Ltd.

Camplin Broadcasters Pty. Ltd. acquired all the shares in both companies.

2GZ Orange—Country Broadcasting Services Ltd.

2NZ Inverell—Northern Broadcasters Pty. Ltd.

Country Television Services Ltd. acquired all the issued capital of Country Broadcasting and Television Services Ltd. which company holds all the shares in the licensee company of 2GZ, which company in turn holds all the issued capital of the licensee company of 2NZ Inverell.

2LT Lithgow—Lithgow Broadcasters Pty. Ltd.

Transcontinental Broadcasting Corporation Ltd., licensee of 2KA Katoomba, acquired all the issued capital.

3AK Melbourne—General Television Corporation Pty. Ltd.

150,381 shares of \$2 each out of a total of 1,012,000 shares of \$2 each held in General Television Corporation Pty. Ltd., licensee of 3AK Melbourne were transferred to Consolidated Press Holdings Ltd. (141,629) and Greater Union Organisation Pty. Ltd. (8,752).

The 1,012,000 shares in the licensee company are now held as follows:

Independent Television Corporation Pty. Ltd.	802,771
Consolidated Press Holdings Ltd.	141,629
Greater Union Organization Pty. Ltd.	67,600

3AW Melbourne—3AW Broadcasting Company Pty. Ltd.

The Macquarie (Special) Superannuation Fund Ltd. and Vident Pty. Ltd. (nominee for the Trustees of the Fairfax Foundation) acquired 5,500 shares each from J. C. Williamson Ltd. and Allans Music (Australia) Pty. Ltd. respectively.

The 56,000 shares in 3AW Broadcasting Co. Pty. Ltd. are now held as follows:

Broadcasting Station 2GB Pty. Ltd.	45,000
Macquarie (Special) Superannuation Fund Ltd.	5,500
Vident Pty. Ltd.	5,500

3NE Wangaratta—Wangaratta Broadcasting Company Pty. Ltd.

Victorian Broadcasting Network Ltd. acquired 4,147 of the 27,650 shares.

4BH Brisbane—Broadcasters (Aust.) Pty. Ltd.

During the year 785 shares, out of a total of 12,500 issued shares of \$2 each in Broadcasters (Aust.) Pty. Ltd., licensee of 4BH Brisbane, were trans-

ferred from W.A. Broadcasters Pty. Ltd. to News Ltd. (369), A. & F. Sullivan Pty. Ltd. (370), and Coastal Broadcasters Pty. Ltd. (46).

6IX Perth, 6BY Bridgetown, 6MD Merredin, 6WB Katanning

The Herald and Weekly Times Ltd. acquired all the issued ordinary shares in West Australian Newspapers Ltd. whose wholly owned subsidiary W.A. Broadcasters Pty. Ltd. held the licences for stations 6IX Perth, 6BY Bridgetown, 6MD Merredin and 6WB Katanning. Arising from this transaction the Minister approved the transfer of the four abovementioned licences to TVW Ltd., licensee of commercial television station TVW Perth. Prior to the Minister's approval, it was necessary for West Australian Newspapers Ltd. and WAN Nominees Pty. Ltd. to dispose of shares in TVW Ltd. to an extent necessary to avoid the existence of a contravention of the Act by the former company. Details are given in paragraph 357.

MEMORANDA AND ARTICLES OF ASSOCIATION OF LICENSEE COMPANIES

236. Under Section 90L of the *Broadcasting and Television Act* (No. 2) of 1969 all companies holding a licence for a commercial broadcasting station were required to amend their articles of association by 31 December 1969 or such later date as the Minister approved, to include certain provisions in connection with the new provisions in that Act concerning the ownership or control of stations. The requirements of the Section have been met by all licensee companies.

237. Section 90K of the Act provides that a licence is subject to a condition that a change in the memorandum or articles of association of a company holding a licence for a commercial broadcasting station shall not take place without the approval of the Minister.

238. During the year, the Minister, pursuant to the provisions of Section 90K gave his approval to minor changes in the memoranda and articles of association of several licensee companies.

DIRECTORSHIPS OF COMMERCIAL BROADCASTING STATIONS

239. Under section 90F (1.) of the Act a person shall not be a director of two or more companies that are, between them, in a position to exercise control of licences for:

- (a) more than one metropolitan commercial broadcasting station in any one State;
- (b) more than four metropolitan commercial broadcasting stations in Australia;
- (c) more than four commercial broadcasting stations in any one State; or
- (d) more than eight commercial broadcasting stations in Australia;

provided that a person is permitted to be a director of any companies in a position to control interests in excess of those specified, if those interests were held prior to 24 September 1969.

240. Under section 90F (1.) of the Act any persons contravening the sub-section were required to rectify their position by 31 December 1969. It was necessary for

the Board to invite the attention of six directors of licensee companies of commercial broadcasting stations to their holding of directorships which placed them in contravention of the provisions of Section 90F (1.) of the Act. All such contraventions were corrected prior to the required date.

NETWORKS OF COMMERCIAL BROADCASTING STATIONS

241. The licensee of each commercial broadcasting station is required to obtain the Board's consent before entering, or becoming a member of, any network, by a condition of the licence which reads as follows:

The licensee shall not, without the consent in writing of the Australian Broadcasting Control Board, enter or become a member of any network of broadcasting stations, or any other association or organization of broadcasting stations formed for the purpose of making arrangements for the provision of programmes or the broadcasting of advertisements, or acquire by itself or any person or company on its behalf, any shares or other interests in any such network, association or organization.

242. The two principal networks in existence at present are the Macquarie Broadcasting Network and the Major Broadcasting Network.

243. The Macquarie Broadcasting Network consists of a proprietary company, Macquarie Broadcasting Service Pty. Ltd., in which 22,304 of the total of 77,658 shares are held by Broadcasting Associates Pty. Ltd. (a wholly-owned subsidiary of Macquarie Broadcasting Holdings Ltd.) and the remainder of the shares are held by member stations. Broadcasting Associates Pty. Ltd. has further interests in the company through its shareholdings in certain member stations (see Appendix I).

244. The following were member stations of the network at 30 June 1970:

Macquarie Broadcasting Network

<i>New South Wales</i>	<i>Queensland</i>	<i>Western Australia</i>
2GB Sydney	4BH Brisbane	6IX Perth
2LF Young	4BU Bundaberg	6BY Bridgetown
2LT Lithgow	4GY Gympie	6MD Merredin
2MW Murwillumbah		6WB Katanning
2PK Parkes	<i>South Australia</i>	
2WL Wollongong	5DN Adelaide	<i>Tasmania</i>
		7HO Hobart
		7LA Launceston
		<i>Australian Capital Territory</i>
<i>Victoria</i>		2CA Canberra
3AW Melbourne		

245. Macquarie Broadcasting Service Pty. Ltd. has an arrangement with a number of other stations in accordance with which they may co-operate with the network on agreed terms in the sale of station time for the broadcasting of Macquarie programmes.

246. The Major Broadcasting Network is not a company but is an association of stations of which the following were members at 30 June 1970:

Major Broadcasting Network

<i>New South Wales</i>	<i>Queensland</i>	<i>Western Australia</i>
2UE Sydney	4BK Brisbane	6PR Perth
2KO Newcastle	4AK Oakey	6CI Collie
		6TZ Bunbury
<i>Victoria</i>	<i>South Australia</i>	<i>Tasmania</i>
3DB Melbourne	5AD Adelaide	7EX Launceston
3LK Lubeck	5PI Crystal Brook	7HT Hobart
	5MU Murray Bridge	
	5SE Mount Gambier	

The Major Broadcasting Network has an arrangement with a number of other stations which co-operate with the Network for the purpose of selling advertising time.

247. There are several other groups of stations which are described as networks, details of which are as follows:

- Associated Broadcasting Services, comprising stations 3CS Colac, 3SR Shepparton, 3UL Warragul and 3YB Warrnambool.
- Central Queensland Broadcasting Network, comprising stations 4IP Ipswich, 4LG Longreach and 4LM Mt. Isa.
- New England Network, comprising stations 2AD Armidale, 2MO Gunnedah, 2RE Taree and 2TM Tamworth.
- Queensland Broadcasting Network, comprising stations 4BC Brisbane, 4GR Toowoomba, 4MB Maryborough, 4RO Rockhampton and 4SB Kingaroy.
- Tasmanian Broadcasting Network, comprising stations 7AD Devonport, 7BU Burnie, and 7SD Scottsdale.
- Victorian Broadcasting Network, comprising stations 3CV Maryborough, 3HA Hamilton, 3SH Swan Hill, 3TR Sale and 3NE Wangaratta.
- Consolidated Broadcasting System, comprising stations 6PM Perth, 6AM Northam, 6GE Geraldton and 6KG Kalgoorlie.

OPERATION OF COUNTRY COMMERCIAL BROADCASTING STATIONS AS RELAY STATIONS

248. For some time, the Board has been concerned regarding the operation of a number of country commercial broadcasting stations to a substantial extent as relay stations, having in most cases a capital city station as the parent station. The matter has been referred to in previous annual reports. The Board last year again took the matter up with licensees pointing out that for country commercial broadcasting stations to provide (with reference to section 16 of the Act) adequate and comprehensive programmes to serve the best interests of the public, they must

furnish a significant degree of local service directed to the special interests and requirements of the area concerned; indeed the Board views the provision of such a service as a major justification for country commercial broadcasting stations.

249. Favourable progress towards greater independence of operation of the stations concerned had followed earlier discussions with licensees. The matter is not without problems for licensees from aspects such as the costs of local operation and the fact that the capacity of some of the areas for revenue earning is not high. For these reasons, the Board has not expected more than a progressive approach to substantial independence of operation of the stations. Nevertheless, the Board has been pleased with further developments in this regard in recent years. Two of the stations formerly concerned (5AU Port Augusta and 5RM Renmark) have become substantially local stations. In respect of a number of the other twelve stations concerned, a trend towards providing significant amounts of local programming was continued during the year.

250. The Board intends to pursue the matter with licensees.

PART IV—BROADCASTING—TECHNICAL SERVICES

DEVELOPMENT OF THE NATIONAL SERVICE

251. The Board's Twenty-first Annual Report reported approval for the establishment of national broadcasting stations in the North-West (Bourke-Cobar-Brewarrina) area of New South Wales and in the Ceduna-Streaky Bay area of South Australia. Sites have been approved and site and building arrangements are proceeding. Establishment of the stations is expected to be completed in the financial year 1971-72.

252. A new national broadcasting station at Busselton, Western Australia (6BS) commenced operation on 22 December 1969. The station is using a low-height stand-by radiator. It is expected that the full-height, antifading radiator will be in service early in 1971.

253. The operating frequency of national broadcasting station 6WF Perth was changed from 690 kHz to 720 kHz on 15 December 1969. Both 6WF and 6WN (810 kHz) radiate from the one mast and whilst such a method of operation is not uncommon practice in the national service the two frequencies are closer than is usually the case; because of this the successful operation of the two stations constituted a technical task of some magnitude. This success has permitted improved arrangements in regard to frequency usage within the medium frequency band.

254. During the year the Minister approved, on the recommendation of the Board, the establishment of new national broadcasting stations at Julia Creek, Mossman and Hughenden in northern Queensland, and at Leigh Creek in South Australia.

255. That area of central northern Queensland along and to the north of the Townsville to Mount Isa railway line does not at present receive an adequate broadcast service and there have been representations for improved service over

a period of many years. National Station 4QL Longreach, because of its favourable frequency and the very high soil conductivity, provides a service to the area in day-time but the distance is so great that reception from 4QL is subject to fading and distortion after dark. The sealing of beef roads and the extension of mining and pastoral interests will mean a steady increase in demand for broadcasting service within the central north Queensland area. The proposed national broadcasting station for Julia Creek will provide an adequate day-time broadcast service to the whole of the north central and north west areas of Queensland to as far north as the Gulf of Carpentaria and to part of the southern extremity of the Cape York Peninsula, an area not now receiving a service. A directional system will be necessary for the station to prevent interference with New Zealand services and, as a result of this, and the distance between Julia Creek and Hughenden, it would not be possible to provide an adequate broadcast service to Hughenden from the station at Julia Creek. Accordingly, a station of low power is to be established at Hughenden specifically to serve that centre. The two proposed stations should be a most valuable addition to the national broadcasting service. The Julia Creek station should provide a service to a population of about 13,000 and of this number 10,000 should receive primary service. The total area receiving day-time service would be 120,000 square miles. The station at Julia Creek will operate on a frequency of 570 kHz with a power of 10,000 watts. The station at Hughenden will operate on a frequency of 1570 kHz with a power of 50 watts.

256. While the Mossman-Daintree-Port Douglas area is only 40 or 50 miles north of Cairns, the intervening country is so rugged that it does not receive much more than a token service from either the Cairns (4QY) or Atherton (4AT) national broadcasting stations. The population affected comprises about 4,000 people and representations for improved service have been received over a long period. Because of the high natural interference levels, particularly in the summer, a local service has become essential. The new station in this area will operate on a frequency of 600 kHz with a power of 1,000 watts.

257. Leigh Creek, South Australia, is a town of over 1,000 people, some 200 miles from the nearest high-power broadcasting station—5CK Crystal Brook. Because of the distance, broadcasting signals are very weak during the day and fading and distortion mar service at night. The area is the source of coal for the major electricity generating station in South Australia at Port Augusta. There have been representations for improved broadcasting service over a considerable period. The station at Leigh Creek will operate on a frequency of 1,570 kHz with a power of 50 watts.

258. The transfer of national broadcasting station 5PA South-East Service (Penola) to a new site in the vicinity of Naracoorte, together with an increase in power from 2,000 watts to 10,000 watts and the provision of a directional aerial—to which reference was made in paragraph 184 of Twenty-first Annual Report (1968-69)—was completed on 29 June 1970. Operation under the new conditions will greatly improve the effectiveness of the station and ensure a satisfactory service in many areas of the South East region of South Australia where reception has hitherto been deficient, whilst continuing the provision of a first quality service to the Penola district.

259. Changes in the operating conditions of national broadcasting stations 2TR Taree and 2NB Broken Hill were determined during the year. The frequency channel of station 2TR will be changed from 720 kHz to 1,000 kHz associated with an increase in power to 2,000 watts and installation of a directional aerial. The frequency channel of 2NB will be changed from 760 kHz to 1,000 kHz associated with an increase in power from 1,000 to 2,000 watts and installation of a directional aerial. These re-arrangements follow ratification of the agreement with the New Zealand Administration on the use of medium frequencies. It is not possible to indicate at this stage when the changed operating conditions will be effected.

DEVELOPMENT OF THE COMMERCIAL SERVICE

260. As indicated in paragraph 51 applications have been invited for licences for a commercial broadcasting station at Gosford, New South Wales, and at Nowra, New South Wales. The Board will determine sites for the stations after consideration of the views of applicants.

261. As indicated in paragraph 205 the Postmaster-General approved, during the year, the grant of a licence for a commercial broadcasting station at Alice Springs. The Board has determined that the operating conditions for the station will be—

Frequency: 900 kHz.

Power: 2,000 watts.

262. In paragraph 187 of the Twenty-first Annual Report, it was stated that the Board had approved in principle of an increase in the power of station 5SE at a new site at Mt. Gambier and that for these arrangements, the allocation of a new frequency would probably be necessary. The proposals were approved on the basis that station 5SE, which at present operates to a considerable extent as a relay station of 5AD Adelaide owned by the same interests, will adopt substantially independent programming. The rearrangements will also effect a considerable improvement and extension of commercial broadcasting service in south-east South Australia. The station will use a directional aerial. At the time of writing this report the licensee was investigating possible transmitting sites.

263. Following the ratification of the agreement with the New Zealand Administration on the use of medium frequencies, it was possible for the Board during the year to determine changes in the operating conditions of certain commercial broadcasting stations. The changes are a prerequisite to further rearrangements of the frequency plan and have the object of improving service from some of the stations concerned or facilitating improvements in the broadcasting services in other directions. The following changes were determined and were notified to licensees:

2BH Broken Hill	Change of operating frequency from 660 kHz to 570 kHz.
2MW Murwillumbah	Change of operating frequency from 1,440 kHz to 970 kHz.
3HA Hamilton	Change of operating frequency from 1,000 kHz to 980 kHz.
3YB Warrnambool	Change of operating frequency from 1,210 kHz to 880 kHz.
4RO Rockhampton	Change of operating frequency from 1,000 kHz to 980 kHz.
7QT Queenstown	Change of operating frequency from 720 kHz to 840 kHz.

In connection with the change of frequency of 2BH Broken Hill, an increase in operating power from 200 watts to 500 watts has been approved. Stations 3HA and 4RO effected the changes of frequency on 8 July 1970. Information is not yet available as to when the changes will be made in the other cases.

264. There was a steady level of activity by commercial broadcasting stations during the year in replacing or expanding their technical facilities. In addition to the fairly general acquisition by stations of new items of equipment such as microphones, tape recorders, AGC amplifiers and the like, numerous major changes were made or have received the Board's approval. These latter related particularly to studio facilities involving over 20% of the stations; new transmitters have been installed or are proposed in a substantial number of cases and two directional aerials and one replacement omni-directional aerial were commissioned. These activities reflect the desire of the industry generally to provide first-rate technical facilities in conformity with the provisions of the new technical standards determined by the Board.

265. Investigations were carried out during the year in conjunction with the Technical Committee of the Federation of Australian Commercial Broadcasters on the development of a reflectometer device to permit the power of stations to be determined accurately without interruption to the transmissions. The availability of such a device will simplify station technical operations and will also reduce to a minimum, inconvenience to stations, particularly the stations operating continuously, during annual technical inspections by the Board's engineering staff. At the time of writing this report, work had reached a stage where a detailed recommendation on the equipment for the device was imminent.

DIRECTIONAL AERIALS

266. As indicated in the statement supplied to the Federation of Australian Commercial Broadcasters on the general nature and effect of the agreement with the New Zealand Administration on the use of medium frequencies (paragraph 158), the employment of directional transmitting aerials will continue to be the main means by which improvements and extensions of broadcasting service may be effected. During the year directional aerial systems were brought into operation at 2GF Grafton and 3TR Sale. Installation of directional aerial systems has been approved at stations 2MW Murwillumbah, 4AY Ayr, 3YB Warrnambool and 5SE Mt. Gambier. Altogether directional systems have either been approved or are in operation at 17 commercial and 11 national broadcasting stations.

HIGH FREQUENCY BROADCASTING SERVICES

267. High frequency broadcasting services located in several states are designed to provide a national broadcasting service to distant sparsely populated areas of large extent in the Commonwealth and Territories.

268. Recent Annual Reports referred to a full review being made of these services with a view to ensuring their greatest effectiveness. When the Board's Twentieth Annual Report was made considerable progress had been made with the review including discussions with the Australian Broadcasting Commission as the

authority providing the programmes. It was indicated that an important aspect of the review was the effect of extensions of medium frequency broadcasting services in recent years on the requirements for high frequency services. With the plans now being implemented by the Board in the latter regard, reference to which has been made earlier in this Report, it has become apparent that further work on the review will have to be deferred until the coverage which will be provided by extensions to the normal broadcasting services can be assessed.

BROADCASTING SERVICES IN TERRITORY OF PAPUA AND NEW GUINEA

269. Previous Annual Reports have referred to the committee which advises the Postmaster-General and the Minister for External Territories on the planning, co-ordination and development of broadcasting services in the Territory of Papua and New Guinea. The committee comprises representatives of the Department of External Territories, Postmaster-General's Department, Papua and New Guinea Administration, Australian Broadcasting Commission and the Board. A plan formulated by the committee for the development of both the national broadcasting service and the broadcasting service operated by the Department of Information and Extension Services of the Administration on a co-ordinated basis in two stages has been approved in respect of the first stage by the Postmaster-General and the Minister for External Territories.

270. The planning and field investigations in connection with the first stage of the plan have now been completed. The Board co-operated in this work with the Territory Administration and the Postmaster-General's Department. Following field work in the areas in conjunction with these authorities, operating conditions for four stations to be established at Lae, Wewak, Madang and Goroka under the plan will be determined by the Board shortly.

INTERFERENCE TO THE RECEPTION OF BROADCASTING PROGRAMMES

271. The arrangement whereby the Postmaster-General's Department, at the request and expense of the Board, investigates causes of interference to the reception of broadcasting programmes and furnishes advice and assistance to listeners as to how these troubles might be minimised, was continued throughout the year. During the year ended 31 May 1970, 3911 complaints of interference to reception of broadcasting programmes were lodged with the Department, a decrease of about 2 per cent compared with the previous year.

272. The cost of investigation of complaints of interference to broadcasting and television services during the year was \$183,784.

273. The Board was represented by engineering officers at a "Workshop on Radio Interference" sponsored during the year by the University of New South Wales and the Institution of Radio and Electronics Engineers, Australia. The main purpose of the meeting was to bring together those who are concerned with the problems of radio interference and to discuss possible solutions to radio interference difficulties.

STANDARDS FOR THE TECHNICAL EQUIPMENT AND OPERATION OF MEDIUM FREQUENCY BROADCASTING STATIONS

274. As indicated in paragraph 197 of the Twentieth Annual Report (1967-68) new standards determined by the Board for the technical equipment and operation of medium frequency broadcasting stations were distributed in October 1968 to licensees of commercial broadcasting stations, the Australian Broadcasting Commission, the Postmaster-General's Department, the radio manufacturing industry and all other interested parties. Following distribution of the new standards the Board has been pleased to note the activity of the broadcasting industry in bringing the technical facilities installed at stations into line with the more stringent new requirements. Apart from the very considerable effort expended in upgrading existing equipment, there has been a steady level of activity in the provision of new facilities to replace equipment the performance of which did not meet the requirements of the new standards.

275. As mentioned in the Twenty-first Annual Report (1968-69) paragraph 200, procedures in regard to inspections of broadcasting stations and the associated report forms had to be revised to conform with the new standards. Work has been continuing on this matter. New inspection report forms have been introduced which have resulted in greater efficiency in advising station managements and technical staff of the technical state of their stations. It is proposed to make stocks of certain of the inspection forms available to stations to assist them in keeping maintenance records; this will be of mutual benefit to the stations and to the Board's inspection staff.

276. The new standards, combined with the revised inspection and report procedures, have added significantly to the effectiveness of the Board's oversight of the technical equipment and operation of stations, and the contribution which the Board is able to make by means of its statutory responsibilities in this matter to the overall technical efficiency of the broadcasting services.

Meetings of the C.C.I.R.

(COMITÉ CONSULTATIF INTERNATIONAL DES RADIOCOMMUNICATIONS)

277. The XIIth Plenary Assembly of the C.C.I.R. was held in New Delhi from 21 January to 11 February 1970. The final Study Group meetings preceding the Plenary Assembly were held in Geneva in September-October 1969. The Board's Twenty-first Annual Report (1968-69) pointed out that this was the first occasion on which the final meetings of the Study Groups, which produce the necessary documentation for the Plenary Assembly, had been separated in location and appreciably in time from the Plenary Assembly itself.

278. As referred to in paragraph 166 Mr. C. G. Elworthy, Assistant Director of the Board's Technical Services Division, attended both the Study Group meetings and the Plenary Assembly as a member of the Australian delegation.

279. It is not possible within the framework of this Report to attempt to touch on all the matters of special significance and interest to the broadcasting and television industry that were dealt with by the C.C.I.R. at these meetings; full details will be available in the C.C.I.R. "Green Books" to be published as a result. One

aspect which received particular attention was the feasibility of sound and television broadcasting from satellites (see paragraph 82 of this Report).

280. The Board made three contributions to the C.C.I.R. work in this latest Plenary period 1966-70. Details of a second series of propagation tests with orthogonal transmission (mentioned in previous Annual Reports) were made available to Study Groups X (Broadcasting) and VI (Ionospheric Propagation) and the latter Study Group was also furnished with details of a method of MF sky-wave field strength measurement which reduces the number of reception sites required in measurement campaigns. These contributions have been incorporated in the output documentation from the XIIth Plenary Assembly. The third contribution to Study Group XI (Television) is referred to in paragraph 433.

281. As mentioned in the Board's Twenty-first Annual Report (paragraph 204) Mr. J. M. Dixon, Sectional Engineer on the Board's staff, had to relinquish his position as Chairman of International Working Party VI/4 of the C.C.I.R., Sky-wave Propagation at Frequencies between approximately 150 and 1500 kHz, owing to pressure of the Board's engineering activities. His Chairman's report on the accuracy of predictions for MF/LF sky-wave field strength was adopted by, and incorporated in the output documentation of, the XIIth Plenary Assembly.

282. Further reference is made to the C.C.I.R. meetings in paragraph 433.

RADIO RESEARCH BOARD

283. The Board made a contribution of \$6,000 to the Radio Research Board, the primary purpose of which is to encourage research into radio and allied services within the Universities.

284. During the year, the Radio Research Board provided financial assistance to the Universities of New South Wales, Sydney, Melbourne, Queensland, Adelaide, Western Australia, Tasmania, New England, Newcastle, Townsville and to Monash and La Trobe Universities.

285. To ensure the greatest effectiveness of the grants by the Radio Research Board to the Universities, the Radio Research Board, during the year, supplied to Universities information on areas of research in which member organisations are particularly interested. There was a very encouraging response from the Universities to this step.

STANDARDS ASSOCIATION OF AUSTRALIA

286. During the year under review, the Standards Association of Australia established a new committee, the Electronics and Telecommunications Standards Committee to deal with telecommunications matters which were formerly the responsibility of a committee for the electrical industry. This has given rise to increased activity by the Association in fields of interest to the Board. The development was promoted by the need for standards covering a range of categories which would apply to the manufacture of consumer, industrial, professional and military equipment in Australia either for local use or for export. The Board is represented by the Director, Technical Services (Mr. S. F. Brownless) on the parent committee

and by engineering officers on committees dealing with safety, radio communications, interference, electro-acoustics and recording.

287. The Board provides the Chairman for the Association's interference committee, which is engaged in reviewing existing standards and preparing new standards for interference including interference from industrial equipment, domestic appliances, power lines, engine ignition systems and receiver installations. Another feature of the work of this committee is the preparation of standards for the susceptibility of receivers and other equipment to interference. The Board also provides the Chairman for subsidiary bodies dealing with aerials and with video recording.

288. The main activity undertaken by the safety committee has been a revision of approval of test specification C159 relating to radio and television apparatus, which covers the safety aspects of equipment manufactured principally for the domestic market and including specifically radio and television receivers. The need for this revision has arisen principally from an upsurge in design activity on television receivers in anticipation of likely colour television requirements and it will ensure that colour television receivers used in Australia, when colour television is introduced, will be manufactured to an up-to-date standard.

PART V—BROADCASTING—PROGRAMME SERVICES

289. For some years most commercial broadcasters appear to have placed substantial emphasis on entertainment and services for people under forty. This has been a profitable area of operation, but has led to a small but steady flow of adverse criticism of stations' apparent disregard for middle-aged and older listeners. In previous Annual Reports the Board has commented that programmes for such listeners did occur, though not perhaps at all times of day. The past year has seen the development of what appears to be a continuing trend towards melodious music, and a revival of "good" music sessions. (In the context of commercial broadcasting "good" music refers to "evergreens" and full orchestral arrangements of popular music and musical comedy tunes rather than classical music.) Taking account of the distribution of talk-back and informative programmes, greater opportunity now exists for listeners in a wider range of age groups to find programmes which are to their taste.

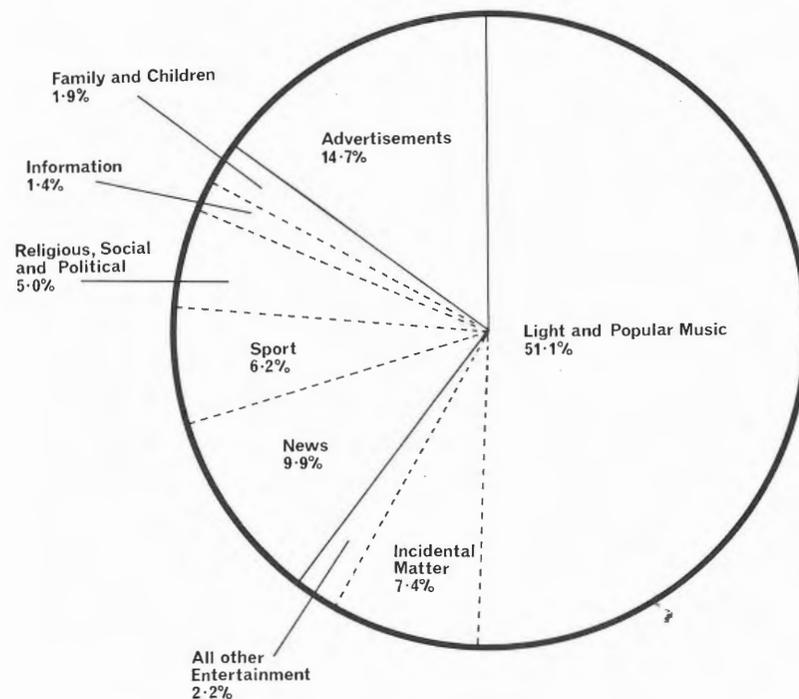
TYPES OF PROGRAMME

290. Half-yearly surveys of the types of programme broadcast by capital city stations were undertaken in November 1969 and May 1970. Because the maximum audience for broadcasting occurs in the early morning, the survey period was begun at 6.00 a.m. this year. The basis of programme classification used in previous years has been retained. Details of the survey findings are set out in Appendix N.

291. The overall pattern of commercial broadcasting programmes is shown in the following diagram which indicates the proportion of time occupied by the broadcasting of different types of programme matter. The proportions shown for each type of programme are the average of results from the two surveys made in the six State capitals. Since the introduction of telephone conversation broadcasts in 1967 sub-

stantial changes have occurred in the forms in which programmes are presented, but this has not necessarily meant a change in their content. Programmes making use of telephone conversations are classified according to the nature of the session in which they occur, and the type of matter dealt with.

COMPOSITION OF PROGRAMMES
ALL METROPOLITAN COMMERCIAL BROADCASTING STATIONS
November 1969 and May 1970 combined



292. The following table shows the distribution of programme matter under the three main headings of entertainment, information, and advertisements. It will be seen that the distribution of programme matter within this framework has been relatively stable over the last two years.

Programme Group	1966-67	1967-68	1968-69	1969-70
	Per cent	Per cent	Per cent	Per cent
Entertainment	60.1	58.2	60.7	60.9
Information —				
News and Sport	15.1	15.8	15.9	16.1
Other	9.7	11.3	9.0	8.3
	24.8	27.1	24.9	24.4
Advertisements	15.1	14.7	14.4	14.7
	100.0	100.0	100.0	100.0

NEWS

293. News services form a significant part of the programmes of commercial broadcasting stations, and provide a comprehensive coverage of international, national and local events. News is broadcast frequently and amounts to about 7 per cent of metropolitan programmes and about 9 per cent of country station programmes. Metropolitan stations broadcast an average of 19 major bulletins (mostly of 10 to 15 minutes duration) and 136 shorter or headline bulletins each week. Country stations average 35 major bulletins and 91 shorter bulletins each week.

294. Most stations also provide extensive auxiliary services, reporting on such matters as beach, snow or road traffic conditions and the movements of public transport. Many stations are encouraging public comment on current events through the medium of telephone conversation programmes.

295. The techniques of news gathering continue to develop with increasing use being made of such facilities as radio-equipped cars and direct telephone reports, observations from aircraft, telex services and satellite relays. It appears that more stations are using independent facilities of this kind, and are consequently developing a considerable degree of self-reliance and independence for their broadcast news services. The resulting diversity of approach to news is a significant contribution to the better-informed community, and the use of these modern techniques, with the consequent presentation of reports direct from the scene of action, adds to the impact and credibility of the broadcasts.

296. Several stations now present news programmes of up to thirty minutes duration, in contrast to the more general tendency in recent years to abbreviate news items. The trend to brevity had caused adverse comment because it led to condensing important matters too much. The introduction of more substantial news programmes, which allow for the treatment of news in depth, is as yet limited to a few city stations; these programmes have, however, won substantial support from listeners—in several cases gaining an audience almost 60 per cent the size of the station's maximum audience (McNair Surveys—1970). The fact that almost two-thirds of a station's audience is prepared to listen regularly to a full half-hour of news and commentary may suggest that the longer programmes are meeting a real community need. A few stations now present even more lengthy programmes of background news material in the early evening.

297. It is symptomatic of current public interest that some stations, including those which have for some time broadcast only condensed news sessions, are providing regular reports on the stock and investment market.

RELIGIOUS BROADCASTS

298. Section 103 of the *Broadcasting and Television Act 1942-1969* requires that the licensee of each commercial broadcasting station shall broadcast from his station Divine Worship or other matter of a religious nature during such periods as the Board determines and, if the Board so directs, shall do so without charge.

299. The Board's Broadcasting Programme Standards require each station to provide an aggregate of at least one hour per week for this purpose, the time being

provided without charge and allocated among the various Churches and denominations as far as practicable in proportion to the number of adherents to each denomination in the area served by the station. The Standards also contain recommendations concerning the types of religious material which should be broadcast.

300. A study of the distribution and duration of religious programmes broadcast without charge showed that all stations were broadcasting at least the minimum amount and that many were providing considerably more than the minimum amount of free time. There was wide variety in the manner of presentation, and many religious programmes comprised short items designed to match in form the station's other programmes.

301. The 114 commercial broadcasting stations now operating in Australia presented religious matter without charge to the extent of 228 hours per week during the year. This was slightly greater than the amount broadcast during 1968-69. The amount of time provided for sponsored religious programmes aggregated 242 hours per week, which was slightly less than in the preceding year.

302. With the development of religious programmes designed to be more readily integrated with the secular programmes of commercial broadcasting stations, some have been produced in a form which includes breaks for advertising purposes. On the recommendation of its Advisory Committee on Religious Programmes, and after discussion with the Federation of Australian Commercial Broadcasters, the Board has varied the Broadcasting Programme Standards to permit the inclusion of carefully selected advertising matter in religious programmes other than those which are devoted to the broadcasting of Divine Worship.

COMMUNITY SERVICE

303. Commercial broadcasting stations continued to make valuable contribution to the interests of the communities they serve. Such stations play an active part during periods of emergency (the service provided by some Queensland stations during Cyclone Ada provides a good example this year), and many regularly schedule general information and services relevant to their own service area. Two examples in this field are the local tourist information services of several Queensland stations, and the telephone education programmes presented in conjunction with the Australian Post Office to assist country people in the changeover from manual to automatic operation in Queensland and Western Australia. Road safety has also been widely promoted in free station time. As in former years, considerable sums of money have been raised for charitable purposes by commercial broadcasting stations in all States.

BROADCASTING IN FOREIGN LANGUAGES

304. The Board's Broadcasting Programme Standards provide that not more than 2½ per cent of a station's weekly hours of transmission may be occupied by programmes in which foreign languages are used, unless the Board has approved otherwise. The grounds for special approval are that a specified station, being one of several stations serving the same area, may be authorized to exceed the 2½ per cent limit if the Board is satisfied that such programmes are of a suitable kind and will serve a useful purpose. For several years station 2CH Sydney has been author-

ized to exceed the 2½ per cent limit; it is currently providing foreign language programmes up to 14 per cent of total transmission time.

305. The Board's rules provide that advertisements in a foreign language shall be broadcast only during a programme which itself is presented in a foreign language. For both programme matter and advertisements the rules provide that the words spoken in a foreign language shall be followed by an adequate translation into English occupying not less than 25 per cent of the total time occupied by the words spoken in a foreign language. As in previous years, the Board has agreed to these rules being set aside to allow messages of importance to migrants to be broadcast on behalf of the Department of Immigration.

EMPLOYMENT OF AUSTRALIANS

306. Section 114 of the Act, which is quoted in paragraph 46 requires licensees to use, as far as possible, the services of Australians in the production and presentation of programmes. Figures showing the extent of full-time employment by commercial stations are included in that paragraph. There is also a substantial amount of employment available on a freelance basis in music production, news commentary, sporting broadcasts and other fields related to broadcasting.

307. A dispute between commercial broadcasting stations and certain gramophone record manufacturers over payment for replay rights of Australian and British-made recordings resulted in less time being occupied in the broadcasting of recordings performed by Australian artists. The effects of the dispute did not become apparent until mid-May 1970, when a previous agreement expired and stations discontinued the use of such recordings. The figures in the following table have been compiled from information supplied by stations in connection with the renewal of their licences, and for the most part concern the period before the effects of the dispute could be noted.

	Average Australian Content Per Station			
	Metropolitan		Country	
	Hrs.	Mins.	Hrs.	Mins.
(a) Service and information programmes including—				
(i) News broadcasts and commentaries, sporting talks and descriptions, service programmes for special groups, religious programmes of Australian origin	20	50	26	21
(ii) telephone conversation programmes	6	53	2	32
(iii) other conversation programmes (both entertainment and service type)	3	28	1	39
(b) Other Australian programmes, live or in transcription form	1	37	3	25
(c) Playing time of gramophone recordings of Australian artists	12	11	8	35
(d) Time occupied by station announcers in the presentation of all musical items	12	32	9	59
(e) Advertising	18	05	12	08
Total Weekly Average	75	36	64	39

308. Compared with the previous year there has been a small increase in the amount of Australian material broadcast by metropolitan stations and a small decrease in the case of country stations. Material which can be classified as Australian in content and character was broadcast during the year for approximately 46 per cent of transmission time of metropolitan stations and for 51 per cent of the transmission time of country stations.

309. The question of the opportunities for employment of Australian musicians in the production of musical station identifications and promotional jingles has been under examination during the year in collaboration with the Federation of Australian Commercial Broadcasters. The Federation issued a comprehensive questionnaire to music production and recording houses in order to establish the availability of talent and facilities and the potential local output of this type of material. Another questionnaire sought the views of commercial stations on various aspects of the matter. The results of the survey when available will be studied by the Board in conjunction with other information obtained from the Board's own resources and with material supplied by the Professional Musicians' Union of Australia.

310. Sub-section 114 (2.) of the Act requires that not less than 5 per cent of time occupied in the broadcasting of music shall be devoted to the broadcasting of works of Australian composers. The following table, calculated from returns from stations, shows the level of compliance with the requirement over the past five years:

Year	Australian Broadcasting Commission	Commercial Broadcasting Stations	
	Average Percentage Metropolitan Stations	Average Percentage All Stations	Number of Stations Below Prescribed Percentage
1965-66	5.08	6.54	12
1966-67	5.71	6.86	10
1967-68	5.64	6.95	10
1968-69	5.85	6.96	8
1969-70	5.10	7.44	2

311. The two stations which failed to broadcast the prescribed percentage were respectively 0.1 and 0.4 per cent below the minimum figure of 5 per cent. The matter has been taken up with the stations in order that the deficiency might be corrected without delay. The proposed system of progressive advice to stations on their compliance with the statutory requirement, which was mentioned in paragraph 234 of the Board's Twenty-first Annual Report, is now in operation after some initial difficulties.

312. It is not clear at this stage how seriously the dispute over recording replay rights mentioned in paragraph 307 will affect stations in complying with Section 114 (2.) of the Act. The broadcasting of Australian recordings was not adversely affected by the dispute until almost the end of the period reviewed in this report. Many stations appeared to anticipate a shortage of recordings and to increase their use of these recordings in the months immediately preceding the expiry of the agreement.

313. The Board has been assured by the Federation of Australian Commercial Broadcasters that stations are well aware of their responsibilities under the Act, and that they are confident of meeting them. Recent press reports of the formation of new companies to produce records which will not be affected by the dispute suggest that there will be no more than short-term difficulties in complying with Section 114 (2.).

314. It was mentioned in paragraph 235 of the Board's Twenty-first Annual Report that in the debate on the Broadcasting and Television Bill No. 2 of 1969, it was stated on behalf of the Government that a proposal that section 114 (2.) of the Act should be amended to require not only that 5% of music broadcast should be devoted to the works of Australian composers but that such proportion of music should also be performed by Australians, would be investigated. From examination of the returns for the broadcasting of Australian compositions, which the Board requires licensees to supply, it became apparent that, with few exceptions, the items listed as Australian compositions were performed by Australian musicians. Numerous performances by Australian musicians of non-Australian compositions were also being broadcast. Based on a study of returns over a period of six months, the average amount of time occupied each week by Australian performances was, for metropolitan stations, slightly less than 10 hours per week; and for country stations, about 9 hours. These figures represent approximately 11 per cent and 13 per cent respectively of the time occupied by the broadcasting of music. On these figures the Board did not consider that there was any need for changes to the present requirements. Australian performances, too, may be affected by the dispute with some record manufacturers, but as indicated in paragraph 307 above, the problem seems likely to be only a short-term one.

ADVERTISING

315. The Board's Broadcasting Programme Standards contain detailed requirements, determined by the Board pursuant to section 100 of the Act, concerning the acceptability of advertisements and the amount of advertising matter which may be broadcast. No breaches of the Standards relating to the acceptability of advertising matter came under the notice of the Board during the year.

316. The Standards provide for spot advertisements to be broadcast for not more than 18 minutes in the hour, or 30 per cent of programme time, and advertisements in sponsored programmes to be broadcast for not more than 20 per cent of the programme period. These amounts are reduced on Sunday between 6.00 a.m. and 12.00 noon to a maximum of 6 minutes in the hour, whether for spot or sponsored advertisements.

317. Observations by the Board's monitoring staff indicate satisfactory compliance with the advertising time standards by most stations during most of the year. Non-compliance with some aspect of the Standards was taken up with 17 stations and at the time this report was being prepared action was being taken with several other stations over the amount of advertising matter in Sunday morning programmes. Having regard to the fact that 114 stations were transmitting for an aggregate of over 15,000 hours a week, the extent of failure to comply with the Standards was small.

318. The table in paragraph 292 provides an indication of the amount of advertising matter broadcast by metropolitan stations during the past four years. There has been little change in the total figure of about 15 per cent but changes occurred in the pattern of advertising content of programmes at various times of the day and in various State capital cities. Compared with 1968-69 the overall

levels of weekday advertising shown in table IV of Appendix N increased slightly in all capital cities except Sydney and Adelaide, and there was an increase in the amount of advertising matter broadcast between 6.30 p.m. and 7.30 p.m.

MEDICAL ADVERTISEMENTS AND TALKS

319. Section 100 (6.) of the *Broadcasting and Television Act 1942-1969* states that a licensee shall not broadcast or televise an advertisement relating to a medicine unless the text has been approved by the Director-General of Health, or, on appeal, by the Minister. Section 122 of the Act places a similar restriction on talks relating to medical subjects. For the guidance of advertising agencies and others who prepare medical advertisements or talks for broadcasting, *Notes on the Broadcasting and Televising of Matters of a Medical Nature* have been prepared by the Commonwealth Department of Health, and the most recent revision of these Notes is published as an appendix to the second edition of the Board's Television Programme Standards.

320. During the year the Board considered, at the Department's request, the suitability of some talks on contraception in the light of the Board's general standards for acceptability of programme matter. The talks had been approved by the Department of Health from its point of view, but it was considered that the more general question of good taste was involved. After serious consideration, and not without some misgiving, the Board approved the material for use at restricted times. So far as the Board is aware, there has been no unfavourable listener reaction.

321. The Board maintains liaison with the Director-General of Health on these matters, and through its monitoring service has been able to assist the Director-General in the exercise of his authority under the Act.

BROADCASTING OF OBJECTIONABLE MATTER

322. Section 118 (1.) of the Act prohibits the broadcasting of matter that is blasphemous, indecent or obscene. So far as the Board is aware from programme observations by its staff and from comments from listeners, nothing was broadcast during the year which could be regarded as contravening this sub-section of the Act.

323. The Federation of Australian Commercial Broadcasters maintains a Programme Committee which advises stations on the suitability of gramophone recordings for broadcasting. Under existing arrangements the Committee may advise stations that a recording is totally unsuitable for broadcasting, or that discretion on the part of station management is required in selecting a time for its transmission. The trend in lyrics towards mention or implication of such matters as drug-taking and sexual activity led the Board to discuss with the Federal Council of the Federation the need for some advice to stations by its committee on the suitability of these types of recordings for broadcasting.

324. The Federation has now advised the Board of its intention to adopt an additional classification by means of which station managements will be advised that certain items are not suitable for broadcasting at times when large numbers of children and young people are likely to be listening.

PROGRAMME RESEARCH

325. It has been the Board's practice for some years to conduct regular surveys of the nature and distribution of programmes broadcast in all capital cities. The results of surveys in 1969-70 have been referred to in paragraphs 290 and 291, dealing with types of programmes. An outline of the methods used in these surveys, and some of the results obtained, are set out in Appendix N.

326. Reports of commercial audience measurement surveys have been supplied by the Anderson Analysis and the McNair Survey. These surveys are conducted in the mainland State capitals and Newcastle. The duration of each survey has been extended for the 1970 series; the longer period under investigation should provide more reliable findings for use by station managements and advertisers. The Board uses this information mainly as an indication of the acceptance of various types of programmes by listeners, and of trends in interest.

327. Reference was made in the Board's Twenty-first Annual Report to a pilot survey, conducted in Melbourne, into the attitudes of listeners to broadcasting programmes. The main aim was to test whether the questions that had been devised were appropriate, and to obtain leads to areas of research which could be usefully pursued, and to suitable methods for obtaining such information.

328. The topics chosen for the pilot survey were:

1. Satisfaction with radio programmes.
2. Characteristics of the audience for various types of programmes and according to different moods.
3. Attitudes to (i) possible formats for news, sport, and religious programmes; and (ii) broadcast advertisements.
4. Preferred mode of listening.

329. The benefits derived from this survey were mainly in the areas of methodology and research topics. Although broadcast listening is widespread and frequent it appeared that the listeners did not often think about the medium or what it provided. Comments from the field interviewers suggested that some people were indifferent to broadcasting, or at least not so aware of it as they were of television. For example, respondents would pass a remark about a television programme or personality in reply to a question concerned only with broadcasting.

330. No decision has yet been made about further surveys in this area.

HOURS OF SERVICE

331. At 30 June 1970 the 114 commercial broadcasting stations were operating for an aggregate of 15,402 hours per week, 10 hours more per week than at 30 June 1969. During the year 15 stations increased hours of programme transmission and seven stations reduced hours. Thirty stations operate continuously: they are 2GB, 2KY, 2SM, 2UE and 2UW Sydney; 2CA Canberra; 2HD and 2KO Newcastle; 2NX Bolwarra; 3AK, 3AW, 3DB, 3KZ, 3UZ and 3XY Melbourne; 3BA Ballarat; 3TR Sale; 4BC, 4BH, 4BK and 4KQ Brisbane; 4AK Oakey; 4IP Ipswich; 5AD, 5DN and 5KA Adelaide; and 6IX, 6KY, 6PM and 6PR Perth.

332. The eighty-three stations of the national broadcasting service, including nine stations operating in the high frequency band, were providing a total of 10,335½ hours per week, 151½ hours per week more than at 30 June 1969.

333. The weekly hours of service of each commercial and national station are shown in Appendices A and B.

334. The following table shows the average weekly hours of operation of commercial stations at intervals over the past fifteen years.

*Average Weekly Hours of Operation
Commercial Broadcasting Stations*

Location of Station	Average Hours Per Week at 30 June (to nearest hour)				
	1955	1960	1965	1968	1970
Sydney (6 stations)	128	139	161	161	162
Melbourne (6 stations)	125	129	142	153	168
Brisbane (4 stations)	135	147	149	168	168
Adelaide (3 stations)	137	139	168	168	168
Perth (4 stations)	113	128	150	158	168
Hobart (2 stations)	117	125	131	136	136
All State Capital Cities (25 stations)	126	135	150	159	164
All other areas	112	116	122	126	127
	(81 stns)	(83 stns)	(86 stns)	(89 stns)	(89 stns)
All stations	115	120	128	133	135
	(106 stns)	(108 stns)	(110 stns)	(114 stns)	(114 stns)

335. Numerous temporary increases in hours of service were authorised during the year to enable stations to cover special events of national or local interest.

