

WIRELESS WEEKLY

Broadcast Programmes a Week in Advance

VOLUME 10

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

NUMBER 25

*Heralds
of 2FC.*



Mr. Anderson - Mr. Williams - Mr. Cochrane

Friday, October 14, 1927.

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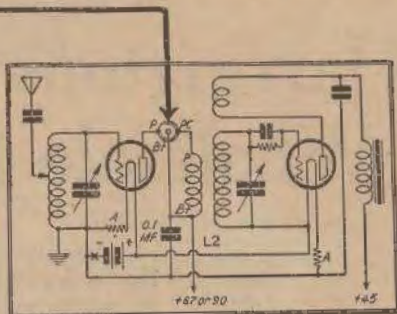
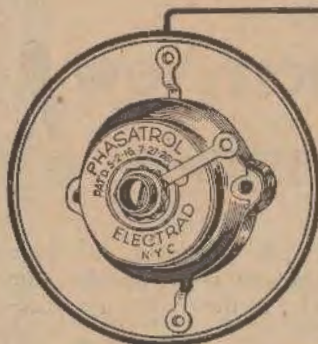
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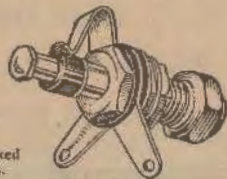
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WIRELESS WEEKLY

VOL. 10, No. 22.

FRIDAY, 14th OCTOBER, 1927.

Why the Same Licence for a Crystal as for a Valve Set?

ONE frequently hears discussions concerning the "broadcast listeners' licence fees. A usual point of argument is the question why should Brown, with a simple crystal set, pay the same licence fee as Robinson, who has a de-luxe superheterodyne? Brown can only hear the local stations—and more often than is desirable, only one station at that—while Robinson can tune in practically all the stations in Australia and New Zealand.

It does seem at the first glance that there is something like inequitable treatment in the method of charging for the service. In the first case, the annual licence fee is nearly as much as the cost of the set, while in Robinson's case the 27/6 is only a slight addition to the cost of the set.

Upon reflection, however, we can see several reasons for the authorities not discriminating in the licence fees. In the first case, when considered in the light of what might be termed practical politics, we will find rather serious drawbacks to the apparently ideal scheme of charging a fee on some basis of ratio to cost and usefulness of the receiving equipment.

If there were to be a cheaper licence fee for crystal sets, it is not difficult to see, human nature being what it is, a large demand for such licences—a larger demand than the number of crystal sets would justify. There would be no means of checking up a statement by an applicant for a licence

who had a 4-valve set, that his set was really a crystal set. And even where no suggestion of misstatement entered into the case, one can readily conceive the circumstances in which a household has both a crystal set and a valve set in use. Furthermore, Robinson may start off with a crystal set, and subsequently obtain his super without remembering to change his licence.

A more important reason for the uniform licence fee rests on the fact that a broadcasting service or services are available to listeners. They are entitled to take as much of the service as they care to receive. It costs the broadcasting company just as much to provide the service for Brown with his crystal set as for Robinson with his superheterodyne.

Hence, it is not unreasonable to maintain a uniform fee. And if Brown can get only 3L0 with his crystal set, it is his own fault that he pays the same licence fee as the owners of the valve sets. The uniformity of licence fee does not obtain in the outer zones of larger sets. That seems a fair thing for the authorities to do, as the extent of service with any kind of receiver varies with the distance from the station. There may appear in that to be a slight contradiction of the previous references to the equity of the licence fee, but it does not really upset the arguments in favor of the contention that the fee should be a uniform one.

Catching Up with the Wireless World.

By R. E. CORDER.



A WIRELESS PHOTOGRAPH was responsible for the capture of a man wanted for committing a bank robbery in Vera Cruz. Despite the fact that the man was travelling under an assumed name, he admitted his identity when confronted with his wireless likeness on arriving in New York.

WHICH ARTIST has appeared most before the microphone? Miss Agnes Fortune must hold the record for SLO. Not only has Miss Fortune appeared with the Studio Orchestra from its inception, but she has also acted as accompanist for most of the vocalists, elocutionists and instrumentalists who have appeared at the Studio. There are few more capable accompanists than Miss Agnes Fortune. Without rehearsal she is ready for the most difficult accompaniments, and every artist finds complete satisfaction.

AFTER A WRANGLE extending over three months, a move is now going strong in Wogga, a move is now going strong in Wogga, a move is now going strong in Wogga. Some months ago, Mr. George Penfold, a farmer, raised almost enough money to provide the installation, and although he had received a promise of help in the work of wiring by the postal electricians, the hospital committee came to the conclusion that the time was not opportune to install radio for the patients in the hospital wards.

AN ARGUMENT ensued and has now resulted in a committee being appointed consisting of members of the hospital committee and business men of the town to supervise the installation subject to Mr. Penfold's being willing to give his services. The hospital committee has been advised that the Department of Health is willing to subscribe half the cost of the installation up to £100, subject to certain formal conditions.

"Women are again going in for ear piercing," we read. We've certainly noticed it over the radio.

Wife: Do you still owe Jones anything on the radio set you bought from him, dear?

Husband: No, only a grudge.

"If you've spotted the fellow who stole your radio set, why don't you get it back?"

"I'm waiting for him to fill new valves."

SAFETY FIRST.

Pal: "Say, Hal, did you get the shirt on the radio last night?"

Hal: "I should say not; think I want my wife to get more points on fighting!"

"Is it not time, therefore, that the word 'wireless' should be changed?" asks a correspondent in a daily paper. Quite time, but why only the word?

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

Radio Man: You've found so much fault with that set, it's quite possible you've been running down the batteries, sir.

To JOHNNY COME LATELY: No, you must on no account bob the cat-whisker or you'll bingle; I beg your pardon, I mean bungle the whole outfit.

A COMPANY has been formed in Africa to take over the bankrupt South African stations under the protection of a government monopoly for a period of five years. Stock will be offered to the public. The interests backing the plan are in control of the most important South African theatres, and they promise better programmes, which should discourage the extensive evasion of license payments, the reefs on which the original broadcasting plan was wrecked.

FATHER usually catches the radio craze from "the boy," and when he does, poor mother is almost invariably in for a period of neglect and ultimate desertion. The garden "goes to the pack," so to speak, and mother is left to do the thousand and one little jobs about the house, which ordinarily are father's duties. Unless mother catches the craze, perchance, by listening to Norman McCance's wrestling descriptions from SLO, she gradually becomes so detached that she can very appropriately be called a "radio widow."

THE QUESTION whether broadcasting diminishes or increases concert and theatre attendances has been argued ever since broadcasting came into practice. In the beginning, theatre managers were fearful lest radio should empty their houses, but although the question is still debated, it appears to be established that radio stimulates the desire for good music and so encourages attendances.

THE MANAGEMENT of broadcasting station, 2FC, Sydney, tried an interesting experiment last week. As a contribution to the University Appeal, 2FC engaged the Conservatorium Orchestra and some noted solo artists to give a popular concert in the Sydney Town Hall. The event was made known as widely as possible and particular emphasis was laid on the fact that it would be broadcast, the object being to find out whether people would pay 3/-, 2/-, and 1/- to attend a concert when they could sit comfortably at home and hear the whole thing without any charge.

THE HALL was packed and the explanation is that (quite apart from the people who have no radio set and, therefore, have to go to concerts for their entertainment), so many listeners have enjoyed Stella Wilson, Alfred O'Shea and the Conservatorium Orchestra over the air that they went to the Town Hall to see, as well as hear, them. The orchestra sounded well to listeners-in, too.

“Prepare to Broadcast.” *Choosing your Subject for a Radio Talk.*

ONE languidly turns over one's letters, and wearily sorts out the bills. Then an envelope leaps into view branded with 3LO set in brown electric waves. A shock runs through one's fingers to the vortex of the brain. A request to broadcast! Fame at last! Two hundred thousand licences—half a million listeners.

True there succeeds the chilling thought that not all of them may be listening during that fateful quarter of an hour. Some may be wasting their time at some evening entertainment; the washing up may be claiming some of the thoughtless children of Martha. Still—even 150,000—say 100 cathedrals full! One's mind rocks on its foundations at the thought! Then comes the question to one's soul—how to make this amazing occasion worthy of the vast audience—at least 150 times larger than any which one has addressed before. Well, after all, one can only give the best that one has got, and not worry. But how best to prepare, for it is a subject for which ideas are needed.

Broadcasting is a new medium, and surely requires a technique of its own. A written style will not do. When people have cold print in front of them, they can take in more ideas to the square inch of type than they can to the equivalent amount of the spoken word. In written articles sentences can be a little longer than in speech. First then, it is clear, broadcasting material should be prepared as a talk. As a talk though, not as a speech.

The hypothetical hundred thousand listeners (let us be modest) are not a vast public meeting. A great gathering is a very different matter. A meeting is held together by a kind of mass mind. Everyone is being silently and subconsciously influenced by the wills and judgments of others. Currents of emotion run freely in a great assembly, and it is the special aim of a skilful public speaker to set up these currents of human electricity. An individual member of a stirring public meeting has much less power to criticise and judge in a cool and detached way than he has at his own fireside. When he goes to the meeting he is usually prepared to be moved by the speaker, and is willing to surrender himself to share the emotions of the people around him. He expects to be stirred. But when one is putting a case to a fellow man in conversation, he whom one is addressing is placing his judgment alongside one's own. He is not in the mood to make the same easy surrender of his emotions. He must be persuaded, convinced or informed, man to man.

Therefore, surely talking on the wireless should be not only keyed to a speaking style, but pitched in the natural tone of a personal conversa-

tion. This is on the whole a relief. One can let oneself off most of the fireworks of rhetoric, and adopt one's natural conversational attitude. The speaker is conducting from his armchair in 3LO a hundred thousand private conversations, yet there need be no more strain about it than the conduct of one. Now if one is to make the best of one's material it is well not to put upon oneself the strain of talking “up” to an imaginary “intellectual” or down to the level of an hypothetical imbecile. It is best to do what is really easiest—to follow the line of least resistance, and talk naturally as to one's intellectual equal, as to converse with him, one expecting and hoping to interest him in a subject which interests oneself.

Then the material. The subject is naturally chosen from one's own interests and therefore a topic that one has thought a good deal about. Therefore the natural tendency is to try to get as much into one's address as possible. This needs careful regulating. It is no manner of use saying more than your hearer can reasonably hope to take in as you talk. What you have to say on education, for in-

stance, is perfectly clear to yourself. You have lived with your thoughts on the matter for some time. But they may be unfamiliar to the man at the other end who lives in a world of machinery or softgoods. Therefore, one must expand one's ideas so that they stay long enough in the mind of the reader to enable him mentally to digest them. One must beware of epigrams at the beginning of a discussion. They are short cuts, only about to be appreciated by those who have followed the drift of the discussion, and hold firmly together the ideas composing it. When you feel your listener has mastered your leading ideas, then it is no bad thing to weld them together by the hammer-blow of an epigram, if you can.

In conversation one should avoid being too abstract. Abstractions are hard to carry in the mind because there is no picture corresponding to them. In talk it is always advisable to use plenty of pictures and illustrations. The listener cannot go back to pick up threads, and everyone finds it easier to keep on easy terms with a thought which goes forward in a series of moving pictures.

Broadcasting should be natural personal conversation, but for all that it is well to have one's matter written. The studio is a lonely and silent spot. One is all alone in an armchair with a little brown microphone. To an extroverted speaker the inspiration of a present audience is a great stimulus, to most an absolute necessity. Many orators rely on the “feel” of their audience to guide and determine their whole method of treating a subject. In a present crowd one can always focus one individual with a glassy eye, and if he wriggles or betrays other signs of collapse, one can administer rhetorical first aid. If he is open-eyed and interested one can go bounding confidently ahead. But the silent studio gives no such guide or stimulus. So though broadcasting should be talk it is better to write it. The silent and ghostly throng are apt to terrify, if one has to pause to think.

When he had come to these many and formidable conclusions, the present writer took up his pen to write his first address with fingers that trembled, but they grew firmer as he forgot all his rules again, and fixing in his mind an imaginary friend, started to explain matters to him in such a way as to keep him awake. When he revised what he had written and tested it on his wife, he found that there were passages at which his friend might be imagined to yawn, and other parts suggested bewilderment at missed connections. So he tried to remember his rules again and went through his material, keeping them in mind.

RELAY STATIONS FOR VICTORIA.

Following upon the announcement that the technical officers of the Postmaster General's Department are considering plans for determining by experiment the best positions for relaying stations in Victoria, and that there is a possibility of the Federal Government controlling these stations, the following statement was made by Major W. T. Conder, the General Manager of 3LO Melbourne: “3LO Melbourne intends to proceed as far as possible with its plans for relaying in the country. We indicated to the Postmaster General's Department some months ago that we desired to provide four relaying stations—one near Mafrá, one near Wangaratta, one near Bendigo, and one near Hamilton. After the publication of the report of the Wireless Commissioner we repeated our application for licences to erect and operate these stations, and are now awaiting an answer. If we obtain the licences to put in the stations we intend to go right ahead with the work and have the stations in operation with as little delay as possible. If the Government decides to build them itself we will have to abandon our plans as they now exist and consider our position under the altered conditions.”



The Safety Valve

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

Dear Sir,—I have been a licensed radio dealer for nearly two years, and I would like to point out a few facts to safety valve grumblers, which the majority of wireless fans probably do not know and which, to my mind, have a lot to do with the slow "taking on" of wireless in the country.

It costs me \$5 per annum for my dealer's license, and this is quite in order, but, if we wish to have a little music in our own home, I must pay another \$17/6; then, if I wish to take my set out into the country and demonstrate to a few "likeliest" at a concert or house party, I must pay a special fee of £1; or, if there is a smoke in town and I am invited to bring my set along, another fee of £1. A radio dance night, even in aid of charity, costs yet another £1.

Now, Mr. Editor, I am sure you will agree with me that if many of these unreasonable charges were rescinded, wireless could be more freely demonstrated, and, as a natural consequence, the sale of sets would increase which, in turn, means more revenue for the broadcasting companies. Under present conditions, radio demonstration would cost me considerably over £5 a year, unless I cared to take a risk and do it "on the quiet," chancing a fine. Few men like underhand work such as this.

Other dealers' views on this subject would be much appreciated.

In conclusion, may I again stress the fact that this letter is not penned in a spirit of grumbling, but purely with a desire to better wireless conditions generally.

Yours faithfully,
"DEALER."

Coolamon.

ON 'PHONE, TOO.

Dear Sir,—With reference to Mr. Burden's letter ("W.W.," 30/9/27), it would possibly be of much use to a lot of people thus affected if they knew that (in nearly every case of a person being deaf or partially so) the use of headphones would probably bring to them the joys of wireless. I have noticed this repeatedly in my own job (telephone mechanic), that a person who is deaf to all ordinary conversation can hear well on a 'phone fitted with two receivers.

Yours, etc.,
"ONE LINGER."

Sunday Programmes

THAT the Sunday programmes are preferred as they are at present broadcast by an overwhelming majority of listeners was proved by the voting in the 387 coupons received (550 from listeners-in to whom the ordinary services are not available).

There were 54 votes only in favour of eliminating all religious matter from the broadcasting programmes, as against 541 in favour of the programmes as at present, and 203 in favour of increasing the number of religious items.

180, however, were for decreasing, though not eliminating, religious matter.

The votes were as follows:—

- (1) Are you in favour of eliminating all religious matter from the broadcasting programmes? 54
- (2) Are you in favour of the Sunday broadcasting programmes as at present? 531
- (3) Are you in favour of increasing the number of religious items in the Sunday broadcasting programmes? 292
- (4) Are you in favour of decreasing the number of religious items in the Sunday broadcasting programmes? 186
- (5) Are you in favour of any of the following changes in the present Sunday broadcasting programmes?
 - (a) Religious addresses instead of church services, 24
 - (b) More sacred music, 135

IMPORTANT: Indicate by means of a cross, if regular weekly religious services which you might attend are through any reason such as distance, home duties, etc., not available to you. 530

This closes the controversy.

MORE LECTURES.

Dear Sir,—The criticisms of the wireless stations and their programmes are interesting. With regard to the former, I would like to say that the remarks regarding transmission are often unjust, as I find two different sets give a great variation between 2FC and 2BL using the same aerial.

I have also noted that barometric pressure and the direction of the isobars have a decided influence on transmission—especially from 4QG.

Few have time to write and say, but I am sure that many country people would appreciate more lectures on such subjects as would make wireless sets more of an asset to those who have to wrest a living from the soil. For these, we have to turn to 3LO or 4QG and they are too infrequent.

Before closing, allow me to express appreciation (most heartily endorsed by friends who also listen in) of the good music—classical, and especially sacred—that a wireless set brings to us of the outback places.

Yours, etc.,

DUDLEY JONES.

Nymbold, North Coast.

USSR.

Dear Sir,—I picked up a foreign station on 60 metres on Sunday, 25th; Monday, 26th; Tuesday, 27th, from 8 a.m. to 10 p.m. (Sunday) 8 p.m. to 9.15 p.m. (Monday and Tuesday).

He came in at very good loud speaker strength on two valves. His clarity of transmission left nothing to be desired. The music on Sunday and Tuesday was worth listening to. His announcements were all in foreign, the only thing I got was USSR.

The Russian Station BFN also used the letters USSR when I got him a few months back, but he spoke in English also.

Could any listeners enlighten me on this subject?

Yours, etc.,

H. KELSICK.

Aberdare Colliery, Cosmnock.



Community singing at the 3LO studio.

Changes in the 3LO Studio

3LO STUDIO QUARTETTE.

IN order to concentrate on special effects 3LO, Melbourne, has lately reduced its Studio Orchestra to a Quartette, under the enthusiastic leadership of Reginald Bradley, the station's excellent violinist.

3LO Melbourne's brilliant accompanist and solo-pianist, Miss Agnes Fortune, met with a serious motor-car accident recently, and listeners are still deprived of her services. During the first week of her absence Miss Elsie Bradshaw most capably filled her place at very short notice, and lately Miss Violet Parkinson is acting as *locum tenens*.

Tasma Tiernan, the popular 3LO, Melbourne, cellist, has returned to her accustomed chair on the platform with her beloved instrument, after a spell up the country recuperating, and is looking as well and playing as attractively as ever.

Those who remember Gaunson's fine work with 3LO Melbourne's Orchestra as first violin and leader for so long in the old studio, and for some time in the new, will be interested to hear that she paid a visit recently to her orchestral and other studio friends, who welcomed her very heartily, though regretful to hear that she is still unable to return to her widdling of the sounding bow.

Reginald Bradley's work with his cherished violin continues to bring fresh accessions of pleasure weekly to all who delight in that prince of instruments. 3LO Melbourne's pro-

grammes are never complete without several items from Reginald Bradley as a solo player, while he very frequently furnishes very interesting obligatos to some of the leading singers, much to the taste of a very wide audience.

WARDE MORGAN TO SING.

When a year or so ago Australian playgoers were shocked to read of the railway disaster in N.S.W., in which Miss Marie Burke and Mr. Warde Morgan were victims, it was announced that Mr. Morgan was injured beyond possibility of recovery.

Only an indomitable will and a determination to get better restored him, first of all to normal life, and then to physical strength. It is one of the romances of surgery that, after such shocking injuries, he should still be able to walk without crutches, and with but a slight limp as a reminder of the accident.

His career in musical comedy having finished, for the time being, Mr. Morgan has had to look around him for other means of using his great talents. On the 22nd October he has been timed to begin a season of song through 3LO, Melbourne. Apart from the intense interest the whole country feels in this plucky chap, his fine voice would make him a radio favourite under any circumstances. It is a noteworthy engagement and one that will prove very popular.

MR. AMERY'S VISIT.

On October 24th the very important visit to Victoria begins of Mr. Amery, the Secretary of State for the Dominions, the first member of the British Cabinet who has visited us for many years. He will then be in Horsham on his way through to Melbourne via Ballarat and Geelong, examining the country as he goes. The object of his visit is to make personal inquiries on the spot into our conditions so that he will be able to acquire first-hand knowledge to assist him in dealing with Dominion problems when he returns. He has already been to South Africa.

At Horsham he will first come under the influence of 3LO, Melbourne. From that time on, it is safe to prophesy that Mr. Amery will not be allowed to say a public word that is not breathed into a microphone. He will be officially welcomed at Horsham, and his reply will be flashed all over Australia. He will journey on to Ballarat after the Horsham banquet, and once more his words will be caught. When he reaches Geelong, it will be to find a microphone up against him, and even in Melbourne he will be unable to get away from it, for his reception by the Lord Mayor will be as public as 3LO, Melbourne, can make it. This last function is scheduled for Wednesday, 25th October.

Radio Receives Storm Warning, then Cooks Meal.

CAPTAIN John Hall and six seamen from the three-masted schooner, G. J. Cherry, wrecked off Cape Hatteras in the hurricane of March 2, attributes the fact that he and his crew were saved to two things: the first, a modern radio set with a metallic box, and, secondly, to 443,000-ft. of lumber the ship was bringing from Charleston, S.C., to New York.

Late in the day of March 1, Captain Hall, tuning in with the broadcast set he had purchased only last November, heard a storm warning from a radio station.

The station was right, and the storm came with such violence that it opened the seams of the ship and for thirteen days he and the crew clung desperately to the after deckhouse of a ship two-thirds submerged by water, diving to the laxaret in the after hatch for raw potatoes and catching fish with a hook improvised from the springs on the schooner's auxiliary gas engine, which was thrown overboard with every other removable object to keep the ship from going under. The lumber cargo kept the boat afloat. The radio set was quite forgotten in the struggle to keep alive!

The story of seven ships, sighted by the watch in the mizenmast cross trees, which passed without noticing the signals of distress during the thirteen days until Captain Hall and his crew were at last picked up by the oil tanker Gulf Point has been told, but the part that a metal box cabinet of the radio set played was merely suggested in the original accounts of the rescue.

The G. J. Cherry's galley was, of course, submerged and the raw potatoes salvaged and the fish caught had to be cooked, so Captain Hall, remembering the metal box sent a Negro sailor down to salvage it from his under water cabin.

"Castiron Bill," the ship's seventy-seven-year-old cook, had a man dive into the schooner's galley for a grate from the stove.

It was easy to find fuel—there was a lumber cargo. They also had the food. What was needed now was a vessel to do the cooking in.

It may have hurt the new radio fan which the captain had turned into to tear out the coils, condensers, sockets and valves from the metal frame of the receiver. But this was done, and soon the odor of sizzling sausages, thirteen fish, and a few mangle potatoes heartened the crew again.

"So even after the storm warning we used the set," explained "Castiron Bill."

On the eighth day adrift the potatoes gave out and the fish went no longer bite, and "Castiron Bill" took to light cooking—four sausages a day for seven men.

It was a bad day all round. The fourth steamer had passed within five miles without sighting them, and the crew voted six to one against the captain to take to the single lifeboat the G. J. Cherry carried.

"Three hundred miles to land," said the captain, "and they wanted to row it. Childish. Would have been suicide."

"Why didn't they mutiny?" he was asked.

"Well, I persuaded them, I guess," said the weatherbeaten "old man" of the ship, who has been a master of sailing vessels for thirty-five years.

THE VACUUM TUBE AND ITS WORK.

OF present-day vacuum tubes, there are two main classes, namely, the two-electrode (diode) and the three-electrode (triode). The former class is employed for rectifying alternating current into direct current. The latter class is the standard vacuum tube so extensively employed.

Essentially, a vacuum tube is a modified form of electric lamp, with its filament heated by the passage of current. The heated filament gives off tiny particles of matter called "electrons." If in the same bulb there is placed an electrode called a "plate," and the plate is made positive with respect to the hot filament, the electrons from the filament will be attracted to the plate just so long as the filament remains heated and the plate remains positive. If the battery in the plate circuit be reversed, making the plate negative with respect to the filament, the electrons will be repelled by the plate and will re-enter the filament. Thus no current will flow. That, briefly, is the principle of the two-element rectifier tube.

By adding another electrode in the form of a mesh or grid which is called a "grid," we have the standard vacuum tube. This third electrode serves to control the flow of electrons to the plate. It is a gate valve, so to speak. By making the grid alternately positive and negative, the amount of current flowing from filament to plate can be increased and decreased, the grid itself taking practically no power.

In receiving practice the tube filament is heated by the "A" battery. The plate circuit utilizes the "B" battery. Delicate signals are impressed on the grid which regulates the flow of "B" battery current, either to detect the signals or to amplify them.

Radio in South Australia

A TRIP through the city and suburbs of Adelaide recently showed that radio is now taking a great part in the life of South Australians. In every direction aerials of all shapes and sizes are springing up, long, strong, and short; long thin ones which sway precariously when the wind blows and threaten to return to mother earth with their tangle of insulator decorated guy wires.

The programme provided by the "A" Class Station 5CL is very well worth the money, and with the little expenditure necessary to extend the range of the receiver it is possible to take a choice of the programmes offered by other stations. Three stations are working in South Australia, 5CL, the "A" Class Station and two "B" Class Stations 5KA and 5DN. Whilst at present 5KA works only three nights in each week, the programme provided is highly appreciated by numbers of listeners. 5DN can be heard working every day in the week.

Although the power of 5CL is only 5 kilowatts input, as in the case of the other Australian "A" Class Stations, the station is well modulated, and the range is such that it can be heard throughout the whole of South Australia in daylight, and throughout every portion of the Commonwealth at night.

Radio dealers in South Australia report that trade is booming, and good business is being done in radio receivers. Whilst the trade in parts for home construction of receivers is steadily increasing, the demand for commercially built receivers is increasing in leaps and bounds. Evidently the public are beginning to take radio as part and parcel of home life and are leaving the experimental part of it to amateurs and experimenters. Naturally, however, there must always be a percentage of listeners who will look upon radio from the experimental point of view and not as an entertainment factor in the home.

South Australia is fortunate in having a number of fine band organizations, and 5CL has not been slow in catering for the public demand in this line. Adelaide is known as the "City of Culture" and naturally this is reflected in the broadcast programmes to a great extent. Although fine classical programmes are often presented, the programme department of the station does not lose sight of the fact that a certain amount of the listeners demand lighter music. The station has permanently attached to its staff a fine studio orchestra, and this combination is assisted in the provision of light musical programmes by frequent broadcasts from the better known Dance Palais.

3000 English Schools now fitted with Wireless

WIRELESS IN SCHOOLS.

3,000 schools in Great Britain are now fitted with wireless. An article in the current number of "The Journal of Education" states that the time has now come for the British Broadcasting Company to arrange an all-day programme for schools on a separate wave length, and to use this wave length for the benefit of more advanced students in various kinds of continuation schools at night. Mr. D. C. Temple, M.A., who writes this article, which is entitled "Modern Inventions as Educational Aids," says:

"The poorest agricultural labourer can, and apparently does, afford his crystal set, thus coming into contact with the great world at his own fireside. And what of his children? Are they using the headphones also, and if so, what do they hear? Has their schoolmaster grasped the potentialities of this new instrument, and has he yet installed a valve set and a loud speaker in the village school."

The provision of this aid seems peculiarly a matter for those enlightened enthusiasts, who are fortunately to be found in all classes, who really care for the cause of education. 3LO, Melbourne, has commenced an educational programme on Thursday afternoon, which it is prepared to extend as the demand increases. The community as a whole is not yet prepared to spend on its schools what it spends across the bar, or on the race course, but in every community there are to be found people who believe that human progress is coming through the widening of human outlook, the quickening of imagination, the broadening of human sympathies by education. "We would be happy but for our pleasures," an Irish statesman is reported to have said. The only way of displacing the pleasures that waste time, money, physique and talent is by replacing them with others of better quality. This lifting of taste, and quickening and broadening of interest in life is the special task of the radio in education, and 3LO, Melbourne, is anxious to be allowed to play its natural part in the education progress in this State.

COUNTRY BROADCASTING.

The Policy of 3LO, Melbourne.

Every since the commencement of broadcasting 3LO, Melbourne, has made a special feature of relaying concerts, sporting functions and other ceremonies from every part of Victoria, and as far away as Sydney and Adelaide. These relays have always

been a huge success, and have been greatly appreciated by listeners. In many cases 3LO, Melbourne, has assisted in the success of the concerts by providing artists and bands to supplement the programmes.

It is not unusual for 3LO, Melbourne, to broadcast country relays almost every day in the week, and often it happens that in the large provincial cities two or three functions in one day are broadcast, and sometimes they are put on the air from many centres on the same day.

It does not affect 3LO, Melbourne, when trunk telephone lines are not available for these relays, because that station has always ready for emergency a portable transmitting plant which can be erected almost at a moment's notice on the location of the events to be broadcast, thus dispensing with telephone lines altogether.

