

1949.

COMMONWEALTH OF AUSTRALIA.



# FIRST ANNUAL REPORT

OF THE

## AUSTRALIAN BROADCASTING CONTROL BOARD.

PERIOD—15TH MARCH TO 30TH JUNE, 1949.

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Presented Pursuant to Section 6P—*Australian Broadcasting Act 1942-1948.*

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By Authority:

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# AUSTRALIAN BROADCASTING CONTROL BOARD.

## FIRST ANNUAL REPORT.

*The Honorable the Postmaster-General:*

In conformity with the provisions of section 6P of the *Australian Broadcasting Act 1942-1948*, the Australian Broadcasting Control Board has the honour to submit its First Annual Report on its operations, together with financial accounts in the form approved by the Treasurer, and the report of the Auditor-General on those accounts.

2. The Australian Broadcasting Control Board was constituted by section 6A of the *Australian Broadcasting Act 1942-1948*. This section was inserted in the Principal Act by section 6 of the *Australian Broadcasting Act 1948*, which was proclaimed to commence on 15th March, 1949. On that date also the Board was established.

3. Consequently, this report deals only with the period from the date of the establishment of the Board until the 30th June, 1949, a period of three and a half months, during which the Board was obliged, of necessity, to devote a considerable amount of time to problems associated with the commencement of its operations, including the determination of its organization, the selection of staff, and the acquisition of office accommodation.

4. As the Board had at its disposal during that period only a skeleton staff and very limited office accommodation, made available by the Director-General, Posts and Telegraphs, its activities in relation to the functions entrusted to it by Parliament were restricted mainly to a preliminary review of various matters which appeared to require early attention. It will be observed, however, from Part III. of the report, that the Board dealt with certain technical questions of considerable importance, including the determination of transmission standards for television in Australia.

5. This report is arranged as follows:—

Part I.—Introductory.

Part II.—Constitution, Functions and Staff of the Board.

Part III.—Technical Services.

Part IV.—Programme Services.

Part V.—General.

### PART I.—INTRODUCTORY.

6. The establishment of the Board was an important event in the history of broadcasting administration in the Commonwealth and it may therefore be appropriate in this report to recapitulate briefly the various stages of the development of the Australian broadcasting system.

#### COMMENCEMENT OF BROADCASTING IN AUSTRALIA.

7. Broadcasting was commenced in Australia in accordance with regulations made, under the *Wireless Telegraphy Act 1905-1919*, in July, 1923. The regulations provided for the grant of licences by the Postmaster-General for the establishment of stations, maintained by the subscriptions of listeners using receivers capable of operating only on the frequency allocated to the station to which the subscription was paid. The receiving apparatus was sealed by inspectors of the Postmaster-General's Department so that no alteration could be made to permit of reception from other stations. The subscription fees fixed by the operating companies varied from 10s. to £4 4s. per annum. Listeners were also required to pay a Government licence-fee of 10s. per annum. This scheme was abandoned after twelve months' trial, during which only four broadcasting stations commenced operations and only 1,200 listeners were licensed.

#### CLASS "A" AND CLASS "B" STATIONS.

8. New regulations were made under the *Wireless Telegraphy Act 1905-1919* in July, 1924, and, in contrast to the restrictive nature of the original system, they encouraged the introduction of alternative programmes by permitting the establishment, under licence from the Postmaster-General, of two classes of broadcasting stations. Listeners were required to obtain a licence, which entitled them to receive the programmes of any station.

9. The Class "A" stations, which were licensed for a period of five years, received the main portion of their revenue from listeners' licence-fees collected by the Postmaster-General's Department, the sum so collected being apportioned among the stations established in the respective States in which the revenue was collected. The broadcasting of advertisements by these stations, subject to certain conditions, was permitted for limited periods daily.

10. Class "B" stations did not receive any revenue from listeners' licence-fees, but were maintained by revenue received from the broadcasting of advertisements.

11. The public freely availed themselves of the new service. In the first year 63,874 listeners were licensed, and by 1929, when the five-year licence period of the Class "A" stations ended, the total had grown to 301,199, and twenty broadcasting stations—eight class "A" and twelve Class "B"—were in operation.

12. Notwithstanding this apparently satisfactory progress, it soon became evident that there were some inherent weaknesses in the system. The operations of licensees of stations in the less populous States were restricted by reason of the limited income which they received from the licence-fees collected in those States, and there was a natural inclination on the part of the broadcasters in all States to confine their activities to the capital cities. Consequently, the quality of programmes in the different States varied and country areas and the Territories received very little reliable service.

#### ROYAL COMMISSION ON WIRELESS, 1927.

13. In January, 1927, a Royal Commission was appointed to inquire into and report upon—

"(a) wireless broadcasting within the Commonwealth in all its aspects, making recommendations as to any alterations deemed desirable in the policy and practices at present in force; and

(b) the development and utilization of wireless services for public requirements within the Commonwealth."

14. The Royal Commission, in its recommendations, so far as they related to broadcasting, did not suggest any substantial change in administration, which it thought should remain in the hands of the Postmaster-General's Department. The Commission made a number of detailed recommendations relating to such matters as the amount and distribution of revenue from listeners' licence-fees, the extent to which advertisements might be broadcast, the location, power, frequency, and operating conditions of broadcasting stations, licensing of stations, and other matters. It may be noted that the Commission did not favour the establishment, at that stage, of a National Broadcasting Corporation.

#### UNIFIED CONTROL OF CLASS "A" SERVICE.

15. After a series of negotiations with the licensees of the Class "A" stations, in which the recommendations of the Royal Commission were discussed, the Government, on the 24th July, 1928, decided to take over the Class "A" stations and to establish a system under which the technical equipment of those stations would be owned and operated by the Post Office and the provision of programmes left to experienced entrepreneurs under contract.

16. Accordingly, arrangements were made for the Postmaster-General's Department to take over the Class "A" stations as their licences expired between July, 1929, and January, 1930, and a contract for the provision of programmes was let to a new organization, the Australian Broadcasting Company, for a period of three years ending on the 30th June, 1932.

17. The period between 1930 and 1932, during which the Australian Broadcasting Company was responsible for the provision of programmes on the Class "A" stations was characterized by considerable improvements in broadcasting, and in particular by the development of an efficient programme organization on a Commonwealth-wide basis, capable of producing programmes of high quality. Interstate relays of outstanding programmes were introduced and, although the development of the broadcasting services on the technical side was, unfortunately, retarded by the effects of the financial depression, four regional stations were established in country districts.

#### ESTABLISHMENT OF NATIONAL BROADCASTING SERVICE.

18. Shortly before the expiration of the contract with the Australian Broadcasting Company, the Government decided to establish a National Broadcasting Service and the *Australian Broadcasting Commission Act 1932* was passed by Parliament in May, 1932, providing for the establishment of the Australian Broadcasting Commission.

19. The Commission was required by the Act to take over the existing studios of the Australian Broadcasting Company and, commencing on 1st July, 1932, to "broadcast from the National Broadcasting Stations adequate and comprehensive programmes" and to "take in the interests of the community all such measures as in the opinion of the Commission are conducive to the full development of suitable broadcasting programmes". The Commission's activities were to be financed by a proportion of the receipts from listeners' licence-fees.

20. The technical services of the National Broadcasting Service (previously the Class "A" stations) remained the responsibility of the Post Office, which was also required to provide the programme transmission lines for the relaying of programmes between the States and between the studios in the capital cities and the regional stations.

#### PROGRESS OF CLASS "B" STATIONS.

21. Coincident with the development of the National Broadcasting Service, substantial progress was made with the expansion of the service provided by Class "B" stations (now known as Commercial Broadcasting Stations), whose activities were not affected by the Act of 1932. Licences for these stations continued to be issued by the Postmaster-General in accordance with conditions prescribed in the Regulations, made under the *Wireless Telegraphy Act 1905-1919*. By 1932, the number of Class "B" stations had increased to 43, and many of them were providing a satisfactory service in country districts of the Commonwealth as well as the capital cities.

#### EXPANSION OF NATIONAL AND COMMERCIAL SERVICES.

22. Both National and Commercial services continued to expand, especially in country districts and by

30th June, 1941, there were 27 National and 96 Commercial stations in operation, providing service for 1,293,266 licensed listeners.

