

WIRELESS WEEKLY

Vol. 9, No. 7.

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

Friday, Dec. 10, 1926.

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Announcement
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(See Page 48.)

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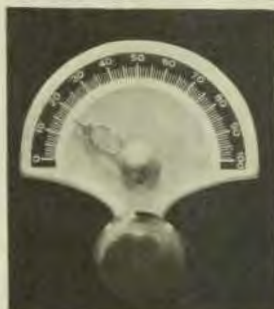
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WIRELESS WEEKLY

VOL. 3. No. 7.

FRIDAY, DEC. 10, 1926.

Why Do Lectures Fail?

HERE are three classes among radio enthusiasts. At the bottom of the scale, down-trodden and oppressed, as he will tell you, as the true radio fan who likes a good jazz or a fight description, but to whom a programme is most interesting when the broadcasting station is farthest from his set. His antipathy is that small upper strata of conservative intellectuals demanding always the classical.

But far greater than either of these is the great middle class following. Entertainment—music, gay or grave, and serious or sentimental song—has been its demand, and by bending to this wish the broadcasting companies have made entertainment the great factor in popularising broadcasting.

Yet, in all three groups, there has arisen in the minds of listeners the question: "Why is there not more instructional and educational matter broadcast?"

Each listener, when asking himself that question, had in his mind the memory of some talk enjoyed—a talk which was eminently successful in his estimation. But what entertains one listener-in is boring to another; what pleases the intellectual annoys the radio fan.

A talk is addressed to a small audience because it is narrowed down to a single subject. In this respect it cannot be compared to music, for except in extreme cases, music makes its appeal to all classes. To be successful an educational or instructional talk must entertain the majority of listeners—since it is entertainment that is demanded by the great middle class following.

Listeners-in do not wish to be educated or instructed for exactly the same reason as they will not read a book in which the author sets out to educate his readers. The whole matter rests with the speaker.

Too many lecturers read monotonously from manuscripts instead of giving a brightly worded address from prepared notes. The politician and the professor fail because they maintain their customary form of address before the microphone. Without the aid of a visible audience upon whom is registered the reception of the address many speakers are at a loss.

If a lecturer wishes to broadcast educational or instructional matter he must make his subject interesting and entertaining. If it were easy to do this we would have far more educational matter in our programmes.

Between You and Me and the Microphone

MUSWELLBROOK hospital is appealing for a radio receiver. A fund has been opened by the local newspaper.

ALL THE HOSPITALS in London, numbering 122, have been equipped with radio, more than 18,000 pairs of headphones having been installed at the various bed-sides. This effort was the result of an appeal by the London "Daily News."

A RADIO and electrical exhibition is being planned to take place in the Sydney Town Hall from February 23 to March 5 next. So successful was the exhibition held in May of this year that already the whole of the space available in the Town Hall has been applied for.

THE RADIO VOICE contest at 1QG is drawing to a close. The number of votes has been increased and the voting in the finals should prove very interesting. Those who have not sung before a microphone prior to the Radio Voice contests are competing very successfully with some of 1QG's popular artists.

SHOWING that the Kandos race club is not lacking in enterprise, a wireless set, secured by Mr. W. B. Murphy, president of the club, was installed at the course recently. This allowed the bookmakers to operate freely on the Moorefield and Victoria Park races, particulars of which come through at intervals.

THERE IS evidence of an increasing appreciation of 5CL in America. Among letters of congratulation received by Central Broadcasters Ltd., there were 18 by one mail from the United States. One writer stated that the Adelaide transmission was the best received from Australia, and that the volume was even better than some American stations on the same power.

MR. G. H. PONDER, financial manager of the New Zealand Rugby League "All Blacks" touring team, writes stating that while crossing Canada the team joined in a church service being held in New York, 3,000 miles away. They were sitting in the observation car of one of the Canadian National Railways wireless-equipped expresses, when the church service was tuned in with remarkable clarity. The team joined in the hymns and responses just as naturally as if they had been in the church itself.

Conducted by
R. E. CORDER

IT'S ALL RIGHT to have a loud speaker in the house if you are not married to it.



Two Loud Speakers.

A CORRESPONDENT in the Irish Free State, describing a recent visit to a little country town, says that it contained only one window shop, and this exhibited German apparatus only. There were five German receivers in the window.

THE 3LO GIRL

The 3LO Girl is a treasure of gold,
She has beauty of feature and form.

There's never a standard that girlhood may hold,
But the 3LO Girl will conform.

The Venus de Milo, bereft, as we know,
Of her sarsel's most beautiful arms,

Could scarce have improved on the maid of 3LO,
With her rare and divested charms.

Australia's fair cities will echo the word,
As the traffic goes by in a whirl,

The farthestmost town in the country has heard
Of the quest for the 3LO Girl.

The charm of the siren is keener, even more,
For she bends all her power to use,

And neither at home in a neat pinfold,
Nor at sport has she need of excuse.

From Broome with its sun to the Mawiland snow,
And wherever the ether waves swirl,

There's one thing that all are impatient to know,
It's the name of the 3LO Girl.

NEW HOUSES at Surbiton Hill, Surrey, England, are equipped with a charging set for wireless and car batteries.

THOUGH the body of the saxophone is made of brass, according to a well-known maker, it is not half so brazen as some of the saxophonists who inflict themselves upon us.

A WIRELESS telephony feat has been performed at Nauen, where the engineers have succeeded in conversing with Buenos Aires and Tokio. The wavelength employed was 40 metres.

ACCORDING to the wireless station at Saigon, French Indo-China, the short wave transmissions from Uccle are received there better than those of any other European station.

YOU CAN hire a wireless receiver in Holland. A wireless hire service is the object of a company which has just been formed, and it is interesting to note that the hiring fee will include the cost of maintenance of valves and accumulators.

THE DEPARTMENT of Education was asked recently by 2GB authorities if country schools could be used as gathering places. In reply, the Minister for Education (Mr. T. D. Mutch) has written: "No objection will be raised to the formation of radio clubs in outlying centres, and to the use of the school buildings during the evenings for those who desire to listen to broadcast matter."

A PLAGUE of moths caused several breakdowns in the programme of 2BL last week. Thousands stormed the buildings, and occasionally one found its way between the plates of a condenser or flew between two leads on the panels. The moth would be immediately electrocuted, but the short circuit caused by its body would break for a second the business of broadcasting. A screen has been erected to keep the moths away.

IT WOULD APPEAR that men as well as women listen to Matron MacMillan's talks on mothercraft broadcast from 2GB. One night this week Miss MacMillan had just finished her address when she was called to the telephone, and a man's voice asked "Weren't you on the Island of Lemnos during the war?" Miss MacMillan replied that she was. "And don't you remember —, who occupied a tent near yours?" Again Miss MacMillan replied in the affirmative, and thus an old war acquaintance was renewed.

A remarkable short story of the spirit world, by a well-known Australian author choosing to hide his identity beneath a nom de plume. It is to be broadcast from 3LO.



The spirit of the murderer Marriott in the 3LO studio. Maurice Dudley, the announcer, a ghostly white in the pale light, is seen facing a testor-stricken audience.

The Rent in the Veil

By H. ELLO

I HAVE made up my mind to tell you this fantastic tale. You will not believe it, and for that I can hardly blame you. Had I felt that it was capable of human belief, I think I would have swallowed my hatred of publicity and told the jury the story at the inquest on poor Armitage's death. As it was, I kept silent, and permitted the usual verdict of "suicide while of unsound mind" to be recorded. "Unsound mind!" George Armitage was never so sane as when he killed himself.

Of course, no other verdict was possible, under the circumstances. Only I feel that I am doing tardy justice to my friend's memory in telling you, the people to whom he spoke week after week, the true incidents that led up to the tragedy.

George Armitage was, as you know, a brilliant student, a great consultant engineer. I suppose that without him many of our water-power schemes that are making Victoria the pride of the world would have been still-born. He was a marvellous mathematician, able to vision great pro-

jects before a pick had been put in the ground, able to see them whole, in all their gigantic grandeur and use. I have heard him broadcast to you people his vision of the future, when Yallourn and all its pendent electricity schemes should be in absolute working order. And Armitage, this brilliant mind, is dead. What a tragedy!

For us, that is. For the man himself, I believe that it marked opportunity for fresh progress, heroically begun.

There was a great sympathy between us. My own work had brought me into constant contact with him, and my imagination leaped to meet his own. Together we re-plotted half the universe, as young men of enthusiasm will. But Armitage was minded to inquire, not only into this world, but also into that other which lies circumpunct to it, the land of grey twilight, peopled by those unhappy dead unable to face the future

work because of their reluctance to leave the only existence where their darling sensations could be gratified.

But I am going too fast. Let me explain just what I came to realize through association with Armitage. There co-exists with this world of ours another, queer, terrible, terrifying: I remember Armitage once explained it to me.

"Nothing can be more certain," he said, "that there throng around us innumerable spirits of the dead, as alive as ever they were, separated from this world only by a veil, generally impermeable, but capable of being pierced if those without push, as we within work at its undermining."

"Theory, my dear chap," I replied, "pure theory, with only the evidence of the excitable and the hysterical to support it."

"It is not only demonstrable, but I am going to demonstrate it," he made quiet answer. "We who are inside the veil do not in general concern ourselves about the possibility, but, believe me, there are those on the out-

side edge of this busy, indifferent, milling globe, near enough to the veil to catch faint glimpses of those beyond it. These glimpses stir our curiosity, and we are always seeking to make a breach. Sometimes we succeed, and those outside come pouring in. If they are fortunate enough to find a psychic lodgment, they remain, spiritual barnacles."

"To what purpose?" I asked him.

"Because only through contact with the living can they hope to gratify the appetites that keep them groping near the veil," was the reply.

"Demoniac possession, then," I said, shivering involuntarily.

"Precisely," he returned, calmly. And then he told me his project.

"I am trying to open a breach in this veil," he said. "I have seen, many times, in partial trance, the dim faces of those who seek to return. As yet it has been only in a sort of grey twilight. I have had quick fleeting pictures of eyes, glaring with unsatisfied desire, of faces pressed, as it were against the opacity of the veil, of grey shapes hard against it, straining with unutterable, obscene longing to meet me, to make me the vehicle of their thwarted wants. Believe me, old chap, there is no emotion so strong, so ruthless, as unsatisfied desire. With that helping me, I have no doubt that I shall succeed, and capture for Science some certain evidence of what it now steadfastly refuses to believe."

And he did it. I was stupefied one night to hear his voice on the telephone, sharp with excitement. "Come, for God's sake, come," he said, "I have succeeded. He is here with me."

It was not the voice of one who has succeeded, but of one terrified almost to madness: I slammed the receiver down, and descended to the street in a panic that prevented me from ever thinking of the lift. Jumping into a Yellow, I was soon at George's flat.

"He's here," said George, in a whisper, as I entered. Pale, his upper lip beaded with sweat, though the night was cold, and his voice a husky echo of his normal tones, it was clear that the man was overwrought with the result of his scientific curiosity. Briefly he related how the thing had hap-

pened. He had been in a sort of trance, watching the milling figures, studying their horrible excitement, when a face detached itself from the rest, and momentarily grew stronger

GOOD FORTUNE has fallen upon David Mansfield, the partially blind "street singer," following the opportunity given him of performing from 2FC. The Sydney Industrial Blind Institution has now arranged with Mr. William Asprey to teach Mansfield singing, Mr. Gordon Lovett to teach him Braille music, and Mr. Herbert Thompson to teach him to read and write in the Braille type. The Committee of the Blind Institution have also purchased clothes for him, and have been allowing him 5/- a week as well as paying for his keep.

in outline. It had approached nearer and nearer to his own face, until it had seemed to press against him. In a second the trance seemed to end, and George found himself seated in his own room, with the monster before him, smiling, triumphant, his eyes glistening with a repellent delight.

"What became of him?" I asked. George's reply was extraordinarily disturbing.

"He is sitting right beside you, smiling still," he said. I moved incontinently. Understand, I had long been familiar with the knowledge that at our work and our play these beings moved beside us; I knew that as we sat in our quiet rooms, listening to broadcasting from the city, there sat with us these men and women of the twilight world of shadows, listening, too, their ears attuned to sounds from eternal distances. But the knowledge of an actual contact with one of them was shocking. For these things are definitely evil. Death is but a momentary barrier to decent folk. They move on quickly to their appointed work in a world of use and endeavour similar to this. Only those wretched spirits whose desires are definitely of the earth linger behind to gaze longingly back through the wall. It was of this evil presence that I became acutely, uncomfortably conscious. It was much as if I could smell the sul-

phur of the pit. To hide my feeling, I asked, with what nonchalance I could assume, what he was like. My casual talk had given George back his usual aplomb, and he echoed my question.

"Like?" To tell the truth, he's an ugly customer. He has a red weal round his neck, that looks suspiciously like the mark of a rope, and his cruel thin mouth, below a beak as predatory as that of a hawk, is distinguished by a queer, red mark like a miniature horseshoe."

I was disturbed, violently, for I knew the man.

"Good God!" I said, but the ejaculation was not profane. It was a verbal crossing of myself. "That is Dr. Marriott, the horrible brute who was hanged last February. Of all men in the world?"

"Or out of it?" smiled George, now perfectly at ease. I remember I begged George to let up on his hideous experiment, to rid himself of his sinister visitor, at all costs. It was as if I talked to the furniture. Every argument was countered by a smile.

"What can he do to me? I am his master. It is by my will and sufferance that he is in the world again, and by my will he stays. Think, Dysart, think, man, I shall be able through him to demonstrate the definite existence of another world. Stout Cortez on his peak in Darien will have to come down from his peak. He discovered an ocean; I shall have pioneered the exploration of a world."

With relief, but with a heavy foreboding, I left George with that monster of depravity, and with the ability most of show for forgetting what appals us. I succeeded in putting Armitage and his queer caller out of my head for many weeks. Private work helped the process by taking me out of Melbourne.

When I saw him again, it was a chance meeting in the street. I could hardly believe my eyes. The ruddy, healthy tinge in his face was gone; his shoulders stooped; his clothes hung on a body perceptibly thinner. His finncere, Dora Gessler, was with him, and it was the appeal in her eyes, as she caught sight of me, that led me to stop.

(Continued on Page 37.)



A vast expanse of gently undulating plain fading into a distant horizon—a fair country threaded with creeks and broken by scrub patches. Looking south from Deniliquin as the Bell Bird passed over.

A remarkable checkboard effect caused by fallowed ground next to unharvested paddocks and fields of stubble. This photograph has not been retouched. Inset: Eyes that pierce the distance. The pilot snapped from the cockpit.

Looking Down On the World

By E. J. VAN DE VELDE

In this article Mr. Van De Velde gives an amusing account of his 1,000 mile aerial tour of N.S.W. and Victoria for 2FC.

OH, YES, I have had a wonderful trip all right—1,000 miles in an aeroplane in 10 hours is some going. It came about like this. One morning instead of sending the motor van to get my mail at 2FC, I thought I would stroll around and read it there.

I was hardly in the door when Mr. Anderson said: Well, Van, what's the next talk about. I suggested 20 different places, but he shook his head and replied—what about our own country, can't you do that?

A 10,000 kilowatt inspiration struck me and I answered classically—sure think—I can, and left him wondering—

Now, readers, I am not a politician and I hate copying—"but needs must when the devil drives"—I sat down and wrote Captain Larkin, of Australian Airways Ltd., and pointed out that I was the only great man in Australia who had not flown in his big planes. I also mentioned the advantages he would gain by my adding a little tone to his outfit.

Return mail brought me the necessary vouchers. Borrowing under the same pretext an aerial camera and a hat full of film from Kodaks, I

caught the 10.5 p.m. S.W. Mail for Cootamundra—a motor met me and drove me $\frac{1}{2}$ a mile to the aerodrome.

There behold the graceful Bell Bird you see in the picture on the next page—engine slowly ticking over—warming her up. You look at her "Ain't she a beauty"—the sensation you now feel is like when you get your first carrier wave on your first valve set. You are anxious to give those dials and controls a "go." You want to grapple with the unknown. You feel you know all about it, and so you do—until some silly ass asks an impertinent question—as in wireless you at once realise your superiority by being asked such a query, so you reply. Oh, that—that's the earth grid, it is connected to the plate on the + side and through the transformer condenser to intensify the modulation.

He is satisfied and leaves you feeling that he too is a wireless expert.

In a couple of minutes we are seated scanning the instruments that a thoughtful manager has placed there so you cannot very well tell any tall yarns when you get back. I think these instruments are there particularly for the man who always brings in 6WF on a single valve, the night you are not there. We are tucked in snugly, 4 passengers and pilot. Then, cheerio! from the pilot and she revs up. We taxi a hundred feet and she's afloat. It seems as if some great hand has pulled the earth from under us and we are in the air, Gee, but it's great. We make one circle of Coota and are now 3,000 feet up. Away down south along the line that is but like a thread, we see Junee—what are those hills, The Bethungra Range—why, goodness they are mountains. We head due west and now for a hundred miles we admire the wonderful wheat country. We have been steadily climbing although we do not notice it until we meet the clouds. We go through these and come out on top. The altimeter now registers 8,000 feet—1,000 feet above the clouds.



Our contributor,
Mr. E. J. Van de Velde.

The earth has disappeared, and the most glorious sight that ever mortal eye beheld is before you. A hundred miles on every side snow white billowy clouds. Above, nothing but brilliant sunshine and the clean thin air, the quintessence of purity. Surely this side of the clouds was made for the angels—is it not a sacrifice for men to penetrate here. The Taj Mahal of Agra is a hut next to these heavenly palaces of clouds—but a truthful narrator cannot possibly describe them—even old Ananias himself could not fill the bill.

10.20 arrive Hay. Lunch. 1.30 depart Hay. Call at Deniliquin, Echuca. Beautiful panoramas all the way to Melbourne where we arrive at 4.50. Yes, I called at 3LO and met the redoubtable Major Condon—shook hands with him twice in five minutes. Now who will dare say I am not the goods—he very generously upset a fortnight's programmes to allow me to inflict 40 minutes chastisement on the Victorians.

I also met Mr. Lewis who wanted my picture for comic cuts or something. Uncle Monte was there too. My word he looks important in that big studio—and Miss Kookaburra. I suppose a lot of you have heard her laugh—well, its nothing to her smile. And she's some sport, too. I told her a story I had heard from 4QG, and she laughed. Well, I saw the

cable trams and the Yarra, and I did not see Footscray, but I can vouch that it is still there—but enough of Melbourne. I'll try and get 2FC to let me give you my impressions of Melbourne over the air.

The homeward trip was just as wonderful, we did Hay to Coota, 240 miles in under 2 hours in Tuesday's gale.

I am going back in January to do Mildura, Broken Hill and Adelaide—I want to see more of this wonderful country of ours. I want also to

IN THE VAN WITH A CAMERA.

That versatile and much travelled man, Mr. E. J. Van de Velde, not satisfied with photographing practically every corner of the habitable globe, will not be content until he takes a complete series of air photographs. Putting his scheme before 2FC, he met with a ready response, and working in conjunction with Australian Air Ways, he started off photographing Australia from the air. His first trip was from Sydney in Melbourne, via Hay, Deniliquin, and Echuca, returning to Sydney via Broken Hill. It was found possible during his short stay in Melbourne to give a talk from 3LO, describing his experiences, and having published locally some of the choicest photographs taken, so that listeners with these photos in front of them had a more vivid idea of the places being dealt with. Then on his return to Sydney he gave a further talk from 2FC, with illustrations dealing with the N.S.W. portion of his trip. When the Duke and Duchess of York visit N.S.W., "Van," as he is popularly called, will literally be in the van with his camera.

make you realise just what aeroplanes will mean to us—and with the generous help of 2FC, "Wireless Weekly," and Captain Larkin, I will succeed.

CLERGYMAN'S RADIO.

One of the most popular of the Sydney churches whose services are broadcast from time to time is the Newtown Congregational, the minister of which, Rev. Mearns Massey, has "branch churches" in various parts of the country. At these "branch churches"—usually worshippers gather round a loud speaker and listen to Mr. Massey's private sermons over the air perhaps hundreds of miles away.

Mr. Massey, who spent many years in America, has been anxious that his brother, a resident of California, should hear him. Recently he arranged for the latter to listen to see if he could hear the Newtown service. The test was made last Sunday night, when in his address Mr. Massey spoke direct to his brother. A cable was received during the week stating that the brother had received the message. He had sat up until the early hours of the morning before a receiving set in California, and apparently the message came through quite distinctly.

As showing that the Australian broadcasting stations carry very long distances, it is of interest to know that during this week the other A class station in Sydney 2FC received a letter from a Mr. Tessie Kusumoto of Tokyo, Japan, stating, "I have been having a nice music last night from your broadcasting station in New South Wales."



The graceful Bell Bird.



Space and light replacing oppressive and heavy curtains is the keynote of the latest studios. Above is seen the control room and studio at KOA.

Latest Broadcasting Developments in U.S.A.

The development of broadcasting in the United States has swept forward at such a pace as to be out of control. Some interesting figures are given in this article.

INTERESTING information regarding broadcasting in the United States has been received from New York. As the conditions in that country are of special interest to us in Australia, the information is worth epitomizing.

Since 1920 over 1400 broadcasting stations have been licensed, and no less than 870—over 62 per cent.—have gone out of the business. Two main reasons are given for these defections. The first is the financial difficulties experienced by the broadcasters in running the stations. Nearly 50 per cent. of the 870 stations that closed up disappeared from the air on this account. It was found that to maintain a broadcasting service was a costly business, and as no return was received from the listeners, the proprietors of the stations decided to cut their losses and get out.

This indicates that broadcasting is not a business that everyone can manage; there must be an understanding of the requirements of listeners and of the expenses to be incurred in providing a service that

will last. The second main reason advanced for the failure also proves this. About 20 per cent. of the proprietors of stations retired from the business because they realized that they were not giving as satisfactory a service as their competitors. They found that the "message" they desired to put over could be done better by people who understood the business, and who, consequently, had many more listeners. It was more economical to pay another station to broadcast their advertisements, and propaganda.

The decrease in the number of stations has not caused any lessening in the interest taken by listeners. On the contrary, it appears to have had the other effect. There are probably too many stations now operating in the various cities, especially as only a portion of them can afford to give good services.

To ascertain the number of listeners a census was conducted recently by the American Telephone and Telegraph Company, operating 18 of the principal stations in the Eastern and Middle West of the States. A ques-

tionnaire was sent out and over 3,750,000 people answered the questions. It was estimated that the listeners numbered over 15,000,000. (A more recent return gives the number of sets in use as 5,500,000; and as it was estimated from the replies to the former questionnaire that five persons listened at each set, the radio audience in the United States can be set down at over 27,000,000 people).

The famous inventor, Edison, recently startled the radio world in America by stating that music received from broadcasting stations was always distorted, and owing to the failure to obtain faithful reproduction of musical items, people were abandoning their radio sets and returning to the phonograph.

This surprising statement was challenged by radio authorities and broadcasting entrepreneurs. Telegrams were sent to most of the phonograph dealers throughout the country asking if Edison's statement reflected the position. The replies produced abundant evidence to the contrary.

(Continued on Page 43.)

Coming Features in the Broadcasting Programmes

ON FRIDAY NIGHT, December 17, 2FC will broadcast the 1st Act of "Rose Marie," and also a ten-minute interview with Mr. Frederic Bentley, in his dressing room, at 7.40 p.m.

TRAVEL GRAPHOLOGUES by Major Sandford Morgan have proved popular. The series will close with his final talk on Monday, December 20, which will be illustrated with pictures in the "Evening News" on that night.

THE 2FC RACING Commissioner will have a particularly busy time during the coming holiday season. Arrangements have been made to broadcast from Randwick the following meetings: December 18, 27 and 29, and January 1, 1927.

SUNDAY EVENING, December 19, will see a presentation of Flowtow's opera "Martha." The orchestral music will be conducted by Mr. Lionel Lawson, and the vocal quartette will bring forward Miss Joyce Hadley (soprano), Mr. Charles Stephen (tenor), Miss Muriel Humphries (contralto), and Mr. Wilfred Thomas (basso).

A NOVEL ITEM is promised to 2FC listeners on Friday, December 17, when a full dress rehearsal of the "Bunch of Keys" production by Alfred Lawrence's new comedy company at Adyar Hall will be heard. The interesting part about this transmission is that the performers will not know when they are on the air, and in this way an intimate atmosphere will be created. Thus listeners will have some idea of the thorough preparation which such a production entails.

2FC will keep listeners in close touch with the important Interstate tennis matches to be played at N.S.W. Lawn Tennis Ground on Friday and Saturday, December 10 and 11. A play by play description will be broadcast.

A SOUTH SEA ISLAND "boy" has taken possession of 2BL. He talks with Uncle George on Thursday evenings during the children's hour, and so popular has the little

fellow become that 40 letters have been received at the station inviting him to spend week ends at various homes. So far no invitation has been accepted—and possibly the writers of the letters would be very surprised if they saw the young "savage." "What that fella boccus over there?" he asks, and Uncle George replies, "Boccus—boccus, we haven't any boccus." "That fella boccus, you hammer him and he sing out!" says the "South Sea Islander." "Oh," says Uncle George, "that isn't a boccus, that's a piano."

CAPTAIN HURLEY, the noted explorer has been a regular visitor to 2BL of late and as he talks pidgin English as easily as the Australian language, he comes in useful to interpret for Uncle George, whose failure to understand some of the pidgin is intensely amusing to his young listeners. No one outside the broadcasting station has yet seen this young "Islander," but thousands must have laughed at him.

A SERIES OF TALKS have been arranged by 2FC, on the Romance of Cable Laying. The lecturer will be

Flinders Barr—a name which hides the identity of a well known sea commander. On December 7 this officer will give his first talk entitled "The Sea Bottom." On the 15th he will speak on "The Submarine Cable," and on the 23rd, on "Ships and Sailors of long ago."

EARLY IN THE NEW YEAR 2FC will present "A Night at Sea." Theatrical effects will be introduced into the broadcasting studio, which will give it a nautical atmosphere, in which studio artists will sing old time sea chantes and choruses, the bosun's pipe will be heard, a storm will rage through the rigging, and the swaying of ropes, the swishing of the sea, the cracking of masts, the banging of block and tackle—all will be heard without the listeners becoming the slightest bit seasick.

MR. ALFRED GORDON, the eminent Polish actor who recently produced Hamlet at the Sydney Conservatorium, has been keen to play the great tragedy at a broadcasting studio. Mr. Gordon is confident that it would be practicable to broadcast the play from start to finish, but the management of 2FC with whom he has been discussing this ambitious project, considers that listeners would prefer to hear the drama by instalments. Arrangements have accordingly been made for Mr. Gordon and his Company to present excerpts from Hamlet commencing on the evening of Wednesday, December 8.

2FC HAS ARRANGED a special entertainment for Christmas Eve, entitled "Christmas Eve in London." Probably the thermometer in Australia will register about 100 degrees on that festive evening, but listeners will be asked to imagine themselves among the snow and ice of Old England. This may sound somewhat difficult, but the modern broadcasting studio is replete with all manner of "effect," and listeners will be taken for a stroll around London where they will hear the waits, the street noises, the carols and all the sounds familiar to London residents on the night before Christmas.



"Billy Bunn"—
Mr. H. J. Book,
the popular bed-
time storyteller
of 3LO.

3LO Gives £500 a Year for Radio Research

The Broadcasting Company of Australia (3LO), has shown the way to other broadcasters in the war against bad reception. Will other stations follow?

IN keeping with its policy of maximum service to its listeners, 3LO Melbourne, is undertaking a programme of Radio Research. The Company has arranged to pay £500 a year for three years to the Melbourne University for the purpose of scientifically investigating problems in broadcasting.

This is an important step, as there are several difficulties in the way of rendering broadcasting services to listeners, and research workers at the University, under Professor Laby, will be thoroughly competent to undertake the research work with the facilities of the University at their disposal. While the Broadcasting Company concentrates on providing the programme side of the service and the transmission from its station is as satisfactory as can be expected from a modern station, the difficulties experienced by listeners are caused after the programme has been radiated. Many listeners, particularly in country districts, are subjected to considerable annoyance resulting from fading, distortion and other forms of interference. Some of the latter, including induction troubles from electric light mains, should not be very difficult to remedy, but the problems of fading, distortion and atmospheric are such as to call for the concentrated attention of competent scientific workers.

