

WIRELESS WEEKLY

Broadcast Programmes a Week in Advance

VOLUME 11

Registered at the G.P.O., Sydney, for
transmission by post as a Newspaper.

NUMBER 8



Friday, December 16, 1927.

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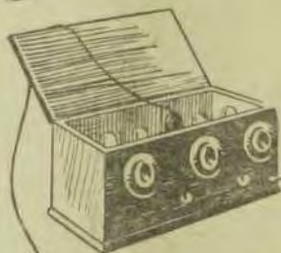


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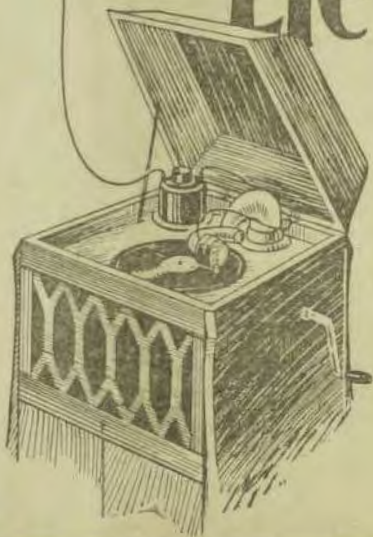
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WIRELESS WEEKLY

VOL. 11. No. 5.

FRIDAY, 14th DECEMBER, 1927.

What does the New Wireless Agreement Mean to Listeners?

WHEN the Wireless Commission's Report was published a few months ago many speculations were made as to the ultimate outcome of the searching and Commonwealth-wide investigation. In the early stages of the Commission's Meetings the average "man in the street" did not quite understand what the Commission was appointed for. Gradually, however, he learned from Press reports of the evidence that there was some real need for the investigation and for the improvement of the broadcasting services. This improvement apparently was not possible in some instances owing to the uncertainty and difficulty of one aspect in particular of the broadcasting business, namely, the payment of Patent Royalties. The Commission made certain recommendations and after several weeks the Government has announced its solution of the problem. An agreement has been made with Amalgamated Wireless referring to many things, but the thing that interests listeners mostly is the portion of this agreement dealing with Royalty payments.

Under the old scheme the Company was entitled to large sums of money for Royalty payments, which they claimed from the broadcasting stations, from the wireless traders and from listeners. The broadcasting companies had been paying the wireless company at the rate of 5/- per license per annum. Basing this payment on the present number of licenses, about 250,000, the handsome sum of £62,500 was payable by the broadcasting companies from their revenue derived from listeners' fees.

The wireless company also claimed Royalty payments from the traders, but apparently not many of the traders did not agree to pay, with the result that litigation had been contemplated or actually entered into against the traders. The basis of charging the traders for Royalties was a payment of 12/6 per valve socket on every valve receiver. The Royal Commission report shows that on an estimated number of 25,000 valve sets every year, and charging 12/6 per valve for these receivers, the company would receive £82,500. Thus, the company apparently intended to obtain about £125,000 per annum.

The Royal Commission thought this amount too much, and recommended that the valve socket payment should be reduced to 5/- and the 5/- per licence item reduced to 2/-. This would make a return to the company of £75,000 per annum.

The Government, however, has reduced the amount further. Under the agreement, the broadcasting companies and the traders are not required to pay anything to Amalgamated Wireless; at all events, for a period of five years; but the company is to receive 3/- per annum from each listener, and basing this amount on the number of licenses now existing the total amount of Royalty to the company is £37,500.

It is interesting to note in this connection that the patents owned by Amalgamated Wireless, not all of which are included in broadcasting, were obtained by the company at a cost of £93,000. The return of £37,500 is, therefore, a rather handsome one.

Catching Up with the Wireless World.

By R. E. CORDER.



"THE SYDNEY TWO": A London Wireless Magazine publishes constructional details for a set made specially for picking up Farmers on their low wavelength. They call it "The Sydney Two."

HAVE YOU ever thought that it is possible to receive a "thrill" by listening to the chimes of the G.P.O. clock? A listener-in writes from Stanthorpe, Queensland, to this effect. Having been away from the Harbor City for eight years, with no prospects of visiting Sydney for some years to come, he tunes in regularly to 2EL, just for the pleasure of hearing the hour boomed forth by the big clock in Martin Place. He concludes his letter by stating that, for him, it is worth while having a radio set just to hear those chimes.

2FC CELEBRATES 4th BIRTH-DAY: On Monday last, Station 2FC celebrated its 4th birthday, and the management were the guests of the North Sydney Orphans, at their Christmas Wall held at Warringah Hall, Neutral Bay. An excellent musical programme was arranged, but the big surprise of the evening was the presentation to the guests of a huge cake, on which four candles twinkled bravely. A happy speech was made by the President of the Orphans Club, to which Mr. Oswald Anderson responded on behalf of 2FC. A large poster drawing was also handed over with due formality, wishing the Station many happy returns.

DURING THE EVENING from the Studio, the Scott Alexander Company presented a special radio sketch in honor of the 4th Anniversary. The sketch portrayed 2FC as a child, commencing with its birth four years ago, and went on to show how the babe had developed into a lusty youngster whose lungs had become so strong, they were recently heard on the other side of the world.

Many letters and phone calls of congratulation reached the Station from listeners in New South Wales and the adjoining States.

WHEN TELEVISION IS PERFECTED:

"Lady Singleton is asking for you on the television, sir."

"Dear me, I shall have to call her back—I'm not dressed."

CUSTOMER: "You told me that set I bought would bring in the coast. I can't even get local stuff."

SALESMAN: "I'm sorry, sir, but we're hearing from all parts of the country through this set. In fact, you're one of those we're hearing from."

THIS WEEK'S EXPLORER: The tired man who said he was looking for a portable storage battery.

"MOORAYDIO."

(By G.E.I.)

(The Victorian Director of Education who recently returned from abroad, has announced that he is favorably impressed with the possibilities of wireless for educational purposes.)

We're going to have the wireless in our school.

The chaps are all excited as can be. When Splinter Wilson's father put the music up.

The joy will send them dups—all but me.

We're going to learn our singing by the wireless—

The Orchestra at 3LO will play—

And most of us will very soon be Brownless.

Our sisters, Madame Melba, so they say.

We're going to learn geography and history

And lots of other things across the air.

We're going to hear the Gov-nor speak at Canberra.

The very same as if we all were there.

Our teacher's just about as glad as we are.

He's eager for the other teaching stunts;

He's jolly good, but has the little weakness,

He can't do more than seven things at once.

Some day we're going to see as well as listen.

By tuning in to Station 3LO.

So let us give a whoop for happy school-days.

Together now, come on, Mooraydio!

INSTALLATION OF THE NEW three-phase rectifier at the transmitting station of 3AR, at North Essendon, Melbourne, is now completed; and 3AR is satisfied that it is the most up-to-date in Australia, as are also their control panels and microphones.

RADIO DIRECTS AUTO RACE: More than 100 radio-equipped motor vehicles recently staged the first automobile radio contest which was successfully held in France. These cars were detailed in various directions over 150 miles of rough roads, and each car was directed from the same transmitting station which used a wave length of 322 metres.

UNCLE GEORGE was asked the question by a little girl who wrote to him. He did not know, so he consulted Uncle Bas. Uncle Bas was not sure, so the advice of Little Willie was sought. Together, they searched the pages of every book available on Natural History, but without success. Mrs. Jordan armed with correspondence relating to remedies for corns, recipes for mock-cream, mustard pickles, etc., put on her thinking cap, then had to admit that she did not know. Various other people were spoken to, but nobody could answer definitely. The enquiry, which puzzled everybody, was, Do ants have teeth?

SHORT WAVE TESTS BY 3LO: Letters keep pouring in to 3LO, Melbourne, containing favorable reports of the reception of the regular short wave service on 36 metres from that station every Monday morning, between 4.30 and 6.30 o'clock. Last week a letter arrived from Gunnedah, and it is worth quoting some extracts, which are as follows:—

"I have been listening-in for four years, and this morning was the first time I have heard real radio when I tuned in to your short wave test. The modulation was absolutely perfect. For real radio my advice is get a short wave outfit and listen to 3LO on Monday mornings."

Philcos are Aristocrats among Batteries.

Boy Prophet Forecasts Future Radio Developments



*The Boy Argus
— mind reader
and prophet —
who makes some
interesting con-
jectures regard-
ing future radio
developments.*

THE relation between mental telepathy and radio has always been a puzzling one. Few pretend to understand it, and even the researches of so famous a scientist as Sir Oliver Lodge have failed to result in anything more material in the way of evidence, than the scientists' own unshaken conviction that the two are inseparable. We only know that individuals are occasionally born gifted beyond the ordinary. While perfectly normal in all other respects, they betray remarkable talents in certain directions, which border on the supernatural.

Such is the case of a young 18-year-old Melbourne boy who some 12 years ago performed feats of memory, mind-reading, and mathematical deduction beyond the ordinary. This faculty grew, and to-day, he appears regularly before the public as a professional mind-reader.

His latest exploit was carried out at EBL. Argus, as he is called, was stationed in Hoyt's Theatre, where a microphone was installed. In the studio at EBL a committee of 20 well known citizens prepared queries and articles ready for the test. They included Messrs. H. Goldstein, M.L.A., Randwick; C. Lazarini, M.L.A., Marrickville; R. W. Weaver, M.L.A.,

Neutral Bay; O'Halloran, ex-M.L.A., Eastern Suburbs; G. Kelly, M.L.A., Bathurst; W. Missingham, M.L.A., Lismore; H. Miller, National Bank, J. Kentish, Manager National Bank, and F. McClellan, Radio Bureau.

A pack of cards was lying on a small table in the studio. From this each person present drew a card. An announcer in the studio, using no other words than, "Argus, tell me the name of this card" went around the company.

Not one error was made. The voice of the boy came through clearly. "It is a red card—I see diamonds upon it—also a lady—the card is the Queen of Diamonds." This test was followed by another of a more intricate nature. Each member held up some article which was minutely described by Argus. Among the tests were cigarrette cases, coins, bank notes, a piece of tortoiseshell, a witch doctor's wand from the Solomon Islands, and badges.

In such cases the articles were accurately described, even to the number of cigarrettes in the case, the words on the badges, the origin of the tortoiseshell and the wand, and the number on the bank note.

A test of even more astonishing qualities followed. Argus, who has

never played the piano before in his life, played wonderfully those pieces which were concentrated upon. Among these were "I want to be Happy," and Beethoven's "Sonata." This brought the broadcast to a conclusion, and the Members of the Legislative Assembly gave a short opinion to listeners of their impressions.

Mr. Missingham, M.L.A., said "The test has been most mystifying and in every case 'Argus' has been most exacting."

Each member of the Committee left the studio perfectly satisfied that the whole test was quite genuine, and we wonder what next mystic science will reveal to us.

This would seem conclusive proof of the youth's powers, although a large amount of scepticism is always evinced by these demonstrators owing to the frequent appearance of fraudulent individuals posing as mental wonders.

In fact, Argus himself has several times been arrested on a charge of having obtained money under false pretences, though his ability to read the magistrate's mind has always resulted in his discharge.

Argus also claims powers as a prophet, and it is noteworthy that many of his predictions have been realised. Whether this is an actual gift of divining the future or whether it is merely the ability to follow the trend of men's minds and the fuller comprehension of contemporary development is doubtful.

However, the reader will find interesting a series of questions answered by this abnormal young man bearing on wireless.

Questions as put to "Argus" and his replies follow in order:—

Do you think television will ever become as popular as radio?

Yes—though in a different manner, of course.

How long do you reason it will be before television sets are placed on the Sydney market, and what will be the approximate price?

Six or seven years; average price, £50—£70 complete.

What do you think will be the next important invention relative to wireless during the next five years,—and will the idea become stabilized?

A device which will eliminate fading,—the latter part of your question is simple to answer—yes.

With regard to the present trouble relative to wave-lengths, will any great alterations be made?

As regards the present, the answers

alterations will be made, though in this question are—in Australia—no other countries alterations and amendments will be made—particularly America.

Will static ever be overcome? If so, in what manner?

Yes—by gradually reducing the various wave-lengths.

What important points will have developed with regard to radio within (A) the next 50 years—and (B) the next 1000 years?

Answering question (A), I will say that it will be possible to transmit power by wireless,—which will run machinery, illumination, etc. Some people may wonder why this cannot be tapped.—If so, just ask them why they do not tap an electric wire or power line that runs within reaching distance of their window. With regard to (B), it will be possible, by the aid of radio, to separate various compounds which at the present are supposed to be "atoms"; in other words, the smallest particle into which matter can be divided by chemical separation.

What happens to the dining-room carpet when water is spilt on it from the accumulator? The electrolyte, or "water" as you term it, would eat holes in the carpet, though the effect could be neutralized by adding a strong solution of ammonia.

What parts will radio take in the next war?

Television—for ascertaining enemy secrets and for leaders' use, aircraft will also be controlled by wireless, though this will later be discarded as a failure. Explosives will be fired from a distance by means of a powerful wireless ray, and all machines using a spark, whether aeroplanes, cars, motor cycles, etc., will be able to be stopped.

Will pocket wireless transmitting and receiving sets ever become more than a prophecy?

Pocket transmitters never—though they will be built in small attaché cases, and all will work on the lower waves. Leaving crystal sets out of the question, there will never really be made a truly pocket receiver, though they might be small.

Relative to interference, what discoveries will be made?

This is really solved—it has been found that if all transmission were made on and around 5 metres, interference and static would be eliminated. Further developments will be made in this respect within a few months.

Will there be any distinct improvement on aircraft within the next century?

The Helicopter will be perfected, and will be easily capable of developing from 400-600 miles per hour,

though, of course, this speed will not be used for commercial work. Your question requested the most distinct improvement within the next century, but I think this is more important as it will be universally recognised within twelve to fifteen years.

How long will it be before our Aborigines are totally extinct?

Another 150-200 years yet. Will wireless communication sets be installed in streets and post offices in lieu of 'phone boxes?

No, neither will radio interfere with the telephone system in any way whatsoever.

Will the crystal ever become obsolete?

Yes, within 20 to 30 years. What kind of aerial will eventually be used for low wave work?

Upright hollow copper tubes.

Will the various churches eventually have their own broadcasting station? If so, how long will it be before the movement commences? Which denomination will start—and will all the other churches follow?

Yes—the movement will commence within three years, the Seventh Day Adventists will be first, the others will follow, very slowly.

Do you think a solution will ever be found which will eliminate interfering oscillation? Yes, though the period is likely to be a long one.

Will the valve ever be obsolete by reason of a new invention?

Actually no—the theory of the valve will always be incorporated, though improved upon, one improvement being the "cold" filament in the place of that heated by the "A" battery.

Will it ever be possible to listen-in without the aid of power either direct or indirect. Excepting the crystal?—the answer is no.

Will radio be affected through any cause of alteration in the air belt?

I presume you refer to the heavy-side layer—no, the heavy-side layer will not alter, and consequently it will make no alteration on radio, though without this heavy-side layer, radio would not be possible.

What will be the approximate cost of a three valve set in 10 years' time?—From 26 to £11.

Do you think radio will ever out the telephone?—Never, though the two will eventually co-operate to a great extent.

In your opinion, will wireless progress as far as the total extinction of Morse owing to telephony being improved to its equal? Morse will always be prevalent, though not so much as at present.

What will be the cost of a listener's licence in ten years' time?—Ten shillings.

Will "B" class stations ever share the revenues?—No.

What will be the highest wave-length in the year 2000?—180 metres.

What will be the minimum number of valves necessary to give loud speaker results on inter-State station in 50 years' time?

One valve will be ample.

Argus has a four valve set in his home at Melbourne, and has enough parts to build up an 8 valver. At one time he held an experimental licence which was for the purpose of studying Telepathy. He has tried many successful experiments, and hopes to shortly perfect a device (which consists of a Ford Trembler Coil, a battery, two zinc plates, and a pair of spark balls), which will be capable of stopping the flow of petrol in any mechanical device which uses spark plugs, thus stopping the machinery.

CARILLON OF BELLS: Listeners to 5CL will be pleased to hear that arrangements have now been made to regularly broadcast the Carillon of Bells from St. Andrew's Church of England at Walkerville. One of the most difficult things to reproduce for broadcasting purposes is a carillon of bells, and a considerable amount of time has been spent on experiments by the engineering staff of 5CL, so that the reproduction shall be as near perfect as possible. The bells will be broadcast twice every Sunday. In the morning at 10.40 and in the evening at 6.30. St. Andrew's Church is one of the oldest edifices of its kind in South Australia, and the bells are considered by campanologists to be extremely fine.

CHRISTMAS PROGRAMMES AT 5CL: Arrangements are already well in hand with the special programmes for the festive season. Several most attractive programmes have already been organised, and announcements will be made next week. One of the features during the Christmas Holidays will be the broadcasting of the Mootna Harmony Choir of 65 Performers, accompanied by Holden's Silver Band.

GRAND OPERA ARTISTS AT 5CL: Now that the Italo-Australian Grand Opera Company have returned to South Australia from a most successful season in the Eastern States, many of the artists will be heard over station 5CL. Among the artists are Dino Pelardi, Vincent McMurray, Marcelle Bernardi, Elsie Woolley, Malcolm Jones—all well known and well liked artists.

Telling the World About Australia.

ONE of the most interesting developments associated with broadcasting in Australia during recent months has been the recognition of the part played by the broadcasting companies in making Australia known to the world. Prior to the advent of our big stations, Australia and Australians were little more than names to tens of thousands of people in every corner of the outside world. They saw our coastline on the map; they knew, possibly, that we grew wool and that we had some gold mines; but of our national life and our national resources they knew little. But to-day they feel they know us. They have listened to our musical programmes, they have followed the descriptions of national events such as the opening of Canberra, and they have learned, too, something of our national hopes and aspirations.

The efficiency of stations such as 3LO, Melbourne, has made such a result possible, and the benefit to Australia as a whole should be unbounded. New evidence of the growing interest in our country is contained in almost every overseas mail received by 3LO, Melbourne. From Alaska, from the Continent, from America, from Canada, from England, from China, and from almost every other corner of the world, come letters of appreciation of the programmes received. In such letters, too, it is not infrequently mentioned that 3LO, Melbourne, has interested the writer in Australia, and in Australians.

In an outpost on the edge of the civilisation, for instance, on the furthest border of Alaska, one lonely listener frequently tunes in to 3LO, Melbourne, and his letters to the station are illustrative of the great majority of messages—"I have never seen Australia," he once wrote, "but I think I know something about you. 3LO, Melbourne, has shown me that you must have a great country, and some day, when the opportunity offers, I am coming 'down under' to see for myself. I feel that I will not be disappointed."

Broadcasting, under such circumstances, carries with it a large measure of national responsibility, and for that reason alone, no effort should be spared to maintain the high level of efficiency reached by 3LO, 2FC, and the other big stations.

WORLD-WIDE TESTS.

The world-wide short wave tests now being conducted every Monday morning by 3LO, Melbourne, have brought in a new range of appreciative listeners, and the tests also have served to further emphasise the national aspect of the whole realm of broadcasting in Australia. Dutchmen in Holland and in Java, tea planters in Ceylon and India, Japanese radio operators and experimenters, Englishmen and Australians in the Strait Settlements and in Malaya, missionaries in the Pacific outposts, listeners in almost every State in America and Canada, all have joined with Englishmen in England, and radio men in almost every other corner of the world, in wishing 3LO well, and in showing a new-born interest in Australia.

Slowly, but surely, Australia and Australians are being made known to the world. This is an age of publicity and national advertisement, and if we have been lacking in that direction in the past, the broadcasting companies now are filling the much-felt need.

UNCLE NORMAN: Listeners are more familiar perhaps with Norman McCance's Stadium descriptions than with any of his other varied efforts before the microphone. Perhaps it is because he made his name with the former. However, his broadcasting versatility is remarkable, and it is surprising even to those who know him best with what speed his mind works as he visualises passing events.

Recently at the Laverton Air Force Depot he essayed the task of describing the arrival of Father Xmas by aeroplane, and his effort is regarded as one of the very best broadcast descriptions ever given.

He quoted certain scriptural facts for the purpose of lending color to his description, and even the Padre at the Air Force Depot acknowledged that he did not know that one very important event happened at Nazareth, whilst Wing Commander McBain stood in astonishment at Norman's flights of imagination.

Realising that he was speaking mostly to children, Mr. McCance said that it was the first time he had



Arthur Stigant, the popular comedian of the Student Prince Company in Melbourne, who is broadcasting from 3LO.

spoken to them, and no doubt he would be known as "Uncle Norman"—a title which somehow seems to suit him very nicely. Let us hope that the children will hear more of "Uncle Norman" in the near future from 3LO, Melbourne.

DELIGHTFUL ENTERTAINER:

Rita Hilton, the well-known soprano entertainer, who, with delightfully witty songs at the piano, has sung herself into the favour of all listeners to 3LO, Melbourne. A hospital concert held during the war, and a dearth of artists was the main "urge" for Miss Hilton adopting the role of comedienne, but so successful was her first attempt in this direction, that she has carried on with the good work ever since. At this particular concert, all the humorists had failed to turn up, and though the Dieguez were "perfect dears" and behaved like little gentlemen as ballad after ballad was sung—one felt a restiveness in the air, as though a bomb would explode at any minute. It was at this time that it was thought a good comedy song had better be introduced—Miss Hilton was prevailed upon to sing a "rag," and in the language of "the" profession, simply "brought down the house." It is interesting to note that Miss Hilton's repertoire included some excellent numbers by the Australian composer, Sonia Hardy.

CHARACTER FROM HANDWRITING: Since the announcement that "Caligra" is coming to Studio 3LO, Melbourne, samples of handwriting have been pouring in from all parts of the Commonwealth, indicating all sorts of characters—we have the firm, the unstable, the ambitious (a great many of these), the artistic—also well represented—and a host of others too numerous to mention. According to "Caligra," who has made an extensive and intensive study of the science of Calligraphy and Graphology (this expert insists that it shall be regarded as a Science), there is no truer indication of the character than a person's handwriting—it unmistakably outlines the faults and fallings, also the good points in the "make up," all of which are good for the individual to know, for if we are not made conscious of our faults, how are we to endeavour to eradicate them?

POPULAR CONTRALTO: Fresh from her triumphs in Sydney comes Jessie Smith, the popular 3LO contralto, who will shortly be heard over the air from the Studio. During her stay in Sydney, Miss Smith not only wrote several new songs, but made a great number of records for the Parlophone Company—which will be released in a week or two—and fulfilled a most successful engagement at 2FC—being engaged for a greater number of concerts than usually falls to the lot of any visiting artist. Over a cheery cup of afternoon tea, the method of making gramophone records was discussed, and compared with singing "over the air," and though, in both cases, the artist sings into a microphone, the method is entirely different, for, in the case of a record—a number may have to be sung twenty times before the requisite qualities of "light and shade" are satisfactorily registered. However, notwithstanding the many records that have been successfully made by this popular artist, Miss Smith is glad to be home once again, and especially glad to be with her many friends from 3LO.

SUCCESSFUL KYNETON BROADCAST: The concert given by 3LO, Melbourne, in conjunction with the Kyneton Brass Band at the Paramount Theatre, Kyneton, recently, was a huge success, and resulted in raising enough money to provide a wireless set for the Kyneton District Hospital with a pair of headphones for each bed. 3LO sent Joe Aronson's Band to Kyneton, together with Miss Agnes Fortune, Reginald Bradley, Bobby Pearce, Victoria Wilson and Pat McLean, who with an announcer demonstrated to the great audience how the Studio of 3LO is worked.

BIGGEST CHILDREN'S PARTY: The biggest children's party ever given has been arranged for this year's 3LO Children's Xmas Treat. Over 7000 kiddies of every age and size and class will be entertained. There are far too many for one party, and the great annual event will therefore be spread over several days between December 10th and 24th. The auditorium will virtually shake with childish merriment during these parties, and Billy Bunny, Miss Kookaburra, Mary Gumleaf and Mary Mary, as well as old Father Xmas himself, will be in their element with the 3LO kiddies.

VAUDE AND VERNE: If you want to hear some really good patter—topical and up-to-date—then tune in to Studio 3LO, Melbourne, and listen to Vaude and Verne, the two distinctly funny comedians who are enjoying such a success, both over the air and on the vaudeville stage. Their jokes are crisp and witty—and up to the latest moment—in fact, it is their boast that whatever takes place in Collins Street during the morning—is made the subject of a topical remark during the same afternoon. Nothing escapes them, and no subject is sacred to them—they joke about everything—even the Prime Minister's new spate.

Results Count.

WHAT is advertising? The placing before the public of a commodity which has been tried and proved—the silent salesman of business concerns who have some product that the public wants. The advertisement is the powerful link between the business organisation and the public, the written message of someone who is himself imbued with so much confidence in his own product that he conveys his impression in plain words to others.

Advertising in itself is nothing without the backing of the article. A poor article will not stand consistent advertising, because the public has the commonsense to know what is good and what is inefficient. Nothing that is not good can be regularly advertised. Messrs. Amplion (A'sia) Ltd. have been advertising consistently in *Wireless Weekly* for years. The facts stated in their advertising are facts that we ourselves have been given every opportunity to prove—and have proved to our entire satisfaction.

29th November, 1927.

The Editor,

Wireless Weekly,

51 Castlereagh Street,
Sydney, N.S.W.

Dear Sir,—

Some little time ago we advertised the "Amplion Public Speech and Band Reposter Equipment" through various mediums other than *Wireless Weekly*, with results which were far from encouraging, as the response was practically nil.

We finally decided to advertise the Equipment in *Wireless Weekly*, and were very gratified at the enquiries which came to us in reply to the first advertisement inserted in your journal. These replies were by no means confined to Sydney, but embraced towns in different parts of New South Wales and Queensland, and as far apart as Wagga, Albury, Maitland, Lismore, Rockhampton and Cairns.

In our opinion this is a splendid tribute to the advertising value of *Wireless Weekly*, and is also an excellent indication of the widespread popularity of "Amplion," and particularly our Public Speech Equipment, which has had such remarkable success on so many occasions in both Sydney and Melbourne.

Yours faithfully,

AMPLION (A'sia) LTD.

(Signed) W. BLOGG,
Managing Director.

It's All in the Air

Coming Features in the
Broadcasting Programs

THE OFFICIAL OPENING of the new Town Hall, Melbourne, will take place on Thursday, December 16th, at 8 p.m. The speeches will be broadcast by 3LO, Melbourne.

CALIGRA: The famous graphologist, "Caligra," will be introduced to listeners of 3LO immediately after her arrival in Australia to give special character delineations in aid of the Melbourne Hospital—3LO will broadcast a chat by "Caligra" about "Character from Handwriting" on Sunday evening, December 18th.

ON 22nd DECEMBER, Horace Book, better known as "Brer Rabbit," will entertain listeners to 3AR, Melbourne, with a series of extracts from the Pickwick papers, with which most people are familiar; and also with ballads from writers such as Robert Service. His "Hard Luck Henry" should amuse listeners greatly.

"FAUST": The Studio presentation of "Faust" (Part II), under the direction of Mr. J. Sutton Crow, and assisted by the Auburn Methodist Choir and the Studio Orchestra, will be broadcast by 3LO on Saturday evening, December 17th. The following are the principals in the cast—Faust, John D. Sullivan; Mephistopheles, Thos. George; Valentine, J. Alexander Browne; Wagner, F. Davies; Marguerite, Madam Elsie Davies; Bebel, Ina Lillycrop; Martha, Myrtle Waiscott.

NHILL BROADCASTING: 3LO, Melbourne, will broadcast another long distance country programme on Wednesday evening, December 21st. This time it will be from Nhill, which is over 270 miles from Melbourne. The principal items will be contributed by the Nhill Town Band, which has distinguished itself recently at band contests, having been coached by Mr. Percy Jones, of Geelong, who remarked that it is one of the finest brass combinations in the provinces. Vocal and instrumental items will be rendered by well-known Nhill artists.



The staff at 2FC opening a morning's mail—the first from England following the Empire broadcast recently. Most of the letters bear English postmarks.

IMPORTANT ANNOUNCEMENT: The famous Humphrey Bishop English Musical Comedy Company are producing a special programme for broadcasting by 3LO, Melbourne, on Monday evening, December 19th.

BEPPIE DE VRIES: A dressing-room talk of more than ordinary interest will be that of Beppie de Vries on Thursday evening, December 15th, which will be transmitted by 3LO from His Majesty's Theatre, where she is appearing with marked success in the production of "The Student Prince."

CROQUET AND CRICKET: On Thursday, December 15th, at 10.30 a.m., and at intervals during the day, a description by Mr. C. J. Miller, of the Croquet Championship matches, Australia and England, will be broadcast by 3LO, and during the afternoon of the same day a description by Rod McGregor, of the Interstate cricket match, Victoria v. Queensland, will be transmitted from the Melbourne Cricket Ground.

COMMENCING this week Station 2GB's instrumental trio, consisting as follows, Miss Murielle Lutz, Miss Ada Brook, and Mr. Dan Seally, will play popular music on Tuesdays and Fridays of each week.

CHILDREN'S SONG WINNERS: The presentation of the prizes to the winners of the various classes of the recent 3LO, Melbourne, Child Radio Song Competition will take place at the Studio of 3LO on Saturday evening, December 17th.

THE "TWO CROONING TROUBADOURS," appearing at 3AR Melbourne on 22nd December, are two very accomplished artists, who specialise in Hawaiian music and plantation songs, accompanied by a Spanish guitar and ukulele. This type of music is very popular at the present time, so listeners will be pleased to hear that the "Two Crooning Troubadours" are commencing a season of entertainments from station 3AR.

MISS IRIS RODERICK, an attractive entertainer of great charm and personality, is very clever at impersonations, and imitations of musical instruments. She is booked for a lengthy season with 3AR Melbourne, where she will be heard on Friday, 23rd December.

THE ATMOSPHERE OF Bendigo seems conducive to the production of fine voices. Miss Beth Currie hails from that town, and is the possessor of a rich contralto voice admirably suited to the microphone, as she will demonstrate at 3AR on the 23rd December.

OLD TIME NIGHT: On Friday evening, December 16th, listeners are asked to lay aside their newspapers, their pipes and knitting—and also their business and household cares. They are asked to forget, just for an hour, that they haven't danced for years and years and enter into the true spirit of the 3LO Old Time Night.

5CL'S NOVEMBER BRIDE: South Australia has taken a great interest in 5CL's November Bride, Miss Bishop, who received over 31,000 votes out of a total of over 31,000, was busily engaged last week travelling from place to place in a specially decorated cab placed at her disposal by the Checker Cab Company. Bearing a Microphone, lit from the inside by electric lights, the cab attracted much attention wherever it was seen, and in some cases the crowd of people assembled to see Miss Bishop were so great, that she experienced considerable difficulty in getting back to her car. Many people came forward to congratulate her, and the little lady's hand felt quite painful. She received thousands of letters, and innumerable presents. In her shopping tours through the City of Adelaide, she was accompanied most of the time by Miss K. Reid, of Central Broadcasters' Ltd, and together they had what they described as a "most exciting time."

MARRIAGE CEREMONY BROADCAST: The nuptials were carried out at the Maughan Methodist Church, Franklin Street, at 7 a.m. on Saturday, November 26th. The Rev. W. H. Cann officiated at the ceremony, which was broadcast by 5CL. The public were invited to be present at the Church, and many listeners came from the country specially to be present at the wedding. The reception was held at the Maple Leaf Cafe, at 8 p.m. (26/11/27), and the speeches and musical items were broadcast. Mr. W. C. Smallacombe (Uncle Radio) was the M.C., and a number of well known artists rendered musical items. Representatives of the firms who have made presentations to the November Bride were also invited to attend the Wedding and Reception in addition to members of the bride and bridegroom's families.

"STUDENT PRINCE" SINGER: A new comer to Studio 3LO is John D. Fitzner—from the ranks of "The Student Prince"—who will shortly be entertaining listeners with some very well rendered baritone songs. Mr. Fitzner has made a good start in the musical world—and is keen to travel much farther in his art—and having youth, enthusiasm, and a remarkably good voice to aid him—he should rise high in the ranks of his chosen profession. He is a very busy young man, for notwithstanding his theatrical engagement keeps him very busy—to say nothing of his broadcasting work—he still finds time to put in some solid work in the study of singing and languages, so as to prepare a firm foundation for the time when his "big chance" will come along.

FOR THE AGED: We would again remind both listeners and readers that Studio 3LO are making an appeal for gifts to be sent to the various Benevolent Homes for the Aged and Infirm that are dotted round and about Melbourne. As may be imagined, it is not the value of the gift that counts, but the thought behind it—and whilst busy housewives are making their Christmas cakes and puddings—there is certain to be a little pudding basin or cake tin handy, that would hold "just enough"—for one of these dear old souls who do not often get an opportunity of partaking of delicacies. Then again, our "home-made sweet" experts need not wonder how to dispose of that extra dainty basket of confectionery—just send it along to the Studio, and they will do the rest. Also, it must not be forgotten—that although we are in summer now—warm woollies will be acceptable—for they can be laid aside, and, in a few months' time, will bring much comfort to the recipient. In short, gifts of all kinds will be more than welcome.



Miss Jessie Ella Bishop, winner of the 5CL November Bride Competition, as she appeared before the microphone during the marriage ceremony which was recently broadcast.

TROUBLE SHOOTING

Industrial Interference Causes.

We come now to that amazing contribution to the true and the beautiful entitled

INDUSTRIAL APPLICATIONS.

1. Arc Light Circuits.—And we find that this delightful topic is not treated on a mass, but is divided into three intriguing sub-topics, reading from left to right: A—Line; B—Arc Light, and C—Mercury Arc Rectifier or Direct Current Generator.

We may as well skip item "A." It is merely an iteration of the fact that the line may act as an antenna to distribute noise or may cause the noise of its own volition.

"B" has a more novel look. The engineers point out that an arc light consists of two electrodes between which current flows with a brilliant flare, and devices for moving the electrodes as they burn. Normally, it is said, this adjustment occurs about once an hour, and so quietly that even sensitive sets in the immediate neighborhood do not pick up the resultant click. Loose connections and grounds are cited as the chief causes of woe, plus a third known to the trade as "lamp-jumping." This as nearly as can be determined is a spasmodic contortion of electrodes generally resulting from broken globes. All three difficulties are easily remedied.

"C" is probably the most important of the three subdivisions, inasmuch as such rectifiers in use in battery stations are less likely to receive attention than disturbers which are peculiarly the property of the light company. They are used also to supply direct current to ordinary arcs and so have a pretty fair distribution in cities. Normally they cause no trouble. In operation they may develop fading characteristics due to changes in vacuum and consequent alteration of the voltage curve. The fading or pumping results in a very spirited output of radio frequency interference. Choke coils in both sides of the circuit are recommended as a cure for such activity. Heat treating and resting the mercury tube are also suggested by the engineers. The average radio listener will no doubt feel a perfect neutrality about this unless he is a stockholder in the power company. It is further recommended that the power company's trouble shooters report the difficulty to the manufacturers of the arcs—which seems to be as good a solution as any.

Commutator trouble is listed as the chief cause of trouble in direct current generators. Inasmuch as this same

The second of the series of articles on better radio reception, published through the courtesy of the Radio Manufacturers' Association of U.S.A.

The articles contain useful information, hints, and ideas for the improvement of reception, and are published in order to enable listeners to get the most out of their equipment.

ailment comes up for treatment elsewhere it might as well be passed here.

If you live in Van Wert, Ohio, you will have wasted your time with this valuable information concerning the life and habits of the mercury arc. Such devices are forbidden by law as are bootleg Scotch, vibratory charges, and prussic acid.

Van Wert has taken the leadership in the great reform, but possibly will stand alone for some time, inasmuch as the use of a few dollars' worth of condensers will eliminate all the effects which tend to make arcs unpopular.

And so we come with palpitant interest to:

No. 2. Telephone and Telegraph Lines: It was discovered in the survey that owing to the low energy in such lines they are not a source of serious annoyance. Disturbances which they seldom produce themselves, but sometimes convey by induction are easily eliminated when the collector system of the receiving set is changed.

Postpone your soul in patience and we shall take a look at:

No. 3. Pole Chargers: These gadgets are used in small telephone exchanges to produce a pulsating direct current for ringing polarized bells or an alternating current for use with common bells. They are a source of trouble through sparking of interrupting contacts.

Pole changers operate from a D.C. source, generally a storage battery and if an A.C. source is desired a new difficulty is introduced in the shape of a frequency converter with two mechanical rectifiers in it. Operation is similar to that of the vibratory battery charger, so its principles, if any,

need not be exposed at this time. Its trouble-making ability comes from the fact that it may radiate not only from the A.C. line, but from the ringing line which it supplies.

The pole changer disturbance is carried out and distributed among the avid radio listeners by telephone line pickup, which may be prevented if the device is properly shielded and kept out of the way of magnetic coupling. The frequency converter buzzes around over the secondary lighting feeders supplying the exchange.

Some success has been had in the detection of the source of such noises by the use of a 25 turn honeycomb coil on a long pole with leads in series with a crystal detector and headphones.

Once the trouble is located it can be eliminated by filters and here again the investigators direct that the telephone company employing the troublesome devices state their woes to the manufacturer who supplied them. He will provide the necessary remedies. The report tends to show that telephone companies have much to worry about aside from wrong numbers.

Steel Railway Conductors and Non-Conductors.

Which brings us expectantly to:

No. 4. Street Cars and Electric Railroads: It is generally supposed that the chief trouble on street railway lines is caused by the conductors. We now have it on good authority that it is the non-conductors which disturb the public peace.

Arcing grounds, broken insulators, sparking commutators, arcs at trolley wheels, arcs at car wheels, . . . Arc! Arc! The Larks. . .

All of these sizzling products are distributed across cities—possibly across counties—by the hard-working trolley lines.

The investigators are a bit saddened at the noises of trolley lines. They are not so bold as to suggest that the public walk to work and force the operating companies into bankruptcy as a means of silencing them. But they hint that nothing short of that process will do much good.

However, some hope is at hand if chokes are placed at intervals in the power wires and condensers are hooked in between the power wires and the ground. If these heroic measures do not eliminate the noises the radio listener is at liberty to move out into the country and by a flivver.

5. **Motors:** Let us forget them until later.

6. **Smoke and Dust Precipitators:** Here we have the mystery element entering into the engrossing narrative for the first time. The engineers seem to be a bit undecided, both as to "How the Devil He Goeth" and "What the Devil He is Roaring About." Such devices are of varying types, but in principle they are alike. They establish a highly charged electrical field inside the chimney or chute so that particles moving into the field are charged and driven against precipitator plates where they stick. The investigators have not yet determined just how they cause interference, but they know the habits of some of the components—namely the rectifiers used with them. Here as elsewhere arcing contacts are responsible for a good deal of the racket. The Bureau of Standards suggests that the rectifier be kept close to the precipitator and housed in a grounded metal shield with a tuned circuit between sparking terminals. Otherwise, it is pointed out, the smoke elimination may have its effect on sets twenty miles away.

7. **Sign Flashers:** Once more the arc! Make-and-break contact devices are the basis of all these devices with consequent generation of radio frequency currents. In cities they are a peculiarly persistent offender, particularly if used near large apartment buildings. But they may be silenced and their beauty, if any, kept intact for the community if a simple filter is connected across their contact points. Electric lines feeding the sign should be enclosed in metal conduit.

So ends the discussion of General Classification No. 2. Looking back at the debate so far it seems to prove nothing except that it is very worrisome to be trouble shooter for a power company. The next classification is of more immediate and poignant interest to the lads who own the sets. To wit:

Household Appliances.

1. **Heating Pad:** As has been mentioned earlier in this interesting narrative, these things are kept at a constant heat by means of thermostats; otherwise they would burn up—and why not? Contacts in the thermostats open and close and in doing so arc.

The best method for stopping interference from heating pads is to turn them off. One can also toss them into the waiting ash-can and buy a hot water bottle, but such extreme methods are hardly necessary if the

radio listener retains sufficient energy to turn the switch. Condensers across the thermostat points will cut down the interference to a minimum, but inasmuch as it is hardly practicable for an ordinary householder to get inside the pad and make such adjustments he can compromise by putting a larger condenser between the two lines of the input.

2. **Violet Ray Machines:** These things must be heard to be appreciated. They sound like all the static in the world augmented by hard coal falling through a chute. Generally, a vibrator in the apparatus is the cause of the annoyance and, of course, the good old "Turn-it-off-and-put-it-away" method is supremely effective. If any investigative soul desires to use his violet ray outfit and listen to radio at the same time he may eliminate the noise by hooking a tapped condenser between the input terminals of the machine and grounding the centre tap.

3. **Flatirons:** Interference from such appliances with resistance wire heating elements is generally the result of bad insulation and may be eliminated by the purchase of a new heating element.

4. **Doorbells, Motors, Light Switches:** Motors will be dealt with separately. Light switches cause only slight clicks when turned on or off unless they are so defective that they cause a sputtering arc. If they are they have to be fixed. Doorbells are generally only a sporadic source of interference. If the antenna system is kept some distance away from the bell wiring the difficulty is virtually nil. (In one case investigated for the R.M.A. it was found that the radio receiver picked up the ringing of the telephone bell. . . Tracing of the collector circuit shows that the set and the phone system were using a common ground.)

Possibly it should be pointed out here that most of the troubles arising from the use of electricity in the home are simple to trace and simple to remove. At present household electrical devices are possibly the most persistent nuisances in radio, but this is 99 and 44/100 per cent. due to the neglect or ignorance of operators.

Miscellaneous Causes of Interference.

1. **X-Ray Machines:**—It was found that when such apparatus is properly installed and carefully shielded the range of interference is not great.

2. **Storage Battery Chargers:**—This subject is treated under three heads: A—Vibratory or mechanical rectifiers; B—Thermionic or ionised gas rectifiers; C—Chemical rectifiers.

The noisiest are, of course, the vibrators, on account of arcing at the contacts. A small condenser across the vibrator element ends the disturbance. Tube rectifiers sometimes sputter, but may be silenced by use of condensers and chokes on the line side. Electrolytic rectifiers are not noise producers unless the genius of the user contrives some method for making them arc across the top. The engineers in their report stated that the chief cause of interference lies in close coupling between the set and the light line that supply the chargers.

3. **Annunciator Systems:**—See doorbells.

4. **Stock Tickers:**—Trouble, if any, results from coupling of apparatus with line of communication.

5. **Ignition Systems:**—Some radio frequency energy is put out by normal activities of spark plugs and distributors. It can be corrected by moving the automobile. In effect, it is not serious.

Similar causes produce similar results in the case of stationary gas engines. Here the shielding of ignition leads is advocated.

6. **Electric Elevators:**—The National Electric Light Association engineers leave the problem of the electric elevator to be dealt with in a later survey. They point out two kinds of interference—a click heard in the loud speaker when contacts are engaged or disengaged—(a sound like the turning on and off of the light switch), and a steady hum due to the motor. As a matter of fact, the motor problem is merely another of those things. The clicking of contacts in an elevator control seems eliminable by the same methods used to cope with other makes and break disturbances.

The chief cause of interference in electric elevators is not that they are electrically operated, but that the motive apparatus is old and poorly cared for.

7. **Electric Furnaces:**—These things do create some disturbance. As an active agency in the great national cacophony they are about as important as the blowing of tin whistles in Mesopotamia.

Let's forget this one.

8. **Moving Picture Equipment:**—With moving picture theatres, now more numerous than radio stores, it is time somebody gave some attention to their power for interference. Apparently they haven't much. Motor equipment for projecting and re-winding of films is subject to the usual ill of motors. Projecting arcs may develop some radio frequency energies. However, it was found that with such apparatus in good condition, the R.F. currents were

pretty well choked out of the feeder lines and there were no other important nuances in the theatre aside from the pictures and ushers.

9. High Voltage Testing Equipment.—No hum! Who thought of that one?

10. Beware the Handsome Aerial.

5. Investigate conditions of aerial and ground.

This measure, manifestly, is indicated only if tests seem to show the disturbance to be of an outside origin. However, it never does any harm to look at an aerial on any pretext. They are frequently hoisted only to be forgotten, these handsome ornaments. They can develop more ailments than an office boy, but one expects somehow to find them always sturdy and unharmed.

Make sure that insulators are not cracked or dirty, that aerial itself is not touching other aerials or trailing on the surface of the roof, that it is not parallel to—well, you know—that the lead in wire is electrically connected to it—and by an electrical connection is meant an electrical connection, that neither the aerial nor lead in wire is being scraped by trees, that neither wire is anchored to telephones or electric light poles.

6. Mark condition of weather at time interference occurs.

This, properly, should be included as part of "Good Advice No. 4." But perhaps it will do better as a separate lead for the blood hounds.

Moisture across insulators sometimes causes activity in leaks that are not observable in dry weather. Sleet on power wires causes trouble quite aside from its effect on radio reception.

Sometimes it may be noticed that wet weather brings better reception, in which event one may suspect the potency of one's ground connection.

MISS EMILY HALSALL, steel guitar instrumentalist, lives in Ballarat, where she teaches guitar, mandolin, banjo and ukulele playing. Commencing Friday night, 23rd December, her steel guitar will be heard in turn, together with her Spanish guitar, ukulele and piano, at intervals, from 3AR, Melbourne. The Kaala Hawaiian Troubadours speak very favorably of her skill with the Hawaiian instruments, so she should please listeners.

THE "SPARKLETS" granted to make the mirth rise, will send bubbles and bubbles of fun from the microphone at 3AR, Melbourne, on 20th December, so be sure and have some, it will aid digestion. These two bright entertainers, sparkle in private life as Mrs. and Mr. Cook. So list, and be merry, this festive Christmas season.