Perhaps the record will be broken at Ballarat early in November when a huge charity concert will be broadcast, to be followed the next day with descriptions of the Agricultural Show, and at night the music of a grand Charity Ball. 3LO, Melbourne, is sending Joe Aronson's famous symphonists specially to Ballarat for those events, and the Mayor and Councillors of the City are co-operating. The local arrangements are being carried out by a strong committee of leading citizens. The third night's broadcasting from Ballarat will be the ever popular Community Singing. In between a race and other events will be described and items of special interest broadcast.

21 W.

WHATEVER is said about B class stations there can be no doubt that 2UW is making itself heard in many homes previously unaware of its existence. Since the installation of a new speech amplifier, this station has shown a vast improvement on its old transmission, and in its programme.

It has inaugurated a "Women's Session" each morning at 9.45 conducted by "Auntie Flo," and at least five nights every week, artists broadcast from 2UW, among them being Miss Elsie Ross, soprano, who can always be heard on Thursdays and is accompanied at the piano by her sister, Miss Jessie Ross. Professor C. Sauer has lately been secured by this station. Amongst its other artists, 2UW includes Mr. Stuart Peters, and Mr. George F. Manuel, tenor, who also conducts talks on "Natural History" every Wednesday evening, Miss Esther McAlpine, a contralto, and Miss Jane Edwards, a soprano.

BROADCASTING ERROR.

Big Fight by Radio.

THE BROADCASTING of the world's championship fight between Tunney and Dempsey was like the polite curate's egg—good in parts. Listeners in most parts of Australia received the news of Tunney's victory within a few seconds of the finish, but the detailed description was far from satisfactory.

THE TROUBLE was that the radio announcers at the ringside, instead of being shut inside sound-proof glass boxes, had to try to make themselves heard above the yelling of 150,000 excited men. The American radio stations reached Australia right enough, but most of the description was drowned in the shouting. The Australian stations had intended to relay the Americans, but it was found better to gather up the fragments of the story, piece it together and broadcast it afresh. This was done and the roar of the ringside was allowed to accompany the words of the Australian announcer, thus conveying a vivid idea of the excitement.

ONE-ACT PLAYS ON THE AIR: If 3LO is seeking a new and useful competition it will seek to foster the new technique of writing plays suitable for broadcasting. Far too few plays are broadcast. There is a love of drama inherent in each one of us. We naturally crave for the surprising and the unique or we are quite content to see the old dressed up in new clothes. Occasionally artists broadcast plays but they are plays written for visual acting. Too many explanations are necessary to enable listeners to follow the unspoken. In England, regular features of the programmes are one-act plays specially written for the wireless. We have in Australia people who are capable of writing such things, given the encouragement. A prize of £100 offered for the best radio one-act play to take not more than half an hour would produce probably a score of plays worthy of production in a studio. 3LO could secure the rights to these on payment of a reasonable sum and the author could licence other stations to use them. If the programmes now broadcast lack one thing more than another, it is variety. Anything new in this way would be to the good. It's an idea, anyway, with which I present 3LO free of charge.

It's All in the Air

Coming Features in the
Broadcasting Programs

"THE MERRY WIDOW": The studio presentation of this ever-popular musical comedy will be repeated on Wednesday evening, October 12th.

GREAT TREATS ORCHESTRA: The Regent Grand Concert Orchestra, conducted by Ernest G. Mitchell, will render a special programme on Monday, October 17th, starting at 3 p.m.

CLEVER COMEDIENNE: Pat McLean, the popular young comedienne, is to make a reappearance at the Studio of 3LO, Melbourne, for a short season, commencing on Wednesday, October 12th.

"THE DAUGHTER OF JAIRUS": Sir John Stainer's great choral work, "The Daughter of Jairus," will be produced at the Studio by the Collins Street Baptist Church Choir, under the direction of Madame Ella Kingston on Sunday evening, October 16th.

A CAMP CONCERT: Riflemen's susceptibilities are responsive to more than the musical "ping" of bullets, and they are living in appreciative anticipation of the concert which 2FC have arranged for their especial benefit at Liverpool Camp, on the night of 13th October. Charles Lawrence, the well known entertainer, is the capable manager of the party, which includes Gwladys Fimister, Ad. Cree, Bertha Warren, Joe Cahill, Harrison White, Laurence Macaulay and Mary Judd. The entertainment will be broadcast by 2FC.

THURSDAY, 13th OCTOBER: Organ recital from Crystal Palace Theatre, by Hai Stead, in the morning, between 10.30 and 11.30. In the afternoon, progress reports of the King's Shooting Match, from Liverpool. In the evening, from Liverpool Camp, special camp concert arranged by 2FC. The artists include, Charles Lawrence, Ad. Cree, Joe Cahill, Gwladys Fimister, Bertha Warren, Laurence Macaulay, Mary Judd, and Harrison White. From the studio, Eileen Boyd, contralto. Orchestral music from the Lyric Winter Garden Theatre. Special appearance of Walter Kingsley, English baritone, during his short stay in Sydney, after a successful tour of the States and Tasmania with the Humphrey Bishop Company. A talk in connection with Health Week, by Dr. Thompson, on "Diphtheria Prevention."

EVEN SONG: The weekly Even Song Service will be transmitted from St. Paul's Cathedral on Thursday, October 13th, at 4.45 p.m.

"TIP TOES" COMEDIAN: Cecil Kelloway, now appearing in "Tip Toes," will speak for broadcasting from his dressing room at the Theatre Royal on Thursday, October 13th, at 7.45 p.m.

N.S.W. BLIND INSTITUTE: Unhindered by their physical affliction, members of the Blind Institute will contribute to an attractive programme arranged by the capable Secretary, Mr. Hedger, from 2FC Studio, on Sunday afternoon, 16th October.

EDUCATIONAL SESSION: As usual this widely appreciated educational hour will be conducted at the Studio by the Rev. Kenneth Henderson on Thursday, October 13th, at 3 p.m. Dr. A. E. Floyd and Miss G. Flos Greig, B.A., LL.B., will also speak.

FRESH ARTISTS AT 2FC: This enterprising Station is continually discovering fresh talent, and the following artists have been added to their already long lists: Margerol Butterworth, contralto; Tom Goodall, cornetist; Roward Baverneche, tenor. The latter is over from Adelaide for a short holiday in Sydney. Harry Harrison will add unusual month organ novelties to an already diversified programme. Nea Hallett has recovered from a slight indisposition, and is booked for a series of appearances.

PUBLISHERS, book stores and newspapers report greatly increased sales of works by Australian authors as the result of the publicity obtained for Australian Authors' Week. Most of the credit is due to the organiser of the movement, Capt. J. H. Peters, whose talks on popular books are almost a permanent feature of the programmes of 3LO. The movement was a community one, and it will be a very hardy individual in the future who will dare, as it has been done in the past, to reject a book simply because he had found it was written by an Australian author. The good that has been done by the movement did not finish on September 10, but will carry its influence throughout the year.

CHORAL TREAT: The Melbourne Choral Union will render special anthems at the Studio on Saturday evening, October 15th.

COMMUNITY SINGING: From the Studio, Tuesday, October 11th, midday, from the Assembly Hall, Thursday, October 13th, and from Ballarat, Friday evening, October 14th.

3LO'S BIRTHDAY: Thursday, October 13th, is the third birthday of 3LO, Melbourne, and the occasion will be celebrated by a special broadcast programme from the Studio.

CAULFIELD CUP: 3LO, Melbourne, will broadcast running descriptions by "Musket," of the "Sporting Globe," of the Caulfield Cup and other races at Caulfield on Saturday, October 16th.

"HEALTH WEEK," Commencing Monday, 17th October, 2FC have arranged for a series of talks on the all important subject of health, which should prove of considerable interest and value. Health after all is largely a matter of sane thinking, and attention to the advice of the man who knows—the doctor. Listeners will have the benefit of the knowledge of Sydney's leading physicians and authorities during Health Week, and it behoves them to take the fullest advantage of it. Among those who will speak for ten minutes each night are Dr. Fordy, Dr. Barell, Dr. J. S. McEachren, Dr. Thompson, Dr. Arthur and Mr. Creswell O'Reilly.

AUSTRALIAN COMMONWEALTH BAND: Listeners are not likely to have forgotten the famous band engaged by the Haymarket Theatre last March, which is returning from its world tour by the Aorangi on October 14. The versatility of the Band is remarkable. To quote the critique by a prominent Melbourne paper—"Items given ranged from the dramatic intensity of Wagnerian music to tomes resembling a huge organ. Grand opera and the lighter music were rendered with the same ease and success." They will play in the Town Hall, Sydney, on October 15, and the enterprising management of Station 2FC are negotiating for the exclusive broadcasting rights of the performance. After their Sydney engagements, they will tour the sister States.

ON OCTOBER 17th, special arrangements have now been completed by Studio 3LO to broadcast a programme of band music from the Northcote State School. This band shows a tremendous improvement since the last broadcasting took place, and Mr. Johnson, the genial skipper of the Collingwood Citizens' Band, who is also in charge of the Northcote State School Band, is justly proud of the achievement of his young bandmen.

TO CELEBRATE "Trafalgar Day" fitting programmes have been arranged from Studio 3LO, Melbourne—especially with regard to the musical side, when old English melodies of the days of Nelson and Drake will form a conspicuous feature. As is usual on these occasions—Mr. J. Howlett Ross will give one of his well-prepared and scholarly discourses on the Battle of Trafalgar—and listeners will be all the richer from a mental standpoint for having tuned in to this inspiring address supplemented by old English orchestral and vocal selections, on Friday, 21st October.

THE PROGRAMME at Studio 3LO, Melbourne, has been considerably strengthened by the talented young musician, Hamilton Bateman, who is widely known throughout Australia as a particularly gifted violinist. Although he was born in Melbourne, Mr. Bateman has spent the best part of his life in England, where he made his first professional appearance as a violinist at the age of eleven at the Castle Theatre, Richmond (London), and astounded critics by playing Mendelssohn's Concerto at the age of twelve. He completed his studies under Professor Rivarde (who was a fellow pupil of Fritz Kreisler under the great continental maestro, Wienawski), and this eminent authority predicted a great future for the young artist. Since his return to Melbourne he has been actively engaged in concert work, has given two or three successful recitals, and is now going to add broadcasting to the rest of his activities.

OTHER COMING EVENTS.

On the 26th of October Fritz Hart's opera, "Fidelio," is to be repeated from Studio 3LO, Melbourne. This great opera has proved popular to a marked degree as is evidenced by the many hundreds of letters received by 3LO, Melbourne.

Talking of music, two new orchestras come on to the air at this time, Ernest Mitchell's fine orchestra from the Regent Theatre, South Yarra, and Professor Sarcoti's organisation. It is just as well 3LO, Melbourne, is building up these other orchestras, for the popularity of Joe Aronson's band is leading to requests from all over the city for his services at various balls. 3LO, Melbourne, has been very generous with the public, but they have to pay a substitute orchestra, so that the goodwill is costly.

LISTENERS will be glad to welcome Miss Vera Spauld to the programme from Studio 3LO, Melbourne, as her brightness and versatility are so well known. Whilst in "Madame Pompadour" at His Majesty's, where she has gained such a conspicuous success, Miss Spauld has many opportunities for singing, and she is still continuing her studies at the Conservatorium. For her broadcasting programmes, Miss Spauld has selected all the latest and brightest numbers in her repertoire, and feels that this is the type of entertainment the majority of listeners enjoy.

SHORTLY we are to have the pleasure of listening to Marie Lawton from Studio 3LO, Melbourne, who with voice, harp and piano, will make a welcome addition to the programme. From a musical standpoint, there is very little that this gifted young artist cannot accomplish—her well-trained soprano voice is equally at home in operatic, oratorio, or light comedy numbers—and when singing some delightful songs at the piano, her keen sense of comedy helps her to get every point successfully home. On the piano she is a brilliant executant, and her harp solos are too well known to need any further comment in these pages. The majority of the popular melodies arranged for the harp, are her own work—and a great many of the lyrics of the dainty songs she sings at the piano are from her facile pen.

ONE of the best broadcasting voices that has been heard from Studio 3LO, Melbourne, for some considerable time past, is that of Peggy Humbert—a lyric soprano—sweet and bell-like, with liquid cadences, that are shown to great advantage in light bright numbers, such as "The Pines of Pan" from "The Arcadians." Miss Furr is widely known throughout Victoria as a concert artist, and her many friends will be glad of this opportunity of hearing her over the air.

Broadcasting under difficulties. Mr. Welch describing the races at Flemington in torrential rain.



The Radio Receiver and its Work.

CONVERTING the entrapped radio energy into speech or music is the purpose of the radio receiver and its accessories.

First, there is tuning, which serves to bring various circuits in tune or resonance with the frequency of the desired wave, while, barring others, most receivers have a tuner for the wave-intercepting circuit, whether antenna or loop, and additional tuners for the other circuits. To reduce the number of tuning controls, the tuning condensers in various circuits are sometimes grouped together and controlled by one knob.

Secondly, there is the detector, which rectifies the radio-frequency energy into audio current.

Thirdly, there is the amplifier, which may be one of two types. There is the radio-frequency amplifier, magnifying the signals before they reach the detector and increasing the sensitivity and receiving range. Then there is the audio-frequency amplifier, magnifying signals after rectification by the detector. This last amplifier increases the audible volume rather than the sensitivity or range. Most receivers now have both kinds of amplification.

Fourthly, there are the batteries. The "A" battery lights the filaments of the tubes. The "B" battery furnishes current for the plate circuits. Sometimes there is a third battery, the "C" battery, which serves to reduce the "B" battery drain and produces better tonal quality with high amplification. Perhaps one or all the batteries are eliminated by the use of battery eliminators, operating on electric lighting current.

Fifthly, there are the vacuum tubes or radiotrons, which serve to detect and amplify the signals. The simplest receiving sets use a crystal detector, with its limited range and volume, in place of vacuum-tubes.

Sixthly, there is the loud-speaker for general enjoyment of radio programmes, and head-phones for individual enjoyment.

THE TRUTH ABOUT RADIO CIRCUITS.

THERE are just eight basic circuits in radio reception, and this despite the hundreds upon hundreds of so-called circuits. In fact, nothing serves to confuse the layman so much as the weekly appearance of new circuits with high-sounding names and lavish claims, producing the general but erroneous impression that radio is a constant experiment with receiving sets rendered obsolete a week after they are purchased. The

plain truth is that new circuits are very, very rare, although new names are plentiful.

Our present-day basic circuits are as follows:—

1. The simple crystal receiver, with a most elementary tuner.

2. The simple vacuum tube receiver, with a most elementary tuner, and no provision for so-called regeneration or radio-frequency amplification.

3. The regenerative receiver, in which part of the output from the detector is returned to the detector to increase the strength of signals.

4. Audio-frequency amplification, used in conjunction with all kinds of receivers in order to increase the sound volume in 'phones or loud-speaker.

5. Tuned radio-frequency amplification, in which each stage is tuned so as to secure the utmost transfer of radio energy from one stage to the next.

6. Untuned radio-frequency amplification, utilising fixed transformers which require no tuning or adjustment.

7. The redoxing arrangement, whereby a set of tubes do double duty, first as radio-frequency amplifier and then as audio-frequency amplifier.

8. The super-heterodyne, whereby the incoming wave is thrown into interference with a locally generated frequency, setting up a so-called intermediate frequency current which is amplified and then detected.

AUDIO-FREQUENCY AMPLIFICATION.

THE output of the usual detector is so weak that it will do little more than produce faint sounds in the sensitive headphones. So, for loud headphone results, it becomes necessary to step up or to amplify the weak energy. This is done by impressing the weak energy on the grid of an amplifier tube, wherein it serves as a flawless valve to control the flow of a current several times as powerful in another circuit to which the headphones are connected. And for loud-speaker rendition requiring far greater amplification, the output of the first amplifier tube is impressed on the grid of the second amplifier tube, which in turn controls a still more powerful current in circuit with the loudspeaker.

Some means must be employed to couple the detector with the first amplifying tube, and the first tube with the second amplifying tube. The simplest and most common method in-

volves audio-frequency transformers, which serve as couplers as well as to apply a higher potential on the grid of the succeeding tube. Audio-frequency transformers have windings composed of many thousands turns of extremely fine wire insulated with enamel coating, yet with a total diameter much less than a human hair. In order to step up the energy, the secondary winding or output winding contains from three to nine times as many turns as the primary or input winding, so that the transformer is referred to as having a ratio of 3-1, 3²-1, 5-1, and so on, as the case may be.

Low ratio transformers produce sweeter tones in the loud-speaker, but have less amplification. The marked improvement in tonal qualities during the past few months, to be found in the latest radio receivers, is due to better and larger transformers capable of uniform amplification of musical frequencies over a wide range. Two stages of transformer coupled give the necessary amplification usually required, corresponding to three stages of other methods.

"THE CHOCOLATE SOLDIER":

Listeners will appreciate the opportunity of hearing excerpts most suitable for broadcasting, through station 2FC, of the popular comic opera by Strauss, on the evening of 12th October. There is a fine cast, in which Gerald Walenn takes the title role, supported by Stella Wilson, Leo Darenton, John Ralston, Bernard Manning and Mabel Gibson. Our readers will be glad to know Mr. Manning has recovered from the slight throat affection from which he was suffering, for which the vagaries of our delightful climate as well as overwork were responsible.

THE DEVELOPMENT OF WIRELESS

in British Colonies and Protectorates was one of the questions under discussion at the Colonial Conference which met recently in London. During the past fifteen years about thirty small stations have been erected, being used mainly for local requirements and communication with shipping, but they are regarded as the preliminary links in a chain of Empire communication which may be ultimately established. Ceylon has taken the lead in establishing a broadcasting service, while the possibilities of development in this direction are being considered by Hong Kong, Palestine, the Gold Coast, Cyprus and Zanzibar.

The Story of a Filter Condenser

A TIN can is all that greets the eye of the average radio set owner when he views a filter condenser, and the chances are if he did see what was inside the sight would be no more impressive. Yet the intricate processes and the many precautions in the manufacture of this seemingly simple piece of apparatus might be woven into a story of amazing proportions.

When it is explained that a filter condenser can be made faulty by such minute things as a speck of metal so small that it is invisible to the naked eye, or by a small stain from the perspiring fingers of the operator winding the condenser, the problem confronting the manufacturer will be more fully understood and appreciated.

If we remove the tin can from a filter condenser we will find what appears to be an oblong block or several oblong blocks of wax, depending on the size of the condenser. Upon closer examination, however, it will be discerned that the condenser is made up of two layers of tinfoil and one or more layers of very thin paper solidly wound and impregnated with wax.

How It Is Used.

In its application one of the layers of tinfoil is connected to one side of an electrical circuit and the other layer is connected to a line of opposite polarity and the layers of paper act as an insulating medium. In certain circuits there is at times a stress of as much as a thousand volts between the two layers of tinfoil, which, in an analogy, might be said to be seeking an exit through a weak spot in the insulating paper to the layer of opposite polarity. A tiny speck of metal imbedded in the paper during the papermaking process, a trace of moisture due to dampness of the air at the time the condenser is wound, the slight perspiration from the fingers of the girl operator on a warm day, a wrinkle in the tinfoil, a tear in the long strip of paper—these and many other seemingly slight defects will provide a path for the terrific strain and the condenser "breaks down." Hence the first and most important step in the making of paper condensers is the examination and testing of materials entering into the production, followed by careful use of such material in the making of the condenser.

The paper, contrary to lay opinion, is not waxed at the time it is

How a delicate piece of radio apparatus is made.

Why unusual care is taken in its manufacture.

made into a condenser. It is a thin, tough, smooth and clean bond paper of special manufacture, made of pure linen rags and measuring about .001 of an inch in thickness. The specifications for condenser paper set as standard by the Dubilier Condenser Corporation permits a certain number of flaws—small metallic specks worn from the rollers in the process of paper manufacture—per square foot. Each lot of paper is tested in the laboratory of this concern by a chemical process which causes the metallic flaws to become visible in the form of colored spots or circles.

Aside from the flaws, which are the most important consideration, the paper is also tested for tensile strength, ageing, porosity, acidity, alkalinity, moisture absorption and electrical strength. The tinfoil, likewise, must meet rigid specifications. It must be smooth, free from wrinkles, capable of staying put when rolled and devoid of holes. It measures $\frac{1}{2}$ to $\frac{1}{4}$ thousandth of an inch in thickness.

The First Step.

The first step in the making of a condenser is the winding operation. Operating with an automatic feed and watched by skilled operators, the winding machines form the three layers of tinfoil and paper, automatically counting the number of turns. When the desired number of turns have been wound the operator cuts the paper and tinfoil with a pair of shears and the first step is completed. Following the winding the rolls are tested for short-circuits to prevent waste effort on defective units.

Impregnation or "waxing" is the most critical part of the process. The loose rolls taken from the winding machine are placed in an iron frame with a steel slab at top and bottom, so that each roll is held between steel slabs. The mass is then placed in a press and a predetermined pressure applied. The frame is bolted while under this pressure as

a means for keeping the condenser sections in their new compressed form.

The frames are now brought to the vacuum and impregnating tanks. These tanks are huge iron pots consisting of two sections, a feature which permits the impregnating liquid to be driven from one to the other to facilitate loading and unloading. The tanks or vats are steam jacketed in order to provide the necessary heat to keep the impregnating compound in a liquid state.

After the frames, with their condenser sections, have been placed in an empty vat a heavy lid is closed hermetically sealing all that is inside and a vacuum is created to remove all traces of air and moisture from the sections. The vacuum treatment completed, the impregnating compound is permitted to run into the sealed vat from the adjoining vat. The hot liquid penetrates through the condenser section so that the compressed mass is thoroughly filled with compound. This impregnation not only extends to every crevice and fold, but even soaks into the fibres of the insulating paper. Cooling and removal from the vat now follows, and after certain treating and annealing processes the condenser sections are removed from the iron frames.

Given "Flash Test."

The completed sections are now given a "flash test," which is done at a voltage considerably higher than the working voltage to which they will be subject during actual operation. These flash tests serve to detect any faulty condensers before they are assembled.

The condenser sections are now assembled to form the various values of condensers in demand. They are electrically connected by means of stout conductors, placed in a metal can and sealed. Following this the condensers are again tested and they are ready for shipment.

After reading this the set owner and experimenter will more fully appreciate the trials of a condenser manufacturer, and perhaps he will not unthinkingly abuse his filter condensers by subjecting them to voltages in excess of that marked as "working voltage." He may even be philosophical when a condenser "breaks down"—but that is asking too much.



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1 Gridleak Holder	1 0
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A Cockaday-Hartley 3 Valve Receiver

MANY and varied are the circuits devised by expert writers and they are all good. But the question of just how good they are is qualified by their performance. Some readers there are who are satisfied with what they call good results from the local stations, but it is certainly admitted that many readers do not consider that good results are obtainable unless they are attendant with interstate.

It is a somewhat difficult matter to combine both sensitivity and selectivity in a receiver. To effectively do this some form of radio frequency amplification is desirable and this means the addition of extra valves. The Neurodyne and the Solodyne with both effectively bring in interstate stations with regular consistency night after night, but both of these receivers are of the five-valve variety. Now, there is many a man anxious to use three valves only and to get some sort of response from the interstate stations. Last week's receiver, the Rice Neurodyne, is a particularly good receiver for this purpose, and so is the one about to be described.

This one is known as the "Cockaday-Hartley" Three-Valve Set. No radio frequency valves are used, but a good degree of selectivity is obtainable for distant reception. The names of Cockaday and Hartley are well-known to the earlier enthusiasts in radio, Cockaday designing several receivers bearing his name and Hartley is better known for his work with transmitting circuits. Many and varied are the circuits and modifications of circuits which are put forward from time to time for the object of cutting out the transmission from a powerful nearby station and receiving something from a more distant or interstate station. To the man who has no wish to employ radio

frequency, then this receiver will appeal to him for besides, as has been previously mentioned, being selective, it is, nevertheless, sensitive.

Selectivity.

A well-known method of achieving selectivity is to use as few turns in

the aerial circuit as is possible. Unfortunately, while this gives the required selectivity, the sensitivity invariably suffers. Cockaday produced a medium whereby only a portion of the aerial circuit was coupled through the grid, or secondary coil and the same has been done in this receiver, plus the addition of smooth reaction and that which might be called a wave trap.

Reference to the circuit diagram shows what is meant. Coil L1 is the tapped wave trap coil, L2 being the primary, in the ordinary sense of the word, and L3 being the coupling portion of the primary which is inductively coupled to L4, the secondary reaction coil. This latter coil is tuned for its whole length by C2 variable condenser of .0005 mfd. capacity. L2-L3 is tuned by another .0005 mfd. condenser, but the reaction condenser is one of the small midget types so much in evidence to-day.

The coil designated L5 is a radio frequency choke, and acts as a buffer to the radio frequency current, forcing it from the plate of the detector valve down to the reaction coils, so that effective reaction is obtained. It will be noticed that the grid leak, instead of being connected across the grid condenser, is taken direct from the grid of the valve to the A positive lead. This is absolutely essential in this circuit, so remember to keep this in mind when constructing the set.

Audio Frequency.

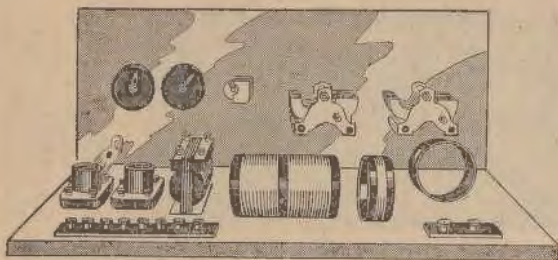
Now the question of just what form of audio frequency should be employed is one that is ever recurring in the minds of technical men. Quite a lot of discussion has arisen around this subject of audio frequency amplification, some maintaining that for pure tone, resistance coupling is the

Parts Required

Although the parts listed below and mentioned throughout the article were those actually used by us in the receiver described, it must be pointed out that it is not absolutely essential that they be exactly selected in.

Other parts of similar quality and technical values should function quite satisfactorily.

- 1 Dilecto, Radion or hard rubber panel 20 x 8 x 3-10ths.
- 2 .0005 mfd. Variable Condensers.
- 2 Emmco Vernier Dials.
- 1 4-inch length of 3-in. Dilecto or Radion Tubing.
- 2 1½-inch lengths of 3-inch Dilecto or Radion Tubing.
- 4 oza. No. 24 gauge D.C.C. Wire.
- 4 oza. No. 26 gauge D.S.C. Wire.
- 3 Valve Sockets.
- 2 30 ohm Rheostats.
- 1 A.W.A. Superaudio Five to One Transformer.
- 1 One stage Polymet Resistance Coupling Unit.
- 1 Advance Midget Condenser.
- 1 Radiokes R.P. Choke.
- 1 .00025 Wireless Grid Condenser.
- 1 Two Meg. Grid Leak and Clips.
- 1 E.M.S. Battery Switch.
- 1 E.M.S. S.C. Jack
- 1 Baseboard
- 11 Terminals.
- 1 Terminal Strip.
- Busbar, etc.



Back view of receiver.

only suitable system. Others again favor transformer coupling and others impedance couplings. Without entering into any controversy in the matter the writer has heard excellent tone from standard transformer coupled stages and incidentally has heard most impure reproduction from the same method. Also, it is interesting to note that the most raucous reception ever the writer heard came from a receiver in which resistance coupling throughout was used.

An investigation of the causes of distortion in the resistance coupled stages revealed the fact that incorrect values of resistances had been used. Unless good quality resistances are pressed into service when the receiver is being constructed, very poor will be the results. After awhile, the resistances become impaired on account of the pressure of the B batteries flowing across one of them. It is, therefore, seen that too much stress cannot be laid on the necessity of good quality resistances in the resistance coupled stage. The Polymet single stage used in this receiver is quite good and will last, so will also Durham metallised resistances. The coupling condenser C5 should be no smaller than .006 mfd. and this is the actual size supplied with the kit. No harm can come to anything that even a quarter microfarad condenser is placed in this position, but there is hardly any need for it.

It must always be borne in mind that to get the best from any resistance coupled stage of audio frequency amplification a high plate voltage is desirable. "High" means somewhere in the regions of 120 to 135 volts. Anything lower than this is of very little use.

Coil Design.

In this receiver instead of purchasing a ready-built kit of coils, these can be made at home very quickly. In the list of parts will be seen some three-inch tubing specified, and it is

on these three pieces of tubing that the four coils are wound. First of all, wind the secondary or grid coil L4, which consists of 80 turns of No. 24 D.C.C. wire. This wire is strong, but the 30 gauge D.S.C. wire is, of course, very thin so a little care is necessary in handling it. Don't for a moment think that it will break very easily, but understand that it will not stand the same stress as heavier gauge wire.