The methods of research and the order in which the problems will be attacked will be left to the University. In effect 3LO says to the University, "Our patrons are experiencing various difficulties in the reception of our programme, and we realise that the solution of the problems causing those difficulties is a matter for the University. We are anxious



Taken at the University Dinner held at Menzies Hotel, Melbourne, on Wednesday, November 24. From left to right: Mr. G. A. Julius, Sir William Irvine, Chancellor of the University, The Governor-General, Lord Stonehaven, Sir John Monash, Vice-Chancellor of the University, The Lord Mayor of Melbourne, Alderman Sieve Morell—whose speeches were broadcast by 3LO Melbourne.

to have those difficulties removed, and will gladly appreciate any co-operation you can afford us in the interests of listeners generally."

This public spirited attitude is to be commended. The investigations will be the first organised research work in Australia, and very few stations in the world have gone as far as 3LO has in organising scientific resources for the benefit of listeners.

3LO is looking for an All Round Girl

IHAVE been impatiently watching the progress of 3LO's efforts to find the perfect girl, because I have been hunting for one myself for a long time without success. A remark in similar tone made to a member of the studio staff brought a sharp rebuke.

"We're not looking for a perfect girl," he said. "We want an all-round one." I pointed out that they were not making them this shape this season, and caught another look of

dislike in his eyes. He told me not to be funny.

"The trouble is," he said, "that people have got the idea we will only consider the perfect girl. I have heard a splendid type of young woman declare that she could wash and cook and sew and play tennis, and didn't hurt the eyes to look at, but she was sure she'd have no chance in the competition because she had never played in a tournament. Now, that's all wrong. We don't want only girls that have distinguished themselves in sport. We only want to be sure that they are the healthy, breezy type that outdoor sport helps to fashion, see?"

I said I did, and I was particularly interested, because an almost perfect girl whom one day I'm going to marry, if she can win a few wedding presents first, can't cook. I shall now enter her for the 3LO Girl Competition, since perfection is not required. The application form has misled many into miscalculating the effect of their own.

(Continued on Page 51.)

Receiving Sets We Have Tested

Under this heading we shall discuss the merits of a different receiving set each week. In this article the Marconiphone V2, of English manufacture, is described.

I HAD a Marconiphone two-valve receiver at home during the week, and subjected it to a very interesting test which I will tell you about. First of all a description of the receiver will not be out of place.

On opening the parcel in which it was delivered, I was surprised to find that the whole receiver was self-contained in a handsomely-polished maple cabinet. The absence of the usual bakelite panel was most noticeable. In place of this panel was a wooden front with two peep screens mounted thereon. Noticing that this wooden front was held in place by two clips, and being curious, I undid the catches and the "works" of the receiver were displayed. In the immediate foreground were two valve sockets between which was situated an audio frequency transformer. To the right was placed an oblong shape component, which was marked "regenerator unit," which I later found was variable by means of a lever which was capable of being raised or lowered.

At the back of the set were two inductances enclosed in a wooden case, thereby rendering them impervious to moisture. One of these range blocks, as they are known, was a spare, and covered a different wavelength to the other one, which was in circuit by means of making contact with springs which held it tightly in position, the contact to the circuit being through the medium of contact screws protruding from the range block.

On removing these range blocks, there was found at the back two copper damping plates, a control for each coming out at each end of the receiver, this control being in the form of a tuning handle. On the left-hand side of the cabinet was a similar type of tuning handle which controlled a rheostat governing both valves.

After satisfying myself that everything moved, and having inspected the bottom portion of the cabinet, which has been designed to contain the batteries, I thought I would hook on the aerial and earth and test the Marconiphone on actual listening conditions.

Firstly, I connected up the batteries and was indeed pleased to find that special cords and plugs were provided for both the high tension battery and the low tension battery, each plug being distinctly marked so that no mistakes could be made in connecting up. It was not possible to insert the "B" battery plug into the "A" battery socket on the right-hand side of the cabinet, as the plugs were not interchangeable, thus preventing any possibility of burn-outs in valves by accidentally plugging the "B" battery into the low tension sockets. Each cord was distinctly marked "positive" and "negative," and as a further assurance the "positive" cord was of a bright red color, whereas the "negative" cord was black.

Besides being safe, this system of battery connections ensured correct polarity. Truly this was an excellent system. However, I connected up the batteries and plugged in the earphones, a special plug being provided for this purpose also, the arrangement of the sockets of this 'phone plug being such that either one or two pairs of 'phones could be inserted at will.

On examining the left-hand side of the cabinet, I found three distinct sockets marked aerial sockets, one, two, and three, respectively, and one plug marked earth plug. A suitable plug, attached to which was a length of silk-covered flexible cord, which provided for the aerial and a socket similarly equipped, was provided for the earth connection.

On reading over the booklet which accompanied the receiver in order to

satisfy myself just which was the correct socket to plug in my aerial, I read as follows: "Into No. 1, if the total length of wire in the aerial is between 100 and 60 feet. Into No. 2 if the total length of wire in the aerial is between 60 and 25 feet. Into No. 3 if it is less than 25 feet."

As I had three aerials of different sizes, I chose the No. 1 aerial, and connected it accordingly to the receiver. On turning up the filament of the valves I tuned in the Marconiphone. Firstly, I pulled out the right-hand tuning handle, which is attached to the damping plate and soon located 2BL. The right-hand tuning handle was then adjusted, which produced increased volume in the headphones. By depressing the lever of the Regenerator unit, the volume was increased and the set burst into oscillation, which I rectified by slowly raising this lever to the point where the howling just ceased.

The volume was now sufficiently strong to put on the loud speaker, and the clarity of the speaker reproduction was very pleasing. Being a new set to me, I insisted on tinkering about with the various controls, and noted the effect. At one stage I succeeded in getting a medley of sounds from both Broadcasters and Farmer's at the same time, but by moving the right-hand control each station was separated from the other, and only one station at a time could be heard.

A further adjustment with the controls produced Farmer's (2FC) at a most remarkable volume, considering only two valves were used. By careful manipulation of the lever of the regenerator unit, I could get the carrier wave from 4QG (Brisbane), but on clearing this up and reaching a modulated wave a slight background from 2BL was discernible. By substituting a shorter aerial, 2BL was eliminated entirely, but 4QG's carrier wave could not be cleared up.

By substituting the second tuning block and carefully handling the controls, 3AR (Melbourne) was brought in at weak 'phone strength, but as fading was particularly bad, this cannot be taken as an indication of the distance-getting proclivities of the Marconiphone.

For two or three evenings in the week I used this set entirely, and as a result of my observations, I have no hesitation in recommending this receiver to those desirous of having a compact two-valver, which will produce loud speaker results on the local stations.

To those seeking a portable set for the summer months, the Marconiphone two-valver should prove ideal. A short indoor aerial, or even an aerial stretched from tree to tree will give excellent results, and the compactness of the receiver will recommend itself.

I may add that Philips' B406 valves were used in conjunction with Garboneels for an "A" battery.

Our receiver was obtained from Messrs. Amplion (Australia) Ltd., Sydney.

SATURDAY NIGHT is 2GB's busiest night. Phone calls are numerous, and so many are the demands for request numbers that it is impossible to satisfy all requests in the two short hours which are devoted to this purpose.

A **KANSAS** rancher owns a powerful radio receiver, and has connected its output posts to a long wire fence running past his house and the houses of a number of neighbours, so that the latter can tap in on his reception by merely connecting wires to the fence. The fence wires form one side of the circuit, the ground the other. The six families living within range of the fence have purchased loud speakers, and enjoy nightly concerts.

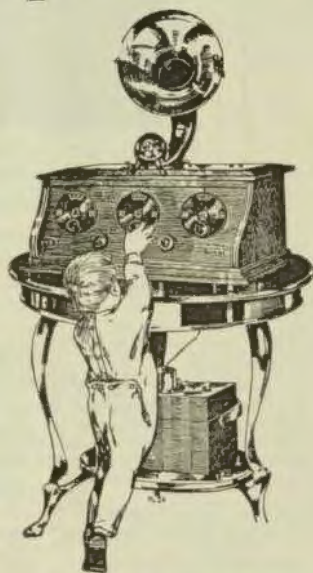
LIEUT. E. H. KINCAID, navigator of the "T.S. Kittery," succeeded in plotting the course of a West Indian hurricane recently by observing, with his radio compass, the direction in which the heaviest static was heard. This ingenious observation suggests a new service for the radio compass.

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You can operate the Mingay Unique Super Five with the greatest ease. Its simplicity is only one of the reasons why it has captured the fancy of so many listeners-in.

There is absolutely nothing to go wrong, and a written guarantee against trouble (excepting valves and batteries) covers you. Each set is sold complete with the finest accessories and the price represents the great value for a five-valve set.

You are invited to see, hear, and operate this set. Call and have a demonstration, or send for particulars.



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Complete

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Build the Split Secondary 2-Valve Receiver

Many circuits appear in this Magazine from time to time, but the Split Secondary 2 Valve Receiver is one of the best we have yet tried out. Go right ahead and build this wonderful Receiver with out quality parts. Here is a list of the parts you will require:

	£	s.	d.
1 Bakelite Panel, 16 x 8 x 1, at 3d. per sq. inch	0	8	0
1 Quaker Straight Line Frequency Condenser, size .0005	0	10	9
1 Advance, size .00025 Straight Line Frequency Condenser	0	9	6
2 Ajax 30 ohm Rheostats, at 2/1	0	4	2
1 Single Circuit Jack	0	1	9
1 Battery Switch, "Tiffany"	0	1	9
2 Metal Shell Sockets, 1/11 each	0	3	10
1 Crescent 6 to 1 Audio Transformer	0	15	8
1 2 megohm "Ajax" Gridleak	0	1	0
1 Size .00025 Mica Fixed Condenser	0	1	6
1 .001 Mica Fixed Condenser	0	1	6
1 2 coil Holder, Vernier	0	7	9
2 Fixed Panel Plugs, Emmeo, 3/- each	0	6	0
1 Terminal Strip	0	0	6
1 Set of Engraved Terminals	0	1	9
Total	£3	13	3

HONEY-COMB COILS.

	35 Turn	35 Turn	50 Turn	75 Turn	100 Turn
Unmounted	1/2	1/4	1/7	1/11	2/2
		Mounted Coils cost 2/- extra.			

The Quaker Straight Line Frequency Condenser

A wonderfully strong and efficient Straight Line Frequency Condenser at **10/9**. This new type Condenser is the strongest and most efficient Condenser on the market, it is made of aluminium and brass throughout, the bearings are of the Cone Type and extremely solid. The Condenser is made in size .0005 and is used for practically all Circuits, and is sold at the low price of 10/9

More Quality Parts for Our Next Set

AUDIO TRANSFORMERS:	s. d.	VALVE SOCKETS:	s. d.
The new famous "Econotran," Ratio: 3/4 to 1, price	8 6	Ordinary type English Valve Sockets, complete with nut	0 9
The "Crescent," 6 or 3/4 to 1	13 6	Base mounting English Valve Sockets	1 3
The "Ediswan" Transformer	13 6	American type or 201A Socket, metal shell base	1 11
AERIAL WIRE:		All Black Bakelite Socket	2 7
Copper, 3 strands of 20 gauge in 100 ft. lengths	2 6	Special aure contact Socket, all Bakelite	2 3
Phosphor bronze, 50 strands for loop for outside use, per 100 ft.	3 0	Porcelain Valve Sockets for 201A valves	4 0
Enamelled Copper, 7 strands of 22 gauge, per 100 ft.	4 9	RHEOSTATS:	
Electron Aerial Wire, in cartons	2 6	Wire wound Ajax Rheostats, 30 or 6 ohm	2 1
		Super Rheostats, wire wound, Ajax 30 ohm	3 6
		Pilkostats, Vernier all the way	8 6

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THE ECONOMIC RADIO STORES

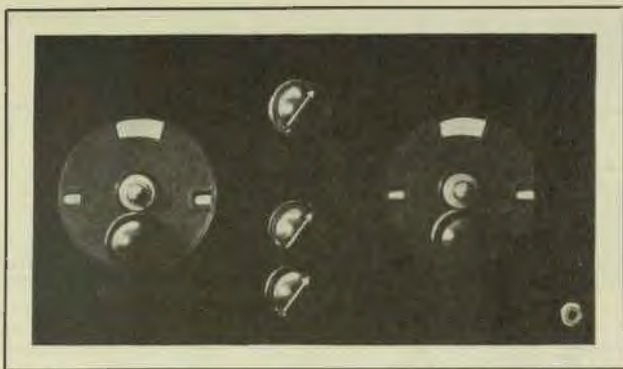
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without high
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simple
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action con-
trol.

A Split-Secondary Two Valve Receiver

THE question of selectivity is a vast one indeed. There is no doubt that the Browning-Drake and the neutrodyne are very selective receivers, but both employ radio frequency amplification in gaining selectivity. The same fact does not apply to the average two-valve receiver unless some form of the Reinartz circuit is employed.

Many readers by this time will have had considerable experience with the standard three-coil receiver, and all will know beyond a shadow of doubt what a vast difference in the tuning is made by the reaction coil. With the standard type of honeycomb coil receiver the wavelength is altered when the reaction is increased or decreased, thus making an otherwise selective receiver sensitive of handling. To receive the Interstate stations the standard three-coil receiver has two bad points. One is that on loosening reaction coupling in order to stop oscillating, the wavelength changes, owing to the variation in the tuning of the secondary circuit and the other is that when the coupling between the primary and secondary coils is loosened the set starts oscillating on account of the reduction of the damping effect of the aerial.

This means that very careful adjustment of the reaction coil is necessary in order to create maximum

selectivity, which is absolutely essential for bringing in Interstate stations.

Some years ago, the writer built a short-wave receiver designed to receive amateur stations round about 100 metres wavelength, employing what is known as the "Split Secondary." This was found to have practically no effect on the tuning of the primary coil, and again considering that only a small portion of the secondary was coupled to the reaction any

alteration in this latter coupling had a very small appreciable effect on the tuning of the whole of the secondary circuit.

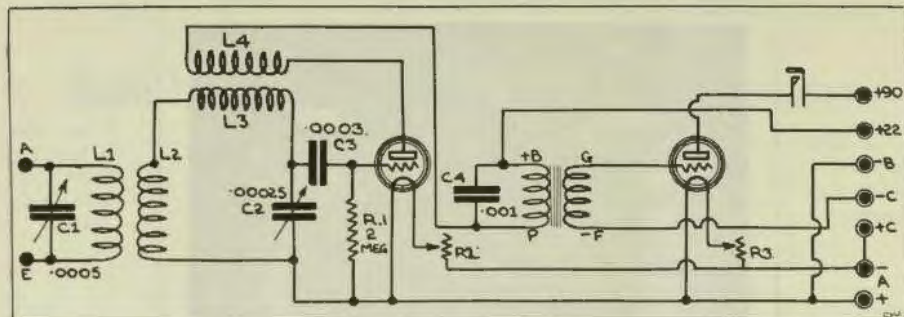
For the ultra-short waves this system proved ideal, but strange as it may seem this method is rarely applied to broadcast wavelengths. Why this should be, no one knows. If the particularly critical short-wave reception will respond on the "Split Secondary" method of reception why should this not be the case on the average broadcast wavelengths? That it is the case is proved by the receiver now to be described.

In this receiver it is not necessary for very fine coupling between the primary and a portion of the secondary which is inductively coupled to the primary, but the coupling between the smaller part of the secondary and the reaction coil requires very fine adjustment. Hence, the peculiar layout of the baseboard. Realizing just how weak will be the distance station on one valve during the summer months a stage of audio frequency amplification has been added, which will give increased volume on the distant stations and at the same time will produce reasonably good loud speaker results from the local broadcasting stations.

Another feature of the receiver which will appeal to many is that point to point wiring has been used,

LIST OF PARTS FOR "SPLIT SECONDARY" TWO VALVE RECEIVER.

- 1 Panel, Dilecto or Radion, 16 x 8 x 3/16 inches.
- 1 0005 Emco S.L.F. condenser
- 1 00035 or 00025 Emco S.L.F. condenser.
- 2 Emco 30-ohm. rheostats.
- 1 Emco S.C. Jack, or alternately, 1 Emco S.C. filament control jack.
- 2 Emco standard valve sockets
- 2 Emco fixed coupling plugs.
- 1 Emco 5 to 1 transformer.
- 1 Wireless 001 condenser.
- 1 Wireless 00025 grid condenser.
- 1 2-megohm grid leak and clips.
- 1 2-coil holder with long handle.
- 1 Terminal board with seven terminals.
- 1 Terminal board with two terminals.
- 1 Baseboard, 15 x 10 x 1/4 inch, Sundry screws, flex, etc.
- 2 Emco vernier dials (optional)



The circuit diagram. Note the position of the grid leak, also the arrangement of the secondary coils.

instead of the usual busbar method so popular with the average constructor of to-day. Ordinary flexible wire has been used instead, allowing the constructor to run direct from one point to the other without recourse to neat right angle bends in busbar. This system is equally as efficient and lends itself to speedier work in wiring.

Looking at the back-of-panel wiring diagram the flexible wiring is clearly seen. The photograph of the receiver has been taken before the terminal board has been inserted in the circuit, therefore showing only that wiring which is short of the terminal board wiring. The back-of-panel wiring diagram shows in complete detail the wiring of this receiver, and the constructor should have no difficulty in following this out closely and producing a receiver of which he will be proud. The front panel view should be compared with the panel layout, the only difference being that the writer employed a single circuit filament control jack instead of a battery switch shown in the panel layout.

All the materials employed in the construction of this receiver, excepting the panel and the two-coil holder, are of Australian manufacture, as can be verified by consulting the list of parts itemized in this article. To those who support "Australian-made" this receiver will also appeal, and the constructor need not doubt the quality of the different components used.

The circuit diagram is straight-for-

ward, the only peculiarity being the "Split Secondary" as is shown by coils L2 and L3. These two coils together form the secondary or grid coils, and are tuned by the smaller variable condenser, either .00025 or .00035. Reaction coil L4 is coupled to L3, thus minimizing the effects before mentioned. Again it will be noticed that instead of the grid leak being shunted across the grid condenser this leak has been taken from the grid of the valve direct to the positive of the "A" battery.

Construction.

As is usual, the panel layout is considered first of all. For the guidance of the constructor a diagram is produced which looks quite balanced. If, of course, the standard single circuit jack is used no filament switch must be provided. If, on the other hand, a single circuit filament control jack is employed this filament switch may be dispensed with entirely. Keeping this fact in mind, mark out your panel to the dimensions given in the panel layout, and drill accordingly, remembering, of course, that the bottom centre hole is for the spindle of the two-coil holder. And also provide three holes for fixing screws in order that the panel may be attached to the baseboard.

When every hole is drilled, mount your panel components, noticing that the condensers do not foul the rheostats.

Baseboard.

Proceed now to lay out your baseboard. The photograph of the

back-of-panel provides one method whereas the back-of-panel wiring diagram provides an alternative method. Decide which is better for your own particular purpose, and lay out accordingly. Coil holders for L1 and L2 should both be variable in relation to one another, but instead of the usual method of geared variation, simple course variation is required. To obtain this effect, mount the two fixed coupling plugs on separate pieces of dielecto or radion, each piece being approximately 1½ by 1 inch. Leave room at the edge of these small portions of dielecto to provide for a wood screw at one corner to go through to the baseboard. Improvise small distance pieces out of timber or fibre tubing, thus raising both these plugs approximately half an inch from the baseboard, and also allowing each to swing around from one another.

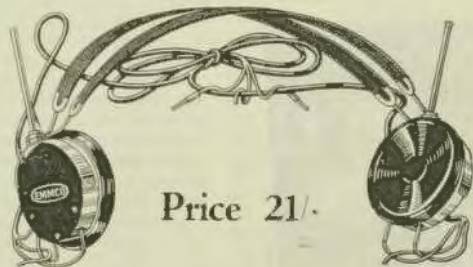
The position of the two-coil holder will be governed by the hole in the panel for the shaft. Perhaps, this shaft or spindle may not be long enough for your purpose, it is therefore necessary to extend it in some way. The method employed by the writer is as follows. The shaft provided by the makers, proving too small, it was sawn off approximately a quarter of an inch from the coil holder. A piece of 5/8 inch brass rod, 7 inches long, was pressed into service. One end of this rod and through the centre was drilled a hole the exact size of the outside measurement of the original shaft. The small



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combine the two essentials demanded by the discriminating buyer—low price combined with absolute efficiency. Their strongest feature is their capability of reproducing music and speech without the slightest trace of the rattling and distortion so often met with in headphones.

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the valve. To further explain this, a separate diagram of the jack is provided. One point in jack wiring should always be watched carefully, that is do not allow the flux or resin to run over the insulating material which is used for insulating one prong from the other and also acts as a support. Should this flux be spread over this material trouble will ensue sooner or later.

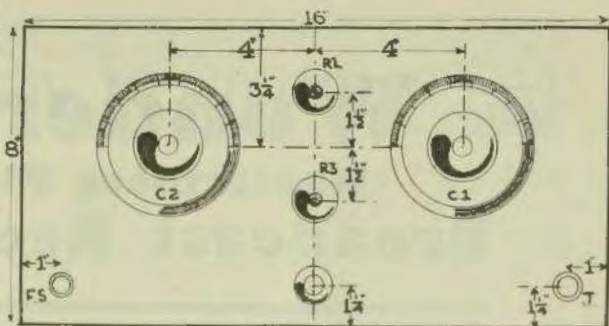
The last portion of all to be wired up is the battery terminal board, and this is clearly seen in the wiring diagram. Don't forget to shunt the primary of the transformer with a .001 fixed condenser.

Testing.

After all the wiring is completed and checked over the receiver is ready for testing. Firstly, to ensure that there is no mistake in the battery wiring, join your "A" battery to the "B" battery terminals, insert your valves, turn on your rheostats, and switch the current on either by means of your battery switch or by plugging into the filament control jack. The valves should not light up. If they do, there is something wrong, and it should be rectified right away. Provided, of course, the valves do not light up, then you can connect your batteries to their proper terminals. Do not, under any circumstances, make a mistake and connect your "B" battery to your "A" battery terminals. Should this happen the valves will be rendered useless.

The value of the "A" battery, which is used for heating the filament, depends upon the particular type of valve used. The "B" battery, on the other hand, is also governed by the valve used, but as a suggestion put 22½ volts on your detector and 90 volts on your amplifier, the amplifier "B" battery terminal being that one which is connected to the jack. A "C" battery of 4½ volts will be found ideal for most purposes, and a "C" battery besides prolonging the life of the "B" battery yields increase signal strength and a better quality of tone.

Now, plug in your honeycomb coils. For L1 use a 35-turn coil, and L4 use a 50-turn coil. Temporarily plug in a 35-turn coil in L2, and a 20-turn coil in L3. That is to say, the bigger



This shows the panel layout. The dimensions given are quite suitable.

portion of the "Split Secondary" is coarsely coupled to the aerial coil L1, and the smaller portion of this secondary coupled to the reaction coil. Now listen in, keeping your reaction coil at an angle of 45 degrees to L3. Tune in the local station, using the condensers only. Then note the effect of the difference in coupling between L1 and L2. Move one at an angle to the other, and retune with both condensers. Gradually bring up the reaction coil closer to L3, a slight retuning of condenser C2 will give you increased volume. Spend an hour or so on the local stations, familiarizing yourself with this receiver, noting, of course, just how sharp is the tuning. A few degrees of the condenser either way and out goes the station.

Course or fine tuning may be had at will according to the arrangement of the two separate portions of your secondary. Remember this, now: — The smaller the honeycomb coil that is coupled to the reaction coil the greater, or, perhaps, the broader, the tuning will be, conversely, the smaller the size of that portion of the secondary coil coupled to the aerial coil, the greater will be the selectivity. So great will be the selectivity that critical adjustment will be found essential to tune in even the local stations. The angular adjustment between L1 and L2 is a most important part, as will be found after using the receiver for a few nights.

The coils actually used by the writer were a mixture of Duric and

Atlas coils, both these makes having odd sizes which make them particularly adaptable to this receiver. There is nothing to hinder you from trying different combinations of coils, but should you find that the signal strength decreases when the reaction coil is brought closer to the secondary coil, use a smaller coil in the reaction, and note again if this factor is still present. If so, reverse the leads on the coil holder of L4, and this effect will disappear.

Test Report.

As is usual of all "Wireless Weekly" receivers, this one in particular has been thoroughly tested at Marrickville. The four local stations, 2KY, 2GB, 2BL, and 2FC, all produced comfortable, sweet, loud speaker strength. After careful handling, 4QG, Brisbane, and 3LO, Melbourne, were heard at splendid phone strength, and 3AR, strange to relate, was infinitely louder than either of the two above-mentioned Interstate stations. Static precluded 1YA, New Zealand, from being heard to advantage, this factor being equally true of 5CL, Adelaide. Vernier dials were found to be really indispensable, and even half a degree on the Emeco dial lost 4QG entirely. This is an indication of just how sharp in tuning can this receiver be made.

Next Week.

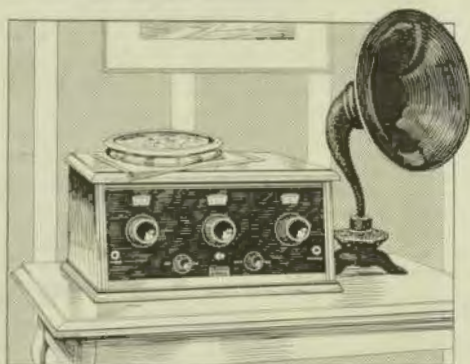
Constructional details of a one control five-valve receiver will be given next week. Toroidal coils and a multiple condenser will be featured.

The Wondertone

Masterpiece Five

Broadcast Receiver

WITH THE WONDERTONE MASTERPIECE Five you enjoy absolute fidelity of Tone. The rendition in the distant studio reaches your room round, full, clear—with all the original expression of the Artists. When an orchestra plays, you hear all the notes both Treble and Bass—the harmony of the whole. The music rests and soothes you, and reaches you unadorned—in perfect timbre.



Masterpiece Five, complete with heavy duty "B" Battery, 60 ampere hour Accumulator, Headphones, Amplion Speaker, Battery Hydrometer, "B" Battery Voltmeter and Aerial Equipment £36 10 0
 With Dry Cell Valves in lieu of Accumulator £24 5 0

YOUR OLD SET TRADED IN

Wiles Wonderful Wireless and Electrical Stores

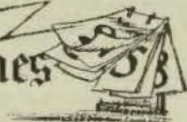
BRANCH:
23 PITT ST.

PITT & GOULBURN STS.,
SYDNEY

BRANCH:
384 PITT ST.

MAIL ORDER DEPT., 60 GOULBURN STREET.

Broadcasting Programmes for the Coming Week



Friday, Dec. 10

2FC

EARLY MORNING SERVICE.

- 7.—"Big Ben" and announcements.
7.5—Music from the Studio.
7.10—Official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, commercial news, mail services.
7.25—Investment market, mining share market, metal quotations.
7.35—Wool sales, breadstuffs markets, Interstate markets, produce markets.
7.45—Sydney Morning Herald's news service.
8.—"Big Ben" A "Chavric" talk, by Mr. J. K. Powell.
8.15—Close down.
9.15—The Chimes of 2FC.
9.20—Music from the Studio.
9.30—Marching music for school children.
9.40—Music from the studio.
10.—"Big Ben" and Announcements.
10.15—Late "Sydney Morning Herald" news service.
10.15—Music from the Studio.
10.25—A morning reading.
10.30—"Big Ben," Australian Press Association and Reuter's Cable Service.
11.10—Music from the studio.
11.15—A talk on Home Cooking and Recipes, by Miss Ruth Forest.
11.30—Marching music for school children.
11.35—Close down.

MIDDAY SERVICE.