PART VI—TELEVISION—ADMINISTRATION

CURRENT LICENCES FOR COMMERCIAL TELEVISION STATIONS

336. As at 30 June 1970 there were forty-five licences for commercial television stations in force. Details of licensees are contained in Appendix D of this Report. The distribution of licences is as follows:

	State Capital Cities	Country Areas	Territories	Total
Australian Capital Territory	—	—	1	1
New South Wales	3	11	—	14
Victoria	3	6	—	9
Queensland	3	7	—	10
South Australia	3	2	—	5
Western Australia	2	2	—	4
Tasmania	1	1	—	2
Commonwealth	15	29	1	45

GRANT OF NEW LICENCES

337. The Board's Twenty-first Annual Report (paragraphs 46 and 47) recorded that the Postmaster-General, following a report by the Board, approved the Board's recommendation that applications should be invited for licences for commercial television stations in respect of Mt. Isa, Queensland, Kalgoorlie, Western Australia

and Darwin, Northern Territory. The Minister's invitation, pursuant to section 82 of the Broadcasting and Television Act, was issued on 14 August 1969 and published in the *Commonwealth Gazette* of 21 August 1969.

338. Mt. Isa, Kalgoorlie and Darwin are areas included in the Sixth Stage of television development which was announced by the Minister on 17 May 1967. National television stations are being established in each of the areas in this Stage of development, which also includes Central East Area of South Australia and the Geraldton area of Western Australia. In the report to the Minister, referred to in the preceding paragraph, the Board came to the conclusion that there was not at that stage, justification, on economic grounds, for an invitation for licences for commercial television stations in the Central East Area of South Australia and the Geraldton area of Western Australia. The matter is to be kept under review.

339. Applications for licences for commercial television stations in the Mt. Isa, Queensland, Kalgoorlie, Western Australia and Darwin, Northern Territory areas closed with the Board on 28 November 1969. Applications were received as follows:

Darwin, N.T.

H. N. Wardle, on behalf of Territory Telecasters Pty. Ltd. (a company to be formed).

Lucius Laurence D'Arcy Richardson, on behalf of Territory Television Pty. Ltd.

Kalgoorlie, W.A.

Mid-Western Television Pty. Ltd.

Mt. Isa, Qld.

Mount Isa Television Pty. Ltd.

North Queensland Broadcasting Corporation Pty. Ltd.

340. Pursuant to section 83 (1.) of the Act, the Minister, by instrument in writing dated 2 December 1969 referred the applications to the Board for its recommendation as to the exercise by him of the power conferred by sub-section (1.) of section 81 of the Act. The Board's public inquiries into the applications for each area, in accordance with section 83 (2.) of the Act, were held as follows:

Mt. Isa Area: in Mt. Isa on 24 February 1970.

Kalgoorlie Area: in Kalgoorlie on 8 April 1970.

Darwin Area: in Darwin on 10 March 1970.

The application of North Queensland Broadcasting Corporation Pty. Ltd. was withdrawn prior to the Board's inquiry. The Board submitted its report and recommendations as to the grant of licences to the Minister on 2 September 1970.

RENEWAL OF LICENCES FOR COMMERCIAL TELEVISION STATIONS

341. The Board is required by the Act to submit a recommendation to the Minister on each licensee's application for the renewal of its licence and before doing so, it makes a complete review of the service which has been provided by the licensee. Applications are made in accordance with a form designed to provide information concerning the constitution and ownership or control of the licensee

company for the purpose of ascertaining whether there has been any contravention of the provisions of Division 3 of Part IV of the Act and also to provide information concerning the technical and programme performance of the station.

342. The licences for 38 commercial television stations fell due for renewal during the year under review. The licences for the following stations, being the initial licences, extending in accordance with the Act for a period of five years have not yet expired.

Station	Licensee
New South Wales—	
BKN Broken Hill Area	Broken Hill Television Ltd.
CWN Central Western Slopes Area	Country Television Services Ltd.
Queensland—	
FNQ Cairns Area	Far Northern Television Ltd.
MVQ Mackay Area	Mackay Television Ltd.
South Australia—	
GTS Spencer Gulf North Area	Spencer Gulf Telecasters Ltd.
Western Australia—	
BTW Bunbury Area	South Western Telecasters Ltd.
GSW Southern Agricultural Area	South Western Telecasters Ltd.

343. In its report to the Minister on the applications which had been made by the licensees for renewal of the licences, the Board informed the Minister that on the whole, all the stations were maintaining a satisfactory standard of technical efficiency, both in respect of the maintenance of equipment and the operation of the stations. With respect to programmes each of the stations continued to provide what might be described as a reasonably adequate and comprehensive programme service. Overall compliance with the Board's Television Programme Standards had been satisfactory.

344. In connection with stations ECN Manning River Area, MTN Murrumbidgee Irrigation Areas, STV Mildura Area, SDQ Southern Downs Area, TVQ Brisbane, SAS Adelaide, SES South East (South Australia) Area and STW Perth, the applications were for first renewal. On expiry of the period of five years covered by the initial grant of a licence, the Board was gratified that it was able to report that six of the licensees had made considerable progress with the development of their services in that period. The stations had progressively extended hours of operation and were providing a considerable range of programmes including generally a reasonable proportion of programmes of Australian origin. The licensee of ECN Manning River area, had encountered substantial economic difficulties but, at the time of renewal of the licence, the company, in co-operation with the licensee of NRN Coffs Harbour area, had developed a combined operation with the latter station, and was hopeful of success. At the time of preparation of this report the future of ECN was uncertain.

345. The Minister, on the recommendation of the Board, granted a renewal of all licences for a period of one year.

FEEs FOR LICENCES FOR COMMERCIAL TELEVISION STATIONS

346. Fees for licences for commercial television stations are payable in accordance with the provisions of the *Television Stations Licence Fees Act*

1964-1966. Under this Act, the annual fee for a licence for a commercial television station is \$200 together with:

- (a) An amount equal to 1 per cent of the gross earnings of the station up to \$1,000,000 during the year ended 30 June (or where the licensee has, with the approval of the Board, adopted an accounting period ending on some other day than 30 June, ending on that other day), preceding the anniversary of the grant of the licence or the period for which the licence is renewed, as the case may be.
- (b) An amount equal to 2 per cent of the gross earnings over \$1,000,000 but not exceeding \$2,000,000.
- (c) An amount equal to 3 per cent of the gross earnings over \$2,000,000 but not exceeding \$4,000,000.
- (d) An amount equal to 4 per cent of the gross earnings exceeding \$4,000,000.

347. The Act defines 'gross earnings' as follows: "gross earnings" in relation to a commercial television station in respect of a period means the gross earnings of the licensee of the station during that period in respect of the televising from the station of advertisements or other matter, including the gross earnings of the licensee during that period in respect of the provision by him of, or otherwise in respect of, matter televised from the station, not being earnings from the production and recording on photographic film, or the recording on photographic film, of matter consisting wholly of an advertisement.' The other provisions of the Act are similar to those of the Broadcasting Stations Licence Fees Act.

348. The total amount of fees payable by stations during the period 1 July 1969 to 30 June 1970 was \$1,490,144. In the previous financial year, the total amount of licence fees which were payable was \$1,385,390.

TRANSFER OF LICENCES

349. Section 88 (I) of the *Broadcasting and Television Act 1942-1969* provides that a licensee of a commercial television station may not, without the consent in writing of the Minister, transfer the licence or admit another person to participate in any of the benefits of the licence.

350. There were no transfers of licences during the year.

OWNERSHIP OR CONTROL OF COMMERCIAL TELEVISION STATIONS

351. The principal provisions of Division 3 of Part IV of the *Broadcasting and Television Act 1942-1969* which deals with limitation of ownership or control of commercial television stations were set out in paragraph 153 of the Eighteenth Annual Report.

352. The Postmaster-General's announcement of 12 December 1969 that the Broadcasting and Television Act would be amended to prevent employees' superannuation and provident funds being used to evade the intentions of its ownership and control provisions has been referred to in paragraph 229. In accordance with his statement the Bill to amend the *Broadcasting and Television Act 1942-1969*

introduced into Parliament on 4 March 1970 includes a proposed new section 91AB to deal with the matter in respect of television. A proposed new section 91AA will cover the same matter in respect of broadcasting. Details have been given in paragraph 230.

LIMITATION OF INTERESTS IN COMMERCIAL TELEVISION STATIONS

353. Section 92 of the *Broadcasting and Television Act 1942-1969* provides that a person shall not have a prescribed interest in:

- (a) each of three or more licences;
- (b) each of two or more licences for stations in a Territory; or
- (c) each of two or more licences for stations in a State and within a radius of thirty miles of the General Post Office in the capital city of the State;

provided that a person may continue to hold prescribed interests in licences in excess of those specified if he held those interests prior to 17 December 1964. Interests of the latter nature may not be increased in any manner and the persons concerned may not acquire prescribed interests in any further licences.

354. A prescribed interest in a licence as defined in the Act (section 91 (2.)) is broadly a shareholding, voting or financial interest in excess of 5 per cent.

355. During the year the Board observed several transactions which had the effect that the provisions of section 92 restricting the prescribed interests which a person may hold in licences for commercial television stations were contravened. The companies and persons involved in the contraventions were advised by the Board of their position in relation to the provisions of section 92 and they have taken the necessary action to remedy the contraventions.

356. Details of organisations with majority or substantial interests in two or more commercial television stations and newspaper interests in stations will be found in Appendix I.

IMPORTANT CHANGES IN SHAREHOLDINGS IN TELEVISION STATIONS

357. Details of principal shareholders in companies which are licensees of commercial television stations, according to information supplied to the Board by them, are contained in Appendix H. The following were the more important of the changes in the shareholdings of companies holding licences for commercial stations during the year under review:

ATN Sydney—Amalgamated Television Services Pty. Ltd.

The Australian Broadcasting Company Pty. Ltd. disposed of 32,000 shares to four members of the Albert family which owns that company.

CBN Central Tablelands Area

CWN Central Western Slopes Area—Country Television Services Ltd.

Country Broadcasting and Television Services Ltd., disposed of 595,200 stock units. Country Life Newspaper Co. Ltd. increased its holding from 10,000 to 101,950 shares and Graziers Superannuation Co. Pty. Ltd.

increased its holding from 8,000 to 62,000 shares following the takeover of Country Broadcasting and Television Services Ltd. by the licensee company.

MTN Murrumbidgee Irrigation Areas—Murrumbidgee Television Ltd.

Riverina Television Ltd. disposed of its holding of 84,499 shares. Australasian Jam Co. Pty. Ltd. acquired 52,249 shares. H. Jones & Co. (Sydney) Pty. Ltd. increased its holding from 297,800 to 340,350 shares.

NBN Newcastle-Hunter River Area—Newcastle Broadcasting and Television Corporation Ltd.

National Nominees Ltd. acquired 220,897 shares from Telecommunications Securities Ltd. to be held as nominee for the latter company.

Time Inc. (U.S.A.) transferred 150,000 shares to Currong Pty. Ltd.

American Broadcasting Companies Inc. (U.S.A.) disposed of 100,000 shares including 33,000 to Breeza Investments Pty. Ltd.

NEN Upper Namoi Area—Television New England Ltd.

Broadcast Amalgamated Ltd. increased its holding from 352,790 to 399,390 shares.

TCN Sydney—Television Corporation Ltd.

Consolidated Press Holdings Ltd., after having reduced its shareholding by disposing of 216,245 shares to Hoyts Theatres Ltd. and 15,997 to Efftee Broadcasters Pty. Ltd., acquired a further 36,145 shares.

TEN Sydney—United Telecasters Sydney Ltd.

E.M.I. (Aust.) Ltd. acquired 500,000 shares from Entertainments Finance Ltd.

AMV Upper Murray Area—Albury Upper Murray T.V. Ltd.

Breeza Investments Pty. Ltd. increased its holding from 106,100 to 230,100 shares.

GMV Goulburn-Valley Area—Goulburn-Murray Television Ltd.

Associated Broadcasting Services Ltd., by way of takeover, acquired all of the 699,950 shares which it did not previously hold in the licensee company.

GTV Melbourne—General Television Corporation Pty. Ltd.

Hoyts Theatres Ltd. disposed of all its 86,498 shares.

Nilsens Broadcasting Service Pty. Ltd. disposed of all of its 35,290 shares.

Val Morgan & Sons Pty. Ltd. disposed of all of its 22,194 shares.

Efftee Broadcasters Pty. Ltd. disposed of all of its 6,399 shares.

Consolidated Press Holdings Ltd. acquired 141,629 shares.

Greater Union Organisation Pty. Ltd. increased its shareholding from 58,848 to 67,600 shares.

FNQ Cairns Area—Far Northern Television Ltd.

Telecasters North Queensland Ltd., by way of takeover, acquired all of the 1,000,000 shares in the licensee company.

MVQ Mackay Area—Mackay Television Ltd.

Telecasters North Queensland Ltd. disposed of 130,000 shares including 62,000 shares to Tingalpa Hotel Pty. Ltd., and 47,000 to Buss and Turner Pty. Ltd.

TNQ Townsville Area—Telecasters North Queensland Ltd.

Ayr Broadcasters Pty. Ltd. increased from 80,000 to 100,000 shares.
Amalgamated Wireless (A/asia) Ltd. disposed of 39,755 shares.

TVQ Brisbane—Universal Telecasters Qld. Ltd.

Ansett Transport Industries Ltd., by way of takeover, acquired all the 1,015,100 shares which it did not previously hold in the licensee company.

GTS Spencer Gulf North Area—Spencer Gulf Telecasters Ltd.

The Mutual Life & Citizens Assurance Co. Ltd. disposed of 20,000 shares.

SAS Adelaide—South Australian Telecasters Ltd.

Anglo-Australian Nominees Pty. Ltd. disposed of 105,400 shares including 101,000 to Tinsmiths Pty. Ltd.

*BTW Bunbury Area**GSW Southern Agricultural Area—South Western Telecasters Ltd.*

Southern Television Corporation Ltd. acquired 46,000 shares from Australian and International Insurances Ltd.

TVW Perth—TVW Ltd.

West Australian Newspapers Ltd. and WAN Nominees Pty. Ltd. (which held the shares on behalf of West Australian Newspapers Pension Fund) disposed of 575,000 and 32,500 shares respectively as follows: Tasmanian Television Ltd. 66,700; Silvertown Securities Pty. Ltd. 66,700; Goulburn Murray Television Ltd. 64,000; Westralian International Ltd. 60,000; T. E. Wardle Pty. Ltd. 50,000; TVW Nominees Pty. Ltd. 31,500; The Mutual Life and Citizens Assurance Co. Ltd. 31,400; W. R. Carpenter (Holdings) Ltd. 25,000; Swiss Reinsurance Co. Ltd. 20,000; Southern Television Corporation Ltd. 20,000; TVW Senior Staff 15,000; Greengage Pty. Ltd. 12,500; Robert Nettlefold Pty. Ltd. 12,000; Coventry Motor Replacements Ltd. 10,000; Wesfarmers Provident Fund Pty. Ltd. 10,000; City Mutual Life Assurance Society Ltd. 10,000; Commercial Nominees Pty. Ltd. 10,000; The Sea Insurance Co. Ltd. 10,000; Others (in holdings of less than 10,000) 82,700.

TVT Hobart—Tasmanian Television Ltd.

Northern Television Ltd. disposed of 106,600 shares including 79,600 to The Examiner Newspaper Pty. Ltd. and 27,000 to 7EX Pty. Ltd.

MEMORANDA AND ARTICLES OF ASSOCIATION OF LICENSEE COMPANIES

358. Section 92FA (1.) of the Act provides that a licence is subject to a condition that a change in the memorandum or articles of association of a company holding a licence for a commercial television station shall not take place without the approval of the Minister.

359. During the year, the Minister, pursuant to the provisions of Section 92FA (1.) gave his approval to minor changes in the memoranda and articles of association of several licensee companies.

LICENCES FOR TELEVISION REPEATER STATIONS

360. A television repeater station is a station of low operating power designed to transmit only programmes recorded on magnetic tape. Aural transmissions originated at the stations will be restricted to material such as station identification and emergency announcements.

361. Amendments to the Broadcasting and Television Act to provide for the grant of licences for such stations following proposals by the Mining Industry Council have been referred to in paragraph 62.

362. On 7 May 1970 the Postmaster-General on the recommendation of the Board approved the grant of licences for television repeater stations as under; also included are technical conditions determined by the Board.

Call Sign and Location	Licensee	Channel	Polarisation
<i>Queensland</i>			
WEQR Weipa	Commonwealth Aluminium Corporation Ltd.	7	Horizontal
<i>Western Australia</i>			
CKWR	Koolan Island, Yampi Sound	Dampier Mining Company Ltd.	7 Horizontal
	Cockatoo Island, Yampi Sound	Dampier Mining Company Ltd.	Input 7 Horizontal (from Koolan Island) Output 9
HDWR	Dampier Karratha	Hamersley Iron Pty. Ltd.	7 Horizontal
		Hamersley Iron Pty. Ltd.	Input 7 Horizontal (from Dampier) Output 9
HTWR Mount Tom Price NEWR Newman	Hamersley Iron Pty. Ltd. Mt. Newman Mining Co. Pty. Ltd.	7	Horizontal
		7	Horizontal
<i>Northern Territory</i>			
GEMR Groote Eylandt	Groote Eylandt Mining Co. Pty. Ltd.	7	Horizontal

363. When the national television station to serve the Dampier area is established, the licences for the repeater stations at Dampier and Karratha will be withdrawn.

364. The stations will be established in all cases on a convenient elevation adjacent to the town. Subject to a number of factors, including availability of equipment, it is hoped that the first of the stations will be in operation later this year. Present plans contemplate the provision of programmes supplied by the Australian Broadcasting Commission for 33 hours weekly consisting of five hours daily Monday to Saturday and three hours each week of daytime sessions suitable for housewives and children.

DEVELOPMENT OF TELEVISION SERVICES

365. The following table contains details of the various stages of development of the television services:

		<i>Date of Commencement of Operations</i>
STAGE 1 OF DEVELOPMENT		
<i>National Stations—</i>		
ABN	Sydney	5 November 1956
ABV	Melbourne	18 November 1956
<i>Commercial Stations—</i>		
ATN	Sydney	2 December 1956
TCN	Sydney	16 September 1956
GTV	Melbourne	19 January 1957
HSV	Melbourne	4 November 1956
STAGE 2 OF DEVELOPMENT		
<i>National Stations—</i>		
ABQ	Brisbane	2 November 1959
ABS	Adelaide	11 March 1960
ABW	Perth	7 May 1960
ABT	Hobart	4 June 1960
<i>Commercial Stations—</i>		
BTQ	Brisbane	1 November 1959
QTQ	Brisbane	16 August 1959
ADS	Adelaide	24 October 1959
NWS	Adelaide	5 September 1959
TVW	Perth	16 October 1959
TVT	Hobart	23 May 1960
STAGE 3 OF DEVELOPMENT		
<i>National Stations—</i>		
ABC	Canberra Area (Australian Capital Territory)	18 December 1962
ABCN	Central Tablelands Area (New South Wales)	31 March 1964
ABHN	Newcastle-Hunter River Area (New South Wales)	5 June 1963
ABRN	Richmond-Tweed Area (New South Wales)	20 April 1964
ABWN	Illawarra Area (New South Wales)	28 October 1963
ABEV	Bendigo Area (Victoria)	29 April 1963
ABRV	Ballarat Area (Victoria)	20 May 1963
ABLV	Latrobe Valley Area (Victoria)	30 September 1963
ABGV	Goulburn Valley Area (Victoria)	28 November 1963
ABDQ	Darling Downs Area (Queensland)	16 December 1963
ABRQ	Rockhampton Area (Queensland)	21 December 1963
ABTQ	Townsville Area (Queensland)	21 September 1964
ABNT	North Eastern Tasmania Area	29 July 1963
<i>Commercial Stations—</i>		
CTC	Canberra Area (Australian Capital Territory)	2 June 1962
CBN	Central Tablelands Area (New South Wales)	17 March 1962
NBN	Newcastle-Hunter River Area (New South Wales)	4 March 1962
RTN	Richmond-Tweed Area (New South Wales)	12 May 1962
WIN	Illawarra Area (New South Wales)	18 March 1962
BCV	Bendigo Area (Victoria)	23 December 1961
BTV	Ballarat Area (Victoria)	27 April 1962
GLV	Latrobe Valley Area (Victoria)	9 December 1961
GMV	Goulburn Valley Area (Victoria)	23 December 1961
DDQ	Darling Downs Area (Queensland)	13 July 1962
RTQ	Rockhampton Area (Queensland)	7 September 1963
TNQ	Townsville Area (Queensland)	1 November 1962
TNT	North Eastern Tasmania Area	26 May 1962

*Date of Commencement
of Operations*

STAGE 4 OF DEVELOPMENT

National Stations—

ABDN	Grafton-Kempsey Area (New South Wales)	28 June 1965
ABGN	Murrumbidgee Irrigation Areas (New South Wales)	25 July 1966
ABLN	Broken Hill Area (New South Wales)	14 December 1965
ABMN	South Western Slopes and Eastern Riverina Area (New South Wales)	30 April 1965
ABQN	Central Western Slopes Area (New South Wales)	12 September 1966
ABSN	Bega-Cooma Area (New South Wales)	29 June 1966
ABTN	Manning River Area (New South Wales)	29 April 1966
ABUN	Upper Namoi Area (New South Wales)	27 September 1965
ABAV	Upper Murray Area (Victoria)	15 December 1964
ABMV	Mildura Area (Victoria)	22 November 1965
ABSV	Murray Valley Area (Victoria)	30 July 1965
ABMQ	Mackay Area (Queensland)	21 December 1967
ABNQ	Cairns Area (Queensland)*	25 July 1966
ABSQ	Southern Downs Area (Queensland)	4 July 1966
ABWQ	Wide Bay Area (Queensland)	8 October 1965
ABGS	South East Area (South Australia)	3 December 1965
ABNS	Spencer Gulf North Area (South Australia)	10 April 1965
ABAW	Southern Agricultural Area (Western Australia)	6 June 1966
ABCW	Central Agricultural Area (Western Australia)	28 March 1966
ABSW	Bunbury Area (Western Australia)	10 May 1965

Commercial Stations—

BKN	Broken Hill Area (New South Wales)	16 August 1968
CWN	Central Western Slopes Area (New South Wales)	1 December 1965
ECN	Manning River Area (New South Wales)	27 May 1966
MTN	Murrumbidgee Irrigation Areas (New South Wales)	15 December 1965
NEN	Upper Namoi Area (New South Wales)	10 April 1965
NRN	Grafton-Kempsey Area (New South Wales)	23 January 1965
RVN	South Western Slopes and Eastern Riverina Area (New South Wales)	19 June 1964
AMV	Upper Murray Area (Victoria)	7 September 1964
STV	Mildura Area (Victoria)	27 November 1965
FNQ	Cairns Area (Queensland)*	7 September 1966
MVQ	Mackay Area (Queensland)	9 August 1968
SDQ	Southern Downs Area (Queensland)	26 February 1966
WBQ	Wide Bay Area (Queensland)	10 April 1965
SES	South East Area (South Australia)	25 March 1966
BTW	Bunbury Area (Western Australia)	10 March 1967
GTS	Spencer Gulf North Area (South Australia)	1 March 1968
GSW	Southern Agricultural Area (Western Australia)	23 August 1968

*Temporary Station.

STAGE 5 OF DEVELOPMENT

Commercial Stations—

TEN	Sydney	5 April 1965
ATV	Melbourne	1 August 1964
TVQ	Brisbane	1 July 1965
SAS	Adelaide	26 July 1965
STW	Perth	12 June 1965

STAGE 6 OF DEVELOPMENT

National Stations—

ABGW	Geraldton Area	8 December 1969
ABKW	Kalgoorlie Area	27 January 1970

National television stations are to be established in the following additional areas in stage 6—

Mt. Isa (Queensland)
Central East Area (South Australia)
Darwin (Northern Territory)

Details of the technical operating conditions and the sites for these proposed stations together with expected dates of commencement of operations of the stations are given in paragraph 378.

On the recommendation of the Board, the Postmaster-General invited applications on 21 August 1969 for the grant of licences for commercial television stations at Darwin, Kalgoorlie and Mt. Isa. Details are given in paragraphs 337 to 340.

STAGE 7 OF DEVELOPMENT

Low-power national television stations are to be established in the following areas:

Mungindi (New South Wales)	Richmond (Queensland)
Hughenden (Queensland)	Julia Creek (Queensland)
Clermont (Queensland)	Cloncurry (Queensland)
Springsure (Queensland)	Mary Kathleen (Queensland)
Barcardine (Queensland)	Emerald (Queensland)
Blackall (Queensland)	Ceduna (South Australia)
Longreach (Queensland)	Woomera (South Australia)
Winton (Queensland)	Southern Cross—Bullfinch (Western Australia)
Alpha (Queensland)	Moorra (Western Australia)
Goondiwindi (Queensland)	Carnamah (Western Australia)
St. George (Queensland)	Three Springs (Western Australia)
Dirranbandi (Queensland)	Mingenew (Western Australia)
Miles (Queensland)	Esperance (Western Australia)
Roma (Queensland)	Norseman (Western Australia)
Mitchell (Queensland)	Carnarvon (Western Australia)
Morven (Queensland)	Port Hedland (Western Australia)
Augathella (Queensland)	Dampier (Western Australia)
Charleville (Queensland)	King Island (Tasmania)
Cunnamulla (Queensland)	

The Postmaster-General has also indicated that the plans for Stage 7 will permit the extension of the national television service to Alice Springs but that the distance between Alice Springs and existing stations and the absence of relay channels to that centre will necessitate special measures being taken to make television service available. Information in regard to the technical operating conditions and the sites of stations to be established in the seventh stage of development, in cases where determinations have been made, is given in paragraph 381.

The stations in the seventh stage of development are to be established over the four year period to 1972-73: the station at Norseman will be completed at the end of this year; the stations at Hughenden, Richmond, Julia Creek, Cloncurry and Mary Kathleen will be completed in 1971, in conjunction with the completion of the Post Office broadband communication link between Townsville and Mt. Isa; the station at King Island will be completed towards the end of 1971.

Television Repeater Stations

Television repeater stations (low power stations transmitting only programmes recorded on magnetic tape) are to be established at Weipa, Queensland, Yampi Sound (Koolan and Cockatoo Islands), Dampier, Karratha, Mount Tom Price, Mt. Newman, Western Australia and Groote Eylandt, Northern Territory. The stations are expected to commence operations in 1970.

TELEVISION TRANSLATOR STATIONS

366. A television translator station is a relatively low-powered device which relies for its operation on the reception of signals from a parent station or another translator station and the re-transmission of these signals on a different frequency channel.

367. Details of commercial and national television translator stations in operation are shown in Appendices F and G respectively.

368. On the recommendation of the Board, translator stations* have been authorised by the Minister in the following areas during the year:

Commercial Translator Stations

New South Wales

Eden
Inverell
Portland-Wallerawang
Wollongong

Queensland

Collinsville
Toowoomba (in operation)

National Translator Stations

New South Wales

Eden
Gloucester
Portland-Wallerawang
Upper Hunter

Tasmania

Strathgordon (in operation)

Queensland

Collinsville

Tasmania

Strathgordon

369. During the year ended 30 June 1970, licences for commercial television translator stations were granted in accordance with the following details:

Area	Licensee
Cobar, New South Wales	Country Television Services Ltd.
Cowell, South Australia	Spencer Gulf Telecasters Ltd.
Port Lincoln, South Australia	Spencer Gulf Telecasters Ltd.
Strathgordon, Tasmania	Tasmanian Television Ltd.
Toowoomba, Queensland	Darling Downs TV Limited

370. Television translator stations commenced operation during the year in the following localities:

New South Wales

Batemans Bay-Moruya (National)
Cobar (Commercial)
Cooma (National)

Victoria

Eildon (National and Commercial)
Myrtleford (Commercial)

Queensland

Gympie (Commercial)
Toowoomba (Commercial)

South Australia

Cowell (National and Commercial)
Keith (National)
Port Lincoln (National and Commercial)
Bordertown (National)

Western Australia

Kambalda (National)

Tasmania

Savage River-Luina (National)
 Strahan (National)
 Strathgordon (Commercial)
 Waratah (National)

371. Television translator licences are granted for an initial period of five years and are renewable annually. During the year the Postmaster-General on the recommendation of the Board granted renewals of seven licences.

372. Commercial and national television translator stations which have been approved but have not commenced operations are set out in the following lists which also include the technical conditions determined by the Board.

COMMERCIAL TRANSLATOR STATIONS

Area to be served	Parent Station	Power (Watts)	Channel	Polarisation	Site of Transmitter
Bega (N.S.W.)	WIN-4	100	6	Horizontal	Mount Mumbulla
Eden (N.S.W.)	WIN-4 (via Bega Translator)	100	3	Horizontal	Mount Imlay
Inverell (N.S.W.)	NEN-9	25	10	Horizontal	Hillview 1½ miles E.N.E. of Inverell
Portland-Wallerawang (N.S.W.)	CBN-8	50	4	Horizontal	Stait's Hill 3¾ miles S.S.W. of Portland
Upper Hunter (N.S.W.)	NBN-3	100	10	Horizontal	The Lookout 6½ miles W.N.W. of Aberdeen
Wollongong (N.S.W.)	WIN-4	200	3	Horizontal	Broker's Nose 2 miles N.W. of Wollongong
Nhill (Vic.)	BTV-6 (via intermediate UHF Translator at Mount Arapiles)	500	7	Vertical	Lawloit
Bowen (Qld.)	TNQ-7	100	1	Horizontal	Seacom Site—Sprole Castle
Collinsville (Qld.)	MVQ-6	5	11	Horizontal	½ mile E.S.E. of Mount Devlin Trig
Monto (Qld.)	WBQ-8	50	5	Vertical	3½ miles from Mulgildie
Smithton (Tas.) Alternative	TNT-9 (via Stanley Translator)	5	11	Vertical	Tier Hill*
Strahan (Tas.)	TVT-6 (via Queenstown Translator)	1	3	Horizontal	P.M.G.'s Radio Telephone Site at Strahan

NATIONAL TRANSLATOR STATIONS

Area to be served	Parent Station	Power (Watts)	Channel	Polarisation	Site of Transmitter
Bourke-Brewarrina (N.S.W.)	ABQN-5 (via Micro-wave Link)	1000	4	Horizontal	Mount Oxley
Cobar (N.S.W.)	ABQN-5 (via Micro-wave Link)	50	2	Vertical	Fort Bourke Hill

Area to be served	Parent Station	Power (Watts)	Channel	Polarisation	Site of Transmitter
Eden (N.S.W.)	ABSN-8	100	5	Horizontal	Mount Imlay
Gloucester (N.S.W.)	ABTN-1	10	0	Horizontal	The Bucketts
Nyngan (N.S.W.)	ABQN-5 (via Micro-wave Link)	5	3	Vertical	Nyngan
Portland-Wallerawang (N.S.W.)	ABCN-1	50	0	Horizontal	Stait's Hill 3¾ miles S.S.W. of Portland
Upper Hunter (N.S.W.)	ABHN-5	100	2	Horizontal	The Lookout 6½ miles W.N.W. of Aberdeen
Myrtleford (Vic.)	ABGV-3 (via Intermediate UHF Translator at Mount Stanley)	25	2	Horizontal	Tower Hill
Nhill (Vic.)	ABRV-3 (via Intermediate UHF Translator at Mount Arapiles)	500	9	Vertical	Lawloit
Bowen (Qld.)	ABTQ-3	100	5	Horizontal	Seacom Site—Sprole Castle
Collinsville (Qld.)	ABMQ-4	5	8	Horizontal	½ mile E.S.E. of Mount Devlin Trig
Smithton (Tas.) Alternative	ABNT-3 (via Stanley Translator)	5	8	Vertical	Tier Hill*
Strathgordon (Tas.)	ABT-2	5	5	Horizontal	Twelvetees Range near Strathgordon

*These proposed translator stations are intended, with that already operating at Stanley, to ensure television service to the general Stanley-Smithton area; however, alternative locations for the transmitters are under examination which may permit more effective provision of service.

PART VII—TELEVISION—TECHNICAL SERVICES

TECHNICAL FACILITIES AND OPERATION OF STATIONS

373. In paragraph 287 of the Twenty-first Annual Report, mention was made of a new type of helical scan video tape recorder with improved performance. The Board has now had an opportunity to test some of these machines, and finds that in general their transient response for single generation recordings meets the television system video requirements, but that like the previous types of helical scan machines, the new models have insufficient line time base stability to allow their unrestricted use by television stations. Further technical developments with this type of video tape recorder are expected in the near future. Having regard to the present technical standard of helical scan video tape recorders, the Board broadly requires that their use by commercial stations shall be limited to 10% of programme time. Their principal use is for outside broadcasts by country stations. However, the Board has authorised the use of this type of video-tape recorder at television repeater stations, the programmes of which must be completely provided on tape, in view of special considerations applying to these stations—see paragraph 62.

374. The Twenty-first Annual Report referred to the use of parabolic reflector screen aerials for off-air pickup of programmes taken on relay. In addition to the 36 ft. diameter parabolic reflector aerial mentioned in the Twenty-first Annual Report (used at Kenine Hills for off-air pick-up of the programmes of BTW Bunbury area for relay through GSW Southern Agricultural Area), two similar aerials have been constructed and tested, but are not yet in service. Both will operate in band III, and should provide improved protection against noise and ghost signal reception in relay circuits. The Board is participating in preliminary investigations into the construction and cost of much larger parabolic reflector screen aerials with a window area in the range 6,000-10,000 square feet.

375. Similar aerials designed for transmitting may find a use in providing high effective radiated powers from relatively low power relay transmitters, in those regions where the topography is suitable for long distance transmission, and where the density of V.H.F. channel allocations will not be high.

UNATTENDED OPERATION OF TELEVISION TRANSMITTERS

376. During the year, commercial station MVQ and national station ABMQ Mackay area changed to unattended operation of their transmitters, and station TVW Perth was given approval to change to unattended transmitter operation. The number of commercial stations now operating their transmitters unattended is 16. Included in this total are stations GLV Latrobe Valley area, DDQ Darling Downs area and WIN Wollongong area which are operated on a semi-attended basis from the nearby transmitter buildings of the national television stations in those areas, under an agreement between the Postmaster-General's Department and the licensees. Station WIN is in the process of changing over to normal unattended operation with the remote control to be exercised from its own studios. Station STW Perth is also at an advanced stage in preparation for unattended operation of the transmitters. Most commercial stations in the third stage of television development covering thirteen country areas, either operate their transmitters unattended or intend to do so. Most commercial stations in the fourth stage of television development, share facilities at the transmitters, including transmitter buildings, with the national television service and the commercial transmitters are operated by Post Office staff.

377. National television stations operating unattended are ABLN Broken Hill and ABMQ Mackay area.

TECHNICAL CONDITIONS AND SITES FOR PROPOSED STATIONS

378. The operating conditions for the national television stations yet to be established in the sixth stage of television development are as follows:

Area	Site	Aerial Pattern	Polarisation	Channel	Effective Radiated Power(KW)
Mount Isa, Qld.	2 miles south-east of Mount Isa (Trig. Point 140)	270° coverage— not south-east	Horizontal	6	0.5
Central East, S.A.	2½ miles west-south-west of Loxton	Part-directional	Vertical	3	100
Darwin, N.T.	Blake Street, near Botanic Gardens	Maximum to south	Horizontal	6	10

379. The two other national stations in the sixth stage in the Geraldton and Kalgoorlie areas commenced operations on 8 December 1969 and 27 January 1970 respectively and details of operating conditions are given in Appendix E of this report.

380. The stations in the Central East, South Australia area and at Mount Isa are expected to be completed by the end of 1970, and the Darwin station in July 1971. All the stations in Stage 6, except the Darwin station, will take their programmes on relay from the capital cities of the States concerned. There will be studios at the Darwin station from which local programmes will be televised. Later when the Mount Isa-Darwin broadband communication link is completed, the station will take many of its programmes on relay from national station ABQ Brisbane.

381. Surveys have been made in all areas in which it is proposed to establish national television stations in the seventh stage of development of television, to assist in the determination of sites and operating conditions for the stations. The following are the operating conditions so far determined:

Station	Aerial Pattern	Polarisation	Channel	Effective Radiated Power (watts)
Cloncurry, Qld.	Omni-directional	Horizontal	7	100
Hughenden, Qld.	Omni-directional	Horizontal	9	100
Julia Creek, Qld.	Omni-directional	Horizontal	10	100
Mary Kathleen, Qld.	Directional, beamed to the township	Horizontal	9	25
Richmond, Qld.	Omni-directional	Horizontal	6	100
Norseman, W.A.	Directional, beamed to the township	Horizontal	7	50
King Island, Tas.	Directional, (various maxima and minima through 360°)	Horizontal	11	2,000 (Max.)

382. The site for the King Island station is at Gentle Annie Hill. The other stations mentioned above are located along Postmaster-General's Department broadband microwave routes, and are situated at the Department's repeater site nearest to the particular town.

PROVISION OF PERMANENT TELEVISION SERVICE, CAIRNS AREA

383. Temporary national and commercial television stations have been in operation at Cairns since 1966. They serve only the city of Cairns and its immediate surroundings.

384. Complex problems in connection with a site and access thereto, due to the nature of the country surrounding Cairns, has delayed the establishment of permanent stations. Paragraph 297 of the Board's Twenty-first Annual Report contained a statement by the Postmaster-General on 29 August 1968 announcing the decision to establish the permanent stations on Mt. Bellenden Ker. There will be a cableway to provide access to the site on the summit of the mountain. The proposals were considered by the Parliamentary Committee on Public Works which recommended approval of the project. The permanent transmitters will serve about 90,000 people on the coastal plain north of Cairns to Mossman and south to Tully and the Atherton Tableland.

385. All the planning work in connection with the project is now well advanced. Contracts have been let for the civil works, and orders placed for the television equipment. The scheduled date of completion is the end of 1971. Careful co-ordination of construction schedules will be necessary to achieve this target, in view of the difficulties of construction at the high elevation and the restrictions imposed by the wet season in the north.

TELEVISION TRANSLATOR STATIONS

386. Information concerning television translator stations is given in paragraphs 366 to 372 of this Report. The following comments refer to some technical aspects.

387. The authorisation during the year of national and commercial television translator stations at Eden, New South Wales, was a further step in connection with television coverage of the south coast region of New South Wales. The high-power television stations ABWN and WIN Illawarra area on Knight's Hill, south-west of Wollongong provide a service nearly as far south as Batemans Bay. National and commercial translator stations operate at Mt. Wandera to provide service from the Wollongong stations to the Batemans Bay-Moruya area. National television service is provided to the Bega area by the national station ABSN in the Bega-Cooma area. Commercial station CTC operates a commercial station which serves Cooma, but there is no high-power commercial television station in the Bega-Cooma area. There is approval for station WIN Wollongong to establish a translator station near Bega to serve the Bega area. The two national and three commercial translator stations so far approved for the south coast area (two of which are already in operation) will extend the service of the national stations in the Illawarra and Bega-Cooma areas and the commercial station in the Illawarra area to some 7,700 and 16,800 additional people, respectively.

388. The television translator station which station WIN Wollongong has been authorised to establish at Broker's Nose, approximately 2 miles north-west of Wollongong will improve reception of WIN in an area from Scarborough in the north to Lake Illawarra in the south along the plateau escarpment in the west of the Wollongong area. The area is within the general service area of WIN. The reception difficulties are due to the effects of ghost reflections from the escarpment. It is estimated that some 30,000 viewers are concerned.

389. The provision of national television to the Nyngan, Cobar and Bourke-Brewarrina areas will involve the transmission of national television programmes via micro wave bearers to transmitters at Nyngan, Cobar and near Bourke. The transmitters at Nyngan and Cobar will be of low power, whilst the transmitter at Bourke will be of medium power and will provide service to the towns of both Bourke and Brewarrina and the nearby rural areas. The Board and the Minister have received a considerable volume of representations concerning both the desire for an early commencement of operations and wider coverage by the stations. It has been necessary to point out in regard to the representations on the commencement date that the project is one of considerable magnitude, involving, apart from the planning work which has been necessary, the construction of both micro wave

links and transmitter facilities. It is estimated that the stations will be completed in August 1971 (Nyngan) and January 1972 (Cobar and Bourke). These dates are the earliest date practicable in the circumstances. In regard to coverage, the provision of services to the Bourke-Cobar-Brewarrina area is governed by the considerations which apply to the provision of television to all areas of low population. It has only been practicable in the present state of technological development to provide service, in wide areas of scattered population, to the population centred around the principal centres. The establishment of high power stations would involve costs of the order of \$600,000 for each such station and the additional number of people who would be served would not justify the capital outlay. Notwithstanding the questions which have been raised about the coverage of the proposed stations for the Bourke-Cobar-Brewarrina area, it is gratifying that they will provide a service to some 10,000 people. The stations, together with the stations at Broken Hill will serve some 70% of the population of the Western Division of New South Wales.

390. After commencement of operation of the national translator station at Eildon (Victoria), operating on Channel 1, some difficulty was experienced in the reception of Channel 0, Melbourne, by some viewers. After extensive tests in the area, and examination of different means of effecting improvement, it was apparent that a reduction in the power of the translator would be the simplest means of eliminating the difficulty. The effective radiated power of the translator was accordingly reduced during the year from 50 watts to 12.5 watts without serious effect on the reception of the translator in the township of Eildon.

391. The commercial television translator station at Toowoomba, Queensland, by DDQ Darling Downs Area will ultimately use channel 4, though use of channel 5 has been authorised on a temporary basis. The use of channel 5 is subject to the condition that it must be vacated on 12 months notice by the Board. Because of the very difficult position as to frequencies in the Toowoomba area, channel 4 is the only channel which could be allocated on a permanent basis.

392. The commercial translator stations to be established near Wagin and Katanning will together cover the general Narrogin-Wagin-Katanning area falling between the acceptable service areas of the high-powered television stations in the Central Agricultural Area (national station ABCW) and in the Southern Agricultural Area (national station ABAW and commercial station GSW). At the time when the high-power services were authorised an undertaking was given that if service in the Wagin area was unsatisfactory, the matter would be rectified by the authorisation of translator stations. Service has turned out to be unsatisfactory not only in Wagin but also in Narrogin and Katanning due to electrical noise generated by light industries in these towns. The translator near Wagin will serve the Wagin-Narrogin areas, and the translator near Katanning will serve that town. The proposed translator stations will provide service to some 15,200 people and will therefore be an important development in the television services in Western Australia.

393. The commercial television translator station in operation at Strathgordon, Tasmania, and the national television translator station to be established there, are provided to serve the construction township being established by the Hydro Electric

Commission, Tasmania, in connection with the Gordon River Power Development Scheme. The Commission is providing certain facilities for the stations such as the transmitter building and the towers for the receiving and transmitting aerials. This will result in a significant reduction in the capital costs of the stations.

394. It is a common experience that the inauguration of a service from translator stations in a locality gives rise to complaints of poor reception. In some cases the complaints are in respect of interference by the translator stations to signals of stations which, although used by viewers prior to the establishment of the translator stations, are substantially beyond the areas for which such stations were intended to provide a service. It is not technically practicable to protect the reception of signals from distant stations and at the same time to provide channels for the development and extension of the television services by new transmitters. On the other hand reception problems can arise due to viewers reliance on unsuitable aerial installations, and in some cases minor interference effects, and these can be remedied. The Board is anxious to ensure that the best use is made of translator services and has adopted the practice of sending engineering officers into areas concerned when translator services commence to explain operating conditions, aerial orientations and other details for optimum reception from the new installations. Officers visited Cooma for these purposes in December 1969. There were a number of complaints of interference to the Cooma commercial television translator station operating on Channel 10 when the Cooma national television translator station commenced operation on Channel 0. The cause of this interference was traced to aerial amplifiers which had been installed by viewers before the commencement of local Cooma service in 1966, to make the best of the very weak signals from the Canberra stations. These amplifiers were overloaded by the strong signal from the Cooma national television translator station and strong signals from communication services in the area, causing the generation of spurious signals by the interaction of the two strong signals at a frequency which caused interference to the commercial translator service. In a number of cases, the removal of the amplifiers overcame the interference problem. However, there remain some locations where the signal from the commercial translator station is so weak as to require amplification. In these cases, separate aerials for the national and commercial services are required so that a selective amplifier can be used for reception of the commercial service, Channel 10, to avoid generation of the spurious signal. The Board also undertakes appropriate publicity in these matters. In October 1969, this step was taken in respect of the Orbost area in connection with the Orbost national television translator station operating on Channel 2 with vertical polarisation relaying the programmes of ABLV Latrobe Valley area operating on Channel 4, with horizontal polarisation. Viewers were not making use of the translator station to the east due to use of horizontally polarised aerials pointed west to ABLV.

395. The national television station to serve Bordertown, South Australia, commenced operation on 29 March 1970. Because of unforeseen and complex technical difficulties the station is operating on a power of 80 watts instead of the 500 watts initially proposed. However, a satisfactory service is being provided to the town and a considerable surrounding area. Following commencement of the translator, there were complaints of difficulties in receiving the Adelaide com-

mercial television stations in the town. A visit was made to Bordertown by an engineer in July 1970 to investigate this matter. It was found that the strong signal from the translator station results in fairly general blanketing of reception of the weak signals from the Adelaide stations some 150 miles distant. Bordertown viewers have generally erected high masts, high gain aerials and often aerial amplifiers to view these stations. The commencement of operation in the near future of national and commercial television translator stations approved for the Nhill area, Victoria, which will relay the programmes of the Ballarat national and commercial television stations on Channels 9 and 7 respectively, will further affect reception in Bordertown of the Adelaide commercial television stations which also operate on Channels 9 and 7. The Board will review reception conditions in the Bordertown district following commencement of operation by the Nhill translators.

TECHNICAL ASPECTS OF TELEVISION REPEATER STATIONS

396. Information of the localities in which television repeater stations are to be established has been given in paragraph 362.

397. Tenders for the supply and installation of equipment for the stations were called early in 1969. Equipment proposed by the mining companies is as follows:

Transmitter	A low power modulator and frequency converter driving locally made 1 and 10 watt solid state VHF amplifiers.
Aerial	Locally made heavy duty Yagi aerials employing folded dipoles.
Mast	Self-supporting tower either 70 or 110 feet high.
Video Equipment	Includes switcher, stabilising amplifier, picture and waveform monitors, pulse generator and monitoring receiver.
Audio Equipment	Includes microphone, microphone amplifier, main switcher, VU meter, monitor amplifier and speaker cue signal equipment.
Power Supply	With voltage regulator.

398. All of this equipment is expected to meet the Board's normal requirements for technical equipment and operation of television stations.

399. The Board provided assistance with a number of matters relating to the establishment of the proposed repeater stations including the selection of appropriate technical equipment and sites.

400. In the case of a repeater station receiving the programmes from another repeater station, it is proposed that it shall comprise the RF and IF sections of a locally built receiver, a frequency converter and solid state VHF 1 and 10 watt amplifiers, and mast and aerial as above.

401. A minimum of test equipment will be provided at each station, but adequate test equipment and qualified personnel for equipment maintenance and test will be available for each station from a base in Sydney. The Board will

require the mining companies to provide one spare transmitter for each of five in service. Spare parts will be provided at each station.