#### JOINT PARLIAMENTARY COMMITTEE ON BROADCASTING.

23. On the 3rd July, 1941, Parliament appointed a Joint Committee to inquire into and report upon wireless broadcasting within and from Australia with particular reference to the following questions:—

- (a) Should any and what changes be made in the existing laws and practices relating to the control of broadcasting?
- (b) Are the services now provided by the Australian Broadcasting Commission and Commercial Broadcasting Stations adequate and, if not, in what respects should they be improved?
- (c) Should any and, if so, what improvements be made in the wireless broadcasting of news within and from the Commonwealth?"

24. The Committee which is usually known as "The Gibson Committee" from its Chairman, Senator the Honorable W. G. Gibson, presented a report to Parliament on 25th March, 1942. The Committee's report contains a comprehensive account of the development and problems of the Australian broadcasting system. While many recommendations were made in respect of questions of administration and programmes, the Committee did not advocate any change in principle in either the National Broadcasting Service or the Commercial Broadcasting Service. The establishment of a Parliamentary Standing Committee on Broadcasting was proposed.

#### AUSTRALIAN BROADCASTING ACT 1942.

25. The Committee reviewed the existing legislative and recommended that the *Australian Broadcasting Commission Act 1932* should be repealed and replaced by a new act governing the operations of both National and Commercial services. The recommendation was adopted by the Government and the *Australian Broadcasting Act 1942* was passed by Parliament in June 1942, and became law on 1st July, 1942.

26. The new Act incorporated many of the previous existing provisions relating to the Australian Broadcasting Commission and the licensing of commercial broadcasting stations. In addition, it provided for the appointment of a Parliamentary Standing Committee on Broadcasting whose functions would be to consider and report to Parliament on any matter affecting broadcasting which was referred to it by either Houses of Parliament or by the Minister. No substantial change was made in the constitution of the Commission by the provisions relating to the Commercial Broadcasting Service, which had previously been contained in regulations under the *Wireless Telegraphy Act*, were for the first time set out in an Act of the Parliament.

27. The Act was amended in 1946 to provide for the establishment of an independent news service by the Australian Broadcasting Commission, and for conditions relating to the staff of the Commission and several other respects.

#### ESTABLISHMENT OF AUSTRALIAN BROADCASTING CONTROL BOARD.

28. On 28th September, 1948, the Prime Minister announced that the Government had decided to introduce legislation to provide for the establishment of a special board to control broadcasting, television and other like services in the Commonwealth.

29. After reviewing the remarkable progress which had been made since the introduction of broadcasting in the Commonwealth, and referring to the great developments which had been made in overseas countries in broadcasting techniques, including the frequency modulation system and television, the Pri

Minister advanced the following reasons for the Government's decision:—

- (a) It was essential that machinery should be available to ensure that the broadcasting services in Australia, both National and Commercial, should be established, developed and operated along sound lines and with proper regard to the public interest.
- (b) All countries recognized the principle of the public domain of the airwaves and as there was only a limited number of frequency channels available under the International Radio Regulations, it was imperative that they should be used to the best advantage in the interests of the general community.
- (c) The action contemplated by the Government conformed in principle with that already taken in Great Britain, Canada, New Zealand, South Africa and the United States where special authorities had been established to control broadcasting.
- (d) Apart from other important considerations, the stage had been reached that unless a similar course were followed in Australia it would be necessary to expand the organization of the Post Office to meet requirements.
- (e) Although control by the Post Office had operated satisfactorily in the past, the remarkable developments in broadcasting in recent times and the possibilities in the future meant that it could not continue to be controlled effectively on a part-time basis.

30. In Part II. of this Report an account is given of the legislation passed in 1948 insofar as it relates to the powers and functions of the Board under the Act.

#### DEVELOPMENT OF BROADCASTING IN AUSTRALIA— STATISTICS.

31. The following table shows the progressive development in the number of broadcasting stations and licensed listeners since the inception of broadcasting in 1923:—

Year.	Number of broadcasting stations in operation.		Number of licensed listeners.
30th June, 1924	Sealed Sets 4		1,206
	Class "A"	Class "B"	
1925	7	6	63,874
1926	8	9	128,060
1927	8	12	225,249
1928	8	12	270,507
1929	8	12	301,199
	National	Commercial	
1930	8	13	312,192
1931	9	27	331,969
1932	12	43	369,945
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

In addition to the above National Stations there were, as at 30th June, 1949, eight short-wave transmitters providing service to listeners in remote areas.

#### BROADCAST LISTENERS' LICENCE-FEES.

32. As mentioned above, listeners are required to pay an annual licence-fee which has varied from 35s. in 1924 to 20s. at the present time for listeners in Zone 1, that is within approximately 250 miles of a National Station.

33. During the period when the Class "A" stations were in operation, the listener's licence-fee was paid to the licensees after a small proportion was deducted to cover the Post Office costs of administration and issuing licences to the public.

34. From 1929 to 1932, the Australian Broadcasting Company received 12s. per listener's licence, the balance being paid to Consolidated Revenue to meet the costs of technical services provided by the Post Office.

35. The *Australian Broadcasting Commission Act* 1932 provided that the Commission should receive 12s. per listener's licence, but its proportion was reduced to 11s. by an amendment of the Act in 1940.

36. In the early stages of the National Broadcasting Service, the amount received from listeners' licence-fees was sufficient to cover the cost of both programme and technical services, but with the extension of the service in country districts and rising costs, expenditure by the Commission and the Post Office in recent years has exceeded income from listeners' licences, the difference in 1947-48 being approximately £660,000.

37. The *Australian Broadcasting Act* 1948 altered the method of financing the National Broadcasting Service by providing that the whole of the revenue from listeners' licence-fees should be paid to the Consolidated Revenue and the cost of the Service should be met by funds provided by Parliament by appropriation from revenue. This provision came into force on 15th March, 1949.

#### COMMERCIAL BROADCAST STATIONS' LICENCE-FEES.

38. Commercial broadcasting stations are required, by the *Commercial Broadcasting Stations Licence Fees Act* 1942, to pay by way of annual licence-fee an amount of £25 per annum plus one-half of one per cent. of the gross earnings where a station has made a profit in the previous financial year. Previously the licence-fee for commercial broadcasting stations was a flat rate annual fee of £25. The total amount of licence-fees paid during 1948-49 was £12,792.

39. The following particulars obtained from statements submitted to the Postmaster-General's Department by the licensees of commercial broadcasting stations since 1942 show the financial results of the operations of those stations during the past seven years:—

Year.	Number of stations in operation.	Stations making a profit.	Stations showing a loss.	Total revenue.	Total expenditure.	Total profit.
				£	£	£
1941-42	97	53	44	1,330,000	1,248,188	81,812
1942-43	96	66	30	1,298,297	1,157,294	141,003
1943-44	98	87	11	1,871,851	1,491,967	379,884
1944-45	100	89	11	2,184,686	1,758,905	425,781
1945-46	100	86	14	2,279,719	1,851,042	428,677
1946-47	101	85	16	2,388,587	2,013,363	375,224
1947-48	102	86	16	2,774,371	2,278,319	496,052

## PART II.—CONSTITUTION, FUNCTIONS AND STAFF OF THE BOARD.

### LEGISLATION.

40. Legislation was introduced into the Commonwealth Parliament in October, 1948, for the amendment of the *Australian Broadcasting Act 1942-1946* to provide for the establishment of the Board, and for certain other purposes. After having been passed by both Houses of the Parliament, the Act was assented to on 6th December, 1948, and subsequently proclaimed to commence on 15th March, 1949.

### FUNCTIONS OF THE BOARD.

41. The principal functions of the Board are set out in section 6K of the Act as follows:—

- (a) to ensure the provision of services by broadcasting stations, television stations and facsimile stations, and services of a like kind, 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 such stations to serve the best interests of the general public.

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

42. In the exercise of its functions in respect of programmes, the Board is required—

- (a) to consult the Australian Broadcasting Commission and representatives of licensees of commercial broadcasting stations in relation respectively to the programmes of the national and commercial broadcasting services, and
- (b) in particular to—
  - (i) ensure reasonable variety of programmes;
  - (ii) ensure that divine worship or other matter of a religious nature is broadcast for adequate periods and at appropriate times and that no matter which is not of a religious nature is broadcast by a station during any period during which divine worship or other matter of a religious nature is broadcast by that station;
  - (iii) ensure that facilities are provided on an equitable basis for the broadcasting of political or controversial matter;
  - (iv) determine the extent to which advertisements may be broadcast in the programme of any commercial broadcasting station;
  - (v) fix the hours of service of broadcasting stations, television stations and facsimile stations.