- 12.—The Chimes of "Big Ben" and Announcements.
12.5—Stock Exchange, First Call.
13.—Music from the Studio.
13.10—Marching Music for the school children.
13.40—Music from the Studio.
13.45—From Farmer's Oak Hall: The Oak Hall Trio.
13.55—Rugby Wireless News.
14.—"Big Ben"—Weather Intelligence.
14.5—Evening News, Midday News Service, Producers' Distributing Society's report.
1.20—From Farmer's Oak Hall: The Oak Hall Trio.
1.25—Stock Exchange, Second Call.
1.30—Marching Music for the school children.
1.40—Music from the studio.
1.50—From Farmer's Oak Hall: The Oak Hall Trio.
2.—"Big Ben." Close down.

AFTERNOON SERVICE.

- 2.30—The Chimes of 2FC.
2.35—Broadcast from the Haymarket Theatre: Items by the symphonic orchestra, under the baton of Mr. Stanley Forster (by permission of the management).
2.50—Marching Music for the school children.
3.—Miss Katherine Beverley, soprano, "I hope" (Gerald Jones).
3.15—The Oak Hall Trio.
3.25—Music from the Studio.
3.40—Miss Annie Payne, mezzo, "Where the bee sucks" (Arne).
3.45—A music talk by Mr. Ewart Chapple.
3.50—Miss Katherine Beverley, soprano, "Tis the Day" (Leoncavallo).
4.—The Oak Hall Trio.
4.10—Music from the Studio.
4.40—Miss Annie Payne, mezzo, "Comina" thro' the Key" (Scotch traditional).
4.45—Stock Exchange—third call.
Note.—During the afternoon, results of the Inter-State Tennis, played on the White City Courts, will be transmitted.
4.46—Close down.

FARMER'S SERVICE, SYDNEY, CALL SIGN 2FC, WAVE LENGTH 463 METRES.

- Broadcasters Ltd., Sydney, call sign 2HL, wave length 333 metres.
Trades Hall Broadcasting Station, call sign, 2KY, wavelength, 250 metres.
Theosophical Broadcasting Service, call sign, 2GB, wavelength, 316 metres.
Burgin Electric Coy. Ltd., Sydney, call sign, 2HE, wavelength, 316 metres.
Broadcasting Co. of Australia, Melbourne, call sign N.O., wave length 371 metres.
Associated Radio Co., Melbourne, call sign 2AR, wave length 404 metres.
Queensland Radio Service, Brisbane, call sign 4QQ, wave length 325 metres.
Central Broadcasters Ltd., Adelaide, call sign 3CL, wave length 395 metres.
Radio Broadcasting Co. of N.Z., Auckland, call sign IYA, wave length 420 metres.
Western Australian, Perth, call sign 6WF, wave length 1250 metres.
Tasmanian Broadcasting Pty. Ltd., Hobart, call sign 72L, wave length, 468 metres.

EARLY EVENING SERVICE.

- 5.40—Chimes of 2FC.
5.50—The "Hello Max" talks to the Children.
6.15—A Recital by the juvenile pupils of Madeline Ada Baker.
6.45—From Farmer's Oak Hall: Instrumental and vocal items.
7.—From the Studio: Last Minute Sporting Information, by the 2FC Racing Commissioner.
7.10—"Evening News" late news service, weather information.
7.30—Dalgely's Market Reports (wool, wheat, stock), Fruit and Vegetable Markets.
7.40—A talk on next week's film releases.

NIGHT SERVICE.

- 7.55—Announcements.
8.—"Big Ben." Broadcast from the Lyceum Theatre, items by the orchestra, under the baton of Mr. Emanuel Aaron (by permission of the Directors of Lyceum Theatres Ltd.).
8.30—From the Studio: The Metropolitan Quartette consisting of Miss Iyan Mills, soprano; Miss Mary Bourke, contralto; Mr. A. L. Champion, tenor; and Mr. A. G. Ellis, baritone.
9.7.—A talk by Miss Gertrude Mack, on "The Missions of California."

- 9.17—The Metropolitan Vocal Quartette.
9.24—Mr. Gladstone Bell in cello solos.
9.34—Mr. A. G. Ellis, baritone.
9.38—Mr. Lindley Evans, in pianoforte solos.
9.48—Miss Mary Bourke, contralto.
9.52—The Instrumental Trio, consisting of Mr. Lionel Lawson, violinist, Mr. Gladstone Bell, cello, and Mr. Lindley Evans, pianist.
10.2—Broadcast from the Lyceum Theatre, orchestra under the baton of Mr. Emanuel Aaron, during which Mr. S. H. Bowden will describe from the Projection Room at Film House, the new films to be released in Sydney next week.
10.30—From the Wentworth Hotel, items by the new symphonic dance orchestra, under the baton of Mr. Sydney Simpson.
10.52—Music from the Studio.
11—"Big Ben" and Announcements.
11.3—From the Wentworth New Symphonic dance orchestra, until midnight.
12—National Anthem; Close down.

2BL

EARLY MORNING SERVICE.

- 7.15—Physical Training and Health Exercises and Announcements.
7.25—Health Hints.
7.30—Physical Training and Health Exercises.
7.45—Weather Forecast.
7.47—Sporting Intelligence.
7.50—Broadcasters' Special News Service.
8.—G.P.O. Clock and Chimes. Close down.

MORNING SERVICE.

- 10.—G.P.O. Clock and Chimes.
10.1—Weather Report.
10.3—Broadcasters' News Service direct from Rugby.
10.5—Daily Telegraph News Service.
10.25—Musical Programme from the Studio.
10.35—Daily Telegraph News Service.
10.50—Musical programmes from the Studio.
11.—G.P.O. Clock and Chimes.
11.5—Musical programme from the studio.
11.15—Market Reports.
11.14—Fruit Market Reports.
11.21—Other Market Reports.
11.24—London Metal Quotations.
11.28—Boats in call by wireless.
11.31—Weather Report and Forecast.
11.35—Shipping Information.
11.37—Information re Interstate and Overseas Mails.
11.40—Women's Session, conducted by Mrs. Jordan, Social notes.
11.50—Mrs. Jordan replies to correspondents.
12.—G.P.O. Clock and Chimes.
12.1—Talk on Making Salads, Mrs. Jordan.
12.30—Sydney Stock Exchange calls.
12.35—News Service from the Sun.
12.45—Hillier's Instrumental Quartette, under the direction of Carey Coobling.
1.30—G.P.O. Clock and Chimes.
1.31—Weather Report by courtesy of Govt. Meteorologist.
1.35—Sydney Stock Exchange Calls.
1.36—Latest Sporting Information and race results on race days.
1.40—"Sun" Newspapers News Service.
2.—G.P.O. Clock. Close down.

AFTERNOON SERVICE.

- Racing Information broadcast by courtesy of "The Sun."
3.—G.P.O. Clock and Chimes; Weather Report and Forecast by courtesy of Mr. C. J. Mares, Govt. Meteorologist.

- 8.4—Social notes from "The Sun."
 8.10—"Sun" Newswoman's News Service.
 8.15—Civil Service Restaurant Trio, under the direction of Miss De Cussy Bremer.
 8.30—"Sun" Newswoman's News Service.
 8.45—Musical Programme from the Studio.
 4—G.P.O. Clock and Chinese Civil Service Storm Trio.
 4.15—Serial Story.
 4.30—Musical Programme from the Studio.
 4.45—Producers' Distributing Society's Vegetable and Fruit Markets Report.
 4.50—Shipping information when available.
 4.52—Day's meteor readings when available.
 4.55—News from "The Sun."
 4.58—Resume of night's programme.
 6—G.P.O. Clock and Chinese Close down.

EVENING SESSION.

- 6.45—G.P.O. Clock and Chinese.
 6.50—Uncle George and the Kiddies.
 6.55—The pupils of Miss Monica Scully will entertain the kiddies.
 6.40—Parlour Dinner Orchestra, under the direction of Mr. Geo. Morrison. Special Country Selection.
 7—G.P.O. Clock and Chinese: Australian Mercantile Land and Finance Co's Stock, Wool and Hide Report.
 7.15—Weather Report and Forecast, by courtesy of Mr. C. J. Meares, Government Meteorologist.
 7.30—Block Exchange Reports.
 7.44—Producers' Distributing Society's Vegetable and Market Fruit Report.
 7.47—Fruit and Vegetable Report ("Sun").
 7.50—Grain and Fodder Report ("Sun").
 7.55—Dairy Produce Report ("Sun").
 7.50—Country news from "Sun."

NIGHT SESSION.

- 8—G.P.O. Clock and Chinese: Broadcasters' Topical Chorus.
 8.15—Broadcasters' Trio.
 8.18—Miss Hilda Lane, soprano.
 8.20—Mr. Clem Williams, baritone.
 8.22—Mr. Bobby Watson, comedian.
 8.44—Mr. Norman Wright, tenor.
 8.47—Talk concerning next Val's Set.
 8.51—Miss Hilda Blair, violin solo.
 8.55—Resume of following day's programme.
 9—G.P.O. Clock and Chinese: Weather Report and Forecast by courtesy of Mr. C. J. Meares, Govt. Meteorologist.
 9.1—Broadcasters' Trio.
 9.14—Miss Hilda Lane.
 9.21—Mr. Clem Williams.
 9.28—Interval.
 9.33—Mr. Norman Wright.
 9.40—Singer Sporting Expert of the "Sun" will talk on "The Prospects of Saturday's Racing."
 10—G.P.O. Clock and Chinese.
 10.1—Broadcasters' Trio.
 10.8—Mr. Bobby Watson.
 10.15—Al. Harcourt and Ambassadors Dance Band until midnight. "Sun" News Reports during intervals between dances.
 12—G.P.O. Clock and Chinese: National Anthem.

2GB

NIGHT SESSION.

- 6.45—Talks to children by "A.B.C."
 7.55—Instrumental Trio.
 8.3—Address by Dr. J. J. Van der Looze, I.L.D.
 8.20—Songs by Miss Josephine Lee.
 8.28—Violin solo by Lloyd Davies.
 8.58—Instrumental Trio.
 9.46—Selection from Shakespeare.
 9.55—Celli solo by Marcel Lang.
 9.15—Announcements.
 9.20—Songs by Miss Josephine Lee.
 9.28—Violin solo by Dan Scully.
 9.36—Talk on Radio.
 9.45—Instrumental Quartette.
 9.55—Great Thoughts from Great Minds" by Prof. Ernest Wood. God Saves the King.

3LO

MIDDAY SESSION.

- 12—Time Signal. British Official Wireless News from Rugby. Reuter's and the Australian Press Association cables. "Argus"

- and "Herald" news services.
 12.45—Stock Exchange information.
 1.15—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales. Ocean Forecast.
 1—Time Signal.
 1.1—Studio Orchestra.
 1.20—Tommy Tarnan, violin.
 1.35—Frank Graham, tenor.
 1.54—Studio Orchestra.
 1.55—L. Marshall, solo.
 1.59—Marshall and Frank Graham, duet.
 1.44—Franklin Stomba, clarinet.
 1.47—Studio Orchestra.
 2—Close down.

AFTERNOON SESSION.

- 2—Agnes Fortune and Rexford Bradley, piano and violin.
 3—Studio Orchestra.
 3.35—"An Echo" of Messrs Buckley & Nunn Ltd.: "Fashion Talk."
 3.55—Lola Bright, soprano.
 4.22—Studio Orchestra.
 4.24—Super-Phonic Guitars Recital.
 4.57—Mrs. M. Callaway Mahood, "The Art of Pen Drawing."
 4.12—C. Richard Chapp, flute.
 4.17—Lola Bright, soprano.
 4.24—Reynold Bradley, violin.
 4.32—Studio Orchestra.
 4.45—"The M.G. Girl" Competition. "Herald" news service: Stock Exchange information.
 5—Close down.

EARLY EVENING SESSION.

- 6.45—Children's Hour. Answers to letters and Birthday Greetings.
 6—Vern Bonall will sing to the children.
 6.7—"Buddy Buggy," "The Littlest's Fairy Story."
 6.16—Thelma Whitehead will whistle for the children.
 6.20—Vera Spain will sing just once more.
 6.27—"Billy Bony," "The Queen Bee," "The Black Princess."
 6.40—"Argus" and "Herald" news services. Reuters and the Australian Press Association cables.
 6.55—Stock Exchange information.
 6.57—Fish Market reports, by J. H. Borrett Ltd.
 7—River reports.
 7.8—Market Reports, by the Victorian Producers' Co-operative Co. Ltd. Hymenatrel Sheep Sales. Poultry, Grain, Chaff, Hay, Straw, Jute, Dairy Produce, Potatoes and Oatmeal.
 7.18—Market prices of oranges and lemons, supplied by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION

- 7.50—Under the auspices of the Department of Agriculture, Miss A. Knight, Fruit Preserving Expert, "Preserving Berry Fruits."
 7.40—Mr. Herbert Browne, now appearing in "Willflower," will speak to you from his dressing-room at the Theatre Royal, by permission of J. C. Williamson Ltd.
 8—Transmission from the Northcote State School, The Boys' Band, under the direction of Mr. F. C. Johnson, march "Sunday Morning," etc.
 8.10—Studio Orchestra, "Musical Gems of Tchaikowsky."
 8.40—Pat McLean, will entertain you.
 8.47—Reynold Bradley, violin.
 8.54—Archie Clarke, comedian.
 9—Mr. E. C. H. Taylor, "School Life and School Sport."
 9.20—Collingwood Citizens' Band, Mr. F. C. Johnson conductor.
 9.30—Pat McLean, entertainer.
 9.47—Mr. Leslie Brunning, Gardening Talk.
 9.57—Collingwood Citizens' Band.
 10—A Concert in the Village Schoolroom at Coddington (by special request). Presided over by the Rev. Mr. Chance.
 10.50—"The M.G. Girl" Competition. "Argus" news service: Meteorological information.
 11—Our Great Thought for To-night is:—"Success is for sale in the open market."

- Whith comes by diligent production and candour."
 11.1—M.G. Melody Masters.
 11.40—God Save the King.

3AR

MORNING SESSION.

- 11.20—British Official Wireless Press, Studio Barometer Readings, Racing Anticipation and Sporting Events, reviewed by "Field Glasses."
 11.25—Time Signal Chime from G.P.O.
 11.30—Miss Dorothy Adams, soprano.
 11.44—Miss Rene Bartley, T.D.L.C.M.
 11.50—The Ford Comedy Duo.
 11.57—Mr. R. Stanley Haines, Weekly Gardening Talk.
 11.58—Miss Gwen Hayman, violinist.
 11.52—Mr. Les. Shanley, tenor.
 11.58—The Ford Comedy Duo.
 11.58—Miss Dorothy Adams, soprano.
 11.54—Miss Rene Bartley, T.D.L.C.M.
 11.52—Mr. Les. Shanley, tenor.
 11.50—Miss Hilda Slatter, soprano.
 11.57—Ford Comedy Duo.
 11.58—Miss Max Pawken, mezzo.
 11.56—Miss Helen Moore, pianist.
 11.50—Time Signal from G.P.O.
 11.55—Leazette's Ballroom Orchestra, relayed from Grove Hill Hall, under the leadership of Mr. Harry Nangle.
 11—Close down.

AFTERNOON SESSION.

- 2.30—Roy's Premier Orchestra, Cecil W. Fraser, conductor.
 2.55—Evelyn Nobis, cooking lecture, by courtesy of Metropolitan Gas Company; Roy's Premier Orchestra.
 4.10—Gardening chat to children, by Mr. R. Stanley Haines.
 4.15—Time Signal Chime. Studio Barometer and Outdoor Thermometer Readings.
 4—Close down.

EARLY EVENING SESSION.

- 6.45—Children's Corner, by Uncle Rud.
 EVENING SESSION.
 7.45—British Official Wireless Press, Studio Barometer Readings, Racing Anticipation and Sporting Events, reviewed by "Field Glasses."
 7.50—Time Signal Chime from G.P.O.
 7.55—Miss Gwen Hayman, violinist.
 8.14—Miss Dorothy Adams, soprano.
 8.44—Miss Rene Bartley, T.D.L.C.M.
 8.50—The Ford Comedy Duo.
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 8.52—Mr. Les. Shanley, tenor.
 8.58—The Ford Comedy Duo.
 9.18—Miss Dorothy Adams, soprano.
 9.14—Miss Rene Bartley, T.D.L.C.M.
 9.23—Mr. Les. Shanley, tenor.
 9.30—Miss Hilda Slatter, soprano.
 9.37—Ford Comedy Duo.
 9.48—Miss Max Pawken, mezzo.
 9.56—Miss Helen Moore, pianist.
 11.50—Time Signal from G.P.O.
 11.55—Leazette's Ballroom Orchestra, relayed from Grove Hill Hall, under the leadership of Mr. Harry Nangle.
 11—Close down.

1QG

MIDDAY SESSION.

- 12.45—Time-in.
 1.15—Time Signal.
 1—Market Reports. Weather information. "The Daily Mail" news; "The Daily Standard" news.
 1.20—From Hotel Carlton: Lunch music from the lounge, played by Hotel Carlton Symphony Orchestra.
 2—Close down.
 AFTERNOON SESSION.
 3.30—From Hotel Carlton: The Hotel Carlton Symphony Orchestra.
 4.15—From the Studio: "The Telegraph" news.
 4.30—Close down.
 EARLY EVENING SESSION.
 6.30—"Daily Standard" news.
 6.40—The Children's Session—Stories by "The Sandman."
 7—From the Council of Agriculture Studies: Market reports. Lectures, "Pure Breed Cattle," by Mr. R. S. Maynard, Editor, "Live Stock Bulletin."

7.36—From the Studio of JQC: Stock Reports, Announcements, Weather Information.

NIGHT SESSION.

7.45—Lecture Session: "Wireless and the Selector," by Canon Garland.
8.—Studio Programme.
8.15—A Radio Novelty.
8.30—From the Studio: Musical Programme.
9.—Metropolitan Weather Forecast. Week-end road information for motorists, officially supplied by the Royal Automobile Club of Queensland.
9.15—Selections from the Studio.
10.—"The Daily Mail" news. Close down.

5 CL

MORNING SESSION.

11.30—G.P.O. Chimes.
11.31—Stock Duo Art.
11.40—"Advertiser" News Service.
11.55—Vocalion number.
12.—G.P.O. Chimes.
12.1—"Advertiser" news service.
12.16—Stock Duo Art number.
12.50—5CL Studio Orchestra.
1.55 (approx.)—Ward & Co.'s Stock Exchange Intelligence, Weather Reports and Station Announcements.
2.—G.P.O. Chimes.

AFTERNOON SESSION.

3.—G.P.O. Chimes.
3.1—Relay from "Maple Leaf" Cafe—Orchestral numbers.
3.45—From Studio: Talk by Mrs. Costhill.
4.—G.P.O. Chimes.
4.1—Relay from "Arenella" Cafe—Orchestral numbers.
4.4—Stock Exchange reports, general information, and station announcements.
5.—G.P.O. Chimes.

EVENING SESSION.

6.30—G.P.O. Chimes.
6.51—Decline stories for the children by Uncle Miller and Aunt Peggy.
7.30—Market Reports.
7.40—Sporting Talk by Mr. Arnold Trehear.
8.—G.P.O. Chimes.
8.1—Relay from Malcolm Reid & Co.—Orchestral numbers.
8.15—Mrs. Gerald Healy, tenor.
8.24—Miss Jean Churchward.
8.28—Relay from Malcolm Reid & Co. Rundle Street, Adelaide.
8.55—Mr. Mason Wood.
9.—G.P.O. Chimes.
9.1—Weather reports.
9.2—The Merry-makers.
9.7—Items from Studio.
10.—G.P.O. Chimes.
10.1—Items from Studio.
10.15—"Advertiser" News Service.
10.35—Items from Studio.
11.—G.P.O. Chimes. National Anthem. Close down.

6 WF

THE WESTRALIAN FARMERS' LIMITED BROADCASTING STATION (6WF).

Wireless Broadcasting Programmes for week ending December 12th, 1926.
(Programmes are subject to any alteration that may be necessary owing to unforeseen circumstances.)

MORNING SESSION.

12.30—Tune in.
12.35—First Local News Bulletin. Market Reports; Cables.
1.—Time signal from the Perth Observatory.
1.1—Weather notes.
1.2—Studio Septette.
2.—Close down.

AFTERNOON SESSION.

2.—Tune in.
8.55—Musical programme. Afternoon Tea Concert, relayed from Messrs. Deans' Ltd. Tea Rooms.
4.30—Close down.

EVENING SESSION.

7.—Tune in.
7.5—Musical evening for the kiddies, by Annie Evelyn and Uncle Henry, Leslie, Jerry and Duffy.
7.50—Stock and Share Intelligence. Market Reports. Cables, news, by courtesy of "The Daily News" Newspaper Co.
8.—Tune signal from the Perth Observatory.
8.1—Weather Notes, supplied by the Meteorological Bureau of Western Australia.
8.2—A Relay Concert. Musical programme.
8.45—"Health" talk, by Mr. H. S. Hutton, of the Hutton School of Physical Culture.
10.—Second News Bulletin, supplied by courtesy of "The Daily News" Newspaper Co.
10.30—Close down.

7 ZL

MORNING SESSION.

11.—G.P.O. Clock Chimes. The "Mercury" news, stock market, shipping, commercial intelligence, weather information. "Salonola" selections.
12.—G.P.O. Clock Chimes. Close down.
3.—G.P.O. Clock Chimes.
3.30—Musical Items from the Studio.
3.50—Hobart Stock Exchange quotations.
4.55—Weather information.
4.—G.P.O. Clock Chimes. Close down.

AFTERNOON SESSION.

3.—G.P.O. Clock Chimes.
3.30—Musical Items from the Studio.
3.50—Hobart Stock Exchange quotations.
4.55—Weather information.
4.—G.P.O. Clock Chimes. Close down.

EARLY EVENING SESSION.

7—Children's Corner. "Big Brother" chats to his Pal.

EVENING SESSION.

8.—G.P.O. Clock Chimes. "The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information.
8.5—Hobart Stock Exchange quotations.
8.10—Weekly Gardening chat, by Mr. George Nation.
8.20—Sports Bulletin, supplied by Mr. T. W. Neston, of Hobart Sports Depot.
8.30—Studio: From the Studio, Miss Bertha Marshall, soprano; Miss Dulcie Tate, alto; Miss Jessie Bell, mezzo-soprano; Miss Ruby Plesch, pianiste; Mr. Leell Dowling, tenor; Mr. Hubert Large, baritone.
8.15—Prize reports from Roberts & Co., Ltd., Murray Street, Hobart. Tasmanian District Weather reports.
9.50—"The Mercury" special interstate news service. Weather synopses. Station announcements. National Anthem.

Saturday, Dec. 11

2 FC

EARLY MORNING SESSION.

7—Chimes of "Big Ben" and Announcements.
7.15—Music from the Studio.
7.40—Official Weather Forecast: Rainfall; temperature; Astronomical; Misc. Memoranda; Shipping Intelligence; Mail Services.
7.25—Investment Market, Mining Share Market, Metal Quotations.
7.35—Wool Sales, breadstuffs markets, interstate markets, produce markets.
7.40—"Sydney Morning Herald" News Service.
8—"The Chimes of 'Big Ben'". Close down.

MORNING SESSION.

9.15—"The Chimes of 2FC and Programme Announcements."
9.20—Music from the Studio.
9.45—Late night sporting information, by the 2FC Racing Commissioner.
10.—Chimes of "Big Ben" and music from the Studio.
10.15—Late "Sydney Morning Herald" news service.

10.11—Music from the Studio.
11—"The Chimes of 'Big Ben'". Music from the Studio.
11.15—A talk on Gardening by "Red Gum," (Mr. J. G. Larkley).
11.50—Close down.

MIDDAY SESSION.

12.55—Chimes of 2FC and programme announcements.
1—"Big Ben," "Evening News" midday news service. Weather information. Race results will be transmitted for the first time from Canterbury Park Race Course. Each race described in the running by 2FC Racing Commissioner.

AFTERNOON SESSION.

3—"Big Ben." Announcements. During the interval of sporting events, items will be given from the Studio, including Mr. Cliff Arnold, society pianist.
4.30—Complete review of the afternoon sporting events.
5.—Close down.

EARLY EVENING SESSION.

5.45—"The Chimes of 2FC."
6.15—"The 'Hello Man'" talks to the children.
6.15—From the Children's Ward at Litchburn Hospital, "Uncle Russ" and "Jerry" assisted by "Uncle Monty" will entertain the children.
6.45—From the Hotel Australia, Sydney, items by the orchestra, under the direction of Miss A. J. Egan.
7.40—Close down.

NIGHT SESSION.

7.55—Announcements.
8—"Big Ben." Broadcast from the Litchburn Hospital, a concert by the 2FC Concert Party. Mr. Russ Garing introduces the Company.
8.5—Mr. Wilfrid Thomas, basso: "The Late Flower" (Allison).
9.15—Madame Emily Marks, soprano: "Love is meant to make us glad" (German).
9.14—Mr. Harrison White, basso solo: "Stars and Stripes" (Goss); "Plantation Melodies" (arr. Harrison White).
9.20—Mr. Laurence Halbert, baritone.
9.24—Mr. Montgomery Stuart, entertainer.
9.30—Madame Emily Marks, soprano: "Ma Curly Headed Baby" (Chitman).
9.34—Mr. Wilfrid Thomas, basso: "The Song of Kalistrata" (Kats).
9.45—Mr. Russ Garing and "Jerry" in vocal-trifolium patter.
9.50—Mr. Laurence Halbert, baritone.
9.54—Madame Emily Marks, soprano: (a) "Summer Sketch" (Anderson); (b) "Away in the Snow of Ireland" (Anderson), (accompanied by the Company).
9.5—Mr. Harrison White, basso solo: (a) "The Prisoner's Song" (Massey); (b) "Dandelion" (Evans).
9.12—Mr. Montgomery Stuart, tenorist: "Blarney".
9.12—Mr. Wilfrid Thomas, basso: (a) "When the Scrooge-magoo's on Parade" (Longstaffe); (b) "Fill a Glass" (Quilter).
9.30—Broadcast from Hoskies' and Sons Steel Works, Lithgow, a description by the 2FC Announcer of the blasting furnaces in operation.
9.45—Choral Items.
9.50—Tapping the furnaces.
9.55—Items by the 2FC Hospital Concert Party.
10.—Some local talent.
10.20—Final descriptions, from the Steel Works.
10.30—From the 2FC Studio, Sydney: 2FC Dance Band.
10.35—Late Sporting information and announcements.
10.45—2FC Dance Band.
11—"Big Ben."
11.2—2FC Dance Band.
11.2—National Anthem. Close down.

2BL

EARLY MORNING SESSION.

- 7.15—Musical Programme from the Studio.
 7.18—Physical Training and Health Exercises.
 7.25—Health Hints.
 7.30—Physical Training and Health Exercises.
 7.42—Weather Forecast.
 7.47—Sporting Information.
 7.51—Broadcasters' Special News Service.
 8—G.P.O. Clock and Chimes; Close down.

MORNING SESSION.

- 11—G.P.O. Clock and Chimes.
 11.1—Weather Report; Race Results broadcast by courtesy of the Non Newspapers.
 11.5—Musical Programme from the Studio.
 11.17—Sydney Daily Telegraph News Service.
 11.20—Women's Session conducted by Mrs. Jordan; Social Notes.
 11.30—Mrs. Jordan replies to correspondence.
 11.40—A Talk on Simple Cooking for Children by Mrs. Jordan.
 12.5—Musical Programme from the Studio.
 12.20—Daily Telegraph News Service.
 12.25—G.P.O. Clock and Chimes.
 12.31—London Metal Quotations.
 12.35—Broadcasters' special Rugby News Service.
 12.50—Boats in call by wireless.
 12.52—Weather Report and Forecast.
 12.54—Shipping Information.
 12.58—Information re Interstate and Overseas Mails.
 12.51—News from Sun Cable Edition.

AFTERNOON SESSION.

- 1—G.P.O. Clock and Chimes.
 1.1—Musical programme from the Studio.
 1.15—Daily Telegraph News Service.
 1.30—G.P.O. Clock and Chimes.
 1.31—Musical Programme from the Studio.
 1.45—Talk on Sporting and Athletic Fixtures for the day, Lacrosse, Hockey, Tennis, Cricket, Sailing, Boxing, Athletics, Rifle Shooting, Golf, Bowls, Racing.
 During the afternoon, sporting information will be broadcast by courtesy of "The Sun" Newspapers. Musical programme from the Studio during the afternoon.
 5—G.P.O. Clock and Chimes. Close down.