402. The station buildings will have a brick exterior measuring 25' x 18', and will be airconditioned to provide a cool dust-free environment.

403. The Board normally imposes a limit on the amount of programme material which may be televised using the helical scan type of video tape recorder—see paragraph 373. However, in the case of repeater stations which will serve company or "closed" towns, and where it is expected that there will be some measure of control by encouraging the use of preferred types of receivers not so sensitive to the instabilities at present inherent in helical scan machines, the Board is relaxing its requirements and allowing the complete programme time to be provided on helical scan recorders.

404. With regard to the supply of programmes to the stations by the Australian Broadcasting Commission, the Commission is establishing separate programme recording centres at Townsville, Adelaide (to be shifted to Darwin when a national television station is established at that centre), and Perth, each supplying programmes on video tape for distribution on normal airline services. There will be two and not more than three repeater stations in any distribution circuit.

405. The new proposed town of Karratha is close to the newly developed town of Dampier and it has proved possible to locate the repeater stations so that the Dampier station will operate as a main repeater station, with the Karratha repeater station picking up and re-transmitting the transmissions of the Dampier station.

406. At Yampi Sound, mining operations are carried out on the adjacent islands, Koolan Island and Cockatoo Island. Due to the proximity of the islands and the favourable topography, a main repeater station will be established at Koolan Island, and the station to be established at Cockatoo Island will pick up and re-transmit the transmissions of the Koolan Island station.

STANDARD INTERMEDIATE FREQUENCIES FOR TELEVISION RECEIVERS

407. The Board has recommended standard intermediate frequencies to the manufacturers of television receivers, in order that frequency allocations for television stations may be made in such a manner as to avoid mutual interference between television and other services, arising from image responses, intermediate frequency difference responses, and beat oscillator radiation. A multiplicity of intermediate frequencies would make it impractical to ensure maximum protection from such interference. Nevertheless, the Board has recommended the use of two alternative intermediate frequencies as follows—

vision	36.875 MHz	or	36 MHz
sound	31.375		30.5

The Board originally specified an intermediate frequency of 36 MHz vision, but some receivers were found prone to the generation of spurious signals on Channel 2. A change of intermediate frequency to 36.875 MHz alleviated this but created the

possibility of interference on Channel 4 from the local oscillator radiation of receivers tuned to Channel 1 in the same locality. Consequently there was a need for alternative intermediate frequencies in different parts of the Commonwealth.

408. The Board has now sought the opinions of television receiver manufacturers on this matter, particularly in relation to practices which depart from the recommendations of the Board, the reasons for such departures and any evidence of reduced interference.

COLOUR TELEVISION

409. The determination of new system standards for the Australian television service following recommendations by an Industry Committee has been mentioned earlier (paragraph 172 et seq.). The standards are contained in Appendix M of this report.

410. Amendments proposed by the Industry Committee, and now contained in the standards, include a reference white level of 20% maximum carrier level, a blanking level of 77% maximum carrier level, and a vision to sound power ratio of 10:1. The Industry Committee's recommendations were assisted by information on the effect of vision modulation levels and sound carrier power on the compatibility of reception of the colour signal on monochrome receivers obtained from test transmissions. Details of these test transmissions were set out in paragraph 318 of the Board's Twenty-first Annual Report.

411. The significance of changes to the modulation levels, particularly reference white level, is that it will permit better colour performance from existing transmitters without creating any restriction on the ultimate colour performance of transmitters in which advanced design techniques are incorporated. The choice of 20% for reference white is mid-way between alternative operating limits of 10% and 30%. The lower value, currently used as a lower limit in the U.S.A., Europe and Japan, was considered to cause undue crushing of saturated colours of high luminance, and accompanying luminance shifts in existing transmitters. Compatibility was also considered to be worse with regard to sound buzz and the 1.07 MHz beat signal. A higher value of reference white would avoid these problems with existing transmitters at the expense of reduced contrast capability in some receivers, and reduced signal to noise ratio. Justification of any selection of reference white level near the lower practical limit would be dependent upon a relatively low statistical occurrence of high luminance saturated colours and the generation of signals corresponding to these conditions. Replies to overseas enquiries indicate that with new equipment and production facilities, colour saturation has been increased significantly.

412. In regard to the vision to sound power ratio, the Board considers it prudent to introduce a ratio of 10:1 well ahead of the commencement of colour programme transmissions; as stated earlier the change has already been effected by the Sydney and Melbourne stations and the matter is under consideration in regard to other stations. A review of the situation will be necessary at the end of the first year of a colour television service to determine whether any further change would be warranted, and in particular an increase in the ratio to 20:1.

413. Revision of the Board's Standards for the Technical Equipment and Operation of Television Stations, so that these will be appropriate for both monochrome and colour television operation, will now be necessary and this work is proceeding (see paragraph 179).

414. During the year, a greater proportion of programmes from the United Kingdom was received on video tape. Much of this programme material is recorded in PAL colour, and constitutes a source of complete (although distorted) colour signals at some Australian television studios, even though the stations concerned have no colour equipment installed. Programmes relayed from Europe via the Intelsat satellite over the Indian ocean also constitute a similar source of PAL colour signals. The Board requested licensees to ensure, if such action had not already been taken, that their technical equipment was operated in such a manner as to eliminate any sub-carrier burst signal prior to transmission—a procedure which prevents reception in colour on normal colour receivers—in view of the undesirability of any programme being receivable in colour prior to a decision on the introduction of colour television.

X-RAY RADIATION FROM TELEVISION RECEIVERS

415. Considerable publicity has been given to reports from the United States of America of harmful levels of X-ray radiation from certain types of colour television receivers. These can arise from the extremely high voltages necessary in these receivers. Tests in the United States have indicated that no danger exists under normal viewing conditions when normal precautions have been taken by manufacturers against excessive X-ray radiation. Only a small minority of receivers in the United States had caused concern.

416. The matter is basically one which affects public health and the Board therefore consulted the National Health and Medical Research Council. Tests were conducted on receivers for excessive X-ray radiation in collaboration with the Departments X-ray and Radium Laboratory.

417. During the year reports in the press raised the related matter of fears of dangerous levels of X-ray radiation from black and white receivers.

418. The position on these matters is best indicated by a statement released by the Postmaster-General and Minister for Health on 14 June 1970, reported as follows:

No hazard arises from X-ray emission from black and white television sets in use in Australia or from the colour television sets already available for experimental purposes. This was shown in a series of tests conducted recently by the X-ray and radium laboratory of the Commonwealth Department of Health and the Australian Broadcasting Control Board, in association, in a study of X-ray emissions from television receivers. None of the wide range of makes and ages of black and white television receivers tested had a level of X-ray emission greater than $\frac{1}{25}$ of the internationally recommended level for such receivers and none of the colour television sets had an X-ray emission greater than $\frac{1}{40}$ of that level. The higher level for colour television receivers arises from the higher voltages of their electronic components. The instruments used in the tests were of sufficient sensitivity to measure the radiation from a radioactive luminous watch. The level of X-radiation from black and white television receivers was well below the radiation from this commonly used item.

The Minister for Health, Dr. Forbes, and the Postmaster-General, Mr. Hulme, gave this information today in a joint statement, in which Dr. Forbes announced that the National Health and Medical Research Council has recommended to State Governments that they amend their radioactive substances regulations to permit the sale only of television receivers which comply with the standards of X-ray emission it has now defined. Council noted that the amendment should be made well in advance of the introduction of colour television into Australia.

The Ministers said the question of acceptable standards of X-ray emission from television receivers was raised with the National Health and Medical Research Council by the Australian Broadcasting Control Board because of earlier reports from the United States of colour television receivers emitting dangerously high levels of X-rays. The Board was anxious that standards of X-ray emission be defined, to permit manufacturers of colour television receivers for Australian use to adopt, in advance, receiver designs which will conform with satisfactory emission levels.

The recommendation of the National Health and Medical Research Council prescribes a maximum level of X-ray emission at a distance of five centimetres (about two inches) from any surface of a television receiver. The level adopted by the National Health and Medical Research Council is identical with that recommended by the International Commission on Radiological Protection which is recognised throughout the world as the authority for setting permitted levels of radiation exposure.

The conditions for measurement of X-ray emission from television receivers have been defined by the National Health and Medical Research Council to ensure that the maximum X-ray emission ever likely to occur will take place at the time of test measurement. The X-ray emission under normal use will be less than under the conditions of measurement. The technical requirements of the recommendation adopted by the National Health and Medical Council are the same as those which will become effective through regulations in the United States from 1 June 1971.

419. The following is the text of the relevant amendment to the model radioactive substances regulations of the National Health and Medical Research Council:

"A television receiver shall not be sold unless it complies with the following standards:

a. *Applicability*

The provisions of this section shall come into operation on a date to be fixed. (Note: It is recommended that the date selected be well in advance of the introduction of colour television in Australia so as to provide time for manufacturers to comply with the requirements of these standards).

b. *Definitions*

- (i) "External surface" means the cabinet or enclosure provided by the manufacturer as part of the television receiver. If a cabinet or enclosure is not provided as part of the receiver, the external surface shall be considered to be a hypothetical cabinet, the plane surfaces of which are located at those minimum distances from the chassis sufficient to enclose all components of the receiver except that portion of the neck and socket of the cathode-ray tube which normally extends beyond the plane surfaces of the enclosure.
- (ii) "Maximum test voltage" means 110 per cent of the nominal root mean square voltage specified by the manufacturer for the power source for the television receiver.
- (iii) "Service controls" means all of those controls on a television receiver provided by the manufacturer for purposes of adjustment which, under normal usage, are not accessible to the user.
- (iv) "Television receiver" means an electronic product designed to receive and display a television picture through broadcast, cable or closed circuit television.
- (v) "Usable picture" means a picture in synchronization and transmitting viewable information.

- (vi) "User controls" means all of those controls on a television receiver, provided by the manufacturer for purposes of adjustment which, on a fully assembled receiver under normal usage, are accessible to the user.

c. Requirements

- (i) Exposure rate limit. Exposure rates of ionizing radiation produced by a television receiver shall not exceed 0.5 milliroentgens per hour averaged over a ten square centimetre area at a distance of five centimetres from any point on the external surface of the television receiver as measured in accordance with the requirements of this section.
- (ii) Measurements. Compliance with the exposure rate limit defined in sub-paragraph (i) of this paragraph shall be made with an instrument, the radiation sensitive volume of which has a cross section parallel to the external surface of the television receiver with an area of ten square centimetres and no dimension larger than five centimetres. However, measurements may be made with an instrument having a radiation sensitive volume of cross sectional area and dimensions other than those specified above provided the instrument readings are corrected for spatial non-uniformity of the radiation field to obtain the exposure rate average over a ten square centimetre area.
- (iii) Test conditions. All measurements shall be made with the television receiver displaying a usable picture, with the power source operated at supply voltages up to the maximum test voltages of the television receiver and with all user controls and all service controls adjusted to combinations which result in maximum production of ionizing radiation together with conditions identical to those which result from that component or circuit failure which gives rise to the maximum production of ionizing radiation."

420. As the above statement indicates, the amendment is a recommendation to State Governments.

421. The Board is aware that the Standards Association of Australia is also paying attention to precautions against excessive X-ray radiation from television receivers. For details of the Board's association with this body see paragraph 286.

INTERFERENCE TO THE RECEPTION OF TELEVISION PROGRAMMES

422. During the year ended 31 May 1970, 11,467 complaints of interference to reception of television programmes were investigated by the Postmaster-General's Department in accordance with the arrangements referred to in paragraph 271. This was a decrease of about 9 per cent compared with the previous year.

423. The cost of investigation of complaints of interference to broadcasting and television reception during the year was \$183,784.

TELEVISION OPERATOR'S CERTIFICATE OF PROFICIENCY

424. The Board conducts examinations for the Television Operator's Certificate of Proficiency twice a year in each capital city and where the occasion demands, some country centres. The Board's standards for the technical equipment and operation of television stations require that persons operating or responsible for maintenance of television station technical equipment shall hold a Television Operator's Certificate of Proficiency or be otherwise qualified to the satisfaction of the Board. During the year to 31 May 1970, 118 candidates sat for the Television Operator's Certificate of Proficiency of whom 47 were successful.

425. Recent Annual Reports have made reference to a proposal for the development of a single handbook covering the syllabus for the Television Operator's Certificate of Proficiency. At present examination candidates must refer to a number of text books. The committee formed to examine this matter has continued its work during the year. Matters relating to organisation of the project remain to be settled.

EXPERIMENTAL INVESTIGATIONS

426. The Board has been making long-term field-strength recordings in each of the eastern States on very high frequencies and in some States on ultra-high frequencies.

427. The purpose of both series of measurements is to determine the distance limits at which the translation of television transmissions is practicable, to determine the grades of service to be expected at the longer distances, and to investigate in detail the possible benefits of diversity reception.

428. Attempts are being made to correlate this information with C.C.I.R. basic data, mainly in the particular aspect of local interpretation of basic C.C.I.R. assumptions.

COMMUNITY TELEVISION AERIAL SYSTEMS

429. Under Section 130A of the Act the Minister may, on the recommendation of the Board, grant permits for the operation of community television aerial systems in certain circumstances. Community television aerial systems are used in Australia to provide reception of television stations in restricted areas of difficult reception within the general area served by stations concerned; the systems consist of receiving equipment using a high aerial on a favourable site, from which signals are relayed by cables or wire lines and amplifiers to subscribers to the system.

430. The Board has previously emphasised that community television aerial systems properly organised, installed and maintained can be an effective remedy for television reception difficulties in limited areas within the general area served by television stations concerned. For this reason, the Board is prepared to furnish advice in connection with such systems in areas where they are appropriate. Notes in a simple form on the use of CATV systems are available from the Board's offices for the guidance of interested people who may have only a limited knowledge of the purposes and possibilities of such systems. The notes cover method of operation, costs, effectiveness, etc.

431. Details of the community television aerial systems for which permits have been granted are as follows:

Permittee	Area	Number of Subscribers
Ferris Bros. Pty. Ltd.	Castlecrag, N.S.W.	10
Management Committee Bayview Community TV System	Bayview, N.S.W.	49
E. R. Moffitt	Balmoral, N.S.W.	102
Harrow Community TV System	Harrow, Vic.	18
Clinton Pty. Ltd.	Glen Osmond, S.A.	46
A. G. Robertson	Wivenhoe, Tas.	44

432. The fee for a permit for a community television aerial system is \$10.

MEETINGS OF THE C.C.I.R.

(COMITÉ CONSULTATIF INTERNATIONAL DES RADIOCOMMUNICATIONS)

433. Reference has been made in paragraphs 277 to 282 to the C.C.I.R. Study Group meetings in Geneva in September-October 1969 and to the XIIth Plenary Assembly in New Delhi in January-February 1970. It was indicated that the Board made three contributions to the C.C.I.R. work in this latest Plenary period 1966-70. Details of two contributions concerned with sound broadcasting were outlined. The third contribution by the Board, which arose from the Board's technical investigations in relation to the choice of a system and technical standards for colour television, was a submission to Study Group XI (Television) that, in order to reduce the amount of de-tuning necessary in existing monochrome receivers for the elimination of 1.07 MHz beat signals during colour television transmission, the ratio of vision to sound powers in colour television transmission should be within the range 10:1 to 20:1 and preferably 20:1. The Board's draft television system standards for colour television included this proposal. At the Study Group meetings the general consensus of opinion on this latter matter, on which there were contributions from other countries also, was that the ratio should be 10:1. This has been shown as the revised ratio for System B, the television system in use in many countries, including Australia, in the relevant C.C.I.R. Information Report approved by the XIIth Plenary Assembly. The ratio of 10:1 has been adopted in the Board's system standards as finally determined for the Australian television service in connection with colour television—see paragraph 410.

WORLD ADMINISTRATIVE RADIO CONFERENCE FOR SPACE COMMUNICATIONS

434. The Board has been represented at inter-departmental meetings which have been held to prepare a brief for the Australian Delegation to the World Administrative Radio Conference and C.C.I.R. Study Group meetings on Space Telecommunications organised by the International Telecommunications Union (I.T.U.) to be held at Geneva in June, 1971.

435. One of the matters which is a concern of the Committee is the formulation of an Australian requirement in respect of radio frequency spectrum space. The Board has furnished advice to the Committee on this matter in regard to broadcasting and television. In the Ultra High Frequency (UHF) Band the allocations available for broadcasting and television are more restricted for Australia than for other parts of the world. Although this frequency band is not at present used for broadcasting or television in Australia, the Board recommended to the Committee that proposals should be made for the UHF band 470-942 MHz to be reserved for such use on the basis of the desirability of standardising Australian frequency usage with international reservations of frequencies for broadcasting and television purposes, and to provide for expansion of broadcasting and television services to meet the growing needs arising from the great population and economic growth of the nation.

436. The Board also decided to request provision for possible new types of broadcasting services which may be made necessary by population and economic growth, in the 12GHz band.

437. A question of importance in regard to the conference is the possibility of interference to existing television services in Australia from satellite transmission, especially for those stations operating in bands which are not normally used for television in other parts of the world. Television channels 3, 4, 5 and 5A are in this category. It would be an Australian concern to protect these interests at the Conference. It is now obvious with the development of artificial satellites that any local departure from generally agreed occupancy of the radio frequency spectrum under I.T.U. Radio Regulations, may create a vulnerability to interference which was not previously contemplated.

438. From the Board's point of view, the obvious place for satellite broadcasting services is in the UHF or higher frequency bands. Apart from television relay links, there are no existing Australian services in these bands; also the ultra-high frequencies have limitations for terrestrial services. Satellite television broadcasting has advantages in regard to coverage. The angle of arrival is sufficiently steep to expect uniform coverage, independent of terrain. For much the same reason, ghost signal reception should also be reduced.

PART VIII—TELEVISION—PROGRAMME SERVICES

439. Television programming during the year under review has reflected some of the changes in social standards of acceptability which have occurred in other areas of entertainment. But in keeping with the principles of the Board's Programme Standards, and the principle that television is by its nature less susceptible to prior selection by the audience than other forms of entertainment, the effects of contemporary permissiveness were relatively restrained. Television is essentially an intrusive and personal medium, and it is generally accepted in all countries of which the Board has knowledge that the standards applicable to it must be more restrictive, particularly at times when large numbers of children are likely to be watching.

440. There has been little change in the range and variety of programmes imported from other countries. Australian programmes, which continue to occupy about half the transmission time, have developed along lines already established, rather than in any essentially new directions. Several attempts were made to develop new programmes for evening transmission, but not all of them proved to be popular. These included Australian drama series which met with less success than the long-running series "Homicide" and "Division 4".

441. Many programmes are based on sport, either public events or events staged by commercial television stations. The particular sport may change, but the popularity of sport for its own sake, traditional in Australia, appears to assure stations of an audience. Commercial stations have recently shown much interest in boxing.

442. The year has been memorable for technological developments and their effect on programming. Reference has been made in paragraphs 72 to 76 to pro-

gramme matter received from other parts of the world by satellite transmission, and to the expansion of programme relay facilities within Australia in paragraphs 77 to 81. The effect of these developments has been to emphasise just how many of the world's developed nations have become part of the 'global village'.

443. The Apollo space flights were given extensive coverage by means of satellite transmission: Apollo 11 coverage extended over ten days from 16 July 1969, including the actual landing on the moon; Apollo 12 coverage extended over a similar period from 15 November 1969; and the full drama of the abortive flight of Apollo 13 was conveyed by tense programmes from 12 to 15 April 1970.

ANALYSIS OF PROGRAMMES

444. The Board's analysis of television programmes is derived from data obtained from commercial television stations and the Australian Broadcasting Commission. The statistics in this report are based on eleven four-weekly periods between April 1969 and March 1970. Programmes have been categorised under nine headings, some of which are divided into sub-categories. The analysis does not take into account the time occupied by advertisements, which is dealt with separately in other sections of this report (paragraphs 490 to 496).

445. The following paragraphs and tables review in broad outline the composition of programmes of metropolitan and country commercial television stations. Additional tables are included in Appendix O. For comparison purposes these latter tables also show details of the programmes of a representative station of the National Television Service.

446. The Board's records of the composition of television programmes show that over the past ten years the proportion of time occupied by drama and light entertainment combined has remained relatively constant, any increase in the amount of one of these types of programme being offset by a decline in the amount of the other. During 1969/70 the proportion of drama televised fell below 50 per cent for the first time since 1961, when data was first compiled in this form, and the proportion of light entertainment reached its highest level.

447. Although there has been relatively little change in the overall pattern of programming, as reflected in the following statistical tables, there have been marked changes in the programming policies of individual stations. At the beginning of the year under review many stations, both metropolitan and country, were presenting early morning news programmes on weekdays. The majority of the stations which were doing so found difficulty in sustaining the programmes and few now remain, their place having been taken in some cases by cartoon and other light entertainment programming, while other stations discontinued early morning transmissions altogether.

448. The increase in light entertainment programmes may be attributed in part to the increased number of "specials", which in the main consist of variety programmes, both local and imported, featuring overseas stars of television, screen or stage.

Percentage of Time Occupied by Various Types of Programmes Commercial Television Stations

Programme Type	Capital City Stations			Country Stations		
	1967-68 Per cent	1968-69 Per cent	1969-70 Per cent	1967-68 Per cent	1968-69 Per cent	1969-70 Per cent
Drama	51.3	52.3	49.3	55.3	55.2	53.6
Light Entertainment	22.0	22.1	24.8	21.2	21.2	23.2
Sport	6.2	5.9	5.0	4.1	4.6	4.4
News	4.3	6.5	7.1	6.7	8.3	9.0
Family	6.3	4.6	4.9	5.0	4.1	3.7
Information	1.5	1.9	1.6	1.9	2.6	2.1
Current Affairs	3.9	2.5	2.2	4.1	2.8	2.7
The Arts	0.4	0.1	*	0.5	0.1	0.1
Education	4.1	4.1	5.0	1.2	1.2	1.4

*Less than 0.05 per cent

449. The following table shows increases since last year in the proportions of programmes in the information and current affairs categories televised during popular viewing time; production has since ceased on several programmes of this type, particularly those providing background information in documentary form.

Programmes Televised between 7.00 p.m. and 9.30 p.m. Commercial Television Stations

Programme Type	Capital City Stations			Country Stations		
	1967-68 Per cent	1968-69 Per cent	1969-70 Per cent	1967-68 Per cent	1968-69 Per cent	1969-70 Per cent
Drama	76.8	72.5	66.9	77.8	75.6	73.1
Light Entertainment	18.8	23.6	27.2	14.8	18.8	21.3
Sport	1.3	0.8	0.7	0.6	1.1	1.0
News	1.2	1.4	2.0	3.3	1.9	1.4
Family	0.3	0.8	1.9	1.1	1.6	1.8
Information	0.3	0.8	1.9	1.1	1.6	1.8
Current Affairs	1.0	0.3	1.1	1.3	0.5	1.0
The Arts	0.3	0.1	0.1	0.7	*	0.2
Education	—	*	—	—	—	—

*Less than 0.05 per cent.

TELEVISION PROGRAMME STANDARDS

450. As reported in paragraph 138, the Board consulted with the Federation of Australian Commercial Television Stations, representing the licensees of commercial television stations, on two occasions during the year to examine the draft of the second edition of the Television Programme Standards. The draft had undergone preliminary study by a working party consisting of officers of the Board and representatives of the Federation. Discussions of this type are not, by long established practice, made public; the Board regrets and deprecates statements made by the Federation after the meetings, putting forward views on matters under discussion. The Board put its attitude on the matter very strongly before the Federation at a subsequent meeting, to the degree that in the Board's opinion one-sided statements on unresolved issues seriously jeopardise the usefulness of discussions. An unfortunate effect was the considerable controversy in the press on matters involved which had not the firm basis of any decision by the Board.

451. The Board's Television Programme Standards, determined under section 99 (1.) of the Act, were first promulgated in 1956, just prior to the commencement of television in Australia. With the passing of time some minor amendments had become necessary, and these were incorporated in a reprint of the first edition, in July 1959. After fourteen years of experience in the medium, the Board considered it desirable to revise the Standards and to publish a consolidation of the matters of which commercial television stations had been advised as they arose during that time. This was done in the second edition of the Television Programme Standards which became effective on 1 August 1970. The general principles of the Standards, as determined in 1956, remain substantially unchanged, although some paragraphs have been re-written, and items have been regrouped in the interests of making the publication more useful as a reference handbook for station operators. Rulings given during the intervening years, but now published in the Standards for the first time include a restriction on detailed instruction for young people on sex matters, prohibition of the use of techniques involving subliminal perception, rules for the televising of film trailers, conditions under which telephone conversations may be used in programming, limits on imported matter in advertisements and on the incidental use of foreign languages in advertisements.

452. Sections of the Standards which have undergone revision include:

- (a) revised times for the period known as family and children's viewing time, which are now—
weekdays: 6.00 a.m.-8.30 a.m. and 4.00 p.m.-7.30 p.m.
Saturday and Sunday: 6.00 a.m. to 7.30 pm.
(Previously the time on weekdays was 4.30 p.m. to 7.30 p.m.)
- (b) a caution about the characterization of women in programmes for children; degradation of womanhood is to be avoided.
- (c) an amendment to the definition of film classifications A and AO, in keeping with the revised times for family and children's viewing time.
- (d) a statement of a station's obligation to televise the classification symbol of films.
- (e) the elimination of the minimum duration for religious programmes, and suggestions for appropriate types of programme.
- (f) the inclusion of the new sub-section 116 (4A) of the Act concerning political matter (see paragraph 127).
- (g) the inclusion in the section dealing with news programmes of a requirement to exercise special care in the selection of video and sound material to be televised at times when the audience is likely to contain large numbers of children (previously mentioned only in the paragraphs dealing with family and children's programmes).
- (h) variations in advertising standards to provide for visual superimposing of advertisements on programme matter under certain conditions; identification of an advertiser; restriction of advertisements in association with a public appearance of any member of the Royal family; and the association of advertisements with some types of religious programmes.

- (i) variations in the conditions relating to the advertising of liquor, personal products, gambling, lotteries, and money lending. Variations in respect of liquor, personal products and gambling resulted from the changed times for family and children's viewing; and provision was made for sponsorship identification and institutional advertising of liquor at times when direct advertisements for liquor are unacceptable; personal products are now more specifically defined; the requirement for advertisements for lotteries and money lending is that they should comply with the laws of the State in which they are presented.
- (j) a variation in the advertising time standards to provide for calculation of the amount of time occupied by advertisements in a period of 60 minutes commencing either on the hour or at the half hour (previously calculated only on the clock hour).
- (k) a more precise definition of a shopping guide.

453. It was also thought convenient to include in the Standards several rules for procedure which had been the subject of previous advice to licensees. These included the procedure to be followed when a change in the approved hours of service is desired; the method required for station identification; precautions to ensure accuracy in announcements of the time of day, and in the transmission of weather reports and forecasts.

454. The Board had previously determined rules concerning the televising of programmes between 6.00 a.m. and 12.00 noon on Sunday (see paragraph 381 of the Board's Twenty-first Annual Report). Representations from the Federation on these rules were still under consideration and it seemed unlikely that an early decision would be reached. The Board did not wish to delay circulation of the revised Standards, particularly as the previous edition was out of print, and consequently the second edition was issued with an indication that these rules are under review.

455. The draft of the Standards was also discussed with the Australian Broadcasting Commission, and the Chairman of the Commission has informed the Board that in accordance with its usual practice the Commission accepts the new edition of the Standards as setting out the minimum standards which will be followed in the presentation of television programmes by the Australian Broadcasting Commission.

456. Reference has been made earlier (paragraph 79) to the relay by Australian television stations via satellite of overseas entertainment programmes, following the opening of the Satellite Earth Station at Ceduna in February 1970. By circular of 24 March 1970, the Board reminded licensees of their responsibility to ensure that the provisions of the Board's Television Programme Standards are observed in regard to programmes relayed via satellite. It was indicated that programmes from other countries which contain matter which contravenes the provisions of the Standards, either as to subject or form of presentation, should be suitably edited before re-transmission. It follows that where a station is unable to satisfy itself that programmes will not contain material contrary to the Standards, the programmes should not be re-transmitted simultaneously with their reception by satellite.

EMPLOYMENT OF AUSTRALIANS

457. Under the provisions of section 114 of the Act, licensees of commercial television stations are required, as far as possible, to use the services of Australians in the production and presentation of their programmes. Effect has been given to this section of the Act since 1960 by means of requirements designed to ensure that a specified percentage of programmes will be of Australian origin, and that during popular viewing times not less than a specified minimum of Australian programmes will be televised.

458. The overall requirement was increased progressively from 40 per cent initially to 50 per cent in 1965. The amount of Australian programme matter required to be televised during the main evening viewing periods has also been progressively increased from four hours per four-week period in 1960 to eighteen hours per four-week period in 1969. New requirements introduced in 1967 included an obligation for stations to televise an aggregate of at least two hours of drama as part of the latter requirement. Because the category of television drama occupies so large a proportion of transmission time, the Board regards the production and presentation of Australian drama as particularly important. It has been strongly represented that steady development of this part of Australian programming is essential to the proper training of the country's resources of writers, producers, directors, actors and technical staff in the television industry.

459. Some Australian-produced drama series are very popular on the evidence of audience measurement surveys, but during the past year several series appeared relatively briefly and, failing to win sufficient support from viewers, were dropped from the schedules. The result has been a decline in the total amount of drama currently being produced, and although several new drama projects have been announced it is apparent that this section of an admittedly volatile industry is far from the position of stability necessary to ensure a steady improvement in both quality and quantity of production. The Board has received a large number of representations from organisations such as Actors' and Announcers' Equity, the Australian Writers' Guild, and the Producers' and Directors' Guild of Australia, as well as from some individual members of the public, seeking increases in the amount of Australian programming—and Australian drama in particular—which stations are required to present.

460. The Board is again engaged in a review of its Australian content requirements. These reviews are undertaken at regular intervals. Discussions have been conducted by the Board as a whole, and by Members individually with the Federation of Australian Commercial Television Stations, with representatives of the groups referred to in the preceding paragraph, and with other interested parties. It is clear that there is no simple solution. Strongly held views about the availability of physical and financial resources and the capacity of the artists concerned vary so widely that it is not easy to determine the best policy to be adopted immediately. Many of the proposals put to the Board about, for example, the production of film and drama in Australia go beyond the Board's jurisdiction. Others which concern the capacity of the industry to develop and use programmes of the necessary quality are at so wide a variance that they obviously require an intensive study upon which the Board is currently engaged.

461. It is apparent that this review will take longer than the Board had earlier expected, but it is being carried out as quickly as possible, having regard to the Board's very heavy programme of inquiries in various fields.

462. The following table shows the performance of stations in regard to the Australian content requirements, which apply to stations which have completed three years of operation. The figures are based on twelve periods of four weeks between May 1969 and April 1970 and, in assessing the overall Australian content requirements, take into account the credit loadings which the Board allows for Australian content requirements, which apply to stations which have completed limited credit for programmes produced in other countries of the British Commonwealth.

Australian Content of Television Programmes
Commercial Television Stations which have completed three years of operation.

Station	Proportion of Programmes Credited as being Australian			Total Australian Credit||	Average Duration of Australian Programmes Televised in Specific Hours			
	Australian Base Credit	Australian Credit Loading	British Commonwealth Credit*		Monthly 7.00-9.30 p.m.		Weekly 7.00-9.00 p.m.	
					Australian Programmes	Australian Drama	Australian Programmes	
	Minimum Requirements Per cent	Per cent	Per cent	50 Per cent	18 Hours	2 Hours	2 Hours	
					Hours Mins	Hours Mins	Hours Mins	
<i>Metropolitan Stations</i>								
ATN	41.3	9.9	3.2	54.4	20 26	9 25	4 15	
TCN	39.7	5.7	4.6	50.0	20 59	6 31	4 17	
TEN	43.3	9.3	2.6	55.2	21 50	1 45	4 08	
ATV	47.6	7.2	2.6	57.4	15 20	2 28	3 41	
GTV	38.0	8.1	3.6	49.7	22 41	6 03	4 53	
HSV	45.8	8.0	5.0	58.8	28 38	8 51	6 34	
BTQ	36.6	9.4	4.6	50.6	22 32	9 27	5 10	
QTQ	39.7	11.1	2.3	53.1	24 15	6 48	4 52	
TVQ	35.5	7.8	4.4	47.7	18 13	2 04	3 44	
ADS	38.9	7.7	2.5	49.1	24 26	5 32	5 41	
NWS	46.4	9.2	3.4	59.0	28 08	5 38	5 49	
SAS	34.6	6.1	3.4	44.1	15 17	2 17	2 37	
STW	45.0	8.9	3.5	57.4	19 28	4 23	4 33	
TVW	42.0	10.4	4.8	57.2	24 59	4 35	5 02	
TVT	47.9	12.2	4.4	64.5	24 32	10 39	4 56	
<i>Country Stations</i>								
CBN	41.8	8.3	5.4	55.1	24 22	11 33	5 08	
CTC	39.1	8.0	5.4	52.1	20 54	9 16	4 02	
MTN	42.9	8.0	2.9	53.8	26 49	12 24	5 09	
NBN	43.9	9.6	6.4	58.5	25 29	8 44	4 56	
NEN	38.1	8.6	5.7	51.7	18 28	7 54	3 18	
NRN	38.0	8.3	5.1	51.3	25 26	9 28	5 07	
RTN	39.5	12.4	5.3	56.9	22 43	9 45	4 34	
RVN	37.2	6.8	5.0	49.0	20 26	10 31	4 19	
WIN	50.8	5.3	2.9	59.0	27 45	10 08	5 34	
AMV	41.9	6.7	3.9	52.5	27 14	10 18	4 41	
BCV	40.8	8.6	3.7	53.1	27 34	14 45	5 43	
BTV	51.4	8.2	2.9	62.5	22 20	9 36	4 17	
GLV	52.5	5.2	3.3	61.0	26 59	10 11	5 50	
GMV	55.0	9.6	2.3	66.9	28 14	12 39	6 02	
STV	35.3	10.2	5.6	50.5	20 13	9 27	4 25	
DDQ	40.9	8.2	3.9	53.0	25 31	11 49	5 37	
FNQ†	23.1	9.1	3.9	36.1	13 02	7 19	2 38	
RTQ	34.5	11.2	3.6	49.3	23 47	11 29	4 35	
TNQ	35.5	11.3	4.9	51.7	24 20	8 17	3 35	
WBQ	33.1	10.4	6.4	48.5	22 54	9 06	4 35	
SES	42.7	8.1	3.4	54.2	26 13	7 57	5 26	
TNT	47.7	8.3	5.0	61.0	32 15	9 30	4 33	

* British Commonwealth produced programmes are allowed Australian credit for half their duration.

|| Includes British Commonwealth Credit to a maximum of 5 per cent.

† FNQ completed three years of transmission on 7.9.1969.

463. The table shows that the majority of stations complied satisfactorily with the Board's requirements, many exceeding the minima by substantial amounts. Eight stations, namely GTV, TVQ, ADS, SAS, RVN, FNQ, RTQ and WBQ, failed to comply with the requirement to televise 50 per cent of Australian material. Of these TVQ, SAS and FNQ were operating under financial difficulties during the period, while a technical difficulty faced the other country stations concerned. It has been explained in earlier reports that country stations which lack videotape facilities are unable to present many Australian programmes which are available only by that means of reproduction. With regard to GTV and ADS, which are well-established metropolitan stations, the Board recognised that the margin of failure was not statistically significant. However, it indicated an unsatisfactory trend in the stations' programming, and the matter is under discussion with the respective managements.

464. Comparison of the preceding table with the figures for 1968-69 shows that all metropolitan stations made some increase in the amount of Australian programme matter televised between 7.00 p.m. and 9.30 p.m. and that nine of the fifteen stations made increases under all three requirements for popular viewing time. Most of the country stations also televised more Australian programmes than in the previous year, and eight of the twenty-two stations made increases under all three requirements.

465. Country television stations which have not completed three years of operation are not required to provide a specified amount of Australian programmes. The following table, which is based on information supplied for sample weeks throughout the year, shows the proportion of Australian programmes televised between 7.00 p.m. and 9.30 p.m. each week by these stations.

*Australian Content of Television Programmes
Commercial Television Stations which had not Completed Three Years
of Operation at 30 June, 1970*

Station	Proportion of Programmes Credited as being Australian			Average Duration of Australian Programmes Televised Weekly Between 7.00 p.m. and 9.30 p.m.	
	Australian Origin (Credit Loadings shown in brackets)	British Common- wealth Credit	Total Australian Credit	Hours	Mins.
BKN	16.7 (2.8)	4.0	23.5	3	00
MVQ	26.2 (9.0)	7.0	40.2	2	19
GTS	32.2 (4.2)	5.8	41.4	4	53
BTW	27.8 (3.3)	4.3	35.4	3	28

NEWS

466. News services provided by commercial television stations have in general continued to be produced along established lines. The availability of satellite relays from other countries and improved communications facilities within Australia have enabled many stations to increase the extent to which they present immediate reports of overseas and interstate events.

467. Major overseas events were given wide coverage during the year. These included the investiture of the Prince of Wales, the lunar flights of Apollo 11, 12

and 13, the principal statements made by the President of the United States on policy on the war in Vietnam and Cambodia, and the official opening of the Australian pavilion at Expo 70 in Japan. Nationwide coverage was also given to important Australian events including the 1969 Federal Elections.

468. Quite apart from the coverage of special events, daily news services have benefited from the development of equipment and news gathering techniques, and the acceptance by viewers of commercial television news programmes in the early evenings is reflected in the high audience measurement ratings. However, the audience appears to be less interested in news programmes at other times of day, and as mentioned in paragraph 447 most of the early morning programmes of news and commentary which were being televised at the beginning of the period under review have since been terminated.

CENSORSHIP AND CLASSIFICATION OF IMPORTED PROGRAMMES

469. The long-standing arrangement under which the Commonwealth Film Censorship Board with the approval of the Minister for Customs and Excise and the Postmaster-General, classifies all films imported for use on television continues to operate effectively. The Chief Film Censor exercises his judgment on the basis of the Board's Television Programme Standards in allocating classifications to such films. The Chief Film Censor has advised the Board that as an increasing amount of television programme matter is being imported on videotape, provision is being made to examine this material under conditions similar to those used for imported films. He expects these facilities to come into full operation during 1970-71.

470. The purpose of the programme classification is to provide, as a guide to parents, an indication of the suitability of imported programmes for various age groups of young people. Australian programmes are not classified by the Chief Film Censor but are required to be made in such a way as to comply with the Board's Programme Standards.

471. The basis for classification of imported programmes has undergone slight modification as a result of consideration by the Board and the Commonwealth Film Censorship Board of recommendations made by the Board's Advisory Committee on Children's Television Programmes (which were published in Appendix N of the Board's Twenty-first Annual Report, for year ending 30 June 1969). The classifications now in operation are as follows:

Symbol G —Unrestricted for television.

Symbol A —Not recommended for children under 13; may not be televised between 6.00 a.m. and 8.30 a.m. or between 4.00 p.m. and 7.30 p.m. on weekdays or at any time between 6.00 a.m. and 7.30 p.m. on Saturday or Sunday.

Symbol AO—Suitable only for adults; may be televised only after 8.30 p.m. on any day, or between 12.00 noon and 3.00 p.m. on weekdays which are schooldays.

472. The Chief Film Censor reports that during the year ended 30 June 1970 the number of television programmes examined totalled 8,022 (7,356 in the pre-

vious twelve months period) occupying about 5,275 hours (5,050 hours) of screening time of which 188 hours was for programmes on videotape. Eliminations were made from 651 programmes (816). The number of films rejected under the Customs (Cinematograph Film) Regulations was 16 (30) and a further 29 (42) were considered unsuitable for television in terms of the Television Programme Standards. There was one appeal against eliminations and one against classification; both were disallowed. Television programmes were imported in the approximate proportion of 63 per cent from the United States of America, 29 per cent from Britain, and 8 per cent from other countries. This represented a considerable change from 1968-69 when the proportions were 73 per cent from the United States, 19 per cent from Britain and 8 per cent from other countries.

473. During the year a joint meeting of the Board and the Commonwealth Film Censorship Board was held, and the Chief Film Censor attended a meeting of the Board. On each occasion the discussions concerned matters relating to the interpretation and application of the Board's Programme Standards. They had particular reference to the current trends in programmes away from restraint and moderation in the treatment of situations in dramatic production towards the more intense depiction of violence and towards the more frequent use of coarse expressions, sometimes as a means of heightening characterization. In discussions of these matters the principles referred to in the Twentieth Annual Report that there cannot be complete freedom from restraint in television because it penetrates intimately and indiscriminately into the life of the family and that it is undesirable to allow television to give purposeless offence to viewers, must always be prominent. Greater care and discretion is necessary than in most other media, to which access may be more easily controlled by the exercise of parental or personal responsibility.

474. The Board again records its pleasure at the satisfactory relationship which exists between the two Boards, and the efficient day to day liaison which operates at executive level.

FAMILY AND CHILDREN'S PROGRAMMES

475. The Television Programme Standards contain provisions designed to ensure that programmes televised during certain periods of the day, when children may form a substantial part of the audience, will be suitable for viewing by young people without parental supervision. Formerly this period was specified in the Standards as between 4.30 p.m. and 7.30 p.m. on weekdays and at any time before 7.30 p.m. on Saturday and Sunday. The Board has now varied the Standards so that on and after 1 August 1970 the provisions relating to family and children's programmes will apply to all programmes televised between the hours of 6.30 a.m. and 8.30 a.m., and 4.00 p.m. and 7.30 p.m., on weekdays, and between 6.00 a.m. and 7.30 p.m. on Saturday and Sunday.

476. During these periods all programmes televised must be suitable for viewing by persons of all ages. Whilst news programmes may be televised at these times, the Board requires that licensees exercise special care in the selection of the sound and visual content of such news programmes (see paragraph 452). The importance of this requirement is emphasised by improved techniques of news coverage which have enabled stations to report incidents with a vivid realism.

477. Programming for children and young people continued in four broad categories: for the pre-school child; for the primary school range; for teenagers; and for the general family audience. Pre-school and kindergarten children were provided for by Australian programmes such as "Here's Humphrey", "Play School", "Owly's School", "Kindy" and "The Marvellous Munchkin Show". These were widely used throughout the country, and generally were presented during the morning or early afternoon. The range of constructive Australian programmes for older children was much more limited and often consisted of no more than short linking segments between such imported material as cartoon or adventure programmes. A few stations presented Saturday morning entertainment for children much in the style of the programmes formerly televised in the late afternoon. Teenage interest in popular music was catered for by a number of widely distributed programmes which were, in the main, televised at weekends.

478. By far the greatest proportion of programmes in family viewing time consisted of general entertainment from overseas. Although many of these programmes attract the young audience it is clear that in family viewing time there are unused opportunities for developing a wider range of Australian programmes of both an entertaining and informative character to interest children and adolescents. The Australian culture, in its broadest sense, should rank much higher than it does in subject matter presented by television to developing young Australians.

RELIGIOUS PROGRAMMES

479. Section 103 of the *Broadcasting and Television Act* (1942-1969) provides that:— a licensee shall broadcast or televise from his station Divine Worship or other matter of a religious nature during such periods as the Board determines and, if the Board so directs, shall do so without charge.

480. The Board has determined in its Television Programme Standards that each commercial television station should provide time without charge to the extent of at least 1% of the normal weekly hours of service, with a minimum of 30 minutes per week, for the televising of religious matter.

481. Reference was made in paragraph 372 of the Twenty-first Annual Report (1968-69) to the fact that so long as the free time requirement for religious programmes was expressed as a proportion of total transmission time, stations might find it difficult to obtain sufficient material of quality as they increased their hours of service. It was subsequently determined that for an experimental period of twelve months from 1 April 1969, the sole minimum time requirement should be thirty minutes per week, regardless of weekly hours of service.

482. During this period some of the agencies responsible for the production of religious matter explored different forms of presentation. The use of short announcements in place of the longer programmes which they had formerly produced was one experiment. In order to permit the continuation of these production experiments, and at the request of some production agencies, the Board announced in March 1970, an extension for a further twelve months of the experimental period during which the sole minimum time requirement of 30 minutes per week for free religious programmes would apply. Notwithstanding the relaxation in requirements,

thirty of the forty-five commercial television stations provided substantially more than the minimum of 30 minutes per week during the year under review. Approximately 1.2 per cent of the weekly hours of service of all commercial stations, or an average of 50 minutes per week per station, was occupied by such programmes. For metropolitan stations an average was 58 minutes per week and for country stations 45 minutes per week.

483. Most religious programmes presented were produced by the Christian Television Associations or by Catholic Radio and Television, although a few stations produced other religious programmes in addition to those made available by these Church agencies. The times of presentation varied widely from station to station, a factor which has caused some difficulty to production agencies which wished to produce programmes for specific audiences. About half the weekly aggregate of the religious programme time was made available at some time on Sunday, approximately one-fifth being before noon. Programming on weekdays consisted mainly of items of less than five minutes duration in the form of epilogues, items for children or one-minute scatter announcements.

484. The Second Edition of the Board's Television Programme Standards retains basic principles for the allocation of free time for religious matter that were set out in the earlier edition of the Standards but includes reference to some types of programme recommended by the Board's Advisory Committee on Religious Programmes. These are intended as a guide to licensees and programme producers in order to enable them to provide for the various needs and interests of the television audience.

ADVISORY COMMITTEE ON RELIGIOUS PROGRAMMES

485. The members of the Board's Advisory Committee on Religious Programmes during the year under review were:

Rev. B. R. Wyllie	Deputy Chancellor, University of Sydney (Chairman).
Rev. T. F. Keyte	Minister, East Doncaster Baptist Church, Victoria (Deputy Chairman).
Right Rev. Dr. Felix Arnott	Coadjutor Bishop of Melbourne.
Rev. Father B. Fleming, S.J.	Rector of St. Leo's College, University of Melbourne.
Rev. Dr. J. D. McCaughey	Master of Ormond College, University of Melbourne.
Rev. Dr. J. A. Munro	Rector, St. Paul's Church of England, Manuka, A.C.T.
Rev. Canon W. R. Ray	Headmaster, Pulteney Grammar School, Adelaide.

486. The Advisory Committee did not meet as a body during the year. Its major activity was the completion of its third report which was submitted to the Board, in August 1969. It was stated in paragraph 378 of the Board's Twenty-first Annual Report that in the Committee's view one of the major problems was to

arouse the interest of the Church as a whole in using the broadcast media to advantage. In submitting its third report the Advisory Committee pointed out that while the report expressed the grave concern with which its members viewed the future of religious broadcasting and television if those in a position to guide the programme producers did not do so, it also attempted to provide the Board with answers to particular questions and with general recommendations for the nature and contents of religious programmes.

487. The Board regards the report as a valuable document, and has circulated it widely among churchmen and media operators. The report, which was published under the title "Religion and the Broadcast Media", is reproduced in Appendix P.

488. The Advisory Committee, in making recommendations for types of religious programmes, envisaged the presentation of religious matter in a form which would match the surrounding programmes, believing that relatively little opportunity now exists for the transmission of lengthy religious programmes such as church services. The Board has adopted a recommendation of the Committee that the principle of televising advertisements during or adjacent to religious programmes, other than Divine Worship, should be accepted, subject to certain safeguards, and if both the producing agency and the station wish it. This has been provided for in the Programme Standards.