CHILDREN'S TIME AT MIDDAY:

5CL recently commenced giving a children's session during the early part of the day. Although the time seems unsuitable for children, it is obvious from the large number of letters received that there are a great number of children who listen-in at that time. These talks were instituted originally for the entertainment of sick children, but many of the younger folk hurry home from school to listen-in.

POULTRY TALKS: Mr. A. M.

Whittembury, who gives weekly talks from CL and was largely responsible for the organization of the 5CL poultry club, will be visiting the eastern States shortly for the purpose of obtaining information of use to those listeners interested in poultry. He is visiting the eastern States at the request of 5CL, who desire that members of the Radio Poultry Club numbering over a thousand to obtain the best possible information.

"UNCLE MAC" AND "JIMMY

JACKAROO," who are so popular with the juvenile listeners to 3AR, Melbourne, have arranged with Mendelsohn's studios, that all little radio nephews and nieces up to the age of sixteen years may go to that studio, and have their photos taken. One of these is to be a present to mother or father, and the other is to be given in to 3AR to take its place in the giant picture books.

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OLD TIME NIGHT: Many requests have been received by 5CL for an Old Time Night. This special programme is now being arranged, and will be given during the Christmas Holidays. A special book is being written, and suitable artists are being engaged. Jazz will be strictly barred that night.

AFTER THE most successful tour of Australia by the Humphrey Bishop New English Musical Comedy Company, the directors of 3LO, Melbourne, were indeed fortunate in being able to book them for a big night's broadcasting from the Studio on Monday, December 19th.

Humphrey Bishop will personally act as entrepreneur, and the whole of his great combination will take part in the evening's programme.

Every member of the company was carefully selected by Humphrey Bishop when he organised it, and the recent remarkable success of his many productions throughout Africa, Asia, Australia and New Zealand are due to the close attention paid by him to every detail in his sparkling and varied programmes.

It is safe to say, therefore, that his broadcasting engagement at 3LO will be a huge success, and listeners will regret that it is impossible to arrange for more than one night's broadcasting—at any rate for the present.

VERSATILE TALKER: One of the most delightful and instructive series of talks given over the air comes from the resourceful diary of Miss Frances Fraser, who, to use her own expression, claims to be educated in the University of the World—having taken the Degree of Science in Australia, Literature in England, and Philosophy in the United States—to mention only a few of her accomplishments. Miss Fraser has now been speaking for nearly three years from Studio 3LO—and her talks gain in interest as time goes on. Especially was her talk on the "Quiet Nooks in London" enjoyed by a vast number of listeners, who, although born Londoners themselves, although Miss Fraser knew a great deal more about the "old world" than they did themselves. We enjoyed the imaginary walks through the Inns of Court—the poring over old bookshelves in the hope of finding "first editions"—and the ramble through picturesque Soho. It is good to know that Miss Fraser's talks are all timed for the afternoon session, which gives so many women—who are compelled to remain at home—a chance of hearing about places and persons overseas.

£7/12/3 The "Cole" £7/12/3

5 VALVE SET 5

One Knob Control—Easy to Tune In Interstate Stations—

This set is described in this issue. Here are the parts:

	£	s.	d.
1 Polished Hard Rubber Panel, 15 x 7 x 3-18	0	5	6
3 Advance Centralign Condensers, .0005, at 12/6	1	17	0
2 400 ohm. Potentiometer	0	2	6
1 6 ohm. Philmore Rheostat	0	1	10
1 B.M.S. Single Circuit Jack	0	1	7
1 B.M.S. Battery Switch	0	1	5
1 B.M.S. Ornamental Bakelite Vernier Dial	0	7	9
5 Eco Bakelite UX Sockets, at 1/2	0	5	10
1 Kit Radiokes Circloid Coils	2	15	0
2 Econotron Audio Transformers, 8/6	0	17	0
1 Wetless .00025 Condenser, Plain	0	1	6
1 Wetless .00025 Condenser, with Clips	0	1	9
1 3 megohm. Gridleak	0	1	0
1 Advance Midget Condenser	0	6	6
1 Terminal Strip (Bakelite)	0	0	8
9 Engraved Terminals	0	3	0
1 Dozen Round Buswire	0	0	11
2 Lengths Spaghetti Covering	0	0	10

"SAMSON" Heavy Duty 45 Volt B Batteries

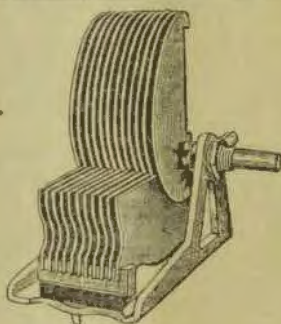
Built especially for us to withstand the severe local conditions.

21/- each

Short Wave Adaptor

RECEIVE THE OVERSEAS SHORT WAVE BROADCASTS (Wavelengths 25 to 56 metres) on Your Present Broadcast Set.

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The Quaker Low Loss Condenser

One Hole Fixing Size .0005
Brass Plates
Good Separation
Compact

9/6

Crystal Sets and Crystals

THE ECO WONDER
CRYSTAL SET 27/0

Parts Only 15/-
Mighty Atom Crystal .. 1/3
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The Most Sensitive Cone Type Speaker Made, Adjustable Unit

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For QUICK SERVICE address Mail Orders to ECONOMIC RADIO STORES, 492 George Street, Sydney.

"YOURS FOR LOWER PRICES,"

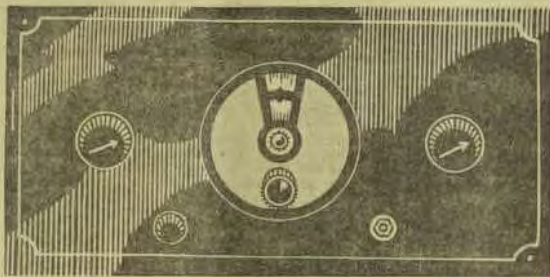
THE ECONOMIC RADIO STORES

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'Phone: UW 9601.

SYDNEY:
25 NEW ROYAL ARCADE,
'Phone: M 6138.

NEWCASTLE:
569 Hunter St. West.
'Phone: Nw. 1622.

The COLE Five Valve Receiver



NOW that the summer months are creeping on us, it becomes more difficult each night to receive inter-State stations on the average 3 valve receiver, at a satisfactory volume. Old Father Static who sleeps most of the winter months, has ceased to rest, and his activities are now being felt and will be felt more so as the hot weather approaches. Of course, it must be understood that irrespective of what receiver may be used during this period, static will be, like the poor, always with us. Some nights are better for reception than other nights, in fact, even during the hottest nights it is quite possible to receive inter-State stations reasonably well.

It is asking quite a lot from the average receiver to expect consistent loud speaker results on these inter-State stations, during Summer, so in order to make a certainty of that which is doubtful, it is a good scheme to have a certain amount of reserve energy to play with.

To arrive at this, more valves are necessary, in order that the amplification may be built up, to sufficient strength to operate a loud speaker. It is common knowledge that more than two stages of audio frequency amplification of transformer coupled type, is impracticable, therefore, we have no choice but to make use of some form of radio frequency amplification, which builds up the weak incoming energy before it is applied to the detector valve, where it is rectified.

An Efficient Receiver.

A neutrodyne receiver is known the world over to be one which lives up to its name of being a most efficient

all round receiver. A neutrodyne employs two stages of transformer coupled radio frequency, the trans-

former being the usual type associated with neutrodynes, that of the solenoid coils mounted at a given angle and spaced from 5 to 7 inches apart. It is admitted accordingly, that a considerable length of panel is required to allow this receiver to function at its maximum efficiency. Incidentally, too, three condenser controls are required, which, although quite simple to handle, cannot be compared with the more popular form of one control receiver, of more modern times.

One method of gaining the one control feature is by means of gauging the variable condensers, which are required for tuning purposes. When these condensers are spaced along the panel, some form of belt or chain drive must be resorted to, and as it is beyond the scope of the average home constructor to devise such a means, then we must, perforce, seek some other system. This brings us back to that popular method associated with the Solodyne, that of gauging the condensers one behind the other, on a long spindle. With the neutrodyne when this is done, we meet with the difficulty of long leads to the grids of the valves, and as these long leads spell lack of efficiency you must think of some other type of coil which need not be spaced so far apart as the neutrodynes, but which can be fixed relatively close to one another and yet which must not give rise to interaction between these coils.

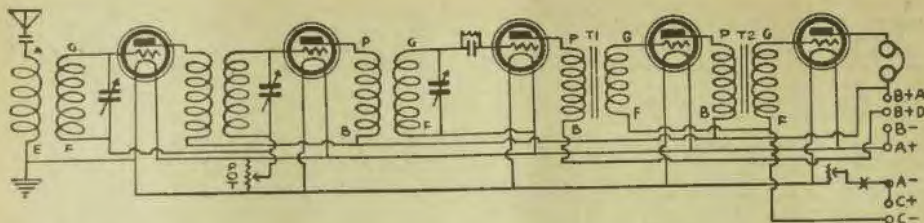
Circloid Coils.

The writer has over and over again, come in contact with neutrodyne receivers which have not lived up to

PARTS FOR THE COLE FIVE.

Although the parts listed below and mentioned throughout the articles were those actually used by us in the receiver described, it must be pointed out that it is not absolutely essential that they be rapidly adhered to. Other parts of similar quality and technical value should function quite satisfactorily.

- 1 Diecto or hard rubber panel, 14 x 7 x 3-16.
- 3 Advance Centralign condensers, 0005 mfd.
- 1 Eborite bush with 4 inch hole, and two set screws.
- 1 Electrad 400 ohms. potentiometer.
- 1 Electrad 6 ohms. rheostat.
- 1 S.C. Jack.
- 1 Battery Switch.
- 1 Kit of Radiokes Circloid Coils.
- 5 Valve sockets.
- 1 Advance nidget condenser.
- 1 .00025 Wetless condenser (in aerial lead).
- 1 .00025 Wetless condenser, with clips.
- 1 2 Meg. grid leak.
- 1 Viking transformer, 5 to 1 (1st stage).
- 1 Viking transformer, 33 to 1 (2nd stage).
- 9 Terminals.
- 1 Terminal board.
- 1 Pilot Kilograd dial.
- 1 Baseboard, 13 x 14 x 3/8 inch.
- Spagetti, busbars, screws, etc.



the good name earned by such an excellent receiver. Invariably, the trouble has been traced to badly spaced neutroformers, and incorrect neutralisation. These unfortunate set of circumstances have given rise to many complaints which could have been avoided if the constructor built his receiver according to the specifications laid down by the writer of the constructional article. These troubles can be overcome by making use of some form of coil where the magnetic field is confined within a small area. Screening or shielding is a means to an end, such as was demonstrated in the Solodyne previously referred to, but there is another type of coil which seemingly has been overlooked of recent months, which can effectively give excellent results in a very small space without the attendant troubles of magnetic coupling. This coil is known as Radiokoe Circloid coil, and while not quite new in principle, in practice when built into a receiver, gives most phenomenal results.

Phenomenal is just the word to describe the results heard on the Cole Five. That the Circloid coils assist greatly in rendering these results possible, there is no doubt, as they are a splendidly constructed coil, designed locally to give extremely good results, and that they succeed in doing so, cannot be denied. The space occupied by the Cole Five is very small indeed, in fact, the whole receiver is so compact that it must make its appeal to most readers desirous of a super-excellent five valve receiver.

Compactness.

The whole receiver is very compact, the size of the front panel exactly 14 inches long by 7 inches high, and the depth of the baseboard, which contains most of the components, is 14 inches. Within this small space is confined all the apparatus necessary for this wonderful Cole receiver. The variable condensers numbering three, are ganged by means of one common spindle right through the three separate condensers. When it is said one common spindle goes right through the three condensers, this statement is not virtually correct, as the variable

condenser governing the detector circuit is electrically separated from the other two condensers. It is known that for best results, the grid returns of the radio frequency valve circuit, are connected to the A battery negative, while the grid return of the detector valve should be joined to the A battery positive.

Ganged Condensers.

If all the moving plates of the variable condensers—and usually the moving plates comprise the return circuit—are connected to one long brass spindle, then it is necessary to make some alteration in the grid return or perhaps it should be said, the grid feed of the detector valve, so that proper control of this detector valve is arranged. In this receiver there has been a departure from the ordinary. The two radio frequency valves have their grid returns arranged in such a way that they may be placed at either positive or negative potential according to the whim of the owner. This is effected by means of joining the common grid returns to the centre arm of a potentiometer, the outside terminals of which are connected across the A battery, thus allowing the variation previously specified. This feature is one well worthy of incorporation in this receiver.

Instead of using one long brass spindle, right through the three Advance condensers, just sufficient brass spindle is used to allow it to protrude between the two radio frequency condenser controls, and that condenser which tunes the detector valve circuit makes use of a small portion of tin Dilectro rod, which is an excellent insulating material, yet has sufficient tensile strength to allow this portion of the gang condenser to be turned in harmony with the other two portions. Thus it is possible for the grid return on the detector valve to be taken to the A positive.

Advance Centralign condensers have been chosen for this particular circuit, because they lend themselves very nicely to ganging, but at the same time it is quite possible that they may vary somewhat slightly in their capacitance for the different

wavelengths to which they will tune with any given coils. To overcome any possibility of trouble in this direction, there has been connected in parallel with one section of this ganged condenser, an Advance mid-gang condenser to act as a balancing arrangement. Some people may find it necessary to place one of these mid-gang condensers across two of the three sections, in order to get the correct balance, but this will depend on actual results.

All the valve filaments are controlled with one 0 ohms rheostat, which under actual conditions of reception has proved quite satisfactory, but were the writer to build this receiver to-day, he would use an Amperite for every valve. It may seem strange that the previous statement has been included in this article, but it is a fact, nevertheless, because this particular Cole Five has been in existence, and rendering yeoman service for a period extending over 8 months.

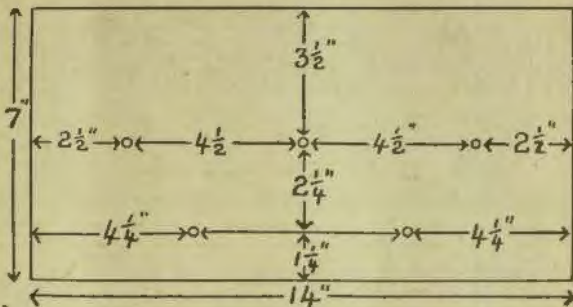
During this period of time, it may be interesting to annotate that not only have all the Australian Broadcast stations been received on the Cole Five, but also the two New Zealand stations. And when one comes to consider that actually only one control is essential, this speaks volumes for the performance of this receiver.

Construction.

The construction does not call for any great engineering skill in any way, as there are no coils to wind, the first act in construction is in marking out and drilling the panel. The panel drilling diagram shows the measurements and the spacing of the different parts. Lay the panel on a flat surface, mark out the positions with the centre punch, then drill the necessary holes. With the Advance condenser, countersinking must be resorted to, for the fixing screws of the Advance condenser. A larger size drill than is usual may be used for this purpose, but be certain you don't drill too deeply, or right through the panel, as this will create an awkward situation. Make provision for three screws with which to fix the panel to the baseboard. Leave the panel on one side, then attend to the ganging of the condensers.

A length of a $\frac{1}{4}$ inch diameter round brass rod, five and five-eighths inches in length, is required for the two radio frequency portion of the gauged condenser. It is necessary to remove the existing spindles, although if preferred, existing spindle of the 2nd condenser may be forced into the back of the 1st condenser, that is the condenser nearest the panel, and with the moving plates of both condensers "all in" fix the set screw of the 1st condenser, so that it grips the spindle of the 2nd condenser. Now obtain an insulating bush of material, such as ebonite or Bakelite, and a length of Dilecto rod $2\frac{1}{2}$ inches long, by quarter inch in diameter, and another short length of this rod one inch long, of the same diameter. Undo the back set screw, governing the moving plates of the second condenser, clamp the one inch length of rod into the back of this condenser, leaving approximately three-eighths of an inch protruding out the back. To this protruding portion grip one set screw of the ebonite bush. Now into the last condenser, that is, the third one from the panel, push the longer length of Dilecto rod right through from the back, allowing about half an inch to protrude beyond the front, and grip this protruding half inch with the other set screw of the Ebonite bush. The two set screws on the back condenser, should now be secured tightly, but make certain in doing so, that the moving plates of all three condensers are all in.

It may be advisable to mount these three condensers on a small sub panel about eight inches long, by three inches wide, then fix to the panel. A small pillar approximately one and one quarter inches long, fixed at the back of this small sub panel will permit the gauged condenser to remain perfectly steady, and keep it off the baseboard, at a height commensurate with a distance, the condenser is mounted on the panel.



Now mount this condenser on to the panel, also the potentiometer, the rheostat, the jack, and the battery switch. Place the panel into position against the baseboard, and screw the panel to the baseboard. Now, in accordance with the plan view, lay out the rest of the baseboard components. It will be seen that one radio frequency valve socket is mounted on one side of this condenser and the other on the opposite side, then on this opposite side, right at the back of baseboard, fix the detector valve socket. Running right along the back of this baseboard, close to the terminal board, are the two audio transformers, and the two audio valve sockets. Looking from the back of the set on the left hand side near the rheostat is fixed the first radio frequency Circlout coil, close to the first radio frequency valve socket, alongside of which is the midgeit balancing condenser. On the opposite side of the condenser and near to the potentiometer, is found a position for the second radio frequency Circlout coil, at the back of which is a second radio frequency valve socket, to the left of which,

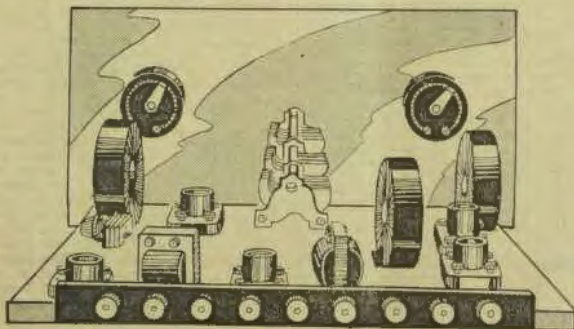
close to the variable condenser, is fixed the detector tuning Circlout. The rest of the layout is very apparent.

Wiring.

When the terminal board has been screwed into position the wiring may be commenced. To be quite frank, the system of wiring used in this receiver is the straight spaghetti covered soft wiring with point to point connections. No neutralising condensers are necessary, as Circlout coils seldom need to be neutralised. Even if they were, the use of the potentiometer in this circuit dispenses with this necessity. The back of panel wiring diagram is sufficiently clear for the average person to follow out the wiring. Begin with linking up the filament terminals of the different valve sockets, then come back to the audio stages, wiring those up completely. There is not one point in the wiring difficult of access in this set in spite of its compactness. Bear in mind that it is always advisable to mount the grid condensers and grid leak directly on the G terminal of the detector valve socket.

Valves.

As it is the usual practice with all W.W. receivers the actual valves used in the set being described are always mentioned. To be quite frank about this matter the writer has no hesitation in stating that almost any good valves will give excellent results, and usually have given excellent results. When the Radiolux valves were put on the market the writer happened to get a few and found them to be really worth the extra outlay—particularly the UX200A Radiolux special detector. When this valve was placed in the detector socket a distinct increase in volume was noticed, not only on the local stations, but also on the interstate stations, everyone without exception. This is a candid admission which may be of profit to many readers who are seeking an excellent detector valve.

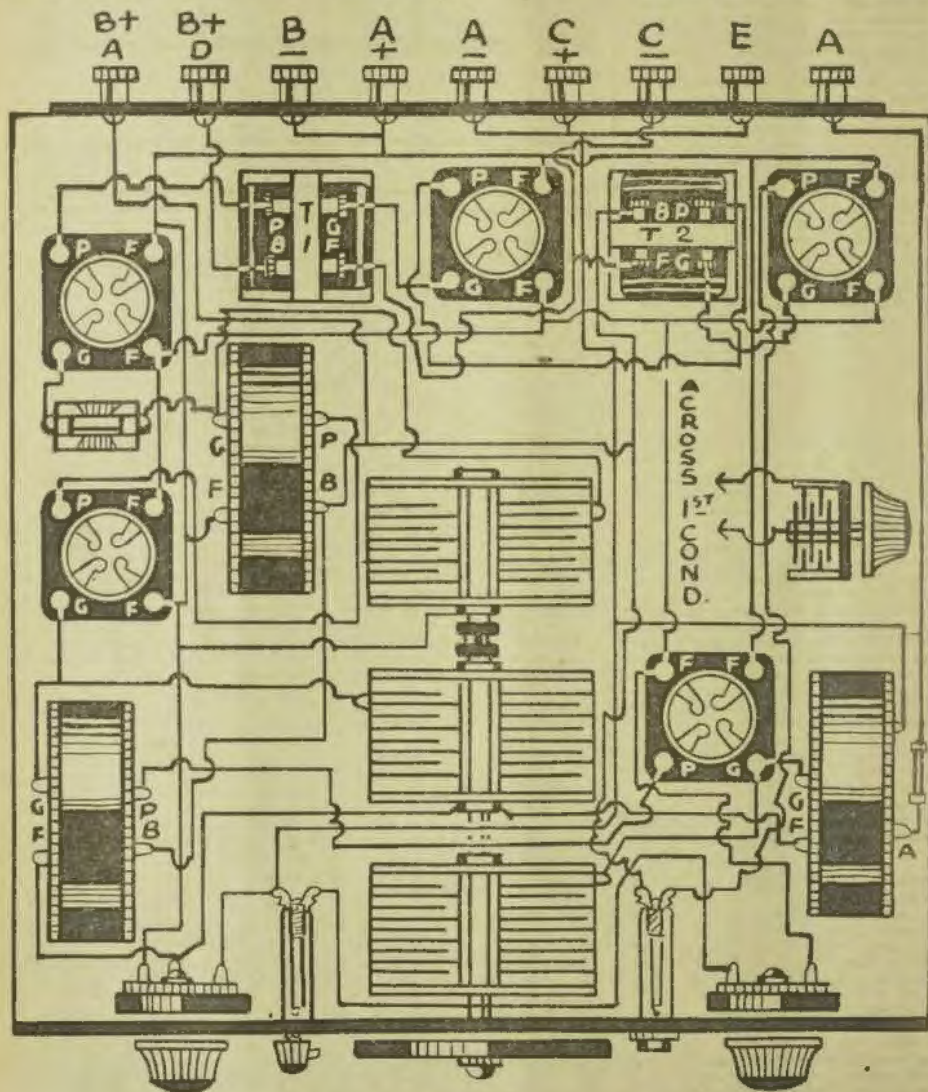


Battery Voltages.

The A battery voltage depends on the particular valves chosen. For the Radiokes, Radiotron, 201A type, many Philips, Cosser, and Mullard valves six volt will be found quite satisfac-

tory, although for the latter, it might even be said all types, there is a four volt variety to be chosen. Regulate your accumulator to supply to the filament of all valves, the correct A battery voltage.

The B battery voltages depend very greatly on the valves to be used. For the average valve the detector voltage fixed at from 223 to 45 volts will be found to give very satisfactory results and with 90 volts on both audio



and radio stages, a wonderful performance should be had from the Cole Five. The grid bias battery of 41 volts will be found quite suited to a 90 volt audio B battery with a 201A type of valve, although with any other type up to 9 volts C battery will be necessary. It is always advisable to adjust both the B and C batteries to suit the particular valves and the actual receiver in which they are installed. Don't be afraid to vary the voltages, even to what may seem to be ridiculous, provided you are getting good results.

Testing.

For a trial connect up all the batteries as specified, plug in the loud speaker, and hook on the aerial and earth. The aerial need not exceed 60 feet in length, and the earth may be the usual water pipe or buried sheet iron or kerosene tin, as the case may be. Press the battery switch to the on position and turn the rheostat the whole way around. Set the potentiometer on midway between the two terminals, and tune with the vernier dial governing the ganged condenser. The local station will be heard at one setting at a wonderful volume.

Turn the rheostat back until the local station can just be heard in the speaker. Now, balance up the three ganged condensers. Turn to the one midjet and adjust this slightly, which most probably will bring in the local station a little more loudly. Bring it up to its loudest pitch with this condenser. Turn up the rheostat, then adjust the potentiometer until the loudest and clearest point is found. Now turn back the rheostat back again to the same position as it was when balancing and note if any increase in volume is present. Then turn your rheostat up again to its full, and seek the interstate station. Go for 3LO, Melbourne, which will be found very close to 2BL, Sydney. Work the potentiometer into such a position that the carrier wave of 3LO can be heard. Now carefully tune with the gang condenser and adjust the potentiometer until the carrier wave disappears, leaving only the modulated output of Melbourne station.

Perhaps the volume may not be what you expect. If such is the case, then loosen the set screws governing the moving plates of that section of the variable condenser which has no vernier to balance it. Very carefully and very slowly, a fraction at a time, turn the vernier dial till the loudest point of reception from Melbourne is available. It may be necessary to turn either one way or the other. Prove this for yourself. When this point is reached, adjust the set screws of the loosened condenser spindle, use

your potentiometer to advantage, then seek Brisbane. 4QG will be found easily, so will 5CL. Farmers will be very much present, when you reach their setting. A little further on the scale 5AR will present themselves, perhaps not so loudly as the other stations, but still at sufficient volume to be heard comfortably on the speaker. The Hobart station 7ZL may be found a bit difficult, for the writer has experienced a distinct variation in the reception of this station almost every night in the week. That is by the way, of course.

If any difficulty is met with, in bringing interstate stations up to the maximum pitch, the addition of another balancing condenser across that portion not already balanced, with a midjet, will clear up this trouble in no time. Room for this additional midjet will be found on the base-

board, and like its neighbor one set will always be found best in that given position. Trial and practice only proves this.

The Cole Five, as has been previously mentioned, is one which has been in existence, and found a tried and tested receiver, for over eight months. What it has done for the writer it can do for you, but a last word to the reader and to the perspective constructor governing the use of good parts will not be out of place. Referred elsewhere in this article is a list of parts giving the brands of materials actually used in the receiver just described. These parts have given satisfaction in this particular receiver and will no doubt give the constructor similar satisfaction. Even although it is found inadvisable to stick to the letter, at the same time, it is absolutely essential to stick to the values.

My Attempt at Broadcasting By "CIEL"

I SAT down with a yawn in one of the deep and comfortable arm-chairs which are so attractively placed in 5CL's Artists' waiting room and tried not to feel nervous. In a short time I was to broadcast a few short fairy stories to the children, and as it was my first attempt, I really did feel a little nervous.

I began to look through the small bunch of notes I had with me (strange how one forgets even the details of children's stories), and concentrate on the task in front of me, when a small head peeped round the doorway.

The head was followed by a small body and a tiny voice squeaked out "Good evening, pleased to see you here, no doubt you expected to see me. Probably you'll be mentioning me through the microphone later on. My name is 'Tom Thumb.'"

The young fellow continued talking volubly, but for some time I could not follow what he was saying. If the truth be told, I was a little dazed, I did not expect anything like this.

Finally, "Tom Thumb" invited me into the Studio and introduced me to others whom he mentioned as his friends.

I met "Old King Cole," who regretted the inability of his fiddlers to play suitable music for the occasion owing to the absence of fiddle strings (due, no doubt, to their high cost).

Little Bo Peep anxiously questioned me regarding the sheep sales, and "Tommy Tucker" (who sang for his supper) sat gloomily in a corner looking saddy on a notice upon which the word "Silence" was printed in large

letters. In another corner a "Fairy Queen" sat on a cane chair carefully polishing a glowing star on the end of a sparkling wand, and talked softly to a toothless witch who was picking dead leaves away from her broomstick. Then up came Prince Charming, introduced himself and showed me a huge picture book in which Robin Hood and his merry men played hide-and-seek with Four Jolly Robbers around a lattice-work radio mast.

When they got too rough in their game, Prince Charming closed the book with a snap, and before I had a chance to thank him for his kindness, Peter Pan was getting a fit of sulks with Alice in Wonderland because she would insist on holding my hand. She introduced me to the Duchess, who was beginning to complain about the weather when the Mad Hatter came along.

He was too late, however, Cinderella grabbed hold of me and said, "Come on," run quickly, I must hurry before the clock strikes twelve, run, quickly, run—

I began to run, faster and faster, and woke with a start to find Uncle Radio shaking my shoulder, "Come on," he said, "you can go on the air now." He turned and I bolted.

To my mind, 5CL's studio is haunted,

There once was a young man of Kew,
Whose aerial got somehow askew.

He climbed up the mast
To make the end fast,
And that is the last that he knew!



The Safety Valve

Readers are urged to express their opinion on matters pertaining to broadcasting. If you have some grievance, if you have some constructive criticism to offer, here is your chance for expression—your safety valve. The editor assumes no responsibility for statements made by readers and published on this page, as opinions of correspondents do not represent our editorial policies or beliefs. Anonymous letters are not considered.

MORE POWER.

Dear Sir,—I was specially interested in the article on 3LO's application for a Broadcast Chain. It opens up many questions. There is no doubt whatever that 5 kilowatts for any main station is quite insufficient in this country. All the A class stations have been rated at that power for at least 2 years, and no improvement in service has been attempted, though experts have proved that to get over fading and distortion high power is required.

I am about 80 miles from Sydney, and it is impossible to receive either 2FC or 2BL, in fact, any Sydney Station, after dark without very bad distortion. All inter-State stations suffer badly from fading, though 3AR fades less than the others. I am using a Superheterodyne of exceptionally fine manufacture, so that my receiver is not at fault. Also, 2BL and 2FC are perfectly clear in day light. Though slight variation in wavelength does account for some distortion, I am sure that 5000 watts is not sufficient to give reliable service beyond 40 to 50 miles, no matter what type of receiver is used.

Some time ago much money was spent on a Royal Commission, which recommended immediate re-allocation of wavelengths. Yet nothing has been done. As the wavelengths are at present, higher power is impracticable, for even now heterodyning takes place. Every country is advancing, but Australia is no further ahead with broadcasting even though 2FC led the way in Empire Broadcasting, which does not affect the Australian listener.

There is really no pleasure for country listeners, who must buy expensive sets to listen in, as no station can be tuned in and listened to without either fading or distortion taking place.

As a dealer, I speak with knowledge, when I say that business is being driven away because of these faults. I have not given a single demonstration at night, but distortion has been bad, and now I dare not arrange night demonstrations, as it does radio more harm than good.

It is bad enough to try selling receivers by day-time demonstrations,

when the two Sydney A class stations broadcast nothing but gramophone records, mostly jazz. As one potential customer remarked, "Well, I have a gramophone, and will be content to keep it, if that is the rubbish one gets on wireless.

SUPERHET.

Exeter.

SOMETHING LIVELY.

Dear Sir,—In the issue of 18th November, 1927, a reader by the name of R. Roberts, of Bankstown, was growling about Saturday night programmes, and I quite agree with him in that respect.

I will listen to a fight or a wrestle with anybody at any time, barring Saturday nights; what is wanted on Saturdays, is, not highbrow stuff or too much sport, but something lively for a bit of an evening, or something to make you glad that it is Saturday, and that you have finished your week's work.

For a good example, I would like to draw attention of the programme Directors of 2BL and 2FC to just scan 3LO's Thursday night's programmes and to try and put something like that over the air here on Saturday nights.

S. R. NANNELLY.

Richmond.

MORE RESULTS.

Dear Sir,—I wish to congratulate you on the "Extraordinary One Valver" published by you in "Wireless Weekly" July 1st, 1927. I have only just constructed it, but the second night I picked up eight stations (2FC, 2BL, 3LO, 3AR, 3DB, 4QG, 5CL, 5DN), and the third night 2FC came in faintly on the loud speaker.

I also found it was an advantage to use a .0005 variable condenser in place of the .001 fixed condenser in the lead joining the two coils.

I also wish to congratulate you on your paper, or, to be more exact, magazine.

K. McCALLUM.

Via Young.

"EU'S SCANDALOUS"

Dear Sir,—With the march of radio in general, one would expect to find a corresponding improvement in our sport programmes. The present arrangements are entirely unsatisfactory and could be improved upon in many ways.

Since most owners of radio sets have to work hard all the week in order to pay for new batteries, etc., I think it's up to the broadcasting stations to give them a decent programme on a Saturday afternoon. Those listeners interested in horse-racing should be quite content to attend that particular sport, or in any case the newspapers always give full results and descriptions. Then why should a hard-working man who fancies a little wireless entertainment have to put up with long, dreary accounts of a number of horses being forced to race for the enjoyment of those who want to waste their money?

It's scandalous—not content with having the opportunity of personally witnessing their particular branch of sport, those specifically interested can also read the newspaper. Yet in spite of that, descriptions are broadcasted also.

Unfortunately one cannot get music from a newspaper. Why cannot the stations take it in turn to broadcast music and sport descriptions? In this manner all classes could be catered for.

Yours, etc.,

J. H. HANNOVER.

Croydon.

"AN EXAMPLE"

Dear Sir,—Whilst Sydney "A" class stations certainly do well with their week-day programmes, they are all very uninteresting on a Sunday.

In my opinion 2UW's programme is hard to beat, for although they have some "canned" music, there are not such vast quantities of it as we have to put up with from our "A" class stations.

I'd like to see other readers' views.

Yours, etc.,

J. DEWITT.

Geogee.

BROADCAST PROGRAMMES

For the COMING WEEK

Friday, Dec. 16

2FC, SYDNEY.

Farmer's Broadcasting Service.

Wave Length, 442 Metres.

EARLY MORNING SESSION.

1 a.m. to 8 a.m.

MORNING SESSION.

- 12 a.m.—"Big Ben" and announcements.
 12.5 a.m.—Studio music.
 16.15 a.m.—"Sydney Morning Herald" news service.
 16.30 a.m.—Studio music.
 16.35 a.m.—A reading.
 16.45 a.m.—Studio music.
 17 a.m.—"Big Ben."
 Marching music for school children.
 17.5 a.m.—A.P.A. and Resner's Cable Service.
 17.10 a.m.—Studio music.
 17.15 a.m.—A talk on Home Cooking and Recipes by Miss Ruth Puzat.
 17.30 a.m.—Close down.

MIDDAY SESSION.

- 12 noon—"Big Ben" and announcements.
 12.25 p.m.—Stock Exchange, first call.
 12.35 p.m.—Official weather forecast, rainfall.
 12.45 p.m.—Studio music.
 12.50 p.m.—Summary of "Sydney Morning Herald" news service.
 Highly wireless news.
 12.55 p.m.—Studio music.
 12.59 p.m.—Marching music for school children.
 1.10 p.m.—Annie Sedger, mezzo:
 "Trees" (Ballad).
 1.15 p.m.—From Farmer's Tea Rooms:
 The Oak Hall Instrumental Trio.
 (Leader, Mr. Horace Keats).
 1.25 p.m.—Studio music.
 1.30 p.m.—"Big Ben." Weather intelligence.
 1.35 p.m.—Evening News' midday news service.
 1.50 p.m.—From Farmer's Tea Rooms:
 The Oak Hall Instrumental Trio.
 (Leader, Mr. Horace Keats).
 1.55 p.m.—Stock Exchange, second call.
 1.59 p.m.—Marching music for school children.
 2.00 p.m.—From the Studio:
 Annie Sedger, mezzo:
 "Sonnata in de lover's time" (Ring).
 2.05 p.m.—Studio music.
 2.50 p.m.—From Farmer's Tea Rooms:
 The Oak Hall Instrumental Trio.
 2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 2 p.m.—"Big Ben" and announcements.
 2.5 p.m.—Clara Hunt, mezzo contralto;
 "Ma Curry-headed Boy" (Chanson).
 3.7 p.m.—Studio music; popular records.
 3.15 p.m.—A reading.

- 3.22 p.m.—Max Boyer, contralto.
 3.25 p.m.—Fosse Brakel:
 "O thank me not" (Mallinson).
 3.34 p.m.—Marching music for school children.
 3.40 p.m.—Muriel Watt, contralto.
 3.45 p.m.—"My Message" (D'Hardenhoft).
 3.48 p.m.—From Farmer's Tea Rooms:
 The Oak Hall Instrumental Trio.
 (Leader, Mr. Horace Keats).
 3.55 p.m.—From the Studio:
 Kathleen Murray, soprano:
 "I Pick my Lonely Catawba" (Cantata).
 4 p.m.—Popular record.
 4.05 p.m.—From Farmer's Tea Rooms:
 The Oak Hall Instrumental Trio.
 (Leader, Mr. Horace Keats).
 4.15 p.m.—From the Studio:
 Jeanette Romney, contralto:
 "The Garden of Sleep" (de Lere).
 4.20 p.m.—Popular record.
 4.25 p.m.—From Farmer's Tea Rooms:
 The Oak Hall Instrumental Trio.
 4.35 p.m.—From the Studio.
 Max Boyer, contralto:
 4.40 p.m.—Clara Hunt, mezzo-contralto:
 "The Call of the Maritime" (Brahm).
 "Slave Song" (de Lere).
 4.45 p.m.—Stock Exchange, third call.
 4.47 p.m.—Fosse Brakel, contralto:
 "Western Sea" (Mallinson).
 4.50 p.m.—Muriel Watt, contralto:
 "Sometimes when night is nigh" (Phillips).
 4.55 p.m.—Jeanette Romney, contralto:
 "Dance Song" (Hrabal).
 4.58 p.m.—Popular record.
 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 5.40 p.m.—The chimes of 2FC.
 5.45 p.m.—The "Hello Man" talks to the children.
 5.50 p.m.—Story time for the young folk.
 5.55 p.m.—From Farmer's Oak Dining Hall:
 The Oak Hall Instrumental Trio.
 (Leader, Mr. Horace Keats).
 Kenneth Hunt, tenor.
 The Oak Hall Instrumental Trio.

NEW SOUTH WALES "A" AND "E" CLASS BROADCASTING STATIONS.

- 2FC—Farmer's Broadcasting Station.
 Ltd., Sydney, wavelength 442 metres, power 5000 watts.
 2BL—Broadcasters' Ltd., Sydney, wavelength 312 metres, power 5000 watts.
 2GB—Theosophical Broadcasting Station, Ltd., Sydney, wavelength 315 metres, power 3000 watts.
 2KY—Trades and Labor Council, Sydney, wavelength 290 metres, power 1500 watts.
 2UW—Sandel Radio, Sydney, wavelength 287 metres, power 500 watts.
 2MB—Mackellar Bros., Narrabri, wavelength 275 metres, power 550 watts.
 2LU—Electrical Utilities Supply Co., Sydney, wavelength 293 metres, power 250 watts.
 2EE—Burgin Electric Co., Sydney, wavelength 314 metres, 100 watts.
 2ED—H. A. Douglas, Newcastle, wavelength 285 metres, 100 watts.

- 7 a.m.—"Big Ben."
 Latest racing information by the 2FC Commentator.
 7.10 p.m.—Dalger's market reports (wool, wheat and stock).
 7.15 p.m.—Grain and vegetable markets.
 7.20 p.m.—Weather and shipping news.
 7.25 p.m.—"Evening News" late news service.

NIGHT SESSION.

- 1.00 a.m.—Programme announcements.
 1.45 a.m.—Cricket reminiscences, prepared by Mr. Frederick Harper.
 8 p.m.—"Big Ben."
 From Her Majesty's Theatre, Pitt Street, Sydney. After an absence of two years, the first set of the Comic Opera.

"WILDFLOWER."

- Featuring Marie Burke and Herbert Urwin, joint managers of J. U. Williamson, Ltd.
 Musical numbers:
 1. "I love you, I love you."
 2. "You're like to Hunt."
 3. "Wildflower."
 4. "Remember."
 5. "I'll collaborate with you."
 6. "April Rhinoceros."
 7. Finale.
 9.5 p.m.—From the Studio:
 Latest weather forecast.
 9.6 p.m.—"Some Romance and Julia."
 A Talk by Mr. W. F. Kay.
 9.20 p.m.—Lionel Lawson, violinist.
 9.35 p.m.—Gwen Selva, soprano:
 "Nymphs and Fauns" (Blenheim).
 9.50 p.m.—"Let's go round the world!"
 The second of a series of travel talks by Mrs. F. H. Hayward, recently returned from a world tour.
 9.52 p.m.—Alfred Cunningham, baritone:
 (a) "Faries" (Tosti).
 (b) "Live as let me die" (Romance from "Die Frau" (Meyerbeer)).
 10 p.m.—"Big Ben."
 Lionel Lawson, violinist.
 10.1 p.m.—Gwen Selva, soprano:
 (a) "Within my heart a song I found" (Diagoni).
 (b) "A Fantasy" (Carter).
 10.13 p.m.—Gee Morrison and his "Gloomchasers."
 10.25 p.m.—Alfred Cunningham, baritone:
 (a) "The Song of the Wildfire" (Trovati).
 (b) "Night no more, Babel" (Old English).
 10.30 p.m.—Late war-bird forecast.
 10.31 p.m.—Gee Morrison and his "Gloomchasers."
 10.45 p.m.—Late news and announcements.
 11 p.m.—"Big Ben."
 Gee Morrison and his "Gloomchasers."
 11.30 p.m.—National Anthem.
 Close down.

2BL, SYDNEY.

Broadcaster's Ltd.
 Wave Length, 353 Metres.

Friday

EARLY MORNING SESSION, 7 to 8 a.m.

MORNING SESSION.

10.30 a.m.—G.P.O. Clock and chimes.
 Musical programmes from the Budia.

You can Recharge a Philco for a few pence.

- 10.40 a.m.—News from the "Daily Telegraph Pictorial."
- 10.50 a.m.—Musical programme from the Studio.
- 11 a.m.—G.P.O. Clock and chimes. Announcements.
- 11.5 a.m.—Musical programme from the Studio.
- 12 a.m.—WOMEN'S SESSION.
Talk on "Rowing," by Miss Varley, Broadcaster's Women's Sports Authority, Social Notes—Replies to correspondents by Mrs. Jordan. Talk on "Knots, Calms and Decorations," by Mrs. Jordan.
- 12 noon.—G.P.O. Clock and chimes. Special telegram forecast and weather report.
- 12.15 p.m.—Musical programme from the Studio.
- 12.25 p.m.—Information, Mails, Shipping and Post directory.
- 12.35 p.m.—Bouts in rail by wireless.
- 12.50 p.m.—Fruit market report.
- 12.55 p.m.—Vegetable Market report.
- 12.57 p.m.—London Metal market report.
- 12.59 p.m.—Dairy and Farm Produce market report.
- 12.59 p.m.—Ferry market report.
- 12.59 p.m.—Fish market report.
- 12.59 p.m.—Bull and sheep market report.
- 12.59 p.m.—Stock Exchange report.
- 12.59 p.m.—H.M.V. Gramophone Rental.
- 1.27 p.m.—Stock Exchange report.
- 1.30 p.m.—G.P.O. Clock and chimes. Talk to children and special entertainment for Children in Hospital.
- 2 p.m.—G.P.O. Clock and chimes. Close down.

AFTERNOON SESSION

- Having information broadcast immediately after each race, by courtesy of the "Sun."
- 3 p.m.—G.P.O. Clock and chimes. News from the "Sun."
- 10 p.m.—CIVIL SERVICE STORES TRIO, direction, Miss de Courcy Burner.
- 3.20 p.m.—G.P.O. Clock and chimes. News from the "Sun."
- 3.40 p.m.—Talk on "Domesticity," by Pricilla.
- 4 p.m.—G.P.O. Clock and chimes. CIVIL SERVICE STORES TRIO, direction, Miss de Courcy Burner.
- 4.15 p.m.—Talk on "Women of the Orient of all Ages."
- 4.35 p.m.—Musical programme from the Studio.
- 4.50 p.m.—News from the "Sun."
- 4.55 p.m.—Resume of night's programme.
- 4.57 p.m.—Racing review.
- 4.59 p.m.—Special ocean forecast.
- 5 p.m.—G.P.O. Clock and chimes. Close down.

EARLY EVENING SESSION.

- 5.45 p.m.—G.P.O. Clock and chimes. Children's Session.
- 6.30 p.m.—Musical programme from the Studio.
- 7 p.m.—SPECIAL CHILDREN'S SESSION.
G.P.O. Clock and chimes. Australian Mercantile Land and Finance Co.'s Report.
Weather report and forecast by courtesy of Government Meteorologist.
Producers Distributing Society's Fruit and Vegetable market report.
Stock Exchange report.
Grain and Fodder report ("Sun").
Daily Produce report ("Sun").
Eucharistic Conference notes.
7.35 p.m.—Country News from the "Sun."
7.50 p.m.—Talk by Mr. Gregory of the N.I.L.M.A.
7.50 p.m.—Talk on "Gardening Science," by Mr. Cooper, Park Superintendent City Council.

NIGHT SESSION.

- 8 p.m.—G.P.O. Clock and chimes. Broadcasters' Tontolal Chorus.
- 8.3 p.m.—Mr. Leslie Herford, baritone.
- 8.10 p.m.—Broadcasters' Instrumental Trio. Popular Selections.
- 8.20 p.m.—Mr. Harry Cash, Comedian, presenting selections from his repertoire.
- 8.27 p.m.—Mr. George Hanlon, Novelty Jazz Pianist.
- 8.34 p.m.—Broadcasters all Sports Expect will talk on "Cricket."
- 8.40 p.m.—Broadcasters Instrumental Trio.

- 8.40 p.m.—Weather report and forecast by courtesy of Mr. C. J. Marco, Government Meteorologist.
- 9 p.m.—G.P.O. Clock and chimes. From the Stadium: A description of the Champion Boxing Contest.
- 9.45 p.m.—Mr. Leslie Herford.
- 9.42 p.m.—Mr. Harry Cash.
- 9.42 p.m.—G.P.O. Clock and chimes.
- 10.1 p.m.—Resume of following day's programme.
- 10.5 p.m.—The Sporting Editor of the "Sun" will talk on the prospects of Saturday's Racing.
- 10.25 p.m.—Dance Music by Daisy Hogan's Five Six Trio, Transmitted from the Ballroom of the Bondi Casino. During the intervals between dances, "Sun" news will be broadcast.
- 11 p.m.—G.P.O. Clock and chimes. National Anthem.