EARLY EVENING SESSION.

- 6.45—G.P.O. Clock and Chimes; Uncle George and the Kiddies.
 6.40—Pavilion Dinner Orchestra, under the direction of Mr. Doc Harrison.
 7.15—Results of all sporting information, including Sailing, Swimming, Racing, Canoeing, Bowls, by courtesy of Sun Newspapers.
 7.30—Country News from the Sun and results of all sporting and athletic fixtures.
 7.45—Close down.

NIGHT SESSION.

- 8—G.P.O. Clock and Chimes; Broadcasters' Topical Chorus.
 8.3—Excerpts from "The Messiah," broadcast from Welfare Hall, Anthony Hordern.
 10.15—Al. Hammond and the Ambassadors Dance Band, broadcast from the ballroom of the Ambassadors. During the intervals between dances news reports by courtesy of "The Sun" will be broadcast.
 12—G.P.O. Clock and Chimes; National Anthem.

3LO

MORNING SESSION.

- 11—Sonora Recital.
 11.10—Kathleen Robinson, piano.
 11.17—Vera Spaul, entertainer.
 11.24—Sonora Recital.
 11.30—Kathleen Robinson, piano.
 11.40—Vera Spaul, selected.
 11.47—Sonora Recital, selected.
 12—Time Signal. British Official Wireless news from Rugby. Reuters' and the Australian Press Association cables. "Argus" and "Herald" news services. Shipping intelligence.
 12.45—Stock Exchange Information.

- 12.50—Meteorological information. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports. "The 3LO Girl" competition.
 1—Time signal.

AFTERNOON SESSION.

- 1—Time signal.
 1.10—Dorothy Richardson, violin.
 1.17—Gwen Barham, contralto.
 1.24—Studio Orchestra.
 1.30—Bertha Gunnason, violin.
 1.40—Gwen Barham, contralto.
 1.47—Studio Orchestra.
 1.50—Close down.
 2.15—Description of Hurdle Race. Appendix "Races, by Mucket" of the "Sporting Globe."
 2.45—Description of Maiden Plate. Appendix "Races, by Mucket" of the "Sporting Globe."
 3—MLO Melody Masters.
 3.15—Description of the Ascendante Plate, by "Mucket" of the "Sporting Globe."
 3.20—MLO Melody Masters.
 3.45—Description of Ascendante Park Handicap, by "Mucket" of the "Sporting Globe."
 3.50—MLO Melody Masters.
 4.15—Description of the Ascendante Purse, by "Mucket" of the "Sporting Globe."
 4.20—MLO Melody Masters.
 4.45—Description of Jumpers' Flat Race, by "Mucket" of the "Sporting Globe."
 4.50—"The MLO Girl" competition. "Herald" news service. Stock Exchange information.
 5—Close down.

EARLY EVENING SESSION.

- 5.50—Sporting results.
 5.45—Children's Hour; Answers to letters and birthday greetings, by "Mary Gums".
 6—Musical programme, arranged by Miss Eileen Passow Wolfe and "The Sunbeam Singers."
 6.40—"Argus" and "Herald" News Services; Sporting results. Reuters and Australian Press Association cables.
 6.52—Stock Exchange Information.
 6.57—Fish Market reports, by J. R. Barrett Ltd.
 7—River reports.
 7.3—Market Reports, by Victorian Producers' Co-operative Co. Ltd.; Grain, chaff, hay, straw, juia, dairy produce, potatoes and onions.

NIGHT SESSION.

- 7.30—Mr. Frederick Chapman, "Professor Owen's Contribution to Australian Science."
 7.40—Dr. Leach, "Australian Penguin."
 8—Erlie Davis, Malcolm Semple, Lta. Edwards, in "Cavalleria Rusticana."
 9—Brunswick Brass Quartet, Mr. Hugh Niven conductor.
 9.10—Tonovox Quartet, Glee.
 9.17—William James, Australia's famous pianist-organist.
 9.37—Mr. W. Scharland, "Holding across the Rocky Mountains."
 9.57—Brunswick Brass Quartet, "Wendourse."
 10.4—Tonovox Quartette.
 10.11—"The MLO Girl" Competition. "Aresus" news service. Meteorological information. Sporting results. Announcements.
 10.26—Pat McLenn will entertain you.
 10.33—MLO Melody Masters.
 10.41—Pat McLenn will sing to you once more.
 10.49—MLO Melody Masters.
 11—Our Great Thought for To-night (a)—The best instructors are those who teach by their lives, and who prove their words by their actions."
 11.1—MLO Melody Masters.
 11.40—God Save the King.

3AR

MORNING SESSION.

- 11.30—"The British Official Wireless Press received by 3AR's operator from Rugby Wire-

less Station, England. Express train information. "Age" news bulletin.

- 12—Time Signal Chime from the G.P.O. First Weather Forecast; Studio Barometer Report; News of the Day.
 12.5—Musical Selections, relayed from Hurt's De Luxe, Bourke Street, Mr. T. L. Campbell at the organ.
 12.30—Stock Exchange News. Foreign Exchange. Result of Maiden Plate, by the courtesy of Messrs. Thos. Cook & Son's Market Notices.

- 12.50—Musical Selections.
 12.53—Mail Reports. Shipping Movements.
 1—Close down.

AFTERNOON SESSION.

- Ascendante Park Racing Club.
 2.15—Result of Hurdle Race; Host's Premier Orchestra, conductor, Mr. Cecil W. Fraser.
 2.47—Result of Maiden Plate.
 3.10—Result of Ascendante Plate.
 3.45—Result of Ascendante Park Handicap.
 4—Time Signal Chime; 2nd Weather Forecast.
 4.15—Result of Ascendante Purse.
 4.45—Result of Jumpers' Flat.
 5—Time Signal Chime; Evening Amusement Guide; Studio Barometer and Outdoor Thermometer Readings; Close down.

EARLY EVENING SESSION.

- 6.45—Children's Corner, Uncle Mac.

EVENING SESSION.

- 8—Time Signal Chime from G.P.O. Studio Barometer Readings. British Official Wireless Press, Final Sporting and Racing Results. Local news.
 8.15—Dance Night: The Rhythmic Dance Orchestra, relayed from the Maison-de-Luxe, Elwood. Latest popular numbers, under the leadership of Mr. Geo. Lewis.
 9.30—Week-end Traveller's Information, supplied by the Victorian Railways Department and Metropolitan Tramways Board.
 9.55—Maison-de-Luxe Rhythmic Dance Orchestra.
 10—Time Signal Chime from G.P.O. Studio Barometer Readings.
 10.5—The Maison de Luxe Rhythmic Dance Orchestra.
 11—Time signal. Close down.

4QG

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

- 3.25—Time-in.
 3.30—A Hintnee for Little Listeners, by "Miss Waratah."
 4.30—Close down.

EARLY EVENING SESSION.

- 6.30—"The Children's Session. Bedtime stories by "Uncle Ben" and "Uncle Jim," assisted by "Mabel Sunshine."
 7.15—Sporting News.

NIGHT SESSION.

- 7.45—A Sportsman's Talk.
 8—The Scottish Entertainers.
 9—From the National Speedway, a description of the motor cycle racing.
 10—From Lennon's Ballroom: Dance music by the Ajax Novelty Band.
 10.50—From the Studio: "The Sunday Mail" news. Close down.

5CL

MORNING SESSION.

- 10.30—G.P.O. Chimes.
 10.31—5CL Studio Orchestra Selections.

AFTERNOON SESSION.

- Running Description of S.A. Tattersall's Races.

EVENING SESSION.

- 6.30—G.P.O. Chimes.
 6.31—Bedtime stories.
 7.30—Market reports.
 7.40—Sporting Results.
 8—G.P.O. Chime.
 8.1—Melody Jazz Orchestra.

- 8.23—Items from Studio.
- 9.—G.P.O. Chimes.
- 9.1.—Melody Jazz Orchestra.
- 9.30—Items from Studio.
- 10.—G.P.O. Chimes.
- 10.1.—Melody Jazz Orchestra.
- 10.15.—Sporting results.
- 10.20.—Items from Studio.
- 11.—G.P.O. Chimes. National Anthem. Close down.

6 WF

MIDDAY SESSION.

- 12.—Tune-in.
- 12.5.—Musical programme, including piano-forte selections, by Miss Evelyn Willis, A.R.C.M.
- 12.47.—First Local News Bulletin. Market Reports; Cables.
- 1.—Time signal from the Perth Observatory.
- 1.1.—Weather Notes.
- 1.2.—Close down.

EVENING SESSION.

- 7.—Tune-in.
- 7.5.—A playette for the kiddies, by Uncle Duffy, with Auntie Kate and Evelyn, and Uncle Henry, Leslie, Perry, and Duffy.
- 7.35.—Market Reports. Cables, news by courtesy of "The Daily News" Newspaper Coy. Sports results supplied by kind permission of "The Mirror" Newspaper Coy.
- 8.—Time signal from the Perth Observatory.
- 8.1.—Weather Notes.
- 8.3.—Variety; Popular Musical Programme.
- 8.7.—Second news bulletin, supplied by "The Daily News" Newspaper Coy. Sports results supplied by kind permission of "The Mirror" Newspaper Coy.
- 10.15.—The Cremorne Dance Orchestra will feature popular numbers from the Cremorne Dancing Academy. Trotting results.
- 11.5.—Close down.

7 ZL

MORNING SESSION.

- 11.—G.P.O. Clock Chimes. The "Mercury" stock market, shipping, commercial, intelligence. Weather information and sporting anticipations. "Salonia" Selections.
- 11.45.—Hubart Stock Exchange quotations.
- 12.—G.P.O. chimes. Close down.

EVENING SESSION.

- 7.—Children's Corner: "Big Brother" chats to his Pals.

NIGHT SESSION.

- 6.—G.P.O. Clock Chimes. The "Mercury" special Tasmanian news service. Railway routing, produce sales, weather information and sporting results.
- 4.5.—Hubart Stock Exchange quotations.
- 6.15.—Dance numbers from the Studio.
- 9.45.—British Official Wireless News, copied direct from Rugby by our own operator. Weather synopsis. Station Announcements. National Anthem.

Sunday, Dec. 12

2 FC

MORNING SESSION.

- 10.55.—Announcements.
- 11.—"Big Ben"; Morning Service from St. Stephen's Presbyterian Church, Phillip St., Sydney. Psalter, by the Rev. Hugh Paton.
- 12.15.—From the Studio; News Session.
- 12.30.—Close down.

AFTERNOON SESSION.

- 2.55.—Announcements.
- 3.—"Big Ben"; Broadcast from the Petersham Congregational Church, a performance of "The Messiah" by the Combined Choir, conducted by Mr. Christian Hellmann. Principal Solists are: Miss Milly Hughes, soprano; Miss Mirial Humphries, contralto;

- Mr. Kenneth Hunt, tenor; Mr. Stanley Clarkson, baritone.
- 4.45.—From the Studio: The story of "The Messiah" by Handel, told by Mr. William Adams.
- 7.—Close down.

NIGHT SESSION.

- 6.—"Big Ben."
- 6.2.—Announcements.
- 6.5.—Broadcast from the Pitt St. Congregational Church, Sydney, the final organ recital of the 1926 series, given by Miss Lilian Frost.
- 7.—The evening Service from Pitt St. Congregational Church, conducted by the Rev. T. E. Rustin.
- 8.25.—From the Manly Broomia, Ocean Beach, Manly, then by the Manly Municipal Band, conducted by Mr. J. Phelour, March: "Parade of Puppets" (Rolfes); Hymn: "Lead Kindly Light" (Handen); Symphony: "Pastorale" 2nd Movement (Tschakowsky); Reverie: "Coeur Briou" (Gillet); Suite de Ballet: "Les Deux Pigeons" (Massenet); 1. Entrance of Gipsies; 2. Scene and Dance of the two gipsians; 3. Theme and variations; 4. Dance; 5. Hungarian Dance; 6. Finale. Selection: "The Pirates of Penzance" (Sullivan); waltz: Tango: "Adela" (Baurin); waltz: "Daughter of Love" (Benno); march: "Get Away" (Cobb).
- 8.30.—From the Studio: Mr. Alfred Cunningham, baritone; "Who is Sylvia" (Schubert), (b) "The Elf King" (Schubert).
- 9.35.—Mr. Alfred Hill, the well-known composer and exponent of Maori music, will broadcast for the first time, a description of Maori music, with examples played by himself, and his Maori songs sung by Mr. Alfred Cunningham.
- 10.—Mr. Alfred Cunningham, baritone: "Summer time on Broton" (Pool); (b) "Elegy" (Massenet).
- 10.19.—National Anthem; Close down.

2 BL

MORNING SESSION.

- 11.—Service broadcast from the Church of Christ, Scientist, Sydney.

AFTERNOON SESSION.

- 3.—Capitula; "Bethlehem," broadcast from Methodist Church, Croydon.

EVENING SESSION.

- 7.—Service from Chalmers Presbyterian Church.
- 8.30.—Concert from the Studio including: Miss Gladys Veruna, soprano. Broadcasters Trio, Solo and duet by Miss Amy Oatman and Mr. Peter Subleriani.
- 10.15.—G.P.O. Clock and Close down.

2 GB

MORNING SESSION.

- 10.20.—Organ music from St. Alban's Liberty Catholic Church.
- 10.30.—Morning service from St. Alban's Liberal Catholic Church, Redfern.
- 12.—Close down.

EVENING SESSION.

- 8.45.—Music from Studio.
- 9.—Music from Studio.
- 8.15.—Canterbury District Band.
- 8.35.—Miss Hilda Boyle, song.
- 8.40.—Canterbury District Band.
- 9.5.—Announcements.
- 9.10.—Miss Hilda Boyle, songs.
- 9.20.—Canterbury District Band.
- 9.45.—God Save the King.

3 LO

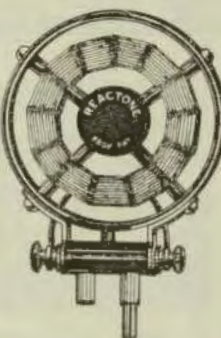
MORNING SESSION.

- 10.40.—Express Train Information.
- 10.45.—Service from St. Paul's Cathedral, Melbourne.
- 12.15.—British Official Wireless News from Rugby.
- 12.30.—Close down.

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AFTERNOON SESSION.

2.—Pleasant Sunday Afternoon Service, from Wesley Church, Lansdale Street, Chairman, Rev. J. H. Cain.

4.30.—Announcements: Close down.

EARLY EVENING SESSION.

5.45.—Children's Hour: Announcements to letters and Birthday Greetings by Billy Bunney.

6.—Stories by Billy Bunney.

6.45.—Close down.

NIGHT SESSION.

7.—Service from First Church of Christ, Scientist, St. Kilda Road, Melbourne.

8.30.—From the Studio: Malvern Tramways Band.

8.45.—Gee-lik Ladies' Choir.

8.45.—Korona Komrad, pianoforte recital.

8.57.—Herbert Brown, tenor.

9.1.—Stanislau Tarczyk, violin recital.

9.24.—Gee-lik Ladies' Choir.

9.31.—Malvern Tramways Band.

9.45.—Herbert Brown, tenor.

9.56.—Malvern Tramways Band.

10.1.—"Arvan" News Service: Weather Forecast, 3.0. (1st) Announcements.

9.53.—Our Great Thought: "Success does not consist in never making blunders, but in never making the same one the second time"—H. W. Shaw.

10.—God Save the King.

3 AR

MORNING SESSION.

10.30.—The bells from St. James' Old Cathedral.

11.—Morning Service from St. James' Old Cathedral. Preacher: Rev. Robinson.

AFTERNOON SESSION.

2.—Miss Elizabeth Proctor, solo pianist.

3.—Miss Dorothy Russell, soprano.

3.11.—Mr. John Ross, baritone.

3.18.—Miss Constance Gibson, contralto.

3.22.—Mr. Frank Schielick, violin solo.

3.30.—Miss Elizabeth Proctor will talk on Australian Birds.

3.44.—Miss Dorothy Russell, soprano.

3.47.—Misses Dorothy Russell, soprano; Constance Gibson, contralto, duet.

3.50.—Mr. Frank Schielick, violin solo.

3.57.—Mr. John Ross, baritone.

4.—Miss Constance Gibson, contralto.

4.17.—Misses Constance Gibson, contralto; Dorothy Russell, soprano, duet.

4.11.—Mr. F. Schielick, violin, close down.

EVENING SESSION.

6.—Children's Entertainment by Ladybird.

6.45.—Bells from St. James' Old Cathedral.

7.—Evening Service from Independent Church, Collins Street. Preacher, Rev. J. Ernest James, R.A.

8.30.—Muriel Alice Fairhall, soprano.

8.37.—Miss Bronnie Fairhall, soprano.

8.44.—Mr. Frank Thomas, baritone.

8.51.—Miss Dorothy Lutzgens, soprano.

8.58.—Muriel Alice Fairhall, soprano.

9.10.—Mr. Jack Brazier, selections on emulating phonic violin.

9.17.—Miss Bronnie Fairhall, soprano.

9.2.—Muriel Alice Fairhall, soprano.

9.32.—Mr. T. Thomas, baritone.

9.39.—Miss D. Lutzgens, soprano.

9.45.—Muriel Alice Fairhall, soprano.

9.55.—"Ave" News.

10.—Close down.

4 QG

MORNING SESSION.

11.—The complete Morning Service (77th Church Anniversary) will be relayed from the Ann Street Presbyterian Church.

AFTERNOON SESSION.

2.—A pleasant Sunday Afternoon Service provided by the Young People's Department of the Newmarket Baptist Church (chairman, Mr. R. T. Pike).

5.17.—Band Concert by the Excelsior Band will be relayed from the Botanical Gardens.

1.30.—Close down.

WANTED.—All kinds secondhand Wireless Sets, Parts, Speakers, etc. Best prices given. JACK RAKPEN, 16 George Street West. MA 1188.

NIGHT SESSION.

7.30.—The complete Evening Service will be relayed from the Ann Street Presbyterian Church.

At the conclusion of the Church Service the concert by the Greater Brisbane Municipal Concert Band will be relayed from the bandstand in Wickham Park.

5.30.—Close down.

5 CL

MORNING SESSION.

11.—Relay from Ross Park Congregational Church—Divine Service.

EVENING SESSION.

6.30.—Sunday stories for children.

7.—Relay from St. Bartholomew's Church of England, Nurwood—Divine Service.

8.15.—Apparia—Vocalion Trio in classical numbers, interspersed with vocal numbers by leading artists.

8.45.—Talk by Mr. P. H. Nicholls: "Abraham Lincoln."

9.—4 P.O. Chimes.

9.1.—Weather reports.

9.2.—Studio Concert, continued.

10.—4 P.O. Chimes, National Anthem. Close down.

6 WF

10.45.—Timothy.

11.—Morning service, relayed from St. George's Cathedral, Perth.

1.—Tune-in.

7.15.—Children's Bedtime Stories, by Mr. Holt, Edmondson.

7.30.—Evening service, relayed from the Lake Street Church of Christ, Perth. Mr. Theo. Huzar, preacher.

8.45.—Band programme, relayed from the Government Gardens, Perth. Mr. W. A. Robinson conductor.

7 ZL

EVENING SESSION.

7.—Service from Melville Street Church, Preacher: Rev. Robert Williams.

8.45.—At conclusion of Church Service either Band Concert from St. David's Park or Studio Concert.

9.—"Mercury" Special Interstate news service: Weather Synopses; Station Announcements; National Anthem.

Monday, Dec. 13

2 FC

EARLY MORNING SESSION.

7.—"Big Ben" and Announcements.

7.5.—Music from the Studio.

7.5.—Official Weather Forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, commercial news, mail services.

7.55.—Investment market, mining share market, metal quotations.

7.15.—Wool sales, breadstuffs markets, interstate markets, produce markets.

7.45.—"Sydney Morning Herald" News Service.

8.—"Big Ben."

8.15.—Close down.

MORNING SESSION.

9.15.—The Chimes of 2FC.

9.20.—Music from the Studio.

9.30.—Marching Music for School Children.

9.40.—Music from the Studio.

10.—"Big Ben" and Announcements.

10.5.—Late "Sydney Morning Herald" News Service.

10.1E.—Music from the Studio.

10.30.—A talk by the 2FC Mazing Comedian.

10.45.—A Morning Reading.

10.5.—"Big Ben"; Australian Press Association and Hunter's Cable.

11.—Music from the Studio.

11.30.—Marching Music for School Children.

11.35.—Close down.

MIDDAY SESSION.

12.—"Big Ben" and Announcements.

12.5.—Stock Exchange, First Call.

13.10.—Music from the Studio.

13.45.—Marching Music from the Studio for School Children.

14.—Music from the Studio.

14.45.—From Farmer's Oak Hall: The Oak Hall Trio.

15.—Rugby Wireless News.

1.—Chimes of "Big Ben." Weather Intelligence.

1.2.—"Evening News" midday news service.

1.—Producers' (Distributing Society's) Report.

1.20.—The Oak Hall Trio.

1.35.—Stock Exchange. Second call.

1.48.—Marching Music for School Children.

1.49.—Music from the Studio.

1.50.—The Oak Hall Trio.

2.—"Big Ben." Close down.

AFTERNOON SESSION.

2.30.—Chimes of 2FC and Announcements, Music from the Studio.

3.—Marching Music for School Children.

3.49.—From Farmer's Tea Rooms: Miss Diana Ross, soprano, "Jewel Song from Faust" (Gounod).

3.48.—From Farmer's Oak Hall: The Oak Hall Trio.

3.57.—Miss Kathleen Fletcher, mezzo, "Morning" (Spryke).

4.—Music from the Studio.

4.20.—Miss Diana Ross, soprano, "Beloved is Mine" (Aylward).

4.25.—From Farmer's Oak Hall: The Oak Hall Trio.

4.35.—Music from the Studio.

4.40.—Miss Kathleen Fletcher, mezzo, "The Fairy Pilgrim" (Hewitt).

4.45.—From Farmer's Tea Rooms—Third Call.

4.48.—Close down.

EARLY EVENING SESSION.

6.45.—The Chimes of 2FC.

6.55.—The "Hills Man" talks to the children.

6.40.—A talk to the Older Children: Serial story, "The Little Black Princess."

6.45.—Broadcast from the Hotel Australia: Interview with the orchestra, under the direction of Miss A. E. Egan.

7.15.—From the Studio: "Evening News" Late News Service; Weather Information.

7.15.—Misses' Market Reports (wool, wheat, stock), fruit and vegetable markets.

7.40.—A talk by Mr. F. L. Gratzmauer, on "The Wonders of Nature," taking for his subject, "Some Prehistoric Australian Animals."

NIGHT SESSION.

8.—"The Ben." Broadcast from the Haymarket Theatre, the Operatic Orchestra, under the baton of Mr. Stanley Forster (by permission of the Management).

8.25.—Broadcast from the Marist Brothers' School, Ridge St., North Sydney, a programme by the Brothers' Boys' Choir of 100 voices. Mr. R. Hahn accompanied: (1) Part: Songs; (a) "Nanareh" (Gounod); (b) "Holliday" (Vincent), by Boys' Choir.

8.30.—Part 2: Violin solo, "Melody" (Daw), by Master F. Hughes.

8.35.—Part 3: Vocal solo, "My Prayer" (Squire), by Master L. Anderson.

8.36.—Part 4: Part Songs: (1) "Believe me if I will" (Moore), (b) "Happy Birth" (Holt), by Boys' Choir.

8.42.—Part 5: Recitation, "I want to go with Daddy," Master R. Newton.

8.46.—Part 6: Vocal solo: "May Mornings" (Demp), Master E. Buntington.

8.48.—Part 7: Part Songs: (a) "Life's Lullaby" (Lane), (b) "The Fairie Queen" (Fletcher), by Boys' Choir.

8.52.—Part 8: Violin solo, "Ave Maria" (Schuler), Master F. Hughes.

8.55.—Part 9: Recitation, "Sewin' things at night," Master R. Wylie.

8.57.—Part 10: Part song, "Sweet and Low" (Harnby), Boys' Choir.

8.5.—Broadcast from the Haymarket Theatre, the Vocal Art.

8.58.—From the Studio: Miss Ew Warkurst, in popular numbers.

- 9.27—Mr. Russell Rix, bass.
 9.31—Mr. Lionel Lawson, violin solo.
 9.34—Mr. Walter Hunt and Miss Eve Warhurst in a One Act Play.
 9.52—Mr. Russell Rix, tenor.
 10.1—Mr. Wally Barnes, comedian.
 10.8—A Comedy Trifle, by Mr. Walter Hunt.
 10.15—Broadcast from the Haymarket, items by the Operatic Orchestra.
 10.20—From the Studio: Mr. Russell Rix, bass.
 10.31—Mr. Lionel Lawson, violin solo.
 10.42—Mr. Wally Barnes, comedian.
 10.45—Some Celebrity Records.
 11—"Ben Ben."
 11.5—Broadcast from the Wentworth Hotel, items by the Wentworth New Symphonic Orchestra, under the baton of Mr. Sydney Simpson.
 12—National Anthem; Close down

2 BL

EARLY MORNING SESSION.

- 7.15—G.P.O. Clock and Chimes.
 7.16—Musical Programme from the Studio.
 7.19—Physical Training and Health Exercises.
 7.23—Health Hints.
 7.30—Physical Training & Health Exercises.
 7.45—G.P.O. Clock and Chimes.
 7.46—Weather Forecast.
 7.48—Sporting Information.
 7.50—Broadcasters' Special News Service.
 8—G.P.O. Clock and Chimes; Close down.

MORNING SESSION.

- 10—G.P.O. Clock and Chimes.
 10.1—Broadcasters' News Service from Rugby.
 10.15—Daily Telegraph News Service.
 10.25—Musical Programme from the Studio.
 10.35—Daily Telegraph News Service.
 10.53—Musical Programme from the Studio.
 11—G.P.O. Clock and Chimes.
 11.1—Musical Programme from the Studio.
 11.15—Vegetable Market Reports.
 11.16—Fruit Market Reports.
 11.21—Other Market Reports.
 11.24—Route in call by Wireless.
 11.31—Weather Report and Forecast by courtesy of Govt. Meteorologist.
 11.39—Shipping information.
 11.53—Information re Interstate and Overseas Mail.
 11.54—Daily Telegraph News Service.
 11.56—Women's Section: Social Notes by Mrs. Jordan, Social notes.
 11.58—Mrs. Jordan replies to correspondents.
 12—G.P.O. Clock and Chimes; A Talk by Mrs. Jordan, on "Xmas Cooking."
 12.25—Sporting talk, by Miss G. Varley of the W. Sports Association.
 12.30—G.P.O. Clock and Chimes.
 12.31—Sydney Stock Exchange Calls.
 12.35—News Service from the Sun.
 12.45—Hillier's Instrumental Quartet, direction Caryl Castling.
 1.50—G.P.O. Clock and Chimes.
 1.51—Weather Report.
 1.53—Bony Stock Exchange Calls.
 1.56—Track Gallops and Sporting Information.
 1.58—Sun Newspaper's News Service.
 2—G.P.O. Clock and Chimes; Close down.

AFTERNOON SESSION.

- Racing Information broadcast by courtesy of The Sun.
 3—G.P.O. Clock and Chimes; Weather Report and Forecast by courtesy of Mr. C. Z. Mars, Govt. Meteorologist.
 4.5—Social Notes from the Sun.
 3.10—Sun Newspaper's News Service.
 3.15—David Jones' Tea Room Trio.
 3.20—G.P.O. Clock and Chimes.
 3.21—News from the Sun.
 3.45—Musical programme from the studio.
 4—G.P.O. Clock and Chimes; David Jones' Tea Room Trio.
 4.15—Serial Story.
 4.35—Musical programme from the studio.
 4.45—Producers' Distributing Society's Vegetable and Market Price Report.
 4.50—Shipping Information when available.

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SYDNEY

- 4.52—Day's Racing resume on race days.
4.58—News from the Sun
4.58—Resume of To-night's programme.
4.—G.P.O. Clock; Close down.

EARLY EVENING SESSION.