Begin winding this coil by drilling two small holes three-quarters of an inch away, and parallel to one edge. Carefully thread the beginning of the wire in and out of these holes to secure it properly. Now wind on thirty turns, each turn being close to the other, and take the thirtieth turn across a space of half an inch and continue winding the other thirty turns, finishing off by threading through two other holes as you did the beginning. At the thirtieth turn the insulation should be scraped from the wire and the wire left bare for about half an inch. Carefully drill a small hole in the centre here and insert a contact stud to which should be soldered this bare portion of the wire. If desired, a coat of shellac may be given to this coil, but under no circumstances shellac the contact stud, as shellac is a very good in-

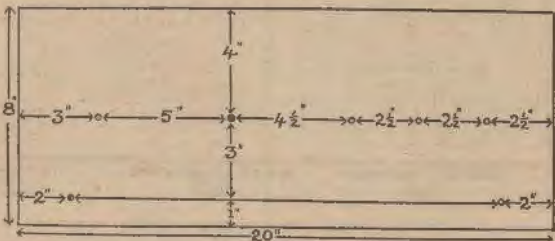
substant, and would therefore not allow any connection to this stud.

Coupled to this coil is the five-turn portion of the primary. These five turns should be wound on one of the smaller pieces of tubing, starting and finishing by securing in the manner already specified. The other small portion of tubing holds both L1 and C2. L2 should be wound on first. It consists of forty turns of the thirty-six gauge wire. Wind this on carefully, then on the same former wind coil L1, which is of fifteen turns tapped at six, nine, and the twelfth turn. The method of taking tapings may conveniently be that ancient and somewhat crude but easy method of twisting loops in the wire at the desired point. The insulation should be scraped off each loop and a spot of solder applied to each tap to give a certain tensile strength for clipping to when the receiver is in operation.

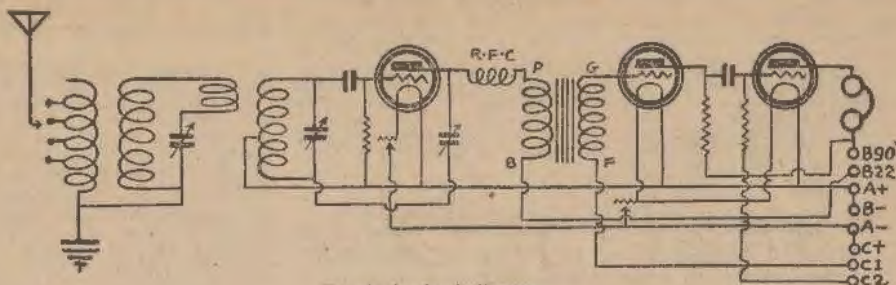
Panel Layout.

Place these coils on the one side, then attend to the panel layout. It is always advisable to mark out the panel with a centre punch before attempting to drill. This overcomes the possibility of the drill slipping and consequently making the hole in the wrong place. Panel drilling diagram here gives dimensions which will be found suitable for most components. On the panel is mounted the two large variable condensers, then the midgeet reaction condenser and then the two rheostats, the second rheostat controlling both audio valves. In addition, there is the battery switch and the jack as well as three holes for fixing the panel to the baseboard. Where counter sinking is called for a larger-size drill will effect a necessary cut.

Mount the components and if everything has been drilled correctly, it will fit into position very nicely. Incidentally, don't forget to provide for the catch screws for the Vernier dials. Now mount the panel in position on the baseboard and proceed to lay out the baseboard parts.



Drill panel to these dimensions.



Here is the circuit diagram.

Baseboard Layout.

The back of panel wiring diagram shows just where these should go. A certain amount of difficulty may be met with in securing the coils to the baseboard, but the use of short pillars made from rod half an inch long will raise these coils off the baseboard. A wood screw about an inch long will be found quite suitable for going right through the former, and through the pillars, which should be drilled previously, of course, and into the baseboard. Thus will uniform height be maintained. The former on which is wound L1 and L2, should be so mounted that the top portion L1 should be at the back of the baseboard. At right angles to this mount L3, but, just for the moment, don't screw it into its position permanently. To the left of L3 mount L4. Allow approximately about two inches space between L3 and L4, as the coupling between these two coils should be as loose as is commensurate with the ultimate results. Whatever you do, remember that L3 should be placed at

right angles to L2. This is most important; and also note that L3 is running in the same direction as L4. Now mount the detector valve socket, the radio frequency choke, the audio frequency transformer and the other components, following out the back of panel wiring diagram as a suggestion.

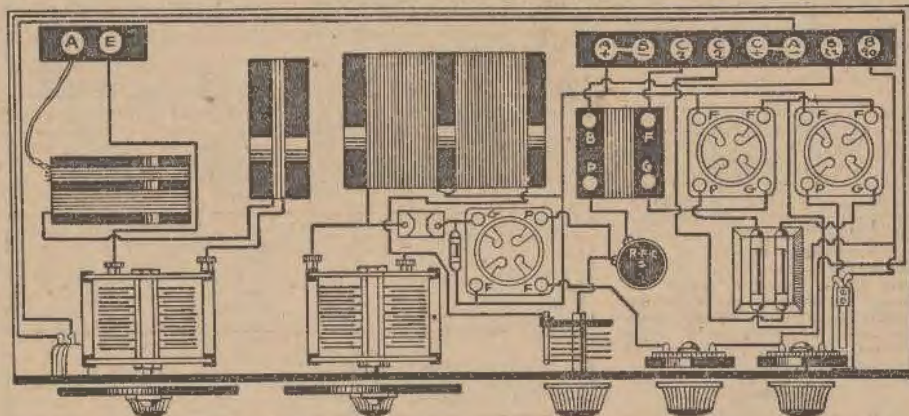
Now prepare the terminal board. Nine terminals should be mounted on a strip of paneling, spaced about an inch apart. To save time and trouble under the nut of each terminal clamp a soldering lug to which can be soldered the connection without disturbing anything. Mount this in its position, and also a smaller terminal board near the coils which supports the aerial and the earth terminal. The wiring can now be commenced.

Wiring.

Link together one F terminal of each valve socket and continue the connection to the contact stud, which acts as the tap in L4, also to one side of the grid leak and finally to the

A positive and B negative terminals on the terminal board. Now join together one side of each rheostat, containing this wire to the A negative and C positive terminals on the terminal board. Now join the beginning of L2 to the beginning of L3, connecting the end of L3 to the fixed plates of the first variable condenser C1, joining the moving plates of this condenser to the end of L2, also to the end of L1 and then to earth. A short length of flexible wire about six inches long should have a battery clip attached to one end and the other end joined to the aerial terminal. This battery clip wanders over the taps of L1. Now connect the beginning of L4 to the fixed plates of the second variable condenser C2, from thence to one side of the grid condenser; the other side of which is connected directly to the grid terminal of the detector valve and to the remaining side of the grid leak.

Join together the fixed plates of the midget reaction condenser to the moving plates of condenser C2 and to the



The back of panel wiring diagram should be compared with the wiring instructions.

bottom of Coil L4. The moving plates of the midge reaction condenser are connected to the plate terminal of the detector valve socket, and to one side of the radio frequency choke. Join the other side of the radio frequency choke to the P terminal of the audio frequency transformer. From the B terminal of this transformer run a connection to a terminal on the terminal board for the B positive detector supplied. Now connect from G of this audio transformer to G of the second valve socket. P of this transformer should be taken to a terminal for the grid bias negative, or for the C negative which is applied to the grid of the second valve. The remaining terminal of this second valve socket "M" take to P of the resistance coupling stage. B of this resistance coupling join to the B positive amplifier terminal on the terminal board. Now join G of this resistance coupling stage to G of the last valve socket.

The last terminal on the Polymet stage F, connect to a second C battery negative terminal alongside the previous one. P of the last valve socket join to one side of the jack, the other side of the jack join to the B positive amplifier terminal which already has one connection. This completes the wiring excepting that it is noticed now that the battery switch is not connected up. This battery switch should be put on either the negative or the positive lead of the A battery, actually being connected in series. That is to say, supposing it were placed in the negative lead, a wire should be run from the negative on the terminal board to one side of the battery switch; from thence up to that wire which joins the two rheostats together. Check over all your connections, making sure they are correct, and that all nuts are tightly secured in their positions and that soldered joints are strong.

Valves.

A note on the suggested valve combination will not be out of place here. To-day there are available on the market special resistance coupling valves, such as Cosor, Oaran, and Radiotron. One of these valves to be used in the resistance coupling stage, or better still, in the middle valve socket. On test a Radiokes 2011 general purpose valve was used as a detector and the Radiotron UX240 as the first audio stage. A Radiokes UX112 power valve fitted in the last stage. Later on, a Cosor Point One Resistance Coupling Valve was substituted in place of the UX240 with equally good results.

Batteries.

The B battery requires careful consideration. For the detector 45 volts were used, and for the amplification

stages 135 volts were applied. The grid bias on the first stage, that is, the transformer coupled stage, was nine volts, whereas 12 volts were applied as grid bias to the last valve. A certain amount of juggling may be necessary to get the last ounce of energy from the receiver, but it is worth the effort put forward.

Tuning.

In actual tuning, considerable interest was evinced. Connect up the aerial and earth; the aerial not exceeding 70 feet over all in length. The average height is 30 feet. Plug the speaker into the jack and tune in. Clip the battery clip on one of the taps of L1, then gradually tune with both Vernier dials. Bring in the local stations firstly, tuning him up with the loudest point. Then, move L3 slightly further away from L4 and return with the second condenser. Now seek 3LO. This time, use the headphones instead of the speaker. This station will be found a few degrees away from 2RL. Use the reaction condenser judiciously so that the set is just on the point of oscillation. Get 3LO clearly. If there is a slight background of 2BL, move L3 about on the baseboard, returning after each movement until the interference vanishes. Permanently fix L3 in this position. Now go for 4QG Brisbane. They will be found all right and quite clear from 2FC. Certainly the volume will not be tremendous, but bring it up to the loudest point and put it on the speaker. You will be surprised at what you will hear.

At Marrickville, very interesting results were received on this set. Faintly on the phones could 2YA Wellington, be heard, altogether apart from 2FC. It certainly required careful tuning, but is well worth the effort and the tone value proved of a very high order, rendering it dear to the hearts of the ladies in the home. The highest notes and the lowest notes were clearly brought out with full quality of tone. The piano which sometimes is very hard to get the best from it, proved wonderful. So did violin music. Try it for yourself. As a last word, remember that the secret of success in the selectivity portion of this receiver lies in the placing of L3 in relation to L4.

GORDON V. LAYERS, the blind pianist, gave a very enjoyable lecture-recital on "Melody in Composition" from 2FC studio, on the afternoon of 25th September. Nature has sought to even the scale by endowing this artist with enviable talent, unhampered in a truly remarkable way by his physical affliction.

Which Station—or Both?

AN amusing incident is related by the officers of the Papuan Government official vessel *Laurabada*. They are all more or less radio enthusiasts, and one night, six weeks ago, they tuned in the ship's set to the wave length of 2FC, Sydney.

To their surprise they distinctly heard someone say, "This is 3LO, Melbourne." In astonishment, they gave the dials a twist over to 3LO only to hear another voice, "2FC, Sydney, speaking." Without being particularly superstitious some of the party certainly wondered whether everything was right with the set—a fine five valve instrument. The operator, Mr. J. H. C. Waldron, remarking that it appeared to be working backwards, ran over the wiring, pulled out a couple of valves, touched up the rheostat and tested the condensers. Still the set insisted on being 2FC one minute and 3LO, Melbourne, the next.

After trying the transformers, examining the aerial and a few more gadgets and finding everything in order, the ship's company decided to cease worrying and listen. They settled back in their chairs and heard an act of the opera "Madame Pompadour," broadcast from Her Majesty's Theatre, Sydney. At its conclusion came the announcement that cleared up the mystery. It was 2FC that was doing the original broadcast, 3LO was relaying 2FC, and both stations were being heard equally well on board the *Laurabada* 2,500 miles away from Melbourne and 2,000 from Sydney.

After a good laugh Mr. Waldron sat down and wrote a letter to 2FC telling all about it. "I got Pompadour beautifully," he said. "I was very sorry there was not more of it."

"SOME" SURPRISE PARTY.

The surprise party broadcast by 3CL on the evening of Thursday, September 22nd, was certainly, as the Americans have it, "some" party. In the first case, one gentleman brought along with him a calf with its heart situated in its throat, and another brought a Ruesian wolf hound or horzo, standing over 33 inches high. Although listeners did not hear a broadcast encounter between the two animals, the sound of their respective heartbeats was made audible by means of 3CL's super-sensitive microphone with great clarity.

The calf is an unusual freak of nature, and the dog is considered to be one of the biggest in the world. In addition, the heart beats of a normal man were broadcast so that the difference could be noted.

Development of the Super-Neutrodyne

DURING recent years great attention has been paid to the development of multi wave broadcast receivers and to the overcoming of interference problems. This development has taken place along two main lines, the super heterodyne and the radio frequency amplifier.

During the war practically all transmission and reception of importance took place on long wave lengths, only unimportant communications over short distances taking place on those wave lengths now allotted to ordinary broadcasting. Consequently much attention was paid to the development of receivers and radio frequency amplifiers for use on these long wave lengths and several notable designs were produced.

When telephonic broadcasting commenced and the public began to demand receivers in order to listen to broadcasting, efforts were made to adapt these long wave receivers to the reception of short waves, but without much success. For reasons which were not then fully understood, receivers built for short waves on the lines of those developed for long were most inefficient; in fact, in several cases, increasing the number of valves in the set actually reduced the strength of reception instead of increasing it. At this time a remarkable invention was made. It consisted of receiving the short wave and actually changing its wave length to that of an exceedingly long wave so that these long wave amplifiers which had been developed during the war period could be used to amplify the short wave signals. This method of reception became known as the super heterodyne or super-sonic method.

However, certain radio engineers were not satisfied to sidestep the matter of short wave radio amplification in this manner. In the first place, the Super Heterodyne represented a waste of valves, in that, valves had to be used to obtain the change of wave length and these valves did nothing to strengthen the signal. Again, there was a certain pig-headedness about them. Theoretically, it should be just as easy to amplify a short wave as a long one, but unfortunately it was not. These engineers refused to be content until they had found the cause. Slowly they came to realize that this reason lay in the fact that the electrodes of a valve act as a small condenser, which permitted the energy released by the valve to re-enter the valve and

That an Australian engineer was the first to patent the circuit design which subsequently appeared in England as the "Elstree Six," is the claim made in this article by a local writer

thus upset the working of the set. Having found the reason for failure the cure was bound to follow. The leading inventors in every country of the world concentrated their attention on the problem and progress was steadily made. First came a method of cancelling the spill over of energy by introducing resistances into the various parts of the receiver. This certainly improved results, but the improvement was again obtained at the expense of efficiency. Perhaps the ST-100 was the most famous example of this type using a 100,000-ohm resistance. Then either in England or France it was seen that it was possible to place this resistance in such a position that it did not absorb much energy from the received signals and another improvement was made. This method lately has become very popular in the cheaper American sets. Unfortunately, it still was not an ideal method, as although the resistance did not absorb energy from the actual received signals it did absorb energy from the output of the valve and again the set could not work at maximum efficiency.

However, the engineers investigating the matter did not abandon their quest but persisted, being sure that a solution did exist. They realised that these resistance methods were something like trying to reduce the speed of a motor car going up a hill by putting the brakes on instead of releasing the accelerator.

Solutions were found in America, England and Australia. It is impossible to say who had the first glimpse of the solution, the thing that matters was that it was solved. An American, Professor Hazeltine, invented one solution. He used a transformer and small condenser to spill over a little energy from the plate circuit of the valve which would just counterbalance or neutralise the energy spilled over the valve itself. The result was quite remarkable.

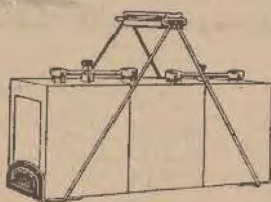
An Australian engineer employed by a Sydney company discovered and patented the method of doing a similar thing without using a transformer,

as he considered that certain disadvantages were attached to the use of the Transformer for this purpose. Finally the Elstree Laboratories in England did exactly the same thing as the Australian engineer, and published the circuit diagrams of the Elstree Six with the statement that they considered that all the old methods were so hopelessly out of date that they would no longer supply information as to their construction. In fact they went so far as to say that the Elstree Six would never require alteration or improvement.

Which of these three inventors was the first it is difficult to say; whether their inventions clash is also a difficult matter, but their results are now available to the Australian public. The Elstree method and the Australian method are practically identical. The Elstree method was published in 1926, and the Australian method was patented in America as well as Australia in November, 1924. Therefore, the Australian probably obtained his result before the Elstree Laboratories, which were not organised in 1924. Up to recently the Australian invention has not been available to the public. Because of the great wavelength ranges, it was very difficult, although not impossible, to incorporate the invention in receivers. Now, however, sets are available, as the patent rights on this method were secured by an Australian Company, United Distributors Limited of Sydney, and the original inventor is at present supervising the construction of Edison Sets incorporating the invention in connection with 1, 2, 3, or 4 stages of radio frequency amplification in 4, 5, 6, and 8 valve sets.

MR. TADASHI IWAI lives in Haranomachi, Japan. Whatever the attractions of his native town are, he finds it preferable to listen to S.L.O. He sent this quaint letter to the studio: "I take the liberty of announcing to you that I have ever picked up your broadcasting with my 5 tube Regenerative Neutrodyne Circuit (which I built) Receiver or one with Loud Speaker. Since September 24, 1926, and sufficiently made sure of the call sign, but to know it more exactly I require would you kindly tell me about the following matters: 1, Your wave length; 2, Power; 3, Day and Time (by your broadcasting); 4, Sort of Broadcasting; 5, Name of your transmitter. Besides to be bestowed your photograph or receipt I will esteem it a great honour. Allow me to subscribe myself. Your obliged and obt. servant."

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XP40—42 Volts 21/-

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"A" BATTERIES.

Standard, 4½ Volts ... 9/6

"C" BATTERIES.

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BROADCASTING PROGRAMMES

For the COMING WEEK

Friday, Oct. 14
2FC, SYDNEY.

Farmer's Broadcasting Service.

Wave Length, 442 Metres.

EARLY MORNING SESSION.

MORNING SESSION.

- 11 a.m.—"Big Ben," and announcements.
10.5 a.m.—Studio music.
10.15 a.m.—"Sydney Morning Herald" news service.
10.30 a.m.—Studio music.
10.35 a.m.—A reading.
10.45 a.m.—Studio music.
11 a.m.—"Big Ben." Marching music for school children.
11.5 a.m.—A.P.A. and Router's Cable Service.
11.10 a.m.—Studio music.
11.15 a.m.—A talk on home cooking and recipes by Miss Ruth Furst.
11.30 a.m.—Close down.

MIDDAY SESSION.

- 12 noon—"Big Ben" and announcements.
12.2 p.m.—Stock Exchange, first call.
12.3 p.m.—Official weather forecast, rainfall.
12.5 p.m.—Studio music.
12.10 p.m.—Summary of "Sydney Morning Herald" news service, Rugby wireless news.
12.25 p.m.—Studio music.
12.30 p.m.—Marching music for school children.
12.40 p.m.—William Bowyer, baritone, "Friendship" (Harvey).
12.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
12.55 p.m.—Studio music.
1 p.m.—"Big Ben." Weather intelligence.
1.2 p.m.—"Evening News" midday news service. Producers' Distributing Society's report.
1.30 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
1.38 p.m.—Stock Exchange, second call.
1.40 p.m.—Marching music for school children.
1.40 p.m.—William Bowyer, baritone: "In Sheltered Vale" (Melody).
1.45 p.m.—Studio music.
1.50 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 2 p.m.—"Big Ben" and programme announcements.
3.5 p.m.—Netta Mullarkey, mezzo: "Whispering Wheat" (Elliott).
3.7 p.m.—Nes Hallett, soprante.
3.11 p.m.—Kathlene Cracknell, contralto: "Sapphic Ode" (Johannes).
3.15 p.m.—A reading.
3.20 Latent sprouting information.
3.25 p.m.—"Big Ben." Daigo's market reports (wheat, wheat and stock).
3.30 p.m.—Fruit and vegetable markets.
3.35 p.m.—Weather and shipping news.
3.40 p.m.—Perala Rutler, soprano: "Pierrot" (Samuels).
3.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO. (Leader, Mr. Horace Ketta).
3.55 p.m.—Nes Hallett, soprante.
4 p.m.—"Big Ben." Frank Botham, baritone: "A Warwickshire Wooing" (Janica).
4.1 p.m.—From the Liverpool Camp Headquarters. Details of the progress shooting for the "Kings".
4.20 p.m.—Perala Rutler, soprano (from Farmer's Tea Rooms): "Spring dropped a song into my heart" (Fence).
4.25 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
4.32 p.m.—From the Liverpool Camp Headquarters. Progress results of the shooting for the "Kings".
4.40 p.m.—Frank Botham, baritone: (from Farmer's Tea Rooms): "Lorraine" (Sanderson).
4.45 p.m.—Stock Exchange, third call.
4.47 p.m.—Kathlene Cracknell, contralto (from the studio): "Psyche" (Palafitte).

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

- 2FC.—Farmer's Broadcasting Station, Ltd., Sydney, wavelength 442 metres, power 5000 watts.
2BL.—Broadcasters' Ltd., Sydney, wavelength 333 metres, power 5000 watts.
2GB.—Theosophical Broadcasting Station, Ltd., Sydney, wavelength 315 metres, power 2500 watts.
2RY.—Trades and Labor Council, Sydney, wavelength 284 metres, power 1500 watts.
2UW.—Otto Sannell, Sydney, wavelength 267 metres, power 500 watts.
2VW.—Hacker Bros., Bathurst, wavelength 276 metres, power 250 watts.
2UE.—Electrical Utilities Supply Co., Sydney, wavelength 293 metres, power 250 watts.
2BE.—Bargin Electric Co., Sydney, wavelength 316 metres, 100 watts.
2BD.—H. A. Douglas, Newcastle, wavelength 283 metres, 100 watts.

- 4.50 p.m.—From the Liverpool Camp Headquarters. Progress results of the shooting for the "Kings".
6.40 p.m.—Studio music.

- 4.55 p.m.—Popular records from the studio.
5 p.m.—"Big Ben." Close down.
Note: An opportunity will be found of broadcasting the speech by the Winner of the "Kings" in addition to the results.

EARLY EVENING SESSION.

- 5.40 p.m.—The chimes of 2FC.
6.45 p.m.—The "Hello Max" talks to the children.
8.30 p.m.—Story time for the young folk.

NIGHT SESSION.

- 7.30 p.m.—Programme announcements.
7.35 p.m.—A talk on "Health Work".
7.40 p.m.—Jones and Raine, entertainers: (a) Humorous song, "Skating"; (b) Song, "Baby's box of Toys" (Francis); (c) Humorous parlour, "March of the Gladiators".
7.55 p.m.—Alfred Cunningham, baritone: "Fuschel's" (Muller).
8 p.m.—"Big Ben."
The Bondi Beach Concert Band.
8.15 p.m.—Alfred Cunningham, baritone: "I Balen" ("Il Trovatore") (Verdi).
8.20 p.m.—The Bondi Beach Concert Band.
8.30 p.m.—Scott Alexander, comedy sketch.
8.40 p.m.—The Bondi Beach Concert Band.
8.52 p.m.—Jones and Raine, entertainers: (a) Humorous Song "Tossie Homes" (Ruse); (b) Patter.
(c) Duet, "Oh If I only had you" (Friend).
(d) Buck, "Big Ben." Late weather forecast.
9 p.m.—A relay from the evening programme given by 6WF Perth, Western Australia.
9.30 p.m.—The Bondi Beach Concert Band.
9.42 p.m.—Alfred Cunningham, baritone: (a) "The Sands O' Dee" (Clay); (b) "In a crowded street" (Drummond).
9.47 p.m.—A talk by Mr. Graham Kest, Subject: "Women and Bridge".
9.58 p.m.—Alfred Cunningham, baritone: "Close Friends" (Charles).
10.2 p.m.—Scott Alexander will present a special radio sketch.
10.15 p.m.—From the Sydney Town Hall: Music supplied by Montgomery Evans dance orchestra playing at the "Music Nooks" Ball, given by the Columbia Graphophone Company Associated Manufacturers in aid of the Hospital Saturday Fund.
10.28 p.m.—Scott Alexander is a play specially written for broadcasting.
10.35 p.m.—From the Sydney Town Hall: Dance music supplied by Montgomery Evans' Orchestra.
10.30 p.m.—Late weather forecast.
10.47 p.m.—Late news and announcements.
11 p.m.—"Big Ben." Dance music from the Sydney Town Hall, until 11.30 p.m.
11.30 p.m.—National Anthem.
Close down.

2BL, SYDNEY.

Broadcaster's Ltd.

Wave Length, 358 Metres.

Friday

EARLY MORNING SESSION.—7 to 8 a.m.

MORNING SESSION.

- 10.30 a.m.—G.P.O. Clock and Chimes.
Musical programme from the Studio.
- 10.40 a.m.—News from the "Daily Telegraph Pictorial."
- 10.55 a.m.—Musical programme from the Studio.
- 11 a.m.—G.P.O. Clock and Chimes.
Announcements.
- 11.5 a.m.—Musical programme from the Studio.
- 11.15 a.m.—Talk on "Croquet," by Miss Gwen Varley, Broadcasters' Women's Sports Auxiliary.
Health Talk, by Mrs. Jordan.
Talk on "Feeding the Family," by Mrs. Jordan.
- 12 noon.—G.P.O. Clock and Chimes.
Special Ocean Forecast and Weather Report.
- 12.15 p.m.—Brunswick Panatone Musical Recital.
- 12.15 p.m.—Information: Mails, Shipping, and Port Directory.
- 12.18 p.m.—Booze in cell by wireless.
- 12.25 p.m.—Fruit Market Report.
- 12.32 p.m.—Vegetable Market Report.
- 12.34 p.m.—London Metal Market Report.
- 12.36 p.m.—Daily and Farm Produce Market Report.
- 12.39 p.m.—G.P.O. Clock and Chimes.
Stocks Market Report.
- 12.45 p.m.—Fish Market Report.
- 12.46 p.m.—Rabbit Market Report.
- 12.48 p.m.—Stock Exchange Report.
- 12.49 p.m.—News from the "Sun."
- 12.49 p.m.—Hillier's Instrumental Quartette: direction, Cory Cellinger.
- 1.17 p.m.—Stock Exchange Report.
- 1.30 p.m.—G.P.O. Clock and Chimes.
Talk to Children and Special Entertainment for Children in Hospital.
- 2 p.m.—G.P.O. Clock and Chimes.
Close down.

AFTERNOON SESSION.

- Racing information broadcast immediately after each Race, by courtesy of the "Sun."
- 3 p.m.—G.P.O. Clock and Chimes.
News from the "Sun."
- 3.15 p.m.—Civil Service Stores Trio; direction, Miss de Courcy Bremer.
- 3.30 p.m.—G.P.O. Clock and Chimes.
News from the "Sun."
- 3.40 p.m.—Country Women's Session: in Objects, by Miss Wilkinson.
- 3.50 p.m.—News from the "Sun."
- 4 p.m.—G.P.O. Clock and Chimes.
Civil Service Stores Trio.
- 4.15 p.m.—Serial Story.
- 4.35 p.m.—Musical programme from the Studio.
- 4.50 p.m.—News from the "Sun."
- 4.55 p.m.—Resume of night's programme.
- 4.57 p.m.—Racing resume.
- 4.59 p.m.—Special Ocean Forecast.
- 5 p.m.—G.P.O. Clock and Chimes.
Close down.

EARLY EVENING SESSION.

- 5.45 p.m.—G.P.O. Clock and Chimes.
Children's Session.
- 5.50 p.m.—Musical programme from the Studio.

SPECIAL COUNTRY SESSION.

- 7 p.m.—G.P.O. Clock and Chimes.
Australian Mercantile, Land and Finance Co.'s Report.
Weather Report and Forecast, by courtesy of Government Meteorological.
Producers' Distributing Society's Fruit and Vegetable Market Report.
Stock Exchange Report.
Grain and Fodder Report ("Sun").
Daily Produce Report ("Sun").
- 7.15 p.m.—Country news from the "Sun."
- 7.20 p.m.—Health Talk.
- 7.30 p.m.—Talk by Mr. Gregory, of the N.R.M.A.
- 7.40 p.m.—Talk on "Gardening Science," by Mr. Cooper, Park Superintendent, City Council.

EVENING SESSION.