2GB, SYDNEY

Theophical Broadcasting Service.

Wave Length, 316 Metres.

Friday.

MORNING SESSION.

- 9 a.m.—Music.
- 9.15 a.m.—"Good Cheer" talk.
- 9.15 a.m.—Music.
- 9.25 a.m.—Psychological Class.
- 9.45 a.m.—Music.
- 9.45 a.m.—Health and Diet.
- 10 a.m.—Close down.

AFTERNOON SESSION.

- 3.00 p.m.—Music.
- 3.37 p.m.—Address.
- 3.55 p.m.—Music.
- 4 p.m.—Address.
- 4.20 p.m.—Music.
- 4.30 p.m.—Close down.

EVENING SESSION.

- 7 p.m.—Music.
- 7.15 p.m.—Address.
- 7.35 p.m.—Music.
- 7.50 p.m.—Address.

INTERSTATE "A" AND "B" CLASS BROADCASTING STATIONS.

- 11.0.—Broadcasting Company of Australia, Ltd., Melbourne, wavelength 213 metres, power 5000 watta.
- 14R.—Associated Radio Co. Ltd., Melbourne, wavelength 484 metres, power 5000 watta.
- 14C.—Queensland Radio Service, Brisbane, wavelength 355 metres, power 5000 watta.
- 11L.—Central Broadcasters' Ltd., Adelaide, wavelength 195 metres, power 5000 watta.
- 4WE.—Western Farmers, Ltd., Perth, wavelength 1250 metres, power 5000 watta.
- 7ZL.—Tasmanian Broadcasters, Ltd., Hobart, wavelength 416 metres, 5000 watta.
- 3DB.—The 3DB Broadcasting Co. Pty., Ltd., Capital House, Melbourne, wavelength 255 metres, power 500 watta.
- 1UZ.—O. J. Nilson & Co., Melbourne, wavelength 315 metres, power 100 watta.
- 4GR.—Gold Radio Electric Service, Townsville, Queensland, wavelength 294 metres, power 500 watta.
- 5KA.—Sport Radio & Broadcasting Company, Adelaide, wavelength 258 metres, power 1000 watta.
- 5DN.—5DN Pty., Ltd., Adelaide, wavelength 312 metres, 500 watta.

- 7.40 p.m.—Music.
- 7.55 p.m.—Instrumental Trio: DAN SULLY, MURIELLE LANG ADA DBOOK.
- 8.1 p.m.—Address by MARY MEMORY.
- 8.25 p.m.—"Cello Solo; MURIELLE LANG; "Notre in G Flat" (Chopin).
- 8.35 p.m.—Songs by RUPERT MARSHALL: 1. "My Darling" (Debussy). 2. "Young Tom of Devon."
- 8.40 p.m.—Instrumental Trio: LEN BREWER, MURIELLE LANG, ADA DBOOK.
- 9 p.m.—Address by Mr. J. K. Powell.
- 9.15 p.m.—Piano solo by MISS ADA BROOK: 1. "Freude" (Bach). 2. "Tea Time" (Debussy).
- 9.35 p.m.—Songs by MARY MEMORY.
- 9.55 p.m.—Violin solo; LEN BREWER. "Sonata for Violin and Piano in G Minor" (Grieg).
- 9.55 p.m.—Songs by RUPERT MARSHALL: 1. "Pale Moon." 2. "I Hear You Callin' Me."
- 10 p.m.—"Good Cheer" talk.
- 10 p.m.—Close down.

2 WU, SYDNEY

Sandel Radio, Ltd.

Wave Length, 267 Metres.

Friday

MORNING SESSION.

- 9 a.m.—News, shipping, mails, studio items.
- 9.45 a.m.—Women's session.
- 9.59 a.m.—Resume of forward programme.
- 10 a.m.—Close down.
- 12.15 p.m.—Special employees Luncheon session.
- 12.45 p.m.—Close down.

AFTERNOON SESSION.

- 3 p.m.—Studio items.
- 3.50 p.m.—Resume of forward programme.
- 3 p.m.—Close down.

EVENING SESSION.

- 6 p.m.—Studio items.
- 6.50 p.m.—Resume of forward programme.
- 8 p.m.—Close down.

NIGHT SESSION.

- 7 p.m.—Studio items.
- 7.2 p.m.—Where to Go.
- 7.30 p.m.—Studio selections.
- 7.40 p.m.—Miss Doris Fitzmaurice, alto-contralto; "After the Marriage"; 7.55 p.m.—Mrs. A. Dalton, pianoforte solo; "Dance Concerto" (Chaminade).
- 7.55 p.m.—Studio selection.
- 7.45 p.m.—Mrs. A. Pearce, violin solo. Selected.
- 7.45 p.m.—Miss Constance Cooper, soprano.
- 8.00 p.m.—Mr. and Mrs. James S. Campbell, steel guitar; (a) Selected. (b) Selected.
- 8.05 p.m.—Clock chimes.
- 8.1 p.m.—Resume of forward programme.
- 8.4 p.m.—Mrs. A. Dalton, pianoforte solo; "No. 5 Waltz Suite" (Copland-Taylor).
- 8.10 p.m.—Miss Doris Fitzmaurice, alto-contralto; "Earthenware".
- 8.15 p.m.—Miss Constance Cooper, soprano; "If my soul were only Wings" (Hahn).
- 8.17 p.m.—Miss Jeanette Paterson, pianoforte solo; "Etude in C Minor" (Liszt).
- 8.25 p.m.—Mr. and Mrs. James Campbell, steel guitar selections.
- 8.32 p.m.—Mrs. A. Pearce, violin solo. Selected.
- 8.37 p.m.—G. F. Marshall, tenor; (a) "You are Godlike." (b) "Maire My Girl."
- 8.40 p.m.—Mr. and Mrs. James Campbell, steel guitar selections.
- 8.55 p.m.—G. F. Marshall, tenor solo; "Spirito Gentile".
- 8.55 p.m.—News items.
- 9 p.m.—Clock chimes.

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XMAS "RADIO"

By far the best issue of the new "RADIO" is the Christmas issue containing the following features:

DX, being a humorous treatise on long distance reception, by Charles D. Maclurcan.

STRONG TEA. A short story of Amateur Radio, by Russell Roberts.

HISTORICAL AND MODERN SIGNALLING. By Sidney F. H. Laws, General Manager of 7ZL.

SOUTHWARD HO, further adventures of Brassø.

FOUR FAMOUS ANNOUNCERS, in caricature and print. Meet Laurence Halbert, Arthur Cochrane, Alfred Andrew, and Maurice Dudley, face to face.

"A DIGEST OF WORLD WIDE RADIO NEWS," "Christmas With Our Contributors," and "Your Choice Among Receivers," are the titles of other general articles.

TECHNICAL ARTICLES.

THE GO-GETTER SHORT-WAVE RECEIVER, by Don. B. Knock (2NO),

THE STROLODYNE, **THE SIMPLICITY THREE** and **THE SAMPSON TWO VALVE RECEIVER**, are the principal constructional articles.

AMATEUR SECTION. A special enlarged Amateur Section is published, which includes Hour News from all seven districts.

On Sale Now—The
XMAS "RADIO"
One Shilling

- 9.29 p.m.—SMART AND AUMONT'S BAND: Subottische, "Old Memories."
 9.35 p.m.—BYD EXTON, tenor: "If You Would Love Me" (McDermid).
 9.40 p.m.—SMART AND AUMONT'S BAND: Waltz, "Blue Danube."
 9.45 p.m.—OLD TIME CHORUSES: "Come Along, Don't be Beafull."
 9.49 p.m.—SMART AND AUMONT'S BAND: Lancers, "Sunshine Girl."
 9.54 p.m.—EEN TROTMAN, entertainer: One Man Minstrel Show.
 9.59 p.m.—SMART AND AUMONT'S BAND: Polka Maurica, "La Violetta."
 10.15 p.m.—MADOLINK KNIGHT, contralto: "The Three Fishers."
 10.18 p.m.—SMART AND AUMONT'S BAND: Rhapsodie, "Back Porch."
 10.23 p.m.—BYD EXTON, tenor: "Sally in Our Alley."
 10.26 p.m.—SMART AND AUMONT'S BAND: Royal Irish, "Ireland."
 10.36 p.m.—"CARDIAN" (Mr. H. A. Wolfe, sporting editor of the "Argus" and the "Australasian" will speak on to-morrow's races).
 10.45 p.m.—The "Argus" news service. Meteorological information. Bellah official wireless news. Island steamer movements.
 11 p.m.—The Royal Automobile Club of Victoria's Safety Message for to-day is for MOTORISTS:
 "Blinding headlights cause many accidents. Give the other fellow a show. Safety First."
 OUR GREAT THOUGHT:
 "A man's fate is his own temper; according to that will be his opinions as to the particular manner in which the course of events is regulated. A consistent man behaves in destiny's capricious hand in chance."
 —Hemansford.
 11.1 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMBIOTS.
 11.45 p.m.—GOD SAVE THE KING.

3AR, MELBOURNE

Associated Radio Co.
Wave Length, 484 Metres.

Friday.

MORNING NEWS SESSION.

11 a.m. to 12 noon.

MIDDAY CONCERT SESSION.

12.1 p.m. to 1.3 p.m.

Transmitted from Panatropo House, 252 Collins Street (by exclusive permission of Willis and Paton, Ltd., on the Brunswick Panatropo).

MATINEE SESSION.

DANCE CONCERT.

- 9.20 p.m.—Newmarket Stock Sales. Special "Snap" report direct from the Yards (by courtesy of John Macnamara and Co.).
 9.21 p.m.—Studio Orchestra: Overture, "Haydn's Lark" (Erick).
 9.24 p.m.—Mr. Tom White, clarinet: "Magnon" (Thomas).
 9.26 p.m.—Ayars Dancemania.
 9.28 p.m.—Mr. Herbert Vetter, violin: "Cavalleria de Sorrento" (Papius), by request.
 9.30 p.m.—Studio Orchestra: "Incidental Music to The Merchant of Venice" (Hose).

- 9.34 p.m.—Mr. Arthur Shaw, baritone: "Sincerity" (Clarke).
 "Cl. Box" (Haydelot).
 9.32 p.m.—Ayars Dancemania.
 9.35 p.m.—Studio Orchestra: "Petite Suite de Concert" (Coleridge Taylor).
 9.40 p.m.—G.P.O. Clock says "Four."
 9.41 p.m.—Second Weather Forecast.
 9.43 p.m.—Announcements.
 9.45 p.m.—Interval Talk: Miss Emily Noble, civic demonstrator of the Metropolitan Gas Company, will advise on "The Cooking of Poultry."
 9.47 p.m.—Mr. Arthur Shaw, baritone: "Desire" (Parler).
 "The Hallowed Hour" (Haydn Wood).
 9.49 p.m.—Ayars Dancemania.
 9.50 p.m.—Studio Orchestra:
 9.51 p.m.—To-night's entertainment.
 "L'Exposition," Part. 2 (Bisot).
 9.54 p.m.—G.P.O. Clock says "Five."
 Close down.

CHILDREN'S SESSION.

- 9.46 p.m.—The Farmyard Five.

EVENING SESSION.

THE NEW MELBOURNE TOWN HALL.

- 7.30 p.m.—Mr. George Beattie, Principal of the Beattie College of Physical Culture: Physical Fitness.
 7.45 p.m.—"Fruit Classes" special review and tips for to-morrow's races.
 7.50 p.m.—Newmarket Stock Sales.
 7.54 p.m.—Week-end Tourist's Guide.
 8 p.m.—G.P.O. Clock says "Eight."
 8.1 p.m.—"The Man on the March," Matters of interest and importance to Country and Town Lovers alike (by arrangement with the Agricultural Department).
 8.14 p.m.—Opening of the New Melbourne Town Hall.
 8.15 p.m.—The opening of the Town Hall is signalled with the playing of the National Anthem by the 300 players of the Victorian Union of School Orchestras.
 8.18 p.m.—Victorian Union of School Orchestras:
 "March III."
 8.24 p.m.—Miss Audrey McAuley, violin: "Cavalleria" (Monti).
 8.30 p.m.—Victorian Union of School Orchestras:
 "Washington Post."
 8.35 p.m.—Miss Alma Roberts, soprano: "One Fine Day" (Florent).

FOREIGN BROADCASTERS

- JOCK—Nagoya Radio Broadcasting Co., Nagoya, JAPAN: 360 watts, 1600 watts. (Announcement in English and Japanese).
 JORK—Osaka Central Broadcasting Co., Osaka, JAPAN: 355 watts, 1000 watts. (Announcement in English and Japanese).
 JOAK—Tokyo Broadcasting Co., Tokyo, JAPAN: 375 watts, 1000 watts. (Announcement in English and Japanese).
 JFC—Batavia Radio Broadcasting, BATAVIA, 228 watts, 40 watts.
 KZRM—Manila, PHILIPPINE ISLANDS: 413 watts, 1800 watts. (Announcement in English and Philippine).
 KOL—Honolulu Advertiser, Honolulu, HAWAII: 278 watts, 360 watts.
 KGO—Oakland, CALIFORNIA: 361.2 watts, 5000 watts.
 KFI—Los Angeles, CALIFORNIA: 467 watts, 5000 watts.
 KOA—Denver, COLORADO: 322.4 watts, 2000 watts.

- 8.42 p.m.—Miss Edna McSperrin, violin: "Hungarian Rhapsody" (Liszt).
 8.43 p.m.—Victorian Union of School Orchestras:
 "Waves of the Danube."
 8.54 p.m.—Miss Vanda Baker, violin: "Fest Polonoise" (Barnas).
 9 p.m.—Victorian Union of School Orchestras:
 "Told Manuka."
 9.6 p.m.—Miss Alma Roberts, song: "Lorette" (Liszt).
 9.12 p.m.—Victorian Union of School Orchestras:
 "March in Solfa."
 9.15 p.m.—Miss Sheila Hunt, violin: "Allegro Brillante" (Ten Have).
 9.24 p.m.—Victorian Union of School Orchestras:
 "March Allegro."
 9.27 p.m.—Junior Orchestra (forty children under 9 years of age):
 "Under the Waves."
 9.30 p.m.—GRAND OPERA:
 A complete performance of one of the best known and best loved of the great opera, "Pagliacci" (Leoncavallo). The entire performance is in English by the principals, chorus and orchestra of the British National Opera Company, transmitted from Panatropo House, Collins Street, on the Brunswick Panatropo (by arrangement with Willis and Paton, Ltd.).
 Conductor: Mr. Emance Coenen, Senr.
 The items are presented as follows:
 (a) British National Opera Orchestra:
 "Prelude."
 (b) Tonia (Mr. Harold Williams):
 "Prologue" (First Part).
 (c) Tonio (Mr. Harold Williams):
 "Prologue" (Conclusion).
 (d) Canio (Mr. Frank Mullings), Peppe (Mr. Eddie Nash) and Chorus:
 Opening Chorus, "They come, they come."
 (e) Canio, Peppe, Tonia, and Chorus:
 "This Evening at Seven of the Clock."
 (f) Canio, Nedda (Miss Marian Lister) and Chorus:
 "Such a Game."
 (g) Canio and Chorus:
 "Hark, 'Is the Bargain and Bell" (Part II).
 (h) Chorus:
 "Bell Chorus" (Conclusion), and Nedda:
 "How Pierce He Looked."
 (i) Nedda and Tonio:
 "Bullishly," "High Aloft They Cry."
 (j) Nedda and Tonio:
 "I Know that You Hate Me."
 (k) Nedda, Tonia, and Silvio (Mr. Dennis Noble):
 "You mock Me; Too Long I've been II."
 (l) Nedda, Tonia and Silvio:
 "My fate is in thy hands."
 (m) Nedda and Silvio:
 "Why hast thou taught me?"
 (n) Nedda, Canio, Silvio and Tonia:
 "Tread, lightly, lightly."
 (o) Canio, Peppe, and Tonio:
 "Ah, stay, good Master."
 (p) Canio:
 "Oa with the Motley."
 Finales of Act I.
 ACT II.
 Orchestras:
 "Intermezzo."
 Nedda, Silvio, Peppe, Tonia and Chorus:
 Opening Chorus, "Quickly, sweet gossip."
 (a) Columbine and Harlequin:
 "Opening of The Play."
 (b) Columbine, Taddeo and Chorus:
 "Ah, You! 'Tis now the hour entrancing."
 (c) Columbine, Harlequin and Taddeo:
 "Sure, yes I know thou art."
 (d) Columbine, Harlequin, Panchinello and Taddeo:
 "Pour the Philtre in his Wine."
 (e) Panchinello, Silvio and Chorus:
 "No, Panchinello, no more."
 (f) Columbine, Panchinello, Taddeo, Harlequin, Silvio and Chorus:
 "If thou dearest me so unworthly."
 Finales: "The Comedy is finished."
 10.1 p.m.—"Age" news bulletin exclusive to 3AR.

A "Radiokes" Xmas

*The best present you can give is a Radiokes
Circloid Kit in special attractive gift packing*

Your FAN FRIEND CAN MAKE UP THE COLE FIVE,
as this Kit is specified—A Truly Excellent Receiver!

The world's best
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Read what a prominent Victorian Radio man says about our Circloids:

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King Street, Sydney.
Dear Sirs,

I am using 3 of your "Circloid" Coils in a 5 that was a Neurodyne, and am getting wonderful results. I can work all the interstate stations loudspeaker strength any time of the day, and this town is not at all a good one for reception. I have logged Bombay and Calcutta on this set when down on the coast—also Johannesburg.

Nov. 25th

Herewith a list of stations I picked up last week: 3LO, 3AR, 3DB, 3LB, 3CI, 3WP, 3R1, 3EF, 3LG, 3SW, 3UZ, 3BY, 3BU, 3FL, 3CH, 3KR, 2FC, 2BL, 2GB, 2UF, 2UW, 2KY, 2BE, 2MK, 5CL, 5DN, 5WF, 5LP, 5WO, 4QG, 7ZL, 7ZSH, JOOK, JOAK, KRZM, 2YA, 3YA, 4YA, 1YA. All at loud speaker strength.

From All Good Dealers.

Metropolitan Electric Co. Ltd.
27-29 King Street :: Sydney

Raymond Street,
Sale, Victoria.
8th Nov., 1927.

I remain,

Yours faithfully,

(Signed) C. H. TUCKEY

10.35 a.m.—Tomorrow's entertainment.

10.55 a.m.—Final Weather Forecast.

10.58 p.m.—Our Australian Good-night Quote is from the poem, "Happy Children," by Arnold Wall:

"There is the land of dream-comes-true
And story diveltled into stozz,
And nothing we can say or do
May blur its unobtainable glory.
Their royal stozz without a flow,
Rich hearts, large nature calm and warm,
A kinder than the human law,
A stables than the human form."

11 p.m.—G.P.O. Clock says "Eleven."
"God Save the King."

4QG, BRISBANE

Queensland Radio Service

Wave Length, 385 Metres.

Friday.

MIDDAY SESSION.

- 1 p.m.—Market reports, weather information, "The Daily Mail" and "The Daily Standard" news.
1.20 p.m.—Lunch hour music.
1.25 p.m.—Standard time signal.
2 p.m.—Close down.

AFTERNOON SESSION.

- 2.30 p.m.—A programme of music from the studio.
4.15 p.m.—"The Telegraph" news.
6.30 p.m.—Close down.

EARLY EVENING SESSION.

- 8 p.m.—"Daily Standard" news; weather information; announcements.
8.15 p.m.—Lectures, A Law Talk "A Short View of Insolvency Law," by Mr. C. E. Stewart (Barrister-at-law).
8.40 p.m.—Bedtime stories by "The Sandman."
9 p.m.—Market reports; stock reports.
9.20 p.m.—Weather news; announcements.
9.35 p.m.—Standard time signal.
9.45 p.m.—A Review of To-morrow's Racing.
10.50 p.m.—"Mercury" special Tasmanian news service.

Railway Auction Produce Sales.

Weather forecasts.

8 p.m.—G.P.O. Clock Chinese the Hour.

8.1 p.m.—Studio Concerts:

- Mrs. Jack Green (soprano).
Mrs. Ken Day (contralto).
Miss Ruby Preece (piano).
Miss Nancy Case (soubrette).
Mr. Harry Foster (baritone).
Mr. Thomas Day (baritone).
8.30 p.m.—Cricket Chat by "Mid-off."
8.40 p.m.—British Official Wireless News.
8.50 p.m.—"Mercury" special interstate news service.

Tasmanian District Weather Reports.

8 a.m. Weather Forecast.

Station announcements: To-morrow's programme.

National Anthem.

NIGHT SESSION.

In response to requests the "Old Time Night" given some time ago by the Lyric Entertainers will be repeated.

The programme will be an unpropitious one and will be continuous.

8 p.m.—FROM THE STUDIO:

An "Old Time Night."

10 p.m.—FROM THE STUDIO:

"Daily Mail" news; sporting news.

Close down.

5CL, ADELAIDE

Central Broadcasters, Ltd.

Wave Length, 395 Metres.

Friday.

MIDDAY SESSION

12 noon to 2 p.m.

AFTERNOON SESSION.

3 p.m.—Chimes.

3.1 p.m.—Orchestral Selections from the Maple Leaf Cafe.

Selection, "Oh, Lally" (Kerr).

Fox Trot, "Sweetie Lady O Mine" (O'Hagan).

Suite, "Ballet Egyptian" (Louglin).

Our Spring Morning (Linn).

Chinese Lantern Dance (Whe).

2.30 p.m.—Orchestral Selections from Foy & Gibson's Store.

4.30 p.m.—Orchestral Selections from the Arcadia Cafe.

Vocalist: Valda Harvey (soprano).

Overture, "Raymond" (Thomas).

Fox Trot, "You Don't See It" (Cohn).

Waltz, "Marianette" (Alexander).

Pianoforte Solo, "Dance Etudes" (Doddard).

Suite, "Yishma El" (Lottier).

Intermission, "Dancing Nipples" (Brain).

Selection, "Bird of Paradise" (Yearly).

4.57 p.m.—S. C. Ward's Stock Exchange intelligence.

5 p.m.—Chimes and close down.

EVENING SESSION.

8 p.m.—Chimes.

8.1 p.m.—Dinner Music by the Covent Garden Orchestra:

Selection, "The Blue Kitten" (Frim).

Romance, "Man Amour" (Broun).

Fox Trot, "Everything Nice About You" (Wandling).

Neapolitan Night (Zamocni).

Pinale, "Technikowski" (An Seat).

8.20 p.m.—Children's Time.

8.25 p.m.—Greetings and Correspondence.

7.50 p.m.—Amused half-hour for the kiddies.

7.25 p.m.—Market reports by A. W. Sandford & Co., Adelaide & Hall & Co., Melbourne & Co., S. A. Farmers' Co-operative Union, Taylor Bros., Retail Grocers' Association, J. H. Young's special report on the Farnam market.

Intervista Fruit and Produce Market Co., Ltd., S. C. Ward & Co's Stock Exchange intelligence.

1.00 p.m.—Information from the News Bulletin by Minister of Markets and Migration.

7.35 p.m.—Windling's Sporting Service.

7.50 p.m.—"Whitew" will talk on "Cricket."

8 p.m.—G.P.O. Chimes.

8.1 p.m.—Orchestral Selections by Malcolm Neill's Orchestra.

Scott's Speech Night Concert:

Song (contralto), "My Ain Folk" (Lennon).

Miss Gladys Mielie.

Dramatic Recital, "The Riding Camel" (O'Brien).

Mr. James Anderson.

Song (soprano), "Ocean, thou Mighty Monster" (Gibson Opera) (Mighty).

Miss Valda Harvey, J.A.R.

Violin solo, "Lieselsgru" (Krauler).

Mr. Allan Sharp, L.A.L.

Song (contralto), selected:

Mrs. Marie Hannaford, F.V.C.M., L.A.R.

Song (soprano), selected:

Mr. H. C. King.

Vocal Duet, "The Venetian Boat Song" (Blumenhain).

Miss Dorothy Hood.

Miss Valda Harvey, L.A.B. and

Miss Dorothy Hood, selected:

Miss Gwen Paul, J.T.C.

Song (contralto), "The Dancing Lenzau" (O'Haver).

Miss Dorothy Reed.

Song (soprano), "Barbours Gracie" (Jones).

Mr. Stanley Tovey.

Vocal solo, selected:

Miss Jean Bowering, A.L.C.M.

Vocal Duet, "Trot Here and There";

Miss Gladys Harrison and

Mr. Norris Bailor, A.L.C.M.

Recital (humorous), "The Tragedy of the Fifth" (Ward).

Mr. James Anderson.

Song, selected:

Mr. Leslie Moten.

Vocal Quartet, "A Regular Royal Queen" (Sullivan).

Miss Harvey and Tovey.

Mezzo, Tovey and Bailor.

Gavotte, "Cherrytime" (Spaulding).

March, "The Limited Express" (Scholze).

The Bandstand Orchestra.

Conductor, Mr. Stanley Lambie.

Accompanist, Mrs. Guy Simble and

Miss Olive Lyons, F.T.C.L., L.A.B.

8.15 p.m.—Orchestral Selection by Minnie Bird's Orchestra.

8 p.m.—G.P.O. Chimes.

8.1 p.m.—Weather report.

8.30 p.m.—Relay from the Adelaide Town Hall, continued.

8.30 p.m.—Mr. H. D. Barton (Chief Dairy Inspector) talks on

"Milk Products."

8.45 p.m.—Relay from the Adelaide Town Hall, continued.

10 p.m.—Chimes.

10.1 p.m.—"Advertiser" news service.

10.10 p.m.—Windling's sporting service.

10.20 p.m.—Musical numbers from the Studio.

10.30 p.m.—Relay from the Masonic De Tames-Dance Selections.

10.35 p.m.—Saturday's programme, and

Metereological information.

11 p.m.—Chimes and National Anthem.

6WF, PERTH

Westralian Farmer's.

Wave Length, 1255 Metres.

Friday.

12.30 p.m.—Tune In.

12.35 p.m.—Market, News, and Cable.

1 p.m.—Time signal from Perth Observatory.

1.15 p.m.—Weather news, applied by the

Metereological Bureau of Western Australia.

1.2 p.m.—Studio Quartette, conducted by Mr. Val Smith.

2 p.m.—Close down.

AFTERNOON SESSION.

3.30 p.m.—Tune In.

3.35 p.m.—Organ music relayed from the

Grand Theatre, Murray Street.

Short Wave Broadcasters

Schedules and Wavelengths Subject to Change.

2NM, Gerald Marouse, Caterham, England, 23 and 35 metres (B.B.C. Programme).

PUJJ, Philips' Experimental Station, Eindhoven, Holland, 30.2 metres (B.B.C. Programme).

2XAF, General Electric Co., Schenectady, New York State, U.S.A., 32.77 metres (W.G.Y. Programme).

2XAG, General Electric Co., Schenectady, New York State, 14, 26 and 92 metres (W.G.Y. Programme).

KDKA, Westinghouse Electric Co., Pittsburgh, Penn., U.S.A., 83.5, 14 and 43 metres.

WLV, Cresley Radio Corporation, Cincinnati, Ohio, U.S.A., 52 metres.

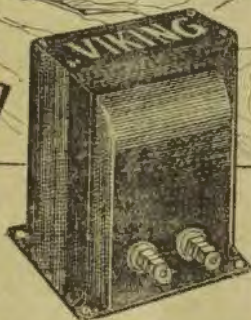
2XAL, "Radio News," New York City, U.S.A., 31.91 metres (WRNY Programme).

J.R. Johannesburg Broadcasting Company, South Africa, 20 and 25 metres.

6SW, Marconi Company, Chelmsford, England, 14 metres.
RPN, Moscow, U.S.S.R., 39 metres.



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VIKING Audio Frequency TRANSFORMER

AT ALL DEALERS

"Nothing Cheaper — — Nothing Better!"

10/6

Vocal and instrumental interludes from the Studio.
4.38 p.m.—Close down.

EVENING SESSION.

8.45 p.m.—Tune in.

104.5 METRE TRANSMISSION.

The evening transmission is broadcast on 104.5 metres as well as the usual wavelength.
8.50 p.m.—Musical evening for the kiddies by Uncle Henry and Duffy.

8.59 p.m.—Stocks, Markets, News.

9.05 p.m.—Racing talk by the Sporting editor of "Truth" Newspaper Co.

9 p.m.—Time signal from Perth Observatory.

9.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia. Station announcements, such as alterations to programmes etc.

9.3 p.m.—From the Studio. Musical programme, including vocal and instrumental artistes.

9.45 p.m.—Talk: "Surf Work and Life Saving" by Mr. C. Baden, President City of Perth Surf Club.

9.50 p.m.—At the Stadium: Description of the boxing match given by the Sporting Editor of "Truth" Newspaper Co. relayed from the Unity Stadium, Beaconsf. Street. Promoters: Messrs. Keys and Lewis.

10 p.m.—Late news items by courtesy of "The Daily News" Newspaper Co. Shows within Range announcement. Weather report and forecast.
10.10 p.m.—Close down.

104.5 Metre Transmission.

Simultaneous broadcast on 104.5 metres of programme given on 1280 metres, commencing at 8.45 p.m.

7ZL, HOBART

Tasmanian Broadcasters, Ltd.
Wave Length, 516 Metres.

Friday

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

8 p.m.—G.P.O. Clock Chimes the Hour.

8.1 p.m.—Tune in selection.

8.3 p.m.—Hobart Stock Exchange Quotations.

8.45 p.m.—Hobart stock Exchange Quotations.

8.50 p.m.—Selections by 7ZL Studio Trio.

"Hustle Dance" (Fletcher).

"Moment Musical" (Schubert).

"La Gondola" (Kromsdorf).

"Baccarole Spivka" (Schubert).

Violin solo, Selected, Mr. E. J. McCann.

4.10 p.m.—Educational Talk.

4.35 p.m.—Close down.

EARLY EVENING SESSION.

8.40 p.m.—Children's Corner with the "Radio Lady".

9 p.m.—Young Folks' Gardening Chat, by Mr. George Nation.

NIGHT SESSION.

7.50 p.m.—Fruit, Poultry and Produce Reports, through the courtesy of Roberts and Co. Ltd., Hobart.

7.25 p.m.—Weekly Gardening Talk, by Mr. George Nation, of Gala Nurseries Caswell.

Saturday, Dec. 17

2FC, SYDNEY

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m.—"Big Ben" and announcements.

10.5 a.m.—Studio music.

10.15 a.m.—"Sydney Morning Herald" news service.

10.30 a.m.—Studio music.

10.45 p.m.—Late sporting news.

10.45 p.m.—Studio music.

11 a.m.—"Big Ben." Studio music.

11.5 a.m.—A.P.A. and Reuter's Cable Services.

11.55 a.m.—Studio music.

11.55 a.m.—A talk on Gardening, by Mr. G. J. Lockley ("Bedgum").

11.59 a.m.—Close down.

MIDDAY SESSION.

12 noon—"Big Ben" and announcements.

12.2 p.m.—Stock Exchange, first call.

12.3 p.m.—Studio music.

12.30 p.m.—"Sydney Morning Herald" news service.

12.35 p.m.—Rugby wireless news.

12.35 p.m.—Studio music.

NOTE: During the afternoon descriptions from the Rowhill Race Course, 2FC Commissioner will describe each event in the running.

1 p.m.—"Big Ben." Weather Intelligence.

1.5 p.m.—"Evening News" midday news service.

1.55 p.m.—Studio music.

NOTE: During the intervals of racing events the following musical items will be heard:

From the Crystal Palace Theatre, George Street, Sydney:

Orchestral items.

From the Studio:

Jack Wright, novelty pianist.

1.50 p.m.—Complete resume of the day's sporting events.

5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

8.40 p.m.—The Chimes of 2FC.

8.48 p.m.—The "Hello Man" talks to the children.

8.58 p.m.—From the Waterfall Recreation Room: Continuation of the Children's Session, conducted by the three Uncles: Uncle Jerry, Uncle Hal and Uncle Dick.

9 p.m.—"Big Ben."

Weather Intelligence.

9.3 p.m.—Late sporting news.

9.45 p.m.—"Evening News" late news service.

9.55 p.m.—Studio music.

NIGHT SESSION.

7.40 a.m.—Programme announcements.

7.35 p.m.—From the Waterfall Recreation Room: A concert by the 2FC Hospital Concert Party on the occasion of the Patients' Annual Christmas Party.

The combined forces of the "Sparklers" (led by Mr. Garling) and "Revelers" (led by Mr. Halbert) will present a varied programme for the benefit of listeners and patients alike.

The artists are as follows:—

R. B. Orchard.

Peggy Dunbar, contralto:

(a) "To a Minstrel" (Brahms).

(b) "Tears" (Alward).

(c) "In a old-fashioned Town" (Smiley).

(d) "Where my Caravan has Rested" (Lohr).

Ernest Archer, tenor:

(a) "Look down, dear eyes" (Fisher).

(b) "Garden of your heart" (Doss).

(c) "Home, Little Margie, Home" (Hill).

(d) "Calling me back to you" (Sawyer).

Lawrence Halbert.
Carlton Fay, pianoforte solo.
Wally Barnes, comedian.
Shirley Cooke, soprano.
Brunton Gibb, pianist:
(a) "The Corsets".
(b) "Bertram, the Butcher".
H. A. Hartman, baritone:
(a) "Old Harry".
(b) "Sea Wars" (Sanderson).

NOTE: The covers will continue without a break until 9.15 p.m. to enable the artists to return to Sydney by the last train.

9.15 p.m.—From the Studio:

Late weather forecast.

9.25 p.m.—A "Schumann" Recital by Madame Emily Marks (soprano) and Miss Edith Himes (piano):

(a) Flauto, "Devotion."

(b) Soprano, "Moonlight."

(c) Soprano, "Spring Night."

(d) Flauto, "Novellette."

9.26 p.m.—Montgomery Stuart:

A Homorous Sketch.

9.3 p.m.—Laurence Macaulay, baritone:

(a) "Here's Old Bohemia" (Czecho-Slovakian) (Traditional).

(b) "Good-night" (Czecho-Slovakian) (Traditional).

9.40 p.m.—Concluding items of the "Schumann" Recital by Madame Emily Marks (soprano) and Edith Himes (piano):

(a) Soprano, "The Lady Bird."

(b) Soprano, "Love's Tears."

(c) Flauto, "Romance in F Sharp."

9.48 p.m.—From the Ambassadors:

The Ambassadors Dance Orchestra.

Conductor, Mr. Al Hammet.

9.58 p.m.—From the Studio:

Montgomery Stuart:

"Cen Drem" Stories.

10.3 p.m.—From the Ambassadors:

Dance music by the Ambassadors Orchestra.

10.10 p.m.—Laurence Macaulay, baritone:

(a) "Father and Mother Dear" (Czecho-Slovakian).

(b) "Farwell to Bohemia" (Czecho-Slovakian).

10.20 p.m.—The Ambassadors Dance Orchestra.

Conductor, Mr. Al Hammet.

10.30 p.m.—Late weather forecast.

10.31 p.m.—Len Maurie, popular baritone.

10.41 p.m.—The Ambassadors Dance Orchestra.

10.51 p.m.—Late news and announcements.

11 p.m.—"Big Ben."

The Ambassadors Dance Orchestra, interspersed with vocal numbers by Mr. Len Maurie.

11.45 p.m.—National Anthem.

Close down.

2BL, SYDNEY

Saturday.

EARLY MORNING SESSION, 7 to 8 a.m.

MORNING SESSION.

11 a.m.—G.P.O. Clock and chimes.

Musical programme from the Studio.

11.15 a.m.—WOMEN'S SESSION.

Social notes. Replies to correspondents, by Mrs. Jordan. Talk on "Simple Cooking for Children," by Mrs. Jordan.

AFTERNOON SESSION.

Race results broadcast immediately after each race by courtesy of the "Sun" News Agency.

12 noon—G.P.O. Clock and chimes.

Special ocean forecast and weather report.

DONT GIVE KNICK KNACKS *this* XMAS

You have given clothes, cigars, and a variety of other knick knacks which soon fulfil their purpose and are discarded and forgotten. NOW give something really useful. Give something that will bring hours and hours of pleasure, day after day, month after month — pleasure all the year round. Although low in first cost, an Emmco Electrical Radio Power Unit actually saves money, and operates at practically negligible cost without trouble. Don't give knick knacks *this* Christmas.

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2 W, SYDNEY

- 12.3 p.m.—Musical programme from the Studio.
 12.29 p.m.—News from the "Sun."
 12.25 p.m.—Sporting and Athletic features.
 12.21 p.m.—What's on at the Pictures and Theatres.
 12.09 p.m.—Musical programme from the Studio.
 12.04 p.m.—News from the "Sun."
 12.01 p.m.—Racing results.
 11.57 p.m.—Musical programme from the Studio.
 11.53 p.m.—G.P.O. Clock and chimes.
 11.49 p.m.—Musical programme from the Studio.
 11.45 p.m.—Sporting talk and athletic features for the day.
 11.41 p.m.—Musical programme from the Studio.
 11.37 p.m.—G.P.O. Clock and chimes.
 11.33 p.m.—Talk on "Women of the Orient of All Ages."
 11.29 p.m.—G.P.O. Clock and chimes.
 11.25 p.m.—News from the "Sun."
 11.21 p.m.—Musical programme from the Studio.
 11.17 p.m.—News from the "Sun."
 11.13 p.m.—G.P.O. Clock and chimes.
 11.09 p.m.—Racing results.
 11.05 p.m.—Musical programme from the Studio.
 11.01 p.m.—News from the "Sun."
 10.57 p.m.—Dance Band Broadcast from the Dannebrog Cabaret.
 10.53 p.m.—G.P.O. Clock and chimes.
 10.49 p.m.—Racing results.
 10.45 p.m.—News from the "Sun."
 10.41 p.m.—Musical programme from the Studio.
 10.37 p.m.—News from the "Sun."
 10.33 p.m.—Dance Band Broadcast from the Dannebrog Cabaret.
 10.29 p.m.—G.P.O. Clock and chimes.
 10.25 p.m.—Racing results.
 10.21 p.m.—News from the "Sun."
 10.17 p.m.—Musical programme from the Studio.
 10.13 p.m.—News from the "Sun."
 10.09 p.m.—Dance Band Broadcast from the Dannebrog Cabaret.
 10.05 p.m.—G.P.O. Clock and chimes.
 10.01 p.m.—Close hour.

EARLY EVENING SESSION.

- 6.45 p.m.—G.P.O. Clock and chimes.
 Children's Session.
 6.30 p.m.—Musical programme from the Studio.
 6.15 p.m.—Recall of day's sporting and Country news from the "Sun."

NIGHT SESSION.

- 9 p.m.—G.P.O. Clock and chimes.
 Broadcasters' Vocal Chorus.
 8.30 p.m.—Miss Phyllis Atkinson, mezzo-soprano.
 8.10 p.m.—Mr. Phil Munnitt, light comedian.
 7.50 p.m.—Musical programme.
 7.30 p.m.—Mr. Rex Harrison, comedian.
 7.10 p.m.—Miss Mabel Fairbridge, soprano.
 6.50 p.m.—Following day's popular songs.
 6.44 p.m.—Mr. Robert Gibson, contralto solo.
 6.48 p.m.—Mr. Dudley Hemrich, baritone.
 6.45 p.m.—Broadcasters' Instrumental Trio.
 6.41 p.m.—Mr. Bert Gilbert, comedian, assisted by Miss Ivy Bay, will present another Adventure of Mr. Hargruff.
 6.20 p.m.—Miss Phyllis Atkinson.
 6.27 p.m.—Broadcasters' Instrumental Trio.
 6.07 p.m.—Mr. Phil Munnitt.
 5.44 p.m.—Miss Mabel Fairbridge (soubrette numbers).
 5.21 p.m.—Mr. Dudley Hemrich.
 5.25 p.m.—Resume of following day's programme.
 10 p.m.—G.P.O. Clock and chimes.
 10.1 p.m.—Mr. Robert Gibson.
 10.8 p.m.—Mr. Rex Harrison.
 10.18 p.m.—Dance Music by Mr. Cyril Kaye and the Wentworth Cafe Orchestra, transmitting from the ballroom of the Wentworth. During intervals between dances, "Sun" news will be broadcast.
 12 midnight.—G.P.O. Clock and chimes.
 National Anthem.

Saturday.

- 7 p.m.—Clock chimes.
 7.8 p.m.—Where to go.
 7.10 p.m.—Dance items from the studio.
 8 p.m.—Clock chimes.
 8.2 p.m.—Resume of forward programme.
 8.4 p.m.—Selections from the studio.
 9 p.m.—Stuko chimes.
 9.2 p.m.—Weather forecast and news items.
 9.4 p.m.—Stuko chimes.
 10.40 p.m.—God Save the King.

3LO, MELBOURNE.

Saturday.

MORNING SESSION.

- 10.42 a.m.—Description of Croquet Matches—Australia v. England, at Melbourne Cricket Ground, Windsor, by Mr. C. J. MILLER, Croquet Champion of Victoria.
 11 a.m.—JOHNSTON'S STUDIO BOYS: "March," "Dance of Berne," "Fox Trot," "Drifting and Dreaming."
 11.10 a.m.—BILLY POLLARD AND WALTER WHITE, Operatic Entertainers: "Soprano," "The Minstrel Boy" (Mozart).
 11.20 a.m.—"The Story of Annie" (Duet).
 11.30 a.m.—MAGGIE FOSTER, violin: "Kupusnik" (Wieniawski).
 11.40 a.m.—"Soprano in A Major" (Chopin).
 11.50 a.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 11.59 a.m.—JOHNSTON'S STUDIO BOYS: "Carnet Duet," "Beams of the Barn," by L. Barrett and W. Bunney.
 12.07 a.m.—ERIC WENTWORTH, organist: "Legend of Bell" (Fingert).
 12.13 a.m.—Description of Croquet Matches—Australia v. England, at Melbourne Cricket Ground, Windsor, by Mr. C. J. MILLER, Croquet Champion of Victoria.
 12 noon.—Melbourne Observatory Time Signal.
 "Are you going midnight? Don't forget your responsibilities whatever people may do. Don't leave a letter of rubbish behind you, be careful with lire, and Cross Streets. Carefully, Remember, Safety First."
 12.1 p.m.—Metal Prices received by The Australian Mines and Metals Association from the London Stock Exchange this day.
 12.15 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 12.25 p.m.—JOHNSTON'S STUDIO BOYS: Selection, "Favorite Melodies."
 12.35 p.m.—THE STUDIO ORCHESTRA.
 12.44 p.m.—ERN TROTMAN, Entertainer: "The Gravedigger's Wedding" (Paul).
 "The Death of Nelson" (Vicenti).
 12.50 p.m.—THE STUDIO ORCHESTRA: Selection, "The Merry Widow."
 1 p.m.—Melbourne Observatory Time Signal.
 "Are you going midnight? In the interests of general safety, leave, drive and obey the resuspended traffic signals. Don't be or cause a casualty through any fault of your own."
 1.11 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 1.11 p.m.—JOHNSTON'S STUDIO BOYS: Intermission—"Penelope's Lovers."
 1.18 p.m.—EILEEN CASTLES, soprano: "Peter and the Rose" (Secchi).
 "Twas April."
 1.25 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.

- 1.35 p.m.—ERN TROTMAN, Entertainer: "The Willow," "Bourlesque" (Anon.).
 "The Somerset Farmer" (Lane-Wilcox).
 1.43 p.m.—MAGGIE FOSTER, violin: "Favorite Melodies."
 1.46 p.m.—THE STUDIO QUARTETTE: Selection, "The Cingales."
 2 p.m.—Description of Croquet Matches—Australia v. England, at Melbourne Cricket Ground, Windsor, by Mr. C. J. MILLER, Croquet Champion of Victoria.
 2.10 p.m.—Description of Two-year-old Handicap 1/4 mile, EPSOM RACES, by "Musket" of "The Sporting Globe."
 2.15 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. ROD MCGREGOR.

- 2.40 p.m.—Description of EPSOM PLATE 5 furlongs, EPSOM RACES, by "Musket" of "The Sporting Globe."
 2.45 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. ROD MCGREGOR.

AFTERNOON SESSION.

- 3 p.m.—Melbourne Observatory Time Signal.
 3.1 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "The Toy Town Parade" (Mottel).
 "Just Once Again" (Ash).
 "Rolling Down the Hill" (Ring).
 3.10 p.m.—Description of Bruce Steele, 2 mile 1/4 chain, EPSOM RACES, by "Musket" of "The Sporting Globe."
 3.15 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 3.25 p.m.—Progress Report of Croquet Matches—Australia v. England, at Melbourne Cricket Ground, Windsor.
 3.30 p.m.—Description of Rowing—Victoria (Champion Four)—in Lower Yarra, by Mr. W. G. Smeeting.
 3.40 p.m.—Description of Thorough Handicap 1 mile, EPSOM RACES, by "Musket" of "The Sporting Globe."
 3.45 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 4 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "When Lights are Low in Cairo" (Marzik).
 "Drepan's Serenade" (Lavin).
 "Fah Gonna be Home To-night" (Dubin).
 4.10 p.m.—Description of Epsom Purse, 6 furlongs, EPSOM RACES, by "Musket" of "The Sporting Globe."
 4.15 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "I'm Telling the Birds, Telling the Bees" (Brown).
 "The Spill of the Moon" (Kahn).
 "The Star" (Kahn).
 Greener.
 4.40 p.m.—Description of Encourage Handicap, 1 mile, EPSOM RACES, by "Musket" of "The Sporting Globe."
 4.45 p.m.—Description of Croquet Matches—Australia v. England, at Melbourne Cricket Ground, Windsor, by Mr. C. J. MILLER, Croquet Champion of Victoria.
 4.50 p.m.—"Herald" news service.
 Stock Exchange information.
 5.10 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 5.20 p.m.—Late Sporting results.