489. With regard to the Committee's suggestion that the Churches should examine the use that is being made of the time and opportunities provided for them by commercial television stations, in accordance with the Board's standards, together with the use that is being made of their own resources, the Board has proposed to Church leaders that it would convene a meeting later in 1970 for this purpose, if the Churches wish it.

ADVERTISING

490. Section 100 of the Act requires licensees to comply with standards determined by the Board in relation to the televising of advertisements. The Board's Advertising Standards include provisions relating to the acceptability of advertising matter, the total amount of advertising matter in programmes, and the duration of advertisements. The time occupied by advertising matter on weekdays must not exceed eleven minutes in each hour between 7.00 p.m. and 10.00 p.m. and thirteen minutes in each hour at other times. There is no restriction on the number of advertisements which may be televised consecutively during intervals between programmes, provided that the total amount of time permitted for advertisements in each hour is not exceeded. Not more than four advertisements may be televised consecutively in any natural break during the course of a programme, and feature films may not be interrupted more than four times in each hour of transmission for the insertion of advertisements or other announcements. Except during feature films, announcements which constitute a public or charitable service or promote forthcoming television programmes are not regarded as advertisements.

491. Compliance with the advertising time standards was generally satisfactory during the year. The table in paragraph 495 indicates that in broad terms the advertising content of programmes televised by Melbourne commercial stations

was within the limits specified in the Standards. This is typical of the situation elsewhere. Whenever breaches of the Standards were observed by the Board's monitoring staff the matter was taken up with the station concerned, and in all cases appropriate action was taken by the station to rectify the matter. In many of the cases of complaint received about the advertising content of programmes, it was found that viewers had regarded promotional material for forthcoming programmes as advertising matter. As explained in the preceding paragraph this type of material is included in calculations of advertising content only when it occurs during feature films.

492. Discussions were held with representatives of the Federation of Australian Commercial Television Stations, the Australian Association of Advertising Agencies, and the Australian Association of National Advertisers with a view to amending a statement of principles and practice which was developed in 1967 by the Board and the Associations for the guidance of advertisers and advertising agencies in the production of television advertisements. The guidelines were published in Appendix I of the Board's Nineteenth Annual Report, for the year ended 30 June 1967. The need for revision of the guidelines became apparent in 1969 when the Board found it necessary to restrict the use of several advertisements to periods outside family viewing time, and to prohibit the televising of others. It was to avoid the need for such drastic action, and the waste of expenditure and effort in the production of unacceptable advertisements, that the guidelines were devised. The review of the guidelines was proceeding at the time this report was prepared.

493. The advertisements mentioned in the preceding paragraph as being withdrawn from use at the direction of the Board included three in which suggestiveness or sex were unduly emphasised. These advertisements were subsequently remade in an acceptable form. Among the advertisements which were disallowed in children's viewing time were two depicting violence and one with undue emphasis on sex. In all cases the Board received convincing evidence in the form of complaints from viewers to support its own view that the advertisements were not suitable for unrestricted use in the public medium of television.

494. Reference was made in the Twenty-first Annual Report to a temporary relaxation of the rules prohibiting the use on Australian television of imported advertisements, to permit the use of advertisements produced in New Zealand. The relaxation, which referred only to advertisements for goods manufactured or processed in New Zealand, was for a trial period of twelve months. At the request of the Association of Accredited Advertising Agencies of New Zealand the Board has agreed to extend the arrangement indefinitely. Before doing so the Board examined the effect on the Australian television industry. The Board has reserved the right to re-open the matter if it becomes apparent at any stage that the arrangement is operating to the detriment of Australian film producers. Very few New Zealand advertisements have yet been used on Australian television, although for some time New Zealand television has carried a considerable number of Australian-produced advertisements.

495. The following table shows the percentage of time occupied by advertisements televised by Melbourne stations during average weeks over the past three

years, and indicates the proportion of time occupied by advertisements at different times of day, and on each day of the week.

Year	Time Periods (Monday to Friday)				Overall
	2.00- 4.30 p.m.	4.30- 7.00 p.m.	7.00- 10.00 p.m.	10.00- 11.30 p.m.	
	Per cent	Per cent	Per cent	Per cent	
1968	10.6	10.7	16.9	14.0	13.2
1969	13.6	14.0	16.4	18.4	15.3
1970	12.9	17.1	16.8	17.7	16.0

Year	Days of the Week							Overall
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	
1968	12.0	12.5	13.5	14.7	14.2	11.4	10.7	12.7
1969	13.4	15.4	14.8	16.1	16.2	14.2	12.8	14.7
1970	11.7	16.3	15.4	16.8	16.2	15.4	12.9	15.0

496. The tables indicate that there has been a slight increase in the advertising content of programmes on all days except Sunday. Advertising during peak viewing time from 7.00 p.m. to 10.00 p.m. has remained constant at a figure a little below the prescribed maximum of 11 minutes in the hour.

TELEVISION OF OBJECTIONABLE MATTER

497. During the year, the Board took action in several cases of programme matter which was not considered to be in accordance with the Television Programme Standards.

498. A considerable number of complaints about programmes was investigated.

499. The Board directed that a documentary programme on child-birth entitled "Don't Cry Baby" should not be televised in its original form. The Board took the view that whilst the film was admirable for its purpose and for showing to selected audiences, the actual birth scenes as filmed were not acceptable for television, as a public and family medium. The programme was televised after deletions had been made in accordance with the Board's direction.

500. The Board directed that unnecessarily violent types of action should be eliminated from certain wrestling and roller-skating programmes.

501. The Twenty-first Annual Report (paragraph 395) refers to discussions between the Board and the producers and station managements concerned regarding excessive violence in the Australian crime-drama series "Homicide" and "Division 4". During the year under review one episode in the Homicide series was considered by the Board unsuitable for televising at 7.30 p.m. The licensee was informed accordingly. The Board directed that four episodes of Division 4 were unsuitable for televising before 8.30 p.m. and stations televising the series were advised.

502. In the year under review, matters of violence also came under notice in episodes of the series "The Long Arm", which commenced during that period. It is recognized that questions of taste may arise in such programmes because of the nature

of the themes and characters. More restrictive standards were applied to "The Long Arm" and "Homicide" than to "Division 4" as they were designed for presentation at 7.30 p.m., whereas "Division 4" was designed for an essentially adult audience and was generally scheduled no earlier than 8.30 p.m. Scenes of violence in the first episode of "The Long Arm", were the subject of discussions with the producer of the series and representatives of the originating station, ATV Melbourne. The Board was concerned to ensure that the requirements of the Programme Standards as they affected the series were fully understood. A later episode in the series was withdrawn after its initial presentation and before distribution to other stations, following the Board's consideration of incidents of violence in it.

503. Reference has been made in paragraph 493 to action by the Board restricting the televising of certain advertisements and prohibiting the use of others.

PROGRAMMES ENCOURAGING SUPERSTITIOUS BELIEFS

504. Programmes concerning astrology and fortune-telling came under notice during the year. Two such programmes, which included personal advice to individual viewers, were terminated following advice from the Board that the material contravened the provisions of the Standards relating to programmes encouraging superstitious or pseudo-scientific beliefs. The Board subsequently issued guidelines for the production of such material. The guidelines were not intended to limit the serious treatment of the subject, but indicated that—

- (i) No attempt should be made to foster belief in any branch of occult science. It should be made clear that such programmes are intended for entertainment purposes only and should not be represented as factual expositions to be taken seriously by the audience.
- (ii) Such programmes should not contain specific advice to individuals nor invite enquiries from individuals about personal matters, whether they are to be answered in subsequent programmes or in private consultation.
- (iii) No attempt may be made in such programmes to build up a clientele for the practitioner appearing in the programme or for any other person or organisation connected with the practice.
- (iv) Historical aspects of the development of astrology and the occult sciences may be dealt with, and technical terms such as the signs of the Zodiac may be explained, provided that the information is not presented in a manner designed to encourage belief in the subjects.

PROGRAMME RESEARCH

505. For some years the Board has been accumulating information derived from various types of television programme research and from sociological research relevant to television programmes. Mention was made in paragraphs 370 to 376 inclusive of the Board's Twentieth Annual Report, for year ended 30 June 1968, of some preliminary findings from television attitude surveys in Sydney and Melbourne. These surveys were repeated, with minor changes, in 1969 and a report on the findings has been published, with statistical appendices, under the title "Atti-

tudes to Television—1968-69". The areas surveyed in 1969-70 were extended to include Adelaide, and during 1970-71 it is proposed to include Brisbane.

506. Following the 1968-69 pre-television study of Geraldton, concerning the habits, interests, and leisure-time activities of the population prior to the introduction of television services, a similar study was made in Darwin early in 1970. In each case a second study will be made some time after television services have become established.

507. The University of Melbourne has reported on the results of a study, partly financed by the Board to the extent of \$3500 in which a group of 10-year-olds studied first in 1957, were restudied in 1967. Included in the follow-up study were questions related to their changes of attitude and the effect on their attitudes of the media including television, and the part played by broadcasting and television in influencing the vote of the sample in the 1969 Federal Elections.

508. Some preliminary work was undertaken, in association with Monash University and the Victoria Health Department, on a study of the influence of television on children attending pre-school centres. It is planned to continue this study during 1970-71.

509. The Board has purchased selected survey reports from the two commercial audience measurement research organizations—the Anderson Analysis Pty. Ltd. and McNair Surveys Pty. Ltd. These reports assist the Board's understanding of changes in the programme schedules of commercial stations, many of which reflect the influence of audience measurement rating figures. Reference is made in "Attitudes to Television" to the strength of this influence and to the desirability of having other measures as well as the count of heads as a guide to programme planning.

HOURS OF SERVICE

510. Section 16 (3.) (c) of the *Broadcasting and Television Act* (1942-1969) provides that the Board shall have power to determine the hours during which programmes may be televised. Section 97 of the Act provides that a licensee shall not televise programmes except during such hours as the Board determines.

511. The forty-five commercial television stations in service at 30 June 1970, operated for an aggregate of 3200 hours per week. This was 35 hours less than at 30 June 1969. Stations TCN Sydney and GTV Melbourne (both 124¾ hours weekly) operated for longer periods than any other station. The average weekly hours of service for metropolitan stations were 107 hours—three hours more than at 30 June 1969. The weekly average for country stations dropped from 56 to 53 hours; the decrease was mainly due to the termination by a number of stations of breakfast programmes which they had formerly taken on relay from metropolitan stations.

512. The aggregate weekly hours of the forty-one national television stations rose from 3280 at 30 June 1969 to 3370 hours at 30 June 1970.

513. The weekly hours of service of all commercial and national television stations in operation at 30 June 1970, are shown in Appendices D and E. The

following table shows the average weekly hours of operation of commercial television stations at intervals since 1960:

*Hours of Operation—Commercial Television Stations
Average Hours per week at 30th June*

Location	1960	1967	1969	1970
Sydney . . .	86 (2 stations)	93 (3 stations)	119 (3 stations)	122 (3 stations)
Melbourne . . .	66 (2 stations)	91 (3 stations)	113 (3 stations)	114 (3 stations)
Brisbane . . .	56 (2 stations)	81 (3 stations)	92 (3 stations)	97 (3 stations)
Adelaide . . .	56 (2 stations)	99 (3 stations)	110 (3 stations)	112 (3 stations)
Perth . . .	44 (1 station)	88 (2 stations)	92 (2 stations)	96 (2 stations)
Hobart . . .	30 (1 station)	65 (1 station)	77 (1 station)	79 (1 station)
All State Capitals	60 (10 stations)	89 (15 stations)	104 (15 stations)	107 (15 stations)
All Other Areas .		54 (26 stations)	56 (30 stations)	53 (30 stations)
All Stations . . .	60 (10 stations)	67 (41 stations)	72 (45 stations)	71 (45 stations)

ACKNOWLEDGMENTS

514. The Board wishes to acknowledge the co-operation extended to it throughout the year by the various bodies with which it is associated in matters relating to the broadcasting and television services of the Commonwealth. The Postmaster-General's Department has provided considerable assistance, as have also the Australian Broadcasting Commission, the Federation of Australian Commercial Broadcasters, the Federation of Australian Commercial Television Stations, the Overseas Telecommunications Commission, the Commonwealth Film Censorship Board and the Department of Education and Science. The Board greatly appreciates also the work done on its behalf in London by officers of the High Commissioner's Office, Mr. D. A. Brooke, the Australian Post Office Representative, and in the United States of America by Mr. R. Banks, Civil Air Attache who, with the approval of the Department of Civil Aviation, acts as the Board's representative in Washington. The Board is grateful also to the Royal Melbourne Institute of Technology, the Central Technical College, Brisbane, the South Australian Institute of Technology, and the Perth Technical College, for assistance in connection with the examination of candidates for the Television Operator's Certificate of Proficiency.

515. The Board would also like to thank all those members of the television industry who have taken part during the past year in committee meetings, theoretical and practical studies, leading to the determination of revised technical standards for colour and monochrome television.

MYLES F. E. WRIGHT, Chairman

J. M. DONOVAN, Vice-Chairman

D. McDONALD, Member

W. C. RADFORD, Part-time Member

G. C. HANNAN, Part-time Member

J. A. McNAMARA,

Secretary,

4 August 1970.

APPENDIX A

COMMERCIAL BROADCASTING STATIONS IN OPERATION ON 30 JUNE 1970 MEDIUM FREQUENCY SERVICES

Call Sign	Location of Station	Frequency (kHz)	Authorised Power (watts)	Licensee and Registered Office	Hours of Service per Week (to nearest Quarter Hour)
AUSTRALIAN CAPITAL TERRITORY					
2CA	Canberra . .	1,050	2,000	Canberra Broadcasters Pty Ltd, 64 Northbourne Avenue, Canberra City, A.C.T. 2601	168
NEW SOUTH WALES <i>Metropolitan</i>					
2CH	Sydney . .	1,170	5,000	Council of Churches in N.S.W. Broadcasting Co Pty Ltd, St. Peter's Rectory, 188 Forbes Street, Darlinghurst, N.S.W. 2010	129½
<i>(Note: Amalgamated Wireless (A'asia) Ltd, 47 York Street, Sydney, N.S.W. 2000, operates station 2CH under an agreement with the licensee, to which the Minister has given his consent, under section 88 of the Broadcasting and Television Act 1942-1969.)</i>					
2GB	Sydney . .	870	5,000	Broadcasting Station 2GB Pty Ltd, 136-138 Phillip Street, Sydney, N.S.W. 2000	168
2KY	Sydney . .	1,020	5,000	The Trustees, R. H. Erskine and H. B. French, and the Secretary, R. B. Marsh of the Labor Council of New South Wales, Trades Hall, Goulburn Street, Sydney, N.S.W. 2000	168
2SM	Sydney . .	1,270	5,000	Broadcasting Station 2SM Pty Ltd, City Mutual Building, 60 Hunter Street, Sydney, N.S.W. 2000	168
2UE	Sydney . .	950	5,000	Radio 2UE Sydney Pty Ltd, 237 Miller Street, North Sydney, N.S.W. 2060	168
2UW	Sydney . .	1,110	5,000*	Commonwealth Broadcasting Corporation Pty Ltd, 365 Kent Street, Sydney, N.S.W. 2000	168
<i>Country</i>					
2AD	Armidale . .	1,130	2,000	New England Broadcasters Pty Ltd, Broadcast House, 123 Rusden Street, Armidale, N.S.W. 2350	120½
2AY	Albury . .	1,490	2,000	Amalgamated Wireless (A'asia) Ltd, 47 York Street, Sydney, N.S.W. 2000	124½
2BE	Bega . .	1,480	D 2,000 N 1,000	Radio 2BE Pty Ltd, Auckland Street, Bega, N.S.W. 2550	111½
2BH	Broken Hill	660	200	Radio Silver City Pty Ltd, Cnr Blende and Sulphide Streets, Broken Hill, N.S.W. 2880	116
2BS	Bathurst . .	1,500	2,000	Bathurst Broadcasters Pty Ltd, 60 Hunter Street, Sydney, N.S.W. 2000	128½
2DU	Dubbo . .	1,250	2,000	Western Broadcasters Pty Ltd, 43 Macquarie Street, Dubbo, N.S.W. 2830	129
2GF	Grafton . .	1,210	2,000	Amalgamated Wireless (A'asia) Ltd, 47 York Street, Sydney, N.S.W. 2000	125
2GN	Goulburn . .	1,380	2,000	Amalgamated Wireless (A'asia) Ltd, 47 York Street, Sydney, N.S.W. 2000	118
2GZ	Orange . .	990	2,000	Country Broadcasting Services Ltd, 31 Sale Street, Orange, N.S.W. 2800	125
2HD	Newcastle . .	1,140	2,000	Airsales Broadcasting Co. Pty Ltd, Maitland Road, Sandgate, N.S.W. 2304	168
2KA	Katoomba . .	780	2,000	Transcontinental Broadcasting Corporation Ltd, 4th Floor, Stanway House, 77 King Street, Sydney, N.S.W. 2000	121
2KM	Kempsey . .	530	2,000	Radio Kempsey Ltd, 4th Floor, Stanway House, 77 King Street, Sydney, N.S.W. 2000	125¼

APPENDIX A—continued

Call Sign	Location of Station	Frequency (kHz)	Authorised Power (watts)	Licensee and Registered Office	Hours of Service per Week (to nearest Quarter Hour)
NEW SOUTH WALES—continued					
2KO	Newcastle ..	1,410	2,000	Radio 2KO Newcastle Pty Ltd, C.M.L. Building, 110 Hunter Street, Newcastle, N.S.W. 2300	168
2LF	Young ..	1,340	2,000	Young Broadcasters Pty Ltd, 136-138 Phillip Street, Sydney, N.S.W. 2000	122½
2LM	Lismore ..	900	2,000	Richmond River Broadcasters Pty Ltd, 9 Molesworth Street, Lismore, N.S.W. 2480	124
2LT	Lithgow ..	1,370	500	Lithgow Broadcasters Pty Ltd, 4th Floor, Stanway House, 77 King Street, Sydney, N.S.W. 2000	117
2MG	Mudgee ..	1,450	2,000	Mudgee Broadcasting Co. Pty Ltd, 60 Hunter Street, Sydney, N.S.W. 2000	114
2MO	Gunnedah ..	1,080	D 2,000 N 1,000	2MO Gunnedah Pty Ltd, 3 Rodney Street, Gunnedah, N.S.W. 2380	122
2MW	Murwillumbah	1,440	2,000	Tweed Radio and Broadcasting Co. Pty Ltd, Murwillumbah Street, Murwillumbah, N.S.W. 2484	121
2NM	Muswellbrook	1,460	D 2,000 N 1,000	Hunter Broadcasters Pty Ltd, 56 Hunter Street, Newcastle, N.S.W. 2300	122
2NX	Bolwarra ..	1,360	2,000	Hunter Broadcasters Pty Ltd, 56 Hunter Street, Newcastle, N.S.W. 2300	168
2NZ	Inverell ..	1,190	2,000	Northern Broadcasters Pty Ltd, 31 Sale Street, Orange, N.S.W. 2800	122½
2PK	Parkes ..	1,400	2,000	Parkes Broadcasting Co. Pty Ltd, 307 Clarinda Street, Parkes, N.S.W. 2870	118
2QN	Deniliquin ..	1,520	2,000	Haig-Muir Broadcasting Pty Ltd, 7th Floor, Stanhill Building, 34 Queen's Road, Melbourne, Vic. 3004	118½
2RE	Taree ..	1,560	2,000	Manning Valley Broadcasting Pty Ltd, Cowper Street, Chatham, Taree, N.S.W. 2430	122½
2RG	Griffith ..	1,070	D 2,000 N 1,000	2RG Broadcasters Pty Ltd, 53-55 Erskine Street, Sydney, N.S.W. 2000	118
2TM	Tamworth ..	1,290	2,000	Tamworth Radio Development Co. Pty Ltd, Radio Centre, Calala, Tamworth, N.S.W. 2340	140
2VM	Moree ..	1,530	D 2,000 N 500	Moree Broadcasting and Development Co. Ltd, 93 Balo Street, Moree, N.S.W. 2400	134
2WG	Wagga ..	1,150	2,000	Riverina Broadcasters (Holdings) Pty Ltd, C/o Cooper Bros & Company, 35 Ainslie Avenue, Canberra, A.C.T. 2600	127
(Note: Riverina Broadcasters, 16 Fitzmaurice Street, Wagga Wagga, N.S.W. 2650, operates station 2WG under an agreement with the licensee, to which the Minister has given his consent under section 88 of the Broadcasting and Television Act 1942-1969.)					
2WL	Wollongong	1,430	2,000	Wollongong Broadcasting Pty Ltd, 136-138 Phillip Street, Sydney, N.S.W. 2000	133
2XL	Cooma ..	920	D 2,000 N 1,000	Cooma Broadcasters Pty Ltd, 132 Sharp Street, Cooma, N.S.W. 2630	126½

VICTORIA
Metropolitan

3AK	Melbourne ..	1,500	5,000	General Television Corporation Pty Ltd, Television City, 22-46 Bendigo Street, Richmond, Vic. 3121	168
3AW	Melbourne ..	1,280	5,000	3AW Broadcasting Co. Pty Ltd, 374-384 La Trobe Street, Melbourne, Vic. 3000	168
3DB	Melbourne ..	1,030	5,000	The Herald and Weekly Times Ltd, 44-74 Flinders Street, Melbourne, Vic. 3000	168
3KZ	Melbourne ..	1,180	5,000	The Industrial Printing and Publicity Co. Ltd, 24-30 Victoria Street, Carlton, Vic. 3053	168

(Note: 3KZ Broadcasting Co. Pty Ltd, 64 Elizabeth Street, Melbourne, Vic. 3000, operates station 3KZ under an agreement with the licensee, to which the Minister has given his consent, under section 88 of the Broadcasting and Television Act 1942-1969.)

APPENDIX A—continued

Call Sign	Location of Station	Frequency (kHz)	Authorised Power (watts)	Licensee and Registered Office	Hours of Service per Week (to nearest Quarter Hour)
VICTORIA—continued					
3UZ	Melbourne ..	930	5,000	Nilsen's Broadcasting Service Pty Ltd, 45-47 Bourke Street, Melbourne, Vic. 3000	168
3XY	Melbourne ..	1,420	5,000	Station 3XY Pty Ltd, C/o Messrs Tovell & Lucas, Charter House, 4 Bank Place, Melbourne, Vic. 3000	168
(Note: Efftee Broadcasters Pty Ltd, 222 Faraday Street, Carlton, Vic. 3053, operates station 3XY under an agreement with the licensee, to which the Minister has given his consent, under section 88 of the Broadcasting and Television Act 1942-1969.)					
Country					
3BA	Ballarat ..	1,320	2,000	Ballarat Broadcasters Pty Ltd, 56 Lydiard Street North, Ballarat, Vic. 3350	168
3BO	Bendigo ..	960	2,000	Amalgamated Wireless (A'asia) Ltd, 47 York Street, Sydney, N.S.W. 2000	127½
3CS	Colac ..	1,130	2,000	Associated Broadcasting Services Ltd, 290 La Trobe Street, Melbourne, Vic. 3000	127½
3CV	Maryborough	1,440	2,000	V.B.N. Limited, 150 Albert Road, South Melbourne, Vic. 3205	131
3GL	Geelong ..	1,350	2,000	Geelong Broadcasters Pty Ltd, 191-197 Ryrie Street, Geelong, Vic. 3220	124
3HA	Hamilton ..	1,000	2,000	V.B.N. Limited, 150 Albert Road, South Melbourne, Vic. 3205	132
3LK	Lubeck ..	1,090	2,000	The Herald and Weekly Times Ltd, 44-74 Flinders Street, Melbourne, Vic. 3000	135
3MA	Mildura ..	1,470	2,000	Sunraysia Broadcasters Pty Ltd, 22 Deakin Avenue, Mildura, Vic. 3500	115
3NE	Wangaratta ..	1,600	D 2,000 N 1,000	Wangaratta Broadcasting Co. Pty Ltd, Templeton Street, Wangaratta, Vic. 3677	125
3SH	Swan Hill ..	1,330	2,000	V.B.N. Limited, 150 Albert Road, South Melbourne, Vic. 3205	131½
3SR	Shepparton	1,260	2,000	Associated Broadcasting Services Ltd, 290 La Trobe Street, Melbourne, Vic. 3000	133
3TR	Sale ..	1,240	2,000	V.B.N. Limited, 150 Albert Road, South Melbourne, Vic. 3205	168
3UL	Warragul ..	530	2,000	Associated Broadcasting Services Ltd, 290 La Trobe Street, Melbourne, Vic. 3000	133
3YB	Warrnambool	1,210	2,000	Associated Broadcasting Services Ltd, 290 La Trobe Street, Melbourne, Vic. 3000	127½

QUEENSLAND
Metropolitan

4BC	Brisbane ..	1,120	2,000	Commonwealth Broadcasting Corporation (Qld) Ltd, Winter Garden Building, 187 Queen Street, Brisbane, Qld 4000	168
4BH	Brisbane ..	1,390	2,000	Broadcasters (Aust.) Pty Ltd, Cnr Albert and Charlotte Streets, Brisbane, Qld 4000	168
4BK	Brisbane ..	1,300	2,000	Queensland Newspapers Pty Ltd, Campbell Street, Bowen Hills, Brisbane, Qld 4006	168
4KQ	Brisbane ..	690	2,000	Labor Broadcasting Station Pty Ltd, Cnr Elizabeth and Edward Streets, Brisbane, Qld 4000	168

Country

4AK	Oakey ..	1,220	2,000	Queensland Newspapers Pty Ltd, Campbell Street, Bowen Hills, Brisbane, Qld 4006	168
4AM	Atherton ..	560	2,000	Far Northern Radio (Tablelands) Pty Ltd, C/o Auer and Harvey, 160A Byrnes Street, Mareeba, Qld 4880	122
4AY	Ayr ..	960	2,000	Ayr Broadcasters Pty Ltd, 222 Flinders Street, Townsville, Qld 4810	125½

APPENDIX A — continued

Call Sign	Location of Station	Frequency (kHz)	Authorised Power (watts)	Licensee and Registered Office	Hours of Service per Week (to nearest Quarter Hour)
<i>QUEENSLAND—continued</i>					
4BU	Bundaberg ..	1,330	2,000	Bundaberg Broadcasters Pty Ltd, 55 Woongarra Street, Bundaberg, Qld 4670	116 ¼
4CA	Cairns ..	1,010	2,000	Amalgamated Wireless (A'asia) Ltd, 47 York Street, Sydney, N.S.W. 2000	122 ½
4GG	Gold Coast ..	1,200	2,000	Gold Coast Radio Broadcasting Co. Pty Ltd, Bundall Road, Surfers Paradise, Qld 4217	143 ½
4GR	Toowoomba	860	2,000	Gold Radio Service Pty Ltd, Winter Garden Building, 187 Queen Street, Brisbane, Qld 4000	133
4GY	Gympie ..	1,350	2,000	Gympie Broadcasting Co. Ltd, Smithfield Chambers, 75 Mary Street, Gympie, Qld 4570	117 ¾
4IP	Ipswich ..	1,010	2,000	South Queensland Broadcasting Corporation Pty Ltd, 43 Limestone Street, Ipswich, Qld 4305	168
4KZ	Innisfail-Tully	530	2,000	Coastal Broadcasters Pty Ltd, 40 Rankin Street, Innisfail, Qld 4860	121 ¾
4LG	Longreach ..	1,100	2,000	Central Queensland Broadcasting Corporation Pty Ltd, 118A Eagle Street, Longreach, Qld 4730	113 ¾
4LM	Mount Isa ..	1,370	2,000	North Queensland Broadcasting Corporation Pty Ltd, 17 West Street, Mount Isa, Qld 4825	133 ½
4MB	Maryborough	1,160	2,000	Maryborough Broadcasting Co. Pty Ltd, Winter Garden Building, 187 Queen Street, Brisbane, Qld 4000	121 ¼
4MK	Mackay ..	1,380	2,000	Mackay Broadcasting Service Pty Ltd, 38 Gordon Street, Mackay, Qld 4740	132
4NA	Nambour ..	1,320	2,000	Maroochy Broadcasting Co. Ltd, 33 Currie Street, Nambour, Qld 4560	114
4RO	Rockhampton	1,000	2,000	Rockhampton Broadcasting Co. Pty Ltd, Winter Garden Building, 187 Queen Street, Brisbane, Qld 4000	121 ½
4SB	Kingaroy ..	1,060	2,000	South Burnett Broadcasting Co. Ltd, 28 Alford Street, Kingaroy, Qld 4610	114 ½
4TO	Townsville	780	2,000	Amalgamated Wireless (A'asia) Ltd, 47 York Street, Sydney, N.S.W. 2000	125 ½
4VL	Charleville ..	920	D 2,000 N 1,000	Charleville Broadcasting Co. Ltd, Radio House, 14 Wills Street, Charleville, Qld 4470	114 ¼
4WK	Warwick ..	880	D 2,000 N 1,000	Amalgamated Wireless (A'asia) Ltd, 47 York Street, Sydney, N.S.W. 2000	114 ¾
4ZR	Roma ..	1,480	D 2,000 N 1,000	Maranoa Broadcasting Co. Ltd, 35 McDowall Street, Roma, Qld 4455	113 ½
<i>SOUTH AUSTRALIA</i>					
<i>Metropolitan</i>					
5AD	Adelaide ..	1,310	2,000	Advertiser Newspapers Ltd, 121 King William Street, Adelaide, S.A. 5000	168
5DN	Adelaide ..	970	2,000	Hume Broadcasters Pty Ltd, 201 Tynte Street, North Adelaide, S.A. 5006	168
5KA	Adelaide ..	1,200	2,000	5KA Broadcasters Pty Ltd, 43 Franklin Street, Adelaide, S.A. 5000	168
<i>Country</i>					
5AU	Port Augusta	1,450	2,000	5AU Broadcasters Pty Ltd, 43 Franklin Street, Adelaide, S.A. 5000	123 ½
5MU	Murray Bridge	1,460	D 2,000 N 1,000	Murray Bridge Broadcasting Co. Ltd, 121 King William Street, Adelaide, S.A. 5000	122 ¼
5PI	Crystal Brook	1,040	2,000	Midlands Broadcasting Services Ltd, 121 King William Street, Adelaide, S.A. 5000	122 ¼
5RM	Renmark ..	800	2,000	River Murray Broadcasters Pty Ltd, 43 Franklin Street, Adelaide, S.A. 5000	121
5SE	Mount Gambier	1,370	500	South Eastern Broadcasting Co. Ltd, 121 King William Street, Adelaide, S.A. 5000	127 ½

APPENDIX A — continued

Call Sign	Location of Station	Frequency (kHz)	Authorised Power (watts)	Licensee and Registered Office	Hours of Service per Week (to nearest Quarter Hour)
<i>WESTERN AUSTRALIA</i>					
<i>Metropolitan</i>					
6IX	Perth ..	1,080	2,000	TVW Ltd, Osborne Park Road, Tuart Hill, W.A. 6060	168
6KY	Perth ..	1,210	2,000	SunTimes Broadcasters Ltd, 17-19 James Street, Perth, W.A. 6000	168
6PM	Perth ..	1,000	2,000	Consolidated Broadcasting System (W.A.) Pty Ltd, 115 St George's Terrace, Perth, W.A. 6000	168
6PR	Perth ..	880	2,000	Nicholsons Broadcasting Services Pty Ltd, 340 Hay Street, Perth, W.A. 6000	168
<i>Country</i>					
6AM	Northam ..	860	2,000	Consolidated Broadcasting System (W.A.) Pty Ltd, 115 St George's Terrace, Perth, W.A. 6000	120
6BY	Bridgetown ..	900	2,000	TVW Ltd, Osborne Park Road, Tuart Hill, W.A. 6060	113
6CI	Collie ..	1,130	2,000	Nicholsons Broadcasting Services Pty Ltd, 340 Hay Street, Perth, W.A. 6000	124 ¾
6GE	Geraldton ..	1,010	2,000	Great Northern Broadcasters Ltd, 145 Marine Terrace, Geraldton, W.A. 6530	121
6KG	Kalgoorlie ..	980	2,000	Consolidated Broadcasting System (W.A.) Pty Ltd, 115 St George's Terrace, Perth, W.A. 6000	113 ½
6MD	Merredin ..	1,100	2,000	TVW Ltd, Osborne Park Road, Tuart Hill, W.A. 6060	115 ½
6NA	Narrogin ..	920	2,000	SunTimes Broadcasters Ltd, 17-19 James Street, Perth, W.A. 6000	119 ¾
6TZ	Bunbury ..	960	2,000	Nicholsons Broadcasting Services Pty Ltd, 340 Hay Street, Perth, W.A. 6000	124 ¾
6VA	Albany ..	780	2,000	Albany Broadcasters Ltd, 171 York Street, Albany, W.A. 6330	123
6WB	Katanning ..	1,070	2,000	TVW Ltd, Osborne Park Road, Tuart Hill, W.A. 6060	116
<i>TASMANIA</i>					
<i>Metropolitan</i>					
7HO	Hobart ..	860	2,000	Commercial Broadcasters Pty Ltd, 152 Macquarie Street, Hobart, Tas. 7000	140
7HT	Hobart ..	1,080	2,000	Metropolitan Broadcasters Pty Ltd, 141 Elizabeth Street, Hobart, Tas. 7000	131 ¼
<i>Country</i>					
7AD	Devonport ..	900	D 2,000 N 1,000	Northern Tasmania Broadcasters Pty Ltd, 54 Cameron Street, Launceston, Tas. 7250	116 ½
7BU	Burnie ..	560	D 2,000 N 1,000	Burnie Broadcasting Service Pty Ltd, 54 Cameron Street, Launceston, Tas. 7250	113 ½
7EX	Launceston ..	1,010	2,000	7EX Pty Ltd, 71 Paterson Street, Launceston, Tas. 7250	163
7LA	Launceston ..	1,100	2,000	Findlay and Wills Broadcasters Pty Ltd, 55 Paterson Street, Launceston, Tas. 7250	126 ½
7QT	Queenstown	720	500	West Coast Broadcasters Pty Ltd, 55 Paterson Street, Launceston, Tas. 7250	98 ½
7SD	Scottsdale ..	540	2,000	North East Tasmanian Radio Broadcasters Pty Ltd, 54 Cameron Street, Launceston, Tas. 7250	100 ½
<i>NORTHERN TERRITORY</i>					
8DN	Darwin ..	1,240	2,000	Darwin Broadcasters Pty Ltd, 16 Smith Street West, Darwin, N.T. 5790	125 ½

D — Daytime N — Night-time

* Provided that power may be reduced to 2,500 watts during the following periods: Monday to Saturday, midnight to 5.30 a.m. Sunday, midnight to 7 a.m.

APPENDIX B
NATIONAL BROADCASTING STATIONS IN OPERATION ON 30 JUNE 1970
MEDIUM FREQUENCY SERVICES

Call Sign	Location of Station	Frequency (kHz)	Authorised Power (watts)	Hours of Service per Week (to nearest Quarter Hour)
AUSTRALIAN CAPITAL TERRITORY				
2CN ..	Canberra	1,540	2,000	126
2CY ..	Southern Tablelands Service (Canberra)	850	10,000	125 ³ / ₄
NEW SOUTH WALES				
<i>Metropolitan</i>				
2BL ..	Sydney	740	50,000	126
2FC ..	Sydney	610	50,000	125 ³ / ₄
<i>Regional</i>				
2AN ..	Armidale	760	50	126
2BA ..	Far South Coast Service (Bega)	810	10,000	126
2CO ..	Riverina and North-East Victoria Service (Albury)	670	10,000	126
2CP ..	Cooma	1,570	50	126
2CR ..	Western Districts Service (Orange)	550	50,000	126
2GL ..	New England Service (Glen Innes)	820	10,000	126
2KP ..	Mid-North Coast Service (Kempsey)	680	10,000	126
2LG ..	Lithgow	1,570	200	126
2ML ..	Murwillumbah	560	200	126
2NA ..	Newcastle	1,510	10,000	125 ³ / ₄
2NB ..	Broken Hill	760	1,000	126 ¹ / ₄
2NC ..	Newcastle	1,230	10,000	126
2NR ..	Northern Rivers Service (Grafton)	700	50,000	126
2NU ..	Northern Tablelands Service (Tamworth)	650	10,000	126
2TR ..	Taree	720	200	126
2UH ..	Muswellbrook	1,040	1,000	126
2WN ..	Wollongong	1,580	2,000	126
VICTORIA				
<i>Metropolitan</i>				
3AR ..	Melbourne	620	50,000	125 ³ / ₄
3LO ..	Melbourne	770	50,000	126
<i>Regional</i>				
3GI ..	Gippsland Service (Sale)	830	10,000	126
3WL ..	Warrnambool	1,570	200	126
3WV ..	Western Victoria Service (Horsham)	580	50,000	126
QUEENSLAND				
<i>Metropolitan</i>				
4QG ..	Brisbane	790	10,000	125 ³ / ₄
4QR ..	Brisbane	590	50,000	126
<i>Regional</i>				
4AT ..	Far North Queensland Service (Atherton)	600	D 4,000 N 2,000	126
4GM ..	Gympie District Service (Gympie)	1,570	200	126
4MI ..	Mount Isa	1,080	200	126
4QA ..	Pioneer District Service (Mackay)	720	2,000	126
4QB ..	Wide Bay District Service (Maryborough)	910	10,000	126
4QD ..	Central Western Queensland Service (Emerald)	1,550	50,000	126
4QL ..	Western Queensland Service (Longreach)	540	10,000	126
4QN ..	Northern Queensland Service (Townsville)	630	50,000	126
4QO ..	Upper Burnett Service (Eidsvold)	910	10,000	126
4QS ..	Darling Downs Service (Toowoomba)	750	10,000	126
4QW ..	South West Queensland Service (St George)	710	10,000	126
4QY ..	Far North Queensland Service (Cairns)	940	2,000	126
4RK ..	Central Queensland Service (Rockhampton)	840	10,000	126
4SO ..	Southport	1,590	200	126

APPENDIX B—continued

Call Sign	Location of Station	Frequency (kHz)	Authorised Power (watts)	Hours of Service per Week (to nearest Quarter Hour)
SOUTH AUSTRALIA				
<i>Metropolitan</i>				
5AN ..	Adelaide	890	50,000	126 ¹ / ₄
5CL ..	Adelaide	730	50,000	126
<i>Regional</i>				
5CK ..	Lower North Service (Port Pirie)	640	10,000	126 ¹ / ₄
5LN ..	Port Lincoln	1,530	200	126 ¹ / ₄
5MG ..	South-East Service (Mount Gambier)	1,580	200	126 ¹ / ₄
5MV ..	South Australian Upper Murray Service (Renmark)	1,590	2,000	126 ¹ / ₄
5PA ..	South-East Service (Naracoorte)	1,160	10,000	126 ¹ / ₄
5WM ..	Woomera	1,580	50	126 ¹ / ₄
WESTERN AUSTRALIA				
<i>Metropolitan</i>				
6WF ..	Perth	720	50,000	126
6WN ..	Perth	810	10,000	125 ³ / ₄
<i>Regional</i>				
6AL ..	Western Australian Regional Service (Albany)	650	400	126
6BE ..	Broome	670	50	126
6BS ..	Busselton	760	4,000	126
6CA ..	Carnarvon	850	200	126
6DB ..	Derby	870	2,000	126
6DL ..	Dalwallinu	530	10,000	126
6ED ..	Esperance	840	1,000	126
6GF ..	Goldfields Regional Service (Kalgoorlie)	660	2,000	126
6GN ..	Geraldton Regional Service (Geraldton)	830	2,000	126
6NM ..	Western Australian Regional Service (Northam)	600	200	126
6PH ..	Port Hedland	600	2,000	126
6WA ..	Western Australian Regional Service (Wagin)	560	50,000	126
TASMANIA				
<i>Metropolitan</i>				
7ZL ..	Hobart	600	10,000	125 ³ / ₄
7ZR ..	Hobart	940	10,000	126
<i>Regional</i>				
7NT ..	North Tasmanian Service (Launceston)	710	10,000	126
7QN ..	West Coast Service (Queenstown)	630	400	126
NORTHERN TERRITORY				
8AL ..	Alice Springs	1,530	200	126
8DR ..	Darwin	650	2,000	126
8KN ..	Katherine	670	50	126
8TC ..	Tennant Creek	680	50	126
TERRITORY OF PAPUA AND NEW GUINEA				
9PA ..	Port Moresby	1,250	2,000	125 ³ / ₄
9RB ..	Rabaul	810	2,000	120 ¹ / ₄

APPENDIX B—*continued*
HIGH FREQUENCY SERVICES

Call Sign	Location of Station	Authorised Power (watts)	Hours of Service per Week (to nearest Quarter Hour)
VLG ..	Melbourne, Victoria	10,000	14
VLH ..	Melbourne, Victoria	10,000	123 ³ / ₄
VLI ..	Sydney, New South Wales	2,000	126
VLK ..	Port Moresby, Papua	10,000	125 ³ / ₄
VLM ..	Brisbane, Queensland	10,000	126
VLQ ..	Brisbane, Queensland	10,000	126
VLR ..	Melbourne, Victoria	10,000	124
VLT ..	Port Moresby, Papua	10,000	125 ³ / ₄
VLW ..	Perth, Western Australia (Two services on two frequencies)	(a) 10,000 (b) 50,000	126

Frequencies of High Frequency Services—The frequencies on which these stations transmit are varied as required, to obtain optimum results.