- 5.45—G.P.O. Clock and Chimes.
5.46—Uncle George and the Kiddies.
5.46—Favilion Dinner Orchestra under the direction of Mr. Cec. Morrison.
Special Country Session.
7.—G.P.O. Clock and Chimes; Australian Mercantile Land and Finance Co.'s Stock and Hide Report.
7.5—Weather Report and Forecast by courtesy of Mr. C. J. Mares, Govt. Meteorologist.
7.16—Stock Exchange Reports.
7.16—Producers' Distributing Society's Fruit and Vegetable Report.
7.20—Fruit and Vegetable Reports (Sun).
7.24—Grain and Fodder Reports (Sun).
7.26—Dairy Produce Report (Sun).
7.30—Primary Producers' Newspaper Report on London Butcher Market.
7.38—Country News from the Sun.

NIGHT SESSION.

- 8.—G.P.O. Clock and Chimes; Broadcasters' Topical Chorus.
8.3—Newtown Band, broadcast from Industrial Hall, Newtown.
8.23—Miss Phyllis Atkinson, mezzo soprano.
8.30—Miss Molly Bassett, educational.
8.37—Miss Hilka Walker, soprano.
8.4—Erie and J. Butterfield, steel guitars.
8.51—Resume of following day's programme.
Weather report and forecast by courtesy of Mr. C. J. Mares, Government Meteorologist.
9.—G.P.O. Clock and Chimes.
9.1—Mr. Bobby Watson, comedian.
9.15—Talk by Miss ——— Western Suburbs.
9.18—Mr. Edward Barry, baritone.
9.20—Newtown Band.
9.26—Miss Phyllis Atkinson.
9.27—Miss Molly Bassett.
9.34—Miss Hilka Walker.
9.41—Mr. Bobby Watson.
10.5—Mr. Edward Barry.
10.15—A. Hammett and the Ambassadors Dance Band, broadcast from the ballroom of the Ambassador. During the intervals between dances, news reports, by courtesy of "The Sun," will be broadcast.
12.—G.P.O. Clock and Chimes; National Anthem.

2GB

EVENING SESSION.

- 6.15—Talks to Children by A.B.C.
7.15—Talks to Women.
7.30—Music from Studio.
7.44—Announcements.
7.55—Instrumental Trio.
8.—Address by Dr. J. Van der Leeuw, M.B.
8.20—Miss Gladys Edwards, songs.
8.30—Competition.
8.43—String Quartette.
9.—Announcements.
9.15—Violin solos, by Dan Scully.
9.23—Instrumental Trio.
9.23—Talk on Radio.
9.38—Miss Gladys Edwards, songs.
9.45—Lloyd Davies, violin.
9.54—Great Thoughts from Great Minds, by Prof. Ernest Wood.
9.58—God Save the King.

3LO

MIDDAY SESSION.

- 12 noon—Time Signal; British Official Wireless News from Rugby; Reuters and the Australian Press Association; Cables; "Argus" and "Herald" News Services.
12.45—Stock Exchange Information; Shipping Intelligence.
12.56—Meteorological Information; Weather Forecasts for Victoria, Tasmania, South Australia, and New South Wales; Ocean Forecast; River Reports. 3LO Girl.
1—Time Signal.

- 1.1—Studio Orchestra.
1.16—Elsie Davies, soprano.
1.21—Elsie Davies, soprano, "cello.
1.24—Diana Quintet.
1.30—Elsie Davies, soprano.
1.42—Reginald Bradley, violin.
1.50—Studio Orchestra.
2—Close down.

AFTERNOON SESSION.

- 3—3LO Melody Masters.
3.10—Margaret McKenzie, soprano.
3.17—3LO Melody Masters.
3.27—Miss Flora Pell, Supervisor of Domestic Arts, Education Department, "Domestic Economy."
3.42—3LO Melody Masters.
3.52—Robert Bassell and Elsie Day, in "Harmonylarity."
3.59—3LO Melody Masters.
4.0—Margaret McKenzie, soprano.
4.05—Miss Dorothy Silk, talk on "Homecrafts."
4.30—Final acceptance for Mentone Races, on Wednesday.
4.42—3LO Melody Masters.
4.48—"Herald" News Service; Stock Exchange Information. 3LO Girl.
2—Close down.

EVENING SESSION.

- 8.15—Children's Hour; Answers to letters and Birthday Greetings.
8.—Yvett Landau will now recite to the children.
8.5—"Little Miss Kookaburra" will tell in response to several requests, the favourite story of the "Three Bears."
8.17—Charlie Pope, Kennedy Colored Koon.
8.23—Miss Kookaburra, story for children.
8.35—Yvett Landau, recitations.
8.40—"Argus" and "Herald" News Services; Reuters and the Australian Press Association Cables.
8.52—Stock Exchange Information; Overseas Shipping.
8.57—Fish market reports, by J. R. Barrett, Ltd.
9.—River reports.
9.28—Market Reports, by the Victorian Producers' Co-operative Co. Ltd.; Haymarket Sheep Sales; Poultry, grain, chaff, hay, sugar, rice, dairy produce, potatoes and oilseed.
7.15—Market prices of oranges and lemons, by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION.

- 7.20—Under the auspices of the New Settlers League, Mr. J. B. Whitcombe, "Clifton Springs."
7.40—Under the auspices of the Department of Agriculture, Mr. A. J. Gill, Senior Herd Tester, "Tips on Wheat Farm."
7.55—Wesley College 1st Annual Speech night Concert, transmitted from the Auditorium, Collins St., Melbourne.
8.45—From the Studio: Elsie Davies; Elsie McCormack; Lillian Franklin; Josephine Gallagher; Beatrice McEvoy; Siska Neave; Josephine Malara; Olga Smith.
9.45—Illustrated lecture by J. Sutton Crowe.
10.5—British Official Wireless News from Rugby; Announcements; 3LO Girl.
10.15—3LO Melody Masters.
10.25—"Argus" News Service; Weather Forecast; Announcements.
10.35—3LO Melody Masters.
12.—Dr. Great Thought for To-night is—"Genius is not a single power, but a combination of great powers."—Whipple.
11.1—3LO Melody Masters.
11.40—God Save the King.

3AR

MORNING SESSION.

- 11.30—British Official Wireless News, received from Rugby Station, Wireless Station, England; Express Train Information; "Age" News Bulletin, exclusive to 3AR.
12—Time Signal Chime. Studio Barometer

- Readings, 1st Weather Forecast. Sporting Fixtures; Events of the day.
12.5—Musical selections, relayed from Hoyt's De-Luxe, Bourke Street. Mr. T. L. Campbell at the Warlike.
12.30—Stock Exchange news, Market reports.
12.40—Musical selections.
12.45—Shipping Movements. Mail Notices.
1—Close down.

AFTERNOON SESSION.

- Richmond Pianos: Results immediately after each race, and at half hourly intervals.
2.50—Hoyt's Premier Orchestra, under direction of Cecil W. Fraser.
3.—The Melbourne Piano Trio.
3.16—Mr. Adiel Harris, tenor.
3.25—Mr. Bert Vetter, violinist.
3.30—Mr. Adiel Harris, tenor.
3.37—Mr. Ronald Bradley, cellist.
3.46—Miss Ethel Beazley, pianist.
3.54—The Melbourne Piano Trio.
4.—Time Signal Chime; Studio Barometer Readings. Hoyt's Orchestra.
4.45—Evening Announcements, Goid.
4.—Time Signal Chime; 2nd Weather Forecast; Close down.

EARLY EVENING SESSION.

- 6.40—Children's corner, by Uncle Bud.

EVENING SESSION.

- 7.50—British Official Wireless Press. Studio Barometer Readings. Time Signal Chime.
8.—Miss Olive Devlin, soprano.
8.4—Mr. T. B. Noall, humorous recital.
8.14—Leppest's Ballroom Orchestra.
8.20—Mr. A. Sullivan, talk on "Travels in Australasia and New Zealand."
8.45—Leppest's Ballroom Orchestra.
8.57—Special Drama: Olive Devlin and Will Jewell.
9.13—Mollins Marion Roman, mezzo.
9.15—Leppest's Ballroom Orchestra.
9.25—Miss Olive Devlin, soprano.
9.35—Mr. W. H. Ludlow, tenor.
9.50—Mollins Marion Roman, mezzo.
9.45—Leppest's Ballroom Orchestra.
10.—Time Signal Chime; Studio Barometer and Perimeter readings. "Age" news bulletin exclusive to 3AR.
Mr. T. B. Noall, educationist.
10.10—Leppest's Ballroom Orchestra.
10.40—Close down.

4QG

MIDDAY SESSION.

- 12.56—Tunin.
12.56—Time Signal.
1.—Market Reports, supplied by the Council of Agriculture. Weather information, supplied by Commonwealth Weather Bureau, News, supplied by "The Daily Mail." News Service, supplied by "The Daily Standard."
1.20—From Hotel Carlton: Light Music from the Lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.
2—Close down.

AFTERNOON SESSION.

- 2.30—From Hotel Carlton: Afternoon Tea Music, played by Hotel Carlton Symphony Orchestra.
4.15—From the Studio: News Service, supplied by "The Telegraph."
4.40—Close down.

EARLY EVENING SESSION.

- 5.—News Service supplied by the "Daily Standard."
5.30—Children's Session: Stories by "The Sandman."
7.—From the Council of Agriculture Studio: Market Reports; Lecture, "Christmas on the Pig Farm," by Mr. E. J. Shelton, instructor in Pig Raising.
7.30—From the Studio of 4QG, Stock Reports; Announcements.

NIGHT SESSION.

- 7.45—Lecture Session: "Amateur Wireless" by Mr. W. T. Monkhouse, President Wire-

ness Institute, Queensland Division.
 8—Studio Concert.
 9—Metropolitan Weather Forecast
 10—Concert continued.
 11—"Daily Mail" News; Announcements; close down.

5 CL

MORNING SESSION.

11.30—G.P.O. Chimes.
 11.31—Stock Due Art number.
 11.46—"Advertiser" news service.
 11.47—Vocalist number.
 12—G.P.O. Chimes.
 12.1—"Advertiser" news service.
 12.16—Stock Due Art number.
 12.30—5CL Studio Orchestras in concert numbers.
 1.58—Ward & Co's. Stock Exchange Intelligence, official weather synopsis, and station announcements.
 2—G.P.O. Chimes.

AFTERNOON SESSION.

3—G.P.O. Chimes.
 3.1—Relay from "Maple Leaf" Cafe—Orchestral numbers.
 3.48—From the Studio; talk by Mrs. Coghlin.
 4—G.P.O. Chimes.
 4.1—Relay from "Arcadia" Cafe—Orchestral numbers.
 4.55—Stock Exchanges general information and station announcements.
 5—G.P.O. Chimes.

EVENING SESSION.

6.30—G.P.O. Chimes.
 6.31—Bedtime stories.
 7.30—Market reports.
 7.46—Mr. Froelichsen, automotive engineer, Vacuum Oil Company.
 7.50—Lure of the Teeth, by Mr. Dungray.
 8—G.P.O. Chimes.
 8.1—Relay from Wandergraph Theatre—Wandergraph Operatic Orchestra, under the direction of Mr. Barford Smith.
 9.16—Concert from the Studio.
 9—G.P.O. Chimes.
 9.1—Weather reports.
 10—G.P.O. Chimes.
 10.15—"Advertiser" News Service.
 10.24—Concert from the Studio, continued.
 10.38—Station Announcements.
 11—G.P.O. Chimes. National Anthem Close down.

6 WF

MIDDAY SESSION.

12.30—Tune-in.
 Reports, Cables.
 12.35—First Local News Bulletin, Market.
 1—Time Signal from the Perth Observatory.
 1.1—Weather Notes.
 1.2—Studio Septette.
 2—Close down.

AFTERNOON SESSION.

3.30—Tune-in.
 3.35—Afternoon Tea Concert, relayed from Messrs. Bann's Limited Tea Rooms.
 4.30—Close down.

EVENING SESSION.

7—Tune in.
 7.8—Stories for Tiny Tots, by Auntie Kate.
 7.26—Talk "Stamp Collecting" by Mr. A. J. Ashford.
 7.56—Stock and Share Intelligence, Market Reports; Cables; news, by courtesy of "The Daily News" Newspaper Coy.
 8—Time signal from the Perth Observatory.
 8.1—Weather notes.
 8.2—Concert by the B.S.I. Band, Mr. Geo. S. Mellor, conductor.
 10—Second News Bulletin, supplied by courtesy of "The Daily News" Newspaper Coy.
 10.30—Close down.

7 ZL

MORNING SESSION.

11—G.P.O. Clock Chimes. The "Mercury" news, Stock Market, Shipping, Commercial Intelligence, Weather Information.
 "Salmon" selections.
 12—G.P.O. Clock Chimes. Close down.

AFTERNOON SESSION.

3—G.P.O. Clock Chimes. Musical items from the Studio.
 3.50—Hobart Stock Exchange quotations.
 3.55—Weather Information.
 4—G.P.O. Clock Chimes. Close down.

EVENING SESSION.

7—Children's Corner. "Big Brother" chats to his Pa's.

NIGHT SESSION.

8—G.P.O. Clock Chimes. The "Mercury" special Tasmanian news service. Railway auction produce sales. Weather information.
 8.50—Hobart Stock Exchange quotations.
 9.10—Talk by Mr. R. W. Crabtree, B.Sc., "The Election."
 9.30—Vocal items and selections on the Guldbassen Registering Piano, broadcast by direct wire from Findlay's Showrooms, Elizabeth Street, Hobart.
 9.15—Tasmanian District Weather Reports.
 9.50—"Mercury" special interstate news service. Weather synopsis. Station announcements. National Anthem.

Tuesday, Dec. 14

2 FC

EARLY MORNING SESSION.

5—"Big Ben" and announcements.
 7.5—Music from the Studio.
 7.10—Official weather forecast, rainfall, temperatures, astronomical numerous, shipping intelligence, commercial news, mail services.
 7.25—Investment market, mining share market, metal quotations.
 7.30—Wool sales, breadfruit markets, interstate markets, produce markets.
 7.45—"Sydney Morning Herald" news services.
 8—"Big Ben."
 8.15—Close down.

MORNING SESSION.

9.15—The Chimes of 2FC.
 9.20—Music from the Studio.
 9.30—Marching Music for the School Children.
 9.40—Music from the Studio.
 9.45—Racing talk, by 2FC Racing Commissioner.
 10—"Big Ben" and announcements.
 10.5—Late "Sydney Morning Herald" News Service.
 10.15—Music from the Studio.
 10.45—A Morning Reading.
 11—"Big Ben"; Australian Press Association and Reader's Cables.
 11.10—Music from the Studio.
 11.15—A talk on Home Cooking and Recipes by Miss Ruth Furst.
 11.55—Marching Music for School Children.
 11.55—Close Down.

MIDDAY SESSION.

12—"The Chimes of Big Ben" and Announcements.
 12.5—Stock Exchange, First Call.
 12.10—Music from the Studio.
 12.30—Marching Music for the School Children.
 12.40—Music from the Studio.
 12.45—Music from the Oak Hall: The Oak Hall Trio.
 12.50—Rugby Wireless News.
 1—"Big Ben"; Weather Intelligence.
 1.8—"Earing News" midday news service. Producers' Distributing Society's reports.
 1.20—Oak Hall Trio.
 1.25—Stock Exchange—Second Call.
 1.30—Marching Music for School Children.
 1.40—Music from the Studio.
 1.50—The Oak Hall Trio.
 2—"The Chimes of Big Ben"; Close Down.

AFTERNOON SESSION.

2.50—The Chimes of 2FC and Announcements.

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- 2.25—From the Studio: A Recital by the pupils of Miss Mabel Batchelor.
 2.30—Marching Music for the School Children.
 3.40—From Farmer's Tea Room, Miss May Jackson, soprano.
 4.05—Oak Hall Trio.
 4.25—Music from the Studio.
 4.35—Miss Peggy Dunbar, contralto: "Don't Hurry" (Sanderson).
 4.45—The Oak Hall Trio.
 4.48—Music from the Studio.
 4.55—Miss May Jackson, soprano.
 4.25—The Oak Hall Trio.
 4.35—Music from the Studio.
 4.40—Miss Peggy Dunbar, contralto: "Until" (Sanderson).
 4.45—Stock Exchange: Third Call.
 4.46—Close down.

EARLY EVENING SESSION.

- 5.30—The Chimes of 24".
 5.35—The "Halle Mary" talks to the Children.
 5.45—A trip to the Farmyard with imitations by "Imito".
 6.05—From the Hotel Australia, items by the orchestra, under the direction of Miss A. J. Egan.
 7.10—From the Studio, "Evening News" Service.
 7.30—Baloney's Market Reports (Wool, Wheat, Stock, Fruit, and Vegetable Markets).
 7.45—A Talk on "Old Payment" by Mr. L. J. Lockley; Close down.

NIGHT SESSION.

- 7.55—Announcements.
 8.—"Rig Ben": From the Studio: Miss Nora Hill, Irish, soprano: (a) "Shule Aarta," (b) "Palatou" (Traditional).
 8.5.—From the Conservatorium Hall, the Final concert of the 1931 series by the Sydney Medical Society of 100 mixed voices, conducted by Mr. Arnold Meyer.
 8.55—Miss Nora Hill, Irish, soprano: (a) "Sileannasna" (Kilkenny), (b) "The Boys of Westport" (Rohr, Dwyer Joyce).
 9.10.—From the Conservatorium Hall, the second part of the Sydney Medical Society's concert.
 10.10.—From the Studio: Rolfe and Keown, entertainers from H.D. Melbourne, in Melody and Mirth.
 10.20—"Imito," the well-known bird and animal impersonator.
 10.25—The Wickeloh Instrumental Trio in queue numbers.
 10.35—Rolfe and Keown, entertainers.
 10.42—The Wickeloh Instrumental Trio.
 10.45—"Imito" in more imitations.
 11.—From the Westworth Hotel, items by the Westworth New Symphonic Dance Orchestra, under the name of Mr. Sydney Simpson.
 11.45—"Rig Ben" and Announcements; Westworth Symphonic Orchestra.
 12.—National Anthem; Close down.

2BL

EARLY MORNING SESSION.

- 7.15—Musical programme from the Studio.
 7.18—Physical Training and Health Exercises.
 7.25—Health Hints.
 7.30—Physical Training and Health Exercises.
 7.45—G.P.O. Clock and Chimes.
 7.46—Weather Forecast.
 7.48—Sporting Information.
 7.50—Broadcasters' Special News Service.
 8.00—G.P.O. Clock and Chimes; Close down.

MORNING SESSION.

- 10.—G.P.O. Clock and Chimes.
 10.1.—Weather Report.
 10.3.—Broadcasters' News Service direct from Rugby.
 10.5.—Daily Telegraph News Service.
 10.25.—Musical Programme from the Studio.
 10.38.—Daily Telegraph News Service.
 10.53.—Musical Programme from the Studio.
 11.—G.P.O. Clock and Chimes.
 11.1.—Musical Programme from the Studio.

- 11.15.—Vegetable Market Report.
 11.18.—Fruit Market Report.
 11.21.—Other Market Reports.
 11.24.—London Mail Quotations.
 11.25.—Basis in call by Wireless.
 11.27.—Shipping Information.
 11.35.—Weather Report and Forecast by courtesy of Govt. Meteorologist.
 11.47.—Information: Re Interstoria and Overseas Mails.
 11.40.—Women's Session; Social Notes by Mrs. Jordan.
 11.50.—Mrs. Jordan replies to correspondents.
 12.—G.P.O. Clock and Chimes.
 12.1.—Talk by Mrs. Jordan.
 12.25.—Talk on Sporting by Miss G. Varley.
 12.30.—Sydney Stock Exchange Calls.
 12.35.—News Service from the Sun.
 12.45.—Huller's Instrumental Quartette, direction Caty Costello.
 1.10.—G.P.O. Clock and Chimes; Weather Report.
 1.35.—Sydney Stock Exchange Calls.
 1.45.—Track Gallies and Sporting Information.
 1.50.—Sun Newspapers News Service.
 2.—G.P.O. Clock and Chimes; Close down.

AFTERNOON SESSION.

- Racing Information, broadcast by courtesy of the Sun.
 2.—G.P.O. Clock and Chimes.
 2.1.—Weather Report and Forecast by courtesy of Govt. Meteorologist.
 2.5.—Concert arranged by the Australasian Astronautical Association, broadcast from the Studio.
 3.10.—G.P.O. Clock and Chimes.
 3.31.—Sun Newspapers News Service.
 4.45.—Musical programme from the Studio.
 4.—G.P.O. Clock and Chimes.
 4.1.—Civil Service Scores' Trio.
 4.5.—Serial Story.
 4.40.—Musical Programme from the Studio.
 4.55.—Producers' Distributing Society's Vegetable and Fruit Market Report.
 4.58.—Shipping information when available.
 4.52.—Day's Racing Results on Race Days.
 4.55.—News from "The Sun".
 4.56.—Resume of night's programme.
 5.—G.P.O. Clock and Chimes; Close down.

EARLY EVENING SESSION.

- 5.45—G.P.O. Clock and Chimes; Uncle George and the Lyric Male Quartette.
 5.48—Pavilion Dinner Orchestra, under the direction of Mr. C. C. Morrison.
 Special Country Session.
 6.—G.P.O. Clock and Chimes.
 7.—Australian Mercantile Land and Finance Co.'s Report.
 7.8.—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.
 7.9.—Stock Exchange Reports.
 7.10.—Producers' Distributing Society's Fruit and Vegetable Report.
 7.15.—Fruit and Vegetable Reports (Sun).
 7.28.—Grain and Fodder Report (Sun).
 7.34.—Daily Report (Sun).
 7.50.—Talk on the "World's Impoverished Handicapped," by courtesy of T. Phillips Gibson, Esq.
 7.45—A Talk on "Tasmanian Lakes".

NIGHT SESSION.

- 8.—G.P.O. Clock and Chimes; Broadcasters' Special Chorus.
 8.3.—Miss Grace Saville, contralto.
 8.10.—The Lyric Male Quartette.
 8.20.—Miss Ida Leggett, soprano.
 8.27.—Mr. J. Crosby Browne, violin solo.
 8.34.—Mr. Stanley B. Catlett, tenor solo.
 8.41.—Broadcasters' Miniature Orchestra.
 8.51.—Mr. Herbert Hinchcliffe, baritone.
 8.58.—Resume of following day's programme.
 9.—G.P.O. Clock and Chimes; Weather Forecast by courtesy of Mr. C. J. Mares, Govt. meteorologist.
 9.9.—Neil Crane and Alf. J. Lawrence.
 9.13.—Broadcasters' Miniature Orchestra.
 9.33.—Interval.
 9.35.—Miss Grace Saville.
 9.42.—Miss Cecile, Mrs. H. Hinchcliffe and S. R. Catlett.
 9.50.—Miss Ida Leggett.
 9.6.—Broadcasters' Miniature Orchestra.
 10.16.—Mr. H. Hinchcliffe.

- 10.22.—Mr. Stanley B. Catlett.
 10.30.—Al. Hammett and the Ambassadors' Dance Band, broadcast from the Ballroom of the Ambassadors. During the intervals between dances, News Reports by courtesy of the Sun Newspapers will be broadcast.
 12.—G.P.O. Clock and Chimes; National Anthem.

3LO

MIDDAY SESSION.

- 12 noon.—Time Signal; British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Argus" and "Herald" News Services.
 12.45.—Stock Exchange information; Shipping Intelligence.
 12.50.—Meteorological Information; Weather Forecasts for Victoria, Tasmania, South Australia, and New South Wales; Ocean Forecast; River Reports; 3LO Grid.
 1.—Time Signal.
 1.5.—Margaret McKenzie, soprano.
 1.7.—Miss Johnson's Monte Carlo Band.
 1.25.—Margaret McKenzie, soprano.
 2.—Close down.

AFTERNOON SESSION.

- 3.1.—Studio Orchestra.
 3.10.—Elsie Davies, soprano.
 3.17.—Dorothy Rothberg, viola.
 3.24.—"Au Fil" of Messrs. Buckley & Nunn Ltd., will give a fashion talk.
 3.30.—Charlie Pope, Comedy Relaxed Room.
 3.40.—Studio Orchestra.
 3.50.—Matron MacLellan, Infant Welfare.
 4.11.—Charlie Pope.
 4.15.—Studio Orchestra.
 4.20.—Elsie Davies, soprano.
 4.25.—Arnie Forjane, piano.
 4.30.—Quintette of Violin and clarinet.
 4.45.—"Herald" News Service; Stock Exchange Information; 3LO Grid.
 5.—Close down.

EVENING SESSION.

- 5.45.—Children's Hour: Answers to letters and Birthday Greetings.
 6.—Vitty Landau.
 6.7.—Story for the latest ones by Mary Gimblett.
 6.15.—Harold Collier, will play some Mouth-organ selections.
 6.20.—Mary Gimblett's story for the boys and girls.
 6.35.—Vitty Landau.
 6.40.—"Argus" and "Herald" News Services; Reuters and the Australian Press Association Cables.
 6.52.—Stock Exchange information; Overseas Shipping.
 6.57.—Fish Market Reports by J. R. Barrett, Ltd.
 7.—River Reports.
 7.3.—Market Reports by the Victorian Producers' Cooperative Co. Ltd.; Hagmarket Show Sales; Poultry, grain, chaff, hay, straw, lute, dairy produce, potatoes and onions; Market prices of oranges and lemons by the Victorian Central Citrus Association Pty. Ltd.
 7.15.—Market Prices of Oranges and Lemons by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION.

- 7.20.—Mr. R. H. Wilmut, Everyday Chemistry.
 7.40.—Under the auspices of the University Extension Board, Mr. T. D. Phillips, M.A., LL.B.: "A Court of appeal for the World."
 8.—First half of Tivoli programme, transmitted from the Tivoli Theatre, by permission of Mr. C. Williamson Ltd.
 9.10.—Dr. Loftus Hill, Popular Science.
 9.25.—Newport Workshops' Brass Band.
 9.35.—Report Hazell and Elsie Day in Harrogate.
 9.43.—"Cardigan," Mr. H. A. Wolfe, Sporting Editor of the "Argus" and the "Advertiser"; Musical Notes.
 9.52.—Newport Workshops' Brass Band.
 10.2.—British Official Wireless News from Rugby; Announcements; 3LO Grid.
 10.17.—Annette Portman, contralto.
 10.24.—Newport Workshops' Brass Band.

- 10.30—Rupert Hazell and Elsie Day.
- 10.47—"Arcus" News Service; Weather Forecast; Announcements.
- 10.47—Annetta Fortman, contralto.
- 10.54—Newport Workboys Brass Band.
- 11.—Our Great Thought for To-night is—"Honour achieved far exceed those that are created."—Solen.
- 11.1—The B.L.O. Melody Masters.
- 11.40—God Save the King.

3 A R

MORNING SESSION.

- 11.30—British Official Wireless Press, received from Rugby Super Wireless Station, England; Express Train Information; "Age" News Bulletin.
- 12—Time Signal Chime from G.P.O. Studio Barometer Readings. 1st Weather Forecast. Events of the day.
- 12.5—Musical Selections from Hoyt's De-Luxe, Bourke Street. Mr. T. L. Campbell at the Waritzler.
- 12.30—Stock Exchange News. Market Reports.
- 12.40—Musical Selections.
- 12.55—Shipping Movements. Mail Notes.
- 1—Close down.

AFTERNOON SESSION.

- 2.30—Hoyt's Premier Orchestra, under direction Cecil W. Fraser.
- 3—Miss Katharin Rogers, contralto.
- 3.—Miss Rene Bartley, T.D., L.C.M. (Dramatic Recital).
- 3.14—Mr. Will Hooking, baritone.
- 3.15—Miss Emmie South, in a few catchy numbers.
- 3.30—Miss Katharin Rogers, contralto.
- 3.47—Miss Rene Bartley, humorous entertainment. "The Wheels of My Merry Jam."
- 3.54—Mr. Will Hooking, baritone.
- 3.55—Miss Emmie South, in a few more catchy numbers.
- 4—Time Signal Chime. 2nd Weather Forecast. Hoyt's Premier Orchestra.
- 4.55—Evening Amusement Guide.
- 5—Time Signal Chime. Studio Barometer Readings. Close down.