EVENING SESSION.

- 5.40 p.m.—Answers to letters and birthday greetings, by "LITTLE MISS KOOKABURRA."
 5.50 p.m.—MR. ROD MCGREGOR will now describe the final of to-day's great Test Match—Victoria v. Queensland, from Melbourne Cricket Ground, transmission from M.C.C. Cricket Ground, by Mr. Rod McGregor.
 6 p.m.—Answers to letters and birthday greetings, by "LITTLE MISS KOOKABURRA."
 6.50 p.m.—Description of Interstate Cricket Match—Victoria v. Queensland, at Mel-

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3AR, MELBOURNE

Saturday.

- 6.10 p.m.—STUDIO QUARTET: Suite "English Folk Song" (Vaughan-Williams).
- 6.20 p.m.—MISS SHEPHERD: "More Struggle Tales."
- 6.35 p.m.—THE STUDIO QUARTET: "More Folk Songs."
- 6.45 p.m.—Sporting results.
- 6.48 p.m.—"Herald" news service. Weather signals, Shipping movements.
- 6.52 p.m.—River Exchange information.
- 6.57 p.m.—River reports.
- 7 p.m.—Market reports by the Victorian Producers' Co-operative Ltd., Ltd. (Horticulture, grain, hay, straw, pigs, dairy produce, potatoes and oysters. Market reports of fruit by the Victorian Producers' Association—result prices. Wholesale prices of fruit by the Wholesale Fruit Merchants' Association, citrus fruit).

NIGHT SESSION.

- 7.15 p.m.—MR. NORMAN BROOKES, president of L.T.A.V., will speak on "The Visit to the French Front Campagna."
- 7.30 p.m.—MR. F. E. PEACOCK, Australian Golden Flowers and Buttercup.
- 7.45 p.m.—DR. J. A. LEACH: "Tros-Ducks and Snobisms."
- 8 p.m.—MR. R. A. ELMANSON: "The Work of the Suffered and Home Committee."
- 8.10 p.m.—Presentation of prizes to the winners in the various grades of the B.I.O. Melbourne, The Radio Song Competition.
- 8.20 p.m.—STUDIO PRESENTATION OF THE OPERA "CAUST," Part II. (Under the direction of J. RUTTON CROW, assisted by THE STUDIO ORCHESTRA and AUBURN METHODIST CHOR.) CAST: Faust JOHN D. SULLIVAN, tenor. Mephistopheles THOS. GEORGE, bass. Valentine J. ALEXANDER. BROWNE baritone. Wagner F. DAVIES, bass. Marguerite ELSIE DAVIES, soprano. Siebel ISA LILLYCRAP, soprano. Martha MYRTLE WALLSCOTT, mezzo-soprano.
- 10.10 p.m.—HELLE POLLARD & WALTER WHITE, aquatic entertainers: Soprano, "She is Far from the Land" (Lambert). Tenor, "Songs of Araby" (Clay).
- 10.17 p.m.—MAGGIE FOSTER, violin: "Chanson" (Friml). "B segmented" (Schubert).
- 10.21 p.m.—EILEEN CASTLES, soprano: "Letter Rite a Wee" (Scott).
- 10.31 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "When Will We Meet Again" (Forster), "Jack in the Box" (Nicol).
- 10.37 p.m.—ERN TROTMAN, entertainer: "Grand Opera" (Original).
- 10.44 p.m.—Late sporting results. Island steamer movements. The Royal Automobile Club of Victoria's Safety Message for to-day is for EVERYONE: "Don't fall asleep when crossing a thoroughfare—there may well wake up at the hospital." Every thinking motorist is reminded to be careful with matches and camp fire—don't let it be on YOUR conscience that through sheer carelessness happy homes are reduced to ashes and desolation.
- 11 p.m.—OUR GREAT THOUGHT: "You are not born in misery; the Almighty never called any of his creatures into existence to render them unhappy; yet many may be wretched from his own follies and vices."—Solomon Gensser.
- 11.1 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS.
- 11.40 p.m.—GOD SAVE THE KING.

MORNING NEWS SESSION.

11.0 a.m. to 12 noon.

MIDDAY NEWS SESSION.

12.1 p.m. to 1 p.m.

Transmitted from Panatope House, 251 Collins Street (by exclusive arrangement of Willis and Paton Ltd.) on the Brunswick Panatope.

MATINEE SESSION.

ORCHESTRAL CONCERT

SPORTS RESULTS: During the afternoon the results of the Mentone Races will be broadcast immediately each race to run.

- 2.30 p.m.—Mentone Races: Result of 2-year-old Handicap, 5 furlongs.
- 2.35 p.m.—Studio Orchestra: "Sunderland's Popular Songs" (Arr. Baycock). "Dreams of Yesterday" (Humphreys).
- 2.40 p.m.—Mentone Races: Result of Open 2 1/2 furlongs.
- 2.45 p.m.—Miss Dorothy Elyon-Jones, Contralto: "My Ships" (Barrett). "A Lullaby" (Buschetti).
- 2.53 p.m.—Studio Orchestra: "Jollies Fantaisie" (Aznibachi).
- 2.57 p.m.—Mr. Ronald Brearley, "Galle; "The Goodfellow Air" (Old Irish), by request.
- 3.04 p.m.—Studio Orchestra: "Scenes from the South" (Nicole). "Adagio Cantabile" (Hirshorn).
- 3.12 p.m.—Mentone Races: Result of Brush Stomps, 2 miles 1/2 chains.
- 3.18 p.m.—Miss Dorothy Elyon-Jones, Contralto: "The Soldier's Wife" (Rachmaninoff). "A Birthday" (Cowen).
- 3.20 p.m.—Studio Orchestra: "A Love Suite" (Lake). "Chant d'Amour" (Froumell).
- 3.25 p.m.—Mentone Races: Result of Mentone Handicap, 1 mile.
- 3.32 p.m.—Mr. James Scott, Bass: "Tommy Lad" (Margatson). "The Happy Messenger" (Marston).
- 3.40 p.m.—G.P.O. Clock says "Four."
- 4.1 p.m.—2nd Weather Forecast.
- 4.2 p.m.—Announcements.
- 4.3 p.m.—Studio Orchestra: Selection, "The Maid of the East" (Neale). 4.37 p.m.—Mr. Herbert Pottler, Violin: "Schon Rosmarin" (Kreutzer), by request.
- 4.42 p.m.—Mentone Races: Result of Trial Plate, 4 furlongs.
- 4.47 p.m.—Studio Orchestra: "The Myrtle of Damascus" (Woodford).
- 4.55 p.m.—Mr. James Scott, Bass: "On Awake, Awake Beloved" (Cowan). "When I Was a Bachelor" (Gregory).
- 4.58 p.m.—Studio Orchestra: "Prayer and Temple Dance" (Grieg).
- 4.59 p.m.—Mentone Races: Result of Trial Purse, 7 furlongs.
- 5.0 p.m.—The 3AR's Entertainment.
- 5.05 p.m.—G.P.O. Clock says "Five"; Class Down.

CHILDREN'S SESSION.

6.30 p.m.—Uncle Mac's Entertainment.

EVENING SESSION.

DANCE CONCERT NIGHT.

- 7.30 p.m.—Everyman's Garden: Special Weekend Talk by Mr. W. B. Warner, President of the Nurseryman's and Seedsmen's Association of Victoria.
- 7.45 p.m.—Newmarket Cattle Sales: Notices; To-day's Sporting Results.
- 8.0 p.m.—G.P.O. Clock says "Eight."
- 8.1 p.m.—Dance Session: Transmitted from Panatope House, 251 Collins Street, Melbourne by exclusive permission of Willis and Paton, Ltd.; Dance Programme Committee. Chairman, Mr. W. D. S. Taylor. Selector, Mr. John Phil. Programme Director, Mr. Geoffrey G. Fox.

- 8.3 p.m.—Hotel McAlpin Band (Conductor, Mr. Bruce Gillett): Fox Trot, "See You Sberman." Fox Trot, "It's a Wonderful World After All" (Gress).
- 8.7 p.m.—The Savanna Syncopators: Fox Toss, "Jamaica Blues" (Hartwell). Fox Toss, "Deep Henderson" (Hartwell).
- 8.11 p.m.—Mr. Frank Thomas, Baritone: "Where the Sarcophagus Major's on Parade" (Leonardi). "I'm Alone for You" (Gleithaway).
- 8.20 p.m.—Regent Club Orchestra: Waltz, "Dancing in Love With You" (Hopkin). "Buccaneer" (Hopkin). "I'm Alone" (Hopkin).
- 8.26 p.m.—Carl Fiedler's Orchestra: Fox Trot, "Queen Ritz Rhythm" (De Sylva-Gensler).
- 8.31 p.m.—Mr. Reginald Symons, tenor: "Ash at Ben Hur," from "Il Trovatore" (Verdi). "Venti la gibbia," from "Pagliacci" (Leoncavallo).
- 8.35 p.m.—Bronx Dance Band: Fox Trot, "The Summer Night" (Sater). Fox Trot, "A Lane Lane Lane" (Leonardi).
- 8.39 p.m.—Mr. L. Miles Hastings, Entertainer: "The end of the Violin" (Jerome). "I'm Waiting for Ships that Never Come In" (Vieland).
- 8.42 p.m.—Leo Jannina's Orchestra: Fox Trot, "The Birth of the Blues" (Hersford). Fox Trot, "Down South" (Tabshaw).
- 8.46 p.m.—Ben Selwyn's Orchestra: Waltz, "Chorus I Love You" (Goodman). Waltz, "Am I Wasting My Time on You" (Ebb).
8.49 p.m.—Mr. Frank Thomas, Baritone: "Berendina" (Schubert). "The Blind Fisherman" (Clarke).
- 8.51 p.m.—Denza Dance Band: Fox Trot, "Oh! How I Love Bulgarian" (Dixon). Fox Trot, "A Gonna be Home To-night" (Steep).
- 8.57 p.m.—Charlie Truitt's Melody Artists: Fox Trot, "Transportation Blues." Fox Trot, "Ensure Number of Transportation Blues."
- 8.58 p.m.—Mr. Reginald Symons, Tenor: "I Pity My Lonely Casanova" (Coates). "The Little Irish Girl" (Lohr).
- 9.0 p.m.—The Cavaliers: Waltz, "So Long to Me" (Rode). Fox Trot, "Blue Skies" (Berlin).
- 9.05 p.m.—Denza Dance Band: Fox Trot, "There's a Trick to Picking a Chick, Chick, Chickens." Fox Trot, "Vo Do De Doo Blues" (Vieland).
- 9.07 p.m.—Mr. T. Miles Hastings, Entertainer: "A Man's Repentance" (Wilcox). "Mr. Brown of Bowery" (Brighton).
- 9.08 p.m.—The Raynold Dance Band: Fox Trot, "Positively—absolutely" (Herbert). Fox Trot, "What I Care What Somebody Said" (Woods).
- 9.14 p.m.—Six Jumping Jacks: Fox Trot, "You Never Get Nowhere Holding on to Hands." Fox Trot, "The More We Are Together" (Kane).
- 9.20 p.m.—G.P.O. Clock says "Ten."
- 9.21 p.m.—Scot-Final Weather Forecast. Specially for our Country Listeners: "The Elk Dittier and Egg Man" (Baker). 10.2 p.m.—Mr. Harry Beer, Accordion Solo: "Estudiantina" (Waldteufel).
- 9.25 p.m.—Denza Dance Band: Waltz, "So Blue" (Hersford). Waltz, "Yesterday" (Harrison).
- 9.26 p.m.—Denza Dance Band: Fox Trot, "Song of the Wanderer" (Muret). Fox Trot, "On the Road to Mandalay" (Spanka).
- 9.29 p.m.—Mr. Lewis Richards, Marchepied Solo: "Turkish March" (Mozart).
- 9.32 p.m.—Mr. Harry Beer, Banjo Solo: "Colletti" (Barr).
- 9.33 p.m.—Ted Lewis' Band: Fox Trot, "In My Garden" (Gifford). Fox Trot, "Eise Schultz-enheim" (Silvers).
- 9.37 p.m.—Pleasidly Nevada Band: Waltz, "The Desert Song" (Romberg). Fox Trot, "Kiss from the Desert Song." 10.38 p.m.—St. Kilda Colliery Prize Band: March, "The Commandant" (Hume).

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Total emission, m/a.	5	5	8.0	8.0	8.0	8.0	8.0
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Filament current amps.	0.3	0.3	0.3	0.35	0.2	.06	0.2
Anode voltage ..	20—100	30—100	30—100	30—100	50—100	50—100	75—125
Total emission, m/a.	8	8.0	8.0	20.0	25.0	15.0	15.0
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THE MASTER VALVE

10.41 p.m.—Mr. Wendell Hall, Comedian: "I'm Gonna Let the Bumble Bee Be" (Little).
 10.44 p.m.—Hal Kemp and His Orchestra: "Fox Trot," "Joe" (Little).
 10.45 p.m.—Fox Trot: "Mary Dear."
 10.50 p.m.—Dennis Dance Band: Waltz, "Lonesome" (Yvain).
 10.55 p.m.—"Who'll Buy My Violin?" (Costa).
 10.58 p.m.—Final Weather Forecast.
 10.59 p.m.—Our Australian Good-Night Quote is from the poem, "An Australian Symphony," by George Rexes Evans. "These purple hills, these yellow lea, These forests lone, These murmuring shores, these shimmering seas. This summer sun— Shall they induce us nobler strain Than songs of bitterness and pain? Strike her wild harp with firmer hand, And send her music thro' the land, With lofter tone."
 11.0 p.m.—G.P.O. Clock says "Eleven"; God Save the King.

4QG, BRISBANE.

Saturday.

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

3.30 p.m.—A Mailbox for Little Misses, by "Miss Waratah."
 4.30 p.m.—Close down.

EARLY EVENING SESSION.

FROM THE STUDIO:
 6.30 p.m.—Bedtime Stories by "Uoche Ben."
 7.15 p.m.—Racing results.
 7.20 p.m.—Today's sporting news described.
 7.30 p.m.—Sailing notes by Mr. F. Smith.
 7.45 p.m.—Lecturette: Gardening Talk, "Gardening for Summer Blooms," by "Tomato."

NIGHT SESSION.

VIOLIN RECITAL.

To-night's programme will comprise a recital relayed from the Studio of Mr. I. A. Fares ("The Hall of the Muses").
 8 p.m.—FROM THE HALL OF THE MUSES: Violin recital.

SPEEDWAY.

During the course of the evening the main motor cycle events from the Davies Park Speedway will be described.
 10 p.m.—FROM THE STUDIO: "The Sunday Mail" news; weather news.
 Close down.

5CL, ADELAIDE.

Saturday.

MORNING SESSION.

11 a.m.—G.P.O. Chimes.
 11.1 a.m.—General information and "Advertiser" news service.
 11.30 a.m.—Musical numbers from the Studio.
 12 noon.—Chimes, and close down.

AFTERNOON SESSION.

1 p.m.—Chimes
 1.1 p.m.—Relay from Victoria Park Race-course, S.A. Tattersall's Club Meeting. A running description by Mr. Arnold Treloar of the events interspersed with musical numbers and interstate results from the Studio.
 1.15 approx.—Close down

EVENING SESSION.

8 p.m.—Chimes.
 8.1 p.m.—Dinner Music from the Covent Garden Orchestra.
 Selection, "The Cinema Star" (Gilbert).

Fox Trot, "Araby" (Nichols).
 Love Song, "A Ted" (ElBotti).
 Slavonic Rhapsody (Friedman).
 4.30 p.m.—Chimes and Musical Time.
 4.40 p.m.—Greetings and correspondence.
 5 p.m.—Talk about Hobbies, and some short stories.
 7.25 p.m.—Messrs. S. J. Ward & Co's Stock Exchange, Melbourne, and Market reports.
 7.35 p.m.—S. A. and Interstate Sporting results.
 7.50 p.m.—Current topics of sport.
 8 p.m.—Chimes.
 8.1 p.m.—Relay from the Henley Beach Rotunda. Band Concert by Holden's Beach Band, interspersed with vocal and instrumental numbers by: Keith Clarke (tenor), Harry Hutchins (violin), Mrs. J. L. Davey (contralto), W. L. Rowett (descriptive stories), Lawrence Haggitt (pianist).
 8.45 p.m.—Talk by Rev. G. E. Hale, B.A.: "What is Life?"
 9 p.m.—Chimes.
 9.1 p.m.—Vocal and Instrumental Concert (continued).
 10 p.m.—Chimes.
 10.1 p.m.—"Advertiser" news service.
 10.15 p.m.—Relay from the Maison de Danse Glenelg Dance selections.
 10.30 p.m.—Sunday's programme and Meteorological information.
 11 p.m.—National Anthem and close down.

Saturday.

12 noon.—Tune in.
 12.4 p.m.—Musical programme, including pianoforte selections by Miss Evelyn Willis, A.C.C.
 12.47 p.m.—Markets, News and Cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 1.2 p.m.—Close down.

AFTERNOON SESSION.

3.15 p.m.—Tune in.

SPORTING SESSION.

Racing results and progressive cricket scores. Vocal and instrumental numbers from the Studio.
 3.30 p.m.—Close down.

EVENING SESSION.

6.45 p.m.—Tune in.

10.45 METRE TRANSMISSION.
 The evening transmission is broadcast on 10.45 metres as well as the usual wavelength.
 6.59 p.m.—Birthday greetings for the Kiddies.
 7.00 p.m.—Circles, Rag and Duff.
 7.10 p.m.—Sports results.
 7.20 p.m.—Markets, News, and Cables.
 7.45 p.m.—Talk: "Spectacle Making" by Mr. Eisner, a representative of Messrs. Latham and Pank, Opticians.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 Station announcements, such as alterations to programmes, etc.

DANCE NIGHT.

8.3 p.m.—Musical programme from the studio, including vocal and instrumental articles. Old time dance music relayed from the Unity Theatre, Beaufort Street.
 10 p.m.—Late news items by courtesy of "The Daily News" Newspaper Co.
 Ships within Range announcement.
 Weather Report and Forecast.
 Sports results.
 10.30 p.m.—Close down.

10.45 METRE TRANSMISSION.
 Simultaneous broadcast on 10.45 metres of programme given on 1250 metres, commencing at 6.45 p.m.

7ZL, HOBART

Saturday

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

2 p.m.—G.P.O. Clock Chimes the Hour.
 Broadcast by direct wire from the T.C.A. Ground, description of Cricket Match New-town v. Sandy Bay, by "Mus-o'".
 Close down.

EARLY EVENING SESSION.

6.30 p.m.—"Uncle Peter's" talks to the children.
 7 p.m.—"Uncle Peter's" half-hour.

NIGHT SESSION.

7.30 p.m.—Musical selection.
 7.45 p.m.—Nature Lesson Book opened by Mr. F. C. Roberts.
 7.50 p.m.—"Mercury" special Tasmanian news service.
 Railway Auction Produce Sales.
 Hobart Stock Exchange Quotations.
 Weather information.
 8 p.m.—G.P.O. Clock Chimes the Hour.
 8.15 p.m.—Dance numbers by Pavillon Dance Band from the City Hall, Hobart, interspersed with musical items from the Studio.
 10.20 p.m.—British Official Wireless News:—Ships within wireless range.
 Weather information.
 Station announcements: To-morrow's programme.
 Close down.

6WF, PERTH.

Saturday.

12 noon.—Tune in.
 12.4 p.m.—Musical programme, including pianoforte selections by Miss Evelyn Willis, A.C.C.
 12.47 p.m.—Markets, News and Cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 1.2 p.m.—Close down.

AFTERNOON SESSION.

3.15 p.m.—Tune in.

SPORTING SESSION.

Racing results and progressive cricket scores. Vocal and instrumental numbers from the Studio.
 3.30 p.m.—Close down.

EVENING SESSION.

6.45 p.m.—Tune in.

10.45 METRE TRANSMISSION.
 The evening transmission is broadcast on 10.45 metres as well as the usual wavelength.
 6.59 p.m.—Birthday greetings for the Kiddies.
 7.00 p.m.—Circles, Rag and Duff.
 7.10 p.m.—Sports results.
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 7.45 p.m.—Talk: "Spectacle Making" by Mr. Eisner, a representative of Messrs. Latham and Pank, Opticians.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 Station announcements, such as alterations to programmes, etc.

DANCE NIGHT.

8.3 p.m.—Musical programme from the studio, including vocal and instrumental articles. Old time dance music relayed from the Unity Theatre, Beaufort Street.
 10 p.m.—Late news items by courtesy of "The Daily News" Newspaper Co.
 Ships within Range announcement.
 Weather Report and Forecast.
 Sports results.
 10.30 p.m.—Close down.

10.45 METRE TRANSMISSION.
 Simultaneous broadcast on 10.45 metres of programme given on 1250 metres, commencing at 6.45 p.m.

**Sunday, Dec. 18
2FC, SYDNEY**

MORNING SESSION.

10.15 a.m.—Programme announcements.
 11 a.m.—"Big Ben."
 From St. Andrew's Cathedral, George Street, Sydney:
 The Morning Service.
 Conducted by the Very Rev. Dean Talbot.
 12.15 p.m.—From the Studio: News session.
 12.30 p.m.—Close down.

AFTERNOON SESSION.

2.15 p.m.—Programme announcements.
 3 p.m.—"Big Ben."
 From the Peterham Congregational Church, Crofton Street, Peterham (Rev. A. P. Doran, minister).

A SPECIAL CHRISTMAS CHORUS.

HANDEL'S "MESSIAH"

Part I and "Hallelujah Chorus."
 Principals:
 Susan Mack, soprano.
 Eleanor Stanton, contralto.
 Molyneux Phillips, tenor.
 Stanley Clarkson, bass.
 Organist and choirmaster.
 Mr. Andrew F. Gibbs, L.L.C.M.
 Hymn, "O Come all ye Faithful."
 Prayer.

HANDEL'S "MESSIAH"—Part I.
 Overture.
 Recit (tenor), "Comfort ye my people."
 Air (tenor), "Every valley shall be exalted."
 Chorus, "And the glory of the Lord."
 Recit (bass), "Thus saith the Lord."
 Air (bass), "But who may abide."
 Recit (contralto), "Behold a virgin shall conceive."
 Air (contralto), "O Thou that tellest good tidings to Zion."
 Chorus.
 Recit (bass), "For behold, darkness shall cover the earth."

Air (soprano), "The people that walked in darkness"
 Chorus, "For unto us a child is born"
 Violin (Soprano),
 Horn (soprano), "These were shepherds"
 Horn (soprano), "And the Angel said unto them"
 Horn (soprano), "And suddenly there was with the Angel"
 Chorus, "Glory to God"
 Air (soprano), "Rejoice greatly, O daughter of Zion"
 Horn (contralto), "Then shall the eyes of the blind"
 Air (contralto), "He shall feed His flock"
 Air (soprano), "Come into Him"
 Chorus, "Hallelujah"
 Benediction

11.30 p.m.—Close down.

EVENING SESSION.

8 p.m.—Programme announcements.

8.15 p.m.—"An Hour" with the Great Com-

poser, arranged by Madame Evelyn Grieg:

Pianoforte (a) "Prelude" (Bach).

(b) "Garden" (Bach).

Madame Evelyn Grieg.

Violin solo, "Ondine" (Maestro).

Mrs. Ella Fenfield.

Violin solo, "Lara and Ben" (Gloria).

Mrs. Ella Fenfield.

Pianoforte (a) "The Bear Wedding" (Men-

delsohn) (by request).

(b) "Pavane" (Benedeksh) (by request).

Madame Evelyn Grieg.

Violin solo, "Evening Star," from "Tann-

hauser" (Wagner).

Mrs. Maysey Daley.

Violin solo, "Entrée au not to leave

"The" (Gounod).

Mrs. Ella Fenfield.

Violin, No. 2 in G, for Violin, Violoncello and

Pianoforte.

Violoncello, "Allegro—and Rondo all Overture

(Bocini).

Violin, Ella Fenfield.

Violoncello, Maysey Daley.

Pianoforte, Evelyn Grieg.

10.30 p.m.—From the Lyceum Hall, Pitt Street,

London.

The Evening Service.

Precursor, Rev. H. C. Foreman, M.A.

Choir Leader, Mr. V. Pearson, B.A.

Organist, Miss Constance Barbery, L.T.C.L.

Organ solo.

10.15 p.m.—Male Quartet:

"Holy Night" (Beethoven).

7 p.m.—Intrill and Invocation.

Hymn 113, "Guns, the joy of loving

smoke."

Prayer.

Hymn 124 "As with gladness men of old"

Chorus, "And the glory of the Lord" (Han-

dell).

Lesson, Luke 6: 12-13, Rev. A. J. Gould.

Solo, "Eternal Hope," Miss Quercia Wilson.

Vesper.

Invitations, Offering, and Anthem, "Glory

O God in the Highest."

Hymn, "The only touch of the hem of his

garment."

Sermon, Rev. H. C. Foreman, M.A.:

"Our Crowded House of Glorious Life."

Hymn, "Jesus, Lover of my soul."

Benediction and Vesper.

10.30 p.m.—From the Grand Records, Manly

Beach: A programme by the Manly Municipal

Band, conducted by Mr. James Phelan.

10.30 p.m.—From the Studio: The second ap-

pearance of the well-known English bar-

itone, Peter Gawthorne, who will give a Song

Recital of excerpts from the well-known

operas of the Georgian period.

10.42 p.m.—Selwyn Seymour, English soloist:

(a) "My Little Room" (Percy Walsh).

(b) "The King goes past" (Seymour).

10.50 p.m.—Peter Gawthorne, in concluding

part of the Song Recital of excerpts from

well-known Operas of the Georgian period.

10 p.m.—Selwyn Seymour, English soloist:

"Learning a Foreign Language" (Jerome

K. Jerome).

10.11 p.m.—National Anthem.

Announcement

Jefferson Transformers

No matter what circuit you wish to complete, there is a JEFFERSON Transformer that will bring you the highest possible degree of amplification. Right from the start put JEFFERSONS in your set—don't experiment—expert Radio Engineers after careful and exhaustive tests have found them perfect in every detail of construction. Distant stations are tuned in with ease, and you will be highly pleased with the extreme sensitivity, quietness and the freedom from distortion.



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2BL, SYDNEY

Sunday.

10.05 a.m.—G.P.O. Clock and chimes.
 10.40 a.m.—Special news service.
 11 a.m.—Service broadcast from Newtown Congregational Church, address by Rev. Messrs Maslin.
 12.15 p.m.—Close down.

AFTERNOON SESSION.

2 p.m.—G.P.O. Clock and chimes.
 2.1 p.m.—Special Session for Children in Schools.
 2.15 p.m.—A rental by courtesy of his Master's Voice Gramophone Company.
 2.45 p.m.—Information service.
 3 p.m.—G.P.O. Clock and Chimes. Close down.
 3.20 p.m.—G.P.O. Clock and chimes.
 3.51 p.m.—From The Studio.
 Bible Class conducted by Mr. W. "Calvo" Bradley.
 4 p.m.—From the Methodist Church, Rosalie. A pleasant hour with the Central Methodist Mission, Rosalie.
 4.30 p.m.—G.P.O. Clock and chimes. Close down.

EVENING SESSION.

6.35 p.m.—Children's service.
 6.50 p.m.—Organ recital broadcast from the Newtown Congregational Church.
 7 p.m.—Service broadcast from Newtown Congregational Church.
 8.00 p.m.—From the Studios.
 Broadcasters' Instrumental Trio.
 8.40 p.m.—Mr. Gordon Hooda, Flauto solo.
 8.47 p.m.—Miss E. Ross, Violin, concerto.
 8.54 p.m.—Mr. Maslin McMahon, violin solo.
 9.1 p.m.—Waltz, waltz, waltz, and waltzes by courtesy of Mr. C. J. Moran, Govt. Meteorologist.
 9.2 p.m.—Mr. Leslie McCallum, Bute solo.
 9.3 p.m.—Mr. Norman Wright, Flute.
 9.35 p.m.—Broadcasters' Instrumental Trio.
 9.58 p.m.—Mr. Gordon Hooda.
 9.53 p.m.—Miss Leslie McMahon.
 9.47 p.m.—Mr. Leslie McCallum.
 9.54 p.m.—Mr. Norman Wright.
 10.1 p.m.—Reprise of following day's programme.
 10.5 p.m.—Broadcasters' Instrumental Trio.
 10.16 p.m.—G.P.O. Clock and chimes.
 National Anthem.

2 UW, SYDNEY

Sunday

10.30 a.m.—Violin solo.
 "Gotta Getta Job" (Op. 21 No. 3).
 10.34 a.m.—Soprano solo.
 "The Last Chord" (Sullivan).
 10.43 a.m.—Orchestral selection.
 "The Thunder" March (Bouslog).
 10.41 a.m.—Studio selections.
 10.51 a.m.—Violin, solo and piano.
 "Simple Ave" (Thomson).
 10.57 a.m.—Orchestral selection.
 "In a clock state" (Orff).
 10.53 a.m.—Church choir with organ accompaniment.
 "The First Noel."
 11.4 a.m.—Band selection.
 "Morning" (William Tell Overture).
 11.8 a.m.—Tutor solo.
 "In Haste" (Lohengrin-Wagner).
 11.14 a.m.—Orchestral selection.
 "Aunt in the Black Forest."
 11.16 p.m.—Violin solo.
 "Introduction and Toccata Op. 45."
 11.22 a.m.—Studio selection.
 11.30 a.m.—Reprise of forward programmes.
 11.35 p.m.—Violin, solo, and piano.
 "Serenade" (Purcell).
 11.38 a.m.—Tutor solo.
 "The First Noel" (Master Alunne-Warner).
 11.39 a.m.—Band selection.
 "March of the Mitten Men" (Braz).
 11.43 a.m.—Studio selections.
 11.51 a.m.—Church choir, Organ accompaniment.
 "I'll come upon the midnight clear."

11.57 a.m.—Band selection.
 "Pastorale" (William Tell Overture).
 12.1 p.m.—Studio selections.
 12.13 p.m.—Soprano solo.
 "Lendini" (Leroux).
 12.15 a.m.—Studio and chime.
 12.50 p.m.—Close down.

NIGHT SESS-ON.

7 p.m.—Clock chimes.
 7.2 p.m.—Studio selections.
 7.30 p.m.—Miss Sylvia Churchill, Mezzo soprano:
 (a) "Loves Wish."
 (b) "Down Here" (Brahms).
 7.35 p.m.—Miss Mabel Ransbotham, violinist.
 "The Lord is my Light" (Allibon).
 (1) Selected.
 7.42 p.m.—Studio selections.
 7.52 p.m.—Douglas Rae, tenor:
 "The Lord is my Light" (Allibon).
 7.57 p.m.—Announcements.
 8 p.m.—Clock chimes.
 8.2 p.m.—Miss Mabel Ransbotham, violin solo.
 8.7 p.m.—Douglas Rae, tenor:
 "Elegie" (Massenet).
 8.11 p.m.—Studio selections.
 8.21 p.m.—Miss Sylvia Churchill, soprano:
 "Waters of the Minotanka" with violin obligato by Miss Mabel Ransbotham.
 8.25 p.m.—Miss Mabel Ransbotham, violin solo, selected.
 8.30 p.m.—Studio selections.
 8.40 p.m.—Miss Mabel Ransbotham, violin solo, selected.
 8.45 p.m.—Douglas Rae, tenor:
 "A Dream" (Bartlett).
 8.49 p.m.—Studio selection.
 8.54 p.m.—Miss Sylvia Churchill soprano:
 "Gloria Mena."
 8.58 p.m.—Announcements.
 9 p.m.—Clock chimes.
 9.1 p.m.—Reprise of forward programme.
 9.2 p.m.—Studio selections.
 9.30 p.m.—God Save the King.

3LO, MELBOURNE

Sunday.

MORNING SESSION.
 10.20 a.m.—Express train information.
 Bells from St. Paul's Cathedral.
 10.45 a.m.—MORNING SERVICE FROM ST. PAUL'S CATHEDRAL, MELBOURNE.
 Matins and Holy Communion (Choral).
 Sentences.
 Exhortation.
 Absolution.
 The Lord's Prayer.
 Versicles and Responses.
 The Venite.
 Psalm 94.
 Lesson.
 The Benedictus.
 Nicene Creed—Service (Stanford in A).
 SERMON: REV. PAT LEONARD, M.C. (Tex. H.).
 Hymn 248, "Ye Servants of the Lord" (A. and M.).
 The Prayer for the Church Militant.
 FROM THE STUDIO.
 12.15 p.m.—British official wireless news from Rugby.
 News from yesterday's papers.
 12.35 p.m.—Close down.

AFTERNOON SESSION.

2 p.m.—PLEASANT SUNDAY AFTERNOON FROM WESLEY CENTRAL MISSION, Lonsdale Street, Melbourne. Chairman, REV. DR. S. J. HOBAN:
 Hymn No. 47, "Light of the World."
 Prayer: Rev. J. H. Galt.
 Orchestral selection. (Mr. G. M. Williams, conductor).
 Hymn No. 51, "There's not a Friend like Us Lowly Jesus."
 Solo: Miss May Alberta.
 Orchestra.
 Solo: Miss May Alberta.
 Notice.
 Orchestra.
 ADDRESS: PROFESSOR W. A. OSBORNE.
 National Anthem.
 Benediction.
 Orchestra.
 4.50 p.m.—Close down.

EVENING SESSION.

6.30 p.m.—Answers to letters and birthday greetings by "BILLY BUNNY."
 6 p.m.—"THE FIED FIFERS" will give you a musical program.
 Organ and violin, "Andante" (Battista).
 Hymn, "It Came Upon the Midnight Clear."
 Solo, "The Serenade" with violin obligato. Carole, "Sweet."
 Violin solo, "Ave Maria" (Schubert).
 Carol, "The Mavis in Jerusalem."
 Solo, "The Living God."
 Hymn, "Gentle Jesus."
 6.25 p.m.—"BROTHER HILL" will chat to the children about "Safety First."
 6.40 p.m.—Bells from St. Paul's Cathedral.

NIGHT SESSION.

7 p.m.—EVENING SERVICE FROM COLLINS-STREET BAPTIST CHURCH.
 CHRISTMAS MUSICAL FESTIVAL.
 Minister, REV. W. D. JACKSON, B.A.
 Choir Director: MADAME ELLA KINGSTON.
 Organ: DR. W. G. PRICE.
 The Service will include the following—
 1. Sanctus: Carol, "The Hallowed Season comes again" (Morandi).
 2. Organ solo, "Overture."
 3. Two Chorals, "The Shepherds found Thee by night" (Shaw).
 (b) "King Wenecias."
 4. Solo, "Comfort ye My people" (Mansuet). Sung by Mr. Val Wolf.
 5. Soprano solo and chorus:
 "Silent Night" (Franz Gruber). (arr. by John E. West).
 Solo, Madame Ella Kingston.
 4. Organ solo, "The Holy Night" (Duck).
 7. Choir, Two choruses from the "Messiah": (a) "And the glory of the Lord."
 (b) "For unto us a Child is born."
 8. Solo, "But who may abide the day of His coming" ("Messiah").
 Sing by Mr. Ernest Sage.
 9. Choir, "All we like sheep have gone astray" ("Messiah").
 10. Organ solo, "Fantastic on a Christmas Tree" (Duck).
 11. "The Hallelujah Chorus."
 SERMON, REV. W. D. JACKSON, B.A. FROM THE STUDIO:
 Island Steamers announcements.
 8.20 p.m.—HAWTHORN CITADEL BAND'S Selection, "Gone from the Messiah."
 8.40 p.m.—J. HOWARD KING, baritone:
 "Se il Nigro" (La Ebreca) (Halvey).
 "Venella sinatra senti."
 8.47 p.m.—ELO, Melbourne, has much pleasure in introducing "CALLERA," who will chat with you about your handwriting.
 8.57 p.m.—MELBOURNE STRAIN QUARTET, programme arranged by Professor Bernard Helme:
 "Nigger Quartette" (Dvorak).
 "Two Idylls for String Quartette" (Frank Bridge).
 "The Quartette, 1st movement" (Bach-thoven).
 9.37 p.m.—HAWTHORN CITADEL BAND, Carols:
 "Hark the Herald Angels Sing."
 "While Shepherds watched their flocks."
 9.47 p.m.—J. HOWARD KING, baritone:
 "Dedication" (Franz).
 "Great Isis, great Isis," from the "Maple Leaf" (Mozart).
 9.54 p.m.—Announcements.
 The Royal Automobile Club of Victoria's SAFETY MESSAGE for today is for nobody has a right to be careless. Stop accidents!
 OUR GREAT THOUGHT: "If we were to fancy a wholly Christless world, it would be a world invaded by the spirit of Christmas—a bright, friendly, benevolent, generous, sympathetic, mutually helpful world. A man who is habitually mean, selfish, narrow, is a man without Christmas in the soul."—G. W. Curtis.
 10 p.m.—"GOD SAVE THE KING."

3AR, MELBOURNE

Monday.
11.0 a.m.—Special Xmas Season Service, transmitted from St. Andrew's Katz, Adelaide.

AFTERNOON SESSION.

Special Band Concert transmitted from the Ballarat Gardens by the City of Ballarat Memorial Band.

1.0 p.m.—Special Children's Hour, conducted by Mrs. Rabbit.

1.30 p.m.—Special Choral Service, transmitted from the Methodist Church, Sydney Road, Brunswick.

EVENING CONCERT SESSION.

7.30 p.m.—Brunswick Panatropo Entertainment, broadcast from Panatropo House, 322 Collins Street, Melbourne, by exclusive permission of Willis and Foster, Ltd., under the direction of the Panatropo Programme Committee.

8.11 a.m.—New Queen's Hall Orchestra, London (Conductor, Sir Henry Wood):
"Jesu Messias" (Saint Sannes).

8.12 p.m.—Mr. Josef Hoffman, International Pianist:
"Polemnia Militaire" (Chopin).

8.41 p.m.—Monsieur M. G. Thill, French Operatic Tenor:
"The Flower Song," from the Opera Carmen (Bizet).

8.45 p.m.—Monsieur Saescha Jacobson, Violin, "The Beauty" (Dvojak).

8.47 p.m.—Signora G. Arangi Lombardi, Italian Prima Donna:
Aria from the Opera "La Forza del Destino" (Verdi).

8.55 p.m.—Mr. William Thomas (with Quartet Party):
"Love's Old Sweet Song" (Malloy).

8.58 p.m.—The Halle Orchestra, London (Conductor, Sir Hamilton Harty):
"Solemn Melody" (Davies).

9.0 p.m.—Mr. Frank Mann, Tenor:
"One Alone" (Blenker).

9.5 p.m.—Mr. Quentin M. MacLean, Organ:
"Classical Selection, 1st Movement" (Monsieur Berlin).

9.55 p.m.—Mr. Kenneth Walters, Baritone:
"When the Sergeant-Major's on Parade" (Longstaffe).

10.1 p.m.—The Merry-makers Light Opera Chorus:
"The Merry-makers in Spain" (Haaschen).

10.15 p.m.—His Majesty's Grenadier Guards Band, (Conductor, Lieut. George Millett):
English Selection, "The Rose" (1st Movement).

10.18 p.m.—Mr. Josef Hofman, International Pianist:
"Maidy in F" (Rubinstein).

10.30 p.m.—Monsieur M. G. Thill, French Operatic Tenor:
Cavatina from the Opera, "Boris and Inlet" (Gounod).

10.35 p.m.—Monsieur Saescha Jacobson, Violin:
"The Song of Songs" (Mey).

10.40 p.m.—Mr. William Thomas (with Quartet Party):
"Eileen Aishann" (Thomas).

10.43 p.m.—The Halle Orchestra (Conductor, Sir Hamilton Harty):
"A Trumpet Voluntary" (Purcell).

10.47 p.m.—Mr. Frank Mann, Tenor:
"The Little White House" (Halsey), by request.

10.50 p.m.—Mr. Quentin M. MacLean, Organ:
"Classical Selection, 2nd Movement" (Cowell).

10.54 p.m.—Mr. Kenneth Walters, Baritone:
"The Company Sergeant-Major" (Sanderson).

11.0 p.m.—The Merry-makers' Light Opera Chorus:
"The Merry-makers in Hawaii" (Haaschen).

11.5 p.m.—The "Age" News Bulletin, exclusive to 3AR.

11.53 p.m.—Tomorrow's Entertainment.

11.55 p.m.—Final Weather Forecast.

12.1 a.m.—Our Australian Good-Night Quote is from: "A Sunset Fantasy," by Victor James Daley:

"To bend in hand we watch the sun
Burn down the Western slope,
Dreaming a charm'd dream, as one
Who in enchantment sleeps:
A dream of how we watch some day,
Careless of morn or eart,
Will both take ship and sail away
Into the sunset's best."



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Wireless Department, Ground Floor, New Building.

FARMER'S

Pitt, Market and George Streets.

4QG, BRISBANE.

Sunday.

MORNING SESSION.

INTERNATIONAL BIBLE STUDENTS' ASSOCIATION.

10.30 a.m.—FROM THE SCHOOL OF ARTS:

Overture.
Hymn No. 116: "I Love to Tell the Story."
Prayer.
Announcements.
Solo: "Thanksgiving"; Mrs. Power.
Scripture Reading.
Children's Hymn: "I Came upon the Midnight Clear."
Address: "A Message for the People."
Mr. Alec McDullooh.
Solo: "The Sorrows of Death had Gathered" (Mendelssohn).
Mr. W. Donald.
Hymn No. 65: "God has promised a Christmas Day."
Benediction.

12.30 p.m.—Close down.

AFTERNOON SESSION.

EXCELSIOR BAND.

2.15 p.m.—FROM THE BOTANIC GARDENS: Band Concert.

NIGHT SESSION.

The complete Evening Service will be relayed from Ann Street Presbyterian Church.
7 p.m.—FROM ANN STREET CHURCH:
Organ Prelude by Mr. Archie Day, P.T.C.L.
Children's Hymn, 569: "The World Looks Very Beautiful".
Bible Story.

Children's Hymn 563: "Do no sinful action."
7.30 p.m.—Bible story.

Innovation, and Lord's Prayer.
Hymn 395: "Hark! hark! my soul."
Invitations and Offertory.
Solo, Miss Grace Evans.

Antiphon.
Prayer.
Hymn 15: "The Spacious Firmament on high."

Benediction. The Rev. J. Cook, B.A., D.D.
Prayer.

Hymn 332: "Sun of My Soul."
Benediction.

Vesper Hymn.
Organ Postlude.
At the conclusion of the Church Service the Concert by the Brisbane Municipal Concert Band will be relayed from Wickham Park.

8.30 p.m.—FROM WICKHAM PARK:
Band Concert.

9.30 p.m.—Close down.

5CL, ADELAIDE

Sunday.

MORNING SESSION.

10 a.m.—G.P.O. chimes.
11.1 a.m.—Divine service from Maughan Church.
12 noon (approx.)—Close down.

AFTERNOON SESSION.

3 p.m.—G.P.O. chimes.
3.1 p.m.—Relay from Maughan Church:
Soloist:
Elnie Woolley.
Walter Wood.
Rabia Givelli.
4 p.m.—Close down.

EVENING SESSION.

6.30 p.m.—G.P.O. chimes.
6.35 p.m.—Carillon of Bells from Walkerville Church.
6.45 p.m.—Sunday stories for children.
7 p.m.—Chimes.
7.15 p.m.—Choral Service—Handel's Messiah, by the Masters' Methodist Choir under the direction of Fred Pilgrim.
Programme:
Miss Phyllis Webb.
Miss Jay Watson.

Controls:
Miss Una Andrew, A.M.U.A.
Miss Martha Virgo.

Tenor:
Mr. Lindsay Jessup.
Mr. Louis Dave.
Bass: Mr. Arnold Masters.
Organist: Mr. Fred Pilgrim.
8.30 p.m.—Relay from the Henley Beach Rotunda. Band selections by Holden's Sinner Band.
9.30 p.m.—Talk by Mr. P. H. Nicholls: "Charles Dickens."
9.45 p.m.—Meteorological information.
9.55 p.m.—National Anthem. Station announcements and close down.

6WF, PERTH.

Sunday.

MORNING SESSION.

10.40 a.m.—Tune in.
11 a.m.—Morning church service relayed the Congregational Trinity Church, St. George's Terrace, Perth.
12.15 p.m.—Close down.

AFTERNOON SESSION.

1.30 p.m.—Tune in.
FROM THE STUDIO:
3.35 p.m.—Musical programme, including vocal and instrumental extracts.
4.30 p.m.—Close down.

EVENING SESSION.

7 p.m.—Tune in.
10.5 METRE TRANSMISSION.
The evening transmission is broadcast on 10.5 metres as well as the usual wavelength.
7.5 p.m.—Children's bedtime stories, by Mr. Robert Edmondson.
8.30 p.m.—Evening church service relayed from Lake Street Church of Christ, Perth.
Preacher: Mr. Chas. Newsh.

A RELAY.

8.45 p.m.—After-church service relayed from Queen's Hall, William Street.
10.1 p.m.—Close down.
10.5 METRE TRANSMISSION.
Simultaneous broadcast on 10.5 metres of programme given in 1250 metres, commencing at 7 p.m.

7ZL, HOBART

Sunday.

MORNING SESSION.