43. The Board is empowered to make recommendations to the Minister as to the exercise by him of any power under Division 1 of Part III. of the Act, which prescribes the conditions under which licences are granted to commercial broadcasting stations.

44. The Board also has power, subject to the directions of the Minister—

- (a) to determine the situation and operating power of any broadcasting station, television station or facsimile station;
- (b) to determine the frequency of each broadcasting station, television station or facsimile station, within bands of frequencies notified to the Board by the Postmaster-General as being available for such stations;
- (c) after consultation with the Commission, to determine the conditions upon which a commercial broadcasting station may broadcast a programme of the National Broadcasting Service;
- (d) to regulate the establishment of networks of broadcasting stations and the making of agreements or arrangements by licensees of commercial broadcasting stations for the provision of programmes or the broadcasting of advertisements.

45. Subject to the approval of the Minister and of the Treasurer, the Board may provide financial and other assistance to commercial broadcasting stations for the purpose of ensuring that programmes of adequate extent, standard and variety are provided in the areas served by these stations.

46. In addition to prescribing the functions of the Board as set out in section 6K of the Act, the amending Act of 1948 also transferred to the Board certain powers which had previously been exercised by the Minister in connexion with the general control of the broadcasting service, particularly in relation to the operations and programmes of commercial stations.

### MEMBERSHIP OF THE BOARD.

47. Section 6B of the act provides that the Board shall consist of three members appointed by the Governor-General, one of whom shall be chairman. The Board was constituted on the 15th March, 1949, when Mr. Lawrence Bede Fanning, I.S.O., was appointed chairman for a period of three years and Messrs. Clive Ogilvy and Robert Gumley Osborne, B.A., LL.B., were appointed members, each for a period of seven years.

48. Section 6B of the Act provides that no person who—

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

shall be appointed as a member of the Board. At the first meeting of the Board, a statement was made by each member that he had no such interest as is referred to in section 6B, and this was subsequently formally reported to the Minister.

### STATE BROADCASTING ADVISORY COMMITTEES.

49. Section 6Q of the Act provides that the Minister shall appoint in each State a Broadcasting Advisory Committee, the functions of which shall be to advise the Board with respect to any matter relating to the programmes of broadcasting and television stations. Provision was also made for the continuation of the Broadcasting Advisory Committees previously appointed under section 87 of the Act to advise the

Minister. The membership of the State Broadcasting Advisory Committees as at 30th June, 1949, is set out in Appendix A.

#### STAFF OF THE BOARD—HEAD OFFICE.

50. The first business of the Board was to consider the staff which would be required to enable the Board to discharge its responsibilities under the Act. After carefully considering this matter, the Board decided that its head office organization would be divided into three divisions, as follows:—

- (a) Technical Services.
- (b) Administration.
- (c) Programme Services.

51. The division of the Board's organization follows, in general, the statement of the powers and functions of the Board as set out in the Act.

52. Under section 6j of the Act, officers and other persons required by the Board are employed under the *Commonwealth Public Service Act-1922-1948*. Accordingly, the Board submitted for the consideration of the Commonwealth Public Service Board a draft scheme of organization providing for the three Divisions mentioned above under the control respectively of a Director, Technical Services, a Secretary, who would be the Chief Executive Officer of the Board, and a Director of Programme Services. Following the approval of the Commonwealth Public Service Board for its organization, the Board widely advertised most of its senior positions and received numerous applications from well-qualified persons for appointment to its service. On 9th June, 1949, the Board appointed Mr. R. B. Mair, B.E.E. (Melbourne University), A.M.I.E. (Australia), as Director, Technical Services, and Mr. J. O'Kelly as Secretary. The Board has since made several additional appointments to its staff, but the officers concerned had not commenced duty before 30th June, 1949.

#### STATE ORGANIZATION.

53. Following the determination of the staff required for the Head Office of the Board, the Commonwealth Public Service Board was consulted concerning the organization which would be required in each State for the detailed administration of matters coming within the Board's functions, and to undertake field investigations for the purpose of ensuring that an adequate service, both in respect of technical efficiency and satisfactory programmes, is available for listeners throughout the Commonwealth.

54. At the end of the period to which this report relates the question of the establishment and staffing of the State organization referred to in the preceding paragraph was still under consideration by the Board and the Public Service Board.

#### HEAD-QUARTERS OF THE BOARD.

55. The Board has, with the Minister's approval, decided that its permanent head-quarters should be established in Canberra, but because of its inability to obtain suitable accommodation in the Federal Capital for its offices and staff, most of whom are at present resident in Melbourne, it has felt that no alternative exists but to establish its Head Office temporarily in Melbourne.

#### CONSULTATIONS WITH AUSTRALIAN BROADCASTING COMMISSION AND REPRESENTATIVES OF COMMERCIAL BROADCASTING STATIONS.

56. The Board met in Sydney from 4th to 8th April, 1949, and took the opportunity of conferring with the Chairman and General Manager of the Australian

Broadcasting Commission and also with the Standing Committee appointed by the Australian Federation of Commercial Broadcasting Stations to represent the Federation in discussions with the Board. The discussions with the Commission and the representatives of the Federation were of a general nature and proved helpful to all parties. Arrangements were made for liaison between the Commission and the Federation and the Board, which is grateful to both parties for the ready co-operation it has received.

#### PART III.—TECHNICAL SERVICES.

57. As has already been indicated in the statement of its functions, the Board is required by the Act to ensure the provision of services by broadcasting stations, television stations, facsimile stations and services of a like kind, in accordance with plans from time to time prepared by the Board and approved by the Minister. It has also the specific technical functions set out in paragraphs 41 and 44 of this report, in particular relating to the technical equipment, situation, operating power and frequency of all broadcasting stations, television or facsimile stations.

58. In the period covered by this report, a preliminary review of existing broadcasting facilities was made, consideration was given to frequency modulation broadcasting, the question of the introduction of re-diffusion or wire broadcasting into the Commonwealth was dealt with, and the Board made a full report to the Government on the introduction of television services, including the technical standards to be adopted in Australia.

#### REVIEW OF EXISTING BROADCASTING FACILITIES.

59. The broadcasting service at present available to listeners in the Commonwealth is provided by stations operating in the medium and high frequency bands allocated for broadcasting purposes under the Radio Regulations annexed to the International Telecommunications Convention (agreed to at Atlantic City, United States of America, in 1947), which entered into force on 1st January, 1949.

60. In Australia, as in most other countries, the band of frequencies utilized principally for domestic broadcasting purposes is that commonly known as the medium wave band which, under the International Radio Regulations, is restricted to those frequencies between 540 kC/s and 1,600 kC/s. Except in the case of Europe, it is the general practice to have 10 kC/s separation between channels, and this procedure is followed in Australia. Thus only 107 channels are available.

61. Until recently, only the 96 channels between 550 kC/s and 1,500 kC/s could be used in the development of the Australian broadcasting system, the reason being that only that portion of the spectrum was reserved under the International Radio Regulations for broadcasting purposes prior to 1938.

62. In that year, the broadcasting band was extended to include frequencies between 1,500 kC/s and 1,600 kC/s and ten more channels became available. Although arrangements were made by manufacturers for all receivers produced after 1938 to cover these frequencies, it was realized that some years would elapse before sufficient new receivers were in operation to permit of the effective use of the ten additional channels. During the war, the manufacture of receivers ceased, and this delayed the normal replacement of obsolescent equipment in the homes of listeners. Consequently, it was not until towards the end of 1948 that broadcasting was commenced in Australia within the band 1,500 kC/s to 1,600 kC/s.

63. The Radio Regulations annexed to the International Telecommunications Convention (Atlantic City) provided for the further extension of the broadcasting band from 550 kC/s to 540 kC/s, but this additional channel did not become available until 1st January, 1949.