APPENDIX C
PAPUA-NEW GUINEA—ADMINISTRATION BROADCASTING STATIONS IN OPERATION
ON 30 JUNE 1970

Call Sign	Location	Frequency (kHz)	Power (Watts)
9CG ..	Goroka	2,410	250
9CH ..	Mount Hagen	2,450	250
8AS ..	Samarai	3,235	250
8BK ..	Kerema	3,245	250
8BD ..	Daru	3,305	10K
9BA ..	Kieta	3,322.5	2K
9CD ..	Wewak	3,335	10K
9BR ..	Rabaul	3,385	10K

Appendix

APPENDIX D

COMMERCIAL TELEVISION STATIONS IN OPERATION ON 30 JUNE 1970

Call Sign and Channel	Area	Location of Transmitter	Authorised Frequencies (mHz)	Authorised Power (kW, e.r.p.) and Polarisation	Licensee and Registered Office	Hours of Service per Week (to nearest Quarter Hour)
AUSTRALIAN CAPITAL TERRITORY						
CTC-7	Canberra	Black Mountain	181-188 V 182.258 S 187.758	Vision 100 Sound 20 (Vertical)	Canberra Television Ltd, Canberra Television Centre, Black Mountain, Canberra, A.C.T. 2414	74
NEW SOUTH WALES						
<i>Metropolitan</i>						
ATN-7	Sydney	Artarmon	181-188 V 182.25 S 187.75	Vision 100 Sound 20 (Horizontal)	Amalgamated Television Services Pty Ltd, Television Centre, Epping, N.S.W. 2121	118¾
TCN-9	Sydney	Willoughby	195-202 V 196.25 S 201.75	Vision 100 Sound 20 (Horizontal)	Television Corporation Ltd, 168-174 Castlereagh Street, Sydney, N.S.W. 2000	124¾
TEN-10	Sydney	Artarmon	208-215 V 209.25 S 214.75	Vision 100 Sound 20 (Horizontal)	United Telecasters Sydney Ltd, cnr Epping and Pittwater Roads, North Ryde, N.S.W. 2113	124¼
<i>Country</i>						
BKN-7	Broken Hill	Rocky Hill	181-188 V 182.25 S 187.75	Vision 5 Sound 1 (Vertical)	Broken Hill Television Ltd, C/o W. C. Beerworth & Crowley, 235 Argent Street, Broken Hill, N.S.W. 2880	36
CBN-8	Central Tablelands	Mount Canobolas	188-195 V 189.258 S 194.758	Vision 100 Sound 20 (Vertical)	Country Television Services Ltd, Memorial Place, Bathurst Road, Orange, N.S.W. 2800	56½
CWN-6	Central Western Slopes	Mount Cenn-Cruaich	174-181 V 175.26 S 180.76	Vision 100 Sound 20 (Vertical)	Country Television Services Ltd, Memorial Place, Bathurst Road, Orange, N.S.W. 2800	56½
ECN-8	Manning River	Middle Brother	188-195 V 189.25 S 194.75	Vision 100 Sound 20 (Vertical)	East Coast Television Ltd, 140 Victoria Street, Taree, N.S.W. 2430	48
MTN-9	Murrumbidgee Irrigation Areas	Mount Bingar	195-202 V 196.24 S 201.74	Vision 100 Sound 20 (Horizontal)	Murrumbidgee Television Ltd, 64 Banna Street, Griffith, N.S.W. 2680	48½
NBN-3	Newcastle-Hunter River	Great Sugarloaf	85-92 V 86.25 S 91.75	Vision 100 Sound 20 (Horizontal)	Newcastle Broadcasting and Television Corporation Ltd, Mosbri Crescent, Newcastle, N.S.W. 2300	89¾
NEN-9	Upper Namoi	Mount Dowe	195-202 V 196.24 S 201.74	Vision 100 Sound 20 (Horizontal)	Television New England Ltd, Radio Centre, Calala, Tamworth, N.S.W. 2340	58
NRN-11	Grafton-Kempsey	Mount Moombil	215-222 V 216.26 S 221.76	Vision 100 Sound 20 (Horizontal)	Northern Rivers Television Ltd, 152 High Street, Coff's Harbour, N.S.W. 2450	48
RTN-8	Richmond-Tweed	Mount Nardi	188-195 V 189.26 S 194.76	Vision 100 Sound 20 (Horizontal)	Richmond-Tweed TV Ltd, Bruxner Highway, Goonellabah, N.S.W. 2480	53
RVN-2	South-Western Slopes and Eastern Riverina	Mount Ulandra	63-70 V 64.24 S 69.74	Vision 100 Sound 20 (Horizontal)	Riverina Television Ltd, Lake Albert Road, Wagga Wagga, N.S.W. 2650	54¾
WIN-4	Illawarra	Knight's Hill	94-101 V 95.25 S 100.75	Vision 100 Sound 20 (Horizontal)	Television Wollongong Transmissions Ltd, Fort Drummond, Mount St Thomas, Wollongong, N.S.W. 2500	82¼

APPENDIX D — continued

Call Sign and Channel	Area	Location of Transmitter	Authorised Frequencies (mHz)	Authorised Power (kW, e.r.p.) and Polarisation	Licensee and Registered Office	Hours of Service per Week (to nearest Quarter Hour)
VICTORIA						
<i>Metropolitan</i>						
ATV-O	Melbourne	Mount Dandenong	45-52 V 46.26 S 51.76	Vision 100 Sound 20 (Horizontal)	Austarama Television Pty Ltd, Cnr Springvale and Hawthorn Roads, Nunawading, Vic. 3131	113½
GTV-9	Melbourne	Mount Dandenong	195-202 V 196.248 S 201.748	Vision 100 Sound 20 (Horizontal)	General Television Corporation Pty Ltd, 22-46 Bendigo Street, Richmond, Vic. 3121	124¾
HSV-7	Melbourne	Mount Dandenong	181-188 V 182.25 S 187.75	Vision 100 Sound 20 (Horizontal)	Herald-Sun T.V. Pty Ltd, 44-74 Flinders Street, Melbourne, Vic. 3000	104¼
<i>Country</i>						
AMV-4	Upper Murray	Baranduda Ranges	94-101 V 95.26 S 100.76	Vision 100 Sound 20 (Horizontal)	Albury Upper Murray T.V. Ltd, Television Centre, Union Road, Lavington via Albury, N.S.W. 2641	58
BCV-8	Bendigo	Mount Alexander	188-195 V 189.25 S 194.75	Vision 100 Sound 20 (Vertical)	Bendigo and Central Victoria Telecasters Ltd, Lily Street, Bendigo, Vic. 3550	68½
BTV-6	Ballarat	Lookout Hill (near Mount Buangor)	174-181 V 175.248 S 180.748	Vision 100 Sound 20 (Horizontal)	Ballarat and Western Victoria Television Ltd, Walker Street, Ballarat, Vic. 3350	63½
GLV-10	Latrobe Valley	Mount Tassie (near Callignee)	208-215 V 209.246 S 214.746	Vision 100 Sound 20 (Horizontal)	V.B.N. Ltd, 150 Albert Road, South Melbourne, Vic. 3205	49½
GMV-6	Goulburn Valley	Mount Major	174-181 V 175.256 S 180.756	Vision 100 Sound 20 (Vertical)	Goulburn-Murray Television Ltd, 290 La Trobe Street, Melbourne, Vic. 3000	75¾
STV-8	Mildura	Yatpool	188-195 V 189.27 S 194.77	Vision 100 Sound 20 (Horizontal)	Sunraysia Television Ltd, 18 Deakin Avenue, Mildura, Vic. 3500	38
QUEENSLAND						
<i>Metropolitan</i>						
BTQ-7	Brisbane	Mount Coot-tha	181-188 V 182.25 S 187.75	Vision 100 Sound 20 (Horizontal)	Brisbane TV Ltd, Sir Samuel Griffith Drive, Mount Coot-tha, Qld 4066	94
QTQ-9	Brisbane	Mount Coot-tha	195-202 V 196.25 S 201.75	Vision 100 Sound 20 (Horizontal)	Queensland Television Ltd, Leichardt Chambers, 133 Leichardt Street, Brisbane, Qld 4000	97½
TVQ-0	Brisbane	Mount Coot-tha	45-52 V 46.25 S 51.75	Vision 100 Sound 20 (Horizontal)	Universal Telecasters Qld Ltd, Sir Samuel Griffith Drive, Mount Coot-tha, Qld 4066	99
<i>Country</i>						
DDQ-10	Darling Downs	Mount Mowbullin	208-215 V 209.26 S 214.76	Vision 100 Sound 20 (Horizontal)	Darling Downs TV Ltd, Video Avenue, Mount Lofty, Toowoomba, Qld 4350	49
FNQ-10	Cairns	Cairns (temporary)	208-215 V 209.25 S 214.75	Vision 5 Sound 1 (Horizontal)	Far Northern Television Ltd, 34 Abbott Street, Cairns, Qld 4870	43¼
MVQ-6	Mackay	Mount Blackwood	174-181 V 175.25 S 180.75	Vision 100 Sound 20 (Horizontal)	Mackay Television Ltd, 216 Victoria Street, Mackay, Qld 4740	40½
RTQ-7	Rockhampton	Mount Hopeful	181-188 V 182.26 S 187.76	Vision 100 Sound 20 (Horizontal)	Rockhampton Television Ltd, Dean Street, Rockhampton, Qld 4700	44¼

APPENDIX D — continued

Call Sign and Channel	Area	Location of Transmitter	Authorised Frequencies (mHz)	Authorised Power (kW.e.r.p.) and Polarisation	Licensee and Registered Office	Hours of Service per Week (to nearest Quarter Hour)
<i>QUEENSLAND—continued</i>						
SDQ-4	Southern Downs	Passchendaele Ridge	94-101 V 95.24 S 100.74	Vision 100 Sound 20 (Horizontal)	Darling Downs TV Ltd, Video Avenue, Mount Lofty, Toowoomba, Qld 4350	49
TNQ-7	Townsville ..	Mount Stuart	181-188 V 182.25 S 187.75	Vision 100 Sound 20 (Horizontal)	Telecasters North Queensland Ltd, Insurance House, 1 Denham Street Townsville, Qld 4810	46½
WBQ-8	Wide Bay ..	Mount Goonaneman	188-195 V 189.24 S 194.74	Vision 100 Sound 20 (Vertical)	Wide Bay-Burnett Television Ltd, 217 Bazaar Street, Maryborough, Qld 4650	48¾
<i>SOUTH AUSTRALIA</i>						
<i>Metropolitan</i>						
ADS-7	Adelaide ..	Mount Lofty	181-188 V 182.26 S 187.76	Vision 100 Sound 20 (Horizontal)	Television Broadcasters Ltd, 125 Strangways Terrace, North Adelaide, S.A. 5006	106½
NWS-9	Adelaide ..	Mount Lofty	195-202 V 196.26 S 201.76	Vision 100 Sound 20 (Horizontal)	Southern Television Corporation Ltd, 202-208 Tynte St., Nth. Adelaide, S.A. 5006	116
SAS-10	Adelaide ..	Mount Lofty	208-215 V 209.25 S 214.75	Vision 100 Sound 20 (Horizontal)	South Australian Telecasters Ltd, 45-49 Park Terrace, Gilberton, S.A. 5081	113¾
<i>Country</i>						
GTS-4	Spencer Gulf North	The Bluff ..	94-101 V 95.25 S 100.75	Vision 50 Sound 10 (Vertical)	Spencer Gulf Telecasters Ltd, 162 Ellen Street, Port Pirie, S.A. 5540	37¾
SES-8	South East ..	Mount Burr	188-195 V 189.26 S 194.76	Vision 100 Sound 20 (Horizontal)	South East Telecasters Ltd, John Watson Drive, Mount Gambier, S.A. 5290	40¼
<i>WESTERN AUSTRALIA</i>						
<i>Metropolitan</i>						
STW-9	Perth ..	Bickley ..	195-202 V 196.25 S 201.75	Vision 100 Sound 20 (Horizontal)	Swan Television Ltd, Hayes Avenue, Nollamara, W.A. 6061	96
TVW-7	Perth ..	Bickley ..	181-188 V 182.25 S 187.75	Vision 100 Sound 20 (Horizontal)	TVW Limited, Osborne Park Road, Tuart Hill, W.A. 6060	96
<i>Country</i>						
BTW-3	Bunbury ..	Mount Lennard	85-92 V 86.24 S 91.74	Vision 50 Sound 10 (Horizontal)	South Western Telecasters Ltd, 32 Stirling Street, Bunbury, W.A. 6230	37¼
GSW-9	Southern Agricultural	Mount Barker	195-202 V 196.24 S 201.74	Vision 50 Sound 10 (Vertical)	South Western Telecasters Ltd, 32 Stirling Street, Bunbury, W.A. 6230	37¼
<i>TASMANIA</i>						
<i>Metropolitan</i>						
TVT-6	Hobart ..	Mount Wellington	174-181 V 175.25 S 180.75	Vision 100 Sound 20 (Horizontal)	Tasmanian Television Ltd, c/o Wise, Lord, Ferguson, Adams & Bennetto, Scottish Union Building, 152 Macquarie Street, Hobart, Tas. 7000	78½
<i>Country</i>						
TNT-9	North Eastern Tasmania	Mount Barrow	195-202 V 196.238 S 201.738	Vision 100 Sound 20 (Horizontal)	Northern Television (TNT9) Pty Ltd, 71-75 Paterson St., Launceston, Tas. 7250	69

APPENDIX E

NATIONAL TELEVISION STATIONS IN OPERATION ON 30 JUNE 1970

Call Sign and Channel	Area	Location of Transmitter	Authorised Frequencies (mHz)	Authorised Power (kW.e.r.p.) and Polarisation	Hours of Service per Week (to nearest Quarter Hour)
<i>AUSTRALIAN CAPITAL TERRITORY</i>					
ABC-3 ..	Canberra ..	Black Mountain ..	85-92 V 86.24 S 91.74	Vision 100 Sound 20 (Vertical)	86
<i>NEW SOUTH WALES</i>					
<i>Metropolitan</i>					
ABN-2 ..	Sydney ..	Gore Hill ..	63-70 V 64.25 S 69.75	Vision 100 Sound 20 (Horizontal)	86
<i>Country</i>					
ABCN-1 ..	Central Tablelands ..	Mount Canobolas ..	56-63 V 57.258 S 62.758	Vision 100 Sound 20 (Vertical)	86
ABDN-2 ..	Grafton-Kempsey ..	Mount Moombil ..	63-70 V 64.26 S 69.76	Vision 100 Sound 20 (Horizontal)	86
ABGN-7 ..	Murrumbidgee Irrigation Areas	Mount Bingar ..	181-188 V 182.24 S 187.74	Vision 100 Sound 20 (Horizontal)	86
ABHN-5 ..	Newcastle-Hunter River	Great Sugarloaf ..	101-108 S 102.258 V 107.758	Vision 100 Sound 20 (Horizontal)	86
ABLN-2 ..	Broken Hill ..	Rocky Hill ..	63-70 V 64.25 S 69.75	Vision 5 Sound 1 (Vertical)	77¾
ABMN-0 ..	South-Western Slopes and Eastern Riverina	Mount Ulandra ..	45-52 V 46.24 S 51.74	Vision 100 Sound 20 (Horizontal)	86
ABQN-5 ..	Central Western Slopes	Mount Cenn-Cruaich ..	101-108 V 102.24 S 107.74	Vision 100 Sound 20 (Vertical)	86
ABRN-6 ..	Richmond-Tweed ..	Mount Nardi ..	174-181 V 175.26 S 180.76	Vision 100 Sound 20 (Horizontal)	86
ABSN-8 ..	Bega-Cooma ..	Brown Mountain ..	188-195 V 189.24 S 194.74	Vision 100 Sound 20 (Vertical)	86
ABTN-1 ..	Manning River	Middle Brother ..	56-63 V 57.25 S 62.75	Vision 100 Sound 20 (Vertical)	86
ABUN-7	Upper Namoi ..	Mount Dowe ..	181-188 V 182.24 S 187.74	Vision 100 Sound 20 (Horizontal)	86
ABWN-5A	Illawarra ..	Knight's Hill ..	137-144 V 138.25 S 143.75	Vision 100 Sound 20 (Horizontal)	86
<i>VICTORIA</i>					
<i>Metropolitan</i>					
ABV-2 ..	Melbourne ..	Mount Dandenong ..	63-70 V 64.25 S 69.75	Vision 100 Sound 20 (Horizontal)	81½

APPENDIX E—continued

Call Sign and Channel	Area	Location of Transmitter	Authorised Frequencies (mHz)	Authorised Power (kW.e.r.p.) and Polarisation	Hours of Service per Week (to nearest Quarter Hour)
<i>VICTORIA—continued</i>					
<i>Country</i>					
ABAV-1 ..	Upper Murray ..	Baranduda Ranges ..	V 56-63 S 57.25 S 62.75	Vision 100 Sound 20 (Horizontal)	81 ½
ABEV-1 ..	Bendigo ..	Mount Alexander ..	V 56-63 S 57.26 S 62.76	Vision 100 Sound 20 (Vertical)	81 ½
ABGV-3 ..	Goulburn Valley ..	Mount Major ..	V 85-92 S 86.23 S 91.73	Vision 100 Sound 20 (Vertical)	81 ½
ABLV-4 ..	Latrobe Valley ..	Mount Tassie (near Callig- nee)	V 94-101 S 95.24 S 100.74	Vision 100 Sound 20 (Horizontal)	81 ½
ABMV-4 ..	Mildura ..	Yatpool ..	V 94-101 S 95.27 S 100.77	Vision 100 Sound 20 (Horizontal)	81 ½
ABRV-3 ..	Ballarat ..	Lookout Hill (near Mount Buangor)	V 85-92 S 86.238 S 91.738	Vision 100 Sound 20 (Horizontal)	81 ½
ABSV-2 ..	Murray Valley ..	Goschen ..	V 63-70 S 64.26 S 69.76	Vision 100 Sound 20 (Vertical)	81 ½
<i>QUEENSLAND</i>					
<i>Metropolitan</i>					
ABQ-2 ..	Brisbane ..	Mount Coot-tha ..	V 63-70 S 64.24 S 69.74	Vision 100 Sound 20 (Horizontal)	80 ½
<i>Country</i>					
ABDQ-3 ..	Darling Downs ..	Mount Mowbullian ..	V 85-92 S 86.252 S 91.752	Vision 100 Sound 20 (Horizontal)	80 ½
ABMQ-4 ..	Mackay ..	Mount Blackwood ..	V 94-101 S 95.25 S 100.75	Vision 100 Sound 20 (Horizontal)	80 ½
ABNQ-9 ..	Cairns ..	Cairns .. (temporary)	V 195-202 S 196.24 S 201.74	Vision 5 Sound 1 (Horizontal)	80 ½
ABRQ-3 ..	Rockhampton ..	Mount Hopeful ..	V 85-92 S 86.26 S 91.76	Vision 100 Sound 20 (Horizontal)	80 ½
ABSQ-1 ..	Southern Downs ..	Passchendaele Ridge ..	V 56-63 S 57.26 S 62.76	Vision 100 Sound 20 (Horizontal)	80 ½
ABTQ-3 ..	Townsville ..	Mount Stuart ..	V 85-93 S 87.27 S 92.77	Vision 100 Sound 20 (Horizontal)	80 ½
ABWQ-6 ..	Wide Bay ..	Mount Goonaneman ..	V 174-181 S 175.24 S 180.74	Vision 100 Sound 20 (Vertical)	80 ½
<i>SOUTH AUSTRALIA</i>					
<i>Metropolitan</i>					
ABS-2 ..	Adelaide ..	Mount Lofty ..	V 63-70 S 64.26 S 69.76	Vision 100 Sound 20 (Horizontal)	77 ¾

APPENDIX E—continued

Call Sign and Channel	Area	Location of Transmitter	Authorised Frequencies (mHz)	Authorised Power (kW.e.r.p.) and Polarisation	Hours of Service per Week (to nearest Quarter Hour)
<i>SOUTH AUSTRALIA—continued</i>					
<i>Country</i>					
ABGS-1 ..	South East ..	Mount Burr ..	V 56-63 S 57.25 S 62.75	Vision 100 Sound 20 (Horizontal)	77 ¾
ABNS-1 ..	Spencer Gulf North ..	The Bluff ..	V 56-63 S 57.25 S 62.75	Vision 100 Sound 20 (Vertical)	77 ¾
<i>WESTERN AUSTRALIA</i>					
<i>Metropolitan</i>					
ABW-2 ..	Perth ..	Bickley ..	V 63-70 S 64.25 S 69.75	Vision 100 Sound 20 (Horizontal)	80
<i>Country</i>					
ABAW-2 ..	Southern Agricultural ..	Mount Barker ..	V 63-70 S 64.24 S 69.74	Vision 100 Sound 20 (Vertical)	80
ABCW-4 ..	Central Agricultural ..	Mawson Trig ..	V 94-101 S 95.26 S 100.76	Vision 100 Sound 20 (Horizontal)	80
ABGW-6 ..	Geraldton ..	6 miles north-east of Geraldton	V 174-181 S 175.25 S 180.75	Vision 10 Sound 2 (Horizontal)	80
ABKW-6 ..	Kalgoorlie ..	4 miles north-east of Kalgoorlie	V 174-181 S 175.25 S 180.75	Vision 4 Sound 0.8 (Horizontal)	80
ABSW-5 ..	Bunbury ..	Mount Lennard ..	V 101-108 S 102.25 S 107.75	Vision 100 Sound 20 (Horizontal)	80
<i>TASMANIA</i>					
<i>Metropolitan</i>					
ABT-2 ..	Hobart ..	Mount Wellington ..	V 63-70 S 64.24 S 69.74	Vision 100 Sound 20 (Horizontal)	82 ½
<i>Country</i>					
ABNT-3 ..	North Eastern Tasmania	Mount Barrow ..	V 85-92 S 86.20 S 91.70	Vision 100 Sound 20 (Horizontal)	82 ½

APPENDIX F

COMMERCIAL TELEVISION TRANSLATOR STATIONS IN OPERATION ON 30 JUNE 1970

Area Served	Location	Call Sign and Area (Parent Station)	Input Channel	Output Channel	Authorised Power/Polarisation	Licensee
NEW SOUTH WALES						
Armidale ..	Kelly's Plains	NEN Upper Namoi	9	1	5 watts (Horizontal)	Television New England Ltd
Bateman's Bay-Moruya	Mount Wandera	WIN Illawarra	4	11	50 watts (Horizontal)	Television Wollongong Transmissions Ltd
Bonalbo ..	Brown's Hill	RTN Richmond-Tweed	8	5	1 watt (Vertical)	Richmond-Tweed TV Ltd
Cobar ..	Fort Bourke Hill	CWN Central West-ern Slopes	6§	10	50 watts (Vertical)	Country Television Services Ltd
Cooma ..	Mount Roberts	CTC Canberra	7	10	1,000 watts (Vertical)	Canberra Television Ltd
Glen Innes ..	Merdon's Hill	NEN Upper Namoi	9	3	5 watts (Horizontal)	Television New England Ltd
Goulburn ..	Mount Gray	CTC Canberra	7	10	50 watts (Vertical)	Canberra Television Ltd
Kandos-Rylstone	Mount Cumber-Melon	CBN Central Tablelands	8	10	5 watts (Vertical)	Country Television Services Ltd
Kyogle ..	Geneva Hill	RTN Richmond-Tweed	8	5	1 watt (Vertical)	Richmond-Tweed TV Ltd
Lithgow ..	Reservoir Hill	CBN Central Tablelands	8	6 modified —1,000 kHz	5 watts (Vertical)	Country Television Services Ltd
Mudgee ..	2 miles S.W. of Mudgee	CWN Central Western Slopes	6	9	1 watt (Vertical)	Country Television Services Ltd
Murwillumbah	May's Hill	RTN Richmond-Tweed	8	5	5 watts (Horizontal)	Richmond-Tweed TV Ltd
Snowy Mountains (Khancoban)	Mount Youngal	AMV Upper Murray	4	10	5 watts (Horizontal)	Snowy Mountains Hydro-Electric Authority
Walcha ..	Clive Blake's Hill	NEN Upper Namoi	9	1	5 watts (Horizontal)	Television New England Ltd
VICTORIA						
Alexandra ..	Burgess Road, near Yarck	GMV Goulburn Valley	6	10	50 watts (Horizontal)	Goulburn-Murray Television Ltd
Eildon ..	Near Wightman's Hill	GMV Goulburn Valley	10 (via Alexandra Translator)	3	5 watts (Horizontal)	Goulburn-Murray Television Ltd
Myrtleford ..	Tower Hill	AMV Upper Murray	4	9	10 watts (Horizontal)	Albury Upper Murray T.V. Ltd
Portland ..	Mount Clay	BTV Ballarat	6	11	500 watts (Horizontal)	Ballarat and Western Victoria Television Ltd
Swan Hill ..	Goschen	BCV Bendigo	8*	11	1,000 watts (Vertical)	Bendigo and Central Victoria Telecasters Ltd
Warrnambool-Port Fairy	Tower Hill	BTV Ballarat	6	9	50 watts (Vertical)	Ballarat and Western Victoria Television Ltd

APPENDIX F — continued

Area Served	Location	Call Sign and Area (Parent Station)	Input Channel	Output Channel	Authorised Power/Polarisation	Licensee
QUEENSLAND						
Blackwater ..	Cutlers Hill	RTQ Rockhampton	7	10	1 watt (Horizontal)	Utah Development Company
Cardstone Village†	2 miles East of Cardstone Village	TNQ Townsville	7	5	1 watt (Vertical)	Northern Electric Authority of Queensland
Cracow ..	Golden Plateau	RTQ Rockhampton	7	5	1 watt (Horizontal)	Golden Plateau No Liability
Gympie ..	Seacom Site-Black Mountain	WBQ Wide Bay	8	1	500 watts (Vertical)	Wide Bay-Burnett Television Ltd
Toowoomba	Mt. Lofty	DDQ Darling Downs	10	5¶	25 watts (Horizontal)	Darling Downs TV Ltd
Townsville ..	Seacom Site-Yarrowonga	TNQ Townsville	7	9	5 watts (Horizontal)	Telecasters North Queensland Ltd
SOUTH AUSTRALIA						
Cowell ..	Mt. Olinthus	GTS Spencer Gulf North	4	8	50 watts (Vertical)	Spencer Gulf Telecasters Ltd
Port Lincoln	Borthwicks Hill	GTS Spencer Gulf North	8 (via Cowell Translator)	5	50 watts (Horizontal)	Spencer Gulf Telecasters Ltd
TASMANIA						
Gowrie Park	1 1/2 miles N.W. of Gowrie Park	TNT North Eastern Tasmania	9	1	1 watt (Horizontal)	Northern Television (TNT 9) Pty Ltd
Maydena ..	Abbott's Lookout	TVT Hobart	6	8	1 watt (Horizontal)	Tasmanian Television Ltd
Queenstown-Zeehan	Mount Owen	TVT Hobart	6	8	50 watts (Horizontal)	Tasmanian Television Ltd
Rosebery-Renison Bell	Mount Read	TVT Hobart	8 (via Queens-town Translator)	10	5 watts (Horizontal)	Tasmanian Television Ltd
Savage River-Luina	Mount Cleveland	TNT North Eastern Tasmania	10 (via Waratah Translator)	7	5 watts (Horizontal)	Northern Television (TNT 9) Pty Ltd
South Launceston	Juliana Street	TNT North Eastern Tasmania	9	11	1 watt (Horizontal)	Northern Television (TNT 9) Pty Ltd
St. Marys-Fingal Valley	South Sister Hill	TNT North Eastern Tasmania	9	11	50 watts (Vertical)	Northern Television (TNT 9) Pty Ltd
Stanley ..	The Nut	TNT North Eastern Tasmania	9	6	50 watts (Vertical)	Northern Television (TNT 9) Pty Ltd
Strathgordon	Twelvetrees Range, near Strathgordon	TVT Hobart	6	8	10 watts (Horizontal)	Tasmanian Television Ltd
Swansea-Bicheno	1/2 mile South of Bicheno	TVT Hobart	6	8	50 watts (H-Swansea) (V-Bicheno)	Tasmanian Television Ltd
Taroona ..	White Rock Point	TVT Hobart	6	8	50 watts (Horizontal)	Tasmanian Television Ltd
Waratah ..	Companion Hill	TNT North Eastern Tasmania	9	10	5 watts (Horizontal)	Northern Television (TNT 9) Pty Ltd

§ Via microwave-intermediate repeater stations at Hermidale and Mount Boppy.

* Intermediate UHF relay at Gredgwin.

† The station at Cardstone Village is operating on a temporary basis and its operation will be reviewed in the light of service provided by the Cairns full-power stations.

¶ Channel 5 allocated on a temporary basis subject to withdrawal on twelve months notice.

APPENDIX G

NATIONAL TELEVISION TRANSLATOR STATIONS IN OPERATION ON 30 JUNE 1970

Area Served	Location	Call Sign and Area (Parent Station)	Input Channel	Output Channel	Authorised Power/Polarisation
NEW SOUTH WALES					
Armidale	Kelly's Plains ..	ABUN Upper Namoi	7	4	5 watts (Horizontal)
Bateman's Bay-Moruya ..	Mount Wandera	ABWN Illawarra	5A	9	50 watts (Horizontal)
Bonalbo	Brown's Hill ..	ABRN Richmond-Tweed	6	3	1 watt (Vertical)
Cooma	Nanny Goat Hill	ABSN Bega-Cooma	8	0	5 watts (Mixed)
Glen Innes	Merdon's Hill ..	ABUN Upper Namoi	7	0	5 watts (Horizontal)
Goulburn	Mount Gray ..	ABC Canberra	3	0	50 watts (Vertical)
Kandos-Rylstone ..	Mount Cumber-Melon	ABCN Central Tablelands	1	0	5 watts (Vertical)
Kyogle	Geneva Hill ..	ABRN Richmond-Tweed	6	3	1 watt (Vertical)
Lithgow	Reservoir Hill ..	ABCN Central Tablelands	1	5	5 watts (Vertical)
Mudgee	2 miles S.W. of Mudgee	ABQN Central Western Slopes	5	11	1 watt (Vertical)
Walcha	Clive Blake's Hill	ABUN Upper Namoi	7	5	5 watts (Horizontal)
VICTORIA					
Alexandra	Burgess Road near Yarck	ABGV Goulburn Valley	3	5	50 watts (Horizontal)
Eildon	Near Wightman's Hill	ABGV Goulburn Valley	5 (via Alexandra Translator)	1	1.25 watts* (Horizontal)
Orbost	Mount Raymond	ABLV Latrobe Valley	4	2	20 watts (Vertical)
Portland	Mount Clay ..	ABRV Ballarat	2 (via Warrnambool Translator)	4	500 watts (Horizontal)
Warrnambool-Port Fairy	Tower Hill ..	ABRV Ballarat	3	2	50 watts (Vertical)
QUEENSLAND					
Gympie	Seacom Site—Black Mountain	ABWQ Wide Bay	6	4	500 watts (Vertical)
Monto	3½ miles from Mulgildie	ABWQ Wide Bay	6	1	50 watts (Vertical)
Townsville	Seacom Site—Yarrowonga	ABTQ Townsville	3	10	5 watts (Horizontal)

APPENDIX G—continued

Area Served	Location	Call Sign and Area (Parent Station)	Input Channel	Output Channel	Authorised Power/Polarisation
SOUTH AUSTRALIA					
Bordertown	Microwave Repeater Station Bordertown	ABS Adelaide	2+	2	80 watts§ (Vertical)
Cowell	Mount Olinthus	ABNS Spencer Gulf North	1	6	50 watts (Vertical)
Keith	Microwave Repeater Station Keith	ABS Adelaide	2+	4	50 watts (Vertical)
Port Lincoln	Borthwicks Hill	ABNS Spencer Gulf North	6 (via Cowell Translator)	3	50 watts (Horizontal)
WESTERN AUSTRALIA					
Kambalda	Red Hill ..	ABKW Kalgoorlie	6	5	5 watts (Horizontal)
TASMANIA					
Gowrie Park	1½ miles north-west of Gowrie Park	ABNT North Eastern Tasmania	3	11	1 watt (Horizontal)
Queenstown-Zeehan ..	Mount Owen ..	ABT Hobart	2	4	50 watts (Horizontal)
Rosebery-Renison Bell ..	Mount Read ..	ABT Hobart	4 (via Queens-town Translator)	1	5 watts (Horizontal)
Savage River-Luina ..	Mount Cleveland	ABNT North Eastern Tasmania	2 (via Waratah Translator)	4	1 watt (Horizontal)
South Launceston ..	Juliana Street ..	ABNT North Eastern Tasmania	3	1	1 watt (Horizontal)
St. Marys-Fingal Valley ..	South Sister Hill	ABNT North Eastern Tasmania	3	1	50 watts (Vertical)
Stanley	The Nut ..	ABNT North Eastern Tasmania	3	1	50 watts (Vertical)
Strahan	P.M.G.'s Radio Telephone Site at Strahan	ABT Hobart	4 (via Queens-town Translator)	10	1 watt (Horizontal)
Waratah	Companion Hill	ABNT North Eastern Tasmania	3	2	35 watts (Horizontal)

* Commenced on 5 watts and reduced to 1.25 watts to avoid interference to reception of another station.

+ Microwave Relay from Adelaide.

§ Commenced operation on reduced power but increase to 500 watts to provide enlarged coverage is proposed as early as is practicable.

APPENDIX H
COMMERCIAL TELEVISION STATIONS
PRINCIPAL SHAREHOLDERS IN LICENSEE COMPANIES

AUSTRALIAN CAPITAL TERRITORY
CANBERRA TELEVISION LTD (CTC)

	50c Stock Units
The Federal Capital Press of Australia Pty Ltd	360,000
Vident Pty Ltd	119,000
Daniel Bros & Co. Pty Ltd	59,600
Others	661,400
Total issued stock units	1,200,000

NEW SOUTH WALES
(Metropolitan)

AMALGAMATED TELEVISION SERVICES PTY LTD (ATN)

	\$2 Shares
John Fairfax & Sons Ltd	1,061,630
Fairfax Corporation Pty Ltd	216,896
Associated Newspapers Ltd	125,000
The Australian Broadcasting Co. Pty Ltd	58,592
Others	32,000
Total issued shares	1,494,118

TELEVISION CORPORATION LTD (TCN)

	50c Ordinary Stock Units	50c Preferred Shares
Consolidated Press Holdings Ltd	7,377,210	737,771
Others	2,707,938	270,684
Total issued stock units	10,085,148	1,008,455

UNITED TELECASTERS SYDNEY LTD (TEN)

	50c Shares
Colonial Sugar Refining Co. Ltd	1,111,111
Amalgamated Wireless (A/asia) Ltd	1,111,111
Email Ltd	1,111,110
N.B.C. International Ltd (Canada)	998,000
Bank of New South Wales	664,666
E.M.I. (Aust) Ltd	500,000
Others	4,504,002
Total issued shares	10,000,000

(Country)

BROKEN HILL TELEVISION LTD (BKN)

	50c Shares
J. M. Sturrock Pty Ltd	102,000
B.T.V. Pty Ltd	19,002
Electronic Industries Ltd	10,000
Underwriting and Insurance Ltd	10,000
Broken Hill Theatres Pty Ltd	10,000
Others	48,998
Total issue shares	200,000

APPENDIX H—continued

COUNTRY TELEVISION SERVICES LTD (CBN)

	50c Stock Units
Email Ltd	226,400
Country Life Newspaper Co. Ltd	101,950
The Mutual Life and Citizens Assurance Co. Ltd	76,500
Australian Mutual Provident Society	70,000
Others	1,214,668
Total issued stock units	1,689,518

COUNTRY TELEVISION SERVICES LTD (CWN)
See CBN

EAST COAST TELEVISION LTD (ECN)

	50c Shares
Manning Valley Properties Pty Ltd	103,600
Television New England Ltd	59,000
Broadcast Amalgamated Ltd	34,600
Others	473,800
Total issued shares	671,000

MURRUMBIDGEE TELEVISION LTD (MTN)

	50c Shares
H. Jones & Co. (Sydney) Pty Ltd	340,350
2RG Broadcasters Pty Ltd	93,800
Australasian Jam Co. Pty Ltd	52,249
Others	513,601
Total issued shares	1,000,000

NEWCASTLE BROADCASTING AND TELEVISION CORPORATION LTD (NBN)

	50c Shares
National Nominees Ltd	220,897
Bank of N.S.W. Nominees Pty Ltd	185,498
Far Pty Ltd	152,000
Currong Pty Ltd	150,000
Wales Nominees (Canberra) Pty Ltd	144,000
Euroka Pty Ltd	101,150
Others	546,455
Total issued shares	1,500,000

TELEVISION NEW ENGLAND LTD (NEN)

	50c Shares
Broadcast Amalgamated Ltd	421,290
Tamworth Newspaper Co. Ltd	102,000
M. M. Moroney, W. A. Baxter, R. V. Brislan, P. M. Smith and L. D. Higgin- botham	77,800
The Mutual Life and Citizens Assurance Co. Ltd	72,000
Others	976,910
Total issued shares	1,650,000

NORTHERN RIVERS TELEVISION LTD (NRN)

	50c Shares
The Daily Examiner Pty Ltd	60,000
Radio Kempsey Ltd	100,000
Amalgamated Wireless (A/asia) Ltd	40,000
Others	680,000
Total issued shares	880,000

APPENDIX H—continued

RICHMOND-TWEED TV LTD (RTN)

	25c Shares
Richmond River Broadcasters Pty Ltd	199,975
Northern Star Ltd	140,000
Tweed Radio and Broadcasting Co. Pty Ltd	82,600
Canberra Television Ltd	69,000
Others	908,225
Total issued shares	1,399,800

RIVERINA TELEVISION LTD (RVN)

	50c Shares
Estate E. V. Roberts	200,000
Henderson Holdings Pty Ltd	150,000
Elwood Pty Ltd	154,100
Others	495,900
Total issued shares	1,000,000

TELEVISION WOLLONGONG TRANSMISSIONS LTD (WIN)

	\$1 Stock Units
Euroka Pty Ltd	131,800
Far Pty Ltd	110,500
Interstate Television Holdings Pty Ltd	101,000
Media Securities Ltd	69,350
Others	587,350
Total issued stock units	1,000,000

VICTORIA
(Metropolitan)

AUSTARAMA TELEVISION PTY LTD (ATV)

	\$2 shares
Ansett Transport Industries Ltd	2,500,000
Total issued shares	2,500,000

GENERAL TELEVISION CORPORATION PTY LTD (GTV)

	\$2 shares
Independent Television Corporation Pty Ltd (and subsidiaries)	802,771
Consolidated Press Holdings Ltd	141,629
Greater Union Organisation Pty Ltd	67,600
Total issued shares	1,012,000

HERALD-SUN TV PTY LTD (HSV)

	\$2 shares
The Herald and Weekly Times Ltd	637,505
Associated Newspapers Ltd (London)	112,500
Total issued shares	750,005

(Country)

ALBURY UPPER MURRAY T.V. LTD (AMV)

	50c shares
A. & F. Sullivan Pty Ltd	159,700
Breeza Investments Pty Ltd	218,300
Tenilba Investments Pty Ltd	54,700
Amalgamated Wireless (A/asia) Ltd	45,000
Border Morning Mail Pty Ltd	44,000
Others	578,300
Total issued shares	1,100,000

APPENDIX H—continued

BENDIGO AND CENTRAL VICTORIA TELECASTERS LTD (BCV)

	50c shares
Victorian Broadcasting Network Ltd	1,100,000
Central Victoria Broadcasters Pty Ltd	100,000
Total issued shares	1,200,000

BALLARAT AND WESTERN VICTORIA TELEVISION LTD (BTV)

	50c shares
Associated Broadcasting Services Ltd	377,220
Ballarat Broadcasters Pty Ltd	110,635
Ballarat Courier Pty Ltd	102,100
Canberra Television Ltd	95,059
Others	714,986
Total issued shares	1,400,000

V.B.N. LIMITED (GLV)

	50c Ordinary Shares	\$2 Cumulative Redeemable Preference Shares
Victorian Broadcasting Network Ltd	975,618	..
Central Murray Broadcasters Pty Ltd . . . . .	..	105,000
Central Victoria Broadcasters Pty Ltd . . . . .	..	10,000
Grenfell Investments Pty Ltd . . . . .	..	10,000
Latrobe Valley and Gippsland Broadcasters Pty Ltd	200,000	420,000
Western Province Radio Pty Ltd . . . . .	..	184,000
Nationwide Finance Ltd	12,690	..
Others	11,692	..
Total issued shares	1,200,000	729,000

GOULBURN-MURRAY TELEVISION LTD (GMV)

	50c shares
Associated Broadcasting Services Ltd	1,200,000
Total issued shares	1,200,000

SUNRAYSIA TELEVISION LTD (STV)

	50c shares
Elliott Newspaper Group Pty Ltd	41,000
Central Murray Broadcasters Pty Ltd	35,000
Electronic Industries Ltd	34,000
Sunraysia Broadcasters Pty Ltd	33,200
Sunraysia Publishing Co. Pty Ltd	32,000
Others	524,800
Total issued shares	700,000

QUEENSLAND
(Metropolitan)

BRISBANE TV LTD (BTQ)

	50c Shares
Queensland Newspapers Pty Ltd	240,000
Telegraph Newspaper Co. Pty Ltd	163,000
Associated Newspapers Ltd (London)	100,000
Commonwealth Broadcasting Corporation (Q'land) Ltd	50,000
Amalgamated Wireless (A/asia) Ltd	60,000
Television Corporation Ltd	50,000
The Herald and Weekly Times Ltd	40,000
Others	747,000
Total issued shares	1,450,000

APPENDIX H—continued

QUEENSLAND TELEVISION LTD (QTQ)

	25c Stock Units
Fairfax Publications Pty Ltd	507,600
Amalgamated Television Services Pty Ltd	500,800
Fairfax Corporation Pty Ltd	500,400
N.B.C. International Ltd (Canada)	303,000
Interstate Television Holdings Pty Ltd	300,000
P.M.S. Investments Pty Ltd	269,400
Others	646,000
Total issued stock units	<u>3,027,200</u>

UNIVERSAL TELECASTERS QLD LTD (TVQ)

	50c Shares
Ansett Transport Industries Ltd	2,000,000
Total issued shares	<u>2,000,000</u>

QUEENSLAND

(Country)

DARLING DOWNS TV LTD (DDQ)

	50c Shares
Commonwealth Broadcasting Corporation (Q'land) Ltd	210,000
Gold Radio Service Pty Ltd	70,000
Tasmanian Television Ltd	60,000
Toowoomba Newspaper Co. Pty Ltd	52,000
Newcastle Broadcasting and Television Corporation Ltd	50,000
Others	958,000
Total issued shares	<u>1,400,000</u>

FAR NORTHERN TELEVISION LTD (FNQ)

	50c Shares
Telecasters North Queensland Ltd	1,000,000
Total issued shares	<u>1,000,000</u>

MACKAY TELEVISION LTD (MVQ)

	50c Shares
Mackay Theatres (Estate Late John Taylor)	79,196
Tingalpa Hotel Pty Ltd	62,000
Buss & Turner Pty Ltd	47,000
Telecasters North Queensland Ltd	32,000
Mackay Printing and Publishing Co.	30,000
Others	389,804
Total issued shares	<u>640,000</u>

ROCKHAMPTON TELEVISION LTD (RTQ)

	50c Shares
Rockhampton Newspaper Co. Pty Ltd	80,000
Nationwide Finance Ltd	72,100
Rockhampton Broadcasting Co. Pty Ltd	40,000
Others	807,900
Total issued shares	<u>1,000,000</u>

APPENDIX H—continued

TELECASTERS NORTH QUEENSLAND LTD (TNQ)

	50c Shares
Ayr Broadcasters Pty Ltd	100,000
Amalgamated Wireless (A/asia) Ltd	40,245
The North Queensland Newspaper Co. Ltd	46,850
Samuel Allen & Sons Ltd	40,240
Others	577,579
Total issued stock units	<u>804,914</u>

DARLING DOWNS TV LTD (SDQ)

See DDQ

WIDE BAY-BURNETT TELEVISION LTD (WBQ)

	50c Shares
Bundaberg Broadcasters Pty Ltd	50,000
Maryborough Broadcasting Co. Pty Ltd	40,000
Birch, Carroll and Coyle (Trading) Pty Ltd	40,000
Others	870,000
Total issued shares	<u>1,000,000</u>

SOUTH AUSTRALIA

(Metropolitan)

TELEVISION BROADCASTERS LTD (ADS)

	50c Shares
Advertiser Newspapers Ltd	920,000
Associated Newspapers Ltd (London)	375,000
Midlands Broadcasting Services Ltd	300,000
5KA Holdings Pty Ltd	300,000
Philips Industries Pty Ltd	95,000
Others	1,010,000
Total issued shares	<u>3,000,000</u>

SOUTHERN TELEVISION CORPORATION LTD (NWS)

	50c Shares
News Ltd	1,150,000
Total issued shares	<u>1,150,000</u>

SOUTH AUSTRALIAN TELECASTERS LTD (SAS)

	50c Shares
United Telecasters Sydney Ltd	200,000
Tinsmiths Pty Ltd	101,000
Adelaide Steamship Co. Ltd	100,000
Ansett Transport Industries Ltd	100,000
Swiss Re-Insurance Co. Ltd	100,000
John Martin & Co. Ltd	84,000
Others	2,315,000
Total issued shares	<u>3,000,000</u>

(Country)

SPENCER GULF TELECASTERS LTD (GTS)

	50c Shares
Electronic Industries Ltd	115,500
Berylmy Pty Ltd	55,000
Atico Pty Ltd	55,000
B.H.P. Nominees Pty Ltd	55,000
Australian and International Insurance Ltd	38,500
Southern Television Corporation Ltd	37,400
Amalgamated Wireless (A/asia) Ltd	33,000
Others	380,600
Total issued shares	<u>770,000</u>

APPENDIX H—continued

SOUTH EAST TELECASTERS LTD (SES)

	50c Shares
Electronic Industries Ltd	89,000
C. Zempilas	28,000
Tasmanian Television Ltd	20,000
Others	462,500
Total issued shares	599,500

WESTERN AUSTRALIA

(Metropolitan)

SWAN TELEVISION LTD (STW)

	\$1 Shares
Australian Mutual Provident Society	80,000
Ansett Transport Industries Ltd	72,000
Esanda Limited	72,000
Thomson Television (International) Ltd, England	72,000
I. C. Derrington and J. F. Jenkinson	53,800
Queensland Insurance Co. Ltd	53,333
Broadway Investments Pty Ltd	42,700
Others	1,154,167
Total issued shares	1,600,000

TVW LTD (TVW)

	\$1 Shares
Tasmanian Television Ltd	66,700
Silverton Securities Pty Ltd	66,700
Goulburn-Murray Television Ltd	64,000
Westralian International Ltd	60,000
T. E. Wardle Pty Ltd	50,000
The Mutual Life & Citizens Assurance Co. Ltd	50,000
W. A. N. Nominees Pty Ltd	35,000
Others	957,568
Total issued shares	1,349,968

(Country)

SOUTH WESTERN TELECASTERS LTD (BTW)

	50c Shares
Southern Television Corp Ltd	46,000
Underwriting and Insurance Ltd	45,000
Harris Scarfe & Sandovers Ltd	42,000
Others	871,000
Total issued shares	1,004,000

SOUTH WESTERN TELECASTERS LTD (GSW)

See BTW

TASMANIA

(Metropolitan)

TASMANIAN TELEVISION LTD (TVT)

	50c Shares
Davies Bros Ltd	165,099
The Examiner Newspaper Pty Ltd	87,750
Robert Nettlefold Pty Ltd	64,400
Associated Broadcasting Services Ltd	60,000
Metropolitan Broadcasters Pty Ltd	50,300
E. G. McRae	48,800
L. Nettlefold	45,700
Australian Mutual Provident Society	41,500
Commercial Broadcasters Pty Ltd	40,000
Others	835,686
Total issued shares	1,439,235

APPENDIX H—continued

(Country)

NORTHERN TELEVISION (TNT 9) PTY LTD (TNT)

	\$2 Shares
Examiner - Northern TV Ltd	183,000
Total issued shares	183,000

APPENDIX I

MULTIPLE INTERESTS OF NEWSPAPERS AND OTHERS IN BROADCASTING AND TELEVISION STATIONS

This Appendix lists newspaper companies and other companies or persons which have substantial interests, directly or indirectly, in two or more licences for commercial broadcasting stations or commercial television stations. The Appendix is divided into four sections:

- I — Capital City Newspapers.
- II — Provincial and Country Newspapers.
- III — Overseas Newspapers.
- IV — Other Organisations.

(I) CAPITAL CITY NEWSPAPERS

ADVERTISER NEWSPAPERS LTD (*The Advertiser, Adelaide*)

Television

ADS Adelaide Holds 920,000 of the 3,000,000 shares in the licensee company. A wholly-owned subsidiary company, Midlands Broadcasting Services Ltd, also holds 300,000 shares in the licensee company.

Broadcasting

5AD Adelaide Holds the licence for the station.
5MU Murray Bridge Wholly-owned subsidiary companies hold the licences for 5MU, 5PI and 5PI Crystal Brook 5SE.
5SE Mount Gambier

(Advertiser Newspapers Ltd also holds 2,872,400 of the 54,834,005 ordinary shares in The Herald and Weekly Times Ltd and 110,000 of the 7,212,901 ordinary shares in Queensland Press Ltd (*see below*).

AUSTRALIAN CONSOLIDATED PRESS GROUP (*Daily Telegraph, Sydney*)

Television

TCN Sydney Consolidated Press Holdings Ltd holds 7,377,210 ordinary stock units and 737,771 preferred ordinary shares in totals of 10,085,148 ordinary stock units and 1,008,455 preferred ordinary shares.
WIN Illawarra Area Consolidated Press Holdings Ltd holds 44,200 of the 1,000,000 stock units in the licensee company.
NBN Newcastle-Hunter River Area Consolidated Press Holdings Ltd holds 67,997 of the 1,500,000 shares in the licensee company.
ECN Manning River Area Maitland Mercury Newspaper and Printing Co. Pty Ltd, a subsidiary company of Consolidated Press Holdings Ltd, holds 26,982 of the 35,996 shares in Manning River Times Pty Ltd, which holds 10,000 of the 671,000 shares in the licensee company.
CBN Central Tablelands Area Western Newspapers Ltd, in which the Consolidated Press Group holds 203,446 of the 778,901 shares, holds directly and through subsidiary companies, 80,000 of the 1,689,518 stock units in the licensee company.
CWN Central Western Slopes Area
GTV Melbourne Independent Television Corporation Pty Ltd, a wholly-owned subsidiary of Television Corporation Ltd, licensee of TCN Sydney, in which Consolidated Press Holdings Ltd holds 7,377,210 ordinary stock units and 737,771 preferred ordinary shares (*see above*), holds 802,771 of the 1,012,000 shares in the licensee company. In addition, Consolidated Press Holdings Ltd holds 141,629 shares in the licensee company.
BTQ Brisbane Television Corporation Ltd, licensee of TCN Sydney (*see above*), holds 50,000 of the 1,450,000 shares in the licensee company. In addition Television Corporation Ltd holds 45,000 of the 7,212,901 shares in Queensland Press Ltd, which, through two wholly-owned subsidiary companies holds 403,000 of the shares in the licensee company.
DDQ Darling Downs Area Newcastle Broadcasting and Television Corporation Ltd, licensee of NBN
SDQ Southern Downs Area (*see above*), holds 50,000 of the 1,400,000 shares in the licensee company.

Broadcasting

2LF Young Western Newspapers Ltd, in which the Consolidated Press Group holds 203,446 of the 778,901 shares, holds 8,498 of the 17,112 shares in the licensee company.

APPENDIX I — *continued*

2GZ Orange A wholly-owned subsidiary company of Country Television Services Ltd, licensee of CBN/CWN (*see above*) holds all the shares in the licensee company.
2NZ Inverell Country Broadcasting Services Ltd, licensee of 2GZ (*see above*) holds all the shares in the licensee company.
3AK Melbourne Consolidated Press Holdings Ltd holds 7,377,210 ordinary stock units and 737,771 preferred ordinary shares. Television Corporation Ltd, a wholly-owned subsidiary company, of which Independent Television Corporation Ltd, holds 802,771 of the 1,012,000 shares in General Television Corporation Pty Ltd (*see GTV above*) which holds the licence for the station. In addition, Consolidated Press Holdings Ltd holds 141,629 shares in the licensee company.
6AM Northam General Television Corporation Pty Ltd, licensee of 3AK (*see above*) holds all the shares in the licensee company of 6AM, 6PM and 6KG and 51 per cent of the shares in the licensee company of 6GE.
6PM Perth
6KG Kalgoorlie
6GE Geraldton

DAVIES BROS. LTD (*The Mercury, Hobart*)

Television

TVT Hobart Holds 165,099 of the 1,439,235 shares in the licensee company and, in addition, has a 50 per cent interest in Commercial Broadcasters Pty Ltd which holds 40,000 shares in the licensee company.

Broadcasting

7HO Hobart Holds 12,000 of the 24,000 shares in the licensee company.
7EX Launceston Tasmanian Television Ltd, licensee of TVT (*see above*) holds 67,200 shares in Examiner-Northern TV Ltd which holds all the shares in W. R. Rolph & Sons Pty Ltd, a subsidiary company of which, holds all the shares in the licensee company.