11 a.m.—Church Service from Chalmers' Presbyterian Church.
Frescher, Rev. H. Carroll.
Close down.

AFTERNOON SESSION.

2.30 p.m.—G.P.O. Chime Chimes the Hour.
3.31 p.m.—Musical Sunday Afternoon Concert from the Studio.
4.30 p.m.—Close down.

EARLY EVENING SESSION.

6.30-7 p.m.—Children's Corner with the "Sunday Lady."

NIGHT SESSION.

7 p.m.—Church Service from Memorial Congregational Church, Hobart.
Frescher, Rev. Arthur C. Neilson.
At conclusion of Church Service, Concert from the Studio or Band Concert from St. David's Park.
6.40 p.m.—"Mercury" special interstate news service.
British Official Wireless News.
Ship with wireless range.
9 a.m. Weather forecasts.
Station announcements: To-morrow's programme.

Monday, Dec. 19
2FC, SYDNEY.

EARLY MORNING SESSION

7 a.m. to 8 a.m.

MORNING SESSION

10 a.m. to 11.30 a.m.

MIDDAY SESSION

12 noon—"Big Ben" and announcements.
12.2 p.m.—Stock Exchange, first call.
12.3 p.m.—Weather forecast, rainfall.
12.5 p.m.—Studio music.
1.10 p.m.—Summary of "Sydney Morning Herald" news service.
1.25 p.m.—Rugby wireless news.
1.30 p.m.—Studio music.
1.40 p.m.—Annie Payne, mezzo.
1.45 p.m.—Studio music.
1 p.m.—"Big Ben" news service.
1.2 p.m.—Evening News' midday news service.
1.50 p.m.—Studio music.
1.58 p.m.—Studio music, second call.
1.59 p.m.—Studio music.
1.40 p.m.—Annie Payne, mezzo.
1.45 p.m.—Studio music.
2 p.m.—"Big Ben" Close down.

AFTERNOON SESSION.

3 p.m.—"Big Ben" and programme announcements.
3.3 p.m.—A Recital of Christmas records.
3.11 p.m.—A musical act by Cliff Bell.
3.15 p.m.—Katherine Beverley, soprano.
3.25 p.m.—"Tune, my Dear" (Spray).
3.35 p.m.—Continuation of the Recital of Christmas records.

EVENING SESSION.

8 p.m.—Irene Simpson, soprano.
8.15 p.m.—Katherine Beverley, soprano.
8.45 p.m.—Harry Jackson, baritone.
8.50 p.m.—Studio music.
8.58 p.m.—Percy Butler, soprano.
9.2 p.m.—Cliff Bell in a musical act.
9.12 p.m.—Katherine Beverley, soprano.
9.15 p.m.—"If we sailed away" (Phillips).
9.16 p.m.—Valerie Chassell, soprano.
9.20 p.m.—Harry Jackson, baritone.
9.25 p.m.—Irene Simpson, soprano.
9.30 p.m.—"You" (Harry).
9.30 p.m.—Studio music.
9.35 p.m.—Lionel Lint, English baritone.
9.40 p.m.—Percy Butler, soprano.
9.45 p.m.—Stock Exchange, third call.
9.47 p.m.—Studio music.
9.50 p.m.—Valerie Chassell, soprano.
9.54 p.m.—Lionel Lint, English baritone.
9.58 p.m.—"Big Ben" Close down.

EARLY EVENING SESSION.

5.40 p.m.—The chimes of 2FC.
5.45 p.m.—The "Hello Man" talks to the children.
6.15 p.m.—Story time for the young folk.
6.40 p.m.—Studio music.
7 p.m.—"Big Ben" Late sports news.
7.10 p.m.—Dulgey's market reports (wheat, wheat and stock).
7.18 p.m.—Fruit and vegetable markets.
7.30 p.m.—Weather and shipping news.
7.38 p.m.—"Evening News" late news service.

NIGHT SESSION.

7.45 p.m.—Programme announcements.
7.45 p.m.—From the Randwick Military Hospital, a programme organised by Station 2FC in connection with the Annual Christmas Concert given to the Soldiers: The North Sydney Orchestra.
Russell Rice, baritone.
(a) "Le Coq" (Flegles).
(b) "Tally Ho" (Franco Lomi).
Charles Lawrence, cello/contrabass.
The Orpheus Glee Club.
Carlton Fox, solo pianist.
Ben Garland and "Jerry," ventriloquist act.
Bryson Taylor, tenor.
"Mah Lindy Lou" (Strickland).

The North Sydney Orchestra.
Gwen Selva, soprano.
Charles Lawton, clarinetist.
Russell King, bassoon.
(a) "Though Faithless Men" (Halvey).
(b) "Sea Fever" (Arnold).
Carlton Fay, solo pianist.
The Orpheus Glee Club.
Rus Garling and "Jerry."
Bryson Taylor, tenor.
"Mandoline" (Carrollers).
Charles Lawton, entertainer.
Gwen Selva, soprano.
The North Sydney Orchestra.
At 9 p.m. approx.—Latest weather forecast.
During the interval at the Randwick Military Hospital Orchestral items will be given from the Studio.

8.45 p.m.—From the City—
Mr. Horace Keats will conduct a new formed Orchestra of 18 players, known as the 2FC Orchestra, which will play on Monday and Thursday of each week.
Listeners are invited to write to the Studio and state what numbers they wish to hear when every effort will be made to fulfil their requests.

The 2FC Orchestra:
(a) Overture, "The Merry-makers" (Coates).
(b) Suite, "Six Waltzes" (Brahms).
(c) Prelude, Op. 28, No. 17 (Chopin-Dumas).
10 p.m.—"Big Ben."

Norman Janson, baritone.
10.15 p.m.—The 2FC Orchestra, conducted by Mr. Horace Keats:
(a) Selection, "The Merry Widow" (Lehar).
(b) Suite, "Four Pages" (Sumner-Dale).
10.25 p.m.—Norman Janson, baritone.
10.35 p.m.—Latest weather forecast.

10.45 p.m.—The 2FC Orchestra (Mr. Horace Keats, conductor):
(a) Quintette, "Meistersingers" (Wagner).
(b) Waltz, "Rose Marie" (Prinzl).
10.55 p.m.—Norman Janson, baritone.
11.01 p.m.—The 2FC Orchestra:
"Musical Gems" (Tschakowsky).

11.07 p.m.—Late news and announcements.
11.10 p.m.—"Big Ben."
National Anthem.
Close down.

2BL, SYDNEY

Monday.

EARLY MORNING SESSION. 7 to 9 a.m.

MORNING SESSION.

10.00 a.m.—G.P.O. Clock and chimes.
Musical programme from the Studio.
10.45 a.m.—News from the "Daily Telegraph Victoria."
10.50 a.m.—Musical programme from the Studio.
11 a.m.—G.P.O. Clock and chimes.
Announcements.
11.5 a.m.—Musical programme from the Studio.
11.15 a.m.—Women's Section.
Talk on "Camping," by Miss Gwen Varley.
Broadcasters' Women's Sports Authority.
Social Notice. Replies to correspondents by Mrs. Jordan.
Talk on "Xmas Puodings" by Mrs. Jordan.
12 noon.—G.P.O. Clock and chimes.
Special news forecast and weather report.
12.3 p.m.—Musical programme from the Studio.
12.5 p.m.—Information—Mails, Shipping and port directory.
12.12 p.m.—Boats in call by wireless.
12.14 p.m.—Fruit market report.
12.16 p.m.—Vegetable market report.
12.18 p.m.—Dairy and Farm produce market report.
12.22 p.m.—Forage market report.
12.24 p.m.—Pork market report.
12.26 p.m.—Rabbit market report.
12.28 p.m.—Stock Exchange report.
12.30 p.m.—B.M.V. Gramophone Recital.
12.32 p.m.—Stock Exchange report.
1.30 p.m.—G.P.O. Clock and chimes.
Talk to children and special entertainment for children in Hospital.

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8 p.m.—G.P.O. Clock and chimes.
Close down.

AFTERNOON SESSION.

Racing information broadcast immediately after each race, by courtesy of the "Sun" Newspapers.

8 p.m.—G.P.O. Clock and chimes.
Musical programme from the Studio.

3:10 p.m.—News from the "Sun."

3:20 p.m.—Musical programme from the Studio.

3:30 p.m.—News from the "Sun."

3:40 p.m.—Dunegowan Dance Band, broadcast from the Dunegowan Hotel.

4 p.m.—G.P.O. Clock and chimes.
News from the "Sun."

4:30 p.m.—Musical programme from the Studio.

4:45 p.m.—Talk on "Women of the Orient of all Ages."

4:50 p.m.—Dunegowan Dance Band.

4:55 p.m.—News from the "Sun."

5 p.m.—Resume of night's programme.

4:57 p.m.—Racing resume.

4:59 p.m.—Special ocean forecast.

5 p.m.—G.P.O. Clock and chimes.
Close down.

EARLY EVENING SESSION.

8:30 p.m.—G.P.O. Clock and chimes.
Children's Session.

8:50 p.m.—Musical programme from the Studio.

SPECIAL COUNTRY SESSION

7 p.m.—G.P.O. Clock and chimes
Australian Meranville Land and Finance Co.'s Report
Weather report and forecast by courtesy of Government Meteorologist.
Producers Distributing Society's Fruit and Vegetable Market report.
Stock Exchange reports.
Grain and Fodder report ("Sun").
Dairy Produce report ("Sun").
Eucharistic Congress Notes
7:25 p.m.—Country news from the "Sun."
7:30 p.m.—Talk on "The Motor Car," by Mr. Martin.

EVENING SESSION.

8 p.m.—G.P.O. Clock and chimes.
Broadcasters' Typical Chorus
An hour's programme presented by Lindeman's Wines.

8:3 p.m.—Mr. Leslie Herford, baritone.
8:10 p.m.—Mr. Henri De Lisle, violinist.
8:17 p.m.—Madame Gossens Viceroy, soprano.
8:25 p.m.—The Newtown Band broadcast from Industrial Hall, Newtown.

8:30 p.m.—Madame Gossens Viceroy.
8:37 p.m.—Talk on Wine.
8:42 p.m.—From the Stadium. A description of the boxing contest by Mr. Walter Whitlow.
8:45 p.m.—Mr. Leslie Herford.
8:52 p.m.—Mr. Henri De Lisle.
9 p.m.—G.P.O. Clock and chimes.
Broadcasters all sports expert will talk on general sporting news.

10:15 p.m.—Resume of following day's programme weather report and forecast by courtesy of Mr. C. J. Maree, Govt. Meteorologist.

10:25 p.m.—Dance music by Danny Heenan's Frisco Six transmitting from the ballroom of the Hood, Casino.

11 p.m.—G.P.O. Clock and chimes.
National Anthem.

2 UW, SYDNEY

Monday.

MORNING SESSION.

9 a.m.—News, shipping, mails, studio items.
9:45 a.m.—Women's session.
9:58 a.m.—Resume of forward programme.
10 a.m.—Close down.
10:15 p.m.—Special employees Teachers' session.
12:45 p.m.—Close down.

AFTERNOON SESSION.

2 p.m.—Studio selections.
2:55 p.m.—Resume of forward programme.
3 p.m.—Close down.

3 p.m.—EVENING SESSION.

5 p.m.—Studio items.
5:59 p.m.—Resume of forward programme.
6 p.m.—Close down.

NIGHT SESSION.

7 p.m.—Studio chimes.
7:2 p.m.—Where to Go.
7:10 p.m.—Professor C. Sauer, pianoforte solo:
"Phonnie in D" (Webster).
7:16 p.m.—Gordon James McDonald, tenor:
"Elegance" (Coleridge).
7:20 p.m.—Kathleen Eckott, soprano:
(a) "I was dreaming" (Janetler).
(b) "I hear you singing."
7:27 p.m.—Lillian Joyce, soprano:
(a) "The Three my Love."
(b) "Swains Song" (Hovell).
7:35 p.m.—Professor C. Sauer, students String ensemble, selected.
7:41 p.m.—Ladies Students' choir with orchestra.
7:42 p.m.—"On Departure" (Axt).
7:47 p.m.—Gordon James McDonald, tenor, selected.
7:50 p.m.—Jean Edwards, soprano:
(a) "Serenade" (Shubert).
(b) "The Street still elms" (Eberster).
7:57 p.m.—Resume of forward programme.
7:59 p.m.—News item.
8 p.m.—Clock chimes.

8:2 p.m.—Ester McAlpin, contralto:
"Come to me, then" (Sauer).
8:7 p.m.—Professor C. Sauer, violin solo:
"Pine Song" (Mastersingers/Wagner).
8:14 p.m.—Kathleen Eckott, soprano:
"Selected."
8:18 p.m.—Lillian Joyce, contralto:
(a) "A Sheepfold Song" (Ronald).
(b) "Cradle Song" (Krepler).
8:25 p.m.—Madame Arline Sauer, piano solo, selected.

8:30 p.m.—Jean Edwards, soprano:
"Musetta's Song" (La Boheme/Puccini).
8:38 p.m.—Ester McAlpin, contralto:
(a) "Moinlein in the Wood" (Goetz).
(b) "Cradle Me Low" (Brasch).
8:42 p.m.—Professor C. Sauer, violin solo:
(a) "Oriental Scene" (Sauer).
(b) "Aria on the G. String" (Laska).
8:50 p.m.—Gordon James McDonald, tenor, selected.
8:54 p.m.—Jean Edwards, soprano:
"Violeta" (Wright).
Violin obligato by Professor C. Sauer.
8:58 p.m.—News items.
9 p.m.—Clock chimes.

9:5 p.m.—Mr. Norman Goode:
"My First Impression of Colonel T. E. Lawrence's Unconquered King of Arabia."

9:17 p.m.—Weather forecast and news items.
9:25 p.m.—Studio items.
9:30 p.m.—God Save the King.

3LO, MELBOURNE.

Monday

MIDDAY SESSION.

12 noon.—Melbourne Observatory Time Signal.
12:10 p.m.—British official wireless news from Bombay, Reuters's and the Australian Press Association cables. "Argus" news service.
12:20 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS:
"Joy Ball" (Friend).
"Just the Same" (Donaldson).
"Go Wash an Elephant" (Terket).
12:29 p.m.—VAUDE AND VERME, entertainers:
"Gags and Giggles."

12:38 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS:
"Nevada" (Nichols).
"The Birth of the Blues" (Henderson).
"The Wind Blew Through His Whiskers Just the Same" (Conrad).
12:48 p.m.—Stock Exchange information.

12:51 p.m.—JOHN D. FITZER, baritone, by permission of J. C. Williamson, Ltd.:
"Lullima Canone".
"The Little Dove".

12:58 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS:
"Sweetie o' Mine" (O'Hagan).

1 p.m.—Melbourne Observatory Time Signal.
Remember this: "That there is a proper dignity and proportion to be observed in the performance of every art of life—don't slump through life, look upwards and onwards."

1:1 p.m.—Description of INTER-STATE CRICKET MATCH, Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.

FROM THE STUDIO:

1:10 p.m.—VERA SPAULI, contralto (by permission of J. C. Williamson, Ltd.):
"Bliss of the Blues."
"Me Too."

1:17 p.m.—Meteorological information. Weather forecast and rainfall for Victoria, Tasmania, South Australia and New South Wales. Ocean forecasts. River reports.

1:24 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS:
"Oh, What a Pal was Whooza" (Kahn).
"Slow Down" (Rolo).
1:30 p.m.—JOHN D. FITZER, baritone (by permission of J. C. Williamson, Ltd.):
"Violeta."
"The Lonely Cavalman."

1:37 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS:
"Cheerio Heerio Boo from Sunny Italy" (Lester).
"Nina" (Denise).
"Miss Annabelle Lee" (Clare).
1:40 p.m.—VERA SPAULI, contralto (by permission of J. C. Williamson, Ltd.):
"Be River."
"Lucky Day."

1:52 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS:
"Whisper Cream" piano solo (Lester).
"My Trouble Down Cottage of Dreams" (Lester).
"I Walked Back from the Ruzer Ride" (Adams).

2 p.m.—Close down.

2:15 p.m.—Description of INTER-STATE CRICKET MATCH, Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.

2:30 p.m.—Close down.

2:50 p.m.—Description of INTER-STATE CRICKET MATCH, Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.

AFTERNOON SESSION.

3 p.m.—Melbourne Observatory Time Signal.
3:1 p.m.—STUDIO QUARTET:
"Gigue, Hungarian Lullaby" (Scriabin).
3:10 p.m.—MRS. DOROTHY SILK:
"Hummerita."
3:15 p.m.—HELENALD BRADLEY, violin:
Gypsy Dance, "Zigenweisen" (Sarcasti).
3:22 p.m.—MARIE MAGAN, soprano:
"Le Cloche" (Lalo).
"Sing not, fair Christiana Maid."

3:45 p.m.—STATION TRIO:
"Hungarian Dance, No. 1" (Brahms).
3:50 p.m.—Description of INTER-STATE CRICKET MATCH, Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McGregor.

4 p.m.—FROM THE STUDIO:
4 p.m.—Supersophisticated Scena Recital:
"Hungarian Dance."
4:15 p.m.—MARIE MAGAN, soprano:
"Hymn au Soleil" (Bachmannoff).
"Chanson Indoue" (Bachmannoff).
4:17 p.m.—STUDIO QUARTET:
"Hungarian Dance, No. 3" (Brahms).
4:30 p.m.—MISS FLORA PELL, Inspector of Schools:
"Domestic Science."
4:45 p.m.—"Herald" news service.
Stock Exchange information.

5 p.m.—Description of INTER-STATE CRICKET MATCH, Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McCreger.

5.15 p.m.—Close down.

EVENING SESSION.

5.30 p.m.—Acceptance for Wednesday's races at Lancelot.

5.35 p.m.—"LITTLE MISS KOOKABURRA." "Mary Happy Returns of the Day," and "Thank you for your letters, Children."

6 p.m.—Description of INTER-STATE CRICKET MATCH, Victoria v. Queensland, at Melbourne Cricket Ground, by Mr. Rod McCreger.

FROM THE STUDIO:

6.7 p.m.—STUDIO QUARTET:

"Bird Songs at Eventide" (Coates).

6.11 p.m.—LITTLE MISS KOOKABURRA has a special Xmas programme for you Kookaburras all about Billy's and Nellie's delightful Xmas morning.

6.40 p.m.—Official report of the Newmarket Stock Sales by the Associated Stock and Station Agents, Bourke Street, Melbourne. Number of sheep and cattle drawn for week's sale.

6.45 p.m.—"Herald" news service. Weather synopsis, shipping movements.

6.50 p.m.—Stock Exchange information.

6.57 p.m.—Fish Market reports by J. H. Burnett, Ltd. Bahili prices.

6.59 p.m.—River reports.

7.3 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd. Poultry, Grain, Hay, Straw, Jute, Dairies, Potatoes and Onions. Market reports of fruit by the Victorian Fruitgrowers' Association. Retail prices. Wholesale prices of fruit by the Wholesale Fruit Merchants' Association, Christy Fruits.

NIGHT SESSION.

7.15 a.m.—MR. CLARENCE WEBER:

"A Chair on Physical Culture."

7.42 a.m.—MR. E. C. H. TAYLOR will talk

"12 power Australia."

"School Life and School Sport."

7.45 a.m.—MR. C. BERGMER, (Middle Distance Professional Champion of the World, will speak on

"Remaining Broad Jump."

"HENCE, LOATHED MELANCHOLY."

8 p.m.—SPECIAL ENGAGEMENT by 110

members of the famous English HUMPHREY

BISHOP COMEDY AND OPERATIC COM-

PANY, featuring a specially attractive

programme by the entire company.

OVERTURE, featuring DOBIE BIRT

(Pianist), FRANK ROAN (Violinist),

TOM HARDIN (Conductor), and CHARLES

STEWART (Drummer).

8.4 p.m.—HUMPHREY BISHOP introduces his

company.

8.7 p.m.—RAGTIME ENSEMBLE, "They call

it dancing," featuring ALAN KITSON,

MARIE LONDON, and the COMPANY.

8.9 p.m.—JOHN MONTCORY and WALTER

KINGSLEY will sing "The Watchman."

8.13 p.m.—COMEDY INTERLUDE, featuring

GEORGE (Scratch) ROSS, assisted by

CHARLES ALBERT.

8.15 p.m.—MARIE LONDON and the

GENTLEMEN in "The Black-Hand Gang."

8.19 p.m.—ARTHUR HEMSLEY and ELAINE

MAYE as "Two Cockneys at the Football

Match."

8.23 p.m.—DAEIL DEAN in Light Comedy at

the Piano.

8.25 p.m.—THELMA TROTT and ELAINE

MAYE, featuring "What can I say after I

say I'm sorry."

8.33 p.m.—ALAN KITSON and MARIE LAN-

DON, featuring:

"Six Feet of Pank"

"Marche Hongroise."

"Take your Finger out of your Mouth."

8.47 p.m.—ARTHUR HEMSLEY, the Doleful

Lancashire Connoisseur.

8.53 p.m.—CECILIE ATTIBERT, MARIE

LONDON, THELMA TROTT and ELAINE

MAYE in Picturesque Harmony.

9 p.m.—CHARLES ALBERT, the Doleful

Canadian.



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4QG, BRISBANE

Monday.

MIDDAY SESSION.

- 11.00 a.m.—Market reports; weather information supplied by the Commonwealth Weather Bureau. News sections supplied by "The Daily Mail" and "The Daily Standard".
11.30 a.m.—Lunch hour music.
1.15 a.m.—Standard time signal.
1.30 a.m.—Close down.

AFTERNOON SESSION.

- 2.30 p.m.—Afternoon tea music.
4.15 p.m.—News service supplied by "The Telegraph".
4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 6 p.m.—News service supplied by "The Daily Standard".
6.10 p.m.—Lecturette: NIL.
6.30 p.m.—The children's session—stories by "The Sandman".
7 p.m.—Market reports; stock reports.
7.30 p.m.—Weather news; "Daily Standard" news.
7.45 p.m.—Standard time signal.
8.45 p.m.—Lecturette: NIL.

NIGHT SESSION.

The first portion of to night's programme will comprise a recital by the City Tabernacle Choir (conductor, Mr. Sydney May).

- 8 p.m.—FROM THE CITY TABERNALE CHOIR:
"The Heavens are Telling" (Haydn)
The Choir.
Duet: "Pickle-hered Mint" (Puccini).
Messrs. W. Donald and E. Herzer.
Anthem: "Father of Mercies" (Weitz).
The Choir.
Song: "Dun's Harry" (Sanderson).
Miss Ethel Howe.
Carol: "Legend" (Tschakowsky).
The Choir.
Recit.: "Comfort Ye" (Handel).
Every Valley (Handel).
Mr. Jack Land.
Chorus: "Terns" (Bullard).
The Choir.
Duet:
"It Was a Lover and His Lass" (Waggon).
Mrs. E. McOnigley and Mr. V. Westcott.

- Anthem: "Like a Father" (Marian).
The Choir.
Duet: "The Voyageurs" (Sanderson).
Miss Blanche Garnow and Mr. Frank Currow.
Chorus: "Miserere" (Vardi).
The Choir.
Song: "Meadow Sweet" (Batten).
Miss Mae King.
Anthem: "O Love the Lord" (Harris).
The Choir.

PART II.—PIANOFORTE RECITAL.
The second portion of the programme will comprise a pianoforte recital by Mr. Erich John.

- 9 p.m.—FROM MR. ERICH JOHN'S STUDIO:
"Organ Fantasia" and "Fugue" (Bach-Liszt).
Mr. Erich John.
Duet solo: "The Gladiator" (Alama).
Mr. Stanley Tambling.
Pianoforte solo:
(a) "Fantasia Impromptu," Opus 66 in C-Sharp Minor (Chopin).
(b) "Dance of Opus 28, No. 18 in F-Sharp Minor (Chopin).
(c) "Waltz," Opus 18 (Chopin).
Mr. Erich John.

- Base solo:
"Song of the Bow" (Aylward).
Mr. Stanley Tambling.
Duet: solo:
(a) "Reflections in the Water" (Debussy).
(b) "The Girl with the Flaxen Hair" (Debussy).
(c) "Dance" (Debussy).
Mr. Erich John.

PART III.—STUDIO CONCERT.
The third portion of the programme will comprise a studio concert.

8.10 p.m.—WALTER KINGSLEY, the Kaimosi London Haritone, featuring:
"At Grenada Fair."
"Solam".

9.10 p.m.—GEORGE (Scratcher) ROSS.
8.25 p.m.—EXCERPT from IL TROVATORE.
Miserere Scene, THELMA TROTT, JOHN MONTFORT and THE COMPANY.
Aveil Chorus, THE COMPANY.

9.30 p.m.—JOYCE STAFF and CHARLES ALBERT, in a Comedy Sketch:
"Myself when Young."
"The Floral Dance".

9.54 p.m.—The Gentlemen in a Humorous Ensamble.

9.58 p.m.—MARIE LANDON and CECILIE ALDIBERT, assisted by JOYCE STAFF, in a Comedy Sketch: "After Tea."

10.00 p.m.—JOHN MONTFORT will sing:
"Wagner."

"I Heard You Go By."

10.2 p.m.—ARTHUR HUMSLEY and THELMA TROTT at the Seaside.

10.15 p.m.—CECILIE ALDIBERT will sing:
"Chorus."

10.18 p.m.—GEORGE (Scratcher) ROSS, assisted by MARIE LANDON, in a Comedy Sketch.

10.20 p.m.—THE ORIGINAL HUMPHREY BISHOP RAGTIME QUINETTE, featuring ALAN KITSON, JOHN MONTFORT, CHARLES ALBERT, and HUMPHREY BISHOP, in
"California."

"Oh, Miss Hannah".

10.26 p.m.—GRAND FINALE:
"Biddle-diddle."

THE FULL HUMPHREY BISHOP CO.

10.30 p.m.—"Argo" news service. Meteorological information. British official wireless news from Rugby. Island steamer movements.

The Royal Automobile Club of Victoria's Safety Messages for To-day is for PEDES-TRIANS: "There is safety a slip 'twixt cup and lip, and there are many places where you may slip also, in safety first."

At the conclusion of to-night's Stadium event, Mr. Norman McEwan will give a resume.

11 p.m.—OUR GREAT THOUGHT:
"The universal joy of Christmas is certainly wonderful. We cling to it when princes are born, or toll a mournful dirge when great men pass away. Nations have their red-letter days, their carnivals and festivals, but none in the world, and only once, the whole nation stands still to celebrate the advent of a He."

11.2 p.m.—JOE ARONSON and HIS SYN-OPAPATING SYMPHONISTS.

11.40 p.m.—GOD HAVE THE KING.

3AR, MELBOURNE

Monday.

MORNING NEWS SESSION.

11 a.m. to 12 noon.

MIDDAY CONCERT SESSION.

12 noon to 1 p.m.

Transmitted from Pentacore House, 282 Col-
lins Street (by exclusive permission of
Wills and Paton, Ltd.), on the Brunswick
Pentacore.

1 p.m.—Newmarket stock sales. Special
"Snap" report on the progress of this
morning's stock sales at Newmarket (by
courtesy of John Macannan and Co.) to
be repeated at 2.30 p.m. specially for our
country listeners.

1.3 p.m.—Close down.

MATINEE SESSION.

ORCHESTRAL CONCERT.

Reports Results.—During the afternoon, re-
sults of the races at the Ascot Ponies'
Meeting will be given and other informa-
tion as it comes to hand.

2.30 p.m.—Newmarket stock sales. Special
"Snap" program report direct from the
yards (by courtesy of John Macannan
and Co.).

2.31 p.m.—Studio Orchestra:
"The Cabaret Girl" (Kern).
"Nocturnal Nicker" (Zamengo).

2.41 p.m.—Miss Alice Mallon, soprano:
"Dearly Bred Song" (Rowley).
"The Cloch of Heaven" (Dunhill).

2.53 p.m.—Studio Orchestra:
"Schumann's Song" (Roberts).

2.59 p.m.—Miss Ethel Bowler, piano:
"Petite Serenade" (Schmitt).

2.13 p.m.—Studio Orchestra:
"Suite Andalusia" (Miramontes).
"Savoy Medley Medley" (Senners).

3.30 p.m.—Miss Alice Mallon, soprano:
"Ah, how delightful the morning" (Lionel).
Arie from Opera. "Le Cidre Pleureux".
Flourish from Opera. (Massenet).

3.51 p.m.—Studio Orchestra:
"Three famous pictures" (Waal).
"Serenade" (Driks).

3.51 p.m.—Mr. Norman Carter, entertainer:
"Circles of the Circle" (Bonnet).
"Harlequin History" (Cecil).

4 p.m.—G.P.O. clock says "Four."
4.1 p.m.—Second weather forecast.

4.3 p.m.—Announcements.
4.6 p.m.—Studio Orchestra:
"Eugene Onegin" (Tschakowsky).
"My desire" (Cradnan).
"Consolation" (Wood).

4.18 p.m.—Mr. Herbert Pettifer, viola:
"Hejre Kari" (Hobay).

4.22 p.m.—Studio Orchestra:
"Songs from the old folks" (Lake).

4.30 p.m.—Mr. Norman Carter, entertainer:
"Village blacksmith" (Robins).
"Mrs. Hobbs" (Robins).

4.46 p.m.—Studio Orchestra:
"Two Oriental Dances" (Crist).
"The Chase" (Smith).

4.53 p.m.—To-night's entertainment.
4.55 p.m.—Special racing report. Acceptances
and barrier positions for Moonee Valley
Haces, by "Daybreak".

5 p.m.—G.P.O. clock says "Five."
Close down.

CHILDREN'S SESSION.

6.30 p.m.—The Farmyard Five.

EVENING SESSION.

BALLARAT CHOIR AND ORCHESTRA.

7.30 p.m.—Amateur Sport. Special topical
sporting talk, arranged by Mr. H. R. Weir,
hon. sec. of the V.A.A.A.

7.40 p.m.—Mr. Horace Jno. Beck, secretary of
the National Safety Campaign, will continue
his interesting series of popular addresses.

7.50 p.m.—Newmarket stock sales.
8 p.m.—G.P.O. clock says "Eight."

8.1 p.m.—Special Christmas Gala Perfor-
mance of "The Messiah" (Handel). Trans-
mitted from the Coliseum, Ballarat, a
special performance of Handel's "Messiah"
by the Ballarat Choral Union (100 voices),
with full strength of the Ballarat Lyric
Orchestra.
Conductor: Mr. Walter Gude.
Organist: Miss Beatrice Voss.

Hon. Secretary: Mr. C. M. Heane.

10.10 p.m.—"Age" news bulletin, exclusive to
3AR.

10.38 p.m.—"Tomorrow's" entertainment.
10.58 p.m.—Final weather forecast.

10.59 p.m.—Our Australian Good-night couple
is from the poem, "The Crying Hearths,"
by Roderie Quiner:

"Still some things make our kinship sweet,
Some deeds inglorious but of royal worth,
As when with bareless arms and willing feet,
We felled the trees and filled the earth."

11 p.m.—G.P.O. clock says "Eleven."
God Save the King.

9.45 p.m.—FROM THE STUDIO:
Hawaiian instrumentalists:
The Alpha Novelty Trio.
Baritone solo:
Kashmir! Love Song" (Woodford-Fin-
den).
Mr. C. R. Astley
Ten Minutes of humor by the Mrhoney
Trio.
Bass solo: "The Blind Ploughman" (Clarke).
Mr. A. N. Falk
Hawaiian instrumentalists:
The Alpha Novelty Trio.
Bass solo: "Beloved Awake" (Hemery).
Mr. A. N. Falk
Hawaiian instrumentalists:
The Alpha Novelty Trio.
10.15 p.m.—"The Daily Mail" news; weather
news. Close down.

SCL, ADELAIDE

Monday.

MIDDAY SESSION.

12 noon to 2 p.m.

AFTERNOON SESSION.

2 p.m.—G.P.O. chimes.
8.1 p.m.—Orchestral selections from the
Maple Leaf Cafe.
9.15 p.m.—Orchestral selections from Toy
and Glenn's showrooms.
9.45 p.m.—Orchestral selections from Aradia
Cafe.
10.15 p.m.—S. C. Ward and Co.'s Stock
Exchange intelligence.
11 p.m.—G.P.O. chimes and close down.

EVENING SESSION.

8 p.m.—G.P.O. chimes.
8.1 p.m.—Dinner music from the Gwent
Garden Orchestra.
8.35 p.m.—Children's time.
8.45 p.m.—Reading greetings and answering
listener's correspondence.
9.00 p.m.—The Song of the Clock. Mary
Bartlett.
9.25 p.m.—Musical monologue, Uncle Miss.
9.35 p.m.—Mandolin selection, Headley Smith.
9.45 p.m.—Song, Lena Sigal.
9.55 p.m.—A story of a great Englishman.
9.55 p.m.—Market reports by A. W. Sandford
and Co., A. E. Hall and Co., Dalgooy and
Co., S.A. Farmers' Co-operative Union,
Taylor Bros., Retail Grocers' Association,
J. H. Young's special report on the to-
morrow market. Interstate Fruit and Produce
Market Co., Ltd., S. C. Ward and Co.'s
Stock Exchange intelligence.
9.55 p.m.—Extracts from "News Bulletin,"
supplied by Minkler for Markets and
Migration.
9.55 p.m.—Talk by Capt. R. E. Playford, Vic.
Command of Kaurassau, on "Peruta."
9.55 p.m.—Talk on Books, by Mr. Riley.
9.55 p.m.—G.P.O. chimes.
10.00 p.m.—Accompagnist, C. L. Bentley.
10.1 p.m.—Original humorous talk by the
"Twinkler" (Mr. F. J. Millar).
10.15 p.m.—Soprano solo, Linda Wald.
10.25 p.m.—Trio, Carlyle Jones, Hartley Wil-
liams, C. L. Bentley.
10.35 p.m.—Soprano solo, Linda Wald.
10.45 p.m.—Musical monologue, Thelma
Bauderston.
10.45 p.m.—Viola solo, Hartley Williams.
10.55 p.m.—Contralto solo, Myra Butler.
10.55 p.m.—Trio, Carlyle Jones, Hartley Wil-
liams, C. L. Bentley.
10.55 p.m.—Musical monologue, Thelma
Bauderston.
11 p.m.—G.P.O. chimes.
11.1 p.m.—Metrical information.
11.3 p.m.—Dalgny's wheat report.
11.5 p.m.—Contralto solo, Myra Butler.
11.5 p.m.—Cello solo, Carlyle Jones.
11.55 p.m.—Musical monologue, Thelma
Bauderston.
11.55 p.m.—Trio, Carlyle Jones, Hartley Wil-
liams, C. L. Bentley.

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9.30 p.m.—Terror solo, Howard Buercoche.
 9.35 p.m.—Banjo solo, Bert Woolley.
 9.40 p.m.—Terror solo, Howard Buercoche.
 9.44 p.m.—Trio, Carlyle Jones, Hartley, Wil-
 liams, C. L. Bentley.
 9.48 p.m.—Bass solo, Cyril Bradley.
 9.52 p.m.—Banjo solo, Bert Woolley.
 9.55 p.m.—Soprano solo, Thelma Baila.
 9.58 p.m.—Bass solo, Cyril Bradley.
 9.59 p.m.—Banjo solo, Bert Woolley.
 10 p.m.—G.P.O. chimes.
 10.1 p.m.—"Advertiser" news service.
 10.15 p.m.—Baritone solo, Lionel Clarke.
 10.19 p.m.—Pianoforte solo, C. L. Bentley.
 10.23 p.m.—Baritone solo, Lionel Clarke.
 10.40 p.m.—Relay from the Masonic De Dence,
 dance selections.
 10.55 p.m.—Tuesday's programme, Meteorological
 information.
 11 p.m.—G.P.O. chimes and National Anthem.

6WF, PERTH.

Monday.

12.30 p.m.—Tune in.
 12.35 p.m.—Markets, News, and Cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather news supplied by the
 Meteorological Bureau of Western Australia.
 1.15 p.m.—Studio Quintet, conducted by Mr.
 Ted Smith.
 2 p.m.—Close down.
 2.30 p.m.—Tune in.
 4.15 p.m.—Anderson Ten Concert relayed
 from the Carlton Cafe. Orchestral numbers
 by Mrs. Hugg's Symphonic Orchestra.
 Vocal items by assisting artists.
 Musical intelligence from the studio.
 4.50 p.m.—Close down.

EVENING SESSION.

6.15 p.m.—Tune in.
 104.5 METRE TRANSMISSION.
 The evening transmission is broadcast on
 104.5 metres as well as the usual wave-
 length.
 6.50 p.m.—Stories for the Kiddies by Uncle
 Henry and Duffy.
 7.20 p.m.—Solo, Marjole, news.
 7.40 p.m.—Talk by Lieut. Col. Le Souef,
 Director of the Zoological Gardens, South
 Perth: "The Acclimatisation of Animals
 and Birds."
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather news supplied by the
 Meteorological Bureau of Western Australia.
 Station announcements, such as alterations
 to programmes, etc.
 8.30 p.m.—CONCERT NIGHT.
 Musical programme, including vocal
 and instrumental solos.
 10 p.m.—Late news items by courtesy of "The
 Daily News" Newspaper Co.
 Chime within range entertainment.
 Weather report and forecast.
 10.30 p.m.—Close down.

104.5 METRE TRANSMISSION.

Simultaneous broadcast on 104.5 metres of
 Musical programme given on 1250 metres,
 commencing at 4.45 p.m.

7ZL, HOBART

Monday.

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

8 p.m.—G.P.O. Clock Chimes the Hour.
 8.1 p.m.—Tune in selection.
 8.5 p.m.—Hobart Stock Exchange Quotations.
 Weather information.
 Station announcements.
 9.10 p.m.—Selections by 7ZL Studio Trio:
 Voice, "Mon-tandis amour" (Bilault).
 Selection, "The Golden Morn" (Nouvelle).
 "Dankbegrü" (Verlaine).
 Solo, "Intermezzo" (Hone).
 Violin solo, Mr. E. J. McEann.

4.15 p.m.—Fashion Talk by "Aunt Edna." of
 Brownells, Ltd.
 4.20 p.m.—Close down.

EARLY EVENING SESSION.

6.40 p.m.—"Uncle Peter's" half-hour.
 7 p.m.—"Uncle Hector" talks to the children.

NIGHT SESSION.

7.30 p.m.—Musical selection.
 7.55 p.m.—Physical Culture Talk, by Lieuten-
 ant Reginald McKiscoe.
 7.10 p.m.—"Mercury" special Tasmanian news
 service.
 Tasmanian Auction Produce Sales.
 Weather information.
 Hobart Stock Exchange Quotations.
 8 p.m.—G.P.O. Clock Chimes the Hour.
 8.1 p.m.—Studio Concert under the direction
 of Mr. G. A. Jackson.
 8 p.m.—Talk on Tasmania, by Mr. E. T.
 Bennett, East and N.E. Coasts.
 9.40 p.m.—British Official Wireless News.
 9.50 p.m.—"Mercury" special interstate news
 service.
 Tasmanian District Weather Reports.
 9 p.m.—Weather forecast.
 Station announcements: to-morrow's pro-
 gramme.
 National Anthem.

Tuesday, Dec. 20 2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m. to 11.30 a.m.

MIDDAY SESSION.

12 noon—"Big Ben" and announcements.
 12.2 p.m.—Stock Exchange, first call.
 12.8 p.m.—Official weather forecast, rainfall.
 12.5 p.m.—Studio music.
 12.19 p.m.—Summary of "Sydney Morning
 Herald" news service.
 Rugby wireless news.
 12.30 p.m.—Studio music.
 12.40 p.m.—Ivy Dunstone, mezzo.
 12.45 p.m.—Studio music.
 1 p.m.—"Big Ben." Weather intelligence.
 1.0 p.m.—"Evening News" midday news ser-
 vice.
 Producers' Distributing Society's Report.
 1.20 p.m.—Studio music.
 1.25 p.m.—Stock Exchange, second call.
 1.30 p.m.—Studio music.
 1.40 p.m.—Ivy Dunstone, mezzo.
 1.45 p.m.—Studio music.
 2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

3 p.m.—"Big Ben" and announcements.
 3.1 p.m.—Miss Nichols, mezzo:
 "O Plover Divine" (Wood).
 3.7 p.m.—The "Radio Trio" (Leader, Mr.
 Ewart Chapple).
 3.17 p.m.—Anne Inelano, soprano
 3.30 p.m.—Dorothy Benbow, contralto.
 3.25 p.m.—Dorset Kent, English baritone.
 3.29 p.m.—Joyce Gillespie, soprano.
 3.30 p.m.—The "Radio Trio" (Leader, Mr.
 Ewart Chapple).
 3.40 p.m.—Hilda Nelson, soprano:
 "Wandering Why" (Clarke).
 3.45 p.m.—Abelina Lindeweer, mezzo:
 "Saint Nicholas Day in the Morning" (Mer-
 tin).
 3.50 p.m.—Studio music.
 Lionel Lunt, English baritone.
 3.58 p.m.—Ang. Lindawee, soprano.
 4.2 p.m.—The "Radio Trio" (Leader, Mr.
 Ewart Chapple).
 4.12 p.m.—Dorothy Benbow, contralto.
 4.15 p.m.—Studio music.
 4.24 p.m.—Thelma Lansdowne, mezzo:
 "What a wonderful world it would be"
 (Lark).

4.28 p.m.—The "Radio Trio" (Leader, Mr.
 Ewart Chapple).
 4.35 p.m.—Joyce Gillespie, soprano.
 4.42 p.m.—A popular record.
 4.45 p.m.—Studio music.
 Lionel Lunt, English baritone.
 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

6.40 p.m.—The chimes of 2FC.
 6.45 p.m.—The "Hello Man" talks to the chil-
 dren.
 6.50 p.m.—Story time for the young folk.
 6.58 p.m.—Studio music.
 The "Crackerjack" Trio.
 7 p.m.—"Big Ben." Late sporting news.
 7.10 p.m.—Dulgey's market reports (wheat,
 wheat and stock).
 7.15 p.m.—Fruit and vegetable markets.
 P.D.S. Poultry markets.
 7.22 p.m.—Weather and shipping news.
 7.28 p.m.—"Evening News" late news service.

NIGHT SESSION.

7.40 p.m.—Programme announcements.
 7.45 p.m.—Miss Goodie Reeve, well-known ac-
 tress returning to Sydney after a tour of
 America, and will give weekly talks deal-
 ing with theatrical and film life in America.
 8 p.m.—"Big Ben."
 From the Lyceum Theatre, Pitt Street, Syd-
 ney: Orchestral music.
 8.20 p.m.—Walter Kingsley, English operatic
 baritone.
 8.25 p.m.—The Metropolitan Band, conducted
 by Mr. John Palmer:
 (a) Quick march, "The Old Regiment"
 (Rimmer).
 (b) Grand fantasia, "Memories of Britain"
 (Rimmer).
 8.15 p.m.—Gladys Fimister, soprano:
 (a) "Do not go, my love" (Hagmann).
 (b) "Obstinatus" (Fontanaillac).
 8.40 p.m.—The Metropolitan Band:
 (a) Grand selection, "On Ball in Measura"
 (Verdi).
 (b) Two step, "O Listen to the Band" (Haw-
 kins).
 8.5 p.m.—Latest weather forecast.
 9.5 p.m.—Ernest Gibb in a Story Rental.
 (a) O. Henry's story, "The Gift of the
 Magi."
 (b) "The Work of Art," by the Russian
 writer, Anton Tchekhov.
 9.20 p.m.—Gladys Fimister, soprano:
 (a) "My World" (Geele).
 (b) "I Sometimes Wonder" (Rose).
 9.25 p.m.—From the Lyceum Theatre, Pitt
 Street, Sydney:
 Orchestral items.
 9.28 p.m.—From the Studio:
 Walter Kingsley, English operatic baritone.
 9.16 p.m.—The Metropolitan Band:
 (a) Waltz, "The Beautiful Blue Danube"
 (Strauss).
 (b) "Serenade" (Schubert).
 10.2 p.m.—Bertha Warren, soprano:
 (a) "A little Cook's Prayer" (Hope).
 (b) "The Dove" (Landon Ronald).
 10.10 p.m.—From the Ambassadors, Pitt Street,
 Sydney:
 The Ambassadors Dance Orchestra in popu-
 lar numbers; conductor, Mr. Al Hammer.
 10.25 p.m.—From the Studio:
 Bertha Warren, soprano:
 "Sing, Blackbird" (Montague Phillips).
 10.30 p.m.—Latest weather forecast.
 10.31 p.m.—From the Ambassadors, Pitt
 Street, Sydney:
 The Ambassadors Dance Orchestra.
 10.40 p.m.—From the Studio:
 Bertha Warren, soprano:
 "Rocking Song" (Jane Munn Spear).
 10.44 p.m.—From the Ambassadors:
 Popular numbers by the Ambassadors Dance
 Orchestra.
 10.57 p.m.—From the Studio:
 Late news and announcements.
 11 p.m.—"Big Ben."
 The Ambassadors Orchestra will play until
 11.48 p.m.
 NOTE: Intervals at the Ambassadors will
 be filled by musical items from the Studio.
 11.45 p.m.—National Anthem.

2BL, SYDNEY.

Tuesday.

EARLY MORNING SESSION.
7 a.m. to 8 a.m.

MORNING SESSION.