64. It has always been recognized that the provision of a completely satisfactory broadcasting service, ensuring reliable reception of alternative programmes by listeners throughout the Commonwealth, constitutes a difficult problem, because of the vast areas which have to be covered and the uneven distribution of the population to be served. Notwithstanding this physical difficulty, however, the task of planning the Australian broadcasting services would not have been so complex if sufficient frequencies had been available to permit the establishment, under favorable operating conditions, of sufficient stations to provide adequate alternative programmes throughout the populated area.

65. As, however, only 96 channels were available until recently and it was obvious that more than 96 stations were needed to provide reasonably satisfactory alternative services throughout the Commonwealth, the only course open to the Postmaster-General's Department, which was responsible for the planning of the broadcasting services, was the introduction, in certain cases, of shared channel working, whereby two or more stations were required to operate on the same frequency.

66. This arrangement, although it permits a larger number of stations to be established, has the inherent disadvantage of restricting the operating power which may usefully be employed by sharing stations. It also necessitates wide geographical separation between such stations in order that each may, within the area it is intended to serve, be reasonably free of interference from any station operating on the same channel.

67. The actual situation at the date of the establishment of the Board was that the 96 frequency channels were allocated as follows:—

	Channels.
On a "clear" basis for use by National stations	26
On a "shared" basis for use by two National stations	3
On a "shared" basis for use by one National and one commercial station	1
On a "shared" basis for use by one National and two commercial stations	2
On a "clear" basis for use by commercial stations	34
On a "shared" basis for use by two commercial stations	21
On a "shared" basis for use by three commercial stations	7
Reserved for use by projected National stations	2

68. The above allocation of frequencies was made by the Postmaster-General's Department over a considerable period during which the complexities involved in planning for the expansion of the services became more and more apparent, as the scope and importance of broadcasting facilities were developed and public demands for additional stations increased.

69. It was decided last year that a stage had been reached where the additional ten channels between 1,500 kC/s and 1,600 kC/s could be allocated, and already one of these is being utilized by a low power National transmitter at Alice Springs (Northern Territory). A low power National station at Longreach (Queensland) is also now operating on the 540 kC/s channel, which, as mentioned in paragraph 63, is now available for use.

70. A total of 139 medium frequency broadcasting stations were in operation on 30th June, 1949. Of these, 37 radiate the programmes of the Australian Broadcasting Commission, whilst 102 commercial broadcasting stations are operated by licensees in accordance with the terms of licences granted by the Postmaster-General under the *Australian Broadcasting Act 1942-1948*.

71. The stations operate with powers varying between 200 and 10,000 watts. Details of the power and frequency of each National station are shown in Appendix B and of each commercial station in Appendix C. The maximum power at present allotted to National stations is 10,000 watts and to commercial stations 2,000 watts.

72. There are certain areas in Central and Northern Australia, and in the Territories, where the cost of providing an adequate broadcasting service by means of a medium wave station could not be justified on economic grounds. To meet the needs of the sparse population in these areas, eight high frequency (short wave) stations have been established, which radiate the programmes of the Australian Broadcasting Commission. Particulars of these stations are also contained in Appendix B.

73. Notwithstanding the progressive development which has taken place over the years in both the National and commercial services, the Board has good reason to believe that a really adequate service is not yet available to all listeners throughout the Commonwealth. This view is supported by the public dissatisfaction which has been expressed, especially in many country areas, and the many requests which have been made to the Government for additional stations to be established in various districts.

74. The Board is therefore undertaking an investigation of the grade of service being rendered by existing broadcasting stations for the purpose of determining the areas which are not being adequately served. In the light of the information disclosed by its survey of the present position, the Board will examine the various methods which might be adopted to effect improvements, including the use of higher power, the operation of stations on the tropical and very high frequencies (frequency modulation), and the possibilities of re-arranging medium frequency allocations to permit a more effective use of channels. In view of the desirability for effecting early improvements in many country districts, the Board regards this matter as one of its immediate obligations and, as the preparation of its ultimate plans will entail considerable technical research, it proposes to prepare an interim plan which will improve conditions in those country districts where the quality of service leaves much to be desired.

#### FREQUENCY MODULATION (VERY HIGH FREQUENCY) BROADCASTING.

75. Frequency modulation broadcasting is a method of providing programmes for listeners in the very high frequency bands not hitherto used for this purpose in the Commonwealth. Prior to the establishment of the Board, the Government had decided—

- (a) that frequency modulation broadcasting should be introduced gradually into the National broadcasting service in Australia;
- (b) that in the State capital cities the frequency modulation system should be introduced as early as practicable, the existing amplitude modulation service to be retained also for so long as may be necessary;
- (c) that, in country districts, the frequency modulation system be utilized where it is technically practicable and advantageous to listeners, and that the amplitude modulation service also be retained and extended where necessary;
- (d) that a fundamental plan be prepared by the Postal Department for the introduction of the frequency modulation system into the National broadcasting service, provision being made in such plan for channels for

the National broadcasting service in State capital cities and selected country centres to enable frequency modulation programmes to be radiated and also provide for special services such as parliamentary debates and school broadcasts;

- (e) that, as a preliminary step in connexion with the preparation of the fundamental plan, the Postal Department should consult the various manufacturing interests concerned in the broadcasting industry with a view to ensuring the smooth introduction of the frequency modulation service; and
- (f) that tests of frequency modulation broadcasting from the experimental stations set up by the Postal Department in Sydney, Melbourne and Adelaide be continued, and that similar stations be established in the other State capital cities as soon as possible and that these transmitters shall regularly broadcast National broadcasting service programmes.

76. In the *Australian Broadcasting Act 1948* it was provided that commercial broadcasting stations should not use any form of modulation other than amplitude modulation.

77. Experimental stations have already been erected by the Post Office at Sydney, Melbourne and Adelaide, and work is proceeding in connexion with the installations at the other capital cities. Particulars of the stations which are already in operation are included in Appendix B.

78. The use of the very high frequency band for broadcasting purposes provides means whereby a very much greater number of stations can be established than is possible in the medium wave band and in the V.H.F. band frequency modulation possesses certain distinct advantages. There are, nevertheless, difficulties in making effective use of the system; for example, it is necessary to utilize transmitting equipment differing from that at present in use; radio receivers of existing types are not capable of being used without adapters; and the cost of receiving equipment designed to take full advantage of the improved reproduction and other properties of frequency modulation would be substantially greater than is the case with receivers at present in use.

79. Having regard to these factors, the Board recognizes that the sudden introduction of frequency modulation broadcasting would have undesirable effects on the existing system and that care must therefore be taken to ensure that, if it is introduced, it is developed on a gradual and orderly basis as a supplementary service to the existing system.

80. The Board endorses the assurances which have been previously given that listeners need have no fears that present day models of receivers will be rendered obsolete during the normal period of their life by any plans which may be formulated for the development of frequency modulation broadcasting.

#### REDIFFUSION.

81. Rediffusion, or wire broadcasting, is a system of distributing broadcast programmes to listeners' premises by means of wire lines. The system has been used in some countries, mainly to overcome technical deficiencies existing in the present method of broadcasting, due to the inadequate number of wave-lengths available and certain local conditions, such as the incidence of interference to reception. Because the wire

lines must be connected from house to house, centres of concentrated population where they can be erected economically provide the best field for the extensive use of rediffusion.

82. Prior to the establishment of the Board, several applications had been received by the Post Office from organizations desirous of establishing wire broadcasting services in Australia, and some concern had been expressed by radio manufacturers and broadcasters who felt that the introduction of such services might have a detrimental effect on the existing broadcasting industry.

83. The matter received early consideration by the Board. It was apparent that listeners who reside in the metropolitan areas and other large centres of population, where the system could be used to the best advantage, are able to receive satisfactorily several alternative programmes. In the circumstances, the Board felt that there were grave doubts whether an alternative means of distributing broadcast programmes would be justified and that there were strong economic and practical considerations for not granting the applications for licences at this stage.

84. The Board made a report to the Government and, subsequently, legislation was introduced to amend the *Post and Telegraph Act 1901-1946* to provide that no person may utilize telegraph lines for the purpose of distributing broadcast programmes to listeners' premises.