EARLY EVENING SESSION.

- 6.45—Children's Course, by Uncle Mac.

EVENING SESSION.

- 7.15—British Official Wireless Press Studio Barometer Readings. Fast Steep and Cat-tle Report, supplied by courtesy of Messrs. John McNamara & Co. Pty., Ltd.
- 8—Miss Louis Sterling, mezzo-soprano.
- 8.—Miss Joe Harrison, violinist.
- 8.14—Mr. W. Goodman, items.
- 8.21—Two Act Play.
- 8.36—Mr. Clive Fordham, baritone.
- 8.42—Mr. Alfred Fitz, cornetist.
- 8.50—Miss Belle Heatherington, dramatic contralto, solos.
- 8.57—Mr. A. Schebler, pianist.
- 9.—Mr. D. J. Moore (manager), by courtesy of the independent Linances Ford Depot, Melbourne, will give a commercial lecture, "Ford Merchandising."
- 9.16—Miss Louise Sterling, mezzo-soprano.
- 9.—Miss Joe Harrison, violinist.
- 9.23—Mr. W. Goodman, baritone.
- 9.40—Mr. A. Schebler, pianist.
- 9.47—Mr. Clive Fordham, baritone.
- 9.54—Miss Belle Heatherington, dramatic contralto.
- 10.—Time Signal Chime from G.P.O. Studio Barometer Readings. "Age" news service, exclusive to 3AR.
- 10.10—Leggitt's Ballroom Orchestra.
- 11—Time Signal. Close down.

4 QG

MIDDAY SESSION.

- 12.55—Tune in.
- 1.25—Time Signal.
- 1.—Market Reports. Weather Information, "The Daily Mail" and "The Daily Standard" news.
- 1.20—From Hotel Carlton: Lorch Music from

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AFTERNOON SESSION.

3.36—A programme of Music from the Studio.
4.18—"The Telegraph" news.
4.30—Close down.

EARLY EVENING SESSION.

6—News Service supplied by the "Daily Standard"; Weather Information, supplied by the Commonwealth Weather Bureau; Announcements.
6.30—"The Children's Session." Stories by "Uncle Ben" and "Uncle Jim."
7—From the Council of Agriculture, Studio: "The Farmers' Session." Market Reports. Lecturer: Christmas on the Pig Farm, Mr. E. J. Shelton, Instructor in Pig Raising.
7.30—From the Studio: Stock Reports; Announcements.

NIGHT SESSION.

7.45—Lecture Session.
8—The first portion of to-night's programme will be provided by the students of Miss Florence Mahin.
9—Metropolitan Weather Forecast; concert continued.
10—From the Centennial Hall, Dance Music.
10.30—From the Studio: "The Daily Mail" News; Close down.

5 CL

MORNING SESSION.

11.30—G.P.O. Chimes.
11.31—Featuring a Stock Duo Art number.
11.45—"Advertiser" news service.
11.55—Vocation number.
12—G.P.O. Chimes.
12.1—"Advertiser" news service.
12.16—Featuring a Stock Duo Art number.
12.30—M.L. Studio Orchestra.
1.55—Ward & Co.'s Stock Exchange Intelligence, official weather synopsis, and station announcements.
2—G.P.O. Chimes

AFTERNOON SESSION.

3—G.P.O. Chimes.
3.1—Relay from the "Maple Leaf" Cafe—Orchestral numbers.
3.45—From the Studio: Talk by Mrs. Coghill.
4—G.P.O. Chimes.
4.1—Relay from the "Aradon" Cafe—Orchestral numbers.
4.45—Stock Exchange Reports; General Information and Station Announcements.
5—G.P.O. Chimes.

EVENING SESSION.

6.30—G.P.O. Chimes.
6.31—Bedtime stories.
7.00—Market reports.
7.46—Milling talk, by Mr. Jackett.
8—G.P.O. Chimes.
8.1—Cadenza Quartette.
8.11—Concert from the Studio.
9—G.P.O. Chimes.
9.1—Weather Reports.
9.2—Concert continued.
10—G.P.O. Chimes.
10.1—Concert, continued.
10.15—"Advertiser" news service.
10.30—Concert concluded.
11—G.P.O. Chimes; National Anthem; and Close Down.

6 WF

MIDDAY SESSION.

12.50—Tune-in.
12.35—First Local News Bulletin. Market Reports; Cables.
1—Time Signal from the Perth Observatory.
1.4—Weather Notes.
1.20—Studio Syncopating Orchestra.
2—Close down.

AFTERNOON SESSION.

3.30—Tune-in.
3.35—Musical programme, including piano-

forte selections by Miss Evelyn Willis, A.R.C.M.
4—Studio Trio.
4.30—Close down.

EVENING SESSION.

7—Tune-in.
7.5—Stories for the Kiddies, by Uncles Henry and Duffy.
7.35—Stock and Share Intelligence, Market Reports; Cables, news by courtesy of "The Daily News" Newspaper Co.
8—Time signal from the Perth Observatory.
8.1—Weather notes, supplied by the Meteorological Bureau of Western Australia.
8.2—Talk: "Arcadon" and "Green Science," by Mr. A. A. Orin, B.A., M.Sc.
8.15—Concert by the Ladies' Glee Society.
10.30—Close down.

7 ZL

MORNING SESSION.

11—G.P.O. Clock Chimes.
11.10—"The Mercury" News; Stock Market; Shipping; Commercial Intelligence; Weather Information; National Selections.
12—G.P.O. Clock Chimes; Close Down.

AFTERNOON SESSION.

2—G.P.O. Clock Chimes; Musical items from the Studio.
3.00—Hobart Stock Exchange Quotations.
3.55—Weather Information.
4—G.P.O. Clock Chimes; Close Down.

EVENING SESSION.

7—Children's Corner, "Big Brother" chats to his pals.
7.10—"The Adventures of George, the Book-shelf Cat, by "Aunt Stella."

NIGHT SESSION.

8—G.P.O. Clock Chimes; the "Mercury" Special Tarantula News Service; Railway Auction Produce Sales; Weather Information.
8.5—Hobart Stock Exchange Quotations.
10—Library Lapses and Library Lists, by Mr. W. J. Fisher.
10.30—Musical items from the Studio: Special Request numbers.
10.45—Dunstan District Weather Reports.
9.50—"The Mercury" Special Interstate News Service; Weather Synopsis; Station Announcements; National Anthem.

Wednesday, Dec. 15 2 FC

EARLY MORNING SESSION.

7—"Big Ben" and Announcements.
7.5—Music from the Studio.
7.10—Official Weather Forecast; Rainfall; Temperature; Astronomical Memoranda; Shipping Intelligence; Commercial News; Mail Services.
7.25—Investment Market; Mining Share Market; Metal Quotations.
7.35—Wool Sales; Brandtline Markets; Interstate Markets; Produce Markets.
7.45—"Sydney Morning Herald" News Service.
8—"Big Ben"; A "Cheerio" Talk by Mr. J. K. Fox by 3FC Baring Commissioner.
8.10—Close down.

MORNING SESSION.

9.15—The Chimes of 2FC.
9.20—Music from the Studio.
9.30—Marching Music for the School children.
9.40—Music from the Studio.
9.45—A talk by 3FC Baring Commissioner.
10—"Big Ben" and Announcements.
10.5—Late "Sydney Morning Herald" News Service.
10.15—Music from the Studio.
10.45—A Morning Heading.
11—"Big Ben"; Australian Press Association and Reuter's Cables.

- 11.10—Music from the Studio.
11.15—A Talk on Home Cooking and Recipes by Miss Ruth Furst.
11.30—Marching Music for School Children.
11.35—Close down.

MIDDAY SESSION.

- 12—The Chimes of Big Ben and Announcements.
12.05—Stock Exchange, First Call.
12.10—Music from the Studio.
12.20—Marching Music for the School Children.
12.40—Music from the Studio.
12.45—From Farmer's Oak Hall—The Oak Hall Trio (leader, Mr. Horace Kants).
12.50—From the Studio: Rugby Wireless News.
1—The Chimes of Big Ben; Weather Intelligence.
1.1—Evening News' Mid-day Service: Producers' Distributing Society's Report.
1.20—Oak Hall Trio.
1.25—From the Studio—Stock Exchange, Second Call.
1.30—Marching Music for the School Children.
1.35—Music from the Studio.
1.50—From Farmer's Oak Hall: The Oak Hall Trio.
2—"Big Ben": Close Down.

AFTERNOON SESSION.

- 2.30—The Chimes of 2FC and Announcements.
2.35—A Recital on the 'Behning' Player Piano.
2.4—A Recital by the pupils from the Studio of Mrs. Gertrude D. Haines.
2.50—Marching Music for School Children.
2.40—From Farmer's Tea Room: Miss May Craven, soprano, "Happy Song" (Del Bonoy).
2.45—From Farmer's Oak Hall: Oak Hall Trio.
3.05—Music from the Studio.
3.10—Miss Annie Sedger, mezzo, "A Song of the Little Black Princess."
3.15—The Oak Hall Trio.
3.15—Music from the Studio.
3.20—Miss May Craven, soprano, "Then and Now" (Martini).
3.25—The Oak Hall Trio.
3.30—Music from the Studio.
3.40—Miss Annie Sedger, mezzo, "Tally-G" (Leon).
3.45—Stock Exchange, Third Call.
3.48—Close down.

EARLY EVENING SESSION.

- 6.45—Chimes of 2FC.
6.50—The "Hello Man" talks to the Children assisted by "Jerry."
6.55—"The Little Black Princess," a serial story for the older children.
6.45—From the Hotel Australia: items by The Hotel Orchestra, under the direction of Miss A. J. Egan.
7.10—From the Studio: "Rousing News" late News Service; Weather Information.
7.30—Dalgy's Market Reports (Wool, Wheat, Stock, Fruit, and Vegetable Markets).
7.40—Close down.

NIGHT SESSION.

- 7.45—Broadcast from the Sydney Town Hall the Annual Concert of the Metropolitan Business College, in aid of the Benevolent Asylum. Artists will include the well-known dramatic soprano, Madame Eliza Strain, Miss Vester, 2. Song, selected, S. Palefski; a Hawaiian Glee Duet (with Ukulele) (a) "Bounteous Isle" (b) "Ukulele Lady" R. D. Rossby and N. Britton; 4. Harmony Fun, Hawaiian Lullaby" T. Selan and A. Bice; 6. Miniatures Pavlova, "Butterfly," Baby Morrissey; 7. Steel Guitar Solo, (a) "Traumer," V. Hodgson, (b) "Kuhale Maohi," G. Burns and G. Croucher; 8. Novelty Song, "To a Minia-

- ture," H. Holmes; 9. Barito Solo (a) "Blava Away," (b) Intermezzo from "Cavalleria Rusticana," G. Luzzo; 10. Quartet, "Aloha Oe," E. Sedon, A. Bice, G. Holmes and Mayo Hunter; 11. Piano Solo, "Rhapsodie No. 2," (Liszt), B. Tackwell; 12. Barito Quartette, Echo from the South"; 13. Mandolin Duet, "Ten Little Spinsters," Gunn and Warner; 14. Hawaiian Trio, "Hawaiian Hotel," Mayo Hunter, C. Costen, and P. Officer; 15. Finale, "The 'Waikiki Merman,'" The Hahaione Girls.
8.30—From the Studio: Flinders Barr will talk on the "Romance of Cable Laying."
9.45—From the Sydney Town Hall, further items from the Benevolent Asylum Concert.
10.1—From the Lyric Watergardens Theatre, items by the Orchestra, under the direction of Mr. Alfred Moulton.
10.30—From the Studio: 2FC Dance Band.
10.40—Some Celebrity Reports.
10.45—2FC Dance Band.
11—"Big Ben" and Announcements.
11.25—2FC Dance Band until midnight.
12—National Anthem; close down.

2 BL

EARLY MORNING SESSION.

- 7.15—G.P.O. Clock and Chimes.
7.18—Musical Programme from the Studio.
7.19—Physical Training and Health Exercises.
7.25—Health Hints.
7.30—Physical Training and Health Exercises.
7.40—G.P.O. Clock and Chimes.
7.40—Weather Forecast.
7.45—Sporting Information.
7.50—Broadcasters' Special News Service.
8—G.P.O. Clock and Chimes; Close down.

MORNING SESSION.

- 11—G.P.O. Clock and Chimes.
11.1—Weather Report.
11.5—Musical Programme from the Studio.
11.17—Daily Telegraph News Service.
11.30—Women's Section, conducted by Mrs. Jordan; Social Notes.
11.40—Mrs. Jordan replies to correspondents.
11.45—Talk on: Some Dots for Mothers, by Dr. Morris.
12.15—Sporting Talks, by Miss G. Varley.
12.20—"Sydney Daily Telegraph" News Service.
12.25—Market Reports.
12.31—London Metal Quotations.
12.35—Broadcasters' Special Rugby News Service.
12.35—Boats in call by Wireless.
12.40—Weather Report and Rainfall by courtesy of Govt. Meteorologist.
12.42—Shipping Information: Arrivals and Departures.
12.44—Mails, Interstate and Overseas.
12.45—News Service by courtesy of the Sun.
1—G.P.O. Clock and Chimes.
1.1—Famous Lectures Recital broadcast from the Fine Art Gallery, Anthony Morgens.
1.40—Sydney Stock Exchange Calls.
1.45—Sporting information and Race Results from the Sun.

AFTERNOON SESSION.

- 2—G.P.O. Clock and Chimes.
2.1—Musical Programme from Studio.
2.15—News from the Sun.
2.30—G.P.O. Clock and Chimes.
2.31—Weather Report.
2.33—Musical Programme from Studio.
2.43—Social Notes from the Sun.
2.46—Sun Newspapers' News Service.
3—G.P.O. Clock and Chimes.
3.1—Musical Programme from the Studio, under the direction Miss K. Jordan.
3.30—G.P.O. Clock and Chimes.
3.35—News from the Sun.
3.45—Musical programme from the Studio.
4—G.P.O. Clock and Chimes.
4.1—Weather Report.
4.45—News from the Sun.
4.15—Serial Story.
4.30—Producers' Distributing Society's Fruit and Vegetable Report.
4.35—Race Results.

- 4.39—Musical Programme from Studio.
4.51—Shipping news when available.
4.55—Race Results.
4.55—Resume of Night's Programme.
5—G.P.O. Clock and Chimes.
5.1—Resume of Day's Racing.
5.3—Close down.

EARLY EVENING SESSION.

- 5.45—G.P.O. Clock and Chimes.
5.45—Uncle George and the Kidnaps.
5.40—Pavilion Orchestra under the direction of Mr. Cec. Morrison.
Special Country Session.
7—G.P.O. Clock and Chimes.
7.1—Australian Mercantile Land and Finance Co's. Report.
7.5—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.
7.9—Stock Exchange Reports.
7.14—Producers' Distributing Society's Fruit and Vegetable Report.
7.18—Fruit and Vegetable Report (Sun).
7.22—Grain and Fodder Report (Sun).
7.26—Dairy Produce Report (Sun).
7.30—Country news from the Sun.
7.45—Talk on Books, Wise and Otherwise.

NIGHT SESSION.

- 8—G.P.O. Clock and Chimes. Broadcasters' Topical Chorus.
8.5—Broadcasters' Trio.
8.10—Miss Camille Alder, dramatic soprano.
8.15—Mr. Macreadie Wilson, basso.
8.27—Mrs. J. Kilwan, songs at the piano.
8.40—Mr. S. Critchenden will talk on "Building a Valve Set."
8.50—Resume of following day's programme.
9—G.P.O. Clock and Chimes; Weather Report and Forecast by courtesy of Mr. C. J. Mares, Govt. Meteorologist.
9.1—Broadcasters' Trio.
9.11—Mr. Ronald Foster will lecture on "Legends in song by famous composers" with vocal illustrations.
9.15—Interval.
9.45—Broadcasters' Trio.
9.50—Miss Camille Alder.
10.20—Mr. Macreadie Wilson.
10.30—Mrs. J. Kilwan.
10.45—Al. Lammie and the Ambassadors Dance Band, broadcast from the ballroom of the Ambassadors. During the interval between dances, some Reports by courtesy of the Sun will be broadcast.
12—G.P.O. Clock and Chimes; National Anthem.

2 GB

EVENING SESSION.

- 6.45—Talks to Children by A.B.C.
7.10—Talks to Women.
7.48—Announcements.
7.50—Miss Ethel Jones, songs.
8.8—Address by J. J. Van der Leeuw.
8.20—Ade Brook, piano.
8.30—Vocal Quartet.
8.40—Talk, "Lecty Comes to Town."
8.50—Mr. Herbt. Hilecox, songs.
9.3—Talk, "Ocean Promenade Pier."
9.8—Songs by Clement Hoaking.
9.16—Announcements.
9.23—Vocal Quartette.
9.30—Talk on "French Revolution," by Mr. A. V. Doyle.
10—"Great Thought from Great Minds" by Prof. Wood.
God Save the King.

3 LO

MID-DAY SESSION.

- 12—Time Signal; Reuter's and the Australian Press Association; Cables; "Argus" and "Herald" News Services; Shipping Intelligence.
12.45—Stock Exchange information.
12.50—Meteorological Information: Weather forecast for Victoria, Tasmania, South Australia and New South Wales; Ocean forecasts; River Reports.
1—Time signal.
1.1—Studio Orchestra.
1.15—Musical Half-Hour by students of the University Conservatorium.

1.45—Studio Orchestra.
2—Close down.

AFTERNOON SESSION.

- 2.30—Description of the Open Handicap. Mentions races by "Munkel" of the Sports Globe.
3—Description of Two-year-old Handicap. Mentions races by "Munkel."
3.5—Community singing transmitted from Tourak Central School.
3.30—Description of Irish Steeplechase. Mentions races by "Munkel."
3.55—Miss Frances Fraser, travellings.
4—Studio Orchestra.
4—Description of Mentone Handicap.
4.5—Reginald Broady.
4.15—"A Night Out" Second Act transmitted from Hin Malaya Theatre by permission of J. C. Williamson Ltd.
4.55—Star Trek; Mothercraft.
4.45—"Herald" News Service; Stock Exchange information; result of Trial Handicap. Mentions races.
5—Description of Trial Purse. Mentions races.
5.5—Close down.

EVENING SESSION.

- 5.45—Children's Hoops. Answers to letters and Birthday Greetings.
6—Musical Hour for Children, arranged by Mr. Fritz Hart.
6.40—"Argus" and "Herald" News Service; Reuters and the Australian Press Association Cable; Shipping Movements; Overseas Shipping; Weather Synopsis.
6.52—Stock Exchange information.
6.57—Fish Market Reports by J. R. Barrett Ltd.
7—River Reports.
7.5—Market Reports by the Victorian Producers' Co-operative Co. Ltd.; Hargmarket; Sheep Sales; Poultry, Grain, Cattle, Hay, straw, etc., daily produce, potatoes and onions; Market prices of oranges and lemons; by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION.

- 7.20—Under the auspices of the Agricultural Department, Mr. L. C. Harris, Senior Irrigation Officer, "Irrigation of Pasture Lands."
7.40—Mr. F. W. Pearce, "Physical Culture."
8—Capt. Peters, Books, Wines and Other-isms.
8.15—University Symphony Orchestra Concert.
10.45—British Official Wireless News from Rugby; Announcements; ALO Girl; "Argus" News Service; Weather Forecast.
11—Our Great Thought for To-morrow: "Music that brings sweet sleep down from blissful skies."—Toussaint.
11.15—ALO Melody Masters.
11.40—God Save the King.

3 AR

MORNING SESSION.

- 11.40—British Official Wireless Press, received from Rugby Super Wireless Station, England, by 3AR's Operator; Events of the Day; Express Train Information; "Age" News Bulletin, exclusive to 3AR.
12—Time Signal Chime from G.P.O.; Studio Barometer and Outdoor Thermometer Readings; First Weather Forecast; Sporting News.
12.5—Medical Selections relayed from Hoyt's DeLuxe, Rourke Street, Mr. T. L. Campbell at the Warlike.
12.30—Stock Exchange News; Market Reports.
12.40—Musical Selections.
12.46—Shipping Movements; Mail Notices.
1—Close Down.

AFTERNOON SESSION.

- Mentone Racing Club—Description of all races.
2.30—Hoyt's Premier Orchestra, under direction of Cecil W. Fraser.
3—The Classic Trio.
3.15—Mr. Owen Vaughan, baritone.
3.25—Miss Amelia Clancy, violinist.

- 3.30—Mr. Owen Vaughan, baritone.
3.37—Mr. Stafford Byrne, cellist.
3.45—The Classic Trio.
4—Time Signal Chime; 2nd Weather Forecast; Studio Orchestra.
4.15—Evening Amusements.
4—Time Signal Chime; Studio Barometer Readings; Close Down.

EARLY EVENING SESSION.

- 6.40—Children's Corner, by Uncle Ned.
EVENING SESSION.
7.50—British Official Wireless Press; Studio Barometer Readings.
7—Time Signal Chime. Messrs. Jack Carter and Charles Backlund, The Hawaiian Duo, "Medley of Old Time Melodies."
8.7—Burton Green, songs at the piano.
8.14—Humorous Sketch, "Quarrel Scene" from the "School for Scandal."
8.30—Mr. Dick Hayford will talk on "Internal Combustion Engines."
8.40—Mr. Miss Davine, baritone.
8.50—Miss Cully Locke, songs at the piano.
8.55—Musical Jumble. Look for further particulars in "Listener In." Mr. Eric Alkott at the piano.
8.50—Miss Leticia Wait, soprano.
9.15—The Hawaiian Instrumentalists again.
9.44—Mr. Miss Davine, baritone.
9.51—Miss Leticia Wait, soprano.
10—Time Signal Chime from G.P.O. Studio Barometer Readings; "Age" News Bulletin, exclusive to 3AR.
10—Time Signal Chime from Hoyt's Premier Orchestra.
10.40—Close down.

4 QG

EARLY MORNING SESSION.

- 8.50—Physical Culture Session.
7—Close Down.

MIDDAY SESSION.

- 12.55—Tune-in.
1.22—Time Signal.
1—Market Reports. Weather information. "The Daily Mail" and "The Daily Standard" news.
1.30—From Hotel Carlton: Lunch Music from the Lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.
2—Close down.

AFTERNOON SESSION.

- 3.30—From Hotel Carlton: Afternoon Tea Music from the Lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.
4.15—"The Telegraph" news.
4.35—Close down.

EARLY EVENING SESSION.

- 6—News Service supplied by the "Daily Standard"; Weather information, supplied by the Commonwealth Weather Bureau; Announcements.
6.30—"The Children's Session: Stories by "Little Miss Brisbane."
7—From the Council of Agriculture; Market Reports; Lecture; "Amongst South Australian Poultry-men," Mr. C. Hidd, hon. secretary National Utility Poultry Breeders Assn. of Australia.
7.30—From the Studio: Stock Reports; Announcements; Weather Information.

NIGHT SESSION.

- 7.45—Lecture Session: "Migration as viewed by the Empire Parliamentary Delegation," by Mr. A. C. Elphinstone, M.L.A.
8—Studio Concert.
8.30—A Radio Novelty: From the Power House, Bulimba. A microphone will be mounted in the City Electric Light Company's power house at Bulimba. A description of the manner in which current is generated will be given, and the noises of running machinery will be picked up and broadcast.
9—Concert continued; Metropolitan Weather Forecast.

- 10—From the Studio: "The Daily Mail" News; Announcements; close down.

5 CL

MORNING SESSION.

- 11.30—G.P.O. Chimes.
11.41—Stock Duo Art number.
11.48—"Advertiser" News Service.
11.55—Vocalion Number.
12—G.P.O. Chimes.
12.1—"Advertiser" News Service.
12.15—Featuring a Stock Duo Art number.
12.30—5CL Studio Orchestra.
1.56—Ward & Co's. Stock Exchange Intelligence; Official Weather Synopsis and Station Announcements.
2—G.P.O. Chimes.

AFTERNOON SESSION.

- 3—G.P.O. Chimes.
3.1—Relay from "Maple Leaf" Cafe—Orchestral Numbers.
3.46—From the Studio—Stock-Duo Art numbers.
4—G.P.O. Chimes.
4.1—Relay from Arcadia Cafe—Orchestral and vocal numbers.
4.52—Stock Exchange Reports; General Information; and Station Announcements.
5—G.P.O. Chimes.

EVENING SESSION.

- 6.30—G.P.O. Chimes.
6.51—Bedtime Stories.
7.30—Market Reports.
7.40—Boy Scouts' Corner.
8—G.P.O. Chimes.
8.1—Concert arranged by South Australian "Listener" in League.
8.30—Talk arranged by F. H. Foulding & Co.
9.40—Concert continued.
9.45—P.O. Chimes.
9.1—Weather Reports.
9.2—"Listeners" League concert continued.
10—G.P.O. Chimes.
10.1—Concert continued.
10.15—"Advertiser" News Service.
10.25—Concert continued.
11—G.P.O. Chimes; Station Announcements; National Anthem; close down.

6 WF

MIDDAY SESSION.

- 12.30—Tune-in.
12.35—First Local News Bulletin, Market Reports, Cables.
1—Time signal from the Perth Observatory.
1.1—Weather Notes.
1.3—Studio Septette.
2—Close down.

AFTERNOON SESSION.

- 3.30—Tune-in.
3.35—Afternoon Tea Concert, relayed from "Stevens' House" Limited Tea Room.
4.50—Close down.

EVENING SESSION.

- 7—Tune-in.
7.5—A playette for the kiddies, by Uncle Duffy, with Auntie Kate and Evelyn, and Uncle Henry, Leslie, Perry and Duffy.
7.55—Stock and Share intelligences, Market Reports, Cables, news by courtesy of "The Daily News" Newspaper Co.
8—Time signal from the Perth Observatory.
8.1—Weather Notes, supplied by the Meteorological Bureau of Western Australia.
8.2—City Commercial College Annual Concert, and distribution of prizes.
10—Second News Bulletin, supplied by courtesy of "The Daily News" Newspaper Co.
10.30—Close down.

7 ZL

MORNING SESSION.

- 11—G.P.O. Clock and Chimes; the "Mercury" News; Stock Market; Shipping; Commercial Intelligence; Weather information, and general Announcements; Station Selections.
12—G.P.O. Clock Chimes; Close Down.

AFTERNOON SESSION.

- 3.—G.P.O. Clock Chimes; Musical Items from the Studio; Story from Illustrated Tasmanian Mail.
- 7.30—Hubert Stock Exchange Quotations.
- 8.15—Weather Information.
- 8.—G.P.O. Clock Chimes; Close Down.

EVENING SESSION.

- 7.—Children's Corner, "Big Brother's" chats to his pals.
- 7.15—Story from Illustrated Tasmanian Mail.
- 7.30—"Young Life Entertainment," by the 4th Company.

NIGHT SESSION.

- 8.—G.P.O. Clock Chimes; the "Mercury" Special; Tasmanian News Service; Railway Auction Produce Sale; Weather Information and Sporting Results.
- 8.15—Solar; Stock Exchange Quotations.
- 8.16—Abstracts and Stock Market Reports from Roberts and Co. Ltd., Murray St., Hobart.
- 8.17—Physics; Culture talk by Mr. George Collis.
- 8.30—Concert from the Studio.
- 8.15—Tasmanian District Weather Reports.
- 8.55—The "Mercury" Special; Interstate News Service; Weather Synopsis; Station Announcements. National Anthem.

Thursday, Dec. 16

2FC

EARLY MORNING SESSION.

- 7.—"Big Ben" and Announcements.
- 7.15—Music from the Studio.
- 7.10—Official Weather Forecast; Rainfall; Temperatures; Astronomical Memoranda; Shipping Intelligence; Commercial News; Mail Services.
- 7.25—Investment Market; Mining Share Market; Metal Quotations.
- 7.35—Wool Sales; Breadstuffs Markets; Interstate Markets; Produce Markets.
- 7.45—"Sydney Morning Herald" News Service.
- 8.—"Big Ben."
- 8.15—Close down.

MORNING SESSION.