- 10.10 a.m.—G.P.O. Clock and chimes.
Musical programme from studio.
10.30 a.m.—News from the "Daily Telegraph" Editorial.
10.50 a.m.—Musical programme from the Studio.
11 a.m.—G.P.O. Clock and chimes. Announcements.
11.15 a.m.—Women's Section. Social Notes.—Reply to correspondents by Mrs. Jordan. Talk on "Toilet Hints" by Mrs. Jordan. Talk on "Legal Duties" by Mr. Douglas.
12 noon.—G.P.O. Clock and chimes.
Special Ocean Forecast and Weather report.
12.15 p.m.—Musical programme from the studio.
12.3 p.m.—Information. Mails, Shipping, and port directory.
12.11 p.m.—Boats in call by wireless.
12.35 a.m.—Fruit market report.
12.45 p.m.—Vegetable Market report.
12.57 p.m.—London Metal Market report.
12.59 p.m.—Dairy and Farm Produce Market report.
1.00 p.m.—FORAGE Market report.
1.24 p.m.—FISH Market report.
1.25 p.m.—Rabbit market report.
1.29 p.m.—Stock Exchange report.
1.30 p.m.—H.M.V. Gramophone rental.
1.37 p.m.—Stock Exchange report.
1.38 p.m.—G.P.O. Clock and chimes.
Talk to children and special entertainment for children in Hospital.
1 p.m.—G.P.O. Clock and chimes. Close down.

AFTERNOON SESSION.

- Radio information broadcast immediately after each race by courtesy of the "Sun."
1 p.m.—G.P.O. Clock and chimes.
News from the "Sun."
1.11 p.m.—Civil Service Stores Trio, direction, Miss de Courcy Bremer.
1.16 p.m.—G.P.O. Clock and chimes.
News from the "Sun."
1.40 p.m.—Musical programming from the Studio.
1.50 p.m.—News from "Sun."
1 p.m.—G.P.O. Clock and chimes.
Civil Service Stores Trio.
1.15 p.m.—Talk on "Women of the Orient of all ages."
1.30 p.m.—Musical programme from the studio.
1.39 p.m.—News from the "Sun."
1.40 p.m.—Review of cinema programme.
1.47 p.m.—Racing Resumes.
1.49 p.m.—Special Ocean Forecast.
1 p.m.—G.P.O. Clock and chimes.
Close down.

EARLY EVENING SESSION.

- 1.6 p.m.—G.P.O. Clock and chimes.
Children's Section.
6.30 p.m.—Musical programme from the studio.
SPECIAL COUNTRY SESSION.
7 p.m.—G.P.O. Clock and chimes.
Australian Mercantile Land and Finance Co's report.
Weather report and forecast by courtesy of Inst. Meteorologist.
Producers Distributing Society's Fruit and Vegetable Market report.
Stock Exchange report.
Cocoa and Cocoa report ("Sun").
Dairy Produce report ("Sun").
N.R.M.A. Talk.
7.15 p.m.—Country News from the "Sun."
7.30 p.m.—Talk by a member of the St. John Ambulance Association.
8 p.m.—G.P.O. Clock and chimes.
Broadcasters' Topical Chorus.
8.15 p.m.—Broadcasters' Light Orchestra under the direction of Mr. E. Knight Barrett.
8.17 p.m.—Mr. Staffed Beuifienhorst, bassoon.
8.15 p.m.—Mr. H. Vrede, clarinet solo.
8.23 p.m.—The Sydney Welsh Male Voice Choir.
8.32 p.m.—Miss Etelo Findlay, soprano.
8.30 p.m.—Mr. Norman Turner, cello/contrabass.
8.46 p.m.—Ms. Norman Wright, tenor.
8.55 p.m.—Broadcasters' Light Orchestra.

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3LO, MELBOURNE

Tuesday.

MIDDAY SESSION.

12 noon—Melbourne Observatory Time Signal.
 12.1 p.m.—Metals prices received by The Australian Metals and Metals Association from the London Metals Exchange—time day.
 Official wireless news from Rugby, Hunter's and The Australian Press Association bulletins. "Argus" news service.
 12.20 p.m.—ERNEST G. MITCHELL AND THE REGENT CONCERT ORCHESTRA will now render musical items composed by Frederick Hall, of Melbourne.
 March, "Rural Antecessors" (Frederick Hall).

Frederick "Dramatique," First Public Performance (Frederick Hall).
 12.30 p.m.—J. ALEXANDER BROWNE, Baritone, with the Regent Concert Orchestra: "Little Northern Window" (Frederick Hall).
 "Dear Heart of Mine" (Frederick Hall).
 12.37 p.m.—STOCK Exchange information.

12.40 p.m.—ERNEST G. MITCHELL AND THE REGENT CONCERT ORCHESTRA.
 Suite, "Lovers and Laces" (Frederick Hall).
 12.50 p.m.—ETHEL POMSLAW, soprano.
 "Viel d'Espoir" (Puccini).
 "L'ami chianano Mimì" (Puccini).

12.57 p.m.—SOLO FROM THE REGENT CONCERT ORCHESTRA:
 Violin, Concerto.
 Soloist, T. J. McArthur.

2.4 p.m.—Meteorological information.
 Weather forecast and rainfall for Victoria, Tasmania, South Australia, and New South Wales. Ocean currents. River reports.

1.15 p.m.—Description of Interstate Cricket Match, Victoria v. Queensland, at M.C.C., by Mr. Rod McGregor.
 FROM THE STUDIO.

1.20 p.m.—J. ALEXANDER BROWNE, baritone, with the Regent Concert Orchestra: "Come to the Fair" (Eustace Martin).
 "The Company Sergeant Major" (Gardner).

1.25 p.m.—ERNEST G. MITCHELL AND THE REGENT CONCERT ORCHESTRA.
 Abstract Tenth Suite, "Oroz."
 Soprano Solo: "The Little Northern Window," First Public Performance (Frederick Hall).

1.32 p.m.—ETHEL POMSLAW, soprano.
 "When Fair Time Begins" (Frederick Hall).
 "Love Comes But Once" (Fred Hall).
 1.45 p.m.—SAULDE AND VEBBE, Entertainers.
 "Christmas Chanticles."

1.55 p.m.—ERNEST G. MITCHELL AND THE REGENT CONCERT ORCHESTRA.
 Cello Solo, "Quasi Op. 17" (Frederick Hall).
 Soloist, Kitty Anderson.

2 p.m.—Close down.
 2.15 p.m.—Description of Interstate Cricket Match, Victoria v. Queensland, at M.C.C., by Mr. Rod McGregor.
 2.20 p.m.—Close down.
 2.45 p.m.—Description of Interstate Cricket Match, Victoria v. Queensland, at M.C.C., by Mr. Rod McGregor.

AFTERNOON SESSION.

3 p.m.—Melbourne Observatory time signal.
 3.1 p.m.—JOE ARONSON AND HIS SYNGO. OPERATING-SYMPHONISTS.
 "When Will We Meet Again" (Fiazzio).
 "Shan-Wan-Da-Mao" (St. Cyr).
 "Slutnam" (Nichols).

3.16 p.m.—"AU FAIT."
 "Commence Faut."
 3.25 p.m.—And Now, let us introduce you to BERNARD THOMAS, Tenor, in "Moonlight and Roses" (Moret).
 "Lolita" (Buxi-Peccini).

3.35 p.m.—JOE ARONSON AND HIS SYNGO. OPERATING-SYMPHONISTS.
 "In She My Girl Friend" (Yellan Dint).
 "I'm Going to Dance with the Grog Wait" (Brung Me) (Knoefe).
 "Ain't Got Nobody, and Nobody Care for Me" (Grubman).

3.41 p.m.—JESSIE IRWIN, Soprano: "Rosebud" (Arditt).
 "Love's Old Sweet Song" (Molloy).

3.45 p.m.—Description of Interstate Cricket Match, Victoria v. Queensland, at M.C.C., by Mr. Rod McGregor.

3.57 p.m.—CAPTAIN DONALD McLean: "More Piratical Persons."
 4.13 p.m.—BERNARD THOMAS, Tenor: "Adieu Marie."
 "Suzanne" (Moret).

4.18 p.m.—JOE ARONSON AND HIS SYNGO. OPERATING-SYMPHONISTS.
 "The Little House in Honeycomb Lane" (Dawling).
 "I Love the College Girls" (Lafte).
 "Classicans" (Piano Solo) (Jaffe).

4.28 p.m.—JESSIE IRWIN, Soprano: "I Wonder if You're Rose" (Slater).
 "The Woodcock" (Nevill).
 4.35 p.m.—MATRON MORELAND: "Mothercraft."

4.45 p.m.—"Herald" news service.
 4.55 p.m.—Description of Interstate Cricket Match, Victoria v. Queensland, at M.C.C., by Mr. Rod McGregor.
 5.00 p.m.—Close down.

EVENING SESSION.

4.30 p.m.—"MARY GUMLEAF" radiates "Maisy Happy Returns" and "Thanks for all your Letters."
 5.00 p.m.—Mr. ROD McGREGOR will describe to the children the final of today's great cricket match, Victoria v. Queensland, from M.C.C.

6 p.m.—"MARY GUMLEAF" continues the Greetings.
 6.7 p.m.—CHILDREN'S CONCERT, arranged by Mr. M. FRITZ HART.
 MARY HOTHAM, mezzo-soprano.
 "O! How Delightful" (Loseel and Clarissa) (Reynolds).

"Come, Ye Pining Finnish Lovers" (Loseel and Clarissa) (Vind).
 "Gone Your Funnin'" (Beggars Opera) (Gay).
 IDA SCOTT, Flauto.
 "Bonny" (Frank Bridge).
 "Valse Capricieuse" (Frank Bridge).

MARY GASKIN, Violin.
 "Old English Dances" (Arranged by Moffitt).
 Accompanist: IDA SCOTT.

6.40 p.m.—Official report of Newmarket Stock Sales by the Associated Stock and Station Agents, Bourke Street, Melbourne.
 6.45 p.m.—"Herald" news service. Weather synopsis. Shipping movements.

6.52 p.m.—Stock Exchange information.
 6.57 p.m.—Fish market reports by J. E. Barrett Ltd. Rabbit prices.
 6.59 p.m.—River reports.

7.2 p.m.—Market reports by the Victorian Producers' Co-operative Co. Ltd. Poultry, Gulls, Hay, Straw, Juice, Dairy Produce, Potatoes and Onions. Market reports of fruit by the Victorian Fruit Growers' Association, retail prices. Wholesale prices of fruit by the Wholesale Fruit Merchants' Association. Citrus fruits. Ballarat sheep market reports.

NIGHT SESSION.

7.10 p.m.—MADAME SOWARD will speak to Students of French, today's talk will be "Histoire d'ours" (Victor Hugo).
 7.30 p.m.—Under the auspices of the University Extension Board, Mr. J. SUTTON CLOW, of the University Conservatorium, will speak on "Christmas Carols and their Origin."

7.45 p.m.—Mr. E. M. PASCOE.
 AN OLD FASHIONED CHRISTMAS PARTY, ESPECIALLY FOR THE OLD FOLKS.
 8 p.m.—BRUNSWICK CITY BAND: Fantasia, "A Military Chorus Parade" (Hume).

8.12 p.m.—BENN MILLER, bass: "Songs of Childhood."
 8.16 p.m.—BRUNSWICK CITY BAND: Hymns, "Shepherds' Rejoice."
 "Adieu" (Eckstein).

8.24 p.m.—MR. CHARLES NUTTALL: "Oh! Christmas."
 8.35 p.m.—THE HUXHAM SERENADERS' QUARTET: "The Legend of Reheben."

8.42 p.m.—BRUNSWICK CITY BAND: Hymns, "While Shepherds Watched," "Hark the Herald Angels."

8.3 p.m.—Weather report and forecast by courtesy of Mr. C. J. Nares, Govt. Meteorologist.

8.4 p.m.—Mr. Stoffel Broadbent.
 9.11 p.m.—Mr. H. Vreede.
 9.18 p.m.—The Sydney Welsh Male Voice Choir.

9.35 p.m.—Broadcasters Light Orchestra.
 9.55 p.m.—Miss Elsie Fensley.
 9.42 p.m.—Robert Turner.
 9.49 p.m.—Mr. Norman Wright.
 9.56 p.m.—Resume of following day's programme.

10 p.m.—G.P.O. Clock and chimes.
 10.1 p.m.—Broadcasters Light Orchestra.
 10.11 p.m.—Announcements and "Sun" news items.

10.16 p.m.—Caryl Kaye and The Wentworth Cafe Orchestra transmitting from "The Ballroom" of the Wentworth. During intervals between dances "Sun" news will be broadcast.

10.25 p.m.—G.P.O. Clock and chimes.
 National Anthem.

2.UW, SYDNEY

Tuesday.

MORNING SESSION.

8 a.m.—News, shipping, mail, studio items.
 8.45 a.m.—Women's session.

8.50 a.m.—Resume of forward programme.
 9 a.m.—Close down.
 12.15 p.m.—Special employees' Luncheon service.

12.45 p.m.—Close down.

AFTERNOON SESSION.

2 p.m.—Studio selections.
 2.55 p.m.—Resume of forward programme.
 3 p.m.—Close down.

EVENING SESSION.

5 p.m.—Studio items.
 5.55 p.m.—Resume of forward programme.
 6 p.m.—Close down.

NIGHT SESSION.

7 p.m.—Studio chimes.
 7.12 p.m.—"Where to Go."
 7.16 p.m.—Professor C. Sauer, pianoforte solo: "Concerti, Pastorales."

7.18 p.m.—Miss May Craft, soprano. Selected.
 7.22 p.m.—Miss Phyllis Stephens, Mezzo soprano:
 "Orpheus with his Lute" (Sullivan).
 7.27 p.m.—Miss Ursula Fallock, violin solo: "Romance" (Rubini).

7.32 p.m.—Miss Amy Wilson, soprano:
 (a) "La Serenata" (Tosti).
 (b) "Duet" (Sanderson).
 7.40 p.m.—Miss Florence Creeker, mezzo contralto.

7.44 p.m.—Professor C. Sauer, pianoforte solo:
 (a) "Fightington."
 (b) "Fantasia Danse."
 (c) "Scherzino" (Schumann).

7.51 p.m.—Miss May Craft, soprano:
 (a) Selected.
 (b) Selected.
 7.58 p.m.—Resume of forward programme.
 8 p.m.—Clock chimes.

8.1 p.m.—Miss Ursula Fallock, violin solo:
 "Cradle Song" (Rehoboth).
 8.5 p.m.—Professor C. Sauer:
 "The History of Oratoria."

8.21 p.m.—Miss Phyllis Stephens, mezzo soprano:
 (a) Selected.
 (b) Selected.
 8.25 p.m.—Miss Amy Wilson, soprano:
 (a) "A Christmas Night" (Boissec).
 (b) "Let Me Sit in Your Garden" (Russell).

8.37 p.m.—Professor C. Sauer, pianoforte solo:
 "Fantasia Concertante."
 8.45 p.m.—Gens of the Opera No. 19.
 "Bella to Muscherra" (Verdi).
 by G. F. Mannro.

8 p.m.—Clock chimes.
 8.1 p.m.—Gens of the Opera—continued.
 8.17 p.m.—Weather forecast and news items.
 8.41 p.m.—Studio items.
 8.40 p.m.—God Save the King.

8.47 p.m.—DOLLY BURDETT, contralto:
"The Silver Ring."
9.00 p.m.—BRUNSWICK CITY BAND:
"Marches."
9.10 p.m.—HUXHAM SERENADERS:
Quartetts, "Ora pro Nobis."
"THERE IS MUSIC IN ALL THINGS IF
MEN HAD EARS."
9.20 p.m.—DOROTHEA MACMASTER, piano:
"Chromatic Fantasia and Fugue" (Bach).
"Irish Tune from County Derry" (Percy
Grainger).
"Rush Hour in Hong Kong" (Abraham
Chasins).
9.30 p.m.—GWALIA MALE CHOIR:
"O, the Kampars" (Sainits).
"As Hrd y noe" (Welsh Melody).
9.40 p.m.—BRUNSWICK CITY BAND:
Fantasia, "The Maid of Orleans" (Laurent).
9.50 p.m.—Fifteen Minutes of Humour and Har-
mony by HUGH HUXHAM'S SERENADER
QUARTETTE.
9.54 p.m.—BRUNSWICK CITY BAND:
Intermission, "Les Cloches de St. Male"
(Himmer).

10 p.m.—"Argus" news service. Meteorologi-
cal information. Sporting notes by "Olym-
pus." British Official Wireless news from
Rugby. The Royal Automobile Club of Victo-
ria's Safety Message for To-day is for
MOTORISTS:—

"Always keep yourself and your vehicle
in safe driving order. Be completely master
of it, and do not drive if you are not physi-
cally fit to do so."

10.10 p.m.—GWALIA MALE CHOIR:
"Masters of the Arcs" (De Bille).
"Händel's" (Welsh Melody).

10.17 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS:
"Sixty Seconds Every Minute I'm in Love
With You" (Davis).
"Oh, You South" (Gower).

"Dancing Tambourine" (Polla).
10.25 p.m.—VAUDE AND VERNE. Enter-
tainers:

"Christmas Crackles."
10.30 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS:
"The Fairy of Avalon" (Parish).
"Oh, How I Love Substantives" (Heiderich).
"Balisek" (Jaff).

10.43 p.m.—BERNARD THOMAS, Tenor:
"Parade" (Tosti).
"Trill" (Sanderson).

10.50 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS:
"You Don't Like It, Nor Much" (Miller).
"Naming Time" (Dixon).
"If I Didn't Know Your Husband and You
Didn't Know My Wife" (Cord).

11 p.m.—OUR GREAT THOUGHT:
"Never deny the ladies their Christmas!
It is the shining seal set upon a year of
happiness. Let them believe in Santa Claus,
give them their cheerfulness and love, and above
all, give them the happiness which is their
proper and natural portion."

11.11 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS:
11.18 p.m.—GOD SAVE THE KING.



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Free pamphlet containing a lot of interesting information and many economy hints for "B" Battery users, sent on request. Ask your dealer, or write us.

3AR, MELBOURNE

Tuesday.

MORNING NEWS SESSION.

11 a.m. to 12 noon.

MIDDAY CONCERT SESSION.

12 noon to 1 p.m.

Transmitted from Panatrape House, 202 Collins Street (by exclusive permission of Messrs. Wills and Paton, Ltd.), on the Brunswick Panatrape.

1 p.m.—Newmarket stock sales. Special "snap" report on the progress of this morning's stock sales at Newmarket (by courtesy of John Macnamara and Co.). To be re-peated at 2.30 p.m., specially for the benefit of our country listeners.

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MATINEE SESSION.

ORCHESTRAL CONCERT.

- 9.30 p.m.—Newmarket stock sales. Special "snip" progress report direct from the stands (by courtesy of John Macnamara and Co.).
- 9.51 p.m.—Studio Orchestra: "Lilac Time" (Schubert). "Spanish Dance" (Strauss).
- 10.16 p.m.—The Sparklets, entertainers: Soprano solo by this popular duo.
- 10.53 p.m.—Studio Orchestra: "Ein Godard-Zyklus" (Ullrich).
- 11.1 p.m.—Mr. Leigh Johnson, piano: Syncope on the piano.
- 11.36 p.m.—Studio Orchestra: "A lover in Damascus" (Woodford-Findon).
- 12.1 p.m.—The Sparklets, entertainers: Comedy duets by these favorites.
- 12.46 p.m.—Studio Orchestra: "Salve Dimca" (Gounod). "Where Nil waters flow" (Paul Andre). "Edera" (Carosio).
- 1 p.m.—G.P.O. clock says "Four."
- 4.1 p.m.—Second weather forecast.
- 4.5 p.m.—Announcements.
- 4.6 p.m.—Mr. Leigh Johnson, piano: Syncope on the piano.
- 4.12 p.m.—Studio Orchestra: "On with the show" (Nicolais). "Valse Poudre" (Pepp).
- 4.24 p.m.—Mr. Ronald Brewer, cello: "Pala Star" (Rach).
- 4.28 p.m.—Studio Orchestra: Violin solo from the ballet "Ayla" (Delibes). "Polly" (Zamecnik).
- 4.39 p.m.—The Sparklets, entertainers: In more humorous solos.
- 4.47 p.m.—Studio Orchestra: "I'm a' loavin' for you" (Hathaway).
- 4.55 p.m.—To-night's entertainments.
- 5 p.m.—G.P.O. clock says "Five." Close down.

CHILDREN'S SESSION.

- 6.50 p.m.—Uncle Ned's entertainment.

EVENING SESSION.

CLASSIC, COMEDY, AND CHRISTMAS.

- 7.30 p.m.—"The Captain." School life and school sport for all the boys and girls of Australia.
- 7.55 p.m.—Newmarket stock sales. Notices.
- 8 p.m.—G.P.O. clock says "Eight."
- 8.1 p.m.—The Classic Trio: "Some of the best-loved 'Xmas Carols'."
- 8.7 p.m.—Madame Miss Hevelin: Will give you a short description of Xmas-tide in Russia, and will sing one of the songs often heard at this season.
- 8.17 p.m.—The Classic Trio: "The Snow Maiden" (Rimsky-Korsakov).
- 8.18 p.m.—Xmas in Germany: A little paper will be read (by courtesy of Mr. Smolle).
- 8.16 p.m.—Miss Edna Hattenbach, cello, will play some of the Xmas songs: "O Tannenbaum." "Stille Nacht, Heilige Nacht." "Gebete der Neudigen Christ."
- 8.22 a.m.—The Dorian Male Quartet. Xmas Carols: "Sleep, Holy Babe" (Dykes). "Good King Wenceslas" (Traditional). "Was in the Winter Cold" (Rach).
- 8.24 p.m.—Announcements.
- 8.30 p.m.—The Classic Trio: "La Belle France" (Laurentien).
- 8.45 p.m.—Mr. Allan Adcock, entertainer: He will tell you of his troubles with "The body in the bag" (Weston and Lee).
- 8.52 p.m.—Mr. Allan Mitchell, tenor: The favorite Dorian tenor will sing: "In Summer time on Breton" (Pee). "When the night with stilly allens" (Robertson).
- 9 p.m.—The Sparklets, entertainers: The favorite duo in two of their specialties: "The tricks of the trade" (Montague). "I should like to know" (Foley).

- 9.3 p.m.—Madame Miss Hevelin, soprano: "Hell song" from Lohme (Delius). "Desire" (Chapin).
- 9.15 p.m.—The Male Sparklet. He will give you his impression of: "Work" (Branford).
- 9.25 p.m.—Announcements.
- 9.27 p.m.—The Classic Trio: Selection from "The Southern Maid" (Frazier and Simons).
- 9.35 p.m.—The Dorian Male Quartet. Duets. "In this solemn hour" (Verdi). Duets. "The Rivin'" (Hastings).
- 9.45 p.m.—Mr. Allan Adcock, popular entertainer, in two comedy numbers: "It's my bath night to-night" (Weston and Lee). "The Three Trees (Adcock) he recites.
- 9.53 p.m.—Miss Fofee Crozier, violin: "Fardale" (Beriot).
- 10 p.m.—G.P.O. clock says "Ten."
- 10.1 p.m.—International weather forecast, specially for our country listeners.
- 10.2 p.m.—Answer to "Answers" Report and answers by IAR Radio Engineers' Staff to listeners who seek expert advice. The service is free.
- 10.13 p.m.—The Sparklets. Another entertaining interlude by these popular entertainers: "Lina's Lovers" (Gibson). "Mister Moon" (Marchmont).
- 10.22 p.m.—The Dorian Male Quartet: Two quartets arranged by Winifred Mitchell: "Turn ye to me" (Old Scotch). "Hello, Swanne, Hello" (Goswami-Brit).
- 10.30 p.m.—The Male Sparklet. He's had a great time at: "The Zoo" (Gibson).
- 10.37 p.m.—The Classic Trio: "Intermezzo" from Cavalleria Rusticana (Mascagni).
- 10.46 p.m.—Special racing report, anticipations and latest track information for tomorrow's races by "Stip."
- 10.50 p.m.—Tomorrow's entertainment.
- 10.53 p.m.—"The Arg" news bulletin, exclusive to IAR.
- 10.58 p.m.—Final weather forecast.
- 10.59 p.m.—Our Australian Good-night Quote is taken from the poem, "The Circling Marsia," by Roddy Quinn: "Tis no great way that we have travelled since Our feet first shook the stony dust of England from them, when with love and trust, In one another, and large confidence In God above, our way were taken; "Nought alien came—each keeping step in mind. And soul and purpose to one trumpet strain, One urging music on the wind."
- 11 p.m.—G.P.O. clock says "Eleven." Good See the King.

- 7 p.m.—Special News Service: Market reports: Stock reports.
- 7.30 p.m.—Weather news; announcements.
- 7.40 p.m.—Blandford time signal.
- 7.45 p.m.—Forecasts: Weather talk by Mr. Jingo Jones.

NIGHT SESSION.

- The whole of to-night's programme will be supplied by the Sandgate Methodist Chorus (conductor, Mr. Norman Evans).
- 8 p.m.—Accompanied. Miss Winnie Freeman. 8 p.m.—FROM THE STUDIO: National Anthem. The Choir.
- 8.5 p.m.—Parties: "Sail Bunting, Mar" (Epifaniti). The Choir.
- 8.5 p.m.—Two-Part Song: "When the Wind Bloweth" (Smart). The Choir.
- 9.15 p.m.—Anthem: "While Shepherds Watched Their Flocks" (W. T. Best). The Choir.
- 9.16 p.m.—Solo (with humming accompaniment): "Three Fishers" (Hullah). The Choir.
- 9.19 p.m.—Noel: "Come Ye Lads" (Hatto). The Choir.
- 9.23 p.m.—Restoration: "A Christmas Wedding" (Eaton). Mr. N. Evans.
- 9.27 p.m.—Part-Song: "In the Cathedral" (De Chasse). The Choir.
- 9.31 p.m.—Solo: Selected. Mrs. F. S. Taylor.
- 9.36 p.m.—Anthem: "Aria, Shire" (Sullivan). The Choir.
- 9.39 p.m.—Solo (with choral accompaniment): "Nearer" (Gounod). Mr. Bryn Evans.
- 9.44 p.m.—Chorus: "Aid the Good" (Handel). The Choir.
- 9.47 p.m.—Solo and Chorus: "A Song the World is Singing" (Ball). The Choir.
- 9.51 p.m.—Chorus: "Gloria in Excelsis" (Handel). The Choir.
- 9.53 p.m.—Chorus: "For Us" (Handel). The Choir.
- 9 p.m.—Weather information.
- 9.1 p.m.—Chorus: "All We Like Sheep" (Handel). The Choir.
- 9.5 p.m.—Monologue: "Christmas Bells." Mr. D. W. Fraser.
- 9.8 p.m.—Chorus: "Worthy is the Lamb" (Handel). The Choir.
- 9.12 p.m.—Solo: "The Gift" (Behrend). Miss Norma Evans.
- 9.16 p.m.—Chorus: "Mallelujah Chorus" (Handel). The Choir.
- 9.20 p.m.—For the second portion of the programme, the choir invites all listeners to allow their imaginations free play and accompany them through the city and suburbs "carol singing." Introduction: "Thoughts of Xmas in the Old Land" (L. James). Wales: "Land of My Fathers" (L. James). Scotland: "My Auld Folk" (Lemon). Ireland: "Come Back to Erin" (Clarke). England: "Home Sweet Home" (Bishop). Then the following choruses, anthems and carols will be rendered: "It Came Upon the Midnight Clear" (Sullivan). "O Come All Ye Faithful." "Hark! Night" (Barry). "Hark the Herald Angels Sing" (Meadeloch). "The Night on the Silent Mountain" (H. H. Tucker). "When the Sun Had Sunk to Rest" (Knight). "While Shepherds Watched" (Sullivan). "Christlike Awake" (Weininger). 10 p.m.—The Daily Mail news. Weather news. Close down.

4QG, BRISBANE.

Tuesday.

MIDDAY SESSION.

- 1 p.m.—Market reports; weather information; "The Daily Mail" and "The Daily Standard" news.
- 1.25 p.m.—Lunch music.
- 1.28 p.m.—Standard time signal.
- 2 p.m.—Close down.

AFTERNOON SESSION.

- 2.30 p.m.—A programme of music from the studio.
- 4.15 p.m.—"The Telegraph" news.
- 4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 6 p.m.—"Daily Standard" news; announcements.
- 6.18 p.m.—Lecturette: A talk arranged by the Queensland Radio Transmitters League.
- 6.30 p.m.—The Children's Hour—Stories by "Uncle Jim."

SCL, ADELAIDE.

Tuesday.

MIDDAY SESSION,

12 noon to 1 p.m.

AFTERNOON SESSION.

- 9 p.m.—G.P.O. chimes.
 3.1 p.m.—Orchestral selections from the Maple Leaf Cafe.
 3.25 p.m.—Orchestral selections from Foy and Gibson's warehouse.
 3.45 p.m.—Talk by Rev. G. E. Hale, B.A.: "Getting ready for Christmas."
 4 p.m.—G.P.O. chimes.
 4.1 p.m.—Orchestral selections from Foy and Gibson's warehouse.
 4.35 p.m.—Orchestral selections from the Arcadia Cafe.
 4.57 p.m.—S. C. Ward and Co.'s Stock Exchange intelligence.
 5 p.m.—G.P.O. chimes and close down.

EVENING SESSION.

- 8 p.m.—G.P.O. chimes.
 8.1 p.m.—Dinner music from the Covent Garden Orchestra.
 8.20 p.m.—Children's time.
 8.45 p.m.—Greetings and children's correspondence.
 8.53 p.m.—The Kiddie Quartette Party.
 9.05 p.m.—Violin solo, Lisette Foglia.
 9.1 p.m.—Song, Wattle Lady.
 9.15 p.m.—Pianoforte solo, Tom King.
 9.20 p.m.—Humorous recitation, Uncle Mills.
 9.25 p.m.—The Kiddie Quartette Party.
 9.35 p.m.—S. C. Ward and Co.'s Stock Exchange intelligence. Market reports by A. W. Standford and Co. A. E. Hall and Co. Delgaty and Co. S.A. Farmers' Co-operative Union. Tappin's Retail Grocers' Association. J. H. Young's special report on the tomato market. Interstate Fruit and Produce Market Co., Ltd.
 9.50 p.m.—Extracts from "News Bulletin," supplied by Commonwealth Minister of Marine and Migration.
 9.55 p.m.—Gardening talk by Lasecock's Nurseries, Lockleys, S.A.
 10.05 p.m.—Home beautiful talk by "Domus."
 10 p.m.—Chimes.
 Accompanist, Tom King.
 10.1 p.m.—Overture, Studio Orchestra.
 10.20 p.m.—Soprano solo, Marcella Bernardi.
 10.34 p.m.—Xylophone solo, Wm. Davey.
 10.38 p.m.—Comedy, Dick Bailey.
 10.43 p.m.—Selection, Studio Orchestra.
 10.50 p.m.—Soprano solo, Marcella Bernardi.
 10.57 p.m.—Xylophone solo, Wm. King.
 11.04 p.m.—Comedy, Dick Bailey.
 11.14 p.m.—Selection, Studio Orchestra.
 11.24 p.m.—Tenor solo, Vincent McMuray.
 9 p.m.—G.P.O. chimes.
 3.1 p.m.—Meteorological information.
 3.2 p.m.—Daigety's wheat report.
 3.5 p.m.—Comedy, Dick Bailey.
 4.1 p.m.—Selection, Studio Orchestra.
 4.25 p.m.—Duet, Marcella Bernardi and Vincent McMuray.
 4.54 p.m.—Xylophone solo, Wm. Davey.
 4.58 p.m.—Bass solo, Ted Jenkins.
 4.52 p.m.—Selections, Studio Orchestra.
 4.45 p.m.—Tenor solo, Vincent McMuray.
 4.53 p.m.—Selection, Studio Orchestra.
 10 p.m.—G.P.O. chimes.
 10.1 p.m.—"Advertiser" news service.
 10.15 p.m.—Bass solo, Ted Jenkins.
 10.19 p.m.—Selection, Studio Orchestra.
 10.23 p.m.—Bass solo, Ted Jenkins.
 10.32 p.m.—Rely from the Maison De Danse, dance selections.
 10.55 p.m.—Wednesday's programme, and meteorological information.
 11 p.m.—G.P.O. chimes and close down.



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6WF, PERTH.

Tuesday.

- 12.30 p.m.—Time in.
 12.35 p.m.—Market, News, and Cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 1.2 p.m.—Studio Instrumental Trio.
 1.25 p.m.—Close down.
 1.30 p.m.—Time in.
 1.35 p.m.—Organ music relayed from the Grand Theatre, Murray Street.
 Vocal interlude from the studio.
 4.30 p.m.—Time down.
 4.45 p.m.—Time in.

1045 METRE TRANSMISSION.

- The evening transmission to broadcast on 104.5 metres as well as the usual wavelength.
 8.30 p.m.—Stories for the Kiddies by Uncle Henry and Duffy.
 7.50 p.m.—Stocks, Markets, News.
 7.45 p.m.—Talk by Dr. J. S. Baiter, B.A., M.R.C.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia. Station announcements, such as alterations to programmes, etc.

ORCHESTRAL NIGHT.

- 8.3 p.m.—Concert by 6WF's Station Orchestra, conducted by Mr. Ronald E. Mayle, A.T.C.L. Vocal assisting artist.
 10 p.m.—Late news items by courtesy of "The Daily News" Newspaper Co.
 Ships within Range announcement, weather report and forecast.
 10.30 p.m.—Close down.

1045 METRE TRANSMISSION.

- Simultaneous broadcast on 104.5 Metres of Programme given on 2125 metres, commencing at 4.45 p.m.

7ZL, HOBART

Tuesday.

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

- 8 p.m.—G.P.O. Clock Chimes the Hour.
 8.5 p.m.—Time in selection.
 9.5 p.m.—Hobart Stock Exchange Quotations. Weather information. Items of interest. Announcements.
 10.15 p.m.—Selections by 7ZL Studio Trio: "Cortina," "Dainty Kelly" (Grey), "Valse," "Nonchelle" (Benson).
 Selection, "Musical Telegrams" (Robsch), "Violin solo," "My Dearest Heart" (Sullivan), "K. J. McCann."
 "Bean Brimble" (Young).
 4.15 p.m.—Cooking Talk, by "Reggie."
 4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 6.30 p.m.—"Uncle Peter's" half-hour.
 7 p.m.—"Uncle Hector" talks to the children.

NIGHT SESSION.

- 7.30 p.m.—Medical selection.
 7.35 p.m.—Literary Lapins and Library Lists, by Mr. W. E. Fuller.
 7.50 p.m.—"Mercury" special Tasmanian news service.
 Railway Auction Produce Sales. Weather forecasts.
 Hobart Stock Exchange Quotations.
 8 p.m.—G.P.O. Clock Chimes the Hour.

- 8.15 p.m.—Broadcast by direct wire from Imperial Hotel, Hobart, Dance Numbers by Mrs. Sheppard's Trio, interspersed with items from the Studio:
 Miss Evelyn Stritton (soprano).
 Miss Elsie Lamplin (soprano).
 Mr. J. Gunn.
 8 p.m.—Radio Question Corner, by "Annie."
 9.40 p.m.—British Official Wireless News.
 9.50 p.m.—"Mercury" special Interstate news service.
 Ships within wireless range.
 Tasmanian District Weather Reports.
 Station announcements: Tomorrow's programmes.
 National Anthem.

- 1.47 p.m.—William Bowyer, bass: "Vale" (Russell).
 1.50 p.m.—Studio music.
 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 5.45 p.m.—The chimes of 8FC.
 5.48 p.m.—"The Hello Man" talks to the children.
 6.15 p.m.—Uncle Ben and "Jerry" entertain.
 6.30 p.m.—Story time for the young folk.
 6.40 p.m.—Studio music.
 7 p.m.—"Big Ben." Late sporting news.
 7.15 p.m.—Dulgey's market reports (wool, wheat and stock).
 7.18 p.m.—Fruit and vegetable markets.
 7.25 p.m.—Weather and shipping news.
 7.28 p.m.—Late "Evening News" news service.

NIGHT SESSION.

- 7.28 p.m.—Programme announcements.
 7.30 p.m.—Lionel Lunt, English baritone.
 7.35 p.m.—A Book Review.
 7.52 p.m.—Lionel Lunt, English baritone. From the Warwick Bowling Club, Bowlers' Head Road, Moorman, on the occasion of the Ladies' Night in commemoration of the opening of the new Bowling Club, Montagu's, Dance Orchestra.
 8 p.m.—"Big Ben."
 Eileen Boyd, contralto:
 (a) "Hushies."
 (b) "The Little Irish Girl."
 Win and Windie, English entertainers, will present their famous Radio Sketch: "The Railway Guard."
 The Leon Instrumental Quartette:
 (a) "William Tell" (Rossini).
 (b) Violin solo, "Bianche."
 (c) Violin solo, "Carpine Virena" (Kreisler).
 Robert Harper, tenor.
 Frank Ryan, comedian.
 Eileen Boyd, contralto:
 (a) "The Sweetest Flower that Grows."
 (b) "My Ain Folk."
 The Leon Instrumental Quartette:
 (a) "Birth of Blues" (Young).
 (b) "The Blue Ocean Girl" (Ray, Law).
 A. E. Y. Boulton, bass.
 Win and Windie, English entertainers: A Comedy Sketch.
 The Leon Instrumental Quartette:
 Medley of songs.
 8.15 p.m.—From the Studio:
 Latest weather forecast.
 8.16 p.m.—Continuation of the series of Studio Plays, produced by Mr. H. W. Varma. By special request, Mr. Varma and his Company will give a condensed version of the famous drama:

"THE SIGN OF THE CROSS"

- Cast of Characters:
 Morris, Met Service.
 Marcus Soperhan, H. W. Varma.
 Tugillius, Pastor Dean.
 Lucius, Nest Waterworth.
 Gloria, William Home.
 Nero, H. J. Salter.
 Vitruvius, W. Hoosan.
 Serullius, H. Dewitt.
 Strabo, D. A. Henry.
 Favinus, William Poddifer.
 Melus.
 Stephanus, Patricia Fielder.
 Berenic.
 Marcia, Florence Clark.
 Dacla, Leo Barry.

- 8.51 p.m.—Incidental music to the second selection of "The Sign of the Cross."
 10.10 p.m.—Latest weather forecast.
 10.21 p.m.—Lex Maurice will conduct a Disc Session until 10.37 p.m.
 10.57 p.m.—Late news and announcements.
 11 p.m.—"Big Ben."
 National Anthem.
 Close down.

Wednes., Dec. 21
2FC, SYDNEY

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m. to 11.30 a.m.

MIDDAY SESSION.

- 12 noon—"Big Ben" and announcements.
 12.2 p.m.—Stock Exchange, first call.
 12.3 p.m.—Official weather forecast, rainfall.
 12.5 p.m.—Studio music.
 12.10 p.m.—Summary of "Sydney Morning Herald" news service.
 12.15 p.m.—Rugby wireless news.
 12.20 p.m.—Studio music.
 12.40 p.m.—Kathleen Stalder, mezzo.
 12.45 p.m.—Studio music.
 2 p.m.—"Big Ben." Weather intelligence.
 1.5 p.m.—"Evening News" midday news service.
 Producers' Distributing Society's Report.
 1.29 p.m.—Studio music.
 1.28 p.m.—Stock Exchange, second call.
 1.30 p.m.—Studio music.
 1.40 p.m.—Kathleen Stalder, mezzo.
 1.45 p.m.—Studio music.
 2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 3 p.m.—"Big Ben" and announcements.
 3.5 p.m.—From the Congregational Church, Pitt Street, Sydney:
 An Organ Recital, by Mr. E. J. Robinson.
 3.28 p.m.—From the Studio:
 New Hallett, soprante.
 3.25 p.m.—From the Congregational Church, Pitt Street, Sydney:
 An Organ Recital, by Mr. E. J. Robinson.
 3.40 p.m.—From the Studio:
 Florence Grant, soprano.
 3.45 p.m.—From the Congregational Church, Pitt Street, Sydney:
 Continuation of the Organ Recital by Mr. E. J. Robinson.
 4 p.m.—From the Studio:
 Lewin Berriek, baritone:
 "Lullaby" (Rusi-Focella).
 4.5 p.m.—From the Congregational Church, Pitt Street, Sydney:
 Concluding numbers of the Organ Recital by Mr. E. J. Robinson.
 4.15 p.m.—From the Studio:
 Rose H. Ball, electrician, from 4GG.
 4.28 p.m.—William Bowyer, bass:
 "Stay with me" (Mattei).
 4.25 p.m.—New Hallett, soprante.
 4.38 p.m.—Lewin Berriek, baritone:
 "I Did Not Know" (Froere).
 4.35 p.m.—Florence Grant, soprano.
 4.45 p.m.—Rose H. Ball, electrician, from 4GG.
 4.45 p.m.—Stock Exchange, third call.

2BL, SYDNEY.

Wednesday.

EARLY MORNING SESSION.

7 a.m. to 9 a.m.

MORNING SESSION.

- 11 a.m.—G.P.O. Clock and chimes.
Musical programme from the Studio.
11.15 a.m.—Women's Session. Talk on "FIT" by Miss Varley, Broadcaster, Women's Sports Authority.
Social Notes—Replies to correspondence by Mr. Jordan. Talk on "Dental Hygiene" by a member of the Dental Board.

AFTERNOON SESSION.

Racing information broadcast immediately after each race by courtesy of the "Sun" newspaper.

- 12 noon.—G.P.O. Clock and chimes.
Special Ocean Forecast and weather report.
12.15 p.m.—Musical programme from the studio.
12.45 p.m.—Informatica, Mail, Shipping and para-directory.
12.11 p.m.—Notes in call by wireless.
12.13 p.m.—Fruit Market report.
12.14 p.m.—Vegetable Market report.
12.17 p.m.—London Metal Market report.
12.19 p.m.—Dairy and Farm Produce Market report.
12.22 p.m.—Exchange Market report.
12.24 p.m.—Fish Market report.
12.26 p.m.—Flabbi Market report.
12.28 p.m.—Stock Exchange report.
12.30 p.m.—R.M.V., Gramophone records.
1.17 p.m.—Stock Exchange report.
1.39 p.m.—G.P.O. Clock and chimes.
Talk to children and special entertainment for children in Hospital.
2 p.m.—G.P.O. Clock and chimes. Racing resume.
2.5 p.m.—Musical programme from the studio.
2.50 p.m.—Musical programme from the studio.
2.40 p.m.—Talk on "Celtic Mythology."
3 p.m.—G.P.O. Clock and chimes. Racing resume.
3.5 p.m.—News from the "Sun."
3.10 p.m.—Pianoforte Recital from the Studio.
3.20 p.m.—News from the "Sun."
3.30 p.m.—Musical Programme from the Studio.
3.40 p.m.—Dingwun Dance Band, Broadcast from Dingwun Cabaret.
4.0 p.m.—G.P.O. Clock and Chimes; Racing Resume.
4.5 p.m.—Musical Programme from the Studio.
4.15 p.m.—Talk on "Women of the Orient of all Ages."
4.30 p.m.—Dingwun Dance Band.
4.50 p.m.—News from the "Sun."
4.55 p.m.—Resume of Night's Programme.
4.58 p.m.—Special Ocean Forecast.
5.0 p.m.—G.P.O. Clock and Chimes; Close Down.

EARLY EVENING SESSION.

- 8.45 p.m.—G.P.O. Clock and Chimes; Children's Session.
8.50 p.m.—Musical Programme from the Studio.

SPECIAL COUNTRY SESSION.

- 7.0 p.m.—G.P.O. Clock and Chimes; Australian Mercantile Land and Finance Co.'s Report; Weather Report and Forecast by courtesy of Government Meteorologist; Producers Distributing Societies' Fruit and Vegetable Market Report; Stock Exchange Reports. Grain and Poultry Report ("Sun"); Dairy Produce Report ("Sun"); N.R.M.A. Talk.
7.15 p.m.—Country News from the "Sun."
7.30 p.m.—Talk on "Tennis," by Dr. McElhenn.

- 8.0 p.m.—G.P.O. Clock and Chimes; Broadcasters' Topical Chorus.
8.5 p.m.—Broadcasters' Trio.
9.15 p.m.—Miss Bertha Waters (Soprano).
9.25 p.m.—Mr. Lawrence Campbell (Elocutionist).
9.27 p.m.—Mr. Herbert Hinchcliffe (Baritone).
9.31 p.m.—The Canterbury District Band.
(Bandmaster, Mr. Stan Nicholls), broadcast from Baker's Hall, Campsie.
9.34 p.m.—Mr. Reg Harrison (Comedian).
9.41 p.m.—Weather Report and Forecast, by courtesy of Mr. G. J. Harris, Government Meteorologist.
9.52 p.m.—Broadcasters' Trio.
9.55 p.m.—Mr. Lawrence Campbell.
9.56 p.m.—Miss Bertha Waters.
9.57 p.m.—The Canterbury District Band (Bandmaster, Mr. Stan Nicholls), broadcast from Baker's Hall, Campsie.
9.57 p.m.—Mr. Herbert Hinchcliffe.
9.58 p.m.—Mr. Reg Harrison.
10.0 p.m.—G.P.O. Clock and Chimes; Resume of Following Day's Programme.
10.2 p.m.—Broadcasters' All Sports Expert will talk on Boxing, Golf and General Sporting.
10.18 p.m.—Cyril Kaye and The Wentworth Cafe Orchestra; Transmitting from the Ballroom of the Wentworth.
11.30 p.m.—G.P.O. Clock and Chimes; National Anthem.

2 UW, SYDNEY

Wednesday.

MORNING SESSION.

- 9 a.m.—News, shipping, mails, studio items.
9.45 a.m.—Women's session.
9.59 a.m.—Resume of forward programme.
10 a.m.—Close down.
12.15 p.m.—Special employees Luncheon session.
12.45 p.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—Studio Selections.
2.59 a.m.—Resume of forward programme.
3 p.m.—Close down.

EVENING SESSION.