#### TELEVISION.

85. One of the matters which received attention by the Board soon after it commenced operations was the question of the introduction of television services into the Commonwealth. The Government had previously decided that, with the object of enabling further consideration to be given to the question with due regard to the estimated cost of equipment, tenders should be invited for six suitable television transmitters and associated studio facilities. Accordingly, the Postmaster-General's Department invited tenders on the 11th August, 1948, the closing date being the 20th January, 1949. Tenders were received from eleven manufacturers.

86. On the 3rd June, 1949, the Board submitted a report to the Government recommending that television services should be established in the six State capital cities as soon as the necessary arrangements could be made. In every country where television has been introduced, it has so far been restricted to densely populated centres, because of the great cost of providing the service. However, the Board indicated in its report that in planning the development of television services in the Commonwealth, the possibility of extending them to provincial areas should be kept in mind. In the meantime, the six stations in the capital cities would provide for approximately 60 per cent. of the population of the Commonwealth.

87. The Board's report dealt with some of the economic, administrative and social problems which would result from a decision to introduce television into Australia. As certain of these matters were still being considered by the Government at the end of the period to which this report relates it is not thought appropriate to refer to them here.

88. The report also dealt with the question of certain transmission standards, the formulation of which is an essential pre-requisite to the commencement of the service. In this connexion the

Board has been able to profit by the experience of the American and British authorities and to propose standards which would take full advantage of all modern developments. Of the standards adopted those of most general interest relate to the band of frequencies in which stations will operate, and the quality of the picture which will be transmitted.

89. In the United States twelve channels are employed in the range 54 to 216 megacycles per second whilst in Great Britain the London station operates in the band 41.5 to 48 megacycles per second. The new transmitter at Birmingham operates on 58.25 and 61.75 megacycles per second for sound and vision respectively. After careful consideration, it was decided to make use of three channels in the frequency band 178 to 200 megacycles per second for Australian television stations. Should developments necessitate such a course, additional nearby channels can be employed.

90. The quality of the picture transmitted depends fundamentally upon the number of scanning lines used and the bandwidth of the channel on which transmissions are undertaken. The greater the number of lines, the wider must be the channel if the best possible definition is to be obtained. In Great Britain 405 lines are employed whilst in America 525 are used. It has been decided to adopt 625 lines for use in Australia and this in conjunction with the seven megacycles per second width of channel, which is greater than that used in either of the countries mentioned, will permit a very much clearer picture to be made available without increasing appreciably the cost of receivers.

91. The Board also decided to incorporate in the standards amplitude modulation of the video carrier with negative polarity, frequency modulation of the sound carrier, horizontal polarization of the transmitted signal, which would also incorporate vestigial side band operation, and the transmission of 25 complete pictures per second, each picture having an aspect ratio of 4 to 3.

92. Following consideration of the Board's report by the Government, the Prime Minister announced, on 14th June, 1949, that it had been decided to introduce a national television service into the Commonwealth as soon as possible, initially in the six State capital cities. The Government directed the Board, in consultation with the Post Office, to take such preliminary action as was necessary for making preparations for the introduction of the service.

#### PART IV.—PROGRAMME SERVICES.

93. The nature of the Board's functions with respect to the programmes of broadcasting, television and facsimile stations has been indicated in Part II. of this Report. The Board is required, in general, to ensure that adequate and comprehensive programmes are provided by these stations "to serve the best interests of the public" and, in particular to—

- (i) ensure reasonable variety of programmes;
- (ii) ensure that divine worship or other matter of a religious nature is broadcast for adequate periods and at appropriate times and that no matter which is not of a religious nature is broadcast by a station during any period during which divine worship or other matter of a religious nature is broadcast by that station;

(iii) ensure that facilities are provided on an equitable basis for the broadcasting of political or controversial matter;

(iv) determine the extent to which advertisements may be broadcast in the programme of any commercial broadcasting station;

(v) fix the hours of service of broadcasting stations, television stations and facsimile stations.

94. The Board is required by the Act to consult the Commission and representatives of the commercial stations in relation to programmes of the National and commercial services respectively.

95. The responsibilities imposed by Parliament on the Board in respect of programmes represent a novel development in the administration of broadcasting in the Commonwealth, since, prior to the commencement of the Act of 1948, the only statutory provisions on the subject of programmes related to such matters of detail as restriction on the broadcasting of political matter during certain periods, health and medical talks and advertisements, the encouragement of "local talent", the broadcasting of objectionable matter, &c.

96. There has been, in Australia as in other countries, much discussion of the content and quality of broadcasting programmes. In this field there are great differences of opinion on many questions, and there are clearly considerable difficulties, not only in determining what is involved in the obligation to "serve the interests of the public" but in giving effect, by the administrative process, to any such determination.

97. The Board feels that the first step to be taken in the discharge of its obligation to ensure that adequate and comprehensive programmes are broadcast will be to make a careful survey of the programmes already available to the public and to obtain full and reliable information concerning the quality of service being provided to listeners. With this end in view, the Board has made arrangements with the approval of the Public Service Board, for the appointment of a small staff with suitable qualifications to enable them to undertake appropriate research into this aspect of the broadcasting services.

98. The Board recognizes the very effective work which the Australian Broadcasting Commission and the commercial stations have done in raising the standard of programmes to the level which has already been attained, and it will therefore freely consult the Australian Broadcasting Commission and representatives of the commercial broadcasting stations, as required by the Act. It intends also to consult other persons or organizations which, in its opinion, are in a position to assist the Board to reach decisions in respect of programmes which are likely "to serve the best interests of the public". In particular, it will have the benefit of the advice of the State Broadcasting Advisory Committees.

99. Although the functions of the Board in connection with programmes are stated in the Act in general terms, the Parliament has directed the Board to undertake specific duties in regard to several important matters. The Board is, for example, required to ensure "reasonable variety of programmes", a duty which necessarily implies a consideration of the possibility of co-ordinating, to some extent, the programmes of National and commercial services, so as to enable varying tastes of listeners to be satisfied as far as is practicable. There have been some indications of the desire of listeners for this question to be examined and the Board is confident that with the co-operation

of the Commission and the Australian Federation of Commercial Broadcasting Stations it will be able to effect improvements.

100. The Board is also required by Parliament to ensure that divine worship or other matter of a religious nature is broadcast for adequate periods and at appropriate times. Shortly after the Board's appointment, complete information was obtained from the Australian Broadcasting Commission and all commercial stations as to the nature and extent of religious broadcasts. It was evident that the Commission had succeeded in the exceedingly difficult task of providing adequate and acceptable religious programmes. While many commercial stations have also provided adequate broadcasts of divine worship or other religious broadcasts, it appeared to the Board, from the information available to it, that it would be desirable to formulate some standards for the guidance of commercial stations to enable them to give effect to the will of Parliament.

101. The provision in the Act that the Board should ensure that equitable facilities are made available for the broadcasting of political and controversial matter expresses an ideal which every democracy might be expected to attain. It should not be overlooked that the number of broadcasting stations which may be licensed is strictly limited by the International Regulations. As a Chairman of the Federal Communications Commission of the United States has said, "If printing presses were few and their output severely limited, a democratic society could not allow the small group of owners unlimited discretion as to what is and what is not printed". The legislatures of Canada and the United States have both enacted legislation of a similar character and the question of political broadcasting has received consideration by Parliamentary Committees in Great Britain, one of which expressed the following view:—

The control of political broadcasting is one of the most difficult and important problems which the advent of "wireless" has created. It is obvious that a medium whereby expressions of political opinion can be brought into seven or eight million homes needs very careful safeguarding if it is not to be abused. It would be possible for those in control of broadcasting to maintain a steady stream of propaganda on behalf of one political party or of one school of thought. They could to some extent make or mar the reputations of politicians, and by a judicious selection of news items and the method of their presentation they could influence the whole political thought of the country.

102. It is also appropriate to mention that the Gibson Committee and the Parliamentary Standing Committee on Broadcasting have both expressed the view that the various political parties should receive impartial treatment, and recommended that where time for political broadcasts is sold, equitable arrangements should be secured by regulation.

103. The Board is glad that in dealing with this difficult question it will have the benefit of the experience of the other English-speaking democracies as a guide in its formulation of practices to be followed in Australia.

## PART V.—GENERAL.

### FINANCIAL ACCOUNTS OF THE BOARD.

104. In conformity with the provisions of section 6p of the Act, a statement of the financial accounts of the Board for the period from 15th March, 1949, to 30th June, 1949, appears in Appendix D of this report.