(*See below for interests of Tasmanian Television Ltd. In addition, Davies Bros. Ltd holds 9,000 of the 54,834,005 ordinary shares in The Herald and Weekly Times Ltd (*see below*) and 19,440 of the 23,460,000 ordinary shares in Advertiser Newspapers Ltd (*see above*).*)

JOHN FAIRFAX LTD (*The Sydney Morning Herald*)

Television

Directly and through subsidiary companies:

CTC Canberra Area Holds 360,000 of the 1,200,000 stock units in the licensee company.
ATN Sydney Holds 1,403,526 of the 1,494,118 shares in the licensee company.
NBN Newcastle-Hunter River Area John Fairfax Ltd has a 45 per cent interest in Newcastle Newspapers Pty Ltd, which through a wholly-owned subsidiary company, Newcastle Morning Herald and Miners' Advocate Pty Ltd holds 144,000 of the 1,500,000 shares in the licensee company.
RTN Richmond-Tweed Area Canberra Television Ltd, licensee of CTC (*see above*) holds 69,000 of the 1,399,800 shares in the licensee company.
WIN Illawarra Area Holds 101,000 of the 1,000,000 stock units in the licensee company.
AMV Upper Murray Area Holds 54,900 of the 1,100,000 shares in the licensee company.
BTV Ballarat Area Canberra Television Ltd, (*see above*), holds 95,059 of the 1,400,000 shares in the licensee company.
QTQ Brisbane Holds 1,308,000 of the 3,027,200 stock units in the licensee company. In addition, the licensee of ATN Sydney (*see above*) holds 500,800 stock units in the licensee company.
DDQ Darling Downs Area Newcastle Broadcasting and Television Corporation Ltd, licensee of NBN
SDQ Southern Downs Area (*see above*) holds 50,000 of the 1,400,000 shares in the licensee company.

Broadcasting

2NM Muswellbrook Has a 45 per cent interest in Newcastle Newspapers Pty Ltd which, through a wholly-owned subsidiary company, Newcastle Morning Herald and Miners' Advocate Pty Ltd, holds 8,314 of the 30,220 shares in the licensee company.
2NX Bolwarra
3XY Melbourne John Fairfax & Sons Ltd holds 2,241,400 of the 6,000,000 ordinary shares in David Syme & Co. Ltd, which has a 50 per cent interest in the operating company of 3XY

John Fairfax Ltd, through wholly-owned subsidiary companies, holds 1,148,400 of the 4,400,000 ordinary shares in Macquarie Broadcasting Holdings Ltd, which, through subsidiary companies, has the following interest in broadcasting stations:

2GB Sydney Holds all the shares in the licensee company.
2CA Canberra Holds 30,000 ordinary and 1,550 preference shares in totals of 30,000 ordinary and 2,050 preference shares in the licensee company.

APPENDIX I — continued

2LF	Young	• • •	Holds 8,612 of the 17,112 shares in the licensee company.
2WL	Wollongong	• • •	Holds all the shares in the licensee company.
3AW	Melbourne	• • •	Holds 45,000 of the 56,000 shares in the licensee company.
4BH	Brisbane	• • •	Holds 1,875 of the 12,500 shares in the licensee company.
5DN	Adelaide	• • •	Holds 5,000 ordinary and 2,000 preference shares in totals of 8,405 ordinary and 4,000 preference shares in the licensee company.

THE HERALD AND WEEKLY TIMES LTD (*The Herald, Melbourne*)

Television

HSV	Melbourne	• • •	Holds 637,505 of the 750,005 shares in the licensee company.
BTQ	Brisbane	• • •	Holds 40,000 of the 1,450,000 shares in the licensee company and 2,917,793 of the 7,212,901 shares in Queensland Press Ltd, which through two wholly-owned subsidiary companies, Telegraph Newspaper Co. Pty Ltd and Queensland Newspapers Pty Ltd holds 403,000 of the 1,450,000 shares in the licensee company. In addition, Advertiser Newspapers Ltd (<i>see ADS below</i>) holds 110,000 of the 7,212,901 shares in Queensland Press Ltd.
ADS	Adelaide	• • •	Holds 7,192,704 of the 23,460,000 ordinary shares in Advertiser Newspapers Ltd, which, with its wholly-owned subsidiary company, Midlands Broadcasting Services Ltd, holds 1,220,000 of the 3,000,000 shares in the licensee company. The Argus and Australasian Ltd, a wholly-owned subsidiary company, also holds 51,840 shares in Advertiser Newspapers Ltd. In addition, Davies Bros. Ltd (<i>see TVT below</i>) holds 19,440 and Telegraph Newspaper Co. Pty Ltd (<i>see BTQ above</i>) holds 24,000 of the 23,460,000 ordinary shares in Advertiser Newspapers Ltd.
TVT	Hobart	• • •	Holds 417,236 of the 866,600 ordinary shares in Davies Bros. Ltd, which holds 165,099 of the 1,439,235 shares in the licensee company. Davies Bros. Ltd also has a 50 per cent interest in Commercial Broadcasters Pty Ltd, which holds 40,000 shares in the licensee company. In addition, Telegraph Newspaper Co. Pty Ltd (<i>see BTQ above</i>) holds 53,866 of the 866,600 ordinary shares in Davies Bros. Ltd.
TVW	Perth	• • •	Holds all the 9,216,316 ordinary shares in West Australian Newspapers Ltd (Publisher of <i>The West Australian</i> , Perth) which holds 25,000 of the 1,349,968 shares in the licensee company.

Broadcasting

3DB	Melbourne	• • •	Holds the licences for both stations.
3LK	Lubeck	• • •	
3XY	Melbourne	• • •	Holds 601,700 of the 6,000,000 ordinary shares in David Syme and Co. Ltd which has a 50 per cent interest in the operating company of 3XY.
4AK	Oakey	• • •	Holds 2,917,793 of the 7,212,901 ordinary shares in Queensland Press Ltd (<i>see below</i>).
4BK	Brisbane	• • •	
4AM	Atherton	• • •	
4BH	Brisbane	• • •	W.A. Broadcasters Pty Ltd, a wholly-owned subsidiary company of West Australian Newspapers Ltd (<i>see TVW above</i>), holds 1,090 of the 12,500 shares in the licensee company. In addition Davies Bros. Ltd (<i>see TVT above</i>) holds 260 of the shares in the licensee company and Commercial Broadcasters Pty Ltd, in which Davies Bros. Ltd holds 50 per cent of the shares, holds 520 of the shares in the licensee company.
5AD	Adelaide	• • •	Holds 7,192,704 of the 23,460,000 ordinary shares in Advertiser Newspapers Ltd (licensee of 5AD), subsidiary companies of which hold the licences for 5PI, 5MU and 5SE. The Argus and Australasian Ltd, a wholly-owned subsidiary company of <i>The Herald and Weekly Times Ltd</i> , also holds 51,840 shares in the licensee company of 5AD. <i>The Herald and Weekly Times Ltd</i> has a further interest in Advertiser Newspapers Ltd through its shareholdings in Davies Bros. Ltd and Telegraph Newspaper Co. Pty Ltd (subsidiary of Queensland Press Ltd) which holds 19,400 and 24,000 shares respectively in Advertiser Newspapers Ltd.
5MU	Murray Bridge	• • •	
5PI	Crystal Brook	• • •	
5SE	Mount Gambier	• • •	
6IX	Perth	• • •	TVW Ltd, licensee of TVW (<i>see above</i>) holds the licences for the stations.
6BY	Bridgetown	• • •	
6MD	Merredin	• • •	
6WB	Katanning	• • •	
7HO	Hobart	• • •	Holds 417,236 of the 866,600 ordinary shares in Davies Bros. Ltd which has a 50 per cent interest in the licensee company. <i>The Herald and Weekly Times Ltd</i> has a further interest in Davies Bros. Ltd through its shareholding in Queensland Press Ltd, a subsidiary company of which Telegraph Newspaper Co. Pty Ltd holds 53,866 shares.

APPENDIX I — continued

7EX	Launceston	• • •	Tasmanian Television Ltd, licensee of TVT (<i>see above</i>) holds 67,200 shares in Examiner-Northern TV Ltd which holds all the shares in W. R. Rolph & Sons Pty Ltd, a subsidiary company of which holds all the shares in the licensee company.
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(*See below for interests of Tasmanian Television Ltd (see above). W.A. Broadcasters Pty Ltd (see 4BH above) holds 127,418 of the 4,400,000 shares in Macquarie Broadcasting Holdings Ltd (see below).*)

NEWS LTD (*The News, Adelaide*)

Television

ECN	Manning River Area	• • •	Television New England Ltd, licensee of NEN (<i>see below</i>) holds 59,000 of the 671,000 shares in the licensee company.
NEN	Upper Namoi Area	• • •	Southern Television Corporation Ltd, licensee of NWS (<i>see below</i>) holds 10,000 of the 1,650,000 shares in the licensee company.
TEN	Sydney	• • •	Mirror Newspapers Ltd (<i>The Daily Mirror</i> , Sydney) a subsidiary company, holds 140,000 of the 10,000,000 shares in the licensee company.
WIN	Illawarra Area	• • •	Mirror Newspapers Ltd (<i>The Daily Mirror</i> , Sydney), a subsidiary company, holds 48,000 of the 1,000,000 stock units in the licensee company.
SAS	Adelaide	• • •	United Telecasters Sydney Ltd., licensee of TEN (<i>see above</i>) holds 200,000 of the 3,000,000 shares in the licensee company.
SES	South East (South Australia) Area	• • •	Southern Television Corporation Ltd, licensee of NWS (<i>see below</i>) holds 17,500 of the 599,500 shares in the licensee company.
NWS	Adelaide	• • •	Holds all the 1,150,000 shares in the licensee company.
GTS	Spencer Gulf North Area	• • •	Southern Television Corporation Ltd, licensee of NWS (<i>see above</i>) holds 37,400 of the 770,000 shares in the licensee company.
BTW	Bunbury Area	• • •	Southern Television Corporation Ltd, licensee of NWS (<i>see above</i>) holds 46,000 of the 1,004,000 shares in the licensee company.
GSW	Southern Agricultural Area	• • •	
TVW	Perth	• • •	Southern Television Corporation Ltd, licensee of NWS (<i>see above</i>) holds 20,000 of the 1,349,968 shares in the licensee company.

Broadcasting

2BH	Broken Hill	• • •	Beneficially owns all the shares in the licensee company.
4BH	Brisbane	• • •	Holds 2,244 of the 12,500 shares in the licensee company.
5DN	Adelaide	• • •	Holds 3,405 ordinary and 2,000 preference shares in totals of 8,405 ordinary and 4,000 preference shares in the licensee company.
6KY	Perth	• • •	Through subsidiary companies holds all the shares in the licensee company.
6NA	Narrogin	• • •	

QUEENSLAND PRESS LTD (*Courier-Mail and Brisbane Telegraph, Brisbane*)

Television

BTQ	Brisbane	• • •	Queensland Newspapers Pty Ltd and Telegraph Newspaper Co. Pty Ltd, both wholly-owned subsidiary companies, hold 403,000 of the 1,450,000 shares in the licensee company. In addition holds 513,600 of the 54,834,005 shares in <i>The Herald and Weekly Times Ltd</i> , Queensland Newspapers Pty Ltd and Telegraph Newspaper Co. Pty Ltd also hold 1,794,901 and 1,278,006 shares respectively of the ordinary shares in <i>The Herald and Weekly Times Ltd</i> . Telegraph Newspaper Co. Pty Ltd holds 53,866 of the 866,600 ordinary shares in Davies Bros. Ltd.
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Broadcasting

4AK	Oakey	• • •	Queensland Newspapers Ltd, a wholly-owned subsidiary company, holds the licences for 4AK and 4BK. The Cairns Post Pty Ltd, a wholly owned subsidiary company, holds 8,500 of the 50,000 ordinary shares in the licensee of 4AM.
4BK	Brisbane	• • •	
4AM	Atherton	• • •	

(Telegraph Newspaper Co. Pty Ltd, a wholly-owned subsidiary company, also holds 24,000 of the 23,460,000 ordinary shares in Advertiser Newspapers Ltd. *See above for interests of Advertiser Newspapers Ltd, The Herald and Weekly Times Ltd and Davies Bros. Ltd.*)

(II) PROVINCIAL NEWSPAPERS

ARMIDALE NEWSPAPER CO. LTD (*Armidale Express*)

Television

NEN	Upper Namoi Area	• • •	Holds 20,000 of the 1,650,000 shares in the licensee company. The company also holds 10,000 of the 20,000 shares in New England Broadcasters Pty Ltd which holds 45,000 shares in the licensee company.
ECN	Manning River Area	• • •	Television New England Ltd, licensee of NEN (<i>see above</i>) holds 59,000 of the 671,000 shares in the licensee company.

APPENDIX I — continued

Broadcasting

2AD Armidale Holds 10,000 of the 20,000 shares in the licensee company.

ELLIOTT NEWSPAPER GROUP PTY LTD (*Sunraysia Daily, Mildura and Victorian provincial newspapers*)

Television

STV Mildura Area Holds 41,000 of the 700,000 shares in the licensee company. A wholly-owned subsidiary company, Sunraysia Publishing Co. Pty Ltd holds 32,000 shares in the licensee company. In addition, Sunraysia Broadcasters Pty Ltd, in which half the issued capital is held by Elliott Newspaper Group Pty Ltd, also holds 33,200 shares in the licensee company.

Broadcasting

3MA Mildura Holds the 500 preference shares in the licensee company. There are also 500 ordinary shares in the licensee company.

3NE Wangaratta Holds 50 per cent of the shares in Wangaratta Chronicle Pty Ltd, which company holds 1,000 of the 27,650 shares in the licensee company.

EXAMINER-NORTHERN TV LTD (*The Examiner, Launceston*)

Television

TNT North Eastern Tasmania A wholly-owned subsidiary company, Northern Television (TNT9) Pty Ltd holds the licence for the station.

TVT Hobart Three wholly-owned subsidiary companies, The Examiner Newspaper Pty Ltd, 7EX Pty Ltd and Northern Television (TNT9) Pty Ltd hold 87,750, 27,000 and 26,150 shares respectively of the 1,439,235 shares in the licensee company.

Broadcasting

7EX Launceston Holds all the shares in W. R. Rolph and Sons Pty Ltd, a subsidiary of which holds all the shares in the licensee company.

(See below for interests of Tasmanian Television Ltd. In addition, W. R. Rolph and Sons Pty Ltd and Examiner-Northern TV Ltd hold 33,750 and 2,100 of the 866,600 ordinary shares in Davies Bros. Ltd (see above).)

NEWCASTLE MORNING HERALD AND MINERS' ADVOCATE PTY LTD (*Morning Herald, Newcastle*)

Television

NBN Newcastle-Hunter River Holds 144,000 of the 1,500,000 shares in the licensee company.

DDQ Darling Downs Area Newcastle Broadcasting and Television Corporation Ltd, licensee of NBN (see above) holds 50,000 of the 1,400,000 shares in the licensee company.

SDQ Southern Downs Area Holds 8,314 of the 30,220 shares in the licensee company.

2NM Muswellbrook Holds 8,314 of the 30,220 shares in the licensee company.

2NX Bolwarra Holds 8,314 of the 30,220 shares in the licensee company.

NORTHERN NEWSPAPERS PTY LTD (*Various Newspapers in Northern New South Wales*)

Television

NEN Upper Namoi Area Holds 45,400 of the 1,650,000 shares in the licensee company. The company also holds 3,000 of the 42,001 shares in Armidale Newspaper Co. Ltd, which holds 20,000 shares in the licensee company.

ECN Manning River Area The licensee of NEN (see above) holds 59,000 of the 671,000 shares in the licensee company.

NORTHERN STAR HOLDINGS LTD GROUP (*Northern Star, Lismore, The Gold Coast Bulletin and The Daily News, Murwillumbah*)

Television

RTN Richmond-Tweed Area Holds 369,975 of the 1,399,800 shares in the licensee company and in addition holds 5,067 of the 16,450 shares in Tweed Radio and Broadcasting Company Pty Ltd, licensee of 2MW (see below) which holds 82,600 shares in the licensee company.

NRN Grafton-Kempsey Area Holds 6,578 of the 59,116 shares in The Daily Examiner Pty Ltd, which holds 60,000 of the 830,000 shares in the licensee company, and in addition also holds approximately 20 per cent of the issued capital in Central North Coast Newspaper Co. Pty Ltd, which holds 20,000 shares in the licensee company.

Broadcasting

2LM Lismore The licensee company, Richmond River Broadcasters Pty Ltd, is a wholly-owned subsidiary company.

2MW Murwillumbah Holds 5,067 of the 16,450 shares in the licensee company.

APPENDIX I — continued

4GG Gold Coast Holds 27,116 of the 98,510 shares in the licensee company and in addition Tweed Radio and Broadcasting Company Pty Ltd, licensee of 2MW (see above) holds 4,339 of the 98,510 shares in the licensee company.

PROVINCIAL NEWSPAPERS (QLD) LTD (*Publishers of various Queensland Country Newspapers*)

Television

RTQ Rockhampton Area Rockhampton Newspaper Co. Pty Ltd, a wholly-owned subsidiary company, holds 80,000 of the 1,000,000 shares in the licensee company.

DDQ Darling Downs Area Toowoomba Newspaper Co. Pty Ltd and Warwick Newspaper Co. Pty Ltd, wholly-owned subsidiary companies, hold 52,000 and 18,000 shares respectively of the 1,400,000 shares in the licensee company.

SDQ Southern Downs Area Maryborough Newspaper Co. Pty Ltd, a wholly-owned subsidiary company, holds 25,000 of the 1,000,000 shares in the licensee company. In addition, Provincial Newspapers (Qld.) Ltd holds 75 per cent of the shares in Provincial Investments Pty Ltd, which holds 51,256 of the 98,160 shares in The Bundaberg Newspaper Co. Pty Ltd which holds 25,000 shares in the licensee company.

WBQ Wide Bay Area Mackay Printing and Publishing Co. Pty Ltd, a wholly-owned subsidiary company, holds 30,000 of the 640,000 shares in the licensee company.

MVQ Mackay Area (Mackay Printing and Publishing Co. Pty Ltd, a wholly-owned subsidiary company, holds 131,085 of the 2,621,739 shares in Victorian Broadcasting Network Ltd (see below).)

A. & F. SULLIVAN PTY LTD (*Daily Advertiser, Wagga, and Post, Goulburn*)

Television

CTC Canberra Area A wholly-owned subsidiary company, Daniel Bros. & Co. Pty Ltd, holds 59,600 of the 1,200,000 stock units in the licensee company, Canberra Television Ltd.

AMV Upper Murray Area Holds 159,700 of the 1,100,000 shares in the licensee company.

Broadcasting

4BH Brisbane Holds 2,245 of the 12,500 shares in the licensee company. (See below for interests of Canberra Television Ltd.)

TAMWORTH NEWSPAPER CO. LTD (*The Northern Daily Leader*)

Television

NEN Upper Namoi Area Holds 102,000 of the 1,650,000 shares in the licensee company.

ECN Manning River Area Television New England Ltd, licensee of NEN (see above) holds 59,000 of the 671,000 shares in the licensee company.

(Tamworth Newspaper Co. Ltd also holds 2,550 of the 80,000 shares in Broadcast Amalgamated Ltd (see below).)

(III) OVERSEAS NEWSPAPERS

ASSOCIATED NEWSPAPERS LTD (ENGLAND) GROUP

Television

HSV Melbourne Holds 112,500 of the 750,005 shares in the licensee company.

BTQ Brisbane Holds 100,000 of the 1,450,000 shares in the licensee company.

ADS Adelaide Holds 375,000 of the 3,000,000 shares in the licensee company.

(A nominee company, Commercial Nominees Ltd, holds 569,600 of the 11,255,631 ordinary shares in News Ltd (see above).)

(IV) OTHER ORGANISATIONS

ADELAIDE CENTRAL METHODIST MISSION INC.

Television

ADS Adelaide Holds 32,000 of the 40,000 shares in 5KA Holdings Ltd which holds 300,000 of the 3,000,000 shares in the licensee company.

Broadcasting

5KA Adelaide Holds 12,000 of the 15,000 shares in the licensee company.

5AU Port Augusta Holds 1,600 of the 2,000 shares in the licensee company.

5RM Renmark Holds 5,821 of the 8,176 shares in the licensee company.

AMALGAMATED WIRELESS (A'ASIA) LTD

Television

TEN Sydney Holds 1,111,111 of the 10,000,000 shares in the licensee company.

NRN Grafton-Kempsey Area Holds 40,000 of the 880,000 shares in the licensee company.

ECN Manning River Area Holds 31,000 of the 671,000 shares in the licensee company.

APPENDIX I — continued

AMV	Upper Murray Area . . .	Holds 45,000 of the 1,100,000 shares in the licensee company.
BTQ	Brisbane	Holds 60,000 of the 1,450,000 shares in the licensee company.
DDQ	Darling Downs Area . . .	Holds 34,000 of the 1,400,000 shares in the licensee company.
SDQ	Southern Downs Area . . .	
RTQ	Rockhampton Area	Holds 25,000 of the 1,000,000 shares in the licensee company.
TNQ	Townsville Area	Holds 40,245 of the 804,914 shares in the licensee company.
MVQ	Mackay Area	Telecasters North Queensland Ltd, licensee of TNQ (<i>see above</i>) holds 32,000 of the 640,000 shares in the licensee company.
SAS	Adelaide	United Telecasters Sydney Ltd, licensee of TEN (<i>see above</i>) holds 200,000 of the 3,000,000 shares in the licensee company.
GTS	Spencer Gulf North Area . .	Holds 33,000 of the 770,000 shares in the licensee company.
TNT	North Eastern Tasmania Area	Findlay and Wills Broadcasters Pty Ltd, licensee of 7LA (<i>see below</i>) in which Amalgamated Wireless (A'asia) Ltd holds 20,000 of the 40,000 shares, holds 169,650 of the 2,000,000 stock units in Examiner-Northern TV Ltd, a wholly-owned subsidiary of which, Northern Television (TNT9) Pty Ltd is the licensee company.
TVT	Hobart	Two wholly-owned subsidiary companies of Examiner-Northern TV Ltd (<i>see above</i>), The Examiner Newspaper Pty Ltd and 7EX Pty Ltd hold 87,750 and 27,000 shares respectively of the 1,439,235 shares in the licensee company, Tasmanian Television Ltd. In addition, Northern Television (TNT9) Pty Ltd, licensee of TNT (<i>see above</i>) holds 26,150 shares.

Broadcasting

2AY	Albury	Holds the licences for the stations.
2GF	Grafton	
2GN	Goulburn	
3BO	Bendigo	
4CA	Cairns	
4TO	Townsville	
4WK	Warwick	
2CH	Sydney	By agreement with the licensee, conducts the service of the station.
7LA	Launceston	Holds 20,000 of the 40,000 shares in the licensee company.
2KA	Katoomba	Holds 1,000 of the 3,643 preference shares in the licensee company. There are also 43,024 ordinary shares in the licensee company.
2LT	Lithgow	Transcontinental Broadcasting Corporation Ltd, licensee of 2KA (<i>see above</i>) holds all the shares in the licensee company.
7EX	Launceston	Examiner-Northern TV Ltd (<i>see above</i>) holds all the shares in W. R. Rolph and Sons Pty Ltd, a subsidiary of which holds all the shares in the licensee company.
4BH	Brisbane	Findlay and Wills Broadcasters Pty Ltd, in which Amalgamated Wireless (A'asia) Ltd holds 20,000 of the 40,000 shares, holds 1,875 of the 12,500 shares in the licensee company.

(*See below* for interests of Tasmanian Television Ltd. In addition:

- (i) Amalgamated Wireless (A'asia) Ltd holds 60,321 of the 2,621,739 shares in Victorian Broadcasting Network Ltd (*see below*);
- (ii) W. R. Rolph and Sons Pty Ltd (*see 7EX above*) holds 33,750 of the 866,600 ordinary shares in Davies Bros. Ltd (*see above*); and
- (iii) Findlay and Wills Broadcasters Pty Ltd holds 55,863 of the 4,400,000 shares in Macquarie Broadcasting Holdings Ltd (*see below*).

ANSETT TRANSPORT INDUSTRIES LTD

Television

TEN	Sydney	Holds 133,333 of the 10,000,000 shares in the licensee company.
ATV	Melbourne	Austarama Television Pty Ltd, the licensee company, is a wholly-owned subsidiary company.
TVQ	Brisbane	Universal Telecasters Qld. Ltd, the licensee company is a wholly-owned subsidiary company.
SAS	Adelaide	Holds 100,000 of the 3,000,000 shares in the licensee company. In addition, United Telecasters Sydney Ltd, licensee of TEN (<i>see above</i>) holds 200,000 shares in the licensee company.
STW	Perth	Holds 72,000 of the 1,600,000 shares in the licensee company.

ASSOCIATED BROADCASTING SERVICES LTD.

Television

CTC	Canberra Area	Holds 20,000 of the 1,200,000 stock units in the licensee company, Canberra Television Ltd.
NEN	Upper Namoi Area	Goulburn-Murray Television Ltd, licensee of GMV (<i>see above</i>) holds 20,000 of the 1,650,000 shares in the licensee company.

APPENDIX I — continued

ECN	Manning River Area	Television New England Ltd, licensee of NEN (<i>see above</i>) holds 59,000 of the 671,000 shares in the licensee company.
BTQ	Ballarat Area	Holds 377,220 of the 1,400,000 shares in the licensee company.
GMV	Goulburn Valley Area	Goulburn-Valley Television Ltd, the licensee company, is a wholly-owned subsidiary company.
RTQ	Rockhampton Area	Goulburn-Murray Television Ltd holds 10,000 of the 1,000,000 shares in the licensee company.
TNQ	Townsville Area	Goulburn-Murray Television Ltd holds 15,000 of the 804,914 stock units in the licensee company.
WBQ	Wide-Bay Area	Goulburn-Murray Television Ltd holds 10,000 of the 1,000,000 shares in the licensee company.
STW	Perth	Goulburn-Murray Television Ltd holds 11,000 of the 1,600,000 shares in the licensee company.
TVW	Perth	Goulburn-Murray Television Ltd holds 64,000 of the 1,349,968 shares in the licensee company.
TVT	Hobart	Holds 60,000 of the 1,439,235 shares in the licensee company, Tasmanian Television Ltd.

Broadcasting

3CS	Colac	Holds the licences for the stations.
3SR	Shepparton	
3UL	Warragul	
3YB	Warrnambool	
4BH	Brisbane	Holds 203 of the 12,500 shares in the licensee company.
6IX	Perth	TVW Ltd, licensee of TVW (<i>see above</i>), holds the licences for the stations.
6BY	Bridgetown	
6MD	Merredin	
6WB	Katanning	

(Associated Broadcasting Services Ltd also holds 118,300 of the 4,400,000 shares in Macquarie Broadcasting Holdings Ltd. *See below* for interests of Macquarie Broadcasting Holdings Ltd, Canberra Television Ltd, and Tasmanian Television Ltd.)

AUSTRALIAN BROADCASTING CO. PTY LTD

Television

ATN	Sydney	Holds 58,592 of the 1,494,118 shares in the licensee company.
BTQ	Brisbane	A wholly-owned subsidiary company Commonwealth Broadcasting Corporation (Q'land) Ltd, holds 50,000 of the 1,450,000 shares in the licensee company.
DDQ	Darling Downs Area	Holds 26,800 of the 1,400,000 shares in the licensee company, and Commonwealth Broadcasting Corporation (Q'land) Ltd holds 210,000 shares in the licensee company. In addition, Gold Radio Service Pty Ltd, licensee of 4GR (<i>see below</i>) holds 70,000 of the shares in the licensee company.
SDQ	Southern Downs Area	
QTQ	Brisbane	Amalgamated Television Services Ltd, licensee of ATN (<i>see above</i>) holds 500,800 stock units in the licensee company.
RTQ	Rockhampton Area	Holds 10,000 of the 1,000,000 shares in the licensee company and in addition, Rockhampton Broadcasting Company Pty Ltd, licensee of 4RO (<i>see below</i>), holds 40,000 of the 1,000,000 shares in the licensee company.
WBQ	Wide-Bay Area	Maryborough Broadcasting Co. Pty Ltd, licensee of 4MB (<i>see below</i>) holds 40,000 shares in the licensee company.
ADS	Adelaide	Holds 74,700 of the 3,000,000 shares in the licensee company.

Broadcasting

Through wholly-owned subsidiary companies, Commonwealth Broadcasting Corporation Pty Ltd and Commonwealth Broadcasting Corporation (Q'land) Ltd.

2UW	Sydney	Holds the licence for the station.
4BC	Brisbane	Holds the licence for the station.
4GR	Toowoomba	Holds 1,663 of the 3,300 shares in the licensee company.
4MB	Maryborough	Holds 1,060 of the 2,000 shares in the licensee company.
4RO	Rockhampton	Holds all the shares in the licensee company.
4SB	Kingaroy	Holds 1,300 of the 3,395 ordinary shares in the licensee company. There are also 2,405 preference shares in the licensee company.
4ZR	Roma	Gold Radio Service Pty Ltd, licensee of 4GR (<i>see above</i>), holds 934 ordinary and 45 preference of the 9,000 ordinary and 1,000 preference shares in the licensee company.

APPENDIX I — continued

AUSTRALIAN MUTUAL PROVIDENT SOCIETY

Television

CTC	Canberra Area	Holds 36,200 of the 1,200,000 stock units in the licensee company.
CBN	Central Tablelands Area	Holds 70,000 of the 1,689,518 stock units in the licensee company.
CWN	Central Western Slopes Area	
TCN	Sydney	Holds 107,639 of the 10,205,622 stock units in the licensee company.
STW	Perth	Holds 80,000 of the 1,600,000 shares in the licensee company.
TVT	Hobart	Holds 41,500 of the 1,439,235 shares in the licensee company, Tasmanian Television Ltd. (See below for interests of Tasmanian Television Ltd.)

Broadcasting

2GZ	Orange	A wholly-owned subsidiary company of Country Television Services Ltd, licensee of CBN/CWN (see above) holds all the shares in the licensee company.
2NZ	Inverell	Country Broadcasting Services Ltd, licensee of 2GZ (see above) holds all the shares in the licensee company.

BANK OF NEW SOUTH WALES

Television

TEN	Sydney	Holds 664,666 of the 10,000,000 shares in the licensee company.
NBN	Newcastle-Hunter River Area	Two wholly-owned subsidiary companies hold in the aggregate 329,498 of the 1,500,000 shares in the licensee company.
SAS	Adelaide	United Telecasters Sydney Ltd, licensee of TEN (see above), holds 200,000 of the 3,000,000 shares in the licensee company.
DDQ	Darling Downs Area	Newcastle Broadcasting and Television Corporation Ltd, licensee of NBN (see above), holds 50,000 of the 1,400,000 shares in the licensee company.
SDQ	Southern Downs Area	

BORAL LTD

Television

Boral Ltd and its wholly-owned subsidiary companies Mt. Lyell Investments Ltd and Huddart Parker Ltd hold 8,470,346 of the 47,936,291 ordinary and 2,000,000 of the 4,000,000 7½% redeemable cumulative preference shares in Ansett Transport Industries Ltd (see above). There are also 322,000 5% cumulative preference and 202,250 10% cumulative preference shares in Ansett Transport Industries Ltd.

BROADCAST AMALGAMATED LTD

Television

NEN	Upper Namoi Area	Holds directly and through subsidiary and associated companies 474,390 of the 1,650,000 shares in the licensee company.
ECN	Manning River Area	Holds 34,600 of the 671,000 shares in the licensee company. Television New England Ltd, licensee of NEN (see above) holds a further 59,000 shares. In addition, Broadcast Amalgamated Ltd holds 2,850 of the 25,000 shares in Manning Valley Broadcasting Pty Ltd, which through a wholly-owned subsidiary company, holds 103,600 shares in the licensee company.

Broadcasting

2AD	Armidale	Holds 10,000 of the 20,000 shares in the licensee company.
2RE	Taree	Holds 2,850 of the 25,000 shares in the licensee company.
2MO	Gunnedah	Holds 11,876 of the 11,878 shares in the licensee company.
2TM	Tamworth	Holds 9,998 of the 10,000 shares in the licensee company.

CAMPLIN BROADCASTERS PTY LTD

Broadcasting

2BS	Bathurst	Holds all the shares in the licensee company.
2MG	Mudgee	Holds all the shares in the licensee company.

CANNBERRA TELEVISION LTD

Television

CTC	Canberra Area	Holds the licence for the station.
RTN	Richmond-Tweed Area	Holds 69,000 of the 1,399,800 stock units in the licensee company.
BTN	Ballarat Area	Holds 95,059 of the 1,400,000 shares in the licensee company.
BTW	Bunbury Area	Holds 12,700 of the 1,004,000 shares in the licensee company.
GSW	Southern Agricultural Area	

APPENDIX I — continued

W. R. CARPENTER HOLDINGS LTD

Television

W. R. Carpenter Holdings Ltd and its wholly-owned subsidiary company W. R. Carpenter and Co. Ltd hold 2,935,000 of the 47,936,291 ordinary shares in Ansett Transport Industries Ltd. There are also 322,000 5% cumulative preference, 202,250 10% cumulative preference and 4,000,000 7½% redeemable cumulative preference shares in Ansett Transport Industries Ltd.

COUNTRY TELEVISION SERVICES LTD

Television

CBN	Central Tablelands Area	Holds the licences for the stations.
CWN	Central Western Slopes Area	
RTN	Richmond-Tweed Area	Holds 6,900 of the 1,399,800 shares in the licensee company.

Broadcasting

2GZ	Orange	Holds all the shares in the licensee company of 2GZ, which in turn, holds all the shares in the licensee company of 2NZ.
2NZ	Inverell	

DARLING DOWNS TV LTD

Television

DDQ	Darling Downs Area	Holds the licences for the stations.
SDQ	Southern Downs Area	

ELECTRONIC INDUSTRIES LTD

Television

BKN	Broken Hill Area	Holds 10,000 of the 200,000 shares in the licensee company.
STV	Mildura Area	Holds 34,000 of the 700,000 shares in the licensee company.
SES	South East (South Australia) Area	Holds 89,000 of the 599,500 shares in the licensee company.
GTS	Spencer Gulf North Area	Holds 115,500 of the 770,000 shares in the licensee company.
BTW	Bunbury Area	Harris, Scarfe and Sandovers Ltd, a wholly-owned subsidiary company, holds 42,000 of the 1,004,000 shares in the licensee company.
GSW	Southern Agricultural Area	

EMAIL LTD

Television

CBN	Central Tablelands Area	Holds 226,400 of the 1,689,518 stock units in the licensee company.
CWN	Central Western Slopes Area	
TEN	Sydney	Holds 1,111,110 of the 10,000,000 shares in the licensee company.
BTQ	Brisbane	Holds 10,000 of the 1,450,000 shares in the licensee company.
SAS	Adelaide	United Telecasters Sydney Ltd, licensee of TEN (see above) holds 200,000 of the 3,000,000 shares in the licensee company.

Broadcasting

2GZ	Orange	A wholly-owned subsidiary company of Country Television Services Ltd, licensee of CBN/CWN (see above) holds all the shares in the licensee company.
2NZ	Inverell	Country Broadcasting Services Ltd, licensee of 2GZ (see above) holds all the shares in the licensee company.

(Email Ltd. also holds 90,800 of the 16,192,833 stock units in Amalgamated Wireless (A'asia) Ltd (see above).)

FAR PTY LTD

Television

NBN	Newcastle-Hunter River Area	Holds 152,000 of the 1,500,000 shares in the licensee company.
WIN	Illawarra Area	Holds 110,500 of the 1,000,000 shares in the licensee company.
DDQ	Darling Downs Area	Newcastle Broadcasting and Television Corporation Ltd, licensee of NBN (see above), holds 50,000 of the 1,400,000 shares in the licensee company.
SDQ	Southern Downs Area	

FINDLAYS BROADCASTING SERVICES PTY LTD

Broadcasting

7AD	Devonport	Holds all the shares in the licensee companies.
7BU	Burnie	
7SD	Scottsdale	
7QT	Queenstown	Burnie Broadcasting Service Pty Ltd, licensee of 7BU (see above), holds 670 of the 5,100 shares in the licensee company.

APPENDIX I — continued

H. E. HENDY

Television

CTC Canberra Area . . .	Tenilba Investments Pty Ltd (<i>see above</i>) holds 22,000 of the 1,200,000 stock units in the licensee company, Canberra Television Ltd.
NBN Newcastle-Hunter River Area . . .	Euroka Pty Ltd (<i>see above</i>) holds 101,150 of the 1,500,000 shares in the licensee company.
WIN Illawarra Area . . .	Euroka Pty Ltd (<i>see above</i>) holds 131,800 of the 1,000,000 shares in the licensee company.
AMV Upper Murray Area . . .	Tenilba Investments Pty Ltd (<i>see above</i>) holds 54,700 of the 1,100,000 shares in the licensee company.
DDQ Darling Downs Area . . .	Newcastle Broadcasting and Television Corporation Ltd, licensee of NBN (<i>see above</i>) holds 50,000 of the 1,400,000 shares in the licensee company.
SDQ Southern Downs Area . . .	Euroka Pty Ltd, P.M.S. Investments Pty Ltd and Tenilba Investments Pty Ltd, in which all the shares are owned by H. E. Hendy, hold in the aggregate 309,000 of the 3,027,200 stock units in the licensee company.
QTQ Brisbane . . .	

(*See above for interests of Canberra Television Ltd.*)

HENDERSON HOLDINGS PTY LTD

Television

RVN South-Western Slopes and Eastern Riverina Area . . .	Holds 150,000 of the 1,000,000 shares in the licensee company.
QTQ Brisbane . . .	Holds 17,172 of the 3,027,200 stock units in the licensee company.

(Henderson Holdings Pty Ltd also holds all the 25,000 'B' ordinary shares in totals of 100 'A' preference, 25,000 'B' ordinary and 25,000 'C' ordinary shares in A. & F. Sullivan Pty Ltd (*see above*).)

HENRY JONES (IXL) LTD

Television

Through subsidiary companies — MTN Murrumbidgee Irrigation Areas . . .	Holds 392,599 of the 1,000,000 shares in the licensee company.
TVT Hobart . . .	Metropolitan Broadcasters Pty Ltd, licensee of 7HT (<i>see below</i>) holds 50,300 of the 1,439,235 shares in the licensee company, Tasmanian Television Ltd.

(*See below for interests of Tasmanian Television Ltd.*)

Broadcasting

2RG Griffith . . .	Murrumbidgee Television Ltd, licensee of MTN (<i>see above</i>) holds 5,667 of the 20,000 shares in the licensee company.
7QT Queenstown . . .	Metropolitan Broadcasters Pty Ltd, licensee of 7HT (<i>see below</i>) holds 670 of the 5,100 shares in the licensee company.
7HT Hobart . . .	Holds 28,500 of the 50,000 shares in the licensee company. There are also 50,000 'B' shares.

HUNTER BROADCASTERS PTY LTD

Broadcasting

2NM Muswellbrook . . .	Holds the licences for the stations.
2NX Bolwarra . . .	

MCCAULEY FAMILY GROUP

Television

Through associated companies — NRN Grafton-Kempsey Area . . .	Holds 100,000 of the 880,000 shares in the licensee company.
2KM Kempsey . . .	Holds 68,781 ordinary and 225 preference of the 110,000 ordinary and 2,085 preference shares in the licensee company.
2KA Katoomba . . .	Holds 32,431 ordinary and 465 preference of the 43,024 ordinary and 3,643 preference shares in the licensee company.
2LT Lithgow . . .	Transcontinental Broadcasting Corporation Ltd, licensee of 2KA Katoomba (<i>see above</i>) holds all the shares in the licensee company.

MACQUARIE BROADCASTING HOLDINGS LTD

Broadcasting

Through wholly-owned subsidiary companies — 2GB Sydney . . .	Holds all the shares in the licensee companies.
2WL Wollongong . . .	
2CA Canberra . . .	Holds 30,000 ordinary and 1,550 preference shares in totals of 30,000 ordinary and 2,050 preference shares in the licensee company.
2GZ Orange . . .	A wholly-owned subsidiary company of Country Television Services Ltd, licensee of CBN/CWN (<i>see above</i>) holds all the shares in the licensee company.

APPENDIX I — continued

2NZ Inverell . . .	Country Broadcasting Services Ltd, licensee of 2GZ (<i>see above</i>) holds all the shares in the licensee company.
2LF Young . . .	Holds 8,612 of the 17,112 shares in the licensee company.
3AW Melbourne . . .	Holds 45,000 of the 56,000 shares in the licensee company.
4BH Brisbane . . .	Holds 1,875 of the 12,500 shares in the licensee company.
5DN Adelaide . . .	Holds 5,000 ordinary and 2,000 preference shares in totals of 8,405 ordinary and 4,000 preference shares in the licensee company.

THE MUTUAL LIFE & CITIZENS ASSURANCE CO. LTD

Television

CBN Central Tablelands Area . . .	Holds 76,500 of the 1,689,518 stock units in the licensee company.
CWN Central Western Slopes Area . . .	
ECN Manning River . . .	Holds 5,600 of the 671,000 shares in the licensee company. In addition, Television New England Ltd, licensee of NEN (<i>see below</i>) holds 59,000 shares in the licensee company.
NEN Upper Namoi Area . . .	Holds 72,000 of the 1,650,000 shares in the licensee company.
RTN Richmond-Tweed Area . . .	Holds 20,000 of the 1,399,800 shares in the licensee company.
TCN Sydney . . .	Holds 155,200 of the 10,205,622 stock units in the licensee company.
BTV Ballarat Area . . .	Holds 10,500 of the 1,400,000 shares in the licensee company.
BTQ Brisbane . . .	Holds 25,000 of the 1,450,000 shares in the licensee company.
GTS Spencer Gulf North Area . . .	Holds 25,550 of the 770,000 shares in the licensee company.
SAS Adelaide . . .	Holds 72,000 of the 3,000,000 shares in the licensee company. In addition Universal Telecasters Sydney Ltd, licensee of TEN (<i>see below</i>) holds 200,000 shares in the licensee company.
TVW Perth . . .	Holds 50,000 of the 1,349,968 shares in the licensee company.
STW Perth . . .	Holds 15,000 of the 1,600,000 shares in the licensee company.

Broadcasting

2GZ Orange . . .	A wholly-owned subsidiary company of Country Television Services Ltd, licensee of CBN/CWN (<i>see above</i>) holds all the shares in the licensee company.
2NZ Inverell . . .	Country Broadcasting Services Ltd, licensee of 2GZ (<i>see above</i>) holds all the shares in the licensee company.

NATIONAL MUTUAL LIFE ASSOCIATION OF A/ASIA LTD

Television

TCN Sydney . . .	Holds 43,900 of the 10,205,622 stock units in the licensee company.
TEN Sydney . . .	Holds 10,000 of the 10,000,000 shares in the licensee company.
ECN Manning River Area . . .	Holds 7,000 of the 671,000 shares in the licensee company.
BTQ Brisbane . . .	Holds 14,300 of the 1,450,000 shares in the licensee company. In addition Television Corporation Ltd, licensee of TCN (<i>see above</i>) holds 50,000 of the shares in the licensee company.
ADS Adelaide . . .	Holds 14,600 of the 3,000,000 shares in the licensee company.
SAS Adelaide . . .	Holds 52,000 of the 3,000,000 shares in the licensee company. In addition, Universal Telecasters Sydney Ltd, licensee of TEN (<i>see above</i>) holds 200,000 shares in the licensee company.
BTW Bunbury Area . . .	Holds 15,000 of the 1,004,000 shares in the licensee company.
GSW Southern Agricultural Area . . .	
TVT Hobart . . .	Holds 15,000 of the 1,439,235 shares in the licensee company, Tasmanian Television Ltd. (<i>See below for interests of Tasmanian Television Ltd.</i>)

NBC INTERNATIONAL LTD (CANADA)

Television

TEN Sydney . . .	Holds 998,000 of the 10,000,000 shares in the licensee company.
QTQ Brisbane . . .	Holds 303,000 of the 3,027,200 stock units in the licensee company.
SAS Adelaide . . .	United Telecasters Sydney Ltd (TEN) (<i>see above</i>) holds 200,000 of the 3,000,000 shares in the licensee company.

SOUTH WESTERN TELECASTERS LTD

Television

BTW Bunbury Area . . .	Holds the licences for the stations.
GSW Southern Agricultural Area . . .	

APPENDIX I — continued

TASMANIAN TELEVISION LTD

Television

CTC	Canberra Area	Holds 30,000 of the 1,200,000 stock units in the licensee company, Canberra Television Ltd.
ECN	Manning River Area	Television New England Ltd, licensee of NEN (<i>see below</i>) holds 59,000 of the 671,000 shares in the licensee company.
NEN	Upper Namoi Area	Holds 41,200 of the 1,650,000 shares in the licensee company.
DDQ	Darling Downs Area	Holds 60,000 of the 1,400,000 shares in the licensee company.
SDQ	Southern Downs Area	
SES	South East (South Australia) Area	Holds 20,000 of the 599,500 shares in the licensee company.
TVW	Perth	Holds 66,700 of the 1,349,968 shares in the licensee company.
TNT	North Eastern Tasmania Area	Holds 67,200 of the 2,000,000 stock units in Examiner-Northern TV Ltd, a wholly-owned subsidiary company of which Northern Television (TNT9) Pty Ltd, is the licensee.
TVT	Hobart	Holds the licence for the station.

Broadcasting

6IX	Perth	TVW Ltd licensee of TVW (<i>see above</i>) holds the licence for the stations.
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6BY Bridgetown

6MD Merredin

6WB Katanning

4BH Brisbane

Holds 260 of the 12,500 shares in the licensee company.
(*See above for interests of Examiner-Northern TV Ltd and Canberra Television Ltd. In addition Tasmanian Television Ltd holds 40,000 of the 4,400,000 shares in Macquarie Broadcasting Holdings Ltd and 60,000 of the 2,084,340 shares in Associated Broadcasting Services Ltd (see above).*)

TELECASTERS NORTH QUEENSLAND LTD

Television

TNQ	Townsville Area	Holds the licence for the station.
MVQ	Mackay Area	Holds 32,000 of the 640,000 shares in the licensee company.
FNQ	Cairns Area	Far Northern Television Ltd, the licensee company, is a wholly-owned subsidiary company.

TOORAK RADIO PTY LTD

Broadcasting

The interests which own this company —

4LG	Longreach	Own all the shares in the licensee company.
4LM	Mt. Isa	Hold all the 10,002 ordinary shares and 498 of the 4,998 preference shares in the licensee company.
4IP	Ipswich	Hold all the shares in the licensee company.

2TM MANAGEMENT PTY LTD

Broadcasting

2TM Management Pty Ltd holds 10,000 of the 80,000 shares in Broadcast Amalgamated Ltd and is entitled to appoint three of the five directors (*see above*).

TRANSCONTINENTAL BROADCASTING CORPORATION LTD

Broadcasting

2KA	Katoomba	Holds the licence for the station.
2LT	Lithgow	Holds all the shares in the licensee company.

TVW LTD

Television

TVW	Perth	Holds the licence for the station.
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Broadcasting

6IX	Perth	Holds the licences for the stations.
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6BY Bridgetown

6MD Merredin

6WB Katanning

UNITED BROADCASTING CO. PTY LTD

Television

NBN	Newcastle-Hunter River Area	Radio 2UE Sydney Pty Ltd, licensee of 2UE (<i>see below</i>) holds 83,900 of the 1,500,000 shares in the licensee company. In addition, United Broadcasting Co. Pty Ltd, holds 24,647 of the 199,000 ordinary shares in the Workers' Cash Order and Finance Co. Ltd, which holds 55,000 shares in the licensee company.
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APPENDIX I — continued

NRN	Grafton-Kempsey Area	Radio 2UE Sydney Pty Ltd, (<i>see below</i>) holds 10,000 of the 880,000 shares in the licensee company.
NEN	Upper Namoi Area	Radio 2UE Sydney Pty Ltd holds 10,000 of the 1,650,000 shares in the licensee company.
ECN	Manning River Area	Television New England Ltd, licensee of NEN (<i>see above</i>) holds 59,000 of the 671,000 shares in the licensee company.
TEN	Sydney	Radio 2UE Sydney Pty Ltd holds 309,145 of the 10,000,000 shares in the licensee company.
DDQ	Darling Downs Area	Newcastle Broadcasting and Television Corporation Ltd, licensee of NBN (<i>see above</i>) holds 50,000 of the 1,400,000 shares in the licensee company.
SDQ	Southern Downs Area	
SAS	Adelaide	United Telecasters Sydney Ltd, licensee of TEN (<i>see above</i>) holds 200,000 of the 3,000,000 shares in the licensee company.