- 8 p.m.—Studio items.
8.59 p.m.—Resume of forward programme.
9 p.m.—Close down.

NIGHT SESSION.

- 7 p.m.—Studio chimes.
7.30 p.m.—Where to Go.
7.59 p.m.—Pianoforte solo. Selected.
7.54 p.m.—Studio items.
7.54 p.m.—Miss Doris Fitzmaurice, elocutionist.
"Nicoletta."
7.57 p.m.—Miss Ailene O'Connor, soprano, at the piano:
(a) "Love is Just a Little Bit of Heaven" (Raer).
(b) "A Little Cuck's Prayer" (Hops).
7.55 p.m.—Harry Afflick, last Interlude.
7.43 p.m.—Miss Sylvia Churchill, mezzo soprano:
"A fat little fellow with his mamma's eye."
7.47 p.m.—Miss Mabel Ramsbotham, violin solo. Selected.
7.55 p.m.—Miss Ailene O'Connor, soprano, at the piano.
"All the Fun of the Fair."
7.56 p.m.—News Items.
8 p.m.—Clock chimes.
8.5 p.m.—Resume of forward programme.
8.5 p.m.—Douglas Han tenor solo: "Senseless is a Voice in Calling."
8.12 p.m.—Miss Mabel Ramsbotham, violin solo. Selected.
8.17 p.m.—Harry Afflick, Jazz Interlude.

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DN

MELBOURNE

- 8.57 p.m.—Miss Sylvia Churchill, mezzo soprano:
(a) "Trees."
(b) "Down Here" (Draba).
8.58 p.m.—Doris Fitzmaurice, soprano:
(a) "When the Table is set for two."
8.57 p.m.—Miss Mabel Ramsbotham, violin solo, Soloist.
9.02 p.m.—Douglas Rae, tenor:
(a) "Serenade" (Schubert).
(b) "My Love and I" (Flechotob).
9.09 p.m.—Miss Sylvia Churchill, mezzo soprano:
(a) "A String of Pearls."
9.02 p.m.—Studio selections.
9 p.m.—Clock chimes.
9.12 p.m.—Weather forecast and news items.
9.8 p.m.—Studio selections.
9.30 p.m.—God Save The King.

3LO, MELBOURNE

Wednesday.

MIDDAY SESSION.

- 11 a.m.—Description of Interstate Cricket Match, Victoria v. Queensland, at M.C.G., by Mr. Rod McGregor.
11.30 p.m.—Close down.
11.30 p.m.—Melbourne Observatory Time Signal.
12.1 p.m.—Metal prizes received by The Australian Mines and Metals Association from the London Stock Exchange this day. British Official Wireless news from Rugby, Reuter's and the Australian Press Association. Cable. "Argus" news service.
12.30 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Hugs and Kisses" (Alley).
"Take your Finger Out of your Mouth" (Yellow).
"Positively, Absolutely" (Cawlow).
12.37 p.m.—BERNARD THOMAS, tenor:
"Mauchia" (MacMurrrough).
"Romy Mary of Argyle."
12.38 p.m.—Stock Exchange information.
12.39 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Brown Eyes in Your Dreams" (Tennant).
"Give Me the Stars" (Jones).
"Duoce Jazz" (Oliver).
12.42 p.m.—VAUDE AND VERNE, Entertainers:
"Jokes from the Shade of Va Maitotee."
12.45 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"For My Sweetheart" (Brown).
"Winona" (Vanessied).
"She Don't Wanna" (Yellow).
12.47 p.m.—Meteorological information. Weather forecast and rainfall for Victoria, Tasmania, South Australia, and New South Wales. Ocean Forecast. River reports.
1.15 p.m.—Description of Interstate Cricket Match, Victoria v. Queensland, at M.C.G., by Mr. Rod McGregor.
1.39 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Chorus Moon" (Nassbaum).
"Tinker, Tinker, Soldier, Sailor" (Frank).
"Himself the Pub Next Door" (Merritt).
1.50 p.m.—BERNARD THOMAS, tenor:
"If With all Your Hearts" (Cooper).
"Where'er You Walk" (Cooper).
1.56 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Blazing" (Jones).
"I Won't Go Home To-Night" (Gilbert).
"That Certain Feeling" (Gowshwin).
"Looking for a Boy" (Gowshwin).
2 p.m.—Close down.

- During the afternoon results will be given at intervals of the race at Latoudef.

AFTERNOON SESSION.

- 2 p.m.—Melbourne Observatory Time Signal.
2.1 p.m.—STUDIO QUARTETTE:
"Nurse Bohemian" (Ord-Hume).

- 3.16 p.m.—BOBBY PEARCE, baritone:
"The Bedouin Love Song" (Pianetti).
"Glossy Popin" (Charles).
3.17 p.m.—TABMA TIRKMAN, Cello:
"The Broken Melody" (Van Eeste).
"Aren't You" (Schumann).
3.24 p.m.—GERTRUDE HUTTON, contralto:
"To a Miniature" (Draba).
"Shepherd's Cradle Song" (Somerswell).
3.31 p.m.—STUDIO QUARTETTE:
"The Merchant of Venice" Part I. (Hoscoe).
3.41 p.m.—MARGARET MARSHALL, vocalist:
"The Barred Orecas" (Noyes).
"The Sings of Mrs. Suemast" (Holland).
3.51 p.m.—STATION QUARTETTE:
"The Merchant of Venice, Part II. (Rance).
4 p.m.—BOBBY PEARCE, baritone:
"The Volunteer Organist."
"Sings the Collier" (Hutton).
4.7 p.m.—BERTHA JOHNSON, violin:
"Scherzo" (Van Gelsen).
"Scherzo Romanza" (Kreling).
4.16 p.m.—STUDIO QUARTETTE:
"Medley—A Musical Critic's Dream" (Dix).
4.28 p.m.—GERTRUDE HUTTON, contralto:
"My Lord, What a Morain" (Burleigh).
"Love, I Have Won You" (London-Ronald).
4.31 p.m.—AGNES FORTUNE, Flauto:
"To a Water-Lily" (McDowell).
"Mazurka in F" (Chopin).
4.43 p.m.—News.
4.50 p.m.—Close down.
Intervals during the afternoon.

EVENING SESSION.

- 5.30 p.m.—Answers to Letters and Birthday Greetings by "MARY, MARY."
6 p.m.—THE STUDIO QUARTETTE:
"Around the Christmas Tree"
7.1 p.m.—"Hills—Under the auspices of the Nominating Society of Victoria, Mr. A. S. Kempen will speak to the children about "Coins and Coin Collecting."
7.22 p.m.—STUDIO QUARTETTE:
"A Musical Nightingale, A Dream after the Feast" (Lamprecht).
7.30 p.m.—"MARY, MARY":
"A Russian Christmas Legend."
7.40 p.m.—Official Report of Newmarket Stock Sale by the Associated Stock and Station Agents, Bourke-street, Melbourne.
7.48 p.m.—"Herald" news service. Weather synoptic. Shipping movements.
7.52 p.m.—Stock Exchange information.
7.57 p.m.—Vide Market reports by J. E. Barrett, Ltd. Rabbit prices.
7.59 p.m.—River reports.
7.2 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd. Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions. Market reports of Fruit by the Victorian Producers' Association—retail prices. Wholesale prices of Fruit by the Wholesale Fruit Merchants' Association.

NIGHT SESSION.

- "I will honor Christmas in my home and try to keep it all the year."
—Charles Dickens.
7.15 p.m.—MISS H. G. HARRIS, Publicity Officer of the Kindergarten Union, will speak on:
"The Work of the Free Kindergartens"
7.30 p.m.—Under the auspices of the INSTITUTION OF ENGINEERS, Australia, Melbourne Division, Mr. L. F. LODGE, M.C.E., J.E.L., Aust., will speak on:
"Good Roads and Roadways in Victoria."
7.42 p.m.—CAPTAIN C. H. PETERS:
"Books, Wines and Observance."
"SWEETEST MELODIES ARE THOSE THAT ARE BY DISTANCE MADE MORE SWEET."
—Wordsworth.
8 p.m.—CONCERT transmitted from the ROYAL PICTURE THEATRE, NEILL. Introductory remarks by Councillor Arthur Wolcott, President of the Luvian Shire, Irwell.

1. NEILL TOWN BAND, winners of Wimpers Championship Band Contest, 1927. Conductor, Mr. James Davis.
March, "Ivory Springs."
2. NEILL MALE QUARTETTE:
"In Absence."
Messrs. A. Bealman, G. E. Dally, T. G. Dockett, F. McLachlan.
3. NEILL TOWN BAND:
Selection, "Labour and Love."
4. CHURCH CHOIRS:
Anthem, "And the Glory."
MR. AND MRS. J. F. McLAHLAN:
Duet, "Boating Song of Yough."
5. NEILL TOWN BAND:
Waltz, "Suzie."
7. MR. J. F. McLAHLAN:
Solo, "Vivace."
8. CHURCH CHOIRS:
Anthem, "Hallelujah Chorus" from the Messiah.
9. NEILL TOWN BAND:
March, "Europe United."
FROM THE STUDIO:
SOME HIGBROW MUSIC AND A LITTLE HUMOR.
9 p.m.—Announcements. The Royal Automobile Club of Victoria's Safety Message for To-day is for MOTORISTS: "Threading your way through traffic may result in an accident to you. In dense traffic, keep it lit and avoid your turn."
9.4 p.m.—PROGRAMME OF CLASSICAL MUSIC arranged by MARY CAMPBELL. MILLENT OSMOND, soprano:
"Les ches ariet" (Mozart).
"Lullaby" (Mozart).
"The First Violin" (Mozart).
GERTRUDE HEALY, viola:
"Minnel" (Bach).
"A French Talleto" (Fugak-Breiter).
"Fraschini and Allegro" (Paganini-Ricci).
IDA WALKER:
"The Wanderer" (Schubert).
"Comfort in Tears" (Schubert).
IDA SCOTT, Piano:
"Fantasia in D Minor" (Mozart).
MILLENT OSMOND, Soprano:
"Suzie's Second Song" (Schubert).
"Who is Sylvia?" (Schubert).
VIOLIN AND PIANO: GERTRUDE HEALY AND IDA SCOTT:
"Sonata G Major, Opus 30, No. 3" (Bach-Boven).
1. Allegro Vivace.
2. Tempo di Minuetta.
3. Allegro Vivo.
IDA WALKER:
"Sapphic Ode" (Brahms).
"There's Song the Willow."
Accompanist, IDA SCOTT.
10.4 p.m.—"Argus" news service. British Official Wireless news from Rugby. Meteorological information. Island Branch Movements.
10.12 p.m.—BERNARD THOMAS, tenor:
"Ariste Minnan" (Kreling).
"Ariste Minnan" (Copper).
10.19 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Yankoo Bow" (Altey).
"Go, You Go" (Kretzmer).
10.28 p.m.—VAUDE AND VERNE, Entertainers:
"Sideshowers."
10.38 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Honey" (Sawell).
"Lonely Acres in the West" (Robinson).
"My Sunday Girl" (Ruby).
10.47 p.m.—Bernard Thomas, tenor:
"Through Thy Window" (Di Capua).
"Marching" (Schubert).
10.50 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Cherita" (Bibb).
"I Walked Back from the Dugger Ride" (Adams).
"My Guide's Dawn Cottage of Dreams" (Leslie).

11 p.m.—OUR GREAT THOUGHT.

"Poverty is the lead of some, and wealth is the lead of others, perhaps the greater lead of the two. It may weigh them to perdition. Bear the lead of thy neighbour's poverty, and let him bear with thee the lead of thy wealth. Thus lighteneth thy load by lighteneth his."

—St. Augustine.

11.15 p.m.—JOE ARONSON AND HIS SYNCOPIATING RHYTHMISTS.
11.40 p.m.—GUD-BAYE THE KING.

4QG, BRISBANE.

Wednesday.

EARLY MORNING SESSION.

6.30 a.m.—Physical culture exercises.
7 a.m.—Close down.

MIDDAY SESSION.

FROM THE STUDIO.

1 p.m.—Market reports: Weather information; "The Daily Mail" and "The Daily Standard" news.

1.10 p.m.—Lunch hour music.
FROM THE OBSERVATORY.
1.15 p.m.—Standard time signal.
2 p.m.—Close down.

AFTERNOON SESSION.

1.30 p.m.—FROM THE STUDIO:
Afternoon Tea music.
FROM THE STUDIO:
4.15 p.m.—"The Telegraph" news.
4.33 p.m.—Close down.

EARLY EVENING SESSION.

6 p.m.—"Daily Standard" news: announcements.
6.15 p.m.—Lectures: A Beauty Talk by Dorothea Webster.
6.30 p.m.—The Children's Hour: Stories by "Little Miss Brisbane."
6.45 p.m.—Special news service: Market reports: Stock reports.
7.05 p.m.—Weather news: announcements.
7.45 p.m.—Standard time signal.
8 p.m.—Commitments and How to Deal with Them—by Mr. G. H. Calway (Qld. Agricultural High School and College).

NIGHT SESSION.

AUCHENFLOWER BOWL HOUSE.

Tonight's programme will comprise the relaying of a special Christmas programme from the Auchenflower Bowl House. The concert, which has been arranged and organised by the Secretary of the Bowling Club, will be the members' Christmas celebration. There will be songs, orchestral numbers and choruses.

8 p.m.—FROM THE AUCHENFLOWER BOWL HOUSE:
Christmas Concert.
FROM THE STUDIO:
10 p.m.—"The Daily Mail" news: weather news. Close down.

5CL, ADELAIDE.

Wednesday.

MIDDAY SESSION.

12 noon to 2 p.m.

AFTERNOON SESSION.

1.0 p.m.—G.P.O. Chimes.
1.1 p.m.—Orchestral Selections from the "Mistle Lark" Cafe.

3.30 p.m.—Orchestral Selections from Foy and Gibson's Showmen.
4.00 p.m.—Orchestral Selections from "Armadillo" Cafe.
Vocalist, Margery Walsh.
4.57 p.m.—S. G. Ward and Co.'s Stock Exchange Intelligence.
5.0 p.m.—G.P.O. Chimes and Close Down.

EVENING SESSION.

8.0 p.m.—G.P.O. Chimes.
8.1 p.m.—Dinner Music by the "Covent Garden" Orchestra.
8.30 p.m.—Children's Time.
8.40 p.m.—Greetings.
8.50 p.m.—The Kiddylime Quartette.
9.0 p.m.—Comedy Duet, Kiddylime Duo.
9.5 p.m.—Recitation, A Kiddylime Artist.
1.10 p.m.—Story for the Children.
2.20 p.m.—S. G. Ward and Co.'s Stock Exchange Intelligence; Market Reports, by A. W. Sandford and Co., A. E. Hall and Co., Daley and Co., S.A. Farmers' Co-operative Union, Taylor Bros., Retail Grocers' Association, J. H. Young's Special Report on the Turbato Market Co., Interstate Fruit and Produce Market Co., Ltd.
7.30 p.m.—"Market Report," "News Bulletin," supplied by Commonwealth Minister of Markets and Migration.
7.35 p.m.—"Boys' Corner."
7.40 p.m.—Follies, Talk by Mr. L. A. Ramsey.
8.0 p.m.—G.P.O. Chimes.
8.1 p.m.—Band Concert, relayed from Henley Beach Rinkside. (Conductor, G. Somerton).
8.20 p.m.—Choral Selections by the "Mounta" Harmony Choir (65 mixed voices), Conducted by Mr. Sary.
8.40 p.m.—Selection by Holden's Silver Band.
9.0 p.m.—G.P.O. Chimes.
9.1 p.m.—Weather Report.
9.3 p.m.—Dingley's Wheat Report.
9.5 p.m.—Motion Talk by "Accelerator."
10.25 p.m.—Choral Selections by Mounta Harmony Choir.
10.30 p.m.—Selections by Holden's Silver Band.
10.40 p.m.—Choral Selections by Mounta Harmony Choir.
10.5 p.m.—G.P.O. Chimes.
10.15 p.m.—Interstate and South Australian Sporting Results.
10.35 p.m.—Relay from the Maison De France Gleeclub, Dance Selections.
10.45 p.m.—Thursday's Programme: Meteorological Information.
11.0 p.m.—G.P.O. Chimes and National Anthem.

6WF, PERTH.

Wednesday.

12.30 p.m.—Tune in.
12.35 p.m.—Markets, News and Cables.
1 p.m.—Time signal from Perth Observatory.
1.1 p.m.—Notes supplied by the Meteorological Bureau of Western Australia.
1.15 p.m.—Studio Quartette, conducted by Mr. Val Smith.
2 p.m.—Close down.

AFTERNOON SESSION.

3.30 p.m.—Tune in.
3.35 p.m.—A ten minutes talk to the Ladies.
3.45 p.m.—Orchestral musical played by Hoyta Orchestra, conducted by Mr. Harold Partridge, relayed from Hoyta Regent Theatre, William Street.
Yocal interludes from the studio.
4.20 p.m.—Close down.

EVENING SESSION.

8.45 p.m.—Tune in.
104.6 METRE TRANSMISSION.
The evening transmission is broadcast on 104.6 Metres as well as the usual wavelength.
8.50 p.m.—Stories for the Tiny Tots by Auntie Jane and Uncle Duffy.
9.20 p.m.—Stocks, Markets, News.



Poor Old Static!

He is as popular as a bad appendix. If you do cut him out, he just comes back for more.

The list of his offences is growing so fast that he only needs a pair of horns and a tail to fit right into the scheme of things.

Every time a battery runs down or there is a short circuit, or the wave length is wrong, or a crystal set can't hear London, Static gets all the blame. I am really surprised that he hasn't been held responsible for the increase in Sydney tram-fares!

Why, I even received a letter from an American friend warning me to be careful in filling my tank with "gas" when the mercury is below zero, as Static may cause a spark from the muzzle of the filler.

Well, in the first place, when I want to fill my "tank" with "gas," I always use a clean glass, and anyway I should welcome a solid junk of zero at the present moment.

Just between you and me, most of this Static talk is as intelligent as operating on a schoolboy's tonsils when his stomach is full of green apples. Nine-tenths of the trouble is just plain bad batteries!

It reminds me of a wireless friend who was everlastingly cursing old Static because his wireless substituted crackles for old Uncle George or the Rev. Ruth. One day he read a Philco Battery ad. in "Wireless Weekly," economised on the wedding anniversary, and gave his radio set a chance.

The last time I saw him he was talking Philco batteries to the rent collector, and actually keeping him interested. Any battery which will soothe a rent collector must be worth the money!

If you want the best rechargeable battery on the market, one which will give you two hours' joy a night for about four months, and then come up fresh as paint after a two shilling recharge, I recommend the new 85X Dynamic Philco, which is specially designed for Super-Hets and other sets having four or more valves.

But if you want something cheap and crackly—a metaphysical tin can to tie on to Static's tail—don't touch a Philco 85X. It isn't cheap, and it never crackles, but it will save you pounds in the first year.

Ring up New System Telephones Pty., Ltd., 280 Castlereagh Street, Sydney, and just say "85X." They will do the rest.

And quit blaming poor old Static!

7.45 p.m.—Spartan talk by Mr. S. B. Cravenell.
8 p.m.—Three signals from Perth Observatory.
8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia. Routine announcements, such as alterations to programmes, etc.

VARIETY NIGHT.

8.3 p.m.—Quartets:
"Come to the Fair."
"Sweet and Lovely" from Perth Observatory.
"Has Sorrow Thy Young Days Shaded."
Duetts by Miss Dotie Morrison, and Mr. P. H. Croft:
"In Springtime."
Duet by Mrs. E. Clear, and Mr. M. Elmhurst:
"For you Alone."
Solo by Miss Dotie Morrison, L.A.B., soprano:
"Nightingale of June."
Solo by Mr. Burgess, tenor:
"Lucevan Le Stelle."
Solo by Mrs. Elsie Clark, contralto:
"My Task."
Solo by Mr. P. H. Croft, baritone:
"Sands of the Desert."
10 p.m.—Late News items by courtesy of "The Daily News" Newspaper Co. Ships within Range announced. Weather forecast, and forecast.
10.15 p.m.—Close down.

10.5 METRE TRANSMISSION.

Simultaneous broadcast on 10.5 metres of programme given on 1256 Metres, commencing at 6.45 p.m.

Thurs., Dec. 22

2FC, SYDNEY

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m. to 11.45 a.m.

MIDDAY SESSION.

12 noon—"Big Ben" and announcements.
12.3 p.m.—Stock Exchange, first call.
12.3 p.m.—Official weather forecast, rainfall.
12.5 p.m.—Studio music.
12.10 p.m.—Summary of "Sydney Morning Herald" news service.
12.15 p.m.—Rugby wireless news.
12.20 p.m.—Studio music.
12.40 p.m.—Margaret Butterworth, contralto.
12.45 p.m.—Studio music.
1 p.m.—"Big Ben." Weather intelligence.
1.3 p.m.—"Evening News" midday news service.
Producers' Distributing Society's Report.
1.30 p.m.—Studio music.
1.35 p.m.—Stock Exchange, second call.
1.40 p.m.—Studio music.
1.40 p.m.—Margaret Butterworth, contralto.
1.45 p.m.—Studio music.
1.50 p.m.—The 2FC Racing Commissioner, in the latest sporting information.
2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

3 p.m.—"Big Ben" and announcements.
3.3 p.m.—From the Christ Church, St. Laurence, Sydney:
An Organ Recital by Mr. Christian Hollemann.
3.29 p.m.—From the Studio:
May Craven, mezzo:
"St. Nicholas Day" (Martini).
3.25 p.m.—From the Christ Church, St. Laurence, Sydney:
Continuation of the Organ Recital by Mr. Christian Hollemann.

3.40 p.m.—From the Studio:
Eather Herford, soprano:
"Sweet and Lovely" (Pavani).
3.45 p.m.—From the Christ Church, St. Laurence, Sydney:
Items from the Organ Recital by Mr. Christian Hollemann.
4 p.m.—"Big Ben."
From the Studio:
Ella Head, mezzo:
"Serenade" (Schubert).
4.15 p.m.—From the Christ Church, St. Laurence, Sydney:
Continuing Items from the Organ Recital by Mr. Christian Hollemann.
4.20 p.m.—From the Studio:
Robert Maria, soprano.
4.25 p.m.—Studio records.
4.29 p.m.—Lionel Lunt, English baritone.
4.33 p.m.—May Craven, mezzo:
"Garden of Happiness" (Wood).
4.37 p.m.—Studio music.
4.42 p.m.—Eather Herford, soprano:
"Ave Maria" (Gounod).
4.45 p.m.—Stock Exchange, third call.
4.47 p.m.—Ella Head, mezzo:
"Cradle Song" (Schubert).
4.58 p.m.—Eileen Marcus, soprano.
4.55 p.m.—Lionel Lunt, English baritone.
5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

5.40 p.m.—The rhimes of EPC.
5.45 p.m.—The "Hello Man" talks to the children.
6 p.m.—Story time for the young folk.
5.48 p.m.—Studio music.
7 p.m.—"Big Ben." Late sporting news.
7.15 p.m.—Bulger's market reports (wool, wheat and stock).
7.25 p.m.—Fruit and vegetable markets.
P.D.S. Poultry Reports.
7.22 p.m.—Weather and shipping news.
7.28 p.m.—"Evening News" late news service.

NIGHT SESSION.

7.40 p.m.—Programme announcements.
7.45 p.m.—Miss Max Matthews will give some impressions of her trip to the United States of America with the Federal Industrial Commission.
7.57 p.m.—Studio music.
8 p.m.—"Big Ben."
From the Masonic Club, Castlereagh Street, Sydney: A programme supplied by Station 2FC and directed by Raymond Ellis.
The 2FC Studio Orchestra, conducted by Mr. Horace Keats, will play:
(a) "Three Bavarian Dances" (Hilgar).
(b) "Prelude and Sicilliana" (Mascagni).
8.14 p.m.—Soprano solo, Margaret James.
8.20 p.m.—Ella Price, contralto:
"Act a Clair" (Herbert).
8.23 p.m.—Alexander Sverjensky, pianoforte solo.
8.30 p.m.—Madame Lillian Gibson, contralto:
8.35 p.m.—Ella Price, contralto:
"The London 'Bus Conductor Chats about 'Wimmen'."
8.45 p.m.—The 2FC Studio Orchestra, conductor, Mr. Horace Keats, will play:
(a) "Chant du Vespéral, and Melodie" (Faderwaki).
(b) "Cantzonetta" (Herbert).
(c) March, "Rubes in Toyland" (Herbert).
9 p.m.—"Big Ben."
From the Masonic Club, Castlereagh Street, Sydney:
Raymond Ellis, English operatic baritone:
"Elegy" (Mascagni) (with cello obligato by Mr. Jules Van der Kief).
9.9 p.m.—Interval at the Masonic Club, during which the following items will be given:
Late weather forecast: From the Studio.
9.13 p.m.—From the Ambassadors:
The Ambassadors Dance Orchestra, conducted by Mr. Al Hammett.
9.30 p.m.—From the Studio:
Harrison White, baritone solo:
"Selection of Popular Chorus" (arr. White).

9.25 p.m.—From the Masonic Club:
The 2FC Studio Orchestra; conductor, Mr. Horace Keats:
"Morceau of Schubert's Melodie" (arr. Petras).
9.37 p.m.—Margaret James, soprano.
9.40 p.m.—Ella Price, contralto:
(a) "The Goblins Haunt's Clerk" (Rigny).
(b) "The Centenarian" (Chevaier).
9.45 p.m.—Alexander Sverjensky, pianoforte solo.
9.48 p.m.—Madame Lillian Gibson, contralto:
10 p.m.—Jules Van Der Kief, violin solo.
10.3 p.m.—Raymond Ellis, English operatic baritone.
10.10 p.m.—The 2FC Studio Orchestra, conductor, Mr. Horace Keats:
Selection, "Rah, Tah" (Jozsi).
10.25 p.m.—From the Studio:
Harrison White, baritone solo:
March, "The Entry of the Gladiators".
10.30 p.m.—Latest weather forecast.
10.31 p.m.—Harrison White, baritone solo:
(a) "Selection of Popular Chorus" (arr. White).
(b) "Ave Lucev Spio" Fantasia (White).
10.58 p.m.—From the Ambassadors:
The Ambassadors Dance Orchestra, conducted by Mr. Al Hammett, will play until 11.15 p.m., and intervals will be filled with Music Numbers from the Studio.
11.45 p.m.—National Anthem.
Close down.

2BL, SYDNEY.

Thursday.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10.30 a.m.—G.P.O. clock and chimes.
Musical programme from the Studio.
10.40 a.m.—News from the "Daily Telegraph Pictorial".
10.55 a.m.—Musical programme from the Studio.
11 a.m.—G.P.O. clock and chimes.
Announcement.
11.5 a.m.—Musical programme from the Studio.
11.35 a.m.—Women's session. Social notes.
Replies to correspondents by Mr. Jordan.
Talk on "Decorations" by Mr. Brogan.
Talk on "Donjon Craft" by Miss Hoyle.
12 noon.—G.P.O. clock and chimes.
Special noon forecast and weather report.
12.5 p.m.—Musical programme from the Studio.
12.8 p.m.—Information. Mail, shipping and port directory.
12.11 p.m.—Music in call by wireless.
12.13 p.m.—Fruit market report.
12.15 p.m.—Vegetable market report.
12.17 p.m.—London mail market report.
12.35 p.m.—Dairy and farm produce market report.
12.32 p.m.—Foreign market report.
12.34 p.m.—Fish market report.
12.38 p.m.—Stock Exchange report.
12.40 p.m.—H.M.V. gramophone recital.
1.07 p.m.—Stock Exchange report.
1.39 p.m.—G.P.O. clock and chimes.
Talk to children and special entertainment for children in hospital.
2 p.m.—G.P.O. clock and chimes.
Close down.

AFTERNOON SESSION.

Racing information broadcast immediately after web race, by courtesy of the "Sun."
3 p.m.—G.P.O. clock and chimes.
Musical programme from the Studio.
3.10 p.m.—News from the "Sun."

- 1.35 p.m.—Musical programme from the Studio.
 1.35 p.m.—News from the "Sun."
 1.40 p.m.—Dungowan Dance Band broadcast from the Dungowan Casino.
 1.45 p.m.—G.P.O. clock and chimes.
 News from the "Sun."
 1.45 p.m.—Musical programme from the Studio.
 1.45 p.m.—Talk on "Women of the Orient of all ages."
 1.45 p.m.—Dungowan Dance Band.
 1.45 p.m.—News from the "Sun."
 1.45 p.m.—Resume of night's programme.
 1.45 p.m.—Racing resume.
 1.48 p.m.—Special ocean forecast.
 1.50 p.m.—G.P.O. clock and chimes.
 Close down.

EARLY EVENING SESSION.

- 1.50 p.m.—G.P.O. clock and chimes.
 Children's session.
 1.50 p.m.—Musical programme from the Studio.

SPECIAL COUNTRY SESSION.

- 1.50 p.m.—G.P.O. clock and chimes.
 Australian Mercantile, Land, and Finance G.S. report.
 Weather report and forecast by courtesy of Government Meteorologist.
 Producers' Distributing Society's fruit and vegetable market report.
 30c Exchange reports.
 Grain and fodder report ("Sun").
 Dairy produce report ("Sun").
 Weekly traffic bulletin.
 Talk about books.
 2.15 p.m.—Country news from the "Sun."
 2.20 p.m.—Helpful hints to listeners.
 2.20 p.m.—Talk on "Some Impressions of Tokyo," by Mr. Rupert Merckham, B.L.S.
 2.25 p.m.—G.P.O. clock and chimes.
 Broadcasters' Topical Chorus.
 An hour's programme presented by House Recorders, Limited.

- 2.25 p.m.—The Salomona Dance Orchestra.
 2.30 p.m.—Miss Grace Saville, contralto.
 2.30 p.m.—The Salomona Dance Orchestra.
 2.35 p.m.—Mr. Herman Treumayne, bass.
 2.40 p.m.—The Salomona Dance Orchestra.
 2.45 p.m.—Mr. Frank Ryan, entertainer.
 2.50 p.m.—The Salomona Dance Orchestra.
 2.55 p.m.—Weather report and forecast by courtesy of Mr. C. J. Mares, Government Meteorologist.
 3.00 p.m.—The Marrickville Salvation Army Band (bandmaster, Mr. N. R. Knight) broadcast from Wemyss Street, Marrickville.
 3.05 p.m.—Miss Grace Saville.
 3.10 p.m.—The Marrickville Salvation Army Band.
 3.15 p.m.—Mr. Herman Treumayne.
 3.20 p.m.—G.P.O. clock and chimes.
 3.25 p.m.—Resume of following day's programme.
 3.30 p.m.—Mr. Frank Ryan.
 3.35 p.m.—Curti Kaye and the Wentworth Orchestra transmitted from the ball-room of the Wentworth.
 11.30 p.m.—G.P.O. clock and chimes.
 National Anthem.

3LO, MELBOURNE.

Thursday.

MIDDAY SESSION.

- 12 noon.—Melbourne Observatory Time Signal.
 Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange this day. Reuter's and the Australian Press Association Cables.
 British Official Wireless news from Rugby.
 "Argus" news service.

VOX POPULI.

- 12.20 p.m.—COMMUNITY SINGING IN THE STUDIO. (Conductor, Mr. G. J. Mackay). Assisted by THE STUDIO QUARTETTE. (Conductor, Reginald Bradley).
 Soloists:
 VAUDE AND YERNE, Entertainers.
 "Christmas Time Humor."
 BERNARD THOMAS, tenor.
 "Little Mother of Mine" (Barleiah).
 "Where's Your Walk" (Hazel).
 1.45 p.m.—Meteorological information.
 Weather forecast and rainfall for Victoria, Tasmania, South Australia and New South Wales. Ocean forecasts. River reports.
 Stock Exchange information.
 2 p.m.—Close down.

AFTERNOON SESSION.

- 3 p.m.—Melbourne Observatory Time Signal.
 3.1 p.m.—REV. KENNETH HENDERSON:
 "Topics of the Week."
 3.15 p.m.—MR. FRITZ HART will speak to Students of Music.
 3.20 p.m.—MR. J. HOWLETT ROSS:
 "Christmas Out-Back."
 3.25 p.m.—STUDIO QUARTETTE:
 "Bavel Strain Quartette, 1st Part"
 3.35 p.m.—NOEL SMITH, now appearing in The Student Prince at His Majesty's Theatre (by permission of J. C. Williamson).
 "Sea Fever" (Boswellfield).
 "Roadways" (Irishland).
 4.2 p.m.—DOROTHY ROXBURGH, viola:
 "Songs Without Words" (Hanser).
 4.9 p.m.—STUDIO QUARTETTE:
 "Allegro" (Schumann).
 4.15 p.m.—NOEL SMITH, baritone:
 "Far Across the Desert Sands" (Woodforde Floden).
 "Where the Abana Flows" (Woodforde Floden).
 4.25 p.m.—STUDIO QUARTETTE:
 "Andante" (Beethoven).
 4.30 p.m.—"Herald" news service. Stock Exchange information.
 4.45 p.m.—Evening song from St. Paul's Cathedral.
 5.30 p.m.—Acceptances for Saturday's races at Moonee Valley.

EVENING SESSION.

- 5.35 p.m.—Answers to letters and Birthday Congratulations by "BILLY BUNNY."
 6 p.m.—ELSIE BRADSHAW:
 "Christmas Carols for the Children."
 6.7 p.m.—MISS M. SHEPHERD:
 "The Reindeer and Other Deers."
 6.22 p.m.—ELSIE BRADSHAW:
 "More Carols."
 6.30 p.m.—"BILLY BUNNY":
 "The Treasure Seekers Are Working Overtime."
 6.40 p.m.—Official report of Newmarket Stock Sales by the Associated Stock and Station Agents, Bourke street, Melbourne.
 6.45 p.m.—"Herald" news service. Weather forecasts. Shipping movements.
 6.55 p.m.—Stock Exchange information.
 6.57 p.m.—Fish market reports by J. R. Borell Ltd. (Huddell) prices.
 6.58 p.m.—River reports.
 7.2 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd. Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions. Market reports of Fruit by the Victorian Fruitgrowers' Association—Retail prices. Wholesale prices of Fruit by the Wholesale Fruit Merchants' Association. Citrus Fruits, Bullarut Pig Market reports, by the Bullarut Stock and Station Agents.

NIGHT SESSION.

- 7.15 p.m.—MR. A. W. JACKSON will speak on "Gold."
 7.30 p.m.—A Talk on Foreign Affairs by "An Australian."
 7.45 p.m.—MR. RUPERT HAZEL will speak to you from his dressing-room at the Trovit Theatre (by permission of J. C. Williamson, Ltd.).



Better reception at less cost

Columbia Heavy Duty "B" Batteries do two things—they last twice as long, under the same conditions, as light duty batteries and they greatly improve the reception.

For every hour of use you now get from your smaller batteries, you will get two from either the Columbia No. 4770 or the even more powerful, longer-lived Columbia Layerbilt No. 4486. You will get a clearer tone, greater volume and greater distance. For genuine economy and satisfaction, insist upon either one of these two batteries.

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- 8 p.m.—MR. BOB MCGREGOR will speak on "Trickett."
- 8.15 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "Informational Patrol" (Palla), "Sing Me a Baby Song" (Kaban), "Hags and Kites" (L. G.).
- 8.24 p.m.—BERNARD THOMAS, tenor: "Mother of Mine" (Towers).
- 8.30 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "South Wind" (De Spry), "Black Bottom" (G. T. Jones), "If All Depends on You" (Henderson).
- 8.36 p.m.—VAUDE AND VERNE, Entertainers: "Cuckles."
- 8.39 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "Just an Ivy Covered Shack" (Rupp), "Died I Do" (Alicia), "Sweet Yvette" (Davies).
- 8.43 p.m.—ELLA KINGSTON, soprano: "The First of June" (Herbert Oliver).
- 8.51 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "Hud Everything" (Schobel), "She's Got It" (Walker), "Love is Just a Gift of Heaven" (Davis).
- 9 p.m.—THE BROS. FRENCH: "Sunny Tennessee."
- 9.3 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "Cack a doodle-ty of my noodle" (Johnson), "Slow River" (Schobel), "Huckle Dream" (Lew).
- 9.12 p.m.—BERNARD THOMAS, tenor: "Evening Song" (Bismantelli).
- 9.18 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "Just the Same" (Donaldson), "One Summer Night" (Speer), "Dear Little Irish Mother" (O'Regan).
- 9.24 p.m.—VAUDE AND VERNE: "Gizmagigats."
- 9.27 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "Go Wash an Ethiopian" (Terkel), "Chinaman," "The Birth of the Blues" (Henderson).
- 9.30 p.m.—ELLA KINGSTON, soprano: "The Dance on the Lawn" (M. F. Phillips).
- 9.36 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "The Whole World is Laughing at Me" (Grunden), "Mine" (Harley), "Heaven Help a Sailor on a Night like this" (Dulin).
- 9.44 p.m.—THE BROS. FRENCH: "Tuck Me to Sleep."
- 9.51 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: "Spring Fever," "Piano Solo (Mars)," "It's a Japanese Garden" (Kamulium), "Underneath the Weeping Willow" (Bread).
- 10 p.m.—Announcements, "Arms" news service, Meteorological information, Sporting notes, "Glimpses"—British official Wireless news from Rugby, The Royal Automobile Club of Victoria's Safety Message for To-day is for EVERYBODY. "Thoughts are seeds, Think Safety, Sow the seeds of carelessness, Their fruits are success, prosperity and happiness!" And "Are you attacking the flu menace energetically? Keep your dust bin covered and the milk tins. When you picnic, be careful with ice, and don't leave a liter of rubbish behind you to pollute the bush."
- 10.18 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS
- 10.24 p.m.—BERNARD THOMAS, tenor: "Selected."
- 10.27 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS
- 10.36 p.m.—VAUDE AND VERNE: "Sideshow."
- 10.43 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS
- 10.49 p.m.—ELLA KINGSTON, soprano: "The Palm Prophet" (Scott).
- 10.51 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.

- 11 p.m.—OUR GREAT THOUGHT: "For little children everywhere: A joyous season will we make: We bring our precious gifts to them: Even for the dear little Jews' sake."
- 11.1 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS: 1-40 p.m.—GOD SAVE THE KING.

4QG, BRISBANE

Thursday
MIDDAY SESSION.
1 p.m.—Market reports; Weather information; "The Daily Mail" and "The Daily Standard" news.
1.10 p.m.—A Lunch Hour address.
1.18 p.m.—Standard time signal.
2 p.m.—Close down.

AFTERNOON SESSION.
2.30 p.m.—A programme of Music by the State Orchestra.
4.10 p.m.—"The Colophon" news.

EARLY EVENING SESSION.
6 p.m.—"Daily Standard" news; announcements.
6.10 p.m.—Lecturette: MIL.
6.30 p.m.—Fictive Stories by "The Bandman."
7 p.m.—Market reports; Stock reports.
7.40 p.m.—"Teacher" news; announcements.
7.55 p.m.—Standard time signal.
8.45 p.m.—Lecturette: A Talk on Books, arranged by McLeod's.

NIGHT SESSION.
"Tonight's programme has been arranged by Mrs. Evelyn John and will be conducted by his pair of radio artists."
8 p.m.—FROM THE STUDIO: CLASSICALS: Wanderer's Song (Schumann), Double Quartette.
Tenor Duets: (a) "Nicht" (B), "Maidens Sing the Madness" (Rahmsdorf), Messrs. Geo. Williamson and Walter Land. Contralto Solo: "To Music" (Schubert), Miss Audrey Bell.
"Aladdin Dreams" (Brahms), Double Quartette.
EASTERN SONGS:
Tenor Solo: "Dedicate Love Song" (Pianisti) Mr. Tom Williams.
Soprano: (a) "The Temple Belle" (Woodford-Finden); (b) "Less Than the Dust" (Woodford-Finden).
Miss Mildred Bell (contralto), and Mr. Albert Paul (baritone).
"Aligh" (Irish John), Male Quartette.
Duet: (a) "In the Great Bazaar" (Woodford-Finden); (b) "Allah Be With You" (Woodford-Finden).
Miss Mabel Malouf (soprano), and Mr. Geo. Williamson (tenor).
Duet Solo: "Schlamm" (Lang), Mr. Tom Ross.

NEBRO ARRIBTALS AND PLANTATION SONGS.
"Click, Click," Double Quartette.
Contralto Solo: (a) "Didn't I Love"; (b) "There's a Wheel—Turning to My Heart".
Miss Mildred Bell.
Tenor Duet: "It's Gone".
Messrs. Geo. Williamson and Walters Land, (with Male Quartette).
Duet: "Far, Far Away".
Misses Mabel Malouf (soprano) and Mildred Bell (contralto), with Double Quartette.
"Dance and Sing"
"Double Quartette."

PART II
CHRISTMAS SONGS AND CAROLS:

"Hark the Herald Angels Sing"
"Double Quartette."
"Merry Xmas and Xmasing" (Lance), Misses Mabel Malouf (soprano) and Mildred Bell (contralto); with Double Quartette.
Tenor Solo: "Star of Bethlehem" (Adams), Mr. Walter Land.
"Santitas" (Oscar Paschl).
"Double Quartette."
Contralto Solo: "A Carol at Christmas Eve".
Miss Mildred Bell and Double Quartette.
Duet: "Let God Give a Gentle Rest O'er" (Hummel), (Mrs. G. Jones).
Miss Mildred Malouf (soprano), and Mr. Geo. Williamson (tenor).
"Don't Your Head Carol".
"Double Quartette."

FROM THE STUDIO.
10 p.m.—"The Daily Mail" news; Weather news. Close down.

5CL, ADELAIDE.

Thursday.
12.0 noon.—G.P.O. Chimes.
12.30 p.m.—General Information and "Advers" News—G.P.O. Chimes.
1.00 p.m.—Musical Numbers from the Studio.
1.40 p.m.—S. C. Ward and Co.'s Stock Exchange Intelligence.
1.50 p.m.—Meteorological Information.
1.55 p.m.—G.P.O. Chimes.
2.10 p.m.—Entertainment for Sick Children.
2.30 p.m.—Musical Numbers from the Studio.
2.55 p.m.—S. C. Ward and Co.'s Stock Exchange Intelligence.
2.55 p.m.—G.P.O. Chimes and Close Down.

AFTERNOON SESSION.
3.0 p.m.—G.P.O. Chimes.
3.15 p.m.—Orchestral Selections from the "Merry Last" Cafe.
3.30 p.m.—Orchestral Selections from Fox and Gibson's Showroom.
3.40 p.m.—Orchestral Selections from the "Arenada" Cafe.
3.57 p.m.—S. C. Ward and Co.'s Stock Exchange Intelligence.
3.58 p.m.—G.P.O. Chimes and Close Down.

EVENING SESSION.
6.0 p.m.—G.P.O. Chimes.
6.1 p.m.—Dinner Music from "Covent Garden" Orchestra.
6.15 p.m.—Children's Time.
6.30 p.m.—Greetings and Children's Correspondence.
6.52 p.m.—Ukulele Solo and Sing, Dorothy Reper.
7.0 p.m.—Song: A Kiddytune Artist.
7.5 p.m.—Humorous Recitation, Uncle Migs.
7.10 p.m.—Song for the Old Folks, Wattle Lady and Mary Wattle.
7.20 p.m.—S. C. Ward and Co.'s Stock Exchange Intelligence, Market Reports by A. M. Sandford and Geo. A. E. Hall and Co., Dalrymple and Sons, J.A. Farmers Co-operative Union, Taylor Bros., Retail Grocers' Association, J. H. Young's Special (a) "The Flamingo Market, Interstate Fruit and Produce Market, Co. Ltd."
7.30 p.m.—Extracts from "New Bulletin" supplied by Commonwealth Minister of Markets and Marketing.
7.35 p.m.—Popular Science Talk.
7.47 p.m.—Talk on Poultry, by A. M. Wattle, Sandbury.
8.0 p.m.—G.P.O. Chimes.
8.1 p.m.—Accompantist, Tom King.
8.30 p.m.—Special Radio Broadcast.
8.35 p.m.—An Evening of Special Interest to us.
8.50 p.m.—An Old Folks Night, Assisted by the Studio Orchestra.
9.0 p.m.—G.P.O. Chimes.
9.1 p.m.—Meteorological Information.
9.3 p.m.—Dalrymple's What Report.
9.5 p.m.—Old Folks Night Continued.
10.0 p.m.—G.P.O. Chimes.
10.1 p.m.—"Advertiser" General News Service.
10.30 p.m.—Relay from the Malton De Dance Guilds, Dance Selections.
10.53 p.m.—Friday's Programme and Meteorological Information.
11.0 p.m.—G.P.O. Chimes and Close Down.

From Icy Pole to Tropic Jungle: Burgess.

Friday, Dec. 23

2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m. to 11.30 a.m.

MIDDAY SESSION.