- 8 p.m.—G.P.O. Clock and Chimes.
Broadcasters' Topical Chorus.
- 8.3 p.m.—The Versatile Two in Saxophones and Piano Novelties.
- 8.15 p.m.—Miss Pauline Harford-Poster, soprano.
- 8.30 p.m.—Broadcasters' Light Orchestra, under the direction of Mr. J. Ralph Harrett.
- 8.36 p.m.—Mr. Bobby Watson, comedian.
- 8.37 p.m.—Miss Ely Dolgich, contralto.
- 8.44 p.m.—Broadcasters' All-Sports Report.
- 8.59 p.m.—Weather Report and Forecast, by courtesy of Mr. C. J. Marrs, Government Meteorologist.
- 9 p.m.—G.P.O. Clock and Chimes.
- 9.1 p.m.—Cec Morrison and his Gloomchasers, broadcast from the Ballroom of the Bondi Casino.
- 9.11 p.m.—Miss Pauline Harford-Poster, soprano.
- 9.13 p.m.—Broadcasters' Light Orchestra.
- 9.28 p.m.—Dorothy Manning and Harry Graham in Song and Story.
- 9.45 p.m.—Cec Morrison and his Gloomchasers, broadcast from the Ballroom of the Bondi Casino.
- 9.58 p.m.—The Sporting Editor of the "Sun" will talk on the prospects of Saturday's Racing.
- 10.13 p.m.—Broadcasters' Light Orchestra.
- 10.25 p.m.—Mr. Bobby Watson.

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

- 3LO.—Broadcasting Company of Australia, Ltd., Melbourne, wavelength 371 metres, power 2000 watts.
- 3AK.—Associated Radio Co., Ltd., Melbourne, wavelength 316 metres, power 5000 watts.
- 4QL.—Queensland Radio Service, Brisbane, wavelength 335 metres, power 5000 watts.
- 4CL.—Central Broadcasters' Ltd., Adelaide, wavelength 335 metres, power 5000 watts.
- 5WV.—Western Farmers, Ltd., Perth, wavelength 1250 metres, power 5000 watts.
- 7TL.—Tasmanian Broadcasters, Ltd., Hobart, wavelength 555 metres, 3000 watts.
- 3DB.—The 3DB Broadcasting Co., Pty., Ltd., Capitol House, Melbourne, wavelength 255 metres, power 500 watts.
- 3IZ.—O. J. Nilson & Co., Melbourne, wavelength 315 metres, power 100 watts.
- 4GR.—Gold Radio Electric Service, Townsville, Queensland, wavelength 294 metres, power 100 watts.
- 4EA.—Sport Radio Broadcasting Station, Adelaide, wavelength 250 metres, power 1000 watts.
- 6DN.—6DN Pty., Ltd., Adelaide, wavelength 312 metres, 500 watts.

- 10.30 p.m.—Cec Morrison and his Gloomchasers, broadcast from the Ballroom of the Bondi Casino.
- 10.40 p.m.—Miss Ely Dolgich.
- 10.47 p.m.—Resume of following day's programme.
- 10.50 p.m.—Cec Morrison and his Gloomchasers, broadcast from the Ballroom of the Bondi Casino.
- 11 p.m.—G.P.O. Clock and Chimes.
National Anthem.

2GB, SYDNEY

Theophical Broadcasting Service.

Wave Length, 315 Metres.

Friday.

MORNING SESSION.

- 9 a.m.—Music.
- 9.5 a.m.—Cheerio Talk.
- 9.15 a.m.—Music.
- 9.25 a.m.—Psychological Class.
- 9.30 a.m.—Music.
- 9.45 a.m.—Health Talk.
- 10 a.m.—Close down.

AFTERNOON SESSION.

- 3.30 p.m.—Music.
- 3.47 p.m.—Address.
- 3.52 p.m.—Music.
- 4.7 p.m.—Address.
- 4.25 p.m.—Music.
- 4.49 p.m.—Close down.

EVENING SESSION.

- 7 p.m.—Music.
- 7.5 p.m.—Address.
- 7.15 p.m.—Music.
- 7.20 p.m.—Address: Health Week.
- 7.30 p.m.—Music and Announcements.
- 7.55 p.m.—Songs by Mr. J. J. Steiner.
- 8.3 p.m.—Address by Professor Ernest Wood.
- 8.30 p.m.—Psychological Trio: DAN SCULLY, MURIELLE LANG, ADA BROOK.
- 8.50 p.m.—Song Cycle, "Song of the Malvern Hills," CLEMENT HOKING.
- 9 p.m.—Address by Mr. J. K. Powell.
- 9.15 p.m.—Instrumental Quartet: DAN SCULLY, MURIELLE LANG, MONICA BORDER, ADA BROOK.
- 9.35 p.m.—Mr. W. J. Steiner.
- 9.45 p.m.—Vocal Solo, DAN SCULLY; 1. "Prelude from Gth Sonata" (Bach), 2. "Gavotte" (Bach).
- 9.50 p.m.—Talk.
- 10 p.m.—Close down.

2 UW, SYDNEY

Sandel Radio, Ltd.

Wave Length, 207 Metres.

Friday.

MORNING SESSION.

- 8 a.m.—News, Shipping, Mails, Radio items.
- 8.45 a.m.—Women's Session.
- 9.10 a.m.—Resume of forward programme.
- 10 a.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—Studio items.
- 2.50 p.m.—Resume of forward items.
- 3 p.m.—Close down.

EVENING SESSION.

- 5 p.m.—Studio Items.
5.59 p.m.—Resume of forward items.
6 p.m.—Close down.

NIGHT SESSION.

- 7 p.m.—Where to go.
7.10 p.m.—Studio Items.
7.30 p.m.—Chat on "Juvenile Migration," by Glen Connor.
7.40 p.m.—Studio selections.
7.49 p.m.—Miss Jeanette Patterson, Pianoforte solo:
"Waltz in G, Flat" (Chaplin).
8.5 p.m.—"The Future of the New Legislation," by Mr. E. Salmon.
8.26 p.m.—George F. Manuel, tenor:
"Friend of Mine."
8.35 p.m.—Sonora selection.
8.40 p.m.—George F. Manuel, tenor:
"Best Song."
8.55 p.m.—Jeanette Patterson, Pianoforte
"Staccato Capricio" (Vogriek).
8.40 p.m.—George F. Manuel, tenor:
(a) "My message."
(b) "At Dinnington" (Cadmans).
8.49 p.m.—Sonora selections.
8.59 p.m.—Studio items.
9.29 p.m.—Resume of forward programme.
9.39 p.m.—Close down.

AFTERNOON SESSION.

- 3.6 p.m.—STUDIO STRING QUARTETTE:
No. 13 in D for Major-Allergo Vivras.
3.10 p.m.—MISS FRANCES FRASER:
"Heroes in Fiction, Don Quixote."
3.25 p.m.—S. HARCOURT FRENCH, Tenor:
"Love Lull" (Bothwell Thompson).
"A Heap of Rose Leaves" (Chas. Whiteby).
3.32 p.m.—STUDIO QUARTETTE:
No. 15 Mozart Allegro Assai.
3.42 p.m.—TASMA TERNAN, Cello:
"Reverie" (Faucouier).
"Clair d'etoile" (Poullard).
3.50 p.m.—ELSIE ROGERS, Soprano:
"A June Morning" (Charles Willbelv).
"That's All" (May Brady).
3.57 p.m.—STUDIO QUARTETTE:
No. 18 D. Major Allergo, Minuet and Adagio (Mozart).
4.7 p.m.—S. HARCOURT FRENCH, Tenor:
"Thank God for a Garden" (del Riem).
"Little Irish Girl" (Herman Land).
4.15 p.m.—REGINALD BRADLEY, Violin:
Siciliana Fantasia (Dvorak-Kraker).
4.22 p.m.—ELSIE ROGERS, Soprano:
"The Lass with the Delicate Air" (Arvo).
"The Wrench" (Kenneth Rae).
4.30 p.m.—MRS. M. CALLAWAY MAHOOD:
"The Art of Deceitful."
4.45 p.m.—"Herald" News Service; Stock Exchange Information.
5.0 p.m.—Close Down.

NIGHT SESSION.

- 7.15 p.m.—Under the auspices of the DEPARTMENT OF AGRICULTURE, MR. R. N. JOHNSTON, Senior Veterinary Officer, will speak on "Biosis Dipping."
7.30 p.m.—STUDIO STRING QUARTETTE:
No. 25 in B-flat Minuet and Adagio (Mozart).
7.40 p.m.—MR. H. K. LOVE:
"The Effects of Aerial on Fertility."
Mr. Love will be glad to attend to your wireless difficulties, and we ask you to write to him for any advice that you may require.
7.50 p.m.—LILY BURNAND and ARTHUR SLATER:
"You Told Me You Loved Me."
"Stories and Imitations."
"Fifty Years Ago."
8.0 p.m.—THE HEALTH ASSOCIATION'S MESSAGE FOR TO-DAY IS:
"The true wealth of a country depends upon the number of noble, healthy, happy human beings it contains."—Ruskin.
8.1 p.m.—MR. C. J. WILLIAMS will comment upon:
"To-morrow's Stadium Event."
8.10 p.m.—STUDIO QUARTETTE:
No. 18 Allegro.
8.20 p.m.—IRENE KIRWAN, Soprano:
"Villanelle" (del'Anon).
"Here's to Love" (Rubens).
8.27 p.m.—COMMUNITY SINGING FROM BALLARAT:
"March, Ballarat City Band.
Selection, Ballarat City Band.
Opening Remarks: His Worship the Mayor (CR. McKENZIE).
"Hells of St. Mary's."
"Sweet and Low."
"Come to the Fair."
Mouth-organ Solo, MR. C. R. ROBERTS:
"Kilbarney."
"Mother Mchree."
"Dear Little Shamrock."
Soprano Solo, Mrs. J. McManusony (MISS MAGGIE SHERLOCK):
"Poor Old Joe."
"Carry Me Back to Old Virginia."
"Mascas in the Coll, Coll, Grassland."
Trumpbone and Euphonium Duet, MESSRS. GRUMBLY AND CLARKE:
"Dances by the Children."
"Bl. Ho. the Merrie."
"Yearning."
"Sailing."
"My Bonnie is Over the Ocean."
"Narrow My God, to be Contrite, MRS. C. ROWE:
"Annie Laurie."
"Comin' Thro the Rye."
"M." Selection, BALLARAT CITY BAND:
"I Passed by Your Window."
"Look for the Silver Lining."
"Proud Day."
Duet, MESSRS. J. BRIMACOMBE and D. DUFF:
"Kick the Home Fies Burnins."
"Australia Has Been There."
"Tipperary."
"Home, Sweet Home."
"Hail, Britannia."
10.8 p.m.—"Argus" News Service; Meteorological Information; Road Notes. THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS FOR MOTORISTS:
"These are three grades of users but only one grade of crossing, and that's dangerous. Cross crossings cautiously."
10.10 p.m.—IRENE KIRWAN, Soprano:
"Blackbird's Song" (Scott).
"My Ain Fire" (Laird).
10.17 p.m.—"CARDIGAN," MR. H. A. WOLFE, Sporting Editor of the "Argus" and "Australasian," will speak on to-morrow's races.
10.40 p.m.—ARTHUR O'BRYEN will sing some of his own compositions.
10.57 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS:
10.47 p.m.—FAC O'BRYEN, Baritone:
"Madona Melodie."
10.51 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS.
11.0 p.m.—OUR GREAT THOUGHT FOR TO-DAY IS:
"No thoroughly scented man was ever yet very unbearable."—Laudon.
11.1 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS.

3LO, MELBOURNE

Broadcasting Co. of Austl

Wave Length, 371 Metres.

Friday.

MIDDAY SESSION.

- 12.9 noon.—This Signal; Metal Prices received by the Australian Mines and Metals Association from the London Stock Exchange this day. British Official Wireless News from Rugby; Reporter's and the Australian Press Association Cables; "Argus" News Service.
12.30 p.m.—LILY BURNAND and ARTHUR SLATER, Entertainers:
"Smist French Maid."
"Try Again."
12.30 p.m.—STUDIO QUARTETTE:
Overture, "Rigue Dance."
12.40 p.m.—Stock Exchange Information.
12.43 p.m.—BENI SUTCLIFFE, Baritone:
"Come to the Fair" (Marvin).
"Devonshire Crown and Cider" (Sanderson).
12.50 p.m.—STUDIO QUARTETTE:
Selection, "Gypsy Love," Part 1 (Lehar).
1.0 p.m.—TIME SIGNAL.
"And it's Never Too Late to Mend."
1.1 p.m.—ELLIE MULLIGAN, Soprano:
"One Fine Day."
"The Little Demosel."
1.8 p.m.—Meteorological Information; Weather Synopses for Victoria, Tasmania, South Australia and New South Wales; Ocean Forecast; River Reports for Victoria, Tasmania, South Australia and New South Wales.
1.15 p.m.—STUDIO QUARTETTE:
Selection, "Gypsy Love," Part 2 (Lehar).
1.25 p.m.—REGINALD BRADLEY, Violin.

MIDDAY SESSION.

- 1.32 p.m.—ELLIE MULLIGAN, Soprano:
"The Turn of the Tide."
"A Heart That's Free."
1.40 p.m.—STUDIO QUARTETTE:
Selection, "The Little Dutch Girl."
1.50 p.m.—BENI SUTCLIFFE, Baritone:
"Handsome" (Stuart).
"Good Fellows" (Phillips).
2.0 p.m.—Close Down.

EVENING SESSION.

- 5.30 p.m.—Answers to letters and birthday greetings by "Billy Bunby."
5.6 p.m.—ELSIE BRADSHAW, Songs for the Belle ones.
5.7 p.m.—"BILLY BUNNY":
"Tell Me Why Stories About Animals."
5.17 p.m.—ELSIE BRADSHAW:
Songs of the Belle ones.
5.23 p.m.—"BILLY BUNNY":
"The Adventures of the Treasure Seekers."
5.40 p.m.—"Herald" News Service; Weather Synopses; Shipping Information.
5.47 p.m.—Stock Exchange Information.
5.52 p.m.—Fish Market Reports by J. E. Barrett, Ltd.; Rabbit Prices.
5.55 p.m.—Rice Reports.
6.03 p.m.—Newmarket Sheep Sales by the Associated Stock and Station Agents, Bourke Street, Melbourne; Market Reports by the Victorian Producers' Co-operative Co., Ltd.; Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.
7.12 p.m.—Market Reports of Fruit.

NEW ZEALAND STATIONS:

(Decreased List.)

1YA, Auckland, The Radio Broadcasting Co. of New Zealand, Ltd.

Power 500 Watts; Wave-length, 383 Metres. Silent Night, Monday.

2YA, Wellington, The Radio Broadcasting Co. of New Zealand, Ltd.

Power 3000 Watts; Wave-length, 420 Metres.

3YA, Christchurch, The Radio Broadcasting Co. of New Zealand, Ltd.

Power 500 Watts; Wave-length, 308 Metres. Silent Night, Thursday.

4YA, Dunedin, The Radio Broadcasting Co. of New Zealand, Ltd.

Power 750 Watts; Wave-length, 463 Metres.

4QG, BRISBANE

Queensland Radio Service

Wave Length, 335 Metres.

Friday.

MIDDAY SESSION.

1 p.m.—Market reports; weather information; "The Daily Mail" and "The Daily Standard" news.

1.15 p.m.—Lunch hour music played by Hotel Carlisle Symphony Orchestra.

1.30 p.m.—Standard time signal.

2 p.m.—Close down.

AFTERNOON SESSION.

2.30 p.m.—A programme of music by the Stuart Quartet, including: Overture, "Barcarolle" (Spohr), "Coraeah" (Barrett); piano solo, "Liebestraum" (Liszt), Miss Erica Stuart; song, "Sweet and Low" (Wallace), Miss Margery Stuart; violin solo, "Romance" (Kapell), Miss E.uld Stuart; viola solo, "Napoleon Song" (Benedict), Mrs. Stuart; violin duet, "Three Waltzes" (Carle), Blanche Field and Erica Stuart; solo, "Agnes Dei" (Liszt), with violin obbligato, Miss Margery Stuart; violin solo, "Swedish Dance" (Max Bruch), Miss Erica Stuart; tango solo, "Vito" (Ponpe), Miss Margery Stuart; quartet, "Nocturne" (White), "Humoresk" (Widor).

4.15 p.m.—"The Telegraph" news.
Close down.

EARLY EVENING SESSION.

6 p.m.—"Daily Standard" news; weather information; announcements.

6.15 p.m.—Lecture.

6.30 p.m.—Bedtime Stories, by "The Sandcastle".

7 p.m.—Market reports; stock reports.

7.30 p.m.—Weather news; announcements; "Daily Standard" news.

7.45 p.m.—Standard time signal.

NIGHT SESSION.

7.45 p.m.—"The Soul of the Soldier Expressed" by A.L.P. Writers, by Mr. J. F. F. Reid (formerly of "Amuse", the trench magazine).

"MUSIC WEEK."

To-night's programme will comprise the broadcasting of the Special Recital in the Exhibition Hall, held in connection with Brisbane's "Music Week."

FROM THE EXHIBITION HALL:
S.S.U. CHORUS AND EAST BRISBANE S.S.U. CHORUS.

1. 20—Quartet chorus, "The Song of the Northmen" (Maurice Curlew Clark; tenor solo, "Take a Pair of Sparking Eyes" (Sullivan), Mr. A. Smith; part-song, "Slumber Song" (Lohr), Curlew Choir; duet, "Tune and Baritone" (Lamb), Messrs. Kells and Pike; descriptive chorus, "Scurian Heroes" (Protheroe), Curlew Choir; baritone solo, "The Hills of Donegal" (Sanderson), Mr. D. Storrer; male chorus, "Bull Falhorn Five" (Dunhill), Curlew Choir; tenor solo, "Oze Heart Divine" (Rowling), Mr. C. T. Dinkbeck; part-song, "They Kissed—I Saw Them Do It" (Bawley), Immortals; Curlew Choir; luminous item, "Finger Bag Cookery," Mr. F. Kenyon; juvenile chorus, "The Toward," East Brisbane State School Choir; descriptive chorus, "The Admiral's Broom" (Bevan), combined Curlew and East Brisbane State School Choirs.

PART II.

ANNERLEY CHORAL SOCIETY.

Part songs, "A Spring Song" (Pissati), Annerley Choral Society; tenor solo, "Kiviana" (Squire), Mr. Geo. Williamson; contralto solo, "The Glory of the Sea" (San-

deron), Mrs. J. Richardson; female chorus, "O! Lovely May" (Gorring), Annerley Choral Society; duet, "Night of Stars" (Offenbach), Miss M. Dolley and Mr. G. Williamson; part-song, "I Saw Lovely Phyllis" (Heven), Annerley Choral Society.

FROM THE STUDIO.

10 p.m.—"The Daily Mail" news.
Weather news.
Close down.

5CL, ADELAIDE

Central Broadcasters, Ltd.

Wave Length, 395 Metres.

Friday.

MORNING SESSION—12 noon to 2 p.m.

AFTERNOON SESSION.

2 p.m.—Chimes.

2.30 p.m.—Orchestral selections from the Maple Leaf Cafe.

3.15 p.m.—Cornet solo, Mr. Vera Rogers.

3.15 p.m.—Orchestral selections continued.

3.45 p.m.—From the Studio: Musical items.

4 p.m.—Orchestral selections from Arcadia Cafe.

Vocalist, Lind Wald (soprano).

4.35 p.m.—Messrs. S. C. Ward and Co.'s Report.

5 p.m.—G.P.O. Chimes and close down.

EVENING SESSION.

6 p.m.—Chimes.

6.1 p.m.—Dance music by Covent Garden Orchestra.

6.30 p.m.—Children's hour.

7.25 p.m.—Messrs. S. C. Ward and Co.'s Stock Exchange Intelligence.

Market Reports by Messrs. A. W. Sandford and Co., A. E. Hall and Co., Dalgey and Co., S.A. Farmers' Co-operative Union, Taylor Bros., Retail Grocers' Association, J. H. Young's special report on the Tomatillo Market.

Interstate Fruit and Produce Market Company, Ltd.

7.35 p.m.—"Windbag's" Sporting Service.

7.50 p.m.—Current topics of sport.

8 p.m.—Chimes.

8.1 p.m.—Overture, Studio Orchestra.

8.10 p.m.—Baritone solo, Harold Tidemann.

FOREIGN BROADCASTERS.

JOEK—Nagoya Radio Broadcasting Co., Nagoya, JAPAN; 350 metres, 1990 watts. (Announcement in English and Japanese).

JOEK—Osaka Central Broadcasting Co., Osaka, JAPAN; 365 metres, 1990 watts. (Announcement in English and Japanese).

JOAK—Tokyo Broadcasting Co., Tokyo, JAPAN; 372 metres, 1600 watts. (Announcement in English and Japanese).

JFC—Bataviasche Radio Vereeniging, BATAVIA, 223 metres, 40 watts.

KZRM—Manila, PHILIPPINE ISLANDS; 413 metres, 1600 watts. (Announcement in English and Philippine).

KGU—Hawaii Advertiser, Honolulu, HAWAII, 275 metres, 800 watts.

KGO—Oakland, CALIFORNIA; 261.3 metres, 5000 watts.

KFI—Los Angeles, CALIFORNIA, 467 metres, 5000 watts.

KOA—Denver, COLORADO; 322.4 metres, 5000 watts.

8.18 p.m.—Selection, Studio Orchestra.

8.25 p.m.—Comedy sketch, Don Fraser.

8.35 p.m.—Baritone solo, Grace Cassin.

8.39 p.m.—Selection, Studio Orchestra.

8.49 p.m.—Baritone solo, Harold Tidemann.

8.53 p.m.—Comedy sketch, Don Fraser.

9 p.m.—Time announcement.

9.1 p.m.—Weather report.

9.3 p.m.—Daigey's wheat report.

9.4 p.m.—Selection, Studio Orchestra.

9.45 p.m.—Talk by Mr. Geoffrey Sennie (Plant Pathologist, Waite Agricultural Research Institute, Glen Osmond): "Tomato Diseases."

9.50 p.m.—Soprano solo, Grace Cassin.

9.58 p.m.—Comedy sketch, Don Fraser.

10.43 p.m.—Selection, Studio Orchestra.

9.53 p.m.—Bass solo, H. W. Durdin.

10 p.m.—G.P.O. Chimes.

10.1 p.m.—"Advertiser" news service.

"Windbag's" sporting service.

10.20 p.m.—Selection, Studio Orchestra.

10.30 p.m.—Bass solo, Harold Durdin.

10.34 p.m.—Selection, Studio Orchestra.

10.44 p.m.—Station announcements.

10.46 p.m.—Relay from Glenelg: "The Maize Dance Band."

11.10 p.m.—Saturday's programme and weather report.

11.15 p.m.—National Anthem and close down.

6WF, PERTH

Wetralian Farmer's.

Wave Length, 1250 Metres.

Friday.

12.30 p.m.—Time in.

12.35 p.m.—Market, News and cables.

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

1.1 p.m.—Weather news supplied by the Meteorological Bureau of Western Australia.

1.2 p.m.—Radio Quintette, conducted by Mr. Val Smith.

2 p.m.—Close down.

2.30 p.m.—Time in.

3.05 p.m.—Address of Capt. Cook window in V.A.L. Hall, by Mr. J. S. Amey, Secretary of State for Dominions, relayed from the V.A.L. Hall.

Organ music relayed from the Grand Theatre, Murray Street.

4.30 p.m.—Close down.

4.45 p.m.—Time in.

6.50 p.m.—Stories for the Boys by Uncle Henry.

7.10 p.m.—Market, news and cables.

7.30 p.m.—Special transmission to be broadcast by 2FC Sydney.

Musical programme, including vocal and instrumental articles:

1. "Drake Goes West" (Sanderson).

Mr. Charles Curt, cornet solo: "Fedia" (Gode).

Miss Jessie Elphick, contralto: "Home-Along" (Sanderson).

Miss Evelyn White, A.R.C.M., piano solo: "Second Elphick" (Liszt).

Mr. Roland B. Parson, bass: "Home-Along" (Sanderson).

Master Charles Curt, cornet solo: "The Bells" (Ardit).

Miss Jessie Elphick, contralto: "Open Thy Eye Eyre" (Massene).

8.3 p.m.—Racing talk by the Sporting Editor of "Truth" Newspaper Co.

A RELAYED CONCERT.

8.18 p.m.—Vocal and Instrumental Concert relayed from Messrs. Morris Bros., Music Warehouse, Hay Street.

9 p.m.—Talk: "Gardening notes" by Mr. A. H. Jones, presenting Messrs. Dawson and Harrison Limited.

10 p.m.—Late news items by courtesy of "The Daily News" Newspaper Co.

10.15 p.m.—Radio programme announcement. Weather report and forecast.

10.30 p.m.—Close down.

100 METRE TRANSMISSION.

Simultaneous Broadcast on 100 Metres of Musical programme given on 1250 Metres, commencing at 8 p.m.

7ZL, HOBART

Tasmanian Broadcasters, Ltd.

Wave Length, 535 Metres.

Friday

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

8 p.m.—G.P.O. Clock chimes.
 11 p.m.—Tune in selection.
 3.6 p.m.—Hobart Stock Quotations. Weather information. Items of interest—announcements.
 4.13 p.m.—Selections by 7ZL studio trio.
 4.16 p.m.—Educational talk.
 4.40 p.m.—Close down.

EARLY EVENING SESSION.

6.30 p.m.—Children's Corner with the "Radio Ladies."
 7 p.m.—Young Folks gardening chat by Mr. George Nation.

NIGHT SESSION.

7.36 p.m.—Fruit, Poultry and produce reports through the courtesy of Roberts and Co. Ltd., Hobart.
 7.55 p.m.—Gardening talk by Mr. George Nation—Open Nurseries Cascades.
 7.58 p.m.—"Mercury" special Tasmanian news service. Railway auction produce sales. Weather forecasts, Hobart Stock Exchange quotations.
 8 p.m.—G.P.O. Clock chimes.
 Sports Budget supplied by Mr. H. W. Newton.
 8.1 p.m.—Studio concert:
 Miss W. O'Brien, (soprano), Miss Mena McGuire (contralto), Miss Norah Finney (soprano), Miss Ruby Pense, (pianist), Mr. H. Bates (tenor), Mr. Victor Pharoah (bass soloist), Mr. P. Tegan (baritone), Mr. George Hook (conductor).
 9.30 p.m.—Crickets News by "Mid-off."
 9.40 p.m.—British Official Wireless news.
 9.50 p.m.—"Mercury" special interstate news service. Ships within wireless range. Tasmanian District Weather reports, 9 p.m. Weather forecasts. Travellers week-end information.
 National Anthem.

Saturday, Oct. 15

2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m.—"Big Ben" and announcements.
 10.8 a.m.—Studio music.
 10.15 a.m.—"Sydney Morning Herald" news service.
 10.30 a.m.—Studio music.
 10.45 a.m.—Studio music.
 11 a.m.—"Big Ben." Studio music.
 11.5 a.m.—A.P.A. and Reuter's cable service.
 11.10 a.m.—Studio music.
 11.15 a.m.—A talk on gardening by Mr. C. J. Lockley ("Rodrum").
 12.30 a.m.—Close down.

MIDDAY AND AFTERNOON SESSIONS.

12 noon—"Big Ben" and announcements.
 12.2 p.m.—Stock Exchange, first call.
 12.3 p.m.—Studio music.
 12.40 p.m.—"Sydney Morning Herald" news service.
 Rhythmic wireless news.
 12.55 p.m.—Studio music.
 Note.—Events of the City Tattersall's meeting at Randwick will be described in this running by the 2FC racing commissioneer.
 1 p.m.—"Big Ben" Weather Intelligence.
 1.5 p.m.—"Evening News" midday news service.
 1.50 p.m.—Studio music.
 Note.—During the afternoon the following musical items will be given:—
 Dorothy Dewar, songs at the piano:
 "Just her way" (Grey).
 "Welsh questions"
 "Mamma's little fellow" (Austria).
 "Mary Fawcett."
 Kevin Gallagher, novelty pianist.
 The Crystal Palace Theatre Orchestra, under the baton of Harry Stone.
 4.30 p.m.—A complete resume of the day's sporting events.
 5 p.m.—"Big Ben."
 Close down.

EARLY EVENING SESSION.

5.40 p.m.—The Chimes of 2FC.
 5.45 p.m.—The "Hello Man" Talks to the Children.
 5.50 p.m.—Story Time for the Young Folk.
 6.40 p.m.—Studio Music.
 7.3 p.m.—"Big Ben" Weather Intelligence.
 7.8 p.m.—"Evening News" Late News Service.

NIGHT SESSION.

7.30 p.m.—Programme Announcements.
 7.33 p.m.—W. Nott, Cornet Solo.
 7.45 p.m.—A Talk on "Health Week."
 7.48 p.m.—Sophie Lashmore, Instrumentalist.
 7.54 p.m.—Selwyn Sermon, Elocutionist, in a sketch entitled "Blind."
 8.3 p.m.—"Big Ben," Nellie Chadwick.
 8.8 p.m.—Speedway Results from the Speedway Royal, R.A.S. Grounds, Sydney.
 8.14 p.m.—W. Nott, Cornet Solo.
 8.17 p.m.—Description and Results from the Speedway Royal.
 8.22 p.m.—From the Studio: Nellie Chadwick.
 8.26 p.m.—Selwyn Seymour, Humorous Recitation.
 8.30 p.m.—Sophie Lashmore, Instrumentalist.
 8.38 p.m.—Description and Results from the Speedway Royal.