### LISTENERS' LICENCES.

105. In Appendix E, particulars are given of the various types of broadcast listeners' licences which were current on 30th June, 1949. At that date, there

were one or more wireless sets installed in 1,762,675 Australian homes, distributed as shown hereunder:—

State.	Metropolitan Area.	Country Area.	Total.
New South Wales .. .. .	357,408	293,067	650,475
Victoria .. .. .	302,066	185,730	487,796
Queensland .. .. .	117,889	131,513	249,402
South Australia .. .. .	117,692	68,108	185,800
Western Australia .. .. .	88,625	39,365	127,990
Tasmania .. .. .	19,419	41,793	61,212
Total .. .. .	1,003,099	759,576	1,762,675

106. Section 96 of the Australian Broadcasting Act provides that, except as prescribed by the regulations, a person shall hold a broadcast listener's licence for each appliance in his possession which is capable of being used for the reception of broadcast programmes. At the present time, the fee for a listener's licence is 20s. for Zone 1, which is the territory within an approximate radius of 250 miles of a National Broadcasting Station, and 14s. for Zone 2, which includes the remainder of the Commonwealth. The Board is required by section 97 of the Act to determine the Zones for this purpose. A listener's licence is granted at half the ordinary fee for each appliance in excess of one in the possession of a person in any one building.

107. Listeners' licences are granted at half the ordinary fee to invalid and old-age pensioners, to widow pensioners, to "Service" pensioners under the *Australian Soldiers' Repatriation Act 1920-1946*, who live alone, or with another pensioner, or with a person or persons with limited means as defined in the Act.

108. Listeners' licences are granted free of charge to blind persons over the age of sixteen years and to schools.

### ACKNOWLEDGMENTS.

109. In conclusion, the Board wishes to express its gratitude to the Director-General, Posts and Telegraphs (Mr. G. T. Chippindall) and his senior officers, for the valuable assistance which they rendered to the Board in connexion with the inauguration of its activities. The Board is deeply indebted to Mr. Chippindall for his kindness in providing accommodation for the Board and its staff until it acquired premises of its own and for placing at the disposal of the Board the services of several experienced officers, pending the appointment of its own staff.

110. The Board is extremely grateful also to the Chairman of the Public Service Board (Mr. W. E. Dunk) and his colleagues for their co-operation in connexion with the establishment of the Board's organization. As we were obliged to take over the control of the established broadcasting services, and to undertake without interruption many duties previously performed by the Post Office, we were confronted with the necessity for securing staff with the least possible delay. We are consequently most appreciative of the prompt and sympathetic consideration which the Public Service Board gave to the various proposals which were submitted to it.

L. B. FANNING, Chairman.

CLIVE OGILVY }  
R. G. OSBORNE } Members.

J. O'KELLY, Secretary.

22nd December, 1949.

## APPENDIX A.

## STATE BROADCASTING ADVISORY COMMITTEE.

MEMBERSHIP OF COMMITTEES AS AT 30TH JUNE, 1949.

*New South Wales—*

S. J. F. Kellock, Esq. (Chairman).  
 \*F. Gordon Scott, Esq.  
 †J. Ridley, Esq.  
 Mrs. G. E. Usherwood Wilson:  
 Professor E. A. Bland, M.A., LL.B.  
 A. S. McAlpine, Esq.  
 L. A. North, Esq.

*Victoria—*

S. W. C. Marks, Esq. (Chairman).  
 \*C. Charlton, Esq.  
 †A. L. Prince, Esq.  
 Mrs. H. C. Marfell.  
 M. Chamberlin, Esq.  
 H. J. Stewart, Esq., M.A.  
 J. V. Stout, Esq.

*Queensland—*

J. C. Stewart, Esq. (Chairman).  
 \*E. K. Sholl, Esq., M.A., LL.B.  
 †C. R. Carson, Esq., A.T.C.L.  
 Miss R. A. Bancroft.  
 T. M. Crowley, Esq., M.L.A.  
 E. P. Griffin, Esq.  
 H. J. Harvey, Esq.

*South Australia—*

H. G. A. Sansom, Esq. (Chairman).  
 \*C. C. Wicks, Esq.  
 †K. A. MacDonald, Esq.  
 Mrs. D. B. C. Dolling, O.B.E., M.Sc.  
 C. R. Cameron, Esq.  
 Rev. H. P. Finnis, M.A., Mus. Bac.  
 A. J. Hannan, Esq., C.M.G., K.C., M.A., LL.B.

*Western Australia—*

C. G. Friend, Esq. (Chairman).  
 \*J. R. E. Chapple, Esq.  
 †E. M. Barker, Esq., F.F.I.A., F.C.I.S.  
 Miss E. H. Hooton.  
 Professor R. G. Cameron, M.A.  
 (Two vacancies.)

*Tasmania—*

G. P. Hanify, Esq. (Chairman).  
 \*E. J. McCann, Esq.  
 †A. P. Findlay, Esq., C.B.E.  
 Mrs. E. A. Waterworth.  
 J. L. Durno, Esq.  
 Rev. H. J. Ralph.  
 (One vacancy.)

\* Representative of Australian Broadcasting Commission.  
 † Representative of Australian Federation of Commercial Broadcasting Stations.

## APPENDIX B.

## NATIONAL BROADCASTING STATIONS IN OPERATION ON 30TH JUNE, 1949.

Call sign.	Stations.	Frequency kC/s.	Wave-length (m).	Aerial power (watts).
MEDIUM WAVE SERVICES.				
<i>Australian Capital Territory.</i>				
2CY	Canberra Regional ..	850	353	10,000
<i>New South Wales.</i>				
2BL	Sydney .. .. .	740	405	10,000
2CO	Riverina Regional (Corowa)	670	448	7,500
2CR	Central Regional (Cummoock)	550	545	10,000
2FC	Sydney .. .. .	610	492	10,000
2NA	Hunter River Regional No. 2 (Newcastle)	820	366	2,000
2NB	Broken Hill Regional ..	750	400	1,000
2NC	Hunter River Regional (Newcastle)	1,230	244	2,000

## NATIONAL BROADCASTING STATIONS, ETC.—continued.

Call sign.	Stations.	Frequency kC/s.	Wave-length (m).	Aerial power (watts).
Medium Wave Services—continued.				
<i>New South Wales—continued.</i>				
2NR	Northern Rivers Regional (Lawrence)	700	429	7,000
2NU	Northern Tablelands Regional (Manilla)	660	455	10,000
2TR	Taree Regional .. ..	720	417	200
<i>Victoria.</i>				
3AR	Melbourne .. .. .	620	484	10,000
3GI	Gippsland Regional (Longford)	560	536	7,000
3LO	Melbourne .. .. .	770	390	10,000
3WV	Western Regional (Dooen) ..	580	517	10,000
<i>Queensland.</i>				
4AT	Atherton Regional .. ..	680	441	500
4QB	Wide Bay Regional (Pialba)	910	330	2,000
4QG	Brisbane .. .. .	790	380	10,000
4QN	North Regional (Clevedon) ..	630	476	7,000
4QR	Brisbane .. .. .	590	508	10,000
4RK	Rockhampton Regional .. ..	940	319	2,000
4QS	Darling Downs Regional (Dalby)	760	395	10,000
4QL	Longreach Regional .. ..	540	556	200
<i>South Australia.</i>				
5AN	Adelaide .. .. .	890	337	2,000
5CK	North Regional (Crystal Brook)	640	469	7,500
5CL	Adelaide .. .. .	730	411	5,000
<i>Western Australia.</i>				
6GF	Goldfields Regional (Kalgoorlie)	720	417	2,000
6GN	Geraldton Regional .. ..	820	366	2,000
6WA	South West Regional (Mindering)	560	536	10,000
6WF	Perth .. .. .	690	435	5,000
6WN	Perth .. .. .	800	375	1,000
<i>Tasmania.</i>				
7NT	North Regional (Kelso) .. ..	710	423	7,000
7ZL	Hobart .. .. .	600	500	2,000
7ZR	Hobart .. .. .	1,160	259	500
<i>Northern Territory.</i>				
5AL	Alice Springs Regional .. ..	1,330	196	50
5DR	Darwin Regional .. .. .	1,500	200	200
<i>Papua.</i>				
9PA	Port Moresby .. .. .	1,250	240	500

## SHORT WAVE SERVICES.

VLG	Lyndhurst, Victoria .. ..	The frequencies on which these stations transmit are varied as required to obtain optimum results	10,000
VLR	Lyndhurst, Victoria .. ..		5,000
VLQ	Brisbane, Queensland .. ..		10,000
VLW	Perth, Western Australia .. ..		2,000
VLH	Lyndhurst, Victoria .. ..		10,000
VLT	Port Moresby, Papua .. ..		2,000
VLX	Perth, Western Australia .. ..		10,000
VLI	Sydney, New South Wales .. ..	2,000	

## FREQUENCY MODULATION SERVICES (EXPERIMENTAL).

..	Melbourne, Victoria .. ..	91 : 100 mC/s.	2,000
..	Sydney, New South Wales .. ..	92 : 100 mC/s.	2,000
..	Adelaide, South Australia .. ..	97 : 300 mC/s.	250

## APPENDIX C.

COMMERCIAL BROADCASTING STATIONS IN OPERATION ON 30TH JUNE, 1949.