- 12 noon—"Big Ben" and announcements.
- 12.7 p.m.—Stock Exchange, first call.
- 12.3 p.m.—Official weather forecast, rainfall.
- 12.3 p.m.—Studio music.
- 12.14 p.m.—Summary of "Sydney Morning Herald" news service.
- Rugby wireless news.
- 12.25 p.m.—Studio music.
- 12.40 p.m.—Annie Sledge, mezzo.
- "Love's Labour" (Michael Head).
- 12.45 p.m.—Studio music.
- 1 p.m.—"Big Ben." Weather intelligence.
- 1.4 p.m.—"Evening News" midday news service.
- Producers' Distributing Society's Report.
- 1.30 p.m.—Studio music.
- 1.28 p.m.—Stock Exchange, second call.
- 1.19 p.m.—Studio music.
- 1.19 p.m.—Annie Sledge, mezzo.
- "Meadow Sweet" (Brache).
- 1.45 p.m.—Studio music.
- 2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 2 p.m.—"Big Ben" and announcements.
- 2.3 p.m.—The "Radio Triad" (Leader, Mr. Ewart Chapple).
- 2.15 p.m.—Fosse Brakell, contralto.
- "None but the Lonely Heart" (Thesley).
- 2.11 p.m.—A short talk.
- 2.23 p.m.—Jeanette Rooney, soprano.
- "The Carpet" (Sanderson).
- 2.29 p.m.—Kathleen Horne, soprano.
- "When You and I Were Seventeen" (Rasoff).
- 2.23 p.m.—The "Radio Triad" (Leader, Mr. Ewart Chapple).
- 2.45 p.m.—Muriel Watt, contralto.
- "Here in the Quiet Hills" (Carnes).
- 2.47 p.m.—Studio records.
- 2.43 p.m.—Fosse Brakell, contralto.
- "The Wild Rose" (Sambert).
- 4 p.m.—A Reading.
- 4.10 p.m.—Jeanette Rooney, contralto.
- "Of the North I Sing" (Olliver).
- 4.15 p.m.—The "Radio Triad" (Leader, Mr. Ewart Chapple).
- 4.20 p.m.—Kathleen Horne, soprano.
- "Until" (Sanderson).
- 4.26 p.m.—Muriel Watt, contralto.
- "The Little Time" (Lohr).
- 4.25 p.m.—The "Radio Triad" (Leader, Mr. Ewart Chapple).
- 4.45 p.m.—Stock Exchange third call.
- 4.47 p.m.—Studio music.
- 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 5.40 p.m.—The chimes of 2FC.
- 5.45 p.m.—The "Hello Man" talks to the children.
- 5.30 p.m.—Story time for the young folk.
- 5.40 p.m.—From Farmer's Oak Dining Hall: The Oak Hall Instrumental Trio (Leader, Mr. Horne East).
- 5.45 p.m.—Marie Dorman, soprano.
- "Phyllis has such charming graces" (Willson).
- 5.50 p.m.—The Oak Hall Instrumental Trio.
- 6.55 p.m.—David Craven, baritone.

- 7 p.m.—"Big Ben."
- Latest Rating Information by the 2FC Commissioner (from the Studio).
- 7.10 p.m.—Dalziel's market reports (wheat, wheat and stock).
- 7.15 p.m.—Fruit and vegetable markets.
- 7.20 p.m.—Weather and shipping news.
- 7.25 p.m.—"Evening News" late news service.

NIGHT SESSION.

- 7.30 p.m.—Programme announcements.
- 7.40 p.m.—Lionel Lunt, English baritone.
- 7.45 p.m.—Cricketing reminiscences, prepared by Mr. Frederick Harper.
- 7.55 p.m.—Lionel Lunt, English baritone.
- 8 p.m.—"Big Ben."
- From the Lyric Winter Garden Theatre, George Street, Sydney:
- Orchestral Items.
- 8.00 p.m.—From the Studio:
- Alice Provost, contralto.
- "How far is it to Bethlehem" (Goudrey Shaw) (arr. Busch).
- 8.24 p.m.—Ria Garland.
- "Mirth and Melody."
- 8.30 p.m.—The "Crackerjack" Trio.
- 8.35 p.m.—Lionel Lunt, English baritone.
- 8.38 p.m.—Alice Provost, contralto.
- "If there were diamonds to sell" (John Ireland).
- 8.42 p.m.—From the Lyric Winter Garden Theatre, George Street, Sydney:
- Orchestral Items.
- 8.50 p.m.—From the Studio:
- Ria Garland.
- 8.58 p.m.—The "Crackerjack" Trio.
- 9.4 p.m.—Late weather forecast.
- 9.4 p.m.—Alice Provost, contralto:
- 1. (a) "Dream of Nights."
- (b) "The man in the Moon" (Castel).
- 2. "Don't the larks" (Old Scots Ballad).
- 9.12 p.m.—From Her Majesty's Theatre, Sydney (by permission of J. C. Williamson, Limited), the Second Act of the Musical Comedy,

"WILDFLOWER."

- Featuring Marie Bourke and Herbert Brown.
- Scene: The Benedetta Villa in Lake Como, Italy.
- Musical numbers:
- "The best dance I've had tonight."
- "Gimme I will."
- "Cassino."
- "You can't blame a girl for dreaming."
- "Goodbye, Little Rosebud."
- "Finale."
- 10.12 p.m.—From the Studio:
- The "Crackerjack" Trio.
- 10.26 p.m.—Len Mauries, popular baritone.
- 10.35 p.m.—Late weather forecast.
- 10.41 p.m.—The "Crackerjack" Trio.
- 10.45 p.m.—Len Mauries:
- popular songs.
- 10.47 p.m.—Late news and announcements.
- 11 p.m.—"Big Ben."
- National Anthem.
- Close down.

3LO, MELBOURNE.

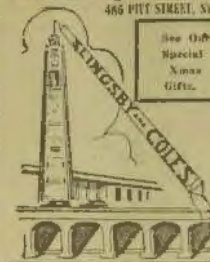
Friday,

MIDDAY SESSION.

- 12 noon—Melbourne Observatory time signal.
- 12.1 p.m.—Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange this day.
- Reuters and the Australian Press Association cables.
- British official wireless news from Rugby. "Argus" news service.
- 12.26 p.m.—STUDIO QUARTET:
- Musical Melange, "Creme de la Creme" arr. (Tobani).

SLINGSBY, COLES Ltd.

465 Pitt Street, Sydney



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UNDER CENTRAL STATION.
We are City Agents for United Distributors Products.

- Roal Harpala in Jacks and Battery Switches
- Doe Them on Your Low-voltage and Kirshbush Vernier Dials, 66-1 Movement
- Variable Condensers
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- Lighting Arrestor and Switch
- Large Stocks of 1.5 and 4 mfd. Condensers
- New Systems Head Phones
- Inspect Our Large Stock of Electrical Fuses.

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455 PITT ST. (2 doors from old address)

Radio Sets Built To Any Circuit Free of Charge

If you purchase your Accessories from me, I will wire your set to your own design without any charge.

All Standard Accessories stocked and priced at advertised rates.

Neutrodyne, Heterodyne, Helmaric and Super Heterodyne are my specialties.

Re-wiring and Repairs faithfully executed. Charges, Eliminator, Speakers on order terms.

If you want advice come and see me. Any information is given free, gladly.

G. C. BEARDSMORE

(Late Radio Manager, Harrington, Ltd.)

1st Floor,
KINCOPPAL CHAMBERK
34 Martin Place,
Sydney. Phone 5177A.

12.50 p.m.—BERNARD THOMAS, tenor:
"Unit" (Sanderson).
"Marabeta" (Scherstinger).

12.57 p.m.—Stock Exchange information.

12.59 p.m.—REGINALD BRADLEY, violin:
"Midnight Bell" (Hueslerget).

12.57 p.m.—STUDIO QUARTET:
Overture, "The Feast of Lanterns" (Lange)

1 p.m.—Melbourne Observatory time signal.
"Time is short, your obligations are infinite. Are your homes regulated, your children instructed, the afflicted relieved. Remember, the only way to be loved is to appear lovely to persons and display kindness."

1.1 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. New South Wales, at Melbourne Cricket Ground, by Mr. Rod McGregor.

FROM THE STUDIO.

1.07 p.m.—DAVID GRAHAM, baritone (by permission of J. C. Williamson, Ltd.):
"When a Maiden Told Your Fancy" (Moore).
"Youth" (Allivent).

1.18 p.m.—Meteorological information. Weather forecast and rainfall for Victoria, Tasmania, South Australia and New South Wales. Ocean forecasts. River reports.

1.25 p.m.—STUDIO QUARTET:
"Musical Scenes from Switzerland" (Lange).

1.35 p.m.—BERNARD THOMAS, tenor:
"Moonlight and Roses" (Moore).
"I Hear a Thrush" (Climan).

1.42 p.m.—STUDIO QUARTET:
"Sounds from Italy" (Kretschmer).

1.49 p.m.—DAVID GRAHAM, baritone:
"The Happy Moments" (H. V. Wallace).
"Aries, O Sun" (M. C. Dar).
1.52 p.m.—Announcements.
2 p.m.—Close down.

2.11 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. New South Wales, at Melbourne Cricket Ground by Mr. Rod McGregor.

2.29 p.m.—Close down.

2.45 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. New South Wales, at Melbourne Cricket Ground, by Mr. Rod McGregor.

AFTERNOON SESSION.

3 p.m.—Melbourne Observatory time signal.

3.1 p.m.—STUDIO QUARTET:
"Three Eastern Sketches" (Hawill).

3.16 p.m.—MISS FRANCES FLASHER:
"Dilemma and Christmas Time."

3.25 p.m.—ALBERT CARLISLE, tenor (by permission of J. C. Williamson, Ltd.):
"Ma Duet" (Tut. Assoc.).
"Kadampai Song" (Fildes).

3.32 p.m.—STUDIO QUARTET:
"Pierrot" (Benois).

3.39 p.m.—MELLIE JUDGES, soprano (by permission of J. C. Williamson, Ltd.):
"Stay with Me, Summer" (C. Morris).
"Here in the Quiet Hours" (Gamm).

3.46 p.m.—STUDIO QUARTET:
Medley, "A Musical Child's Dream" (Dix).

3.53 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. New South Wales, at Melbourne Cricket Ground, by Mr. Rod McGregor.

4.1 p.m.—ALBERT CARLISLE, tenor:
"In the Garden of Tabor" (Doppio).
"A Love Not Just for Two" (Lehr).

4.16 p.m.—STUDIO QUARTET:
"Santa Claus Suite" (Holland).

4.26 p.m.—MELLIE JUDGES, soprano:
"I Love the Night" (Huber).
"Musetta's Valse Song" (Puccini).

4.27 p.m.—MRS. M. CALLAWAY MAROOD:
"The Study and Use of Color—"Yellow."
4.46 p.m.—"Herald" news service. Book Exchange information.

5 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. New South Wales, at Melbourne Cricket Ground, by Mr. Rod McGregor.

5.29 p.m.—Close down.

EVENING SESSION

5.30 p.m.—Answers to letters and Birthday Greetings by "BILLY BUNNY."

5.50 p.m.—Description of the final of today's INTERSTATE CRICKET MATCH, Victoria v. New South Wales, from Melbourne Cricket Ground, by Mr. Rod McGregor.

6 p.m.—"FROM THE STUDIO."
6.1 p.m.—"BILLY BUNNY."
6.7 p.m.—CLIFF BRADSHAW:
Cacels for the Children.

6.11 p.m.—CAPT DONALD MACLEAN:
Jolly Roger Gentleman.

6.34 p.m.—"BILLY BUNNY":
More about Treasure Seekers.

6.40 p.m.—Official report of Newmarket stock sales by the Associated Stock and Station Agents, Bourke Street, Melbourne.

6.45 p.m.—"Herald" news service. Weather forecasts. Shipping movements.

6.52 p.m.—Book Exchange information.

6.57 p.m.—Fruit market reports by J. R. Barrett, Ltd. Rabbit prices.

6.59 p.m.—River reports.

7 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd. Poultry, grain, hay, straw, jute, dairy produce, potatoes and onions. Market reports of Fruit by the Victorian Producers' Association. Retail prices. Wholesale prices of fruit by the Wholesale Fruit Merchants' Association. Citrus fruits.

NIGHT SESSION.

7.15 p.m.—MISS L. G. HARRIS, Publicity Officer of the Kindergarten Union will speak on:
"The Work of the Free Kindergartens."

7.30 p.m.—BRUNSWICK CITY BAND:
Overture, "The Great Day" (Lange).

7.40 p.m.—BERNARD THOMAS, tenor:
"Athen Marie."
"Miserable" (MacMurrugh).

7.47 p.m.—MR. H. K. LOVE:
"Technicalities."
Mr. Love will be glad to attend to your wireless difficulties, and we ask you to write to him for any advice that you may require.

7.57 p.m.—BRUNSWICK CITY BAND:
Grand Chorus, "Hallelujah" (Handel).

8.4 p.m.—VAUDE AND VERSE, entertainment:
"Jolly Jokes."
8.14 p.m.—THE FRENCH BROS., banjoists:
"Bicycle Skies."
"Kentucky Babe."

8.20 p.m.—JESSIE IRWIN, soprano:
"The Waltz Song from Tom Jones" (Georgina).
"Butterflies and Lilacs" (Hemden).

8.27 p.m.—BRUNSWICK CITY BAND:
Selection, "The Cross of Jerusalem."

8.37 p.m.—HAROLD ELVINS, piano:
1. "Barcarolle" (Raff).
2. "Caprice" (St. Saens-Gluck).
3. "Minuet" (Zanella).
4. "Concert Etude" (Goldard).

8.57 p.m.—Announcements.
The Royal Automobile Club of Victoria's Safety Message for to-day is for ALL DRIVERS. "Don't unnecessarily obstruct another driver by holding to the centre of the road after receiving his signal that he wishes to pass."

9.1 p.m.—BRUNSWICK CITY BAND:
Intermezzo, "Les Cloches de St. Malo" (Rimner).

9.10 p.m.—SCROOGE:
A Christmas Carol
by
Charles Dickens,
adapted especially for broadcasting by
Maurice Dooly.

CHARACTERS
Ebenezer Scrooge . . . MAURICE DUDLEY
Bob Cratchit (his Clerk) . . . EDWIN J. LEWIS
Fred Wayland (his nephew) . . . ALAN HELL
Mr. Worthington . . . Mr. Moulton . . . H. M. HILL
GHOST OF JACOB MARLEY . . . J. ROWLETT BOSS
The Cratchit children . . . KATE CUTLER
Martha . . . MYRA HATHORN
Peter . . . SYD DALE
Tiny Tim . . . PAT McLEAN
The Toy Shoppe . . . PAT McLEAN
Fanny (his sister) . . . ALBA GAVAN
Scrooge's Governess . . . MRS. DUDLEY
Mrs. Cratchit . . . MRS. DUDLEY
Produced by Maurice Dooly.
Incidental Music arranged by Wm. C. James.

9.47 p.m.—BERNARD THOMAS, tenor:
"If You'll All You" (Moore).
"Daisy Anubank" (B. Smith).

9.54 p.m.—FRENCH BROS., banjoists:
"Paddy's Air."

10 p.m.—"Dinnering" (Mr. Frank Baxter, of the "Arctur") will speak on to-morrow's rains.

10.10 p.m.—VAUDE AND VERSE, entertainment:
"Christmas Comicalities."

10.17 p.m.—BRUNSWICK CITY BAND:
Anthem, "Ave and I Got You"
Chorus, "Break Forth in Praise."

10.25 p.m.—JESSIE IRWIN, soprano:
"It's a Wonderful Evening"
"Don Caudel" (Mara Lopez).

10.33 p.m.—News service. Meteorological information. British official wireless news from Burley. Road notes. (Aired station movements).

10.45 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS:
"The Top Town Parade" (Maurice).
"Jack Don Amble" (Ash).
"Charming" (Baird).
"Some Day Sweetheart" (Spikes).
"Yah Gauda Be Home Tonight" (Duhin).

11 p.m.—OUR GREAT THOUGHT.
I have always thought of Christmas time, when it has some kind of spirit from the generation that is its sacred time and origin—if anything belonging to it can be apart from that—as a good time a kind, forgiving, charitable, pleasant time—Charles Dickens.

11.1 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS.

11.40 p.m.—GOD SAVE THE KING.

Saturday, Dec. 24
2FC, SYDNEY.

EARLY MORNING SESSION
7 a.m. to 8 a.m.
MORNING SESSION.
10 a.m. to 11.30 a.m.

"Burgess" spells "Quality; Life; Service."

MIDDAY SESSION.

11 noon.—"Big Ben" and announcements.
 12.1 p.m.—Stock Exchange, first call.
 12.3 p.m.—Studio music.
 12.25 p.m.—"Spirey Morning Herald" news service.
 12.32 p.m.—Rugby wireless news.
 12.35 p.m.—Studio music.

NOTE: From 11.50 a.m. results and descriptions of the Cricket Match, New South Wales versus Tasmania, direct from the Sydney Cricket Ground.

1 p.m.—"Big Ben."
 Weather Intelligence.
 1.30 p.m.—"Evening News" midday news service.
 1.40 p.m.—Studio music.

AFTERNOON SESSION.

NOTE: During the afternoon descriptions and results of the A.J.C. Racing at Randwick will be given by the 2FC Racing Commissioner.
 Intervals of Racing and Cricket will be filled with musical items as follows:
 From the Crystal Palace Theatre, George Brown, Sydney.
 Orchestral music.
 From the Studio:
 Cliff Arnold, novelty pianist.
 Syd Montague, ukulele numbers.

4.30 p.m.—Complete resume of the day's Sporting Events.
 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

5.40 p.m.—The chimes of 2FC.
 5.45 p.m.—The "Hello Man" talks to the children.
 6.10 p.m.—Story time for the young folk.
 6.40 p.m.—Birdie music.
 7.05 p.m.—"Big Ben." Weather Intelligence.
 7.3 p.m.—Late sporting news.
 7.15 p.m.—"Evening News" late news service.
 7.25 p.m.—Studio music.

NIGHT SESSION.

7.35 p.m.—Programme announcements.
 7.45 p.m.—Lionel Lunt, English baritone.
 7.45 p.m.—"Let's go around the World," a talk by the Rev. F. H. Raward. The third of the series.
 7.59 p.m.—Announcement.
 8 p.m.—"Big Ben."
 From St. Andrew's Cathedral, by arrangement with the Very Rev. Dean Talbot: Christmas Carols by St. Andrew's Cathedral Choir.
 8.25 p.m.—From the Studio:
 Mr. Scott Alexander will present for the first time in the history of Radio a real old-fashioned Christmas Pantomime, specially written for 2FC by Colinton Ball, entitled

"CINDERELLA."
 Act I.

Scene 1. The Haunted Corridor.
 Scene 2. The Fairy Glen—where Cinderella meets the Prince, and helps the old witch to gather sticks.
 Scene 3. The bad Baron's library.
 Scene 4. The Kitchen. Invites for the ball. Cinderella and the ugly aunt at home—the Fairy's arrival. Cinderella becomes a Royal Princess and goes to the ball.

Act II.

Scene 1. Exterior of the Royal Palace.
 Scene 2. The Ball Room. Cinderella rejects the Fairy's warning and her clothes change again to rags. The Prince orders the glass slipper.
 Scene 3. On the Road Home.
 Scene 4. Back home. The Prince's proclamation.—The slipper fits Cinderella's foot. The ugly sisters' rage.
 Scene 5. The Prince's wedding to Cinderella.

10.8 p.m.—From the Studio:
 Lionel Lunt, English baritone.
 Late weather forecast.
 10.15 p.m.—From the Ambassador:
 The Ambassador's Dance Orchestra; conductor, Mr. Al Hammett.

Intervals at the Ambassador will be filled with Musical Items from the Studio.
 10.57 p.m.—Late news and announcements.
 11 p.m.—"Big Ben." The Waltz.
 11.20 p.m.—From the Ambassador:
 The Ambassador's Dance Orchestra.
 12 midnight—"Big Ben."
 National Anthem.
 Close down.

NOTE: The British Broadcasting Corporation has very graciously accepted the invitation extended to them, by Station 2FC to broadcast in Australia for relay, a typical Christmas programme. This will be broadcast by 6RW—a short wave station of the B.B.C., London, and will be relayed by 2FC.

In recognition, 2FC will broadcast on Monday morning, 26th December, a programme to be picked up and relayed by the B.B.C., London, on Christmas day, between 4 p.m. and 8 p.m.

3LO, MELBOURNE.

Saturday.

MORNING SESSION.

11.5 a.m.—JOHNSTON'S STUDIO BOYS:
 "Silverwood."
 Conard Solo, "The Holy City."
 11.30 a.m.—BERNARD THOMAS, Tenor:
 "Sally Horener."
 "Evening Song" (Blumenhals).
 11.17 a.m.—JOHNSTON'S STUDIO BOYS:
 A Sacred Souvenir.
 11.25 a.m.—DAVID GRAHAM, Baritone
 (By permission of J. C. Williamson, Ltd.):
 "Olewn in Fairyland" (D. Slater).
 "Maize My Girl" (G. Aitken).
 11.53 a.m.—Description of INTER-STATE CRICKET MATCH, Victoria v. New South Wales, at Melbourne Cricket Ground, by Mr. Rod McGregor.

FROM THE STUDIO.

11.43 a.m.—JOHNSTON'S STUDIO BOYS:
 "Spring Song" (Mendelssohn).
 11.52 p.m.—BERNARD THOMAS, Tenor:
 "Lollis" (Bussel-Peech).
 "Bonny Mary of Argyll."
 12.0 noon.—Melbourne Observatory Time Signal.
 "Are you contributing to the Christmas spirit—Be generous and pleasant-tempered, and forgiving; even as God scatters favours over thee, so thou scatter over the people."
 12.1 p.m.—Metal Prices Received by the Australian Mines and Metals Association from the London Stock Exchange this day; British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; News Service.
 12.25 p.m.—STUDIO QUARTETTE:
 "Xmas Medley" (Asten).

Ask for
Wetless Fixed Condensers
 They are built up to a high standard.
 Only the Best Mica is used as Di-electric.
 They are guaranteed capacities, and will last for years



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12.30 p.m.—DAVID CRAMME, Bassoon:
"Theodore Cross and Uder" (Sanderson).
"Fill a Glass With Golden Wine" (Quilter).
12.40 p.m.—Stock Exchange Information.
12.42 p.m.—STUDIO QUARTETTE:
"Around the Christmas Tree."
12.47 p.m.—Description of INTER-STATE
CRICKET MATCH Victoria v. New South
Wales, at Melbourne Cricket Ground, by
Mr. Rod Metcalf.

FROM THE STUDIO.

12.57 p.m.—ETHEL FORSHAW, Soprano:
"Star Violets" (Salvator Rosa).
"A Carol of Jesus Child" (Hoeberl-Hueberl).
1 p.m.—Meteorological Information:
Weather Forecast and Rainfall for Victoria,
Tasmania, South Australia and New
South Wales; Ocean Forecasts; River
Levels.

1.11 p.m.—JOHNSTON'S STUDIO BOYS:
Selection, "Classics."
1.20 p.m.—VAUD AND VERNE, entertainers:
"Cherry Chippings."
1.30 p.m.—STUDIO QUARTETTE:
"All on a Snow Morning" (Aneres).
1.37 p.m.—REGINALD BRADLEY, Violin:
"The Old Refrain" (Kreutzer).
1.45 p.m.—ETHEL FORSHAW, Soprano:
"Pieta Signes" (Gumbert).
"The Elf Man" (Wells).

1.52 p.m.—JOHNSTON'S STUDIO BOYS:
Selected.

2 p.m.—Description of Banyule Horrie, two
miles, MOONEE VALLEY, by "Musket,"
of the "Sporting Globe."
2.1 p.m.—Close Down.

2.12 p.m.—Description of INTER-STATE
CRICKET MATCH Victoria v. New South
Wales, at Melbourne Cricket Ground, by
Mr. Rod Metcalf.

2.30 p.m.—Description of Barkoolie Handicap,
four furlongs, MOONEE VALLEY, by "Musket,"
of the "Sporting Globe."
2.35 p.m.—Description of INTER-STATE
CRICKET MATCH Victoria v. New South
Wales, at Melbourne Cricket Ground, by
Mr. Rod Metcalf.

2.45 p.m.—Close Down; A description of the
WILHELM SPARKS, one mile, A.C.C.
 Races, will be given during the afternoon
from the Sandwick Racecourse, Sydney.

AFTERNOON SESSION.

3 p.m.—Melbourne Observatory Time Signal.

3.1 p.m.—Description of Roonbarrak Handicap,
one mile, MOONEE VALLEY, by "Musket,"
of the "Sporting Globe."
3.5 p.m.—Transmission from Auditorium,
Collins-street, Melbourne.

3.16 p.m.—Description of INTER-STATE
CRICKET MATCH Victoria v. New South
Wales, at Melbourne Cricket Ground, by
Mr. Rod Metcalf.

3.40 p.m.—Description of Laluma Handicap,
1½ miles, MOONEE VALLEY, by "Musket,"
of the "Sporting Globe."
3.45 p.m.—Transmission from Auditorium.

3.50 p.m.—Description of INTER-STATE
CRICKET MATCH Victoria v. New South
Wales, at Melbourne Cricket Ground, by
Mr. Rod Metcalf.

4 p.m.—Transmission from Auditorium.

4.23 p.m.—Description of Kiata Handicap, 6
furlongs, MOONEE VALLEY, by "Musket,"
of the "Sporting Globe."
4.35 p.m.—Description of INTER-STATE
CRICKET MATCH Victoria v. New South
Wales, at Melbourne Cricket Ground, by
Mr. Rod Metcalf.

4.55 p.m.—Transmission from Auditorium.

4.59 p.m.—Description of Arapah Handicap,
seven furlongs, MOONEE VALLEY, by
"Musket," of the "Sporting Globe."
4.55 p.m.—Description of INTER-STATE
CRICKET MATCH Victoria v. New South
Wales, at Melbourne Cricket Ground, by
Mr. Rod Metcalf.

5 p.m.—"Herald" News Service: Stock Ex-
change Information.

5.10 p.m.—Description of INTER-STATE
CRICKET MATCH Victoria v. New South
Wales, at Melbourne Cricket Ground, by
Mr. Rod Metcalf.

5.20 p.m.—Close Down.

EVENING SESSION.

CHILDREN'S HOUR.

5.38 p.m.—Late Sporting Results.
5.40 p.m.—Answer to Letters and Birthday
Greetings by "LITTLE MISS KOOKA-
BURRA."
5.45 p.m.—Description of Fizzle of Today's
great Interstate Cricket Match, Victoria
v. New South Wales, at Melbourne Cricket
Ground, by Mr. Rod Metcalf.

5.57 p.m.—STUDIO QUARTETTE:
"Santa Claus Sings."
5.14 p.m.—A FAIRY PLAY for children of
all ages, presented by the pupils of MISS
YETTY LANDAU:
"LOVE HEARTS."

Princess Darling . . . LOROTHY BETHUNE
Fairy Queen . . . GWENNE HULL
Cupid . . . ELLA REWELL
Puck . . . THELMA HULL
Fairy Bluebird . . . GIRLIE DICKINS
Prince Charming . . . LYLA REYNOLDS
Scene: A GLADE IN THE FOREST
Time: ONCE UPON . . .

Songs incidental to the play—
"The Little White Hill of Dream," The
Fairy Queen.
"A Wedding in Fairyland," Entry Bluebird.
Incidental music by MISS ROSA ROSEN,
A.C.C.M.

All the characters in the play are por-
trayed by children under 14 years of age.
5.48 p.m.—Sporting Results.
5.45 p.m.—"Herald" News Service: Weather
Synopsis; Shipping Movements.
5.52 p.m.—Stock Exchange Information.
5.57 p.m.—River Reports.
6 p.m.—Market Reports by the Victorian
Producers' Co-operative Co., Ltd.; Poultry,
Grain, Hay, Straw, Fats, Dairy Products,
Potatoes, and Onions; Market Reports of
Wool by the Victorian Producers' Asso-
ciation; Retail Prices, Wholesale Prices of
Fruit by the Wholesale Fruit Merchants'
Association; Climate Reports.

NIGHT SESSION.

During the evening, songs to be selected
will be described from the Rotodromes.
7.15 p.m.—MR. F. CHAPMAN, National
Musicalian,
"The Building of the Sea Shell."
7.30 p.m.—Another interesting Chat with
"CALIGULA."
7.45 p.m.—The Right Hon. S. M. Bruce, P.C.,
M.P., Prime Minister of Australia, will
officially open the Mordialloc Christmas
Dinner.

Mr. Frank Green, M.L.A. and
Dr. W. W. White, Mayor of Mornings and
Mordialloc.

CHRISTMAS EVE! A SPECIAL

PROGRAMME
AND SOME CHRISTMAS CAROLS!

8.5 p.m.—We have pleasure in announcing
that a special Christmas Eve programme
has been arranged.

IN HOLIDAY SPIRIT.

18.15 p.m.—Christmas Messages.
19.15 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS:
"I Can't Get Over a Girl Like You"
(Brown).

"There's Everything Nice About You"
(Brown).

19.35 p.m.—Late Sporting Results; Announ-
cements; British Official Wireless News from
Rugby; Island Racing Movements; The
Royal Automobile Club of Victoria's mes-
sage for today is for MOTORISTS:
"Get out that cutting-in. Make motoring
a pleasure not a peril. Safety First."

19.38 p.m.—ETHEL FORSHAW, Soprano:
"Go Not Happy Day" (Frank Bridges).
"Love Went A-flying" (Frank Bridges).
19.46 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS:
"The Luvette" (Lambert) (Lambert).
"Cook a Goodie, I'm of My Moodie"
(Johnson).
"Song of Zambhal" (Egan).

19.55 p.m.—REGINALD BRADLEY, Violin:
"Mildred Bell" (Hooperberg).
19.58 p.m.—J. HOWARD KING, Baritone:
"The Carter" (Gould).
"Santa's Decision" (Kramer).

19.52 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS:
"Look Day" (Sanderson).
"Deep in My Heart, Dear" (Rambler).
"Zig Zag" (Piano solo (Blow)).

19.58 p.m.—AGNES FORTUNE, Piano, and
REGINALD BRADLEY, Violin:
"Old Folks at Home" (Kreutzer).
19.55 p.m.—ETHEL FORSHAW, Soprano:
"The Heart's Whisper" (Holt).
"Santa" (Hudson).
"Hark! the Herald Angels Sing."
Glorious to the numberless King.
Peace on earth, and good-will
to men.
God and angels reconciled—
Charles Wesley.

19.52 p.m.—COLLINGWOOD CITIZENS'
BAND:
19.50 midnight—OUR GREAT THOUGHT:
"The earth has grown old with its burden
of care.
But at Christmas it always is young
The heart of the jewel burns lustre and
fair.
And its soul, full of music, breaks forth
on the air.
When the song of the angels is sung."
—Phillips Brooks.

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All Readers' Queries Answered Here.

C.M. (WAHBOONGA).—Q.: I have recently constructed "The Marco Four Valve Receiver," published a few weeks' back in "Wireless Weekly." So far, I have been able to make the set function. I have followed all directions in the "Wireless Weekly" very carefully, and I am sure there is no mistake in the wiring. Still, there might possibly be a mistake in the printing of the wiring or the layout. If you could publish on the "Queries" page of the "Wireless Weekly" a few suggestions by which I might be able to make my detector set function I would be very much obliged.

A.: There is no mistake in the printing. There are many reasons for failure in any set and we shall take a whole issue of this paper to itemise them. Your set might be out of order, or one of your valves defective. A transformer primary may have broken down, the A or B batteries may be flat, or (1) it may not have been connected up correctly. Your better plan would be to call in a friend who is a little more familiar with the subject than yourself.

H.T. (BIVEDOCK).—Q.: (1) Would you favour me with a reply to the following queries in your next issue of "W.W."? I am going to build the Marco Four described in your issue of 4/11/37. In the article you state UX301A valves. These valves I take it would require a 4 volt battery. I have a 4 volt accumulator and I would like you to advise me whether 4 volt valves would be best for this circuit for good results. (2) Would I have to increase the turns on the L2 coil to 56 turns to No. 22 gauge wire? (3) I have a B battery eliminator built from radio sets of some years ago, employing a 200a valve (4 cells) in the rectifying. Could I use a Philips No. 306 4 volt 1 amp. valve and breakdown the 4 cell at a convenient point in the series a filament, so as to suit a 4 volt tube?

A.: As you are desirous of using 4 volt valves you will find that Philips A425 valve will be an ideal radio frequency valve, the A415 an excellent detector, the A409 a good first stage audio valve, and the B492 a splendid last stage audio valve. You can breakdown the voltage from your eliminator by means of the filament.

H.H.H. (WEST WALLSEND).—Q.: I would esteem it a favour if you could give me information, through your valued columns, concerning the following:—(1) Can a power valve be used with the ST109 circuit employing 3 V.F. stages (as now)? (2) Is it possible to eliminate the R.C. coils on front of panel in favour of telescopic type or other form of internal coil, divided or otherwise?

A.: A power valve can certainly be used in the last audio stage of this circuit, but it will become necessary to feed it with a special grid bias voltage. Leave the C battery connection on the first audio transformer as it is, but from the 2nd, audio transformer, take a separate lead, from the F to the corresponding negative terminal of the C battery, recommended by the valve manufacturer. I would not advise the alteration of this receiver in back of panel coils, if the selenium type 3 V.F. stages (as now) are being used of the coils.

H.T. (SPRING RIDGE).—Q.: Could the Beanooid short-wave kit be used in the short wave adaptor, described in "W.W." about five weeks ago.

A.: Yes, ideally suited thereto.

L.R. (WAHBOONGA).—Q.: I am eager to make the Retinara Four Valve Receiver, could I use a three-plate panel, or is so, what kind would be best?

A.: Yes, three-plate, mounted on both sides and treated to one or two coats of shellac, can be used with satisfaction.

(TOWNSEND).—Q.: I am at present using a valve with 4V1 circuit, and a wireless friend tells me that if I were to connect a H.F. choke between the plate of the detector valve and the primary of the L.F. transformer, it would give me a better reaction

technical queries are answered through the columns of Wireless Weekly. There is no occasion to send either stamps or addressed envelopes. The only condition is that the number of questions be limited to four. We unfortunately cannot deal with technical queries by telephone or by personal callers.

Readers sending in queries are asked to understand that it is necessary to sign their letters and to give their addresses. Only the initials and the town will be published. In future queries arriving at this office signed, say, "Constant Reader," Tumbalgun, will not be answered.

effect. Do you think it would be worth trying? As you are no doubt aware, the leads from the reaction coil occupy the two terminals mentioned. Now to ease I carried out the suggested idea, would it be necessary to make any alteration in the present connection of the reaction coil—or would I merely have to insert the H.F. choke between the two points mentioned, with the reaction coil still in its usual position?

A.: There is hardly any advantage of using a choke in the circuit you mention. A choke is invariably a distinct acquisition in a Retinara receiver, but hardly so in your present set.

S.H.L. (BENDEMER).—Q.: 1. On actual test what results did you get from the short wave adaptor as described in "W.W." 8/9/37? 2. I had the pleasure of bearing XAF Schenstady, U.S.A. and R.P.N. of Russia, also some few weeks previously PCJJ, Holland, as well as a host of Australian and international amateurs.

A.: In conjunction with, what set did you use it?

A.: I plugged the adaptor into the detector socket of a 3 valve Kenaritz receiver, but it does not matter which set it is used in conjunction with.

Q.: Would a 60255 condenser be O.K. instead of the 60925 as specified.

A.: The 60925 condenser will be found altogether too big.

Q.: In the coils, what distance apart should each individual strand be? I was thinking of winding 18 gauge wire on a 3in. former, and then slipping off for finished coil.

A.: Space each turn its own diameter apart, as shown in the diagram.

Q.: Are the old Kodolites Brownine Brake coils suitable for your improved circuit?

A.: Yes, provided you have the damping plate fitted correctly.

Q.: Do the 60925 condenser make any difference from a 60925?

A.: Use either condenser.

Q.: Am I right in supposing that a mistake has been made in connecting B minus to A minus, as shown in the diagram of the Brownine Brake in "W.W." 27/8/37?

A.: There is nothing wrong in connecting A minus to B minus, but if you are getting good results by connecting the A positive to the B minus, then stick to it.

J.L. (KOGARAM).—Q.: Can I replace the 18 and 19 turns Honeycomb coils as specified for the Hale One receiver, without impairing the results?

A.: Stick to the specifications.

Q.: In this set Vernier Glodials are specified, could I use Eschelte verniers?

A.: Yes.

Q.: Would 2.52 volt Ever-Ready batteries connected in series be sufficient for a B battery?

A.: I would rather see you with three.

Q.: How much A battery is required for this set?

A.: This depends on the consumption and voltage of the valve you propose to use. If a 200a valve, then you will require a 6 volt A battery, and the consumption of the current will be .25 of an amp.

DINKEDYNE (NARRANDERA).—Q.: 1. With the Solitons, once a set is balanced and neutralised, will different length aerials affect the balance?

A.: No, not appreciably.

Q.: If the B battery tappings are altered, does the set have to be re-balanced and re-neutralised?

A.: Yes. Mount the caps as you suggest.

Q.: What voltage tappings to you recommend using three Oxram valves and two Radetron valves, with 110 volts available.

A.: Beginning thus for reasons, start with 45, 45 volts for the radio valve, and also the detector valve, and the full 110 volts on the two audio valves, using a corresponding bias of .25 to 3 volts. Then increase the plate voltage of the radio valve, until best results are found.

SOLODYNE (ALBURY).—Q.: 1. With the Solitons, will this set work efficiently with a four volt accumulator and Philips 4 volt valves?

A.: With the valves you have mentioned in the 4 volt series you will get good results. Also, any pair of transformers mentioned will be found suitable for this series.

F.N.M. (GULLBURN).—Q.: What is a right voltage for detector valves?

A.: This depends on the individual valve.

Sometimes I have tried up to 120 volts on the detector valve, but have not experienced any distortion whatever, but with other valves when a high voltage has been used, distortion has been set up. There is no reason why you should not use 100 volts, with the 200a general purpose valve, provided you are not subject to distortion accordingly. With a high plate voltage on the detector valve of receiver employing regeneration, this control becomes very difficult to handle as it sets up uncontrollable oscillations.

Q.: Would a D.C.C. battery eliminator pick up interference from electric light mains even when the earth is disconnected from the set?

A.: This depends on individual location, therefore I cannot answer it correctly.

B.T. (WOLLONGONG).—Q.: I have constructed the 13 valve receiver to work from a loop published in "W.W." of 2/9/37. The loop I am using is the one published in "W.W." of 7/19/37. I tried this set out and only could receive Broadcasters very faintly. I also tried the loop published in "W.W." of 3/6/37. I could not receive anything on the aerial. The valves I am using are Mallard Valves, the ones specified. Please tell me the trouble, and (1) Can another stage be added? How? (2) Can it be worked from an outside aerial?

A.: Increase the loop turns from 16 to 22 or 24 and you will receive Vernors quite alright. Another stage of audio frequency can be added, particulars of which can be had from "W.W." 28/10/37. To use an outdoor aerial, remove the loop altogether with its two terminals, procure a Radolite framed aerial coupling coil, connect the G of this coil to the grid terminal of the 1st valve socket, and the F to the A negative wire. The aerial and earth can be connected to any of the other tappings in this coil.

M.E.B. (BADDINGTON).—Q.: I am a regular reader of your instructive and interesting Weekly, and I was wondering if you would be kind enough to give me a little information. I have a four valve Retinara. I got best and

All Readers' Queries Answered—continued.

Inter-State stations had speaker strength, but there is a peculiar problem about T.V. 202, and also the Inter-State, more particularly with 40G. The batteries are alright, but the 202 is not over 100 volts and the loud speaker is O.K. Is it possible to remedy this trouble, and how?

A.: It appears to be that your reaction is a bit too big; remove a couple of turns and note the effect. Incidentally, I myself am now finding that 40G is secondarily a bit distorted.

C.F. (ROCKDALE).—Q.: I have made up the B battery accumulator, as published in "W.W." 10/11/26, the component parts being as follows:—Pb 12 x 74, tubes 6 x 5/8 in. B round, 1/2 inch dia. Lead 1/2 x 5/8 U shaped. Sulphuric Acid 52° 240 to within 5/8 of an inch of the top of tubes. Rectifier 3 Leclanche Jars such as used for electric bells. Lead 15 lbs. 1 inch wide in Jars fit long by 1/2 in. wide. Aluminium fits in the wide end as shown in Diagram. Liquid contents of Jars is a saturated solution of borax to within an inch of the top of jars. I have put this in for charging, and in 24 hours, which are very excellent, and have left some on for the half-hour as directed, but although the Rectifier in rectifying Jars around the aluminium forms little bubbles, and the same in the Jars, there has not been any lighting up of lamps, when I've tried to do the discharging of the battery prior to changing the polarity. I have even tried to get a kick into a volta meter, but it will not give the needle, and I have tried all sorts of lamps in the attempt to discharge, but there seems nothing to discharge, hence my query to you. In satisfaction of a possible query, re use of borax, I will state that I have witnessed one working very satisfactorily after 24 months, of which the rectifier was charged with borax. As the writer's satisfaction of the user. The lead in the tubes are soldered to lead 1/2 in. dia., and leads and aluminium in the Leclanche Jars for rectifier purposes are about the same or may be a little more. Note that you may be able to get a kick out of set enough from diagram and explanation to enable you to give me a cue to remedy any defect in the accumulator, provided I do not mind the good thing. In reply, I will conclude by expressing appreciation of the many little things answers to other people's inquiries which have been applicable to troubles experienced by myself.

A.: From the instructions sent me it appears that the aluminium are immersed to far within the electrolyte. In this column I have once and over again advised readers to run the rectifier 10 or 20 minutes in on before connecting it to the battery. This allows the rectifier to form on its surface. Then immerse the output leads of the rectifier in a glass of water, where it will be noticed that both these leads will small bubbles to a freely exposed bubble of soda water. It will be seen, that one lead bubbles a little more easily than the other. This is the negative lead, now slide or lower the aluminium in or out of the electrolyte in the rectifier, and it will be noticed that at one particular level, the negative lead gives off a greater effervescence than is had with any other level. This is the correct charging level. Now connect your rectifier to your battery power, noting that no sulphating takes place in the positive lead. See that the terminals are clean. Now charge again a while, watching your battery while doing so, and after about 30 minutes or so, as a little longer, you will find that the lead in each cell of the battery begins to ball or bubble. Keep on observing until this effect is produced. Now disconnect the battery through the lamp. Reverse the polarity of the battery connections, charge up again, then discharge again through the lamp. Again reverse polarity, bring the battery back to where they were originally, and give a particularly long charge this time, perhaps as much as 24 hours, may be required. As the

end of this time, raise one of the U pieces out of the battery, and you will find one side has a very nice chocolate colour and the other side quite gray. The chocolate coloured is the positive plate. The longer this battery is used the better it becomes, and while it is very quiet that for the first month or so it may have to be charged every night before listening in, later on it will hold its charge for a considerable period of time. It is hoped that this further explanation will be of assistance to yourself and to other readers.

J.T. (MIRWILLEMAH).—Q.: I have a "King Quality" Neutrodyne 5 valve set, which I purchased from the kit purchased. No doubt you have noted one of these out, I am using 20A Radiotron valves throughout. There is a filament consumption of .35 without any alteration to the set, would it be any advantage to use any of the 1 valves, or any other type, or would it be better to be satisfied with the 20A type? Have you any personal experience with Phillips "D" battery eliminator? I like the idea of these, but cannot find any details, who give you any advice, except to get a trial with one first before purchasing. Can you tell me anything in this regard. All Inter-State stations come to well received 40G at night time. This station is perfect in all ways, but at night it is very snappy. This is not rectified in my set, but is the general impression of the whole town.

A.: The only advantage gained by using the A of an amp. type of valve is that the accumulator need not be charged so frequently. No alteration need be made to the set in any way. Your set is a very good one. The Philips B battery eliminator will be found very satisfactory for your receiver, and you need not hesitate about getting one. I have tried it. I certainly must agree with you that 40G is not being received too well, anywhere, at the present time, but let us on all hope that in future they will be back to their own old selves.

R.F.H. (RA. FISH).—Q.: What makes a white frosting of the jars in a Leclanche B battery used with a four valve set using 40G?

A.: This effect is known as creepage. Clean the jars, use new solution and the top of each cell, or I should rather say on the top of electrolyte in each cell, squirt a few drops of ordinary machine oil. This will prevent creeping.

Q.: What quantity of shingle of zinc should be mixed per lb. of sal ammoniac in alkaline solution for above battery?

A.: Forget about shingle of zinc altogether. Just use a sal ammoniac solution.

Q.: Would 29 S.W.G. enamelled do for winding L3 Marz 4; if so, what number of turns using .35 valves? Ditto 36 S.W.G. D.C.C. for above?

A.: The 29 S.W.G. enamelled wire would do in a pinch, but the correct gauge is always preferable.

G.M. (GRAPTON).—Q.: Using valves of similar values which would give better daylight and distance reception, the Elstrae 6 or an 8-valve Super-heterodyne.

A.: I couldn't answer a question like this, as a pinch, or so many contrivatory factors. It is like asking me which is the best car, the Oakland or the Pontiac or the Buick.

C.H.E. (Narrabri).—Q.: I require your valued help. Can you please tell what relation is in the relative quantities of the E.F. choke coil to the impedance of the respective valves in the Phydne Receiver described in "Wireless Weekly," of November 1927, and in the "Radio" suggestion. I have been taking "Wireless Weekly" and "Radio" for some considerable time, and have derived much help therefrom. But I feel sure

that there must be many like myself who do not know exactly along what lines to pursue their studies in order to qualify for the A.O.C.P. Exam. I think it would be a good idea were you to publish in "Radio" a series of A.O.C.P. examination papers, together with typical answers of the kind required by the examiners, thus giving many a much needed idea of what is required of them. Trusting that this will meet with your earnest consideration.

A.: For the first portion of your letter, see "Radio" for July and "Radio" for December. In both these issues, Mr. Alexander will give you sufficient to help you. In both "Wireless Weekly" and "Radio" extending over a period of time, have we published simple instructions which has enabled many an amateur to get his A.O.C.P. This demand has been so great that we have sold out of all copies, but I can recommend you to read up from the Admiralty Handbook of Wireless the information necessary. Messrs. Turner and Henderson of Inter-street, Sydney, can supply you with this volume.

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