8.43 p.m.—Nellie Chadwick.
 8.47 p.m.—W. Nott, Cornet Solo.
 8.53 p.m.—Progress Results from the Speedway Royal.
 8.55 p.m.—From the Conservatorium Hall, Sydney: Broadcast for the first time in Sydney: an operatic performance of Verdi's Famous Opera, "Il Trovatore." Produced by the Sydney Grand Opera Company, under the direction of Rita Lancaster. The whole of the second act will be taken, which includes the famous "Avevi" Chorus.
 8.58 p.m.—Description and Results from The Speedway Royal, Sydney.
 10.5 p.m.—From the Studio: Len Maurice, Popular Baritone.
 10.11 p.m.—Dance Music.
 10.22 p.m.—Len Maurice, Baritone; Request Numbers.
 10.30 p.m.—Dance Music; Late Weather Forecast.
 10.40 p.m.—Len Maurice, Baritone.
 10.45 p.m.—Dance Music.
 10.57 p.m.—Late News and Announcements.
 11.0 p.m.—"Big Ben"; Len Maurice, Baritone.
 11.3 p.m.—Dance Music.
 11.15 p.m.—Len Maurice, Baritone.
 11.20 p.m.—Dance Music until 11.45 p.m.
 11.45 p.m.—National Anthem; Close Down.

2BL, SYDNEY

Saturday.

EARLY MORNING SESSION.—7 to 8 a.m.

MORNING SESSION.

11 a.m.—G.P.O. Clock and Chimes.
 Musical programme from the Studio.
 11.15 a.m.—Special Notes, by Mrs. Jordan.
 Talk "Simple Cooking for Children," by Mrs. Jordan.

AFTERNOON SESSION.

Racing information broadcast immediately after each Race, by courtesy of the "Sun."
 12 noon.—G.P.O. Clock and Chimes.
 Special Ocean Forecast and Weather Report.
 12.8 p.m.—Brunswick Panatone Musical Recital.
 12.20 p.m.—News from the "Sun."
 12.25 p.m.—Sporting and Athletic Features.
 12.28 p.m.—What's on at the Picture and Theatre.
 12.30 p.m.—Musical programme from the Studio.
 12.40 p.m.—News from the "Sun."
 12.50 p.m.—Racing resume.
 12.55 p.m.—Musical programme from the Studio.
 1 p.m.—G.P.O. Clock and Chimes.
 Musical programme from the Studio.
 1.10 p.m.—Sporting Talk and Athletic Features for the Day.
 1.25 p.m.—Musical programme from the Studio.
 1.30 p.m.—G.P.O. Clock and Chimes.
 Talk to Children and Special Entertainment for Children in Hospital.
 2 p.m.—G.P.O. Clock and Chimes.
 Social Story.
 2.15 p.m.—Musical programme from the Studio.
 2.35 p.m.—Racing resume.
 2.38 a.m.—G.P.O. Clock and Chimes.
 News from the "Sun."
 During the afternoon Sporting Information will be broadcast, by courtesy of the "Sun," interspersed with Musical Items.
 5 p.m.—G.P.O. Clock and Chimes.
 Racing resume.
 Close down.

Short Wave Broadcasters

Schedules and Wavelengths Subject to Change.

EG-2NM, Gerald Marcus, Caterham, England, 33 and 33 metres (E.B.C. Programme).
 EN-3CII, Philips' Experimental Station, Eindhoven, Holland, 89.5 metres (E.B.C. Programme).
 NU-2XAF, General Electric Co., Schenectady, New York State, U.S.A., 32.77 metres (W.G.Y. Programme).
 NU-2XAG, General Electric Co., Schenectady, New York State 14.26 and 63 metres (W.G.Y. Programme).
 NU-2KKA, Westinghouse Electric Co., Pittsburgh, Penn., U.S.A., 63.5 and 14 metres.
 NU-WLV, Crosley Radio Corporation, Cincinnati, Ohio, U.S.A., 63 metres.
 NU-2XAL, "Radio News," New York City, U.S.A., 30.91 metres (WRNY Programme).
 FO-4B, Johannesburg Broadcasting Company, South Africa, 26 and 33 metres.

EARLY EVENING SESSION.

- 8.45 p.m.—G.P.O. Clock and Chimes.
Children's Session.
8.50 p.m.—Musical programme from the Studio.
9.00 p.m.—Results of all Sporting and Athletic information.
9.30 p.m.—Country News from the "Sun."
9.40 p.m.—Health Talk.

EVENING SESSION.

- 8 p.m.—G.P.O. Clock and Chimes.
Broadcasters' Special Chorus:
Sporting Programmes.
8.3 p.m.—King's Mandolin Orchestra.
8.18 p.m.—Miss Bertha Waters, soprano.
8.27 p.m.—Results of Second Hares, Greyhound Coursing, from Epping Race Course.
8.48 p.m.—Mr. Tommy Clyde, Scotch comedian.
8.55 p.m.—Mr. C. C. King, Mando 'cello solo.
9.25 p.m.—Results of Third Hares Greyhound Coursing, from Epping Race Course.
9.48 p.m.—Broadcasters' Trio.
9.57 p.m.—Herald, Fourth Race, Epping.
9.58 p.m.—Mr. Norman Wright, tenor.
9.59 p.m.—King's Mandolin Orchestra.
9.2 p.m.—Results, Fifth Race, Epping.
9.5 p.m.—Miss Bertha Waters.
9.10 p.m.—Mr. Tommy Clyde.
9.17 p.m.—Results, Sixth Race, Epping.
9.18 p.m.—Broadcasters' Trio.
9.37 p.m.—Mr. C. C. King.
9.49 Solo.—Mr. Norman Wright.
9.50 p.m.—Results, Seventh Race, Epping.
9.51 p.m.—Broadcasters' Trio.
9.59 p.m.—G.P.O. Clock and Chimes.
10.1 p.m.—Results of following day's programme.
10.5 p.m.—Broadcasters' Trio.
11.1 p.m.—"The Ambassadors" Dance Band, broadcast from the Ballroom of the Ambassadors. During intervals between dances, "Sun" news will be broadcast.
11.30 p.m.—G.P.O. Clock and Chimes
National Anthem.

2 UW, SYDNEY

Saturday.

EVENING SESSION.

- 7 p.m.—Dance selections from studio.
9.25 p.m.—Resume of forward programmes.
9.40 p.m.—Close down.

3LO, MELBOURNE.

Saturday.

MORNING SESSION.

- 11 a.m.—JOHNSTON'S STUDIO BOYS:
March, "With Sword and Lance."
Overture, "Country Life."
11.10 a.m.—ELISE ROGELS, soprano:
"One Fine Day" (Puccini).
"Wake Up" (Montague Phillips).
11.17 a.m.—JOHNSTON'S STUDIO BOYS:
Selection, "Coppelia."
11.27 a.m.—BOBBY PEARCE, baritone:
"Get Through the Night" (Gita Weibel).
"Blossy" (Clarke).
11.34 a.m.—J. ROBINSON, concert solo:
"Arduhana."
11.42 a.m.—JOHNSTON'S STUDIO BOYS:
Novelties, "The Elephants Parade."
11.48 a.m.—LILY BURNAND AND ARTHUR SLATER:
"Oh, What a Difference in the Morning."
"The Whistling Dovesy Boy."
"Hi Tiddly Bi Ti Hi Ti Hi."

- 12 noon.—Time signal. Metal prices received by the Australian Mining and Metals Association from the London Stock Exchange this day. British official wireless news from Rugby. Report of the Australian Press Association cables. "Austral" Army service.
12.30 p.m.—JOHNSTON'S STUDIO BOYS:
Selection, "Musical Banquets."
12.50 p.m.—ELISE ROGELS, soprano:
"Gloria" (Goy (Holland)).
"Batteries and Guns" (Beppo).
12.57 p.m.—Stock Exchange information.
1.40 p.m.—STUDIO QUARTET:
Selection, "The Bohemian Girl" (Mozart-Tobert).
1.55 p.m.—BOBBY PEARCE, baritone:
"Good-bye Sweetest Good-bye" (Hollins).
"I'll Meet You in the Square" (Bridges).
1.57 p.m.—JOHNSTON'S STUDIO BOYS:
Waltz, "Tessie Mia."
1.59 p.m.—JOHN D. FRASER, baritone:
"Swedish Song."
"I'll Meet You Singing."

- 1.44 p.m.—Meteorological information, Singapore intelligence. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports. Rainfall for Victoria, Tasmania, South Australia, and New South Wales.
1.56 p.m.—STUDIO QUARTET:
"E. Gloucon" (Puccini).
1.59 p.m.—Description of the Herald, two miles one furlong, V.A.T.C. races, Caulfield, by "Musketeer" of the "Sporting Globe."
1.55 p.m.—JOHNSTON'S STUDIO BOYS:
Bourgeois Solo, "Wagon Flowers."
1.46 p.m.—HESTIA JORGENSEN, violin:
"Minnet" (1st version), arr. by Kreisler.
1.52 p.m.—JOHNSTON'S STUDIO BOYS:
Concert solo, "The Washers," W. Hauer and Leo Sarentz.
Intermission, "The Sanctuary of the Heart."
2.30 p.m.—Cricket: St. Kilda v. Prahran, at St. Kilda, described by Mr. Rod McEneaney.
2.40 p.m.—Close down.
2.40 p.m.—Description of Gyms Nuvary Handicap, one furlong, V.A.T.C. races, Caulfield, by "Musketeer" of the "Sporting Globe."
2.55 p.m.—Close down.

AFTERNOON SESSION.

- 3 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS:
2.5 p.m.—Description of Wyna-Ram-blechaw, about 2 miles 8 furlongs, V.A.T.C. races, Caulfield, by "Musketeer" of the "Sporting Globe."
3.10 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
3.50 p.m.—Cricket: St. Kilda v. Prahran.
3.50 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
3.50 p.m.—Description of Caulfield Cup, one and a half miles, V.A.T.C. races, Caulfield, by "Musketeer" of the "Sporting Globe."
4.05 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
4.20 p.m.—Cricket: St. Kilda v. Prahran.
4.50 p.m.—Description of Barrow Handicap, one mile, one furlong, V.A.T.C. races, Caulfield, by "Musketeer" of the "Sporting Globe."
4.35 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
4.55 p.m.—"Herald" news service. Stock Exchange information.
5.15 p.m.—Description of Windsor Handicap, one furlong, V.A.T.C. races, Caulfield, by "Musketeer" of the "Sporting Globe."
5.45 p.m.—Cricket: St. Kilda v. Prahran.

EVENING SESSION.

- 8.30 p.m.—Results of Woodend Hillside Gold Club.
Cyclo Road Race, 116 Miles Olympic Road Test, Sporting Roma.
8.40 p.m.—Answers to Letters and Birthday Greetings by "LITTLE MISS KOOKA-BURRA."
8.49 p.m.—MISS ELISE BRADSHAW,
Songs for the Children.

- 8.47 p.m.—MISS M. SHEPHERD:
"Strange Tales for the Children."
8.52 p.m.—MISS ELISE BRADSHAW will sing Some More Songs.
8.48 p.m.—"Herald" News Service: Weather Reports; Shopping Movements.
8.42 p.m.—Stock Exchange Information.
8.47 p.m.—Market Reports.
8.50 p.m.—River Reports.
8.52 p.m.—Newmarket Sheep Sales by Auctioneers Stock and Station Agents, Bourke Street, Melbourne: Market Reports by the Victorian Producers' Co. Ltd., Poultry, Grain, Straw, Jute, Dairy Produce, Potatoes, and Onions.
9.0 p.m.—Market Reports of Fruit by the Victorian Producers' Association.

NIGHT SESSION.

- 9.15 p.m.—MR. CHARLES MUTILL:
"On With the Dances."
9.20 p.m.—MR. F. CHAPMAN:
"Sundae and Cuddled."
9.45 p.m.—MR. H. E. F. LAMPE, "The History of Tompkins."
"The Gipsy March" (Gungahner).
THE HEALTH ASSOCIATION'S MESSAGE FOR TO-DAY IS:
"The elements of health for the body are nutrition, fresh air and exercise. Cleanliness, warmth and rest are also necessary, but they are secondary and consequent upon the other three facts."—Sir George Newman.
9.8 p.m.—HAWTHORN CITY BAND:
Selection, "Unadvised Emphases" (Schubert).
9.10 p.m.—MELBOURNE CHORAL UNION:
"Out of the Silence" (Jenkins).
"Liberty, Boh and Chorus" (Fanning).
9.17 p.m.—HAWTHORN CITY BAND:
Overture, "Sonata" (Boschini).
9.27 p.m.—MELBOURNE CHORAL UNION:
"Stars of a Summer Night" (Borini).
"Now Tramp Over Moss and Fell" (Blakop).
9.32 p.m.—HAWTHORN CITY BAND:
Selection, "La Coquette" (Larent).
9.44 p.m.—A Special Programme has been arranged.
10.15 p.m.—HAWTHORN CITY BAND:
March, "Field Day" (Greenwood).
Intermission, "Romano" (Duggan).
10.25 p.m.—LILY BURNAND AND ARTHUR SLATER:
"Check-Check-Check."
"Whistling Tude Anne."
"Knocked 'em in the Old Kent Road."
10.35 p.m.—Late Sporting Results.
ROYAL ATHERTON CLUB OF VICTORIA'S MESSAGE FOR TO-DAY IS FOR EVERYBODY:
"Better be fired with enthusiasm for safety than fired for recklessness."
10.50 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
11 p.m.—OUR GREAT THOUGHT FOR TO-DAY:
"He who has no opinion of his own, but depends upon the opinion and taste of others, is a slave."—Klopstock.
11.1 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
11.40 p.m.—GOD SAVE THE KING.

4QG, BRISBANE.

Saturday

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

CHURCH SERVICE.

The complete Afternoon Service will be relayed from the Seventh Day Adventist Church at Buranda.
FROM BURANDA:

3.30 p.m.—Church service.
4.20 p.m.—Close down.

EARLY EVENING SESSION.

6.30 p.m.—Stories by "Circle Ben".
7.15 p.m.—Racing Results.
7.20 p.m.—Today's Football Play Described.
7.30 p.m.—Selling Notes by Mr. E. Smith.

NIGHT SESSION.

COMMERCIAL TRAVELLERS' CLUB CONCERT.

To-night's programme will comprise the relaxing of the complete Concert organised by the Commercial Travellers' Association from the Commercial Travellers' Club.
FROM THE COMMERCIAL TRAVELLERS' CLUB:

8 p.m.—Concert programme: Duet, "The Moon has Rained" (Benedict); W. W. Chip and J. E. Shuckland; song, "Ruben Rauss" (E. Wetherley); J. Colledge; aria, "Carmina" (Lane Wilson); Mrs. Leahy; Minnie; Scotch song, "Burdie Ballad" (Lowrie); Malcolm Finlayson; ballad, "Whatever is the Best" (Lohr); Miss Vera Parker; piano solo (a) "Lichtstrahlen" (Lutz); (b) "Sennhalla" (Aabstein); Miss Peggy Dean; First Studio of Miss Gladys Fry; Old Scotch song, "Twas Within a Mile of Edinboro' Toun," Miss M. Jamison; song, "See Rasture" (Comes); W. W. Chip; Rhyme ballad, "Monday" (Whitby); J. E. England; duet, "O' Wert, Thou in the Cold Bush" (Mendelssohn); Miss M. Jamison and Malcolm Finlayson; songs, (a) "The Sea Bath in Perth" (Maid White); (b) "Crabbed Age and Youth" (Evelyn); (c) "Lemon"; songs, "Bread of Day" (Sanderson); Mr. Leslie Morris; song, "The End of the Road" (Trotter); Gordon Fullerton; song, "The Windmill" (Nelson); E. A. Gaffney; monologues, (a) "Chattman Bell" (b) "O' Mummy"; Tom Muller; violin solo, "Berndal" (D. Alsted); Miss Mena Martin; song, "The Horn" (Egger); J. E. England; ballad, "I Heard You Go By" (Wood); Miss Vera Parker; Irish ditty, "Down at Dooneys" (Wagrow); Max Aronstein; Scotch ballad, "Down the Burn, Davie Lad"; Miss M. Jamison; duet, "Where the Violets Grow" (Lohr); Miss Vera Parker and Mr. W. W. Chip.

FROM THE STUDIO:
10 p.m.—The "Daily Mail" news.
Weather news.
Close down.

5CL, ADELAIDE.

Saturday.

MORNING SESSION.

11 a.m.—G.P.O. Chimes.
11.1 a.m.—General information and "Advertiser" News Service.
11.30 a.m.—Musical numbers.
12 noon.—Close down.

AFTERNOON SESSION.

2 p.m.—G.P.O. Chimes.
2.1 p.m.—Interstate and Maritima Racing Results, interspersed with Music from the Studio.
5.15 p.m.—Close down.

EVENING SESSION.

6 p.m.—G.P.O. Chimes.
6.1 p.m.—Dinner music, from the Covent Garden Cafe.
6.30 p.m.—Bedtime Stories.
7.25 p.m.—Misses S. G. Ward and Co.'s Stock Exchange Intelligence.
Market reports by Messrs. A. W. Sandford and Co., A. E. Hall and Co., Dalgety and

Co., S.A. Farmers' Co-operation Union, Taylor Bros., Retail Grocers' Association, J. H. Young's Special Report on the Tomato Market.
Interstate Fruit and Produce Market Company, Ltd.

7.55 p.m.—"Windbag's" Interstate and Local sporting results.
8 p.m.—G.P.O. Chimes.
8.1 a.m.—Violin solo, Harriet Williams.
8.4 p.m.—Contra solo, Miss Kay Miller.
8.9 p.m.—Talk by the Rev. G. E. Hale, B.A.
8.24 p.m.—Violin solo, Mr. Harriet Williams.
8.38 p.m.—Contra solo, Miss Kay Miller.
8.32 p.m.—Relay from Exhibition Building: Description of Wrestling Match.
10 p.m. (approx.)—Sporting results.
10.15 p.m.—Relay from Glenelg: The Maitson Dance Band.
11.15 p.m.—Sunday's programme and close down.

6WF, PERTH.

Saturday.

12 noon.—Tune In.
12.5 p.m.—Musical programmes, including Piano-forte selections by Miss Evelyn Willis, A.L.C.M.
12.47 p.m.—Market, News, and Cable.
1 p.m.—Time signal from Perth Observatory.
1.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.
1.2 p.m.—Close down.
3.15 p.m.—Tune In.

SPORTING SESSION.

8.20 p.m.—Quarter-time scores of the Staff Football Club (South Australia) v. Western Australia, football match.
Having results, detailed description.
8.30 p.m.—Close down.
9.45 p.m.—Tune In.
9.50 p.m.—Birthday greetings for the Kiddier, by Uncle Duffy and Rex.
10 p.m.—Sports results.
10.30 p.m.—Market, News, and Cable.
11.15 p.m.—Talk.
8 p.m.—Time signal from Perth Observatory.
8.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.

POPULAR NIGHT.

8.15 p.m.—Musical programme from the Studio, including vocal and instrumental artists.
Orchestral music, played by Rex's Orchestra, conducted by Mr. Harold Darrington, relayed from Hoyt's Regent Theatre, William Street.
Dance music, by Colin Smith and his Dance Orchestra, relayed from the Perth Public Royal Ice Skating.
10 p.m.—Late news items, by courtesy of "The Daily News" Newspaper Co.
Eggs which range announcement.
Weather Report and Forecast.
Sports results.
10.30 p.m.—Close down.

7ZL, HOBART.

Saturday.

MORNING SESSION.

11 a.m.—G.P.O. Clock Chimes.
11.1 a.m.—Tune in selection.
11.5 a.m.—British Official Wireless News.
11.10 a.m.—"Mercury" news service.
11.30 a.m.—Shipping information.
Stage within wireless range.
11.35 a.m.—Mail notices.
11.40 a.m.—Market, News, and Cable.
Foreign-Exchange Market.
Housewives' Guide.
11.45 a.m.—Hobart Stock Exchange quotations.

11.58 a.m.—Sporting anticipations.
11.55 a.m.—Forecasting stations 9 a.m. weather report.

12 noon.—G.P.O. Clock Chimes.
Close down.

AFTERNOON SESSION.

3 p.m.—G.P.O. Clock Chimes.
8.1 p.m.—Sporting events or items from the Studio.
Close down.

EARLY EVENING SESSION.

6.30 p.m.—Children's Corner, by "Uncle Hooper".
7 p.m.—"Uncle Peter's" half-hour.

NIGHT SESSION.

7.30 p.m.—Musical selection.
7.55 p.m.—Talk under the auspices of the Hobart Development League.
7.58 p.m.—"Mercury" special Tasmanian news service.
Railway Action Protests Set, Weather forecast.
Hobart Stock Exchange quotations.
8 p.m.—G.P.O. Clock Chimes.
8.15 p.m.—Dance music by Mrs. Sherrards' Trio from Imperial Hotel, Hobart; items interspersed from the Studio.
10.30 p.m.—British Official Wireless News.
Weather information.
Station announcement.
National Anthem.

**Sunday, Oct. 16
2FC, SYDNEY**

MORNING SESSION.

10.55 a.m.—Programme Announcements.
11.0 a.m.—"Big Ben"; From St. Andrew's Cathedral, George Street, Sydney: The Morning Service.
12.15 p.m.—From the Studio: News Service.
12.30 p.m.—Close Down.

AFTERNOON SESSION.

1.0 p.m.—"Big Ben"; and Programme Announcements.
1.5 p.m.—From the Blind Institute, Sydney: A Programme supplied by blind members of the Musical Profession.
1. Antiphon: "Hosanna, Hosanna" (arranged from Handel's "Largo")—The Chorus.
2. Violin: "Andante" from "Concerto" (Mendelssohn).
Miss Joyce Frow, L.A.B.
3. Contralto: "Austria With Me" (Liedtke), Miss May Cooper, A.L.C.M.
4. Reading from Bible: Hebrews 11:1-12:2.
Mr. H. W. Thompson.
5. Tenor: "Hail, Ye People Hear Your Heavens" (Mendelssohn).
Air: "If With All Your Hearts" (Mendelssohn).
Mr. Douglas Durkin.
6. Recitation: "The Gates".
Miss Rita McIntyre.
7. Pianoforte: "Prelude in G Minor" (Bachmannoff).
Miss Joyce Frow, L.A.B.
8. Address by Miss Janet Terrell.
9. Part Song: "The Lamb Lay Closer" (Sullivan).
The Chorus.
10. Soprano: "Hallelujah" and "God Said" (Haydn).
Air: "With Veritate Glad" (Haydn).
Miss Myra Foster.

Orchestral Selection.
Hymn 76, "Tell Me the Old, Old Story."
Solo, Mr. W. J. Cadrow.
Orchestral Selection.
Solo, Mr. W. J. Cadrow.
Notices.
Offering.
Orchestra.

ADDRESS: Mr. WARREN KERR, O.B.E.
"Some Impressions of the recent General Economic Conference."
National Anthem.
Benediction.
4.30 p.m.—Close down.

EVENING SESSION.

5.30 p.m.—Answers to Letters and Birthday Greetings by "BILLY BUNNY."
6 p.m.—"THE RED PIPERS" will give their musical programme of Hymns and Choruses. Chorus, "Give Ear Unto My Prayer." Chorus, "The Robin's Petition."
Solo, "Swing Low, Sweet Chariot."
Hymn, "The Pilgrim's Song."
Chorus, "O Gladness Light."
Solo, "Lullaby Low."
Chorus, "The Violet."
Hymn, "Bavious again to Thy Dear Name."
6.35 p.m.—"BROTHER BILL" will talk to the boys and girls about "Gold in the Quartz."
6.45 p.m.—Bells from St. Paul's Cathedral.

NIGHT SESSION.

7 p.m.—Evening Service from St. Paul's Cathedral, Melbourne.
Hymn 298: "Praise My Soul the Kings of Heaven."
Psalm 107.
Anthem: How lovely is Thy dwelling place, O Lord of Hosts! For my soul it lengthen, yea, fainteth for the courts of the Lord; my soul and body crieth out, yea, for the living God. Bless are they that dwell within Thy house, they praise Thy name evermore. How lovely is Thy dwelling place."
Hymn 121: Holy Father, Cheer Our Way."
Sermon: The Archbishop.
Hymn 545: "Glorious Things of Thee Are spoken."
FROM THE STUDIO—

8.40 p.m.—THE HEALTH ASSOCIATION'S MESSAGE FOR TO-DAY IS:
"A Clean, healthy world is the best insurance against disease."
8.41 p.m.—COLLINS STREET BAPTIST CHURCH CHOIR. Under Choir Direction of MADAME ELLA KINGSTON, Sir John Stainer's Choral Work, "THE DAUGHTER OF JARHUS," For Solo Voices and Chorus.
Soprano Madame ELLA KINGSTON
Tenor Mr. V. WOFF
Bass Mr. ERNEST SAGE
1. Introduction.
2. Choral Recitative.
3. Recitative (Soprano and Bass).
4. Solo (Tenor), "My Hope is in the ever-lasting."
5. Recitative (Soprano). The Wailing (Chorus of Women).
6. Recitative (Soprano).
7. Chorus of Likeliest (Tenors and Basses)
8. Recitative and Chorus (Soprano).
9. Duet (Soprano and Tenor):
"Love Divine all love exceeding."
10. Trio and Chorus, "To Him who left His Throne on high."
8.50 p.m.—"Argus" news service.
Announcements.

THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS:
"Men is never watchful enough against dangers that threaten him every hour. Make Safety your shadow."
OUR GREAT THOUGHT:
"For Yesterday is but a dream,
And Tomorrow is only a vision,
But Today well lived makes
Every yesterday a dream of happiness,
And every tomorrow a vision of hope."
—From the Sanskrit.
GOD SAVE THE KING.

4QG, BRISBANE.

Sunday.

MORNING SESSION.

ST. ANDREW'S PRESBYTERIAN CHURCH.
The complete Morning Service will be played from St. Andrew's Presbyterian Church, Brisbane.
FROM ST. ANDREW'S CHURCH:
11 a.m.—Morning Service.
12.20 p.m.—Close down.

AFTERNOON SESSION.

CITIZENS' BAND.
The Concert by the Brisbane Citizens' Band will be relayed from the Botanic Gardens.
FROM THE BOTANIC GARDENS:
3.30 p.m.—Band Concert.
4.30 p.m.—Close down.

NIGHT SESSION.

ST. ANDREW'S PRESBYTERIAN CHURCH.
The complete Evening Service will be relayed from St. Andrew's Presbyterian Church.
7 p.m.—Children's Service.
7.30 p.m.—Evening Service.
8.30 p.m.—Benediction.

BAND CONCERT.

At the conclusion of the Church Service, the Concert by the Brisbane Municipal Concert Band will be relayed from Wickham Park. The programme will include:—Overture, "Fest" (Lortzing); selection, "Mareo Vicenti" (Petrella); "Marine Slave" (Tchaikowsky).
9.30 p.m.—Close down.

6WF, PERTH.

Sunday.

10.45 a.m.—Tune in.
11 a.m.—Morning Service, relayed from Salvation Army Citadel, Pier Street, Perth.
12.15 p.m.—Close down.
3.30 p.m.—Tune in.
FROM THE STUDIO:
3.35 p.m.—Musical programme, including vocal and instrumental articles.
4.30 p.m.—Close down.
7 p.m.—Tune in.
7.5 p.m.—Children's bedtime stories.
7.50 p.m.—Evening Service, relayed from St. George's Cathedral, Cathedral Avenue, Perth.

AFTER-CHURCH SERVICE.

3.45 p.m.—Musical programme, including vocal and instrumental numbers.
10.5 p.m.—Close down.

7ZL, HOBART

Sunday.

MORNING SESSION.

11 a.m.—Church Service from Memorial Congregational Church, Hobart.
Rev. Arthur C. Nelson.
At conclusion of Church Service Band Express information.
Close down.

AFTERNOON SESSION.

3.30 p.m.—Pleasant Sunday Afternoon Concert from the Studio.
4.30 p.m.—Close down.

EARLY EVENING SESSION.

6.30 p.m.—Children's Corner, by the "Sunday Lady."

NIGHT SESSION.

7 p.m.—Church Service from Methodist Church, Melville Street, Hobart.
Preacher, Rev. Robert Williams.
At conclusion of Church Concert from the Studio, by Miss Ruby Wallace (soprano), Miss Ruby Plessa (pianist), Mr. Thomas Day (baritone), also Sacred numbers by Hobart Male Quartet: Messrs. R. J. Shield, N. H. Mackay (tenors), H. Waller and F. N. Brownell (basses).
9.40 p.m.—"Mercury" news service.
British Official Wireless News, Weather forecasts, Station announcements, National Anthem.