Call sign.	Location of Station.	Licensee.	Frequency kC/s.	Wave- length (m).	Aerial power (watts).
AUSTRALIAN CAPITAL TERRITORY.					
2CA	Canberra	Canberra Broadcasters Ltd., 138 Phillip-street, Sydney	1,050	286	2,000
NEW SOUTH WALES.					
<i>Metropolitan.</i>					
2CH	Sydney	New South Wales Council of Churches Service, 61 Cambridge-street, Stanmore	1,190	252	1,000
2GB	Sydney	Broadcasting Station 2GB Pty. Ltd., 136-138 Phillip-street, Sydney	870	345	1,000
2KY	Sydney	The Trustees, R. H. Erskine and J. H. Thom, and the Secretary, R. A. King, of the Labour Council of New South Wales, Trades Hall, Goulburn-street, Sydney	1,020	294	1,000
2SM	Sydney	Broadcasting Station 2SM Pty. Ltd., 60 Hunter-street, Sydney	1,270	236	1,000
2UE	Sydney	Radio 2UE Sydney Pty. Ltd., 29 Bligh-street, Sydney	950	316	1,000
2UW	Sydney	Commonwealth Broadcasting Corporation Pty. Ltd., 49 Market-street, Sydney	1,110	270	1,000
<i>Country.</i>					
2AD	Armidale	New England Broadcasters, 113 Faulkner-street, Armidale	1,130	265	200
2AY	Albury	Amalgamated Wireless (A/asia) Ltd., 47 York-street, Sydney	1,480	203	200
2BE	Bega	J. A. Kerr, Carp-street, Bega	1,490	201	500
2BH	Broken Hill	Radio Silver City Pty. Ltd., cnr. Blende and Sulphide streets, Broken Hill	650	462	200
2BS	Bathurst	Bathurst Broadcasters Pty. Ltd., 43 Keppel-street, Bathurst	1,500	200	200
2CK	Cessnock	Coalfields Broadcasting Co. Pty. Ltd., Vincent-street, Cessnock	1,460	205	300
2DU	Dubbo	Western Broadcasters Pty. Ltd., 129 Macquarie-street, Dubbo	810*	370*	200
2GF	Grafton	Grafton Broadcasting Co., Pty. Ltd., 47 York-street, Sydney	1,210	248	200
2GN	Goulburn	Goulburn Broadcasting Co., Pty. Ltd., 47 York-street, Sydney	1,380	217	200
2GZ	Orange	Country Broadcasting Services Ltd., Hosking House, Hosking-place, 84½ Pitt-street, Sydney	990	303	2,000
2HD	Newcastle	Airsales Broadcasting Co. Pty. Ltd., Maitland-road, Sandgate, Newcastle	1,140	263	500
2HR	Lochinvar	Hunter River Broadcasters Pty. Ltd., High-street, West Maitland	680	441	300
2KA	Katoomba	2KA Ltd., 77 King-street, Sydney	780	385	1,000
2KM	Kempsey	Radio Kempsey Ltd., 10 Martin-place, Sydney	980	306	300
2KO	Newcastle	Newcastle Broadcasting Co. Pty. Ltd., C.M.L. Building, 72 Hunter-street, Newcastle	1,410	213	500
2LF	Young	Young Broadcasters Pty. Ltd., A.M.P. Buildings, Young	1,340	224	300
2LM	Lismore	Richmond River Broadcasters Pty. Ltd., Northern Star Building, Molesworth-street, Lismore	900	333	500
2LT	Lithgow	Lithgow Broadcasters Pty. Ltd., Great Western Highway, Bowenfels	1,080	278	100
2MG	Mudgee	Mudgee Broadcasting Co. Pty. Ltd., Wellington-road, Mudgee	1,450	207	100
2MO	Gunnedah	2MO Gunnedah Ltd., 59 Marquis-street, Gunnedah	1,370	219	100
2MW	Murwillumbah	Tweed Radio and Broadcasting Co. Pty. Ltd., 12 Church-lane, Murwillumbah	1,470	204	500
2NZ	Inverell	Northern Broadcasters Pty. Ltd., Hosking House, Hosking-place, 84½ Pitt-street, Sydney	1,170	256	2,000
2PK	Parkes	Parkes Broadcasting Co. Pty. Ltd., 20 Close-street, Parkes	1,400	214	200
2QN	Deniliquin	Regent Broadcasting Co., Regent Theatre, McCallum-street, Swan Hill, Victoria	1,440	208	200
2RG	Griffith	Irrigation Area Newspapers Pty. Ltd., Ulong-street, Griffith	1,070	280	200
2TM	Tamworth	Tamworth Radio Development Co. Ltd., Peel-street, Tamworth	1,300	231	2,000
2WG	Wagga	Riverina Broadcasting Co., 16 Fitzmaurice-street, Wagga	1,150	261	2,000
2WL	Wollongong	Wollongong Broadcasting Pty. Ltd., Edward-street, Wollongong	1,430	210	500
2XL	Cooma	Cooma Broadcasters Pty. Ltd., Cromwell-street, Cooma	920	326	500
VICTORIA.					
<i>Metropolitan.</i>					
3AK	Melbourne	Melbourne Broadcasters Pty. Ltd., 480 Bourke-street, Melbourne, C.1	1,500	200	200
3AW	Melbourne	3AW Broadcasting Co. Pty. Ltd., 382 Latrobe-street, Melbourne, C.1	1,280	234	600
3DB	Melbourne	Herald & Weekly Times Ltd., 44-74 Flinders-street, Melbourne, C.1	1,030	291	600
3KZ	Melbourne	Industrial Printing & Publicity Co. Ltd., 24-30 Victoria-street, Carlton, N.3	1,180	254	600
3UZ	Melbourne	Nilsen's Broadcasting Service Pty. Ltd., 45-47 Bourke-street, Melbourne, C.1	930	323	600
3XY	Melbourne	Station 3XY Pty. Ltd., Charter House, 4 Bank-place, Melbourne, C.1	1,420	211	600
<i>Country.</i>					
3BA	Ballarat	Ballarat Broadcasters Pty. Ltd., 56 Lydiard-street, Ballarat	1,320	227	500
3BO	Bendigo	Amalgamated Wireless (A/asia) Ltd., 47 York-street, Sydney	960	313	500
3CS	Colac	Colac Broadcasting Co. Pty. Ltd., 241 Murray-street, Colac	1,130	265	200
3CV	Maryborough	Central Victoria Broadcasters Pty. Ltd., Broadcasting House, View Point, Bendigo	1,470	204	500
3GL	Geelong	Geelong Broadcasters Pty. Ltd., Little Malop-street, Geelong	1,350	222	500
3HA	Hamilton	Western Province Radio Pty. Ltd., 239 Collins-street, Melbourne	1,000	300	1,000
3LK	Lubeck	Herald and Weekly Times Ltd., 44-74 Flinders-street, Melbourne	1,090	275	2,000
3MA	Mildura	Sunraysia Broadcasters Pty. Ltd., 22 Deakin-avenue, Mildura	1,360	221	200
3SH	Swan Hill	Swan Hill Broadcasting Co. Pty. Ltd., Campbell-street, Swan Hill	1,330	226	200
3SR	Shepparton	The Argus Broadcasting Services Pty. Ltd., 365 Elizabeth-street, Melbourne	1,260	238	2,000
3TR	Sale	Broadcast Entertainments Pty. Ltd., "The Age", Chambers, 239 Collins-street, Melbourne	1,240	242	1,000
3UL	Warragul	The Argus Broadcasting Services Pty. Ltd., 365 Elizabeth-street, Melbourne	880	341	200
3YB	Warrnambool	The Argus Broadcasting Services Pty. Ltd., 365 Elizabeth-street, Melbourne	1,210	248	200

\* Temporary allocation.