Broadcasting

2KO	Newcastle	Holds all the shares in the licensee company.
2UE	Sydney	Holds 12,568 of the 34,092 'A' class shares and all the 45,908 'B' class shares in the licensee company.

UNITED TELECASTERS SYDNEY LTD

Television

TEN	Sydney	Holds the licence for the station.
SAS	Adelaide	United Telecasters Sydney Ltd, licensee of TEN (<i>see above</i>) holds 200,000

VICTORIAN BROADCASTING NETWORK LTD

Television

MTN	Murrumbidgee Irrigation Areas	Nationwide Finance Ltd, (<i>see RTQ below</i>) holds 13,100 of the 1,000,000 shares in the licensee company.
BCV	Bendigo Area	Directly and through a wholly-owned subsidiary company, holds all the shares in the licensee company.
BTV	Ballarat Area	Holds directly, and through wholly-owned subsidiary companies, 69,900 of the 1,400,000 shares in the licensee company.
GLV	Latrobe Valley Area	Holds directly and through wholly-owned subsidiary companies, 1,175,618 of the 1,200,000 ordinary shares and all of the 729,000 preference shares in the licensee company.
STV	Mildura Area	A wholly-owned subsidiary company, holds 35,000 of the 700,000 shares in the licensee company.
RTQ	Rockhampton Area	Nationwide Finance Ltd, in which Victorian Broadcasting Network Ltd, holds 446,200 of the 1,000,000 shares, holds 72,100 of the 1,000,000 shares in the licensee company.
BTW	Bunbury Area	A wholly-owned subsidiary company holds 32,800 of the 1,004,000 shares in the licensee company.
GSW	Southern Agricultural Area	
TNT	North Eastern Tasmania Area	Holds 30,800 of the 2,000,000 stock units in Examiner-Northern TV Ltd, a wholly-owned subsidiary of which, Northern Television (TNT9) Pty Ltd, is the licensee company.

Broadcasting

3CV	Maryborough	Holds approximately 98 per cent of the ordinary shares and all the preference shares in the licensee of 3CV, 3HA, 3SH, and 3TR; all the shares in the licensee of 4MK, and all the shares in the licensee of 6PR, 6TZ and 6CI.
3HA	Hamilton	
3SH	Swan Hill	
3TR	Sale	
4MK	Mackay	
6PR	Perth	
6TZ	Bunbury	
6CI	Collie	
2BS	Bathurst	Holds 30,000 of the 200,000 shares in Camplin Broadcasters Pty Ltd, which company holds all the shares in the companies holding the licences for 2BS and 2MG.
2MG	Mudgee	
3NE	Wangaratta	Holds 4,147 of the 27,650 shares in the licensee company.

(*See above for interests of Examiner-Northern TV Ltd.*)

APPENDIX J

NEWSPAPER INTERESTS OF A MINOR NATURE IN COMMERCIAL BROADCASTING STATIONS AND COMMERCIAL TELEVISION STATIONS

This Appendix lists the newspaper interests in commercial broadcasting stations and commercial television stations which are not shown in Appendix I.

<i>ALBANY ADVERTISER (1932) LTD (Albany Advertiser)</i>	
<i>Broadcasting</i>	
6VA Albany	Holds 7,000 of the 20,000 shares in the licensee company.
<i>BALLARAT COURIER PTY LTD (The Ballarat Courier)</i>	
<i>Television</i>	
BTV Ballarat Area	Holds 102,100 of the 1,400,000 shares in the licensee company. Ballarat Broadcasters Pty Ltd, a wholly-owned subsidiary company, holds 110,000 shares in the licensee company.
<i>Broadcasting</i>	
3BA Ballarat	Holds all the shares in the licensee company.
<i>BORDER MORNING MAIL PTY LTD (The Border Morning Mail, Albury)</i>	
<i>Television</i>	
AMV Upper Murray Area	Holds 44,000 of the 1,100,000 shares in the licensee company.
<i>THE BUNDABERG NEWSPAPER CO. PTY LTD (The News-Mail, Bundaberg)</i>	
<i>Television</i>	
WBQ Wide Bay Area	Holds 25,000 of the 1,000,000 shares in the licensee company.
<i>CENTRAL NORTH COAST NEWSPAPER CO. PTY LTD (The Advocate, Coff's Harbour)</i>	
<i>Television</i>	
NRN Grafton-Kempsey Area	Holds 20,000 of the 880,000 shares in the licensee company.
<i>THE DAILY EXAMINER PTY LTD (The Daily Examiner, Grafton)</i>	
<i>Television</i>	
NRN Grafton-Kempsey Area	Holds 60,000 of the 880,000 shares in the licensee company. The Company also holds approximately 20 per cent of the issued capital of Central North Coast Newspaper Co. Pty Ltd, which holds 20,000 shares in the licensee company.
<i>GEELONG ADVERTISER PTY LTD (Geelong Advertiser)</i>	
<i>Broadcasting</i>	
3GL Geelong	Holds all the shares in the licensee company.
<i>GYMPIE TIMES PTY LTD (The Gympie Times)</i>	
<i>Television</i>	
WBQ Wide Bay Area	Holds 10,000 of the 1,000,000 shares in the licensee company.
<i>Broadcasting</i>	
4GY Gympie	Holds 200 of the 1,500 ordinary shares in the licensee company.
<i>LAURIE & WATSON (The Border Watch, Mount Gambier)</i>	
<i>Television</i>	
SES South East (South Australia) Area	Holds 11,000 of the 599,500 shares in the licensee company.
<i>MACLEAY ARGUS PTY LTD (The Macleay Argus, Kempsey)</i>	
<i>Television</i>	
NRN Grafton-Kempsey Area	Holds 22,500 of the 880,000 shares in the licensee company.

APPENDIX J—continued

<i>MANNING RIVER TIMES PTY LTD (Manning River Times, Taree)</i>	
<i>Television</i>	
ECN Manning River Area	Holds 10,000 of the 671,000 shares in the licensee company.
<i>MURRUMBIDGEE IRRIGATOR PTY LTD (The Murrumbidgee Irrigator, Leeton)</i>	
<i>Television</i>	
MTN Murrumbidgee Irrigation Areas	Holds 7,396 of the 1,000,000 shares in the licensee company.
<i>THE NORTH QUEENSLAND NEWSPAPER CO. LTD (Daily Bulletin, Townsville)</i>	
<i>Television</i>	
TNQ Townsville Area	Holds 40,000 of the 804,914 stock units in the licensee company.
<i>DAVID SYME AND CO. LTD (The Age, Melbourne)</i>	
<i>Broadcasting</i>	
3XY Melbourne	Has a 50 per cent interest in the operating company of 3XY.
<i>WANGARATTA CHRONICLE PTY LTD (Wangaratta Chronicle Dispatch)</i>	
<i>Broadcasting</i>	
3NE Wangaratta	Holds 1,000 of the 27,650 shares in the licensee company.
<i>WESTERN NEWSPAPERS LTD (The Central Western Daily, Orange)</i>	
<i>Television</i>	
CBN Central Tablelands Area	Holds directly and through subsidiary companies 80,000 of the 1,689,518 stock units in the licensee company.
CWN Central Western Slopes Area	
<i>Broadcasting</i>	
2LF Young	Holds 8,498 of 17,112 shares in the licensee company.
2GZ Orange	A wholly-owned subsidiary of Country Television Services Ltd licensee of CBN/CWN (see above) holds all the shares in the licensee company.
2NZ Inverell	Country Broadcasting Services Ltd licensee of 2GZ (see above) holds all the shares in the licensee company.

APPENDIX K

COLOUR TELEVISION QUESTIONNAIRE

General Questions

1. Are you in favour of the early introduction of colour television or do you feel there are sound reasons to delay the introduction?
Give reasons for any views expressed and indicate what you consider to be appropriate dates.
2. Do you regard the promised 18 months' notice of a commencement date for colour television as adequate? If you regard this period as inadequate, indicate your recommended alternative period.
3. What period prior to the formal date for the commencement of regular colour service would you suggest to be allowed for non-commercial test programmes?
4. How much time do you consider will be needed each day for transmission of test patterns:
 - (a) before
 - (b) after
 the formal date of commencement of the colour television service?
5. Do you think any restrictions should be applied in the introduction of colour television, i.e. with respect to:
 - (i) hours of transmission;
 - (ii) areas of development, e.g. Sydney and Melbourne initially, followed by other capital cities and then country areas;
 - (iii) whether colour transmissions in any particular area should be delayed until all stations providing a signal in the area are equipped to transmit colour;
 - (iv) whether there should be any restrictions in relation to the technical means by which colour transmission shall be made, i.e. to provide that colour shall commence only through telecine, videotape, etc.
6. In the United Kingdom, the B.B.C., the I.T.A. and the electrical industry generally, have joined forces to promote colour television actively to the public. Have you any thoughts on initiating or participating in similar activity in Australia?

To Be Answered By Licensees

7. What arrangements have you made for the introduction of colour transmissions? Is your station already equipped to transmit in colour? If not, when do you estimate that the station could be so equipped? Provide an estimate of the cost of conversion to colour and furnish details of the costs involved, if possible, including capital costs and any increased operating costs applicable.
8. What hours of transmission do you propose for colour initially and later?
9. What will be your sources (both local and overseas) of colour programmes? What proportions of Australian and overseas material in colour do you estimate will be used by your station?
10. Do you propose producing colour programmes yourself? If so, give details of the extent of such productions and whether productions will be on videotape or film and the proposed ratio of videotape to film.
11. Do you propose producing advertisements in colour yourself? If so, give details, e.g. videotape or film and the proposed ratio of videotape to film.
12. Could you provide an estimate of the prices you will expect to pay for overseas and local programmes of various types and how these prices compare with costs of monochrome productions?
13. What effect do you anticipate colour will have on the production of advertisements as to content, production costs and charges to advertisers?
14. Have you made any estimates of the number of viewers who will be equipped with colour receivers for each of the five years following the introduction of colour television?

APPENDIX K—continued

To Be Answered By Manufacturers

15. (a) What is your estimate of the retail price of receivers and will this include aerial and installation costs?
 - (b) Do you propose a new line of aerials for colour reception? If so, what will be the retail price in comparison with existing aerials?
 - (c) What annual service charge do you expect to make for colour television and how does this compare with present charges?
16. Do you propose to rent out receivers?
17. Do you propose manufacturing colour picture tubes in Australia? If so, what screen sizes are proposed?
18. Could you provide an estimate of anticipated level of sales of receivers for the five years from the formal date of commencement of colour transmissions?
19. Having considered the problems of servicing colour television installations:
 - (a) Do you propose a receiver designed to enable module replacement servicing of your receivers?
 - (b) Do you propose to conduct technician training courses for the retailers?
 - (c) What part do you think the trades school or technical colleges should play in the training of technicians for colour installation and service?
20. Do you anticipate the local manufacture or assembly of colour picture tubes? What percentage of receiver components would be of Australian manufacture?

To Be Answered By Programme Production Companies

21. Could you indicate the financial implications of colour television to your company?
22. Could you provide some details of the likely charges you will make for the production and/or sale of colour programmes and advertisements?
23. Do you propose producing colour programmes and/or advertisements on videotape or film or both? If so, give details.
24. What is the proposed usage ratio of videotape to film?
25. Are you purchasing required colour equipment in Australia or overseas? Do you expect any delays in equipment deliveries?
26. Have you received any approaches to produce colour material? If so, what types of programmes were involved? What do you consider to be the likely demand?

To Be Answered By Electrical Retailers' Association

27. Do you anticipate that rental of colour receivers will become more significant as opposed to straight out purchase?
28. Provide estimates of receiver sales for each of the five years following the introduction of colour television.
29. Have you made any plans for the recruiting and training of service personnel?

APPENDIX L

Technical Standards for the Australian Television Service EXPLANATORY NOTES AND BRIEF SPECIFICATION

These notes and specification refer to the Technical Standards for the Australian Television Service, issue 3, 21st April, 1970. The notes explain the relationship of the Standards to various CCIR systems as outlined in reports and recommendations, and the brief specification summarises the more important technical characteristics of the Standards.

Explanatory Notes

1. Related CCIR Systems (specified in CCIR Report 308-2, New Delhi 1970) for colour transmission

System B—625 line 50 field system, 7 MHz channel used in several countries of Western Europe

System I—625 line 50 field system, 8 MHz channel used in United Kingdom

System M—525 line 60 field system, 6 MHz channel used in United States of America.

2. Video and Radio Frequency Characteristics

In general these Standards comply with the characteristics of System B. They adopt, however, the 100 : 40 picture/synch. ratio of video amplitudes of System M, and vision carrier modulation levels comprising an adaptation of the levels of System I to the 100 : 40 ratio.

3. Details during Line and Field Blanking Intervals

Pulse durations in these Standards are in accordance with the recommendation replacing CCIR Report 310-1, Oslo 1966, specifying a video signal for international exchange.

Pulse build-up times for the radiated signal are generally in accordance with those of Systems B and I.

4. Line Numbering

The line numbering used in these Standards is in accordance with paragraph 2 of CCIR Recommendation 420-2, New Delhi 1970.

5. Characteristics of the PAL Colour Television System

These Standards adopt the characteristics specified for the use of PAL with System B, in CCIR Report 407-1, New Delhi 1970, with two main exceptions. Firstly, that part of Item 4 of that report relating to levels is replaced by specification of levels as in 2. above. Secondly, the picture tube primary colour characteristics (separately specified for Systems B and I in Item 9 of that report) are in these Standards in accordance with those specified for System I.

Brief Specification

The column marked "Change" in the brief specification states whether the Standards, which apply equally for both monochrome or colour service, involve a change in the standards or practices used in the existing (1970) monochrome service. **Such changes will not apply forthwith, but will be implemented gradually on dates to be fixed by the Board.**

APPENDIX L—continued

BRIEF SPECIFICATION

		Change	CCIR System
Radiated Signal Characteristics			
Channel width (MHz)	7	No	B
Vision carrier frequency relative to the lower frequency edge of the channel (MHz)	+1.25	No	B
Sound carrier frequency relative to vision carrier frequency (MHz)	+5.4996	Yes	—
Type of vision carrier modulation	amplitude	No	B/I/M
Polarity of vision carrier modulation	negative	No	B/I/M
Synchronising level (percentage of peak carrier level)	100	No	B/I/M
Reference black and blanking levels (percentage of peak carrier level)	77	Yes	—
Reference white level (percentage of peak carrier level)	20	Yes	I
Type of sound carrier modulation	frequency modulation	No	B/I/M
Maximum frequency deviation (kHz)	± 50	No	B/I
Transmitter Characteristics			
Ratio of peak envelope power of vision transmitter to mean power output of sound transmitter	10 : 1	Yes	B
Nominal width of main sideband (MHz)	5	No	B
Nominal width of vestigial sideband (MHz)	0.75	No	B
Nominal limits of sideband components (MHz) for the radiated chrominance signals	$\left. \begin{array}{l} E'_U \sin 2\pi f_{sc} t \\ E'_V \cos 2\pi f_{sc} t \end{array} \right\} \begin{array}{l} +0.57 \\ -1.3 \end{array}$	—	B
Pre-correction in group delay for receiver characteristics (microseconds at 4.43 MHz relative to low video frequencies)	-0.170	Yes	B
Phase modulation of vision carrier, dB below ± 50 KHz deviation	≥ 46	No	—
Audio signal pre-emphasis time constant (microseconds)	50	No	B/I

APPENDIX L—continued

BRIEF SPECIFICATION

		Change CCIR System	
Video Characteristics			
Aspect ratio	4 : 3	No	B/I/M
Scanning sequence—line	Left to Right	No	B/I/M
—field	Top to Bottom	No	B/I/M
Number of lines per picture	625	No	B/I
Interlace	2 : 1	No	B/I/M
Nominal line frequency (lines/second)	15, 625	No	B/I
Colour sub-carrier frequency (MHz)	4.43361875	—	B
Picture frequency (pictures per second)	25	No	B/I
Timing of video signal	See Drawing ZC-24 Sheet 1	Yes	I
Reference white—blanking: synchronising signal, ratio	100 : 40	No	M
Colour coding system	P.A.L.	—	B/I
Colour picture signal		—	B/I
	$E_M = E'_Y + E'_U \sin 2\pi f_{sc}t \pm E'_V \cos 2\pi f_{sc}t$ $E'_Y = 0.299E'_R + 0.587E'_G + 0.114E'_B$ $E'_U = 0.493(E'_B - E'_Y)$ $E'_V = 0.877(E'_R - E'_Y)$ $E'_B - E'_Y = -0.299E'_R - 0.587E'_G + 0.886E'_B$ $E'_R - E'_Y = +0.701E'_R - 0.587E'_G - 0.114E'_B$		
Approximate gamma of display tube	2.8	—	B/I
Bandwidth limitation of colour difference signals at the encoder	at 1.3 MHz \leq 3dB down at 4.0 MHz $>$ 20dB down	—	B/I
Colour synchronisation			
Sub-carrier burst: duration (cycles)	10	—	B/I
start	5.6 microseconds after the leading edge of the line-sync. pulses	—	B/I
amplitude (peak-peak)	40% of the blanking to reference white signal voltage	—	M
Chromaticities of display tube phosphors	<i>x</i> <i>y</i>	—	I
	Red 0.64 0.33		
	Green 0.29 0.60		
	Blue 0.15 0.06		
Reference white chromaticity			
CIE Illuminant D ₆₅₀₀	0.313 0.329	—	I

APPENDIX M

Technical Standards for the Australian Television Service

1. RADIATED SIGNAL CHARACTERISTICS

1.1 Television Channels

The width of the television channel shall be 7MHz. Channels allocated for Australian television services are shown in Table 1 of these Standards.

1.2 Location of Carriers within the Channel

The nominal vision carrier frequency shall be 1.25MHz above the lower frequency limit of the channel and the unmodulated sound carrier frequency shall in all cases be 5.4996MHz above the vision carrier, that is approximately 0.25MHz below the upper frequency limit of the channel.

Frequency offsets from the nominal vision carrier frequency may be prescribed by the Board.

1.3 Vision Carrier Modulation

The vision carrier shall be amplitude modulated by the video signal. Negative modulation shall be employed, that is a decrease in brightness shall cause an increase in mean vision carrier amplitude.

1.4 Modulation Levels of the Vision Carrier

Reference black and blanking levels shall be coincident and correspond to 77 per cent of the peak vision carrier amplitude. Black level shall be independent of light and shade in the picture. Reference white level shall correspond to 20 per cent of the peak vision carrier amplitude.

1.5 Sound Carrier Modulation

The sound carrier shall be frequency modulated to a maximum frequency deviation of ± 50 kHz by the audio signal.

1.6 Polarisation of the Radiated Signals

The polarisation of the radiated signals from both sound and vision transmitters shall be the same and shall be specified by the Board.

2. VIDEO CHARACTERISTICS

2.1 Scanning

2.1.1 Aspect Ratio

The aspect ratio of the television picture shall be four units horizontally to three units vertically.

2.1.2 Scanning Sequence

During active scanning intervals it shall be normal to scan the scene from left to right horizontally, and from top to bottom vertically, at uniform velocities.

APPENDIX M—continued

2.1.3 Number of Lines and Interlace

The number of scanning lines per picture shall be 625 interlaced two to one.

2.1.4 Picture and Field Frequencies

The nominal picture and field frequencies shall be 25 and 50 per second respectively, non-synchronous with the power mains supply, and equal to the appropriate sub-multiples (625 and 312.5 respectively) of the line frequency.

2.1.5 Line and Colour Sub-carrier Frequencies

The line frequency (f_H) shall be $15,625\text{Hz} \pm 5$ parts in 10^6 for monochrome transmissions. In the case of colour transmissions the colour sub-carrier frequency (f_{sc}) shall be $4.43361875\text{MHz} \pm 5\text{Hz}$ and the line frequency shall be related to it by the following equation:

$$f_H = \frac{4f_{sc}}{1135 + \frac{4}{625}}$$

2.2 Video Signal

The video signal comprises the synchronising information occurring alternately on a time division basis with the picture signal as shown in Drawing ZC-24 Sheet 1. The picture signal comprises the luminance component together with the chrominance components if present. The synchronising pulse amplitude shall be 40 per cent of the blanking to reference white amplitude. Table 2 of these Standards specifies the timing intervals of the video signal.

2.3 Colour Picture Signal

Coding of the colour information shall be in accordance with the Phase Alternation Line (P.A.L.) system. In this system the colour picture signal, E_M , contains a luminance component E'_Y , and also simultaneous chrominance components $E'_U \sin(2\pi f_{sc}t)$ and $E'_V \cos(2\pi f_{sc}t)$, with the phase of the latter component being changed by 180° on alternate lines.

The equation of the colour picture signal is:

$$E_M = E'_Y + E'_U \sin 2\pi f_{sc}t \pm E'_V \cos 2\pi f_{sc}t$$

where (a) the luminance component

$$E'_Y = 0.299E'_R + 0.587E'_G + 0.114E'_B$$

(b) the chrominance modulating signals

$$E'_U = 0.493(E'_B - E'_R)$$

$$E'_V = 0.877(E'_R - E'_Y)$$

(c) the colour difference signals

$$E'_B - E'_Y = -0.299E'_R - 0.587E'_G + 0.886E'_B$$

$$E'_R - E'_Y = +0.701E'_R - 0.587E'_G - 0.114E'_B$$

E'_R, E'_G, E'_B are the red, green and blue gamma corrected voltages required for tristimulus matching. The value of the exponent for this correction shall be related to a display tube gamma of 2.8, and shall be consistent with optimum colour fidelity.

APPENDIX M—continued

The sign before $E'_V \cos 2\pi f_{sc}t$ is positive during odd lines of the first and second fields and during even lines of the third and fourth fields.

As a consequence of the choice of colour difference signals the chrominance components both disappear in the absence of colour.

In the case of separate luminance colour sources, equivalent coding requirements will be specified by the Board.

The resulting video signal for fully saturated primary and complementary colours at full luminance is shown in Drawing ZC-24 Sheet 2.

2.4 Bandwidth of Colour Difference Signals

The colour difference signals shall be limited in bandwidth prior to modulation of the colour sub-carriers by a circuit having an approximate Gaussian response, with an attenuation of not more than 3dB at 1.3MHz, but greater than 20dB at and above 4.0MHz.

The vision transmitter may in effect attenuate the video signal spectrum at 5MHz by as much as 3dB relative to f_{sc} (4.43MHz). Deliberate reduction in the video circuits of the upper sideband of the chrominance signals (which would increase the overall asymmetry in the radiated chrominance signals) shall be avoided.

2.5 Colour Synchronisation

A burst of 10 cycles of the colour sub-carrier frequency shall occur during each line blanking period, commencing 5.6 microseconds after the half amplitude point on the leading edge of the line synchronising pulse. At the point of encoding the peak to peak amplitude of the sub-carrier burst shall be 40 per cent of the blanking to reference white signal amplitude and thereafter the amplitude and phase of the burst shall be preserved relative to that of the chrominance signal. The envelope of the sub-carrier burst signal shall have a build-up time consistent with the bandwidth restriction of the colour difference signals.

The sub-carrier burst shall be omitted for nine consecutive lines starting at or before the beginning of each field blanking interval in a four field sequence as specified by Drawing ZC-24 Sheet 3.

The phase of the sub-carrier burst relative to the $+E'_U$ signal reference phase axis shall be: (See Drawing ZC-24 Sheet 2)

$+135^\circ \pm 1^\circ$ on odd lines of the first and second fields and on even lines of the third and fourth fields,

$-135^\circ \pm 1^\circ$ on even lines of the first and second fields and on odd lines of the third and fourth fields.

The video signal shall contain no sub-carrier burst during the transmission of monochrome programmes.

2.6 Special Signals in the Field Blanking Interval

The Board may approve the use of specified signals in the field blanking interval for such purposes as: testing circuit performance, level and quality control, remote control of equipment, source identification, and data transmission. Such signals shall not be radiated before lines 17 and/or 330.

APPENDIX M—continued

3. PRIMARY COLOUR SIGNALS

Spectral responses of the optical section in the colour picture signal source, together with any matrix of the three sensor outputs, shall be such that the E'_R , E'_G , E'_B signals will reproduce an image with optimum colour fidelity on a colour picture tube having phosphors with the following CIE chromaticity co-ordinates, and balanced for a white chromaticity of CIE Illuminant D_{6500} .

	CIE Co-ordinates	
	<i>x</i>	<i>y</i>
Red phosphor	0.64	0.33
Green phosphor	0.29	0.60
Blue phosphor	0.15	0.06
Illuminant D_{6500}	0.313	0.329

4. TRANSMITTER CHARACTERISTICS**4.1 Vision to Sound Power Ratio**

The ratio of peak envelope power output of the vision transmitter to mean power output of the sound transmitter shall be 10:1.

4.2 Response of the Vision Transmitter

Vestigial sideband transmission shall be used. The amplitude/frequency response of the vision transmitter shall be within the limits shown in Drawing ZC-24 Sheet 4. The response at the television channel limits shall be reduced by at least 20dB relative to the response at 1.5MHz above the vision carrier. (The Board will specify the extent of attenuation which may be necessary beyond the television channel limits to minimise interference to other services.)

The vision transmitter shall incorporate group delay correction so that the overall group delay/frequency response of the transmitter and standard vestigial sideband demodulator shall be flat to 5MHz. At the colour sub-carrier frequency the demodulator shall have a group delay of 0.170 microseconds relative to the delay at low frequencies.

4.3 Phase Modulation of Vision Transmitter

Phase modulation of the vision carrier shall be such that noise from this source in the audio output of a high quality intercarrier receiver shall be at least 46dB below the level corresponding to full deviation for a modulating frequency of 400Hz.

4.4 Sound Transmitter Modulating Signal

The sound transmitter shall be capable of operating with audio modulating frequencies between 30Hz and 15kHz. The audio modulating signal shall be pre-emphasised, as shown in Drawing ZC-24 Sheet 5, in accordance with the impedance/frequency characteristic of a series resistance-inductance network having a time constant of 50 microseconds.

APPENDIX M—continued

Table 1—Designation and Frequency Limits of Australian Television Channels

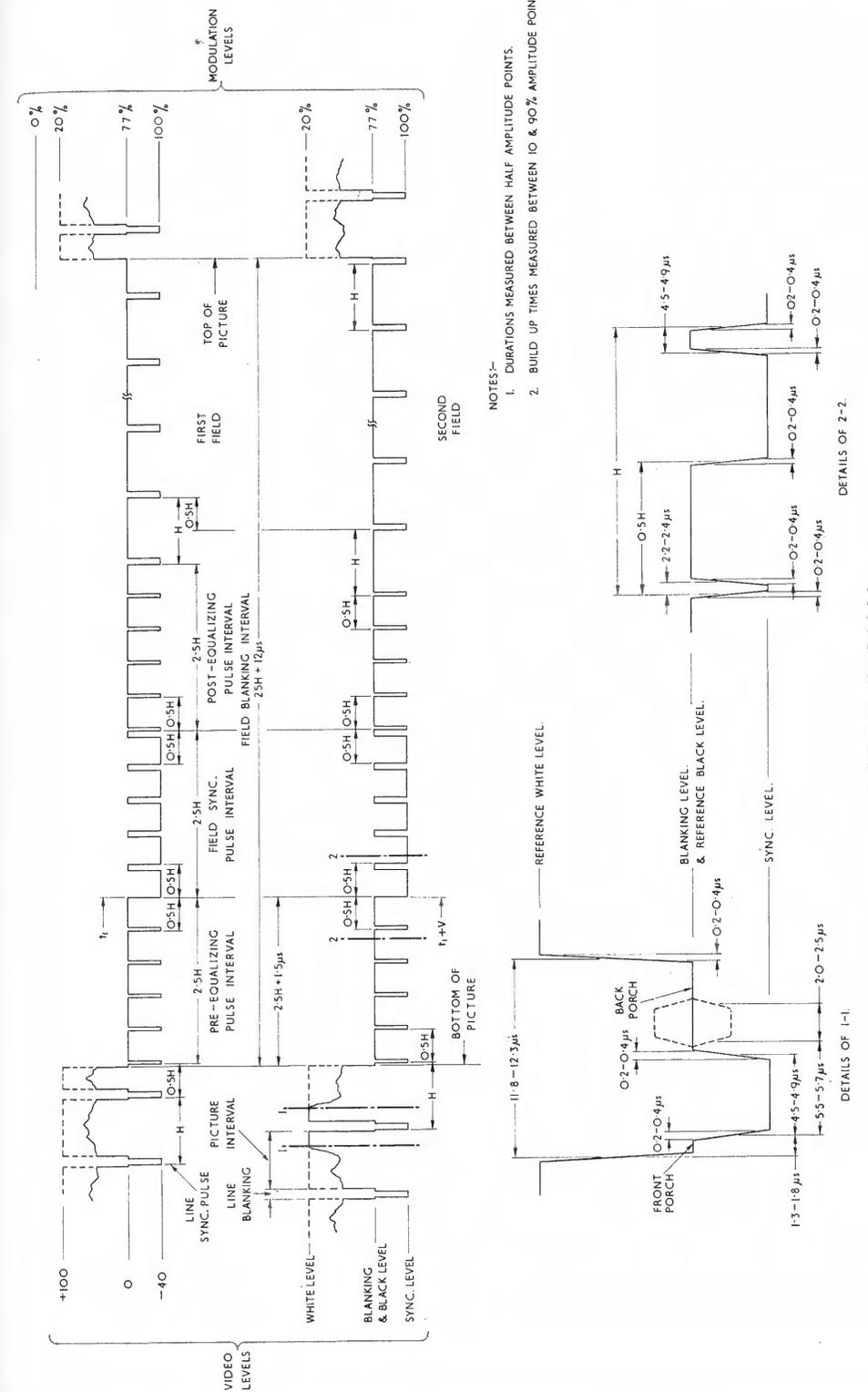
Channel	Vision Carrier Frequency	Frequency Limits, MHz
0	46.25	45–52
1	57.25	56–63
2	64.25	63–70
3	86.25	85–92
4	95.25	94–101
5	102.25	101–108
5A	138.25	137–144
6	175.25	174–181
7	182.25	181–188
8	189.25	188–195
9	196.25	195–202
10	209.25	208–215
11	216.25	215–222

APPENDIX M—continued

Table 2—Timing Intervals of the Video Signal

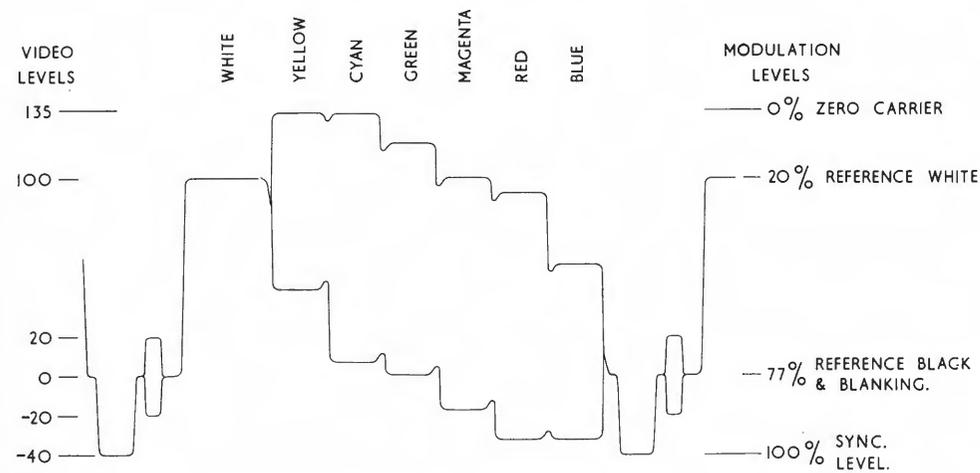
Durations (measured between half amplitude points)	Microseconds
Field period (V)	20,000
Line period (H)	64
Line blanking interval	11.8–12.3
Front porch interval	1.3–1.8
Line synchronising pulse interval	4.5–4.9
Field blanking interval	$25H + 12$
Duration of field synchronising pulse sequence	$2.5H$
Duration of pre-equalising pulse sequence	$2.5H$
Duration of post-equalising pulse sequence	$2.5H$
Equalising pulse interval	2.2–2.4
Interval between field synchronising pulses	4.5–4.9
Colour sub-carrier burst	
—start, from leading edge of line synchronising pulse	5.5–5.7
—duration (nominally 10 cycles)	2.0–2.5
—duration of burst blanking pulse (per field)	$9H$
Build-up time (from 10 to 90 per cent amplitude)	
Edges of	
—blanking pulses	0.2–0.4
—synchronising signals	0.2–0.4*

*The build-up time is here specified for the radiated signal. Shorter build-up times may be used prior to modulation and in particular at points of interconnection the limits shall be 0.1–0.3.



VIDEO SIGNAL

APPENDIX M—continued



(1) VIDEO SIGNAL CORRESPONDING TO FULLY SATURATED COLOURS. (IN ACCORDANCE WITH PARAGRAPH 2.3).

COLOUR SUB-CARRIER AMPLITUDES & PHASES FOR FULLY SATURATED PRIMARY & COMPLEMENTARY COLOURS.

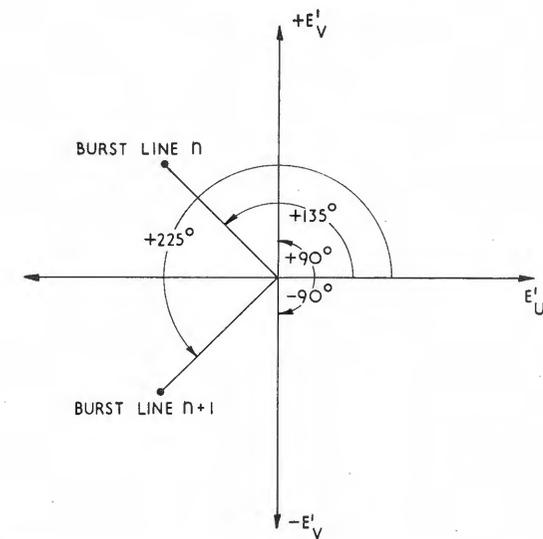
COLOUR	LUMINANCE E'_Y	PEAK TO PEAK CHROMINANCE			CHROMINANCE ANGLE(2)	
		$2E'_U$	$2E'_V$	$2S$ (1)	LINE π (3)	LINE $\pi+1$
REFERENCE WHITE	100.0					
YELLOW	88.6	87.4	20.0	89.6	167.0°	193.0°
CYAN	70.1	29.5	123.0	126.4	283.5°	76.5°
GREEN	58.7	58.0	103.0	118.1	240.7°	119.3°
MAGENTA	41.3	58.0	103.0	118.1	60.7°	299.3°
RED	29.9	29.5	123.0	126.4	103.5°	256.5°
BLUE	11.4	87.4	20.0	89.6	347.0°	13.0°
BURST	0	28.3	28.3	40.0	135.0°	225.0°
REFERENCE BLACK	0					

NOTES:-

$$1. S = (E'_U^2 + E'_V^2)^{\frac{1}{2}}$$

2. THE CHROMINANCE ANGLES ARE MEASURED ANTI-CLOCKWISE FROM THE E'_U AXIS.
3. LINE π CORRESPONDS TO THE ODD NUMBERED LINES OF THE FIRST & SECOND FIELDS & THE EVEN NUMBERED LINES OF THE THIRD & FOURTH FIELDS.

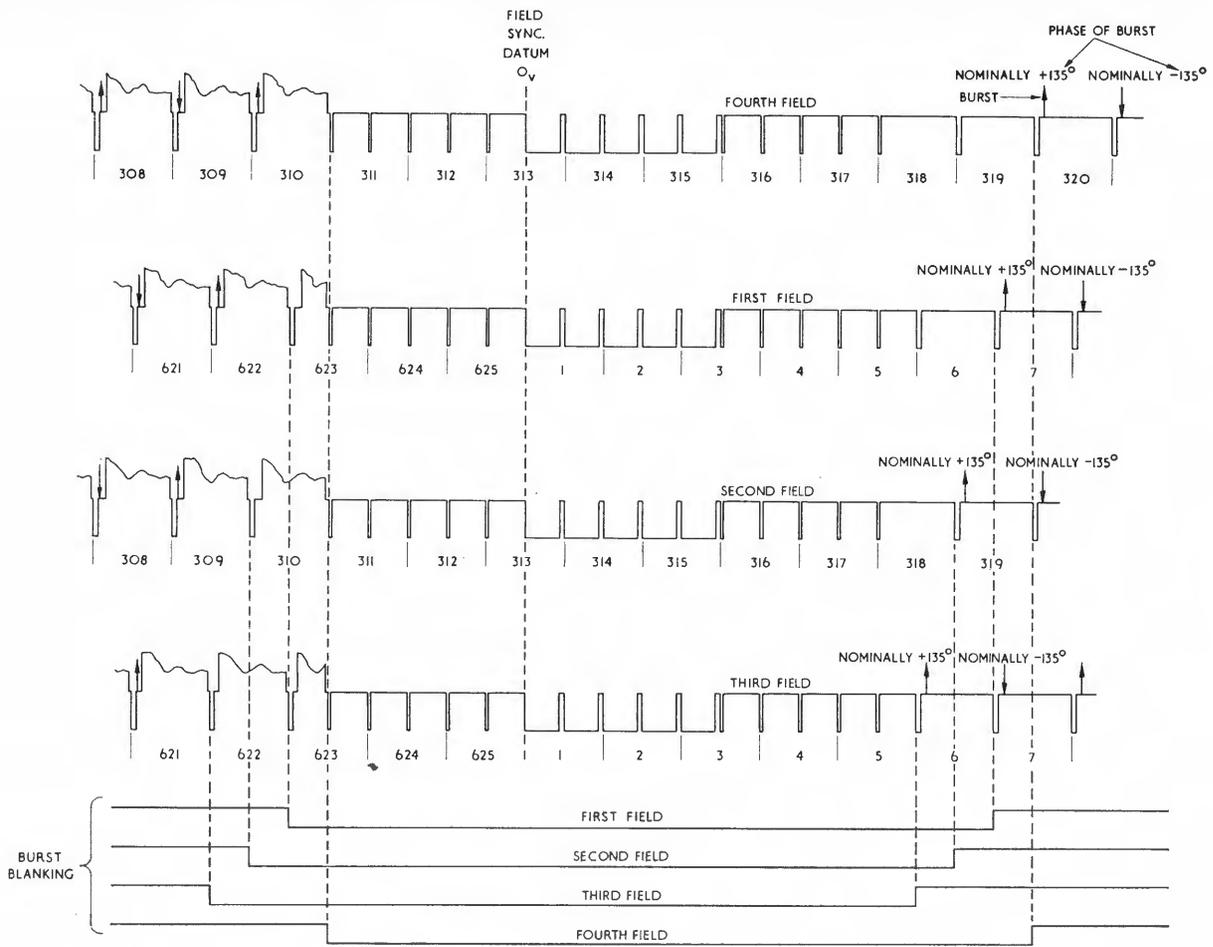
APPENDIX M—continued



(2) PHASES OF BURST, E'_U & E'_V SIGNALS.

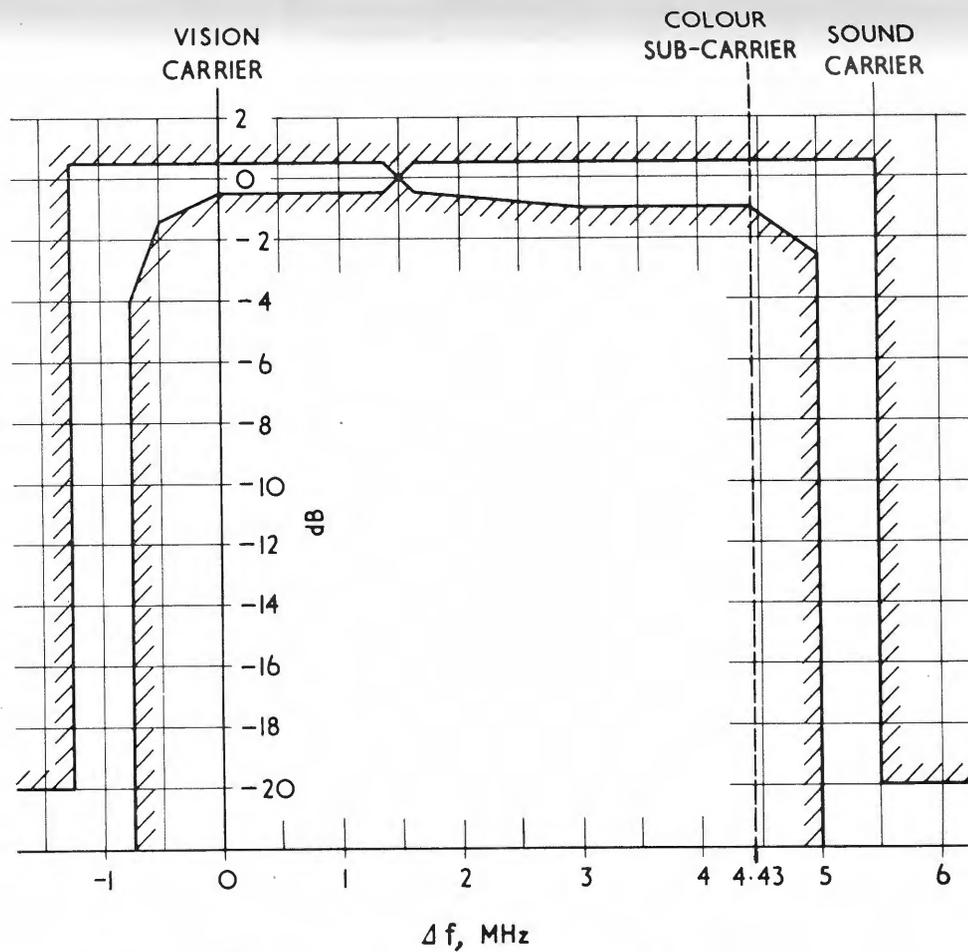
VIDEO SIGNAL CORRESPONDING TO FULLY SATURATED COLOURS

DRAWING ZC-24 SHEET 2



FOUR FIELD SEQUENCE OF BURST BLANKING

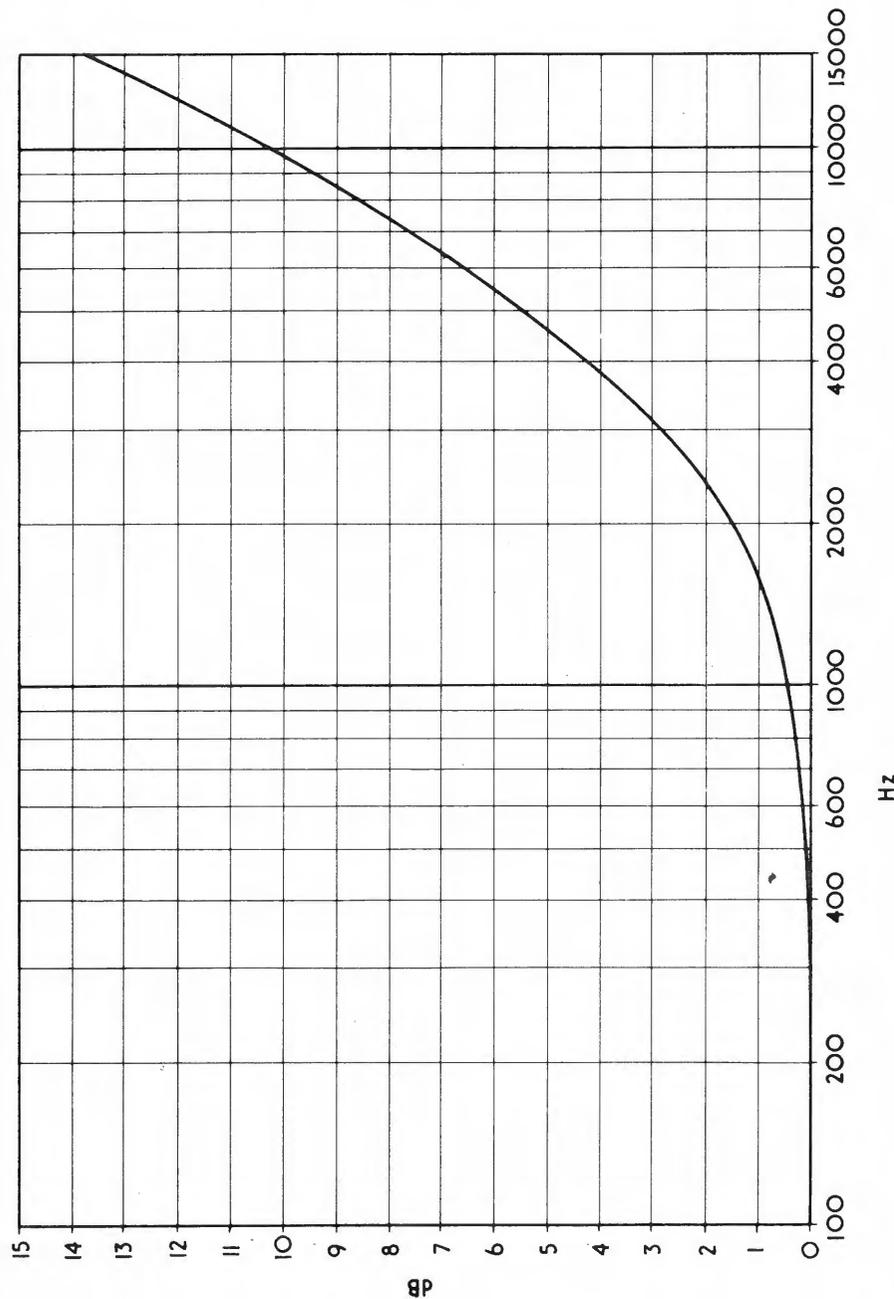
DRAWING ZC-24 SHEET 3



VISION TRANSMITTER, AMPLITUDE/FREQUENCY RESPONSE

DRAWING ZC-24 SHEET 4

APPENDIX M—continued



SOUND TRANSMITTER, MODULATING SIGNAL PRE-EMPHASIS
(TIME CONSTANT 50 MICRO SECONDS)

DRAWING ZC-24 SHEET 5

APPENDIX N

STATISTICAL ANALYSIS OF BROADCASTING PROGRAMMES

The analysis of broadcasting programmes, which is set out in the following tables is based on the combined figures from two surveys conducted by the Board in November 1969 and May 1970. In each case programmes of stations in State capital cities were monitored on a sampling basis for one minute in each ten minutes of transmission between 6.00 a.m. and 10.30 p.m. for a full week. For the purpose of presenting a complete picture of the programmes available to listeners the survey includes the programmes of two representative national stations.