Monday, Oct. 17
2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m.—"Big Ben" and programme announcements.
10.5 a.m.—Studio music.
10.55 a.m.—"Sydney Morning Herald" news service.
11.30 a.m.—Studio music.
10.35 a.m.—Last minute racing information by the 2FC commissioner.
10.45 a.m.—Studio music.
11 a.m.—"Big Ben." Marching music for school children.
11.5 a.m.—A.P.A. and Reiser's cable services.
11.25 a.m.—A reading.
11.50 a.m.—Close down.

MIDDAY SESSION.

12 noon—"Big Ben" and programme announcements.
12.2 p.m.—Studio Exchange, first call.
12.3 p.m.—Weather forecast, rainfall.
12.5 p.m.—Studio music.
12.40 p.m.—Summary of "Sydney Morning Herald" news service.
12.25 p.m.—Rugby wireless news.
12.30 a.m.—Marching music for school children.
12.40 p.m.—Maxie Githman, lyric soprano: "Mighty as is Jesus" (Chadwick).
12.45 a.m.—THE OAK HALL INSTRUMENTAL TRIO.
12.55 p.m.—Studio music.
1 p.m.—"Big Ben." Weather intelligence.
1.5 p.m.—"Evening News" midday news service.
Producers' Distributing Society's report.
1.50 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
1.50 p.m.—Studio music.
1.50 a.m.—THE OAK HALL INSTRUMENTAL TRIO.
2 p.m.—"Big Ben."

AFTERNOON SESSION.

2 p.m.—"Big Ben" and announcements.
3.4 p.m.—A recital by the pupils of Mr. S. Vogt Jajegsen. Violin items.

2BL, SYDNEY

Monday.

EARLY MORNING SESSION—7 to 8 a.m.

MORNING SESSION.

- 7.15 p.m.—A talk by Madame Evelyn Gring: "The Spirit of Music."
 8.05 p.m.—An item by a pupil of Mr. S. Vost Jansen.
 8.30 p.m.—Marching music for school children.
 8.40 p.m.—Florence Grant, soprano.
 8.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO (Leader, Mr. Horace Keats).
 8.55 p.m.—Further items arranged by Mr. S. Vost Jansen, violinist.
 9.15 p.m.—"Big Ben." Jeanette Rooney, contralto (from Farmer's Tea Rooms).
 9.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 1.10 p.m.—Annie Payne, mezzo: "Harp of the Windland" (Marini).
 1.15 p.m.—Florence Grant, soprano.
 1.35 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 4.35 p.m.—Margot Lescant, soprano.
 4.40 p.m.—Jeanette Rooney, contralto (from Farmer's Tea Rooms).
 4.45 p.m.—Stock Exchange, third call.
 4.50 p.m.—Annie Payne, mezzo: "The Fairy Pipers" (Brewer).
 4.55 p.m.—Studio music.
 4.59 p.m.—Margot Lescant, soprano.
 5.00 p.m.—Studio music.
 5.04 p.m.—"Big Ben." Close down.
- 10.30 a.m.—G.P.O. Clock and Chimes.
 Musical item from the Studio.
 10.40 a.m.—News from the "Daily Telegraph" Pictorial.
 10.50 a.m.—Musical programme from the Studio.
 11 a.m.—G.P.O. Clock and Chimes.
 Announcements.
 11.05 a.m.—Musical programme from the Studio.
 11.15 a.m.—Talk on "Archery," by Miss Gwen Varley, Broadcasters' Women's Sports Authority.
 Social Notes: Replies to correspondents, by Mrs. Jordan.
 Talk on "The Week's News," by Mrs. Jordan.
 11.20 a.m.—G.P.O. Clock and Chimes.
 Special Ocean Forecast and Weather Report.
 11.3 p.m.—Brunswick Pausanoe Musical Report.
 11.15 p.m.—Information: Mails, Shipping, and Post Directory.
 11.18 p.m.—Boats in call by wireless.
 12.23 p.m.—Fruit Market Report.
 12.22 p.m.—Vegetable Market Report.
 12.24 p.m.—London Metal Market Report.
 12.25 p.m.—Dairy and Farm Produce Market Report.
 12.30 p.m.—G.P.O. Clock and Chimes.
 Foreign Market Report.
 12.32 p.m.—Fruit Market Report.
 12.41 p.m.—Babbi Market Report.
 12.50 p.m.—Stock Exchange Report.
 12.58 p.m.—News from the "Sun."
 12.55 p.m.—Hilbert's Instrumental Quartette: direction, Carlis Cowling.
 1.27 p.m.—Stock Exchange Report.
 1.30 p.m.—G.P.O. Clock and Chimes.
 Talk to Children and Special Entertainment for Children in Hospital.
 2 p.m.—G.P.O. Clock and Chimes.
 Close down.

AFTERNOON SESSION.

- Reading information broadcast immediately after each Race, by courtesy of the "Sun."
 3 p.m.—G.P.O. Clock and Chimes.
 Musical programme from the Studio.
 3.10 p.m.—News from the "Sun."
 3.20 p.m.—Musical programme from the Studio.
 3.30 p.m.—News from the "Sun."
 3.40 p.m.—Danzon's Dance Band, broadcast from the Danzongan Cabaret.
 4 p.m.—G.P.O. Clock and Chimes.
 News from the "Sun."
 4.15 p.m.—Serial Story.
 4.30 p.m.—Dunrovan Dance Band.
 4.50 p.m.—News from the "Sun."
 4.50 p.m.—Resume of night's programme.
 4.57 p.m.—Reading resume.
 5.00 p.m.—Special Ocean Forecast.
 5 p.m.—G.P.O. Clock and Chimes.
 Close down.

EARLY EVENING SESSION.

- 6.45 a.m.—G.P.O. Clock and Chimes.
 Children's Session.
 6.50 p.m.—Musical programme from the Studio.

SPECIAL COUNTRY SESSION.

- 7 p.m.—G.P.O. Clock and Chimes.
 Australian Mercantile, Land and Finance Club's Report.
 Weather Report and Forecast, by courtesy of Government Meteorologist.
 Producers' Distributing Societies' Fruit and Vegetable Market Report.
 Stock Exchange Report.
 Grain and Poultry Report ("Sun").
 Dairy Produce Report ("Sun").

- 7.15 p.m.—Country News from the "Sun."
 7.25 p.m.—Talk on "How to Maintain Your Health," by Dr. Du Maurier.
 7.40 p.m.—Talk on "The Master Cat," by Mr. Martin.

EVENING SESSION.

- 8 p.m.—G.P.O. Clock and Chimes.
 Broadcasters' Tantalus Chorus.
 An Hour's Programme, presented by Leslie Barr's Wives.
 8.3 p.m.—Sig and Molly Owen and Jack Netherfield in a reading of "Judd."
 8.35 p.m.—An Operatic Duet, by Helena Siverson and Lillian Jeffrey.
 8.38 p.m.—Helen Solms, by Mr. Hagen Hohenbergh, Danon violin.
 8.55 p.m.—Miss Amy Oelings, contralto, and Mr. Foster Sutherland, basso.
 8.42 p.m.—The Newtown Band, broadcast from Industrial Hall, Newtown.
 9.2 p.m.—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.
 9.3 p.m.—Al Jack's Crackbracks, broadcast from the Ballroom of the Bondi Casino.
 9.13 p.m.—Broadcasters' All-Sports Report will talk on General Sporting.
 9.25 p.m.—The Newtown Band.
 9.43 p.m.—In response to numerous requests a second performance of the Song-Cycle, "Mora's Holiday," composed by H. Lane Wilson, Solists: Suzanne, Heloise Stewart, Contralto; Amy Oelings, Tenor; Lance Jeffrey.
 Presented under the direction of Mr. G. Vera Barnett.
 10.15 p.m.—Al Jack's Crackbracks, broadcast from the Ballroom of the Bondi Casino.
 10.18 p.m.—Mr. Hagen Hohenbergh.
 10.23 p.m.—Al Jack's Crackbracks, broadcast from the Ballroom of the Bondi Casino.
 10.45 p.m.—Resume of following day's programme.
 10.50 p.m.—Al Jack's Crackbracks, broadcast from the Ballroom of the Bondi Casino.
 11 p.m.—G.P.O. Clock and Chimes.
 National Anthem.

EARLY EVENING SESSION.

- 5.40 p.m.—Programme announcements and the Chimes of 2FC.
 5.45 p.m.—"The Hello Man" talks to the children.
 5.50 p.m.—Story time for the young folk.
 6.00 p.m.—Studio music.
 6.05 p.m.—Dairy's market reports (wheat, wheat and stock).
 7 p.m.—"Big Ben." Late sporting news.
 7.15 p.m.—Fruit and vegetable markets.
 7.25 p.m.—Weather and shipping news.
 7.30 p.m.—Late "Evening News" news service.

NIGHT SESSION.

- 7.00 p.m.—Programme announcements.
 7.35 p.m.—Margaret Butterworth, contralto.
 7.45 p.m.—Brunton Gibb and Desalle Thomas, in a sketch.
 7.52 p.m.—Tom Goodall, cornet solo.
 8 p.m.—"The Sun." From the Haymarket Theatre, George Street, Sydney, orchestral items under the conductors of Mr. Stanley Porter.
 8.20 p.m.—Brunton Gibb and Desalle Thomas, in a sketch.
 8.30 p.m.—Margaret Butterworth, contralto.
 8.35 p.m.—Jack Lumsdaine, songs at the piano.
 8.50 p.m.—Howard Huerocbee, tenor, from SCL, Adelaide.
 8.58 p.m.—Harry Harrison, mouth organ solos.
 9.05 p.m.—From the Haymarket Theatre, George Street, Sydney, Vocal Act.
 9.20 p.m.—From the Studio, Brunton Gibb and Desalle Thomas, radio sketch.
 9.30 p.m.—Tom Goodall, cornet solo.
 9.38 p.m.—Charles O'Mara, Irish comedian.
 9.45 p.m.—From the Haymarket Theatre, George Street, Sydney, Orchestral items.
 9.55 p.m.—Jack Lumsdaine, songs at the piano.
 10.7 p.m.—Harry Harrison, mouth organ solos.
 10.12 p.m.—Howard Huerocbee, tenor, from SCL, Adelaide.
 10.20 p.m.—The Haymarket Operatic Orchestra, under the baton of Mr. Stanley Porter.
 10.30 p.m.—Dance music. Weather forecast.
 10.57 p.m.—Late news and announcements.
 11 p.m.—"Tig Ben." Dance music.
 11.50 p.m.—National Anthem.
 Close down.

2GB, SYDNEY

Monday.

MORNING SESSION.

- 9 a.m.—Music.
 9.15 a.m.—"Clement's" Talk.
 9.19 a.m.—Music.
 9.35 a.m.—Psychological Class.
 9.40 a.m.—Music.
 9.45 a.m.—Heads and Tails.
 10 a.m.—Close down.

AFTERNOON SESSION.

- 2.30 p.m.—Music.
 2.37 p.m.—Address.
 3.22 p.m.—Music.
 4 p.m.—Address.
 4.22 p.m.—Music.
 4.46 p.m.—Close down.

EVENING SESSION.

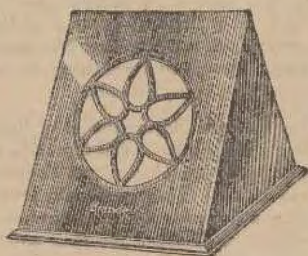
- 7 p.m.—Music.
 7.5 p.m.—Address.
 7.15 p.m.—Music.
 7.20 p.m.—Address.
 7.30 p.m.—Music.
 7.55 p.m.—Selections from A. R. Paterson by Mr. Hagen Hohenbergh.
 7.15 p.m.—Music and announcements.
 7.55 p.m.—Songs by Miss Ethel Lanning.

NIGHT SESSION.

- 8.5 p.m.—Address.
 8.55 p.m.—Songs by Harold Cobb.

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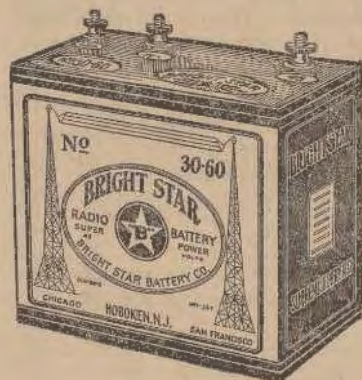
INTERNATIONAL RADIO CO. LTD.,

229 CASTLEREAGH STREET, SYDNEY

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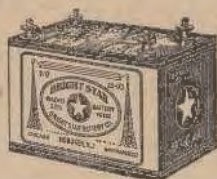
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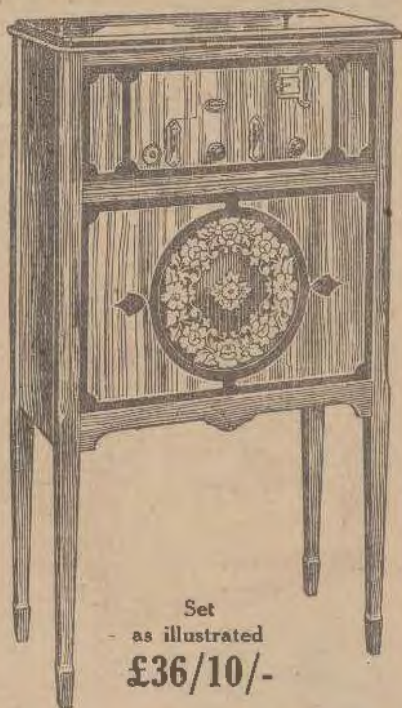
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8.28 p.m.—Instrumental Quartet, Dan Scully, Monica Border, Murielle Lang, Ada Brook.
 8.30 p.m.—Hissio Solo by Miss Amy Cobb.
 9 p.m.—Address by Rev. H. B. S. Imanusson.
 "Mending Broken Bells."
 9.15 p.m.—Songs by Miss Enid Laanene.
 9.23 p.m.—Musical Monologue, Harold Cobb.
 9.30 p.m.—Instrumental Quartet, Dan Scully, Monica Border, Murielle Lang, Ada Brook.
 9.40 p.m.—Talk.
 10 p.m.—Close down.

2 UW, SYDNEY

Monday.

MORNING SESSION.

8 a.m.—News, Shipping, Mails, Studio Items.
 9.04 a.m.—Women's Session.
 9.19 a.m.—Resume of forward programme.
 10 a.m.—Close down.

AFTERNOON SESSION.

2 p.m.—Studio Items.
 2.59 p.m.—Resume of forward items.
 4 p.m.—Close down.

EVENING SESSION.

8 p.m.—Studio Items.
 8.59 p.m.—Resume of forward programme.
 9 p.m.—Close down.

NIGHT SESSION.

9 p.m.—Where 'n Go.
 9.15 p.m.—Studio selection.
 9.16 p.m.—Special musical programme, arranged by Professor C. Euter.
 9.18 p.m.—Studio selections.
 9.25 p.m.—Resume of forward programme.
 9.30 p.m.—Close down.

3LO, MELBOURNE.

Monday

MIDDAY SESSION.

12 noon.—Melbourne Observatory time signal.
 British official wireless news from England, India and the Australian Free Association cables. "Argus" news service.
 12.20 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.
 12.30 p.m.—LILY BURNAND AND ARTHUR SLATTEK, Entertainers.
 "Sweet Home O'Grady."
 "The Poet and Peasant Overture."
 Winding solo.

12.40 p.m.—Stock Exchange information.
 12.43 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.

12.50 p.m.—We have pleasure in introducing to you GLADYS LAMPE, Contralto:
 "My Dear Sam" (Sanderson).
 "Birth of Muz" (Leoni).

1.00 p.m.—Melbourne Observatory Time signal.
 Time Widens walls before it: Opportunity with B, and Repentance behind it.

1.11 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.

1.18 p.m.—Meteorological Information. Weather forecast for Victoria, Tasmania, South Australia and New South Wales. Ocean forecast. River reports. Rainfall for Victoria, South Australia and New South Wales.

1.15 a.m.—We have much pleasure in introducing to you:
 PEGGY HUMBERT, Soprano.
 "The Pipes of Pau."
 "Ninno" (Tosti).

1.22 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.

1.32 p.m.—GLADYS LAMPE, Contralto:
 "If My Songs Were Only Wined" (Kahn).
 "To-morrow" (Kael).

1.39 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.

1.49 p.m.—PEGGY HUMBERT, Soprano:
 Yule Song from "Tom Jones."
 "Oh Niece, Niece" (Merkett).

1.56 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.

2 p.m.—Close down.
 Results of the Asst. 21000 Meeting will be given as they come to hand.

AFTERNOON SESSION.

2 p.m.—Melbourne Observatory time signal.
 THE REGENT GRAND CONCERT ORCHESTRA (by permission Hoyt's Theatrical Ltd.), personally conducted by ERNEST G. MITCHELL:

March, "Old Faithful" (Holman).
 Overture, "Light Cavalry" (Suppe).

2.10 p.m.—Mrs. DOROTHY SILK.
 Selection, "Tip Toe" (Gorbwin).

2.20 p.m.—LILY BURNAND AND ARTHUR SLATTEK:
 Selection, "The Broken Melody" (Vau Riviere).

2.32 p.m.—LILY BURNAND AND ARTHUR SLATTEK:
 Selections from their repertoire.

2.40 p.m.—THE REGENT GRAND CONCERT ORCHESTRA:
 Selection, "Fasst" Part 1 (Gonard, str. Mitchell).

4 p.m.—BILLIE LOBLAINE, Soprano:
 "A Little Coop Prayer."

4.7 p.m.—LILLY BURNAND, piano:
 "The Picnic" (Middwell).

4.12 p.m.—CHAS. V. GARBUER:
 Trumpet Solo, "The Last Chord."

4.22 p.m.—BILLIE LOBLAINE, Soprano:
 "Pretty Babe of Nine" (with ukulele).
 "Little Black Nigger."

4.36 p.m.—MISS ELORA PELL, Inspector of Schools, "Economic Science" (with ukulele).
 "Bureau" news service. Stock Exchange information.

EVENING SESSION.

5.50 p.m.—Acceptance for Wednesday's Races at Werribee.

5.55 p.m.—Answers to Children's Letters and Birthday Writings by "LITTLE MISS KOOKABURRA."

6.05 p.m.—LILLY BURNAND QUARTETTE:
 "O'way Time" (O'Hara).

6.13 p.m.—"LITTLE MISS KOOKABURRA" will tell the little ones a story.
 6.23 p.m.—STYLISH QUARTETTE:
 "Butterflies of Gold" (Colonna).

6.30 p.m.—"LITTLE MISS KOOKABURRA" has an exciting story for the older children.

6.40 p.m.—Gabi report of New market stock sales, by the Associated Stock and Station Agents, Bourke Street, Melbourne—number of Sheep and Cattle drawn for week's sale.

6.45 p.m.—"Herald" news service. Weather synopses. Shipping movements.

6.52 p.m.—Stock Exchange information.
 6.57 p.m.—River reports.

6.59 p.m.—Market reports by J. E. Roswell, Ltd. Bahubul prices.

7.2 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd., JOHNS, GRAIN, FRY, BIRAW, JULE, Dairy Produce, Poultry, and Oysters. MARKET reports of Fruit by the Victorian Fruitgrowers' Association.

NIGHT SESSION.

7.48 p.m.—Under the auspices of the Boy Scouts of Australia, Mr. D. H. ADAM, District Commissioner, Dr. C. McADAM, "Our Usual Camp-fire Yarn."

7.50 p.m.—Mr. E. C. H. TAYLOR will speak to boys and girls—
 "School Life and School Stars."

7.55 p.m.—Under the auspices of the Department of Agriculture, Mr. D. H. ADAM, Vegetable Physiologist, will speak on—
 "Potato Seed Degeneration."

8 p.m.—Mr. H. J. FAX, International Printer, "Olympic Games Preparation."

8.15 p.m.—MUSICAL PROGRAMME, transmitted from the BELEN STREET SCHOOL, NORTHCOLE:

"The School Brass Band."
 Arranged by Miss V. LILIA WILSON.
 Song—JOYCE MUNDY.
 Violin Solo—RON BULME.

"The Laughing Room."
 "I Like a Thrush at Eve"—THE SCHOOL CHOIR.

The School String Band.
 Recitation—MAVIS KRUGER.

Song—JOYCE MUNDY.
 "How Beautiful is Night."
 "Up in the Sky Night"—THE SCHOOL CHOIR.

The Brass Band.
 FROM THE STUDIO—

8.15 p.m.—Announcements, THE HEALTH ASSOCIATION'S MESSAGE FOR YOU TO-DAY IS:

"When a man loses his health, then he begins to miss ears of H."—Josh Billings.

8.19 p.m.—LEN GIBSON'S NEAPOLITAN SEXTETTE:
 "Tubs a Row" (Kohn).
 "Just a Cottage Small" (Hesley).

8.24 p.m.—"THE SUNDOWNERS":
 "Big Blue" (Richardson).
 "Kentucky Babe" (Gabel).

8.34 p.m.—MANDOLIN and SPANISH GUITAR DUO:
 "Misty, Misty" (De Capus).
 "Waltz of Southern Airs" (Arr. Gibson).

8.42 p.m.—BLO has much pleasure in introducing to you MARY LAWTON, Vocalist and Harpist, who will entertain you with selections from her repertoire.

8.54 p.m.—LEN GIBSON'S NEAPOLITAN SEXTETTE:
 "O' Scia Mio" (De Capus).
 "Mary Lou" (Lyzan).

9.02 p.m.—THEBERT SANDERSON, Baritone.
 "Loving Maid of Saver King" (Gonard).
 "Colinette" (Clarke).

9.08 p.m.—"Argus" News service. Meteorological information. British Official Wireless News. THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS:

"It's rather in something and enthusiasm for something that makes a life worth looking at."—W. Holmes.

10.10 p.m.—LEN GIBSON'S NEAPOLITAN SEXTETTE:
 "Just a Rose in Killarney" (Swain).
 "Teach me How to Love" (Giesse).

10.25 p.m.—ROBERT GILHARD:
 "Hymne to the Graham."
 "In Childhood" (Yak).

10.30 p.m.—LEN GIBSON'S NEAPOLITAN SEXTETTE:
 "Sweetheart of Eugene Day" (Born).
 "A Little Spanish Tune."

10.37 p.m.—MARY LAWTON, Harpist:
 Selected.

10.44 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
 "No Wonder He Hugs" (Aksel).
 "When I Look at You" (Jensen).
 "Just the Same" (Donaldson).

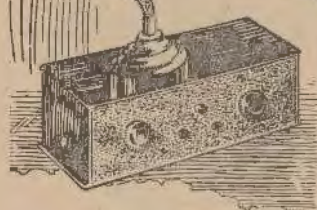
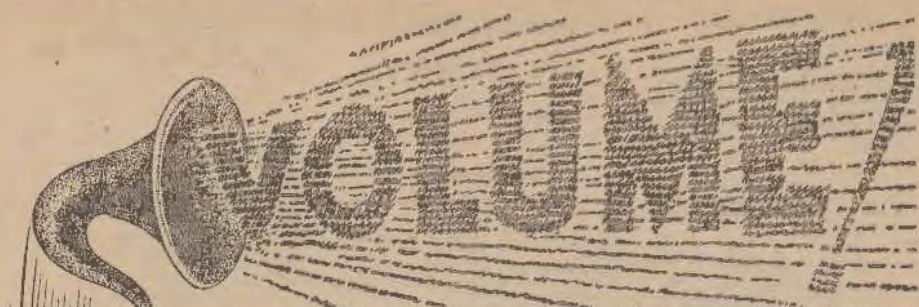
10.50 p.m.—"THE SUNDOWNERS":
 "Gabi" (W.).
 "So Blue" (Henderson).

10.57 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
 "I Won't Kiss You Good Night" (Tacker).
 "Go Wash an Elephant if You Wanna do Something Big" (Tacker).

11 p.m.—OUR GREAT THOUGHT:
 "Work as they work, who are ambitious. Live as they live, as they want who desire it. Be happy, as they are happy who live for happiness alone."
 —From the Hindu.

11.1 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.

11.40 p.m.—GOD SAYS THIS ALING.

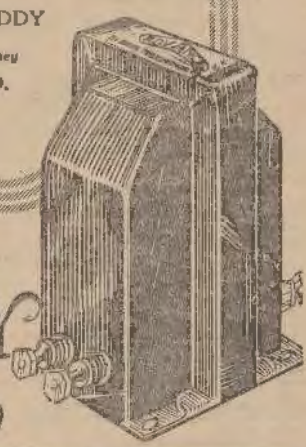


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ADVANCE

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TRANSFORMER**

1/6

6WF, PERTH.

Monday.

- 12.30 p.m.—Tone in.
 12.35 p.m.—Markets, News, and Cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.
 1.2 p.m.—Studio Quintette, conducted by Mr. Val Smith.
 2 p.m.—Close down.
 2.50 p.m.—Tone in.
 3.25 p.m.—Musical programme, including vocal and instrumental items from the Studio.
 Afternoon Tea Concert, relayed from the Carlton Cafe, Hay Street.
 4.50 p.m.—Close down.
 4.45 p.m.—Tone in.
 5.50 p.m.—Stories for the kiddies, by Uncle Henry and Duffy.
 7.20 p.m.—Stocks, Markets, News.
 7.45 p.m.—Talk by Lieut.-Col. Le Soer, Director of the Zoological Gardens, South Perth.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.

CONCERT NIGHT.

- 8.3 p.m.—Items by the Salvation Army Seaforth Girls' Home Orchestra.
 Vocal assisting artists.
 10 p.m.—Late news items, by courtesy of "The Daily News" Newspaper Co.
 Rings within, range announcement, Weather Report and Forecast.
 10.30 p.m.—Close down.
 100 METRE TRANSMISSION.
 Simultaneous Broadcast on 100 Metres of Musical Programme given on 1250 Metres, commencing at 8.5 p.m.

7ZL, HOBART

Monday.

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

- 2 p.m.—G.P.O. Clock chimes.
 2.1 p.m.—Tone in selection.
 2.2 p.m.—Hobart Stock Exchange quotations, weather information, items of interest, announcements.
 3.15 p.m.—Musical selections by 7ZL Studio Trio.
 4.15 p.m.—Fashion talk by "Aunt Edna" of Brownhill.
 4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 8.30 p.m.—Children's Corner: "Uncle Peter's" half hour.
 9 p.m.—"Uncle Hector" talks to the children.

NIGHT SESSION.

- 7.30 p.m.—Physical Culture Talk by Lt. R. McKingock.
 7.30 p.m.—Musical selection.
 7.50 p.m.—"Mercury" special Tasmanian news service. Railway auction quotations.
 8 p.m.—G.P.O. Clock chimes.
 8.1 p.m.—Vocal and instrumental numbers from Findley's Music Showroom, Elizabeth Street.
 9 p.m.—Talk by Mr. E. T. Emmett, Tasmania as a Tourist Resort: subject: "Its Publicity Methods."
 9.40 p.m.—British Official Wireless news.
 9.50 p.m.—"Mercury" special interstate news service. Tasmanian District Weather reports. 9 p.m.—Weather forecasts. Station announcements.
 National Anthem.

Tuesday, Oct. 18
2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

- 10 a.m.—"Big Ben" and programme announcements.
 10.5 a.m.—Studio music.
 10.15 a.m.—"Sydney Morning Herald" news service.
 10.30 a.m.—Studio music.
 10.35 a.m.—Late Sporting news by the 2FC Racing Commission.
 10.45 a.m.—Studio music.
 11 a.m.—"Big Ben." Marching music for school children.
 11.5 a.m.—A.P.A. and Reuter's Cables.
 11.10 a.m.—Studio music.
 11.15 a.m.—A Talk on Home Cooking and Recipes by Miss Ruth Kurat.
 11.30 a.m.—Close down.

MIDDAY SESSION.