- 9.15—The Chimes of 2FC.
- 9.20—Music from the Studio.
- 9.30—Marching Music for the School children.
- 9.40—Music from the Studio.
- 9.45—Talk by 2FC Racing Commissioner.
- 10.—"Big Ben" and Announcements.
- 10.5—Late "Sydney Morning Herald" News Service.
- 10.15—Music from the Studio.
- 10.45—A Morning Reading.
- 11—"Big Ben"; Australian Press Association and Reuter's Cables.
- 11.10—Music from the Studio.
- 11.15—A Dickens Reading.
- 11.20—Marching Music for School Children.
- 11.35—Close down.

MIDDAY SESSION.

- 12.—The Chimes of Big Ben; and Announcements.
- 12.5—Stock Exchange; First Call.
- 13.10—Music from the Studio.
- 12.50—Marching Music for the School Children.
- 12.40—Music from the Studio.
- 12.45—From Farmer's Oak Hall; The Oak Hall Trio (Leader, Mr. Horace Keats).
- 12.55—Rimby Wireless News.
- 1.—The Chimes of Big Ben; Weather Intelligence.
- 1.15—"Evening News" Mid-day News Service, producers' Distributing Society's Report.
- 1.25—From Farmer's Oak Hall—The Oak Hall Trio.
- 1.28—Stock Exchange—Second Call.
- 1.35—Marching Music for the School children.
- 1.40—Music from the Studio.
- 1.45—A Talk by the 2FC Racing Commissioner.



THE CHRISTMAS FEELING

Did you ever fling your arms out with a 100 volt sigh and tell the world: "I need a holiday!"

If so the odds are that you did it

- 1.58—From Farmer's Oak Hall—The Oak Hall Trio.
- 2.—"Big Ben"; close down.

AFTERNOON SESSION.

- 2.30—The Chimes of 2FC and Announcements.
- 2.35—A Recital by the pupils of Mr. Vost (contin).
- 3.30—Marching Music for the school children.
- 3.40—From Farmer's Oak Hall; Miss Marjorie Cole, soprano: "Down in the Forest" (Soudal).
- 3.45—From Farmer's Tea Rooms, the Oak Hall Trio.
- 3.55—Music from the Studio.
- 4.—Solo: Sibel Athelwood, mezzo: "Do you know my Garden" (Wood).
- 4.5—The Oak Hall Trio.
- 4.15—Music from the Studio.
- 4.20—Miss Marjorie Cole, soprano: "Lies Than the Dust" (Finlay).
- 4.25—The Oak Hall Trio.
- 4.35—Music from the Studio.
- 4.40—Miss Sibel Athelwood, mezzo: "Fame Brought the Roses" (Openhaw).
- 4.45—Stock Exchange—Third Call.
- 4.48—Close down.

EARLY EVENING SESSION.

- 5.45—The Chimes of 2FC.
- 5.50—The "Hello Man" talks to the Children.
- 5.55—A Recital by the juvenile pupils of Miss A. J. Egan.
- 6.—From the Studio: "Evening News" late news service and Weather information.
- 7.30—Dalrymple Market Reports (Wool, Wheat, Stock), Fruit and Vegetable Market.
- 7.45—Mr. Minny Luke will talk on "Portraits"—Close down.

NIGHT SESSION.

- 7.55—Announcements.
- 8.—Broadcast from the Conservatorium Hall, the final of the 1926 concerts by the Royal Sydney Apollo Club, conducted by Mr. Arnold Mott; Madame Victoria-Goodwin, well-known soprano will broadcast from 2FC for the first time.
- 9.—From the Studio; Stuart and Lorraine, entertainers: (a) Duets, baritone, "Soleil" (Verdi); (b) "Rosary" (Nevill); (c) "Solo Mio" (Capua).
- 9.10.—From the Conservatorium Hall, the second part of the Royal Sydney Apollo Club Concert.
- 10.—From the Lyceum Picture Theatre, items by the orchestra under the baton of the Management.
- 10.30.—From the Studio; Stuart and Lorraine, entertainers: (a) Duets, baritone: "Dusky" (Hoffe) (Alban); (b) "Amson" (Balm); (c) "Mink's Chorus" (Verdi).
- 10.40.—Some Celebrity Records.
- 10.55.—Stuart and Lorraine, entertainers: (a) "Masses in the gold ground" (b) "Annie Laurie" (Lady John Scott).
- 11.—"Big Ben" and Announcements: From the Westcott Hotel, Sydney; Items by the New Symphonie Dances Orchestra under the baton of Mr. Sydney Simpson.
- 12.—National Anthem; close down.

in December when the first tin whistle and toy balloon came out. Everyone thinks "staleness" and holidays, consequently everyone is stale.

Blame the "Christmas feeling" and examine your golf sticks and fishing tackle.

The average radio battery does not know anything about Christmas, but it also has the knack of growing stale. Any ordinary battery which has been charged and is ready for use will grow stale on the shelf and the unfortunate man who buys may be surprised at the short life of his new purchase.

Not so with the magnificent Philco battery, the world's finest "B" type. The New Eighty-Three X is full of pep and life and saves any user pounds in a single year.

One of the great facts which make a Philco battery supreme is its Dynamic feature. Which in plain English means that it is charged dry at the factory and does not begin its life or its work until the Philco electrolyte (acid) is poured in.

Therefore it hasn't grown stale nor has the acid slopped over. The Philco begins its job when you buy it and it goes on doing its job when the dry battery has been tossed into the scrap heap.

When a man is stale or run down, he tells you and then recharges himself with spray and sunbun. But when a cheap battery is run down, you find it out by its bad working and at first blame static or your wireless set.

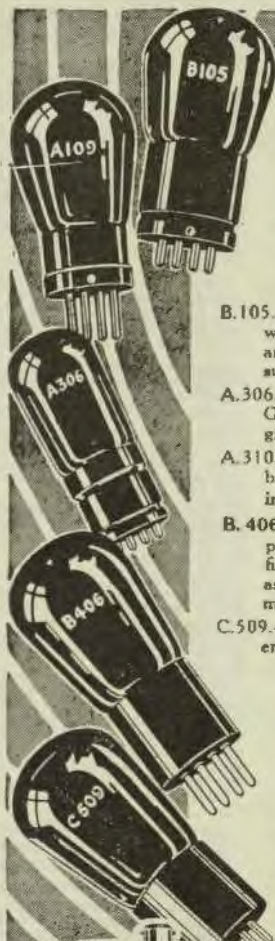
The Philco, however, gives fair warning. When it runs down after months of fine work it lets you know in good time. It has a charge indicator visible in two front cells of each battery unit. Glance at the two tell-tale balls and you see the whole position instantly. Here it is:

- Two balls up—fully charged.
- One up, one down—half charged.
- Two balls down—needs recharging.

Recharging a Philco battery is simple and inexpensive. If you have your own charger, you can do the job for 4d. or 5d., otherwise any garage will put new pep into your Philco at the small cost of 1/6 or 2/.

Scientific design, uniform voltage, rugged construction and perfect insulation give years of trouble-free service, banishing the hum and buzz and crackle of cheap dry batteries.

Get yours for Christmas from any high class radio dealer or write to the wholesale distributors, New System Telephones Pty. Ltd., 280 Castle-reagh Street, Sydney.



A Philips Valve for every Need

A.109.—An excellent valve where only limited supplies of "A" Battery current are available. Suitable for H.F., detector, and 1st stages of L.F. Requires only one Dry Cell for filament.

B.105.—Specially designed for Low-Frequency stages where one Dry Cell valves (A.109) are used for H.F. and Det. A remarkable Loud Speaker Valve for such a small filament consumption.

A.306.—Designed for use with 2 dry cells for filament. Gives sufficient energy to work a small Loud Speaker giving distortionless amplification of sound.

A.310.—Filament requires 2 dry cells. Recommended to be used as H.F. and Detector valve with our A.306 in the L. F. Stages.

B.406.—The New Wonder Valve. Gives unsurpassed purity of tone, splendid volume, and perfect amplification. This valve has revolutionised Listening-in, as it takes only **One-seventh** of the amount of Filament current formerly necessary.

C.509.—This valve may be relied upon to give sufficient energy for every type of Loud Speaker—even the largest sizes—and will always give perfect reproduction of sound.

Type.	Filament Volts.	Filament Amps.	Plate Volts. Max.	List Price.	"A" Battery Needed.
A.109	1.0 to 1.3	0.06	20-120	13/6	1 Dry Cell
B.105	1.0 to 1.3	0.15	20-120	15/6	1 Dry Cell
A.306	3.0	0.06	20-100	13/6	2 Dry Cells
A.310	3.0	0.08	20-100	13/6	2 Dry Cells
B.406	3 1/2 to 4	0.1	20-120	13/6	1 Dry Cell or 2 Accum. Cells
C.509	5.0	0.25	20-120	13/6	3 Accum. Cells

Obtainable in English or American Cap.



PHILIPS

LAMPS AND RADIO



The Rent in the Veil

(Continued from Page 6.)

"Oh, Mr. Dysart —" she began, and stopped, with a suddenness that was almost the result of sharp coercion. Yet I could see nothing of the kind emanate from Armitage's depressed demeanour. The girl began again, quickly, as if she simply had to speak.

"He's here—Marriott's here," she said, fear in her eyes. "I have been to see you, but you were away. I must see you—please."

"Marriott!" I echoed, stupidly. "But —"

"Oh, it's terrible, terrible—I can't tell you here. Later, later," said Dora, and Armitage, without a word, his eyes dull and stupid, walked her on, with no other word. I gazed after them seeing a shadowy third, that walked with them.

That night she came, and the tale she told simply floored me. Marriott had proved the stronger in the tussle of wills. Appetite had beaten scientific curiosity. Without possessing poor Armitage's body, in the ordinary way of demonic possession, he had established over the engineer a supremacy well nigh absolute. Through Armitage the brute satisfied all those evil longings that kept him chained to the wall. Armitage still fought at intervals, but the intervals grew longer and longer. The Thing was stronger than he. A hedonist in life, Marriott had pushed the engineer into every sort of dissipation, taking vicarious satisfaction. More than that he had taken an impish delight in interfering with the work Armitage was engaged on.

"I went with poor George a couple of weeks ago to the broadcasting studio, where George was to give a talk. Marriott came too. Oh, yes, I can see him now; he's getting more and more visible as he feeds on George's vitality. George sat down before the microphone, and Marriott took his seat among the people who go to listen in the new studio. It was terrible. George made the most stupid mistakes in his lecture, and this heast grinned—grinned with the silly, impish delight of a horrid schoolboy who has made an idiotic joke. Oh,



A Radio Set for Xmas!

Farmer's 5-Valve Receiver

Complete with all Accessories

An Ideal Christmas Gift

A Christmas gift which will prove a wonderful source of pleasure and convenience not to one or two personally, but to the whole family! And this is not for a day, a week, or a month, but for many years. For the receiver, which is supplied in a handsome oak-stained cabinet—worthy of a prominent place in any home—is built substantially and will last indefinitely.

Sydney, Melbourne, Brisbane, Adelaide, are yours to command—all Australian stations with the exception of Perth, being received at loud speaker strength. Moreover, the instrument is ready for immediate operations—no delicate adjustments necessary—complete with all accessories, which include the following:—

- 5 "Radiotron" valves, UX201A.
- 1 Peto and Radford Accumulator.
- 2 "Ever-Ready" 60 "B" Batteries.
- 1 "Ever-Ready" "C" Battery.
- 1 "Amplion de Luxe" Speaker and Loud Speaker Cord.
- 1 Set of Aerial Equipment including 100 feet of Aerial Wire.
- 6 Insulators, 25 feet lead-in-wire.
- 1 Lead-in tube, lightning arrester.

Price, complete with all Accessories £40/-/-

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Give Osram Valves for Christmas



See that you get the Valve in the Blue and Gold Box

YOU will be certain of pleasing your friends by choosing Osram Valves as Christmas presents.

They will be delighted with the immediate improvement in tone and volume when Osram valves are installed. And "OSRAM" reliability and economy will add in no small measure to their enjoyment of radio.

There is a type of OSRAM Valve for each purpose and each position in the set which can be relied upon to give long service. A set of OSRAM Valves in your receiver will ensure the most faithful reproduction of broadcasted speech or music.

What the famous OSRAM lamp is to light, the OSRAM valve is to wireless. It is the proved and universally trusted wireless valve. Ask for the OSRAM folder giving useful valve information and describing all types.

There is a Type for Every Requirement

	Current Consumption	Volt	Filament Base Obtainable	
OSRAM DE2 H.F.	12 Dull Emitter	2	English or American UX	13/6
OSRAM DE2 L.F.	12 Dull Emitter	2	English or American UX	13/6
OSRAM DE3	30 Dull Emitter	3	English or American UX	13/6
OSRAM DE3B	30 Dull Emitter	3	English or American UX	13/6
OSRAM DE4	3 Dull Emitter	3.8-4	English or American UX	15/6
OSRAM DE5	25 Dull Emitter	5	English or American UX	12/-
OSRAM DE5A	25 Dull Emitter	5	English or American UX	22/6
OSRAM DE5B	25 Dull Emitter	5	English or American UX	12/-
OSRAM DE6	5 Dull Emitter	2	English or American UX	15/6
OSRAM DE8 H.F.	12 Dull Emitter	5	English or American UX	13/6
OSRAM DE8 L.F.	12 Dull Emitter	5	English or American UX	13/6
OSRAM R5V	.65 Bright Emitter	5	English only	6/-

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Osram Valves

for Broadcasting

BRITISH MADE

Mr. Dysart, I can't bear it—I can't."

She told me more. Armitage was then working out the strain of the great retaining dam in the mountains just above the little town of Deering. It was intricate work, on which he labored far into the night.

"This is the nightmare I have to bear, Mr. Dysart," said Dora. "George's figures are so trustworthy in general that they are accepted without question. If that wall is erected on inaccurate computations, disaster may easily follow. To speak to the commissioners, in whose office I work, will result in ruining George's career. They would think he is mad, and yet —" she made a painful pause.

"Tell me everything in your mind," I urged her. "It will be best for all."

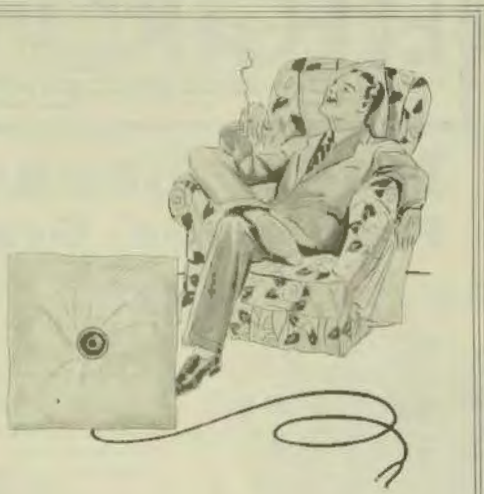
"Then—oh, I must tell you. It is killing me. Mr. Dysart, I am sure that Marriott is urging George to fake his figures, to bring about a disaster—to flood the town. I heard them quarrelling about it last night. George was resisting—but I heard enough, and I am afraid, oh, terribly afraid, that his resistance will weaken. He is not the man he was. What shall I do? What can I do?"

In a flash I had seen the possibility. Killing is a lust, an appetite with certain types of depraved creatures. This Marriott had been one such. To see such a disaster would feed fat the appetite for destruction that animated him. If mischief were to be stopped, George would have to be helped in his fight, if necessary, coerced. I said as much to Dora.

"He has fought against it, Mr. Dysart. Once he locked himself and Marriott in his room, throwing the key out of the window. He was there for three days, before I discovered the situation. He would have starved. I don't know what devilish suggestion Marriott had made that caused that rebellion."

"Come, let us go at once," I said, horribly moved by this evidence of the appalling weakness of Armitage. "The sooner we get into this fight, the better."

It was a bare quarter hour later that we reached the house where George lived. His room was away at the top, where he could be quiet, and there was no lift. As we climbed we



THE EMMCO "PILLOW-PHONE"

An Ideal Xmas Gift

27/6

Of the many novel improvements made in Wireless in recent years the "Pillow-Phone" is probably the most outstanding.

There are many occasions in which wireless reception and comfort must go hand in hand, and hitherto, the loud speaker at times is distressing, while the headphones cause fatigue to the user. The "Pillow-Phone" therefore, supplies the long-felt want—it is a cushion containing the speaker unit for music generally to be received from any wireless set under the most comfortable conditions. The cushion can be had in any form or covering to suit other furniture. Price, complete without cover

27/6

Many types of covers on view in Radio Department at prices ranging from 3/- to 35/-.

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ELECTRON WIRE

THE PERFECT AERIAL

Made Broadcasting Popular in Great Britain



ELECTRON WIRE did more to popularise broadcasting in Great Britain than anything else. It brought wireless within the reach of everybody by its simplicity and inexpensiveness.

Everybody can fix up a crystal set in a few minutes and obtain perfect reception by simply hanging an ELECTRON AERIAL round the room, over the fence, over a tree or exactly as they like.

THE ELECTRON WAY

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| It Abolishes Masts. | It Brings Results. |
| It Abolishes Insulators. | It Promotes Comfort. |
| Fool-Proof—Storm-Proof—Trouble-Proof | |

IT'S SO EASY TO FIT, TOO

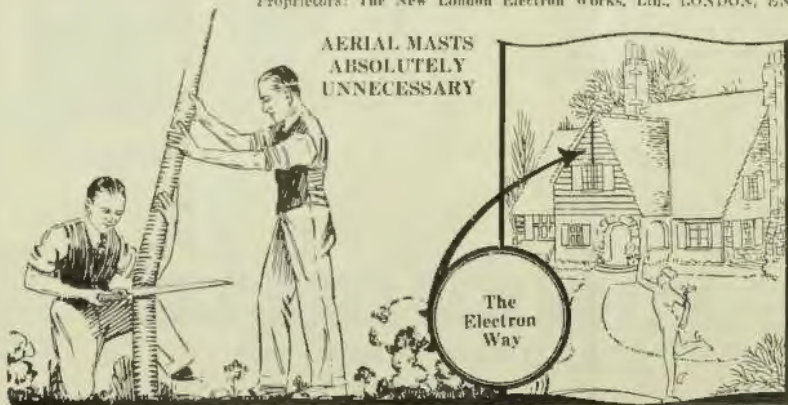
You can simply fling it over a tree, over the roof, round a chimney, run it along a fence, around the picture rail, across the room, hang it out of the window, or where and how you like, and the results are there. Connect one end to your set, let the other be free, use a short piece as an earth—and there you are! Perfect reception and immediate satisfaction.

KEMSLEY & CO., PTY., LIMITED

WARWICK BUILDINGS,
HAMILTON STREET,
SYDNEY, N.S.W.

100 DIXON STREET,
WELLINGTON, N.Z.

Proprietors: The New London Electron Works, Ltd., LONDON, ENGLAND



heard his voice, thin with the intensity of invective. For a few seconds we stopped to listen.

"Damn you, no, a thousand times no," screamed George. "I will not, do you hear. I will not. You can do what you like with me, but let these poor devils alone. You've made me do all manner of dirty tricks but rather than hurt those poor devils I will kill myself!"

We were almost at the top, having paused to listen. With the last words there was a pause, then George's voice, tense with feeling, wild with joy.

"I've got it," he called, and there was actually laughter in his tones, a sickening sort of mirth. "By the Lord Harry, I've got it. I've tried every way to send you back where you belong, and you have beaten me. Well, you'll have to come, because I'm damn well going to take you there. You've got to go wherever I go, have you? Then you'll come back with me to where I picked you up, you beast—you beast."

We ran the last few steps, and I threw open the door. I saw George rush across the room, fumble in a drawer, and then turn. On his face was a look of terrible joy, the look of the master, who has at last the whip hand. I called his name in warning, but I doubt if he heard me. There was a roaring of sound, and my friend fell. But, jury or no jury, I know that his death was no sequel to insanity, but an heroic sacrifice to save the lives of men. For with that shot, the wall between the worlds was once more rent, and behind George Armitage, whipped, mastered, abject went the spirit of his whilom tyrant, Marriott.

BACK NUMBERS AVAILABLE.

Copies of "Wireless Weekly" for October 23 (Neutrodyne circuit), 29, and November 5 and 12, are now available.

A "RADIO WHO'S WHO" section has been inaugurated by the London "Daily Chronicle," London. Brief biographical details are given of celebrities who figure in the broadcast programmes.

Use Your Head

Cut Prices, Shander, Hearsay, Habit, may cause you to buy other Valves BUT—

for the sake of your sanity and best results

Buy De Forest Valves

and have no regrets.

For Sale Everywhere



D.V.5
Filament 5 volts
25 amp.
12/-



D.V.3
Filament 3 volts
.06 amp.
13/6

De Forest Valves

TYPE D.V.5—Takes 5 volts at 25 amp. on filament . . . 12/- each

Plate Voltages, Detector, 18-22½ volts.

Plate Voltages, Amplifier, 60-150 volts.

TYPE D.V.3—Takes 3 volts at .06 of an amp. on filament. —13/6 each

Plate Voltage, 16-22½ volts, Detector.

Plate Voltage, 80-120 volts, used as an Amplifier.

Both Types fit Standard American Socket.

International Radio Co.

Limited

200 Castlereagh Street, Sydney.

91-93 Courtenay Place, Wellington, N.Z.

(Factory Representatives)



Valves with the Wonderful P.M. Filament

THE wonderful P.M. Filament offers you three times more for your money. It is so tough that even after 1,000 hours' life it can be used in knots and cannot be broken except by the very roughest handling—result, safety against accidents.

There is more than strength in the P.M. Filament. It has up to 3 times greater length and up to $\frac{1}{4}$ times greater emission than an ordinary filament. This is where the P.M. Filament gives you real value.

Another big point, the P.M. Filament requires only one-tenth ampere giving 7 times the life to each of your accumulative charges.

For great economy, great life and great results secure the valves with

THE WONDERFUL P.M. FILAMENT

For 4-cell accumulators or 5 dry cells
THE P.M. 3 (General Purpose) 0.1 amp. 13/6
THE P.M. 4 (Power) 0.1 amp. 13/6

For 6-cell accumulators or 4 dry cells
THE P.M. 5 (General Purpose) 0.1 amp. 13/6
THE P.M. 6 (Power) 0.1 amp. 13/6

For 2-cell accumulators
THE P.M. 1 L.P. 0.1 amp. 13/6
THE P.M. 1 L.P. 0.1 amp. 13/6
THE P.M. 2 (Power) 0.15 amp. 13/6

All Mullard Valves are made at the
Mullard Works, Ralham, London,
England.

Mullard

THE MASTER VALVE

Advertisement of THE MULLARD WIRELESS SERVICE CO. LTD., "MULLARD HOUSE," Denmark Street, London, W.C. 2., England

ARKS ?



Ever Cracked Walnuts ?

The shell looked all right ; big, brown, inviting. In fact, you picked it out on size. It looked good. But when you cracked it—nothing.

There are batteries like that. To look at 'em, you'd think they housed a power station. But give them a clock-and-ammeter discharge test. That is—crack them . . . nothing.

Get a P. & R., though, and you get capacity, you get service; plates sturdied to work and keep working; terminals petroleum-jelly packed to stop creep; a "Dagenite" cell case which is leak and acid-proof; wood interplate separators tested and re-tested; a battery with a guarantee; which costs no more than the ordinary kind: the battery which is standard to Rolls Royce cars.

Ask your dealer about

P AND R

PETO & RADFORD

ACCUMULATORS

The beginning and the end in
POWER

DIRECT FACTORY REPRESENTATIVE

JOHN ARNOLD
DEGRAVES BUILDING
DEGRAVES STREET, MELBOURNE



The Conservation of Energy

RADION Panels far excel any other insulating material in the conservation of both physical and electrical energy.

Radion can be easily sawed, drilled, machined and otherwise worked with minimum effort and without the slightest danger of chipping, cracking or breaking.

In the conservation of electrical energy, Radion is supreme, due to its established superiority over any other material in the four main

characteristics required, namely:

- 1—Low angle phase difference
- 2—Low dielectric constant
- 3—High resistivity
- 4—Low absorption of moisture

Do not jeopardize the value of your receiving set by using inferior materials. Save time and energy in the making and loss of power in the operation of your set by always insisting upon genuine Radion Panels and parts. Look for the name stamped on every piece.

SEND FOR FREE BOOKLET

"Building Your Own Set"

Our new booklet, "Building Your Own Set", giving wiring diagrams, front and rear views, lists of parts and directions for building the most popular circuits, will be sent free upon request to



International Radio Co., Ltd.

200 Castlereagh
Street — Sydney

91-92 Courtenay Pl.
Wellington, N. Z.

The Supreme Insulation

RADION

PANELS - DIALS - SOCKETS - KNOBS

303

U.S. Development

(Continued from Page 9.)

Phonograph dealers reported that the sale of radio receivers was not declining, nor was there any sign of the popularity of broadcasting waning.

Radio engineers and research workers also replied, as did noted musical critics, to the effect that music received on a good set from the average good station was more faithfully reproduced than on the phonograph records.

It thus appears that the great inventor was not correct in his severe criticism. The questionnaire of the A. T. and T. Co. also elicited the fact that over 73 per cent. of the owners of radio sets also had phonographs. The competition must be negligible; in fact, it is possible that the two businesses, broadcasting and phonograph, actually help one another.

The plebiscite also showed that 70 per cent. of the listeners were in the large cities, and 30 per cent. in the rural areas. These figures are of interest to us in Australia. They indicate that the popularity of broadcasting in country districts is not as far advanced with us as in America.

In deciding a tariff for "selling time," or the use of a station for propaganda or publicity purposes, the big New York station WEAF based its charges on a good service of 100 miles. It was considered that this was an area in which reliable service could be obtained all the year round from that station. The type of receiver was not mentioned, but there are not many crystal sets in the United States, and one can assume that the receiver contemplated would be a three or four valve set.

As WEAF has a power of about double that of 3LO, the area of 100 miles is interesting, for the recent investigations carried out by 3LO in Victoria showed that a good service was given up to about 70 miles. This would tend to prove that the Victorian service is not inferior to that given in America. In England, where there are many more crystal sets in use than in America the effective range of a station is, of course, much lower.

TWICE THE SATISFACTION

— AND —

Half the Cost



You connect up RAY-O-VAC Batteries and tune-in.

The difference is amazing.

No preliminary howls, buzz, or shrill whistling. The signals come in true, clear, and strong without the slightest bother. The reason is this:

Low Internal Resistance

Ray-O-Vacs have only a fraction of the resistance of other "B" batteries.

Nine Outstanding Features of the Ray-O-Vac

The Exclusive construction of Ray-O-Vac "B" batteries combines a number of characteristics which easily distinguish them as leaders in the "B" battery field. Nine features are outstanding:

1. Zinc can of rolled steel stock.
2. Water and acid proofed zinc plate partition.
3. Connecting wires securely soldered.
4. Insulating compound between cells.
5. Waterproof outer container.
6. Screw Post Terminals make positive connections with wire, cables or spade connector.
7. Binder in upper seal.
8. Heavy non-bulging top seal.
9. Screw post terminal soldered securely to individual cells.



No. 2303.

Added to this, they have remarkably long life.

And the cost is so low.

No. 2303—The Master Ray-O-Vac 45 volt; double the amperage of ordinary 45	£1 16 0
No. 2301—45 volt flat, with 7 tappings	1 5 0
No. 2303—45 volt upright, with 3 tappings	1 6 0
No. 2151—22½ volt flat, with 6 tappings	0 15 9
No. 2153—22½ volt upright, 2 terminals only. Specially recommended for detector valve	0 15 9
No. 5151—BP 22½ volt medium	0 12 6
No. 4151—22½ volt for portable sets	0 10 6
No. 231R—½ "C" battery. Voltage adjustment of 1½, 3, and 4½ volt; can be used as A, B, or C battery	0 4 6
No. 531R—½ volt Grid Bias C Battery	0 3 6
No. 1211—1½ volt A battery—the best 1½ volt single cell on the market to-day	0 3 3
No. 6 —1½ volt cell for radio or telephone use	0 3 3
No. 1231—3 cell 4½ volt A battery in one case	0 12 6



No. 231R.

IF YOUR DEALER DOES NOT STOCK THESE BATTERIES, WRITE TO US DIRECT.