## COMMERCIAL BROADCASTING STATIONS IN OPERATION ON 30TH JUNE, 1949.—continued.

Call sign.	Location of station.	Licensee.	Frequency kC/s.	Wave- length (m).	Aerial power (watts).
<b>QUEENSLAND.</b>					
<i>Metropolitan.</i>					
4BC ..	Brisbane ..	Commonwealth Broadcasting Corporation (Q'ld.) Ltd., 5th Floor, T. & G. Buildings, 189-191 Queen-street, Brisbane	1,120	268	1,000
4BH ..	Brisbane ..	Broadcasters (Aust.) Pty. Ltd., cnr. Albert and Charlotte streets, Brisbane	1,390	216	1,000
4BK ..	Brisbane ..	Queensland Newspapers Pty. Ltd., 288-298 Queen-street, Brisbane	1,290	233	750
4KQ ..	Brisbane ..	The Trustees, C. G. Fallon and S. J. Bryan of the Queensland Branch of the Australian Labour Party, Dunstan House, 236-238 Elizabeth-street, Brisbane	690*	435*	1,000
<i>Country.</i>					
4AK ..	Oakey ..	Queensland Newspapers Pty. Ltd., 288-298 Queen-street, Brisbane	1,220	246	2,000
4AY ..	Ayr ..	Ayr Broadcasters Pty. Ltd., 144 Queen-street, Ayr	960	313	500
4BU ..	Bundaberg ..	Bundaberg Broadcasters Pty. Ltd., 117 Bourbong-street, Bundaberg	1,330	226	500
4CA ..	Cairns ..	Amalgamated Wireless (A/asia) Ltd., 47 York-street, Sydney	1,010	297	300
4GR ..	Toowoomba ..	Gold Radio Service Pty. Ltd., 5th Floor, T. & G. Buildings, Queen-street, Brisbane	860	349	500
4GY ..	Gympie ..	Gympie Broadcasting Co. Ltd., Smithfield Chambers, Mary-street, Gympie	1,350	222	200
4IP ..	Ipswich ..	Ipswich Broadcasting Co. Pty. Ltd., 233 Brisbane-street, Ipswich	1,440	208	200
4LG ..	Longreach ..	Longreach Printing Co. Ltd., Magpie-lane, Longreach	1,100	273	1,000
4MB ..	Maryborough ..	Maryborough Broadcasting Co. Pty. Ltd., 5th Floor, T. & G. Buildings, Queen-street, Brisbane	1,010	297	300
4MK ..	Mackay ..	Mackay Broadcasting Service Pty. Ltd., 85 Sydney-street, Mackay	1,380	217	100
4RO ..	Rockhampton ..	Rockhampton Broadcasting Co. Pty. Ltd., 5th Floor, T. & G. Buildings, Queen-street, Brisbane	1,080	278	200
4SB ..	Kingaroy ..	South Burnett Broadcasting Co. Ltd., Alford-street, Kingaroy	1,060	283	2,000
4TO ..	Townsville ..	Amalgamated Wireless (A/asia) Ltd., 47 York-street, Sydney	780	385	200
4VL ..	Charleville ..	Charleville Broadcasting Co. Ltd., Alfred-street, Charleville	920	326	500
4WK ..	Warwick ..	Warwick Broadcasting Co. Pty. Ltd., Glennie Hall, Albion-street, Warwick	880	341	100
4ZR ..	Roma ..	Maranoa Broadcasting Co. Ltd., Bowen-street, Roma, Queensland	1,490	201	500
<b>SOUTH AUSTRALIA.</b>					
<i>Metropolitan.</i>					
5AD ..	Adelaide ..	Advertiser Newspapers Ltd., 11 Waymouth-street, Adelaide	1,310	229	500
5DN ..	Adelaide ..	Hume Broadcasters Ltd., C.M.L. Building, 41 King William-street, Adelaide	970	309	500
5KA ..	Adelaide ..	5KA Broadcasting Co. Ltd., 43 Franklin-street, Adelaide	1,200	250	500
<i>Country.</i>					
5AU ..	Port Augusta ..	Port Augusta Broadcasting Co. Ltd., 43 Franklin-street, Adelaide	1,400	214	200
5MU ..	Murray Bridge ..	Murray Bridge Broadcasting Co. Ltd., 11 Waymouth-street, Adelaide	1,460	205	200
5PI ..	Crystal Brook ..	Midlands Broadcasting Services Ltd., 11 Waymouth-street, Adelaide	1,040	288	2,000
5RM ..	Renmark ..	River Murray Broadcasters Ltd., C.M.L. Building, 41 King William-street, Adelaide	830	361	2,000
5SE ..	Mount Gambier ..	South-Eastern Broadcasting Co. Ltd., 11 Waymouth-street, Adelaide	1,370	219	200
<b>WESTERN AUSTRALIA.</b>					
<i>Metropolitan.</i>					
6IX ..	Perth ..	W.A. Broadcasters Pty. Ltd., Lyric House, Murray-street, Perth	1,240	242	500
6KY ..	Perth ..	The People's Printing and Publishing Co. of Western Australia Ltd., 38-46 Stirling-street, Perth	1,320	227	500
6PM ..	Perth ..	6PM Broadcasters Ltd., St. George's House, St. George's-terrace, Perth	1,130	265	500
6PR ..	Perth ..	Nicholson's Ltd., 86-90 Barrack-street, Perth	880	341	500
<i>Country.</i>					
6AM ..	Northam ..	6AM Broadcasters Ltd., St. George's House, St. George's-terrace, Perth	980	306	2,000
6CI ..	Collie ..	Nicholson's Ltd., 86-90 Barrack-street, Perth	1,430	210	500
6GE ..	Geraldton ..	Great Northern Broadcasters Ltd., E.S. & A. Bank Buildings, Marine-terrace, Geraldton	1,370	219	500
6KG ..	Kalgoorlie ..	Goldfields Broadcasters (1933) Ltd., St. George's, House St. George's-terrace, Perth	1,210	248	500
6MD ..	Merredin ..	W.A. Broadcasters Pty. Ltd., Lyric House, Murray-street, Perth	1,100	273	500
6TZ ..	Bunbury ..	Nicholson's Ltd., 86-90 Barrack-street, Perth	1,340	224	2,000
6WB ..	Katanning ..	W.A. Broadcasters Pty. Ltd., Lyric House, 223 Murray-street, Perth	1,070	280	2,000
<b>TASMANIA.</b>					
<i>Metropolitan.</i>					
7HO ..	Hobart ..	Commercial Broadcasters Pty. Ltd., A.M.P. Buildings, cnr. Collins and Elizabeth streets, Hobart	860	349	500
7HT ..	Hobart ..	Metropolitan Broadcasters Pty. Ltd., 141-143 Elizabeth-street, Hobart	1,080	278	500
<i>Country.</i>					
7AD ..	Devonport ..	Northern Tasmania Broadcasters Pty. Ltd., 29 Paterson-street, Launceston	900	333	300
7BU ..	Burnie ..	Burnie Broadcasting Service Pty. Ltd., E.S. & A. Bank Chambers, Paterson-street, Launceston	810*	370*	200
7DY ..	Derby ..	North-East Tasmanian Radio B'casters Pty. Ltd., Paterson-street, Launceston	1,450	207	200
7EX ..	Launceston ..	7EX Pty. Ltd., 74 Charles-street, Launceston	1,010	297	500
7LA ..	Launceston ..	Findlay & Wills Broadcasters, 21 Paterson-street, Launceston	1,100	273	500
7QT ..	Queenstown ..	West Coast B'casters Pty. Ltd., 21 Paterson-street, Launceston	680	441	300

\* Temporary allocation.