- 12 noon—"Big Ben" and programme announcements.
 12.3 p.m.—Stock Exchange, first call.
 12.3 p.m.—Official Weather forecast; rainfall.
 12.5 p.m.—Studio music.
 12.10 p.m.—Summary of "Sydney Morning Herald" news service. Rugby wireless news.
 12.25 p.m.—Studio music.
 12.30 p.m.—Marching music for school children.
 12.40 p.m.—Daniel Hardy, baritone: "Angela Guard Thee" (Godard).
 12.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 12.55 p.m.—Studio music.
 1 p.m.—"Big Ben" Weather intelligence.
 1.3 p.m.—"Evening News" midday news service. Producers' Distributing Society's report.
 1.20 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 1.28 p.m.—Stock Exchange, second call.
 1.30 p.m.—Marching music for school children.
 1.40 p.m.—Daniel Hardy, baritone: "New Sleep" (the "Gipsy Peal") (Kalter).
 1.45 p.m.—Studio music.
 1.50 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 3 p.m.—"Big Ben" and programme announcements.
 3.3 p.m.—Mary Maunell, mezzo: "Sims Joyous Bird" (Phillips).
 3.7 p.m.—Eileen Moreau, soprano.
 3.11 p.m.—Studio music.
 3.15 p.m.—A Reading.
 3.25 p.m.—Nancy Marley, soprano.
 3.30 p.m.—Marching music for school children.
 3.40 p.m.—Doris Crossman, contralto (from Farmer's Tea Rooms).
 3.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 3.55 p.m.—Ritty Poole, sub-vocalist.
 4 p.m.—Annie Mills, soprano (from Farmer's Tea Rooms).
 4.5 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 4.15 p.m.—Mary Maunell, mezzo: "I Love You More" (Dorothy Lee).
 4.20 p.m.—Doris Crossman, contralto: "Home isn't Home without You" (Lehr).
 4.25 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 4.35 p.m.—Eileen Moreau, soprano.
 4.40 p.m.—Annie Mills, soprano (from Farmer's Tea Rooms).

- 4.45 p.m.—Stock Exchange, third call.
 4.47 p.m.—Nancy Marley, soprano.
 4.50 p.m.—Ritty Poole, sub-vocalist.
 4.55 p.m.—Studio music.
 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 5.40 p.m.—The Chimes of 2FC.
 5.45 p.m.—"The Hello Man" talks to the children.
 6.00 p.m.—A Talk for the Children—"It is Safe."
 6.40 p.m.—Studio music.
 6.50 p.m.—Lula Sporting news.
 7 p.m.—Dakely's Market reports (Wool, Wheat, and Stock).
 7.5 p.m.—Fruit and Vegetable Markets.
 7.10 p.m.—Weather and Shipping news.
 7.15 p.m.—Late "Evening News" news service.

NIGHT SESSION.

- 7.30 p.m.—Programme announcements.
 7.35 p.m.—A Talk from the Professor of the Sydney University.
 7.45 p.m.—Andrew Higginson and Enid Lavis, Entertainers:
 (a) Patter.
 (b) "You, you, you" (Lehr).
 (c) "Sometimes when Night is Night" (Phillips).
 7.55 p.m.—Ad Crow, Scotch Comedian.
 8 p.m.—"Big Ben." From the Darlington Town Hall (The Metropolitan Band).
 8.15 p.m.—Andrew Higginson and Enid Lavis, Entertainers:
 (a) Patter.
 (b) "I'll have your socks" (Lyle).
 (c) "Because of You".
 8.25 p.m.—From the Darlington Town Hall—The Metropolitan Band.
 8.57 p.m.—Andrew Higginson and Enid Lavis, Entertainers:
 (a) Patter.
 (b) "Land of Tumtobidd" (Allyn).
 (c) "When I am dead, my dearest" (Taylor).
 9.5 p.m.—Late weather forecast.
 Ad. Crow, Scotch Comedian.
 9.10 p.m.—From the Conservatorium Hall, Sydney.
 Items from the Miscellaneous Concert organized by Edward Aray.
 Mendelssohn's "Lyzza of Pralse," with Orchestra and Chorus.
 10.10 p.m.—From the Studio:
 Len Maurice, Popular Baritone.
 10.15 p.m.—Dance music.
 10.25 p.m.—Len Maurice, Baritone, interpreted with dance music until 10.57.
 10.30 p.m.—Late weather news.
 10.57 p.m.—Late news and announcements.
 11 p.m.—"Big Ben."
 Len Maurice, Popular Baritone.
 11.8 p.m.—Dance music until 11.30 p.m.
 11.50 p.m.—National Anthem.
 Close down.

2BL, SYDNEY.

Tuesday.

EARLY MORNING SESSION.—7 to 8 a.m.

MORNING SESSION.

- 10.30 a.m.—G.P.O. Clock and Chimes.
 Musical programme from the Studio.
 10.40 a.m.—News from the "Daily Telegraph" (Victoria).
 10.50 a.m.—Musical programmes from the Studio.
 11 a.m.—G.P.O. Clock and Chimes.
 Announcements.
 11.15 a.m.—Social Notes: Replies to correspondents, by Mrs. Jordan.
 Talk by Mr. Adams, A.M.A.
 12 noon—G.P.O. Clock and Chimes.
 Special Ocean Forecast and Weather Report.
 12.5 p.m.—Brunswick Panatone Musical Recital.



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DEALERS NOTE!
Write us for particulars of our special trade proposition.

12.15 p.m.—Information: Mails, Shipping and Post Directory.
 12.18 p.m.—Basta in call by wireless.
 12.20 p.m.—Fruit Market Report.
 12.22 p.m.—Vegetable Market Report.
 12.24 p.m.—London Metal Market Report.
 12.26 p.m.—Dairy and Farm Produce Market Report.
 12.29 p.m.—G.P.O. Clock and Chimes.
 Storage Market Report.
 12.32 p.m.—Fish Market Report.
 12.34 p.m.—Rabbit Market Report.
 12.36 p.m.—Stock Exchange Report.
 12.38 p.m.—News from the "Sun."
 12.45 p.m.—Miller's Instrumental Quartette, direction, Carol Carling.
 12.47 p.m.—Stock Exchange Report.
 1.00 p.m.—G.P.O. Clock and Chimes.
 Talk to Children and Special Entertainment to Children in Hospital.
 1.05 p.m.—Miller's Instrumental Quartette, direction, Carol Carling.
 1.27 p.m.—Stock Exchange Report.
 1.30 p.m.—G.P.O. Clock and Chimes.
 3 p.m.—G.P.O. Clock and Chimes.
 Close down.

AFTERNOON SESSION.

Racing information broadcast immediately after each Race, by courtesy of the "Sun."
 3 p.m.—G.P.O. Clock and Chimes.
 News from the "Sun."
 3.15 p.m.—Civil Service Stores Trio; direction, Miss de Courcy Bremes.
 3.20 p.m.—G.P.O. Clock and Chimes.
 News from the "Sun."
 3.24 p.m.—Musical programme from the Studio.
 3.30 p.m.—News from the "Sun."
 4 p.m.—G.P.O. Clock and Chimes.
 Civil Service Stores Trio.
 4.15 p.m.—Serial Story.
 4.26 p.m.—Musical programme from the Studio.
 4.30 p.m.—News from the "Sun."
 4.37 p.m.—Resume of night's programme.
 4.39 p.m.—Racing resume.
 4.59 p.m.—Special Ocean Forecast.
 5 p.m.—G.P.O. Clock and Chimes.
 Close down.

EARLY EVENING SESSION.

6.45 p.m.—G.P.O. Clock and Chimes.
 Children's Session.
 6.50 p.m.—Musical programme from the Studio.
SPECIAL COUNTRY SESSION.
 7 p.m.—G.P.O. Clock and Chimes.
 Australian Mercantile, Land and Finance Co's Report.
 Weather Report and Forecast, by courtesy of Government Meteorologist.
 Producers' Distributing Society's Fruit and Vegetable Market Report.
 Stock Exchange Reports.
 Grain and Fodder Report ("Sun").
 Dairy Produce Report ("Sun").
 R.M.S. Talk.
 7.15 p.m.—Country News from the "Sun."
 7.20 p.m.—Talk by a member of the Latenters-in-League.
 7.30 p.m.—Talk on "Tennis," by Dr. McElhane.

EVENING SESSION.

8 p.m.—G.P.O. Clock and Chimes.
 Broadcasters' Topical Chorus.
 8.3 p.m.—Broadcasters' Light Orchestra, under the direction of Mr. J. Knight Barnett.
 8.41 p.m.—Mr. Stanley R. Catlett, tenor.
 8.43 p.m.—The Leone Vocal Trio.
 8.49 p.m.—Mr. Charles Mills, basso.
 8.52 p.m.—Mr. Raymond Peetach, violinist.
 8.52 p.m.—Miss Nathalie Muir, soprano.
 9 p.m.—G.P.O. Clock and Chimes.
 9.1 p.m.—Weather Report and Forecast, by courtesy of Mr. C. J. Marco, Government Meteorologist.
 9.2 p.m.—Broadcasters' Light Orchestra.
 9.12 p.m.—Miss Edna Lister, contralto.
 9.18 p.m.—Mr. Stanley R. Catlett.
 9.20 p.m.—The Leone Vocal Trio.
 9.23 p.m.—Mr. Charles Mills.
 9.40 p.m.—Broadcasters' Light Orchestra.
 9.50 p.m.—Miss Nathalie Muir.
 9.57 p.m.—Resume of following day's programme.

10 p.m.—G.P.O. Clock and Chimes.
 10.1 p.m.—Miss Edna Lister.
 10.3 p.m.—The Ambassadors' Dance Band, broadcast from the Ballroom of the Ambassadors. During intervals between dances "Sun" news will be broadcast.
 12 midnight.—G.P.O. Clock and Chimes.
 National Anthem.

2 UW, SYDNEY

Tuesday.

9.10 a.m.—News, Shipping, Mails, Studio Items.
 9.18 a.m.—Women's Session.
 9.38 a.m.—Resume of forward programme.
 10 a.m.—Close down.

AFTERNOON SESSION.

3 p.m.—Studio Items.
 3.09 p.m.—Resume of forward items.
 3 p.m.—Close down.

EVENING SESSION.

6 p.m.—Studio Items.
 6.59 p.m.—Resume of forward programme.
 6 p.m.—Close down.

NIGHT SESSION.

7 p.m.—Where to Go.
 7.10 p.m.—Studio selections.
 7.15 p.m.—Musical programme, arranged by Professor C. Sauer.
 7.30 p.m.—Mr. Greenwood, Chat to Motorists.
 7.45 p.m.—Continuation of programme, by Professor G. Sauer.
 8 p.m.—Items of the Opera, No. 10, "Ernan" (Verdi), by G. F. Mannal.
 8 p.m.—Studio items.
 8.23 p.m.—Resume of forward programme.
 9.30 p.m.—Close down.

3LO, MELBOURNE.

Tuesday.

12 noon.—Melbourne Observatory time signal.
 Metal prices, received by the Australasian Mines and Metals Association, from the London Stock Exchange this day.
 British official wireless news from Rugby. Reuter's and the Australian Press Association cables. "Anxus" news service.
 12.30 p.m.—COMMUNITY SINGING FROM THE STUDIO, conducted by Mr. G. J. MADKAY, assisted by the STUDIO QUARTET, conductor REGINALD BRADLEY.
 E. MASON WOOD, baritone.
 "Tally Ho" (Leslie).
 "Glorious Devout" (Garrison).
 MOLLY MACKAY, soprano.
 "Spring" (Hendell).
 "I Attempt from Love Sickness" (Purcell).
 1.45 p.m.—Stock Exchange information.
 Meteorological information. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean Forecast. River reports. Rainfall for Victoria, Tasmania, South Australia and New South Wales.
 2 p.m.—Close down.

AFTERNOON SESSION.

3 p.m.—Melbourne Observatory time signal.
 3.1 p.m.—JOE ARONSON AND HIS SYNOCPATING SYMPHONISTS.
 3.10 p.m.—"AU PATI"
 "Tasman Talk."
 3.26 p.m.—JOE ARONSON AND HIS

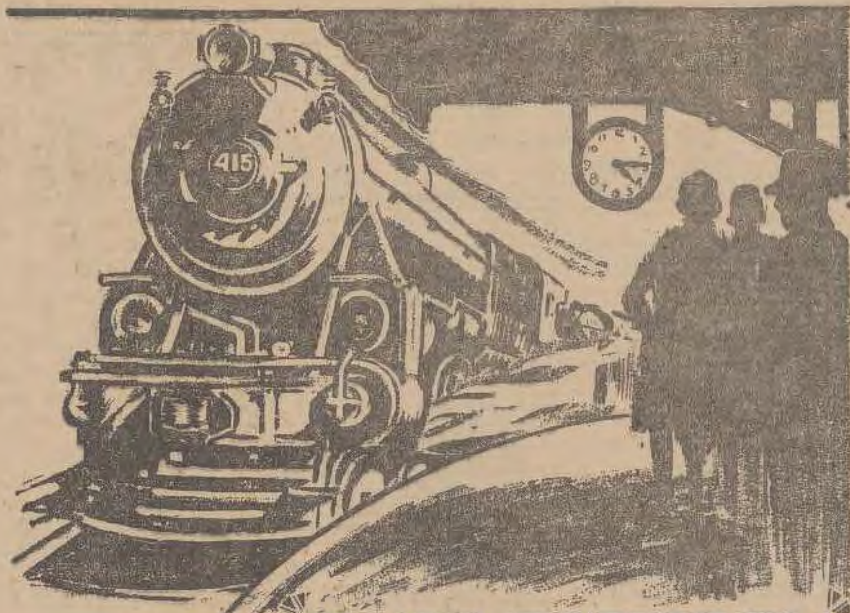
SYNOCPATING SYMPHONISTS.
 3.26 p.m.—ALAN LAMPE, contralto.
 "Down Here" (New Trade).
 "My Treasure" (John Townsall).
 3.42 p.m.—JOE ARONSON AND HIS SYNOCPATING SYMPHONISTS.
 3.42 p.m.—LILLY DUBAND and ARTHUR SLAUGHTER, entertainers:
 "Snuggle an 'Selucky."
 "Sisters and Silver Birds."
 4.1 p.m.—JOE ARONSON AND HIS SYNOCPATING SYMPHONISTS.
 4.12 p.m.—MARIE LAWTON will entertain you with her harp.
 4.19 p.m.—JOE ARONSON AND HIS SYNOCPATING SYMPHONISTS.
 4.24 p.m.—ALAN LAMPE, contralto:
 "With You" (Mulliner).
 "The Silver Ring" (Obmanidae).
 4.35 p.m.—JOE ARONSON AND HIS SYNOCPATING SYMPHONISTS.
 4.45 p.m.—"Herald" news service. Stock Exchange information.
 5 p.m.—Close down.

EVENING SESSION.

6.50 p.m.—Answers to letters and birthday greetings by "MARY GUMBLEAF."
 6 p.m.—MUSICAL PROGRAMME arranged by MR. FRITZ HART.
 MILLENT OSMOND will sing three Shakespeare songs.
 "Where the Bee Sucks" (Arno).
 "When Dailes Feed" (Arno).
 "Under the Greenwood Tree" (Arnet).
 NELLIE WHITE (violinist) will play—Adagio and Vivace (Sonata in G Minor, (Purcell)).
 "Pavane" (Cuperin-Kreisler).
 IDA SCOTT (pianist) will play—
 "Frankie" (Vick Boyen).
 "Night in May" (Palmerston).
 "Walk in a Flair" (Breman).
 Accompanist, IDA SCOTT.
 6.44 p.m.—Official report of Newmarket Stock Sales, by the Associated Stock and Station Agents, Bourke Street, Melbourne.
 Number of sheep drawn for wool's sales.
 6.48 p.m.—"Herald" news service. Weather synopsis. Shipping movements.
 6.52 p.m.—Stock Exchange information.
 6.57 p.m.—River reports.
 6.59 p.m.—Fish market reports, by J. E. Barrett, Ltd. Rabbit prices.
 7.12 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd. Poultry, grain, hay, straw, fute, dairy produce, potatoes and cutins. Market reports of fruit, by the Victorian Fruitgrowers' Association. Ballarat Stock Market reports by Ballarat Stock and Station Agents.

NIGHT SESSION.

7.15 p.m.—Under the auspices of the Town Planning Association, MR. A. E. HAUGHTON will speak on "The Yarra Boulevard."
 7.20 p.m.—Under the auspices of the University Extension Board, MR. G. L. WOOD, B.A., Senior Lecturer in Economics and Economic Geography at the University, will speak on:
 "Planning Peace for the Pacific."
 7.35 p.m.—MR. E. M. PASCOE will speak on "Bowls."
 8 p.m.—STUDIO PRESENTATION OF THE OPERA "LA BOHEME" under the direction of Mr. J. SUTTON CROW, assisted by the AUBURN METHODIST CHOIR, and the STUDIO ORCHESTRA.
CAST.
 Rodolfo, JOHN D. SULLIVAN.
 Schaunard, FRANK DAVIES.
 Mimì, ELSIE DAVIES.
 Marcello, J. ALEXANDER BROWNE.
 Colline, THOMAS GEORGE.
 Musetta, SIGA NAWARETTI.
 Benoit, Aicindora, Sergeant of Customs.
 COLIN NASH.



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9.30 p.m.—Announcements. **THE HEALTH ASSOCIATION'S MESSAGE** for to-day is: "The Prevention of Tuberculosis depends to a great extent on the raising of the standard of home comfort and the amelioration of poverty and distress."

9.54 p.m.—**FRENCH BROS.**, mandolinists: "Popular Melodies."

9.50 p.m.—**HUBERT OFFERMAN**, Australian Cycling Champion: "The Dunlop Grand Prix 635 Miles Cycling Race."

9.47 p.m.—British official wireless information. "Avenue" news service. Meteorological information.

9.53 p.m.—**FRENCH BROS.**, mandolinists: Selected.

10.2 p.m.—**MARIE LAWTON**: Selections from her repertoire.

10.12 p.m.—**JOE ARONSON AND HIS SYNCPATING SYMPHONISTS**.

10.19 p.m.—**GLADYS LAMPE**, contralto: "Melodie in the Wood" (Alma Coetz); "Misty Lull a Bree" (Nivens).

10.24 p.m.—Sporting notes by "OLYMPUS."

10.30 p.m.—**THIRD ACT OF "MADAME POMPADOUR"**, transmitted from His Majesty's Theatre, by permission of J. C. Williamson, Ltd. Adapted by FREDERICK LONSDALE and EMMY GRAHAM. Lyrics by HARRY GRAHAM. Music by LEO FALL. Presented by arrangement with George Edwards (Daly's Theatre), Ltd., with

THE ROYAL COMIC OPERA COMPANY.

First appearance in Melbourne of **DEPHE DE VRIES.**

A story from the life of France's most beautiful woman, Mistress of King Louis, her extreme beauty and charm made him her slave, and thus she ruled France. She held the lives of high statesmen in her hands, and hers was the key of the grim prison, "The Bastille."
Great lover of art, her artistic festivities in the beautiful Palace of Versailles were world famous.

Very good-hearted, she believed in the French proverb, "Women are there to be loved." Love, romance and vanity ruled the life of Madame Pompadour.

CAST OF CHARACTERS.
JOSEPH CALICOOT, ARTHUR STIGANT
JACQUES.....CONRAD CHARLTON
LANDLORD.....STANLEY ODGERS
HELE (Comte d'Estades), FRANK WEBSTER

(First appearance in Melbourne)
MARIETTE (Mail to Madame Pompadour).....VERA SPAULL
MADAME POMPADOUR, BEPPIE DE VRIES

(First appearance in Melbourne)
POULHARD (Assistant Minister of Police).....NORMAN TURNER
MAUREPAS (Minister of Police), LESLIE HOLLAND
LIEUT. CORNIELLE, CHARLES RAYTHORNE

(In command of the Chateau)
COLLIN (Pompadour's Chamberlain), WILLIAM FERRYMAN
BOUCHER (Court Painter), DAVID RAMSEY

AMBASSADOR.....ANDREW McHEE
TOURELLE (Porcelain Manufacturer), FRED WANNER

MADAME.....PEG DESMOND
(First appearance in Melbourne)
KING LOUIS XV......NOEL DAINTON
Ladies, Courtiers, Musicians, Soldiers, etc.
THE PLAY PRODUCED BY FREDERICK J. BLACKMAN.

SYNOPSIS OF SCENES—ACT III King Louis XV.'s Apartments at Versailles, **MUSICAL PROGRAMME—ACT III.**
Introduction.
Duet, "Two Little Birds," Vera Spaul and Arthur Stigant.
*Table Act III., Full Company.

10.53 p.m.—**OUR GREAT THOUGHT** for TO-DAY is: "Occupation alone is happiness."
—Dr. Johnson.
10.58 p.m.—**JOE ARONSON AND HIS SYNCPATING SYMPHONISTS.**
11.40 p.m.—**GOD SAVE THE KING.**

GWF, PERTH.

Tuesday.

12.30 p.m.—Tune in.
12.33 p.m.—Markets, News, and Cable.
1 p.m.—Time signal from Perth Observatory.
1.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.
1.2 p.m.—Studio Instrumental Trio.
1.30 p.m.—Close down.
3.30 p.m.—Tune in.
3.35 p.m.—Musical programme from the Studio, including Pianoforte selections by Miss Evelyn Willis, A.R.C.M.
3.45 p.m.—Health talk, by Mr. H. S. Hatton, of the Hatton School of Physical Culture. Organ music, relayed from the Grand Theatre, Murray Street.
4.40 p.m.—Close down.
6.43 p.m.—Tune in.
6.50 p.m.—Stories for the Boys, by Uncle Henry.
7.00 p.m.—Stocks, Markets, News.
7.45 p.m.—Talk, "Backs of the Month," by Mr. J. P. Bathgate.
8 p.m.—Time signal from Perth Observatory.
8.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.

BAND NIGHT.

8.3 p.m.—Concert by the U.S.L. Band, conducted by Mr. W. H. Ralvorsen.
10 p.m.—Late news items, by courtesy of "The Daily News" Newspaper Coy.
Ships within range announcement, Weather Report and Forecast.
10.30 p.m.—Close down.
100 METRE TRANSMISSION.
Simultaneous Broadcast on 100 Metres of Musical Programme given on 1250 Metres, commencing at 8 p.m.

7ZL, HOBART

Tuesday.

MORNING SESSION.
11 a.m. to 12 noon.

AFTERNOON SESSION.

3 p.m.—G.P.O. Clock chimes.
3.1 p.m.—Tune in selection.
3.15 p.m.—Hobart Stock Exchange Quotations, Weather Information. Items of interest—announcements.
3.14 p.m.—Radio Auction Bridge, Game No. 18.
4.15 p.m.—Educational Talk.
4.30 p.m.—Close down.

EARLY EVENING SESSION.

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

NIGHT SESSION.

7.30 p.m.—Musical selection.
7.35 p.m.—Library Lapses and Library Lists by Mr. W. E. Fuller.
7.50 p.m.—"Mercury" special Tasmanian news service. Railway station produce sales. Weather forecasts. Hobart Stock Exchange quotations.
8 p.m.—G.P.O. Clock chimes. Results of judging at Royal Show Hobart.
8.1 p.m.—Broadcast by direct wire from Imperial Hotel Hobart, dance numbers by Mr. Sheppard's Trio, interspersed with items from the studio by the following: Miss Alice Briggs, (soprano) Mr. Owen Burrows, (baritone).

9 p.m.—Radio Question Corner by "Anode."
9.40 p.m.—British Official Wireless news.
9.50 p.m.—"Mercury" special interstate news service. Ships within wireless range. Tasmanian District Weather reports. 9 p.m. Weather forecasts. Station announcements. National Anthem.

**Wednes., Oct. 16
2FC, SYDNEY**

EARLY MORNING SESSION.

7.0 a.m. to 8.3 a.m.

MORNING SESSION.

10.0 a.m.—"Big Ben" and Programme Announcements.
10.5 a.m.—Studio Music.
10.15 a.m.—"Sydney Morning Herald" News Service.
10.30 a.m.—Studio Music.
10.45 a.m.—A Reading.
10.45 a.m.—Studio Music.
11.0 a.m.—"Big Ben"; Marching Music for School Children.
11.5 a.m.—A.P.A. and Reiter's Cable.
11.10 a.m.—Studio Music.
11.15 a.m.—A Talk on Home Cooking and Recipes by Miss Ruth Furst.
11.30 a.m.—Close Down.

MIDDAY SESSION.

12.0 noon—"Big Ben" and Announcements.
12.2 p.m.—Stock Exchange, first call.
12.3 p.m.—Official Weather Forecast; Bulletin.
12.5 p.m.—Studio Music.
12.11 p.m.—Summary of "Sydney Morning Herald" News Service; Kurby Wireless News.
12.35 p.m.—Studio Music.
12.50 p.m.—Marching Music for School Children.
12.40 p.m.—Annie Sedgwick, Mezzo: "Kissed Thee That Dear Land" (Thomas).
12.45 p.m.—The Oak Hall Instrumental Trio (Leader, Mr. Horace Keats).
12.55 p.m.—Studio Music.
1.0 p.m.—"Big Ben"; Weather Intelligence.
1.3 p.m.—"Evening News" Midday News Service; Producers' Distributing Society's Report.
1.20 p.m.—The Oak Hall Instrumental Trio.
1.28 p.m.—Stock Exchange, second call.
1.30 p.m.—Marching Music for School Children.
1.40 p.m.—Annie Sedgwick, Mezzo: "Hanging Out the Clothes" (Oliver).
1.45 p.m.—Studio Music.
1.50 p.m.—The Oak Hall Instrumental Trio.
2.0 p.m.—"Big Ben"; Close Down.

AFTERNOON SESSION.

2.0 p.m.—"Big Ben"; and Programme Announcements.
3.5 p.m.—A Pianoforte Recital by the Pupil of Mr. Lindley Evans.
3.15 p.m.—Thelma Lansdowne, Mezzo: "Love's Old Sweet Song" (Molloy).
3.18 p.m.—Further items from the Phyllis Recital by Pupils of Mr. Lindley Evans.
3.30 p.m.—Marching Music for School Children.
3.40 p.m.—Hilja Nelson, Soprano: "Heart's Desire" (Logan) (from Farmer's Ten Lessons).
3.45 p.m.—The Oak Hall Instrumental Trio; (Leader, Mr. Horace Keats).
3.50 p.m.—Pianoforte Solo by a Pupil of Mr. Lindley Evans.
3.9 p.m.—Ethel Muller, Contralto: "The Crown" (Rae).
4.5 p.m.—The Oak Hall Instrumental Trio.
4.10 p.m.—Thelma Lansdowne, Mezzo: "Meadow Sweet" (Brabe).

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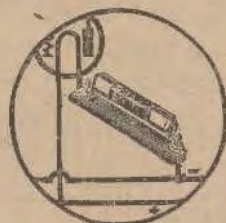
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Buy from the trader who displays Radiokes Products.

2BL, SYDNEY.

EVENING SESSION.

- 4.20 p.m.—Hilda Nelson, Soprano: "O Western Wind" (Brake).
- 4.25 p.m.—The Oak Hall Instrumental Trio.
- 4.35 p.m.—Esther Herford, Soprano: "Down in the Forest" (Ronald).
- 4.37 p.m.—N. McNeilly, Tenor.
- 4.40 p.m.—Ethel Muller, Contralto: "A Song Remembered" (Cottee).
- 4.45 p.m.—Stock Exchange, third call.
- 4.47 p.m.—Esther Herford, Soprano: "Hindu Song" (Rimsky-Korsakoff).
- 4.50 p.m.—N. McNeilly, Tenor.
- 4.54 p.m.—Radio Music.
- 5.0 p.m.—"Big Ben"; Close Down.

EARLY EVENING SESSION.

- 6.40 p.m.—The Chimes of 2FO.
- 6.45 p.m.—The "Hello Man" Talks to the Children.
- 6.55 p.m.—Uncle Ben and "Jerry" Entertain.
- 6.40 p.m.—Studio Music.
- 6.50 p.m.—Daily Sporting News.
- 7.0 p.m.—"Big Ben"; Dalcy's Market Reports (Wool, Wheat and Stock).
- 7.8 p.m.—Fruit and Vegetable Markets.
- 7.10 p.m.—Weather and Shipping News.
- 7.16 p.m.—Late "Evening News" News Service.

NIGHT SESSION.