United Distributors Limited

(WHOLESALE ONLY)

71 Clarence Street, Sydney

343 Queen St., BRISBANE. 27 Chesser St., ADELAIDE. 26 Queen St., PERTH. Cr. Jervis Quay & Harris St., WELLINGTON, N.Z. 66 Charles St., LAUNCESTON, Tas. 664 Bourke St., MELBOURNE.



TO TOUR U.S. AND BRITAIN.

Charles E. Forrest (above) Managing Director of the International Radio Co. Ltd., Sydney factory representatives in Australia for the De Forest Radio Co., Brandes Ltd. (England and America), American Hard Rubber Co., Bright Star Battery Co., and the Ford Radio and Mica Corporation, sails for Wellington on his way to America and Great Britain on December 10, by the "Ulmarua".

Accompanied by Mr. R. R. Urberfoss, manager of the affiliated N.Z. Company, he will tour both North and South Island by car.

Mr. Forrest and Mr. Urberfoss were probably the best known identities in the N.Z. radio trade, having been in the radio business for the last seven years.

POST EARLY.

This year the Postal Department is engaging in a special campaign with the object of ensuring the delivery of Christmas greetings and presents before Christmas Day, and steps are being taken to distribute a leaflet to every house, hotel, lodging house, etc., through the whole of the State, appealing to the public to make their Christmas postings early, so as to avoid the delays which must inevitably occur if the postings are not made until the few days immediately preceding Christmas.

So that gifts may be posted early and yet remain unopened until Christmas Day, the Department is permitting any postal article other than a newspaper to be endorsed with the words: "Not to be opened until Christmas Day," or other words to that effect.

New Price -- 45/- Each



Brandes

The Table-Talker

makes a friend of the electrical impulse

Acoustics is the science of sound. Radio acoustics is the science of transforming the electrical impulse into a audible sound. The electrical impulse is a jolly little fellow who needs to be consulted if you are to get the best out of him. We've been making friends with him for seventeen years and the *Table-Talker* is but one result of our efforts. The goose-neck horn means clearer and more rounded tones, and the patent material of which it is constructed eliminates any suggestion of harshness or metallic resonance. Fitted with an adjustable diaphragm, it is finished in a pleasant shade of neutral brown. Height 18", bell 10".

Ask your Dealer for Brandes.

Now 45/- Each

FACTORY REPRESENTATIVES:

International Radio Company Ltd.

200 CASTLEREAGH, STREET, SYDNEY, N.S.W.

Also at 91-93 COURTENAY PLACE, WELLINGTON, N.Z.

The Royalty of Radio

New Additions to

CREATIONS IN



No. 1 Model



No. 2 Model

Available in Home Repairs at the lowest prices at 542 King's St. There is nothing to question the extreme quality of these Colmovox sets. In addition to the quality of the sets, a table of features is being in the market, kept up-to-date from day to day.

In designing these new Grand-making receivers, Colmovox has successfully interpreted the radio needs of the Australian home. Three decisive advantages go with the Colmovox: unexcelled simplicity of control—reproduction of exceptional clarity in any desired volume—a handsomely built

Colmovox 2 Valve Receiver £12 0 0
Colmovox 3 Valve Receiver £15 0 0
Colmovox 4 Valve Receiver £18 0 0
Colmovox 5 Valve Receiver £22 0 0

Colmovox Rechargeable-Wire Receivers are equipped with patented automatic winding wire, solder, and glass components, making setting effortless, etc.

One Valve Set £2 12 0
Two Valve Set £4 12 0
Three Valve Set £6 12 0
Five Valve Set £9 4 0

The accessories necessary to run these sets are specified in the following list:

Accessories for one valve set £2 3 0
Accessories for two valve set £4 1 0
Accessories for three valve set £5 2 0
Accessories for four valve set £6 8 0

Every amateur given an examination of Colmovox sets would not free.

The Royalty of Radio

Colmovox Lines

RADIO SETS

carefully designed for quiet dignity and convenience without undue expense.

The Colmovox receiver is a minimum of all complicated circuit, and bears the hallmarks of the same feature as the radio expert. It is sensitive and distinct, Colmovox Broadcast Receivers, also satisfy the most discriminating.



No. 3 Model



No. 4 Model

1 Valve	2 Valve	3 Valve	4 Valve	5 Valve
12 0 0	15 0 0	18 0 0	22 0 0	25 0 0
1 0 0	1 0 0	1 0 0	1 0 0	1 0 0
1 0 0	1 0 0	1 0 0	1 0 0	1 0 0

Colmovox sets are equipped with all accessories, including loud speaker (where extra cost, etc.)

Check Colmovox Weekly Catalogue for full details.

COLVILLE MOORE
WIRELESS SUPPLIES
LIMITED

10 BOWE STREET
(New Road Australia)
SYDNEY

Colmovox sets are equipped with all accessories, including loud speaker (where extra cost, etc.) Colmovox sets are equipped with all accessories, including loud speaker (where extra cost, etc.) Colmovox sets are equipped with all accessories, including loud speaker (where extra cost, etc.)

COLMOVOK

COLMOVOK

RESCO RADIO

The five valve Neutrodyne is the Radio Set supreme. Its distance getting propensities are known the world over. Our Neutrodyne is no exception to the rule, as each and every one is capable of bringing in the Inter-State stations at loud speaker strength. It is very pleasant to listen to 3LO, Melbourne, or 4QG, Brisbane, or 5CL, Adelaide. Should one programme not appeal to you, switch over to another whether it be the local station or the Inter-State station. This is the ideal Radio Set; this is just what the Resco Neutrodyne will do for you. It is simplicity itself to change from one station to the other, a child can do it.

The Resco Neutrodyne presents a very neat appearance. All are equipped with vernier dials. The set is self contained: all batteries are contained in the cabinet.

The Resco Neutrodyne is equipped with Exide Accumulator, large capacity "B" Batteries for long life, Philips Valves, Headphones, Aerial gear, etc.



THERE ARE THREE MODELS TO CHOOSE FROM:

- Table Model. Price £19/10/-.
- Floor Model (b). Price £27/10/-, polished maple or oak.
- Floor Model (c). Price £29/10/-, polished rosewood.

All models are handsome in appearance and add to the furnishing of the home.

OUR EASY TERMS ARE THE MOST EQUITABLE IN SYDNEY

There is no experiment about the Resco Neutrodyne. Our sales during the last two months have been enormous and complete satisfaction is expressed by all users.

Read over these prices again then call in and see us. Hear this excellent receiver for yourself. You will be sure to take one home. Prove for yourself this wonderful value.

Radio & Electrical Supply Co.

40 PITT STREET ————— (near Quay) ————— SYDNEY

'Phone: 8 1817.

NEW RADIO BATTERY.

In keeping with their progressive policy, the Clyde Engineering Company Ltd., have produced a new model radio battery, known as the "S.R." type.

This new model is made in 4 volt and 6 volt units in four sizes. The strong and serviceable one piece container eliminates all troubles with leaking cells and corroding wood or iron carrying crates. A feature of



the new models is the thick plate, while the strong carrying handle and radio terminals supplied without extra charge are strong points in favour of the Clyde "S.R." batteries.

The various types manufactured are the 4 S.R.5 (4 volts 25 amps. actual capacity, 6 S.R.5 (6 volts 25 amps.) 4 S.R.7 (4 volts 40 amps.) and 6 S.R.7 (6 volts 40 amps.).

ON CHRISTMAS EVE, 4QG will be "on the air" from 6 o'clock until midnight, and during the latter portion of the evening a programme comprising carol singing by a glee party and band music will be broadcast. On Christmas Day the bedtime stories are to be told in the surf club shed at Coolangubra and will be relayed from there. The surf shed is situated right on the beach, and listeners in the country will hear the waves breaking on the shore as the stories are told.

MADAME ELSA STRALIA, ever willing to help in the cause of charity, is singing at the Sydney Town Hall on December 15, in connection with the Metropolitan Business College concert, in aid of the Benevolent Society. A fine programme has been arranged, including the most popular songs in Stralia's repertoire. 2FC will broadcast the major portion of this concert.

Drydynamic!

What does it mean?

Philco radio batteries are *drydynamic*, which means that they are dry-charged in the factory, and cannot begin their life until acid and water have been added.

THEREFORE when you buy a Philco you get a fresh full-of-life battery, not a stale half-exhausted battery which has been running down on the shelf! That is one reason why Philcos are the finest rechargeable "B" batteries in the world.

PHILCO

THE new Eighty Three X "B" Battery is a Philco product specially designed for service in Super-Hets and other sets having four or more valves. This magnificent battery will run for months without recharging.

WHEN you hear crackles or hum, don't grow angry with your wireless or fix the blame on "static." Throw away your bad battery and begin a new and happier era with a superb Philco battery.

Obtainable from High-Class Dealers and Wholesale from

New System Telephones
Pty. Ltd.

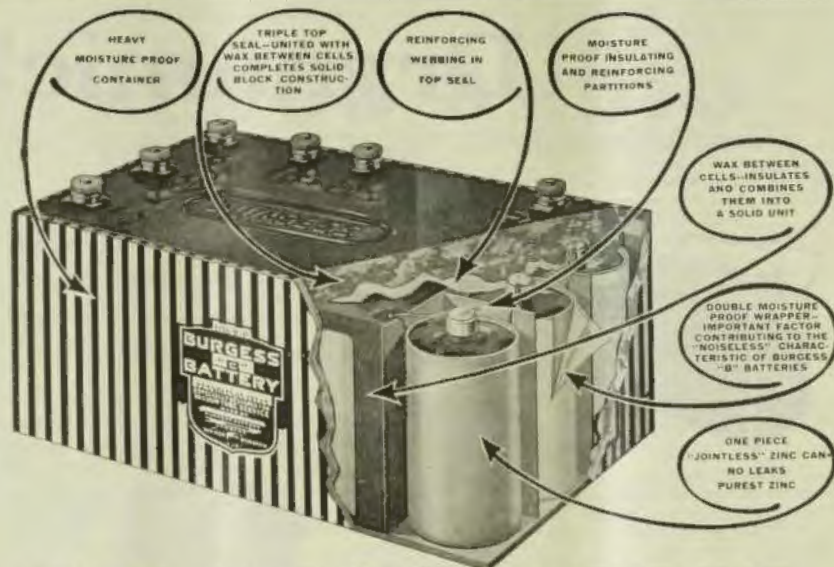
280 Castlereagh Street,
Sydney.

27 Queen's Bridge Street,
Melbourne.

Charles Street,
Adelaide.



S-B



BURGESS "B" BATTERIES

"Ask Any Radio Engineer."

Who would put a Rolls Royce engine into a baby cart, or drive a huge lorry with a tiny four-cylinder engine? Why do this very thing with your radio battery?

There is the right Burgess Battery for every set. Buy it and you will save pounds in a year and get better results.

Obtainable from high-class dealers

Half the cost—because double the life!

Wholesale
Distributors

New System Telephones Pty. Ltd.

280 Camlureagh St.
Sydney S.D.

Burgess "A" is specially designed for radio filament lighting, and has remarkable life.

Burgess "B" meets every need—horizontal or vertical type—from smallest size for portable sets to over-size, specially heavy current drains.

Burgess "C" is for dependable "grid bias duty."

BURGESS "B" BATTERY CHART.

Portable Sets: Nos. 4156 or 5156.
1 or 2 Valves: Nos. 5308 or 5158.
3, 4, or 5 Valves: Nos. 2306, 2308, 2156, 2158.
6 or more Valves: No. 10305.

On all but single-valve sets, use "C" battery 2370.

With the new amplifier power valves, use "C" battery 5156.

3LO is looking for All-Round Girl*(Continued from Page 11.)*

"Have you any University or educational distinctions?" one question asks, and straightaway the prospective entrant gets cold feet and thinks—"Oh, Lord, have I to have them?" Of course, she hasn't. An unfreckled nose is far more important than a B.A. degree. Only, if two unfreckled noses are running neck and neck, so to speak, the B.A. would win by a slight degree. But degree or not, a qualification known as Ch.E.F. would beat the Bachelor of Arts, as would a lovely nature. Hearts would, in other words, put in all over Arts.

Another question asks: "What part have you taken in social service activities?"

This sound portentous. A girl, reading this, would imagine that unless she were in the Salvation Army or the W.C.T.U., she would not have a dog's chance. Nothing of the sort. Any girl who has done social service work, which might be anything from Girl Guiding to young man guiding, making the world cleaner without the aid of vacuum cleaning, in short would to this extent have an advantage over one who possessed the same good looks, the same fine hand in cooking, the same love of sport. It is the girl with the greatest combination of all-round qualities who is going to be sent to New Zealand to advertise this great Commonwealth, and the greatest advertisement of all, human nature being what it is, is a fine face and figure. So the ladies can all send for application forms without worrying about not having been to a University or won a trophy at football.

MR. WILLIAM JAMES, the distinguished composer, accompanist, and solo pianist, whom Australians will remember as the solo pianist and accompanist for the Dal Monte tour, some eight months ago, will be heard from 3LO shortly. Mr. James has accompanied the majority of notable singers, among whom may be mentioned Edna Thornton, Rosina Buckman, and Peter Dawson.

CORPORAL PHILLIPS, known through the theatrical world as "Imito," is always a welcome visitor to 2FC. He never fails to call in when he is in Sydney, and the "Hello Man" generally compiles some story for the kiddies in which these imitations can be severely expressed. Last week's trip to the Zoo was immensely popular, with imitations from every class of bird and animal. Next week

there will be an imaginary trip through the farmyard, which is always popular.

MISS MARY E. MOSS, who is a stern advocate of better conditions for women in the homes, is delivering a series of spirited lectures from 2GB, in which she outlines many very practical schemes for the lightening of home duties. Her talks should prove of interest to the housewife.

A Remarkably Clear Speaker**PRICE 25/-**

Equipped with a non-metal horn, the Western Electric Loud Speaker illustrated, reproduces broadcasting with a purity of tone superior to some loud speakers selling at many times the price.

Only a limited number are available, so if you would secure a **REMARKABLY CLEAR** Speaker at a price less than that charged for head receivers, place your order without delay.

STANDARD TELEPHONES AND CABLES**(AUSTRALASIA) LIMITED**

Formerly

Western Electric Company (Australasia) Ltd.

191-4 CASTLEREAGH STREET, SYDNEY

SLINGSBY & COLES Limited

Under Central Station,
482 PITT STREET.

Ask for **THE BLUE SPOT.**

A revolution in Head Phones—the highest, most sensitive, and accurate ever sold in Australia. 35/- per pair.



Ask for
**THE
BLUE SPOT.**

MULTIDYNE COIL.

For 2-Cell Sets—No changing Coils for various Wave Lengths.

GEORGE FIELD

RADIO AND ELECTRICAL
SUPPLIES.

Head Office and Showrooms:
205 Hunter St. NEWCASTLE.
(Between Scotts and Winns).

"CROIX" the famous French Audio Frequency Transformer, 2:1 ratio—0.4. Best quality coil plugs, 3d. Franco plugs and sockets, with the de luxe spring contacts, 3d. pair. Helicon Valves, 201A and 201 types. Improved non microphonic, with beaded glass filament supports, 6/2 each.
AJAX phone plugs, 1/8. Black celluloid strip, 3d. ft. Midgut Arc-resters, 1/4. Bezel, 1in. and 1 1/2 in.—6d. and 8d. English American adapters, 3/6. Atwater Kent 2 stage audio units, £2/10/-. Peerless metal frame rheostats, with auticapacity shield, 3/6. Grid and phone condensers, 1/- Best bakelite, in stock sizes, 3/4, square inch. Special sizes out to order, 5/4 square inch.

Country Dealers supplied.

Write for Despatch.

Same day Service at best city prices. All Standard Radio lines at best "weekly" prices.

Ring Newcastle 1185 for prompt delivery.

**THE LARGEST AND OLDEST
RADIO HOUSE OF THE NORTH**

Manufacturers Products Pty. Ltd. (M.P.)

(H. J. HAPGOOD)

Challis House, Martin Place
SYDNEY

Tel: BW 1328

—26—

Agents for all types of Radio Products, including Clyde Batteries.

Elec. Meter Mfg. Co. "Emerson."

Rostrade Condensers, Leaks and Fixed Rheos.

Airzone Rheos, Pots, Special Cells and Loops.

Neutron Crystals, Brunet Phones, Prompt Shipments from Sydney.

We represent 54 Foreign Radio Manufacturers

Write for Index List.

Surplus Stocks sold Interstate.

BRITISH MADE

CLARKE'S ATLAS

BRITISH MADE

High Tension Battery Eliminator

WITH

VARIABLE HIGH TENSION VOLTAGES and GRID BIAS TAPPINGS

MODEL AC2

For Alternating Current Only

THE FINEST ELIMINATOR ON THE MARKET.

ELIMINATES "B" AND "C" BATTERIES

For value and efficiency.

Price Complete: £14 each.

Eminently Suitable for Multi-Valve Sets

DEALERS! Ample stocks now available. Get into touch with us today.

THE GENERAL TRADING COMPANY

"Wingello House," Angel Place (Near Martin Place), SYDNEY

Telephones: BW 6938, or B 4917

SOLE AUSTRALIAN DISTRIBUTORS

Readers' Queries Answered Here

In conjunction with Farmer's Broadcasting Service the Technical Editor of "Wireless Weekly" will answer all listeners' queries arising from the wavelength change. Answers will appear in these columns and will be broadcast from 2FC each Thursday night.

L. M. (Wonga Hills, W.A.):—

We are pleased to know of the success of Mr. H. E. Goering, the West Australian amateur, in receiving Breslau station on 418 metres. This is certainly something to be proud of, and we hasten to congratulate him.

A. E. H. (Darlinghurst): Try it for yourself, keeping in mind aerial and earth potential of batteries.

W. W. (Newnes Junction): The valves you mention are quite O.K., and should certainly save you frequent trips with your accumulators.

H. C. (Newcastle): Get in touch with Mr. H. J. Morrison, 31 Cameron Street, Hamilton, N.S.W. (Waterloo): We cannot furnish back of dated views of strange receivers.

R. P. (Terribil): It is impossible to guarantee range on any crystal receiver.

G. C. (Coopers): Stick to your home-made coil.

H. E. C. (Rockhampton): This is quite usual. The indoor aerial thus becomes a counterpoise. Your aerial and earth form the two sides of a condenser, the circuit being an oscillatory one.

R. S. (Willoughby): Glad to hear the good news.

W. H. P. (Lidcombe): Q. 1: I have built the Brownie Drain receiver, and I find it the best four valve receiver I have ever handled. I now desire to build the Neutrodyne, and I would like to know if I can use four rheostats in this circuit.

A. 1: Yes. Provide a separate rheostat for each radio frequency valve, one for the detector and one for the audio valves.

Q. 2: My condensers are .0005 mfd. Can I use them instead of .00035?

A. 2: Yes, by all means they are quite suitable.

Q. 3: I have a Bradley leak, can I substitute this in place of the fixed leak?

A. 3: Yes, but do not mount your Bradley leak on your panel. Mount it on your base board close to the detector valve, and once adjusted to the correct setting, leave it alone.

Groden, Radiokes, and Atkinson kits are equally good.

H. A. M. (South Granville):—

Q. 1: The other evening I got a shock of a kind when the aerial, and when touching it with a screwdriver a spark of about half an inch seemed to jump across. Can you explain this?

A. 1: Yes. Static is the cause. Overcome this by installing a lightning arrester.

J. O. S. (Dural):—

Q. 1: I have a five-valve Neutrodyne, and can receive all the intermediate stations satisfactorily, but cannot get New Zealand, as I have some difficulty in eliminating 2FC. Can you help me?

A. 1: The best advice I can give you is to shorten your aerial a bit. Do not exceed 30 feet over all.

T. S. (Brisbane, Q.):—

Q. 1: I have built a three-valve Reinartz recently described in "Wireless Weekly," but I cannot receive any other station above 400 unless I tune it into oscillation. The reaction is most critical, and at times "blows" in and out of its own accord. My aerial is 120 feet over all.

A. 1: Reduce the size of your reaction coil, even as low as 18 turns, and experiment a bit until you thoroughly understand this most excellent receiver.

Q. 2: If I place the primary further away from the secondary to increase selectivity, doesn't it decrease the volume?

A. 2: To a certain extent it may, but this can only be determined truthfully by experiment.

Q. 3: What is the correct "B" battery voltage for most satisfactory results on a three-valve Reinartz using B405 valves?

A. 3: Between 22½ and 45 volts for the detector, and 90 volts for the audio amplifiers. The "C" battery has to be carefully watched with these valves. Read the maker's instructions, or write direct to Philips' Glow Lamp Works, Kembla Building, Sydney, or the Philips Valve Book. Mention "Wireless Weekly."

H. S. H. (Epping):—

Q. 1: Having an eight valve Super-Heterodyne with the Intermediate Frequency sections, controlled by a 400 ohm potentiometer, I would like to, if it is possible, do away with the rubbing sound, which occurs when the potentiometer is set between the point where the stations whistle and the point where the set comes to oscillate.

A. 1: It seems to me that the valves you are using are too noisy. You do not mention the name of the valves, but I suggest you try D.V.3's.

G. R. P. (Yenda):—

Q. 1: I desire to increase the volume of my four-valve receiver in daylight. At present I am using two 129 type valves, with radio frequency and detector, and two B405 valves as audio amplifiers. Would I obtain greater volume by fitting all B405 or Mullard T.M.4 valves?

A. 1: I really cannot advise you definitely on this point. Perhaps the 129 valves may be old; in this case, replace either of the valves mentioned.

F. M. C. (Ballina):—

Q. 1: I am experiencing trouble with my reception, and can only account for it as being caused by the electric power-house, which is about 150 yards from my aerial, while the electric mains are 20 yards away. My receiving is very distinct when the power-house is not working, but directly the power is on I receive a buzzing sound which is so loud as to stop any receiving. Can you advise me how to overcome the trouble? I might state that my set is a two-valve.

A. 1: This is a very difficult matter to overcome, but I suggest that you erect your aerial at right angles to the power mains.

J. K. (North Sydney):—

Q. 1: I am thinking of altering my set to an undecided which set to build. Please tell me which will be the better set to make—considering tone and range—the Hrosling Drake Four Valve or the Neutrodyne Five Valve. I would like to receive New Zealand if possible. Can either of these sets be reasonably expected to do this?

A. 1: I am afraid that it is impossible to answer the question. Really, it is like raising the old argument of Hulk versus Dodge in the car market. Both receivers are very

good indeed, but it may be advisable to buy in mind that the Neutrodyne has the advantage of one stage of radio frequency over the Hrosling Drake.

J. W. J. (Inverick, Q.):—

Q. 1: I would like you to tell me through your columns of "Wireless Weekly" if the "Harkness Reflex Receiver," of October 18 issue, is selective. If not, how would I make it selective? Also would two 5 to 1 ratio transformers set alright?

A. 1: In your neighbourhood, the "Harkness Reflex" should be sufficiently selective for your purpose. I am afraid that two 5 to 1 ratio transformers would produce a certain amount of distortion, therefore you would be well advised to substitute a 5½ to 1 transformer in the second stage. Many thanks for your nice remarks regarding "Wireless Weekly."

S. J. (Esmore):—

Q. 1: Can you please tell me why one of my transformers has burnt out, and would a 5 to 1 Crescent transformer be as good as a 5 to 1?

A. 1: Really speaking, a transformer does not burn out. Frequently, the primary of a transformer breaks down, and when this happens it has to be replaced. There are many reasons for a transformer breaking down, the most frequent being the use of a battery switch with all rheostats turned full on. This permits a heavy surge of "B" battery current to flow through the primary in which there may frequently be a weak spot, which will break. Hopefully do I suggest that no transformer will last forever, therefore replace the Crescent transformer mentioned, which I know to be a good job.

A. F. (Toronto):—

Q. 1: What sort of a crystal detector would you advise me to put on the Selective Crystal Set in "Wireless Weekly" 8/10/26?

A. 1: Any good crystal detector will be found satisfactory.

Q. 2: Would the Freudan "Anti-Leak" cell former do in place of the cardboard former?

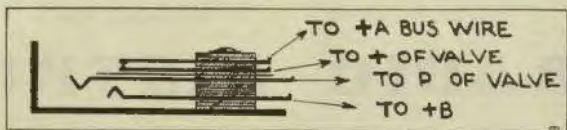
A. 2: Yes, certainly.

Q. 3: How much is a .0025 condenser marked OPTIONAL, and what is it?

A. 3: This condenser costs approximately eighteen pence, and is used as a further means to selectivity. It actually functions as a constant aerial tuning condenser, and its incorporation means that any given receiver can be taken to any aerial and the same fixed settings of the condensers would prove satisfactory.

P. W. (Bathurst):—

Q. 1: I am desirous of building the crystal set described in this week's edition of "Wireless Weekly," and would like to know as to how I could improve the range of this set, so as to receive Sydney stations. My aerial, phone, and earphone wire are all satisfactory. Also I should like you to advise me as to what set you think the better, the one of October 18, 1926, or this week's set?





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A. 1: It is absolutely impossible to give the range of any crystal receiver. The average crystal receiver rarely is satisfactory beyond 25 to 35 miles from a broadcasting station, but at the same time I hear of crystal sets which prove satisfactory at Dubbo and Coonambie and even to the North of Queensland. Frequently, this type of reception is freak, but at the same time I shall recommend you to try that receiver described on the 15th October, 1926.

J.F.C. (Merinda, Q):—

Q. 2: Can I charge a 2 volt 40 ampere hour accumulator from three Daniell cells?

A. 1: I would not advise this. Perhaps you would be best suited with Amplex carbon cells for the "A" battery. These we know to be good.

G.W.L. (Kogarah):—

Q. 1: What is the most suitable receiver set for my requirements? (I want something that will pick up all local stations clearly at loud speaker strength; one that will work well with an indoor "in the room" aerial; and one that will be fairly economical as regards the use of battery current).

A. 1: I would recommend the "Darkness Reflex," described in "Wireless Weekly," 15.10.26.

Q. 2: Would you recommend a mechanically inclined amateur to undertake the building of such a set?

A. 2: The instructions given in the above-mentioned paper will be found very clear in detail, and you should be able to build it yourself. If not, call on a reputable radio dealer, who will undertake this job and guarantee you good results.

G.R. (The Summit, Q):—

Q. 1: I have an 80 volt "B" battery, supposed to run for months without re-charging. I find it will not do so. Could I convert it into a salammunias battery?

A. 1: You could do so, but you would have to dispense with the elements inside your tubes. We have posted you a copy of "Wireless Weekly" of the 1st April, 1926, giving the details necessary for the construction of a salammunias "B" battery.



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Published by Arthur William Watt, of "Folkstone," Lavender St., Lavender Bay, for the Proprietors, Wireless Newspapers Limited, 4 and Castlereagh St., Sydney; and printed by Publicity Press Limited, 71-75 Regent St., Sydney.

The Editor will be glad to consider Technical and Topical Articles of interest to Australian Experimenters. All Manuscripts and Illustrations are sent at the author's risk, and although the greatest care will be taken to return a suitable matter (if accompanied by stamps), the Editor cannot accept responsibility for its safe return.

Subscription rates.—Twelve months (52 issues), 12/- post free. Six months (26 issues), 6/6 post free. Single copies 3d. each, or post free 4d. Subscriptions should be addressed to Wireless Newspapers Ltd., 51 Castlereagh Street, Sydney.

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Agents in Great Britain—The Colonial Technical Press Ltd., Dudley House, Southampton Street, Strand, W.C. 2.

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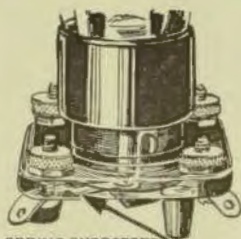
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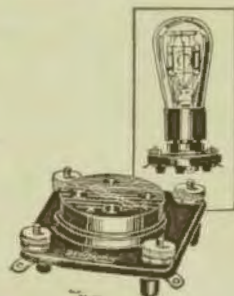
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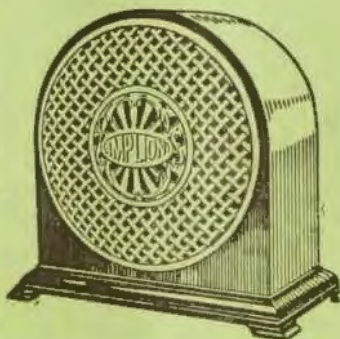
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