2. The data have been summarised in a number of tables as follows:

- Table I—Analysis of Broadcasting Programmes by Categories—All Metropolitan Stations
- Table II—Analysis of Broadcasting Programmes by Categories—Metropolitan Stations by Time Periods
- Table III—Analysis of Broadcast Advertising by Time Periods—Metropolitan Commercial Stations, Monday to Friday Average
- Table IV—Analysis of Broadcast Advertising by Time Periods each day of the week—Metropolitan Commercial Stations.

3. *Definition of Categories.* The statistical system is based on thirteen programme categories, which are set out below, and advertising matter:

<i>Entertainment—</i>		
Light and Popular Music	..	Musical comedy, 'evergreens', items of popular music in general programmes, currently popular music presented in hit parade and similar programmes.
Incidental Matter	..	Matter occurring between major programme units, station announcements (excluding time calls), programme notes, party calls to adults, items in telephone conversation programmes consisting of an exchange of opinions, and miscellaneous patter.
Variety	..	Talent, quiz, panel and variety programmes, including comedy recordings.
Drama	..	Plays, serials and other dramatised productions.
The Arts	..	Serious music and opera, readings of prose and poetry, literary and art criticism.
<i>Information and Services—</i>		
News	..	News bulletins, programmes in newsreel form, time calls, weather, market and traffic reports, train and ship arrival times, warnings of storm, fire, shark and other hazards, police messages, excludes news commentaries.
Sport	..	Sporting descriptions, previews and summaries, sporting news, interviews and talks.
Information	..	Programmes concerning such topics as aspects of science, other lands and peoples, agriculture, industry and other major occupations.
Religious	..	Programmes originated for or by recognised religious bodies.
Social and Political	..	Programmes concerned with political and economic aspects of modern society, news commentaries, Australian history, national events, festivals and public gatherings, charitable activities.
Family	..	Family activities including programmes dealing with cooking, house and garden, hobbies, care of pets, health, physical fitness and other personal matters. Shopping guides.

APPENDIX N—continued

- Children Programmes directed to or presented for children, serials, children's recordings, and informative 'scatters'.
- Educational Programmes designed as an aid to formal teaching; kindergarten sessions.
- Advertisements All advertisements except those within shopping guides; includes translation of foreign language advertisements.

4. Definition of Time Periods. Each day of the week is divided into seven periods as follows:

Breakfast	6.00 a.m.— 9.00 a.m.
Morning	9.00 a.m.—12.00 noon
Midday	12.00 noon— 2.00 p.m.
Early Afternoon	2.00 p.m.— 4.00 p.m.
Late Afternoon	4.00 p.m.— 6.30 p.m.
Evening	6.30 p.m.— 7.30 p.m.
Night	7.30 p.m.—10.30 p.m.

TABLE I—ANALYSIS OF BROADCASTING PROGRAMMES BY CATEGORIES

ALL METROPOLITAN STATIONS			
Programme Category	Commercial (25 stations)	National (12 stations)	All Stations (37 stations)
	Per cent	Per cent	Per cent
Entertainment—			
Light and Popular Music	51.2	30.7	44.7
Incidental Matter	7.4	6.3	7.1
Variety	1.5	1.8	1.6
Drama	0.6	3.9	1.6
The Arts	0.1	22.6	7.2
	60.8	65.3	62.2
Information and Services—			
News	9.9	10.8	10.2
Sport	6.2	3.4	5.3
Information	1.4	6.5	3.0
Religious	2.0	2.5	2.2
Social and Political	3.0	6.1	4.0
Family	1.8	0.4	1.3
Children's	0.1	2.5	0.9
Educational	*	2.5	0.8
Advertisements	24.4	34.7	27.7
	14.8	..	10.1
	100.0	100.0	100.0

*Less than 0.05 per cent.

APPENDIX N—continued
TABLE II—ANALYSIS OF BROADCASTING PROGRAMMES BY CATEGORIES
METROPOLITAN STATIONS BY TIME PERIODS

Programme Category	Breakfast		Morning		Midday		Early Afternoon		Late Afternoon		Evening		Night	
	Com- mercial Stations	All Stations												
	Per cent	Per cent												
Entertainment—	49.9	43.6	36.9	42.7	42.7	53.6	47.8	50.2	54.3	50.2	53.9	45.0	58.8	48.3
Light and Popular Music	6.8	6.8	7.9	6.6	6.6	7.3	6.9	6.8	7.2	6.8	8.8	7.3	7.9	7.2
Incidental Matter	1.2	0.9	1.6	1.9	1.9	2.0	1.4	2.3	1.7	2.3	0.6	0.6	1.0	1.8
Variety	0.1	0.7	1.3	2.0	2.0	*	0.5	0.7	1.0	0.7	0.6	2.3	0.5	3.4
Drama	..	7.0	8.1	2.5	2.5	*	9.8	5.3	..	5.3	0.2	6.5	0.3	9.9
The Arts	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Information and Services—	58.0	59.0	54.1	55.8	55.8	62.9	62.9	66.4	65.3	65.3	64.1	64.1	68.5	70.6
News	15.8	18.7	5.2	15.1	15.1	5.7	4.1	10.4	10.4	9.0	11.1	15.9	7.1	6.5
Sport	1.3	1.0	2.9	7.3	7.3	11.6	10.5	7.6	7.6	7.0	6.4	6.3	7.2	5.8
Information	0.6	1.8	6.5	6.4	6.4	1.1	1.2	0.7	0.7	1.3	0.4	1.0	0.9	1.9
Religious	1.4	2.2	2.6	0.4	0.4	0.9	0.6	0.9	0.9	0.9	1.5	1.9	6.3	5.0
Social and Political	0.4	1.3	7.4	3.5	3.5	2.8	3.9	3.2	3.2	3.2	2.7	3.9	1.1	4.2
Family	..	0.4	3.7	*	*	..	1.9	0.5	0.5	0.3	0.5	0.4	0.4	0.2
Children's	..	..	3.7	..	..	..	1.2	..	..	..	..	..	..	..
Educational	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Advertisements	20.6	26.3	28.8	35.0	35.0	24.0	24.0	21.5	21.5	24.9	22.9	29.4	23.0	23.6
	21.4	14.7	17.1	13.7	13.7	13.1	8.9	14.3	14.3	13.0	13.0	8.9	8.5	5.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Less than 0.05 per cent.

APPENDIX N—continued

TABLE III—ANALYSIS OF BROADCAST ADVERTISING BY TIME PERIODS
METROPOLITAN COMMERCIAL STATIONS, MONDAY TO FRIDAY AVERAGE

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	All Cities
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Breakfast	23.3	25.5	28.9	25.3	23.4	25.5	25.3
Morning	19.9	19.6	17.6	14.8	17.4	20.1	18.4
Midday	15.5	16.0	13.2	13.2	8.5	8.6	13.3
Early Afternoon	14.9	16.9	12.3	16.3	7.4	6.8	13.3
Late Afternoon	17.1	19.1	15.1	14.9	13.4	10.1	15.8
Evening	18.8	17.4	10.7	16.3	13.9	10.6	15.2
Night	13.0	11.6	9.5	8.2	5.5	4.3	9.6
All Periods	17.6	18.2	16.2	15.6	13.2	13.1	16.2

TABLE IV—ANALYSIS OF BROADCAST ADVERTISING BY TIME PERIODS
WITHIN EACH DAY OF THE WEEK

METROPOLITAN COMMERCIAL STATIONS

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	All Days
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Breakfast	7.8	23.6	22.0	27.4	27.4	26.0	15.4	21.4
Morning	12.3	15.1	18.6	20.4	20.2	17.8	15.5	17.1
Midday	14.8	11.1	13.9	13.9	13.5	14.1	14.4	13.7
Early Afternoon	12.9	11.7	12.0	16.5	11.8	14.3	12.3	13.1
Late Afternoon	9.7	12.4	14.5	16.0	17.6	18.5	11.4	14.3
Evening	6.4	13.4	14.6	16.4	17.5	14.3	8.2	13.0
Night	4.6	9.2	8.1	11.2	10.6	9.2	6.7	8.5
All Periods	9.7	14.2	15.1	17.8	17.4	16.7	12.3	14.7

APPENDIX O

STATISTICAL ANALYSIS OF TELEVISION PROGRAMMES

The analysis of television programmes which is set out in the following tables is based on a sample of commercial and national programmes televised during the twelve month period ended 5 April 1970. In this period the sample amounted to approximately 17 per cent.

Details of commercial television programmes are derived from data supplied regularly by each station and details of national television programmes are obtained from information supplied by the Australian Broadcasting Commission. For the purpose of these tables the national programmes analysed are those of ABV Melbourne. These are considered to be reasonably representative programmes of the national television service.

The tables show the composition of programmes under three headings:

Table I—Analysis of Television Programmes by Categories: Metropolitan and Country Stations, Overall.

Table II—Analysis of Television Programmes by Time Periods: Metropolitan and Country Stations, Overall.

Table III—Television Programmes of Australian Origin, Analysis by Categories, Metropolitan and Country Stations.

The figures in Table III are based on the actual duration of Australian programme matter and do not take into account the credit loadings allowed to commercial stations for certain types of programme matter referred to in paragraph The table shows the distribution of types of Australian programmes both as percentages of all programmes of Australian origin, and as percentages of all programmes televised.

At the foot of each column in Tables I and III a conversion factor is shown to enable calculations of the time occupied by programmes in each category.

APPENDIX O — continued
TABLE I—ANALYSIS OF TELEVISION PROGRAMMES BY CATEGORIES
METROPOLITAN AND COUNTRY STATIONS OVERALL

Programme Category	Metropolitan Stations				Country Stations
	Commercial	National	All Stations	Commercial	
Drama—					
Serious	*	0.2	0.1	*	
Adventure	11.0	8.8	10.5	13.2	
Crime and Suspense	9.1	5.2	7.7	9.1	
Domestic and Comedy	13.8	3.2	13.0	16.2	
Western	4.7	1.8	4.0	7.5	
Miscellaneous	10.7	4.0	9.5	7.6	
Light Entertainment—	49.3	29.3	44.8	53.6	
Cartoons	6.9	5.4	6.6	4.9	
Light Music	3.6	1.7	3.1	4.6	
Personality Programmes	9.0	0.5	7.0	7.3	
Talent Programmes	1.5		1.2	2.4	
Variety	3.8	3.2	3.7	4.0	
Sport	24.8	10.8	21.6	23.2	
News	5.0	8.2	5.7	4.4	
Children—	7.1	7.4	7.2	9.0	
Kindergarten					
Other	4.7	5.0	4.7	1.3	
Family Activities	2.5	4.8	3.0	1.7	
Information	7.2	9.8	7.7	3.0	
Current Affairs	2.4	1.8	2.2	2.0	
Political Matter	1.6	3.9	2.1	2.1	
Religious Matter	1.0	7.7	2.6	1.0	
The Arts	0.1	*	0.1	0.2	
Education—	1.1	2.2	1.3	1.5	
Formal			0.5	*	
Other	0.4	15.1	3.5	..	
	0.4	1.7	0.7	*	
	100.0	100.0	100.0	100.0	

1 per cent projected to 52 weeks and rounded to nearest half hour equals in duration per station

*Less than 0.05 per cent.

APPENDIX O — continued

TABLE II—ANALYSIS OF TELEVISION PROGRAMMES BY TIME PERIODS
A—METROPOLITAN STATIONS

Programme Category	Before 4.30 p.m. Weekdays			4.30 p.m.-7.00 p.m. Weekdays and before 7.00 p.m. Weekends			7.00 p.m.-9.30 p.m. Weekdays			After 9.30 p.m. Weekdays		
	Com-mercial Stations	National Stations	All Stations	Com-mercial Stations	National Stations	All Stations	Com-mercial Stations	National Stations	All Stations	Com-mercial Stations	National Stations	All Stations
Drama—												
Serious	*	..	*	*	..	*	..	..	..	..	1.2	0.3
Adventure	6.2	2.1	5.4	10.0	13.4	10.9	19.0	4.9	14.9	14.1	16.0	14.5
Crime and Suspense	8.4	..	6.7	0.6	..	0.5	16.4	7.9	14.0	19.9	9.4	17.6
Domestic and Comedy	13.1	1.2	10.6	16.5	14.5	16.0	17.5	14.3	16.6	6.6	12.4	7.8
Western	2.5	2.6	2.5	5.4	3.1	4.9	5.8	..	4.2	6.4	..	5.0
Miscellaneous	16.8	..	13.3	3.0	2.7	2.9	8.2	7.5	8.0	17.5	15.7	17.1
	47.0	5.9	38.5	35.5	33.7	35.2	66.9	34.6	57.7	64.5	54.7	62.3
Light Entertainment												
Cartoons	7.4	5.7	7.1	13.0	10.9	12.5	0.5	..	0.4	*	..	*
Light Music	0.2	..	0.1	7.2	3.4	6.3	6.0	1.9	4.8	0.6	0.9	0.7
Personality Programmes	18.0	0.5	14.4	5.4	0.4	4.2	6.5	0.6	4.8	1.5	0.7	1.3
Talent Programmes	*	..	*	1.8	..	1.4	5.7	..	4.1	*	..	*
Variety	0.4	..	0.3	0.8	1.5	1.0	8.6	11.4	9.4	12.0	1.3	9.6
	26.0	6.2	21.9	28.2	16.2	25.4	27.3	13.9	23.5	14.1	2.9	11.6
Sport	1.1	..	0.9	10.0	16.3	11.4	0.7	3.7	1.6	6.7	11.3	7.7
News	2.9	4.1	3.1	13.6	1.0	10.7	2.0	20.1	7.2	6.9	9.4	7.5
Children—												
Kindergarten	13.3	17.9	14.2	1.0	..	0.7	..	..	..	..	..	..
Other	2.7	0.6	2.3	4.9	13.3	6.8	..	..	..	..	..	..
	16.0	18.5	16.5	5.9	13.3	7.5	..	..	..	..	..	..
Family Activities	5.6	2.1	5.0	1.3	2.3	1.6	0.1	1.8	0.6	0.3	0.1	0.3
Information	1.0	4.3	1.7	2.1	5.2	2.8	1.9	1.3	1.7	1.1	4.2	1.8
Current Affairs	0.1	0.9	0.3	0.8	5.3	1.8	0.7	22.0	6.7	3.6	5.4	4.0
Political Matter	..	..	..	*	..	*	0.3	0.2	0.3	0.2	..	0.2
Religious Matter	0.3	..	0.2	1.5	3.6	2.0	*	0.1	*	2.6	5.7	3.2
The Arts	*	0.2	0.1	..	1.4	0.3	0.1	2.3	0.7	..	6.3	1.4
Education—												
Formal	..	53.8	11.0	*	0.1	0.1	..	..	..	..	..	..
Other	..	4.0	0.8	1.1	1.6	1.2	..	..	..	..	..	..
	..	57.8	11.8	1.1	1.7	1.3	..	..	..	..	..	..
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Less than 0.5 per cent.

APPENDIX O — continued

B—COUNTRY STATIONS

Programme Category	Before 4.30 p.m. Weekdays	4.30 p.m.-7.00 p.m. Weekdays and before 7.00 p.m. Weekends	7.00 p.m.-9.00 p.m. Weekdays	After 9.30 p.m. Weekdays
	Commercial Stations	Commercial Stations	Commercial Stations	Commercial Stations
	Per cent	Per cent	Per cent	Per cent
Drama				
Serious . . . . .	..	..	*	*
Adventure	6.6	12.5	17.6	13.1
Crime and Suspense	5.2	0.2	17.7	14.8
Domestic & Comedy	12.3	17.2	19.4	12.8
Western	3.2	7.4	11.0	5.6
Miscellaneous	16.3	1.3	7.2	11.9
	— 43.6	— 38.6	— 72.9	— 58.2
Light Entertainment—				
Cartoons	4.7	11.0	1.0	..
Light Music	0.2	7.0	5.1	3.3
Personality Programmes	28.0	2.3	5.4	1.0
Talent Programmes	*	2.9	4.2	0.2
Variety	*	0.7	5.9	11.2
	— 32.9	— 23.9	— 21.6	— 15.7
Sport	*	7.9	1.0	7.8
News	5.8	18.9	1.3	6.3
Children—				
Kindergarten	5.4	1.3	..	..
Other	1.2	4.4	..	..
	— 6.6	— 5.7	— ..	— ..
Family Activities	8.9	0.6	0.2	0.9
Information	1.1	2.4	1.8	2.9
Current Affairs	0.5	0.8	0.4	2.8
Political Matter	*	*	0.4	0.2
Religious Matter	0.6	1.2	0.2	5.2
The Arts . . . . .	..	..	0.2	..
Education—				
Formal . . . . .	..	..	..	..
Other . . . . .	..	..	..	..
	— ..	— ..	— ..	— ..
	100.0	100.0	100.0	100.0

*Less than 0.05 per cent.

ANALYSIS BY CATEGORIES—METROPOLITAN AND COUNTRY STATIONS

Programme Category	Metropolitan Stations						Country Stations	
	Commercial		National		All Stations		Commercial	
	Percentage of Australian Programmes	Percentage of all Programmes	Percentage of Australian Programmes	Percentage of all Programmes	Percentage of Australian Programmes	Percentage of all Programmes	Percentage of Australian Programmes	Percentage of all Programmes
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Drama—								
Serious . . . . .	..	..	1.8	0.9	1.4	0.6	3.1	1.3
Adventure	1.2	0.5	..	..	1.7	0.7	6.3	2.6
Crime and Suspense	2.3	1.0	..	..	1.6	0.7	2.3	1.0
Domestic and Comedy	1.0	0.4	3.2	1.6	*	*	0.2	0.1
Western	0.1	*	..	..	2.1	1.0	2.4	1.0
Miscellaneous	2.7	1.2	0.3	0.1	4.8	2.1	5.1	2.2
	— 7.3	— 3.1	— 5.3	— 2.6	— 6.8	— 3.0	— 14.3	— 6.0
Light Entertainment—								
Cartoons	0.2	0.1	1.2	0.6	0.4	0.2	*	*
Light Music	7.8	3.3	3.4	1.7	6.7	3.0	10.5	4.4
Personality Programmes	20.3	8.7	0.3	0.1	15.2	6.7	16.8	7.0
Talent Programmes	3.6	1.5	..	..	2.7	1.2	5.6	2.4
Variety	6.4	2.7	0.3	0.1	4.8	2.1	5.1	2.2
	— 38.3	— 16.3	— 5.2	— 2.5	— 29.8	— 13.2	— 38.0	— 16.0
Sport	10.6	4.5	11.1	5.5	10.7	4.8	9.1	3.8
News	16.5	7.1	14.9	7.3	16.1	7.1	21.5	9.0
Children—								
Kindergarten	10.8	4.7	6.3	3.1	9.6	4.3	3.3	1.3
Other	5.5	2.4	8.4	4.2	6.3	2.8	3.6	1.5
	— 16.3	— 7.1	— 14.7	— 7.3	— 15.9	— 7.1	— 6.9	— 2.8
Family Activities	5.2	2.2	3.4	1.7	4.7	2.1	4.1	1.7
Information	1.0	0.4	2.4	1.2	1.4	0.6	2.0	0.9
Current Affairs	1.7	0.7	12.8	6.3	4.5	2.0	1.0	0.4
Political Matter	0.2	0.1	0.1	*	0.2	0.1	0.4	0.2
Religious Matter	2.0	0.9	3.6	1.8	2.4	1.1	2.6	1.1
The Arts	*	*	2.6	1.3	0.7	0.3	0.1	0.1
Education—								
Formal	*	*	23.1	11.4	5.9	2.6	..	..
Other	0.9	0.4	0.8	0.4	0.9	0.4	*	*
	— 0.9	— 0.4	— 23.9	— 11.8	— 6.8	— 3.0	— *	— *
	100.0	42.8	100.0	49.3	100.0	44.4	100.0	42.0
1 per cent projected to 52 weeks and rounded to nearest half hour equals in duration per station	24 hrs.	56 hrs.	20½ hrs.	41½ hrs.	23 hrs.	52 hrs.	12½ hrs.	29½ hrs.

*Less than 0.05 per cent.

TABLE III—TELEVISION PROGRAMMES OF AUSTRALIAN ORIGIN

APPENDIX O — continued

APPENDIX P

THIRD REPORT TO THE AUSTRALIAN BROADCASTING CONTROL BOARD
BY THE
ADVISORY COMMITTEE ON RELIGIOUS PROGRAMMES*Introduction*

As a prelude to this report the Committee interviewed many people from all mainland States who are directly concerned with station management or with religion. Changes affecting religious programming must be recognized as part of the general situation of rapid social and cultural change which is taking place in almost every field of man's activity. The development of modern communications techniques by broadcasting and television stations has occurred at a time when religious programmers, already uncertain of what the real content of the Christian message should be, are not sure of what they should say nor of how they should say it. Consequently the programmers have been unable to make effective use of the time available to them from commercial broadcasting and television stations, and station managements have often been rather unhappy about what has been supplied to them for transmission.

Behind this situation we see the failure of the churches to recognize the value to religion of the opportunity provided by Section 103 of the *Broadcasting and Television Act 1942-1969* and the Board's Television Programme Standards. One result of this failure seems to be reflected in the tendency to leave broadcasting and television policy and practice in the hands of enthusiasts rather than to select and train experts for the work. The 1966 Consultation arose from the Committee's earlier awareness of this situation, and the developments in the intervening period have served to confirm many of the misgivings about the future of religious programming which we then held.

In the investigations which preceded this report we found considerable and increasing dissatisfaction with the role and treatment of religion in the media. This dissatisfaction was common to television stations and production agencies. Among broadcasting stations we found an attitude of willingness to do better, coupled with regret that worthier material was not available. These standpoints were not universal but we believe them to have great significance. We shall, therefore, suggest the need for considerable change, for we have come to the conclusion that many of the present practices in both media leave much to be desired.

Towards the end of 1968 the Committee was asked by the Board to examine and report on two aspects of religious programming by commercial television stations, and to review the arrangements and practices for the presentation of religious programmes by commercial broadcasting stations. Specifically the Committee was asked:

- (i) to recommend the amount of station time that should now be provided without charge for televising religious programmes;
- (ii) to consider whether the Board's policy on religious television programmes should continue on the lines established in 1956; and if that policy is thought to be in need of revision, to recommend a form that a revised policy might take; and
- (iii) to recommend variations in relevant paragraphs of the Broadcasting Programme Standards which may be thought necessary either to amend the application of the principles stated therein or to state more explicitly the part that broadcasting might play in religion.

After preliminary discussion of general principles relevant to both media we deal separately with each of the three requests.

A General View of Religious Matter in the Media

Our investigations began with further consideration of the statutory requirements under which religion gains an assured place in broadcasting and television programmes. The words "Divine Worship or other matter of a religious nature", occurring in section 103 of the Act, have been the subject of much thought. In former recommendations on types of religious programme considered desirable for commercial broadcasting and television stations we included the periodical transmission of church services. We did this not so much because we were convinced that it would be the best way of presenting religion in these media but because at the time of the recommendations we felt the public would expect at least a proportion of religious programmes to take that form. This view also appears to have been held some years earlier by

APPENDIX P—continued

the Parliamentary Committees whose recommendations we have assumed to underlie the existence of the present section 103.

Although we did not give the televising of church services a high priority among religious programmes, we believe the time has now come to reduce even further our emphasis on that form of programme for commercial television. Broadcasting seems to be more satisfactory than television for the purpose. Rarely has a televised church service been wholly satisfactory, for the actions of participants seen by the glancing eye of a television camera may impede the mood of worship. Unless the producer can bring about involvement of viewers the programme will lose its main purpose; and the art of such camera work derives only from extensive experiment which is too often denied the commercial television producer by infrequency of opportunity. In saying this we are not overlooking the needs of people whose circumstances preclude church attendance—the shut-ins. These are people whom the mass media can and should serve, but they are a minority whose needs should not disproportionately influence the use of the media.

Australian church agencies concerned with religious programmes have presented the visible manifestations of Christianity in such forms as social works, historical or biographical studies, and hymn singing. Programmes have also dealt with the great religious truths and their application and interpretation in life as it is lived today. The aid of a great variety of people has been sought in these programmes, but the outcome has not always been successful.

The future of religious programming lies, we believe, in the development of an intelligent, responsible and discriminating attitude towards the audience. In television this should, for the most part, take into account the other programmes to which the viewer has become accustomed, and the fact that television is a medium which relentlessly exposes the artificial, the unprepared, and the banal. In broadcasting, the conditions of everyday listening and the current programming formats should be given consideration, though they should not necessarily become limiting factors.

With the foregoing in mind we examined the practicability of defining the words "Divine Worship" in terms of contemporary usage by the mass media. We concluded that these words should retain their historic meaning, and that we should advise the Board of the desirability of placing more emphasis on the less restrictive words of the statute "other matter of a religious nature". If we may assume that the missionary value of transmitting divine worship was in the minds of the Australian legislators, as well as the comfort it may bring to such minority audiences as the shut-ins, we can feel more confident about recommending reduced emphasis on formal religious presentation by commercial stations. We speak of reducing emphasis as a concession to the facts of life in commercial broadcasting and television. Even though we have heard the cogent arguments of station operators, who may be excused for seeing most things in terms of commercial viability, we cannot be persuaded to ignore the religious importance of public worship or to pretend that the job would be properly done if these media confined their religious contribution to crumbs of comfort, obtruse wisdom, or civilizing advice dropped into a sea of competitive entertainment and material hard-sell. The problem then is to provide types of religious programme wanted by those who actively wish for such matter, as well as types of religious programme which may commend themselves to viewers who accept such things passively.

Though we are not required to concern ourselves with the religious programmes of the National Broadcasting and Television Service it would be quite unrealistic to exclude them from the total spectrum of Australian broadcasting and television. We see the existence of religious programmes presented by the Australian Broadcasting Commission as an essential part of what is available to the public, and in our view the Commission's contribution to religious programming should be accepted as complementary to that of commercial stations. Consequently, while the national service continues to broadcast and televise divine worship (and we believe that it will do so) we think it unnecessary to press commercial stations to transmit programmes which would merely duplicate those of the Commission.

The entry of the religious work of the Commission into our deliberations is not new, but to see the media as a whole, and not merely to acknowledge the commercial parts of them, is a major step which perhaps we should have taken much earlier. Recognizing the mass media

APPENDIX P—continued

for what they have become, with their component parts serving the community by means which are very often widely and purposely disparate, we think that inflexible insistence on traditional forms of worship and Christian teaching by commercial stations may not always result beneficially for the Church.

We come now to consideration in detail of the three matters referred to us.

Minimum Duration of Free Station Time for Religious Television Programmes

In April, 1961, we expressed the view that the provision of free station time for a minimum of 30 minutes weekly and a maximum of one per cent of weekly hours of service was not unreasonable. The range of weekly hours of service of the ten stations then in operation was from about 40 to about 90, placing the maximum weekly duration of free station time at about 55 minutes. The mean hours of service required about 40 minutes of free station time weekly. This we believed could be adequately handled by stations, though the quality of programmes left room for improvement.

Several stations now transmit programmes for more than 120 hours per week, and continuous service (168 hours) has been foreshadowed by at least one commercial television station. On the one per cent basis this would require periods totalling as much as one hour 40 minutes of free station time to be made available for religious programmes. Under the existing system of religious programme production and distribution we do not believe that adequate material can be provided for so long a period each week. Two facts must be recognized: religious programme production agencies already carry loads almost too great for their limited staff and funds; and ideas for programmes which are realisable within the available human and economic resources have never been in abundant supply.

The Royal Commission on Television (1954) saw the presentation of religious services and other religious matter as an important obligation of television stations to the public; however it recognized first that religious matter should be presented in a suitable form and secondly that it did not know enough about television programming to be specific. The Royal Commission considered that it was then not necessary or practicable to do any more than indicate the general obligations of television station licensees in that field. The subsequent tenor of Parliamentary opinion, legislating for television in 1956, seems to have been for the retention of the provision for religious programmes in television as in broadcasting; but Parliament did not specify such details as frequency, duration or form of programme.

Overseas experience has been summed up by the Rev. Edwin Robertson: "The effectiveness of the Christian Church in its use of television is not measured by the number of hours it is on the air. We may well do more harm by taking space and pushing religion into it, when we do not know how to treat it, than by doing nothing at all." The Committee, like many Australian stations, would agree with this—harm having perhaps been done both to the image of religion and to the stations' hold on their audience.

The difficulties of programme production, apart from items such as epilogues, were not eased by the dogma of the half-hour programme, originally developed by stations seemingly for their own convenience, and later accepted as inevitable by many of the agencies. Resources in ideas, personnel and finance could not stand the strain this dogma imposed on them. Even if the current swing to the use of short religious items (of one minute or less) led to their occupying most or all of the time it would not necessarily ease the strain on resources, as the production demands for a short item are no less than for a considerably longer programme. Besides, to fill one hour 40 minutes weekly with one minute announcements would be well-nigh impossible even if it were desirable.

We think, therefore, that the minimum time requirement for religious programmes should be amended. Having regard to the relative costs of programming for broadcasting and for television we see no reason to recommend an identical minimum period for each medium, even though both may ultimately operate 24 hours a day; rather we prefer to suggest means by which religious television programming may achieve quality within the limits of the finance that is now available, and may reasonably be expected in the foreseeable future. We consider that whereas commercial broadcasting stations are required to provide a minimum of 60 minutes weekly, commercial television stations should be required to televise matter of a religious nature

APPENDIX P—continued

for an aggregate duration of not less than 30 minutes per week regardless of the total weekly hours of programme transmission. Programme sponsorship by sectional interests (religious, commercial or other) should not be acceptable during this period in either medium.

A Policy for Religious Television

The Board initially allowed stations to find their own ways of presenting religious programmes. Most stations either failed to develop them or, having developed them, found difficulty in servicing them. The stations' difficulties led to the establishment of programme production organizations which, under the auspices of a number of churches, gradually relieved stations of the responsibility for finding religious programme matter. For several years, however, the church agencies found it extremely difficult to provide programmes which could retain station audience. This led to adjustments of programme schedules so that stations would technically comply with the Board's Standards even if the resulting arrangements (including programme blanketing and scheduling at unpopular times) had little regard for the public interest or for what we assume to be the intention of section 103 of the Act. The church agencies, working from a position of weakness because of their reliance on station goodwill for the voluntary provision of studio facilities, tried many types of programme but all too seldom achieved real quality, or aroused genuine enthusiasm even in a minority audience.

Several attempts were made to arrive at a satisfactory working basis for exchange of programmes between agencies, but without lasting success; many agencies were thrown back on their own resources. Perhaps because of the pre-occupation of churches with other matters, these resources remained insufficiently buoyant to ensure viable independent operation. Any television programme costs money, and a good television programme may cost a great deal. The impecunious condition of some agencies has been shown by their brave attempts to finance a year's programming on less money than a station would wish to spend on a single half-hour of quality production. As long as stations are in a position to complain about the inadequacy of the religious programmes supplied to them, they will have the church agencies on the run; and as long as the parent churches fail to take directive interest in their agencies, the agency operators will be unable to do justice to the reason for their existence. Similarly while agencies are obliged to provide programmes for transmission at fixed times of day which more or less restrict the type of material that can be used, they will be hampered in working to best advantage. In this complex situation the present method of providing religious television programmes may have outlived its usefulness.

As a way to better programming we think it essential to acknowledge both the professional ability possessed by station personnel and the community responsibilities that reside in the personnel of the Church. To make the most of skills on both sides, stations should proffer expert assistance for programmes which are to be produced locally.

Given the skills and the will to improve, it should be possible for stations to have different types of religious programme, at different times and on different days, each appropriate to the expected audience. First in order of importance, for the programmer, is the audience; this will vary in size, in programme interest, and in approachability according to the time of day and the nature of other programmes in the vicinity of the period allocated to religious matter. The audience cannot be assumed to be captive. Second in importance to the programmer is the subject matter and form of presentation of the programme, both of which must be appropriate to the audience if they are to serve their purpose. What the producer might like to produce may be far down the list of the Church's priorities; much depends on his understanding of the medium and its audience. The question of priorities is an area in which station personnel can, if they will, be of great assistance in guiding the actions of the Church; for the Church may lack expert appreciation of the use of the media for some time to come.

From our reading of section 99 (1) of the Act we understand that the licensee of each commercial television station is obliged to provide programmes and to ensure that the programmes are in accordance with the Board's Television Programme Standards. This requirement, we assume, applies both to the programme content and to the manner of presentation. Whether all licensees have conscientiously observed this requirement in respect of religious programmes is open to doubt; it may be that, out of deference to what they believe to be the wishes of the

APPENDIX P—continued

Church, many have accepted the programmes provided by the religious programme producing agencies, resisting or protesting only when they are offered something which, as responsible licensees, they cannot condone. If this interpretation of what might otherwise be seen as station lethargy is correct, then credit is due to the licensee for their gracious intentions—and the point is emphasized that the agencies may be lacking the parental guidance which their sponsors, the churches, owe them. Admittedly this interpretation is our own, but we have justification for it even if only in citing public apathy towards religious programmes, and station apprehension of the commercial results of that apathy. The statutory obligation exists for commercial television stations to televise religious matter; the Board has asked this Committee to advise on the nature and form of religious programmes appropriate to television today; the Committee has tried to bring home to religious bodies the importance of the opportunity provided for them and that they in turn have an obligation to society and to themselves to use this opportunity gainfully. The Committee accepts that in the competitive area of commercial television the licensees' interests must be recognized as a factor in religious programming, as in all other programming. We do not think commercial gain should be a dominant factor at such times, and it seems that the Board's action in preventing the capricious rescheduling of religious programmes coincides with our thinking. We are, however, quite certain that the Church must not wholly ignore the nature of a commercial television operation—an operation which depends on the maintenance of substantial audience.

In Sydney the three commercial stations have for some time provided sufficient funds for the employment of a production director to work in association with the religious production agencies. By this means the stations and the church agencies have come to understand each other better. After some initial difficulties the three agencies (the Christian Television Association of New South Wales, Church of England Television Society, and Catholic Radio and Television) now appear to be working in fruitful harmony with the stations. Similar conditions do not exist in other capital cities, or in country areas. The Roman Catholic Church has recently made substantial progress in the establishment of programme units in all State capitals. The operation of these units, which have the authority and confidence of the Bishops, does not necessarily solve problems of diocesan autonomy in respect of television programmes, but it suggests the type of relationship between the Church and the programme agency which we have been advocating.

Recommended types of programme for television include—

- (a) Talks and discussions with either direct or indirect religious intention.
- (b) Feature material, documentaries, or dramatized matter bearing directly or indirectly on religious principles.
- (c) Musical programmes having a bearing on religious thought.
- (d) Divine Worship, preferably in a form adapted for television; if pre-recorded it should, on the day of transmission, be consistent with the Church calendar.
- (e) Short announcements bearing on religious or moral principles.

These do not exhaust the possible types of programme, nor are they all of equal importance. We repeat our opinion that short announcements would not by themselves represent adequate compliance with the spirit of the Act.

It is the Committee's opinion that despite the opportunity for development of religious programmes and church agency understanding which became known to those who attended the 1966 Consultation, the overall position (with the exception mentioned) is substantially as stated in "Religious Telecasting in Australia" (page 84):

At this time it seems that there are two main choices open to heads of churches if they wish to make something of the opportunity of television and avoid more years of indecision. Either they could recognize the need for a central pool of programmes and production, to provide the solid core of religious television programmes, and take prompt and positive action to establish it under their own control; or they could restrict their programme activity to an advisory capacity and leave production to the stations, which have the necessary professional knowledge and on whom the legal responsibility lies to provide free time for religious programmes.

APPENDIX P—continued

The heads of some churches have not had an opportunity to react to the message of that paragraph; but if the heads of churches considered that their sparse representation at the Consultation was adequate, then the intervening years show, in most cases, a considerable degree of sameness in outlook, reflecting perhaps basic disinterest in the use of the medium. If something worthwhile is to be made of religious television the only way may be for licensees to approach the presentation of religious programmes as they do secular programmes. In effect this would require the station to obtain, select and schedule religious programmes in much the same way that it obtains, selects and schedules all other programmes—on the basis of station policy, programme availability and quality, and in accordance with the provisions of the Television Programme Standards. If this way is adopted there should be some safeguards for the interests of the Church. The statutory provision for religious programmes carries by implication at least, an element of protection which could be met by a requirement that licensees should consult religious bodies about the nature and source of religious programmes, and should not, without good reason, resist dealing with topics which the Church regards as important.

Notwithstanding our thought that such a move may be the only way to implement satisfactorily what we believe to be the underlying intention of section 103 of the Act, the first choice mentioned in the quotation above may still exist—that is, the creation of a central pool of programmes and production to provide the solid core of religious television programmes. This idea should, we think, be examined urgently by the churches in a co-operative and constructive manner.

Whatever may be decided about the primary responsibility for religious programme production, a real need exists for benevolent control of religious programmes and their placement in television schedules. The Board has found it necessary to direct several commercial television stations to refrain from altering established arrangements for religious programmes without prior consultation and agreement with appropriate church authorities, and without the Board's approval. We think it would be advantageous to religious programming, and not onerous to the Board's administration, if such a direction were made general. Once each station had established an acceptable plan for religious programmes it should not be burdensome for the process of consultation and approval to be carried through for each change; and the requirement to follow this procedure might well reduce the tendency to move religious programmes around on grounds of commercial convenience.

A Policy for Religious Broadcasting

The Committee's previous review of religious broadcasting, which led to the recommendations now embodied in the Broadcasting Programme Standards, was made towards the end of 1965 and was based on an historical study of religious broadcasting and on the opinions of a considerable number of commercial station personnel. We accepted the opinions as being reasonably representative of commercial broadcasters generally. We have since continued to observe religious broadcasts and to study their place in broadcasting—a place which becomes less clear as each new idea for general programmes is evolved.

Today's commercial broadcasting programmes seem to alternate between a miscellany of information and a flow of sound. Relatively few stations are prepared to broadcast a lengthy period of uninterrupted speech or music; it must be segmented by some means. Consequently the opportunities to broadcast religious services, or other matter of sufficient length to convey reasoned thought, have almost ceased to exist. Station reluctance to broadcast anything but encapsulated matter is not universal, but we see it as a dominant factor in programming at present. Exceptions there are, to be sure; but barring only sponsored religious programmes which, when they occur, are usually regarded as sources of income rather than positive contributions to programming, the exceptions which allow long periods of speech are usually limited to programme ideas which the station management regards as topical or exciting—a description not often considered applicable to religion.

There is some desire among station managers to transmit religious matter, but a stereotyped church service or any type of formal presentation is not favourably regarded. Special services, involving something more than routine interest or activity, are more welcome. By and large,

APPENDIX P—continued

station managers appear to be on the horns of a dilemma—whether to programme religious matter as conscience dictates, or to go for audience.

It is a long time since the average commercial broadcasting station has had to produce its own religious programmes, relying (as at least 80 of them now do) on central sources for the supply of recorded items; consequently few have any ideas beyond looking at the Christian Broadcasting Association catalogue or calling a meeting of the local Ministers' Fraternal. New programme policies developed by some of the stations restrict items of speech on any subject to a given number of seconds—a limit of 60 seconds is usual in such cases. Reports from other countries make it clear that such an approach to religious programmes is not unusual.

A national broadcasting service, wherever it may be found, tends to take religious matter more seriously. The B.B.C. and the A.B.C. still transmit religious services of various types and durations as well as talks and other matter bearing on the activities of churches and religious-based organizations, and religious music. It is possible that both in Australia and abroad much of the responsibility for providing religious programmes, especially those which appeal mainly to minority audiences, may fall in future on organizations which have an obligation under their charter to heed minority interests.

We do not regard an Australian commercial broadcasting station as having a substantial obligation to cater for minorities although it should not be insensitive to their needs.

It is the Committee's view that there should be a varied approach to religious broadcasting which would take into account the public image of each station, the considered judgment of policy-makers of the Church, and the responsibility of each licensee for programmes broadcast by his station. The effect of this is not so much to revise our former recommendations as to widen their scope. We are aware of the nature of commercial broadcasting, which changes the pattern of its programmes from time to time, and of the fact that alterations made now in religious programmes may again have to be modified if their relevance is to be seen in the changing context.

Each licensee should develop positive views on the type of religious matter that is consistent with his station's image, and which he considers appropriate to meet the requirements of the Act and the Broadcasting Programme Standards. A fact to be borne in mind is that programmes which are not obviously religious in form may have beneficial religious or moral effect. Each production organization should co-operate with stations in devising and presenting religious programmes in the idiom of the station. For his part each licensee should be prepared to consult the churches and pay due regard to their wishes in respect of the types of programme to be presented. A co-operative relationship between stations and the churches—whether through their agencies or through local representation—is essential if station time is to be used creatively. The churches must realize their responsibility either to provide programmes themselves or to direct agencies capable of producing them; but the churches must recognize the professional knowledge of the use of the medium developed by commercial broadcasting personnel and respect it even though the broadcaster's views on presentation may differ from those of the Church.

Recommended types of programme for broadcasting include—

- (a) Divine Worship, preferably in a form adapted for broadcasting, if pre-recorded it should, on the day of the broadcast, be consistent with the Church calendar.
- (b) A short devotional service of up to 15 minutes duration, broadcast on several days each week at a fixed time.
- (c) A talk or discussion on such subjects as the teaching, work and affairs of the Church; the subject matter should be authoritatively based and should be appropriate to the time of day and to the expected audience.
- (d) Brief religious items, with a minimum duration of 10 seconds, to be broadcast at any time of day. Such items will be acceptable for broadcasting as part of a station's obligation under these Standards only if they are prepared and produced by persons who are competent in the field of religion and have the authority of the Church to produce the items, and if they have some moral or scriptural value. Such items broadcast in isolation should be additional to programmes of the types outlined in the preceding sub-paragraphs.
- (e) A programme consisting of brief religious items of the type mentioned in the preceding sub-

APPENDIX P—continued

paragraph, presented in a framework of linking and appropriate musical items, provided that the purpose and effect of the programme is of constructive moral or social value.

- (f) Music bearing on religious thought.
- (g) Dramatized matter designed as an adjunct to religious teaching and having moral value.

As in the case of television, this list does not exhaust the possibilities for religious broadcast, but it places the different types of programme in what we regard as a priority sequence. We have emphasized that brief announcements alone are not considered sufficient compliance with requirements for religious programmes.

Advertising Associated with Religious Programmes

The requirement to provide time without charge for such programmes has in the past carried with it an implicit exclusion of advertisements during religious programmes. We are by no means sure that the total exclusion of advertisements at all such times is necessary. The association of advertisements with programmes is part and parcel of commercial television, and to bar advertisements from a particular programme may be to segregate the programme from its environment. Obviously discretion would be required when associating advertisements with religious programmes; a solution might lie in allowing only institutional advertising for products or services which are not inappropriate in such a context. We think, however, that if advertisements are televised in association with religious programmes they should be spot advertisements. It seems preferable to avoid commercial sponsorship of religious programmes, whether complete or partial.

Accordingly we state our opinion that in religious programmes transmitted during periods generally described as "statutory time" stations should be permitted, if they so desire, to televise spot advertisements, subject to the requirements of the Board's Standards. Among other things this would mean, under the present requirements of the Standards, that a religious programme televised before 6.00 p.m. on Christmas Day or Good Friday would not carry any advertising matter.

We consider the argument for advertisements in religious programmes to be equally applicable to television and broadcasting, and to require similar controls and conditions for each medium. The type of control we suggest might be concisely stated on the following lines:

- (a) All advertisements should be in the form of institutional credits and should not mention prices nor attempt to sell the product or service of the advertiser.
- (b) Such advertisements may be presented before or after a religious programme, or during natural breaks in programmes other than church services or similar religious programmes.
- (c) Any advertisement transmitted in association with a religious programme must be appropriate to the occasion and consistent with the requirements of the Board's Standards in respect of the acceptability of advertising matter.
- (d) All advertisements presented in association with religious programmes should comply with the Board's advertising time standards applicable to the time of transmission of the programme.

Summary of Conclusions

Stated briefly, we have come to the following conclusions:

- (i) Under the present provisions of the Standards television stations either face now, or soon will face, an obligation to provide more time for religious programmes than can satisfactorily be filled. Consequently the amount of time required to be provided should be set at a minimum of 30 minutes per week, and the requirement based on a percentage of operating hours should be dropped. The existing minimum requirement of 60 minutes per week should be retained for broadcasting.
- (ii) In general (but with particular exceptions) we consider that the best use is not being made of the opportunities offered to churches by television and broadcasting, nor is the best use made of the available resources.
- (iii) A pattern is being established in Sydney by the present co-operation between the religious television programme production agencies and commercial television stations, which may point the way towards greater programme satisfaction.

APPENDIX P—continued

- (iv) A form of direct relationship between the Church and its programme agencies is developing in the Roman Catholic Church. Even though the modus operandi may not be adaptable to all other churches its merits and effectiveness should be watched closely.
- (v) The leaders and policy-makers of the churches should be invited to re-examine the use that is being made of the time and opportunities provided for them in commercial television and broadcasting, and the use that is being made of resources available for this purpose.
- (vi) If the churches cannot become more directly involved in preparation of religious programmes, it may become necessary for them to relinquish at least some of the responsibility they should now be holding, and to assume the role of advisers to licensees on the presentation of religious matter.
- (vii) In selecting and presenting religious programmes licensees should take into account the views of appropriate authorities in the churches and should not unreasonably disregard the wishes of the churches in respect of the types of programme to be presented.
- (viii) As far as practicable religious matter should be presented in a form which will not unduly isolate it from other programmes of the station.
- (ix) The principle of presenting advertisements in association with religious programmes should be adopted, subject to appropriate controls and safeguards.
- (x) The times at which religious programmes are transmitted should be appropriate to the nature of the programme, and provision should be made by licensees to present different types of programme at different times of day and, if necessary, on different days of the week.
- (xi) The Board's limited practice of directing some stations not to make changes to religious programmes schedules except under certain conditions could beneficially be extended to cover all stations.

APPENDIX Q

AUSTRALIAN BROADCASTING CONTROL BOARD
STATEMENT OF RECEIPTS AND PAYMENTS FOR YEAR ENDED 30 JUNE 1970

	1969-70	1968-69
	\$	\$
<i>Receipts</i>		
Funds on hand at 1 July 1969	6,072	7,852
Parliamentary Appropriation	1,526,000	1,317,600
	1,532,072	1,325,452
<i>Payments</i>		
<i>Salaries and Wages —</i>		
Salaries	796,612	665,367
Temporary Assistance	29,050	26,902
Extra Duty Pay	18,848	12,882
	844,510	705,151
<i>General Expenses —</i>		
Travelling and Subsistence	100,444	64,273
Office Requisites, Library	34,214	29,364
Postage, Telephones, etc.	34,355	23,536
Research and Advisory Committees	24,998	31,388
Payments to Post Office for Station Inspections, Investigations of Interference to Reception, etc.	237,854	222,948
Furniture and Fittings	5,765	2,717
Repairs and Maintenance	13,314	7,444
Buildings and Works	2,564	2,205
Rental	87,141	84,043
Public Inquiries	13,168	2,468
Incidental and Other Expenditure	29,136	22,244
	582,953	492,630
<i>Stores and Materials —</i>		
Technical Equipment	101,676	121,599
	1,529,139	1,319,380
TOTAL PAYMENTS	2,933	6,072
Funds on hand at 30 June 1970	1,532,072	1,325,452

(J. A. McNAMARA)
Secretary
14 July 1970

(MYLES F. E. WRIGHT)
Chairman
14 July 1970

The above Statement of Receipts and Payments has been examined and is in agreement with the accounts. In my opinion it is a correct statement of the receipts and payments of the Australian Broadcasting Control Board for the year ended 30 June 1970.

(V. J. W. SKERMER)
Auditor-General for the Commonwealth
13 August 1970