- 7.50 p.m.—Programme Announcements.
- 7.55 p.m.—Harold Hickey, Tenor.
- 7.55 p.m.—From the Fullerton Memorial Presbyterian Church: An Organ Recital arranged by Mr. Hector P. Tankler.
 - 1. Organ Solo, "Prelude and Fugue E. Flat Major" (Bach).
 - 2. Organ Solo, "Ave Maria" (Corned).
 - 3. Contralto Solo, "Missa Helena Jamieson. (With Organ and Violin Obligato).
 - 4. Violin Solo, "Pol Noces" (Brahm).
 - 5. Miss Helena Collier.
- 8.10 p.m.—From the Studio, "Crickeet reminiscences." A talk prepared by Mr. Frank Harper and Delivered by Mr. L. G. Watt.
- 8.20 p.m.—From the Fullerton Memorial Presbyterian Church. Further items from the Organ Recital arranged by Mr. Hector P. Tankler.
 - 4. Organ:
 - (a) "Chorale Prelude," on Rockingham (Bach).
 - (b) "Question and Answer" (Wollstenholme).
 - 5. Soprano Solo, "The Lord is My Light" (Allison).
 - 6. Miss Marna Jackson.
 - 7. Organ, "Missa Futerle et Chant Scruphique" (Gullistan).
 - 8. Mr. Hector P. Tankler.
- 8.50 p.m.—From the Studio, Harold Hickey, Tenor.
- 9.0 p.m.—"Big Ben"; Late Weather Forecast.
- 9.1 p.m.—From the Peace Memorial Hall, Rose Bay: The Second Programme from the Music Club, under the Direction of Oliver King.
- 9.2 p.m.—H. Charles Wilson, Chairman.
- 9.3 p.m.—Frank Mowatt Carter, Violin Solos.
- 9.15 p.m.—B. Wood, Baritone.
- 9.21 p.m.—Mrs. Chaplin, Dulcitone Solo.
- 9.25 p.m.—Edson Moore, Contralto.
- 9.32 p.m.—Ad Cree, Scottish Comedian.
- 9.47 p.m.—A. E. Y. Benham, Bass.
- 9.58 p.m.—H. Charles Wilson, Chairman.
- 10.0 p.m.—"Big Ben."
- 10.1 p.m.—From the Studio: Harry White, Novelty Pianist.
- 10.8 p.m.—Shirley Cooke, Solitrette.
- 10.16 p.m.—Harry White, Novelty Pianist.
- 10.20 p.m.—Shirley Cooke, Solitrette.
- 10.25 p.m.—Dance Music.
- 10.35 p.m.—Late Weather Forecast.
- 10.36 p.m.—Dance Music.
- 10.47 p.m.—Late News and Announcements.
- 11.0 p.m.—"Big Ben"; Dance Music until 11.30 p.m.
- 11.40 p.m.—National Anthem; Close Down.

Wednesday,

EARLY MORNING SESSION—7 to 8 a.m.

- MORNING SESSION.
- 11 a.m.—G.P.O. Clock and Chimes.
- Musical programme from the Studio.
- 11.45 a.m.—Talk on "Swimming," by Miss Gwen Varley, Broadcasters' Women's Sports Authority.
- Social Notices Replies to correspondents, by Mrs. Jordan.
- Talk on "Dental Hygiene," by a member of the Dental Board.

AFTERNOON SESSION.

- Racing information broadcast immediately after each Race, by courtesy of the "Sun."
- 12 noon.—G.P.O. Clock and Chimes.
- Special Ocean Forecast and Weather Report.
- 12.3 p.m.—Brunswick Patriotic Musical Recital.
- 12.35 p.m.—Information: Mails, Shipping, and Port Directory.
- 12.18 p.m.—Boats in call by wireless.
- 12.30 p.m.—Fruit Market Report.
- 12.32 p.m.—Vegetable Market Report.
- 12.34 p.m.—London Metal Market Report.
- 12.28 p.m.—Dairy and Farm Produce Market Report.
- 12.30 p.m.—G.P.O. Clock and Chimes.
- Foreign Market Report.
- 12.32 p.m.—Firm Market Report.
- 12.34 p.m.—Habitat Market Report.
- 12.35 p.m.—Stock Exchange Report.
- 12.38 p.m.—News from the "Sun."
- 12.45 p.m.—Hillier's Instrumental Quartet; direction, Carl Castling.
- 1 p.m.—United Inventories Service, broadcast from the Basement of the Sydney Town Hall, Speaker, Sir Arthur Cull.
- 2 p.m.—G.P.O. Clock and Chimes.
- Musical programme from the Studio.
- 2.10 p.m.—Racing resume.
- 2.15 p.m.—News from the "Sun."
- 2.25 p.m.—Operatic Talk "The Great Composers," by Mr. Saunders.
- 3 p.m.—G.P.O. Clock and Chimes.
- Talk to Children and Special Entertainment for Children in Hospital.
- 3.00 p.m.—Talk on "How to Maintain Your Health," by Dr. Daughters.
- 3.40 p.m.—Dungowan Dance Band, broadcast from the Dungowan Cabaret.
- 4 p.m.—G.P.O. Clock and Chimes.
- News from the "Sun."
- 4.15 p.m.—Serial Story.
- 4.30 p.m.—Dungowan Dance Band.
- 4.50 p.m.—News from the "Sun."
- 4.55 p.m.—Resume of night's programme.
- 4.57 p.m.—Racing resume.
- 4.59 p.m.—Special Ocean Forecast.
- 5 p.m.—G.P.O. Clock and Chimes.
- Close down.

EARLY EVENING SESSION.

- 5.45 p.m.—G.P.O. Clock and Chimes.
- Children's Session.
- 6.00 p.m.—Musical programme from the Studio.
- SPECIAL COUNTRY SESSION.
- 7 p.m.—G.P.O. Clock and Chimes.
- Australian Mercantile, Land and Finance Co's Report.
- Weather Report and Forecast, by courtesy of Government Meteorologist.
- Producers' Distributing Society's Fruit and Vegetable Market Report.
- Stock Exchange Reports.
- Grain and Fodder Report ("Sun").
- Dairy Produce Report ("Sun").
- N.B.A. Talk.
- 7.45 p.m.—Country News from the "Sun."
- 7.50 p.m.—Talk by a member of the St. John Ambulance Association.

- 8 p.m.—G.P.O. Clock and Chimes.
- Broadcasters' Topical Chorus.
- 8.2 p.m.—The Canterbury District Band, broadcast from Baker's Hall, Campbell (bandmaster, Mr. Stan Nicholas).
- 8.25 p.m.—Broadcasters' All-Sports Expert will talk on Boxing, Golf and General Sporting News.
- 8.38 p.m.—The Canterbury District Band.
- 8.58 p.m.—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.
- 9 p.m.—G.P.O. Clock and Chimes.
- 9.1 a.m.—Selection by Broadcasters' Trio.
- 9.2 p.m.—Broadcasters' Players will present a Radio Drama.
- 10.20 p.m.—Al. Jack's Crackerjacks, broadcast from the Ballroom of the Bondi Casino.
- 10.30 p.m.—"Sun" News Service.
- 10.35 p.m.—Al. Jack's Crackerjacks, broadcast from the Ballroom of the Bondi Casino.
- 10.45 p.m.—Resums of following day's programme.
- 10.50 p.m.—Al. Jack's Crackerjacks, broadcast from the Ballroom of the Bondi Casino.
- 11 p.m.—G.P.O. Clock and Chimes.
- National Anthem.

2GB, SYDNEY

Wednesday.

MORNING SESSION.

- 9 a.m.—Music.
- 9.5 a.m.—"Cherlio" Talk.
- 9.15 a.m.—Music.
- 9.20 p.m.—Psychological Class.
- 9.30 a.m.—Music.
- 9.40 a.m.—Health and Diet.
- 9.50 a.m.—Close down.

AFTERNOON SESSION.

- 3.30 p.m.—Music.
- 3.37 p.m.—Address.
- 3.52 p.m.—Music.
- 4 p.m.—Address.
- 4.22 p.m.—Music.
- 4.30 p.m.—Close down.

EVENING SESSION.

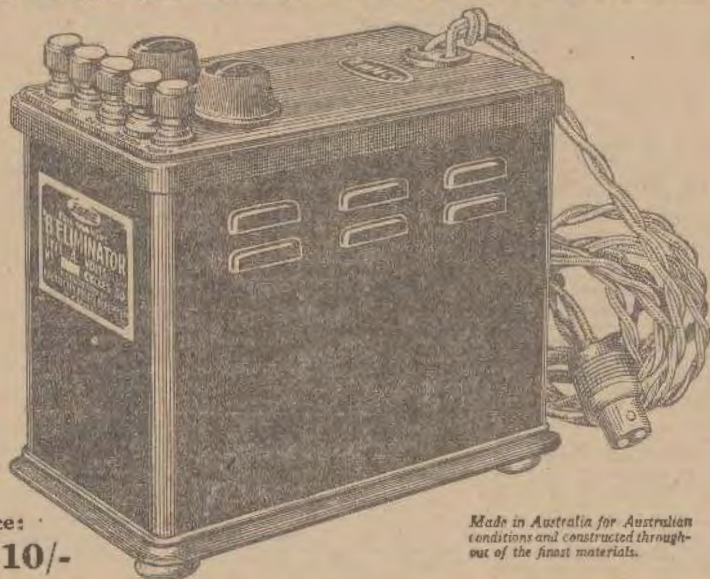
- 7 p.m.—Music.
- 7.5 p.m.—Address.
- 7.15 p.m.—Music.
- 7.20 p.m.—Address.
- 7.30 p.m.—Music.
- 7.45 p.m.—Address.
- 7.55 p.m.—Violin solos, Monica Horde.

NIGHT SESSION.

- 8.5 p.m.—Address.
- 8.20 p.m.—Songs by Eva Croft.
 - 1. "Author of all my joys" (Gibek)
 - 2. "A poor man's garden" (Kennedy)
- 8.25 p.m.—Duets for two violins with piano accompaniment, Dan Sully, Monica Horde, Ada Brook.
- 8.40 p.m.—Clement Hooking Quartet, plantation songs.
 - 1. "Nancy."
 - 2. "Data very queer."
 - 3. "Goodnight."
- 8.50 p.m.—Piano solo, Ada Brook.
 - 1. "Blappody" (Dahany).
- 9 p.m.—Address, Heath Burdock.
- 9.15 p.m.—Songs by Miss Brown.
 - 1. "From Monte Pincio."
 - 2. "Neath the Roses" (Greig).

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Are You a Back Number?

When fig leaves ceased to be fashionable, the curse of man beguiled. Ever since Eden, life has been one long struggle to dodge the back number class.

Do you buy a brand new car? Three months later a futurist model radiator makes your 'bus a has, been. Do you save for a new suit? In a few weeks trousers develop cuffs or the waistcoat sheds a button and widens the shirt front area.

Glady a woman shingles her hair to be up to date, and then Paris decrees a new cut—or she invests in an expensive hat which resembles a shell helmet and straightaway the shop windows are full of wide brimmed atrocities.

You can't dodge the curse! When you really reach the stage of not caring whether you are a back number, your friends order wreaths and try to think of something decent to say about you.

It's the same way in radio. In baby days most of us were crystal-gazers, but when the set with dials was invented we shifted the old set to the attic or put it under the sofa when friends visited.

Now the very latest thing is the abolition of dials. Instead of turning knobs, you put one finger on a tiny wheel and the universe sings to you or tells you to buy Burgess batteries!

When my New System friends decided to make as big a success in radio sets as they had in batteries, they launched a No Dial de Luxe Set, chassis-built like the finest car. Thus they opened the new style in the very bud, so to speak.

This New System five valve receiver is about ten years ahead of the old models. It "makes other sets old"—very old!

But there is no need for the three-dial man to worry. He can pass in his back number set at a fair price and pay the balance on the finest set in Australia on easy long terms.

And this No Dial Set can't get out of date in a few years—it's not possible, unless they hang a different colored ribbon on the wheel for each new model!

Don't be a back number! Call in to-day at 230 Castlereagh-street, and be measured for a superb new suit—I mean set—by New System Telephones Pty., Ltd.

- 9.22 p.m.—Violin solo, Dan Scully.
1. "Chaconne" (Vivaldi).
9.30 p.m.—Clement Hosking Quartet.
1. "The Little Sandman."
2. "Drink to me only with thine eyes."
3. "The harp that once thro' Tara's Halls."
Maie Brown, Eva Croft, Thomas Hall, Clement Hosking.
9.40 p.m.—Duets for two violins with piano accompaniment, Dan Scully, Monica Border, Ada Brook.
9.45 p.m.—Talk.
10 p.m.—Close down.

2 UW, SYDNEY

Wednesday.

MORNING SESSION.

- 8 a.m.—News, Shipping, Mails, Studio Items.
9.45 a.m.—Women's Session.
10.30 p.m.—Resume of forward programme.
10 a.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—Studio Items.
2.55 p.m.—Resume of forward items.
3 p.m.—Close down.
5 p.m.—Studio Items.
6.50 p.m.—Resume of forward programme.
6 p.m.—Close down.

NIGHT SESSION.

- 7 p.m.—Where to Go.
7.10 p.m.—Studio Items.
7.45 p.m.—Gordon James McDonald: Jazz interlude.
8 p.m.—"The Riddle of Industry," by E. E. Salmon.
8.15 p.m.—Studio Items.
9.38 p.m.—Resume of forward programme.
9.50 p.m.—Close down.

3LO, MELBOURNE.

Wednesday.

MIDDAY SESSION.

- 12.0 noon.—Melbourne Observatory Time Signal; Metal Prices Received by the Australian Mines and Metals Association from the London Stock Exchange this day; British Official Wireless News from Rigby; Reuters and the Australian Press Association Cables; "Argus" News Service.
12.20 p.m.—JOE ARONSON AND HIS SYM-PHONISTS:
"Sixty Seconds Every Minute I'm In Love With You" (Davis).
"Oh, You South" (Genser).
"Lo-De-De-O" (Pain).
12.30 p.m.—LILY BURNAND AND ARTHUR SLATER:
"The El Capitan March."
"Two Little Girls in Blue."
12.40 p.m.—Stock Exchange Information.
12.45 p.m.—JOE ARONSON AND HIS SYM-PHONISTS:
"Stopping Around" (Grofe).
"The Bells of Avalon" (Parish).
"Oh, How I Love Balgownie" (Henderson).
12.54 p.m.—GLADYS LAMPE, Contralto:
"Early Morning" (Pell).
"Tiptoe" (Carew).
1.0 p.m.—Melbourne Observatory Time Signal.
1.1 p.m.—JOE ARONSON AND HIS SYM-PHONISTS:
"Bolshewick" (Jaffe).
"You Don't Like It Much" (Miller).
"Nesting Time" (Dixon).
1.10 p.m.—Meteorological Information; Weather Forecast for Victoria, Tasmania, South Australia and New South Wales; Ocean Forecast; River Reports; Rainfall for Victoria, South Australia, Tasmania and New South Wales.
1.18 p.m.—MARIE LAWTON, Vocalist and Harpist, in selections from her repertoire.
1.28 p.m.—JOE ARONSON AND HIS SYM-PHONISTS:
"If I Didn't Know Your Husband and You Didn't Know My Wife" (Cord).
"The Far Away Bells" (Di Capua).
"Oh, Marie" (Gordon).
1.35 p.m.—Rotary Club Luncheon. Speaker, Rev. James Barr, Member of the House of Commons for Motherwell, Glasgow.
"Scotland in Story, Song and Scenery."
2.0 p.m.—Close Down.
2.30 p.m.—Description of Trial Handicap, "Musket," of "The Sporting Globe."
2.55 p.m.—Close Down.
3.0 p.m.—Melbourne Observatory Time Signal.
3.1 p.m.—Description of Jumpers' Flat Race, 1 1/4 miles, WERRIBEE RACES, by "Musket," of "The Sporting Globe."
3.5 p.m.—STUDIO QUARTETTE:
"Chant D'Amour" (Faderewski).
"Melodie" (Faderewski).
3.15 p.m.—ALMA HORLOCK, Soprano:
"When Snow is Sweet."
"The Little White House."
3.25 p.m.—DOROTHY ROXBURGH, Violin:
"Larghetto" (Kreisler-Webber).
"Rondeau" (Palmgren).
3.30 p.m.—Description of Welter Handicap, 7 furlongs 55 yards, WERRIBEE RACES, by "Musket," of "The Sporting Globe."
3.35 p.m.—STUDIO QUARTETTE:
"Minnetto" (Daunone).
3.45 p.m.—NORMAN BRADSHAW, Tenor:
"Brown Bird Singing" (Wood).
"Deep River" (Fisher).
3.52 p.m.—BERTHA JORGENSEN, Violin:
Selected.
4.0 p.m.—Description of WERRIBEE CUP, 9 furlongs, WERRIBEE RACES, by "Musket," of "The Sporting Globe."
4.5 p.m.—ALMA HORLOCK, Soprano:
"The Owl" (Wells).
"Lackaday" (Champion).
4.15 p.m.—STUDIO QUARTETTE:
"Dreamland Shadows" (Holme).
4.25 p.m.—NORMAN BRADSHAW, Tenor:
"Brown Bird Singing" (Wood).
"My World" (Geehl).
4.30 p.m.—Description of Manor Plate, 5 furlongs, WERRIBEE RACES, by "Musket," of "The Sporting Globe."
4.35 p.m.—SISTER LOOKHART, will speak on "Infant Welfare."
4.45 p.m.—"Herald" News Service; Stock Exchange Information.
5.0 p.m.—Description of Manor Purse, 7 furlongs 55 yards, WERRIBEE RACES, by "Musket," of "The Sporting Globe."
5.5 p.m.—Close Down.
EVENING SESSION.
CHILDREN'S HOUR.
5.30 p.m.—Answers to Children's Letters and Birthdays Greetings by MARY MARY.
6.5 p.m.—CLIFF BRADSHAW, has some Animal Songs for the Children.

- 5.7 p.m.—"MARY MARY" will tell the little children a story.
 5.10 p.m.—ELSIE BRADSHAW:
 Songs at the Piano.

EVENING SESSION.

- 5.35 p.m.—"MARY MARY" will tell the Children about "Rumpelstiltskin."
 5.40 p.m.—"Herald" News Service: Weather Reports; Shipping Newsitems.
 5.47 p.m.—Stock Exchange Reports.
 5.52 p.m.—Fish Market Reports from J. R. Forrest, Ltd.; Rabbit Prices.
 5.55 p.m.—River Reports.
 5.58 p.m.—Market Reports: Official Reports of Newmarket Sheep Sales by the Associated Stock and Station Agents, Bourke Street, Melbourne; Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Oatmeal.

NIGHT SESSION.

- 7.13 p.m.—Under the auspices of the Department of Agriculture, MR. J. M. WARD, Superintendent of Horticulture, will speak on:
 "Handling of Soft Fruits for Market."
 7.30 p.m.—MR. E. KENNY, Secretary of Henley Reports, will speak on:
 "Attractions of This Year's Henley Carnival."
 7.45 p.m.—CAPTAIN PETERS will speak on:
 "Books, Wise and Otherwise."
 8.0 p.m.—MALVERN SYMPHONY ORCHESTRA:
 Selection, "Fagiolini" (Leoncavallo).
 8.10 p.m.—GLADYS LAMPE, Contralto:
 "Liberian Song" (Chopin).
 "Chanson de Florian" (Godeau).
 8.17 p.m.—LEONARD FERGUSON AND LYLA BAILL:
 "Concerto for Two Violins" (Bach).
 8.27 p.m.—Presentation of Prizes for Whistling and Lanching Competitions by Conductor Felix Lloyd.
 8.35 p.m.—MR. AND MADAME GREGOR WOOD, Duets:
 "Where Virginia Cries" (Lohy).
 "I Would That My Love" (Mendelssohn).
 8.40 p.m.—MALVERN SYMPHONY ORCHESTRA:
 "Pomp and Circumstance" (Elgar).
 8.52 p.m.—Announcements.

THE HEALTH ASSOCIATION'S MESSAGE FOR TO-DAY IS—

"Disease is our greatest enemy, but although it may largely be prevented, we are not striving enough for that ounce of prevention which is worth the pound of cure."

- 8.55 p.m.—VICTORIAN RAILWAY INSTITUTE DRAMATIC SOCIETY, under the direction of WINIFRED MORELBY:
 ONE ACT PLAY, "THE STEP-MOTHER" (A. A. Milne).
 Sir John Pembury, M.P., MR. J. C. CLARKE, Lady Pembury, MISS ALICE BEEVE Perkins, MR. H. BERNARD LAMBLE "The Strangers", MR. NORMAN FLAGLER "Somebody's Home" in the London House of Sir John Pembury, M.P.

- 9.15 p.m.—MADAME GREGOR WOOD, Soprano:
 "Cradle Me Low" (Brube).
 "London Song" (Beethoven).

- 9.23 p.m.—MALVERN SYMPHONY ORCHESTRA:
 "Minuet" (Boccherini).

- 9.30 p.m.—MR. GREGOR WOOD:
 "On the Road to Mandalay" (Oler Speaks).
 "At Dawning" (Oadman).

- 9.37 p.m.—DAPHNE WHITEHEAD, Soprano:
 Selections from her repertoire.

- 9.45 p.m.—MALVERN SYMPHONY ORCHESTRA:
 "First Movement of Unfinished Symphony" (Schubert).

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M 3230

8.50 p.m.—"Arms" News Service: Meteorological Information; British Official Wireless News; ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS—

"Recklessness is no indication of courage. Brave men are always careful."

9.15 p.m.—MARIE LAWTON, in selections from her repertoire.

10.8 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS.

10.15 p.m.—DAPHNE WHITEHEAD, Siffeluse: Selected.

10.20 p.m.—GLADYS LAMPEE, Contralto: "The Hit Man" (Wells). "My Ships" (Barratt).

10.27 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS.

10.37 p.m.—LILLY BURNARD AND ARTHUR SLAUGHTER: "Little Sparks of Love." "Stowaway."

10.47 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS.

11.0 p.m.—OUR GREAT THOUGHT: "Work for some good, be it ever so slowly, O'erhaul some flower, be it ever so lowly." —F. B. OSGOOD.

11.1 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS.

11.40 p.m.—GOD SAVE THE KING.

GWF, PERTH.

Wednesday.

12.30 p.m.—Tune in.

12.35 p.m.—Markets, News, and Cable.

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

1.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.

A RELATED CONCERT.

1.2 p.m.—Lunch-hour Concert, arranged by Messrs. Musgrave's Limited, relayed from Lyric House, Murray Street.

1.50 p.m.—Studio Quartette.

2 a.m.—Close down.

2.30 p.m.—Tune in.

2.35 p.m.—Musical programme from the Studio, including vocal and instrumental numbers. Orchestral music, played by Horz's Orchestra, relayed from Hoyt's Regent Theatre, Murray Street.

4.30 p.m.—Close down.

5.45 p.m.—Tune in.

6.40 p.m.—Stories for the Tiny Tots, by Auntie Jane.

7.25 p.m.—Stocks, Markets, News.

7.45 p.m.—Talk.

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

8.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.

VARIETY NIGHT.

8.3 p.m.—Items by the Specialty Four. Dance music, by Colin Smith and his Dance Orchestra, relayed from the Perth Palace Royal.

10 p.m.—Late news items, by courtesy of "The Daily News" Newspaper Coy. Shins within news announcement. Weather Report and Forecast.

10.30 p.m.—Close down.

100 METRE TRANSMISSION.

Simultaneous Broadcast on 100 Metres of Musical Programme given on 1250 Metres, commencing at 9 p.m.

7ZL, HOBART

Wednesday.

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

3 p.m.—G.P.O. Clock chimes.

3.1 p.m.—Tune in selection.

3.5 p.m.—Hobart Stock Exchange quotations. Weather information. Items of interest-announcements.

3.15 p.m.—Orchestral Selections by 7ZL Studio Trio.

4 p.m.—Social and Educational Calendar from Illustrated Tasmanian Mail.

4.15 p.m.—Story from Mail.

4.30 p.m.—Close down.

EARLY EVENING SESSION.

6.30 p.m.—Children's Corner by "Uncle Peter."

7 p.m.—Story from Illustrated Tasmanian Mail. Birthday Greetings.

NIGHT SESSION.

7.30 p.m.—Musical selection.

7.35 p.m.—Weekly Scouting Corner: Talk by Scoutmaster Prof. K. G. Masterman: Subject, "Trump Camps."

7.40 p.m.—"Mercury" special Tasmanian news service. Railway auction products sales. Weather forecasts, Hobart Stock Exchange quotations.

8 p.m.—G.P.O. Clock and chimes. Results of judging at Royal Show Hobart.

8.1 p.m.—Ablutions and stock market reports through the courtesy of Roberts and Co., Ltd., Murray Street, Hobart.

9.5 p.m.—Musical selections by 7ZL studio trio, interspersed with items from the studio by the following, Miss Jean Hibbard, (mezzo-soprano) Mrs. E. Saunders (accompanist), Mr. George Muir (tenor).

9.40 p.m.—British Official Wireless news.

9.50 p.m.—"Mercury" special interstate news service, Tasmanian District Weather reports, 9 p.m. Weather forecasts, Station announcements. National Anthem.

Thurs., Oct. 20

2FC, SYDNEY

EARLY MORNING SESSION.

7 to 8 a.m.

MORNING SESSION.

10 a.m.—"Big Ben" and programme announcements.

10.2 a.m.—Studio music.

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

10.20 a.m.—Studio music.

10.25 a.m.—Last minute racing information by the 2FC Racing Commissioner.

10.45 a.m.—From the Crystal Palace Theatre, George Street, Sydney: Organ Solos by Hal Stead.

11 a.m.—"Big Ben" Marching music for school children.

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

11.8 a.m.—Organ Solos by Hal Stead, from the Crystal Palace Theatre, Sydney.

11.30 a.m.—Class down.

MIDDAY SESSION.

- 12 noon.—"Big Ben" and announcements.
 12.2 p.m.—Stock Exchange, first call.
 12.4 p.m.—Official Weather forecast. Rain-fall, temperature.
 12.5 p.m.—Studio music.
 12.10 p.m.—Summary of "Sydney Morning Herald" news service. Bugby wireless news.
 12.25 p.m.—Studio music.
 12.30 p.m.—Marching music for school children.
 12.40 p.m.—Fosse Brakell, contralto: "Orchard Grudge Song" (Denys).
 12.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 12.55 p.m.—Studio music.
 1 p.m.—"Big Ben." Weather intelligence.
 1.3 p.m.—"Evening News" midday news service. Producers' Distributing Society's report.
 1.20 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 1.38 p.m.—Stock Exchange, second call.
 1.50 p.m.—Marching music for school children.
 1.40 p.m.—Fosse Brakell, contralto: "Wayfarer's Night Song" (Martin).
 1.45 p.m.—Studio music.
 1.50 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 1.55 p.m.—Last minute racing information by the ZFC Commissioner.
 2.5 p.m.—Close down.

AFTERNOON SESSION.

- 3 p.m.—"Big Ben" and announcements.
 3.3 p.m.—Studio music—popular records.
 3.11 p.m.—Lorraine Jarman, soprano: "Berwick Market" (Drummond).
 3.18 p.m.—A Reading.
 3.25 p.m.—Rosalie Locke, contralto.
 3.40 p.m.—Marching music for school children.
 3.40 p.m.—Joyce Gillespie, soprano (from Farmer's Tea Rooms).
 3.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 3.55 p.m.—Studio music.
 4 p.m.—Dorothy Benbow, contralto (from Farmer's Tea Rooms): "Just a ray of sunlight" (Squire).
 4.6 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 4.15 p.m.—The Festive Carollers, duet.
 4.20 p.m.—Joyce Gillespie, soprano (from Farmer's Tea Rooms).
 4.25 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
 4.35 p.m.—Lorraine Jarman, soprano: "What a wonderful world it would be" (Lohr).
 4.40 p.m.—Dorothy Benbow, contralto: "Boat of Mine" (Harris).
 4.45 p.m.—Stock Exchange, third call.
 4.47 p.m.—Rosalie Locke, contralto.
 4.50 p.m.—The Festive Carollers, duet.
 4.55 p.m.—Single music.
 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 5.40 p.m.—The chimes of ZFC.
 5.45 p.m.—The "Hello Man" talks to the children.
 6.30 p.m.—Story time for the young folk.

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NEW SYSTEM
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- 5.40 p.m.—Studio music.
6.50 p.m.—Late sporting news.
7 p.m.—"Big Ben." Dalgety's market reports (wheat, wheat and stock).
7.8 p.m.—Fruit and vegetable markets.
7.15 p.m.—Shipping and weather information.
7.15 p.m.—"Evening News" late news section.

NIGHT SESSION.

- 7.30 p.m.—Programme announcements.
7.35 p.m.—A "Safety First" talk on Life Saving.
7.40 p.m.—Studio music.
7.40 p.m.—The N.S.W. Tramway Band.
8 p.m.—"Big Ben." Band items.
8.10 p.m.—Jessie Smith, soprano (from \$10. Melbourne):
"Now sleep the crimson petal" (Quilter).
"Do not go, my love" (Hagenmann).
8.15 p.m.—The N.S.W. Tramway Band.
8.30 p.m.—Selwyn Seymour and company in a sketch dealing with the Casino at Monte Carlo.
8.45 p.m.—The N.S.W. Tramway Band.
9 p.m.—"Big Ben." Jessie Smith, soprano, from \$10:
"O, love from they Power" (Saint Saens).
"A fat little feller" (Gordon).
8.7 p.m.—St. Quintin Downer, pianist:
"Nocturne in C Minor" (Chopin).
"Butterfly Kinds" (Chopin).

- 9.14 p.m.—The N.S.W. Tramway Band.
9.20 p.m.—From Paling's Concert Salon:
Items by the Sydney Madrigal Society.
9.50 p.m.—From the Studio: Mr. J. R. King-horn will give a talk on curious creatures.
10 p.m.—"Big Ben." James Donnelly, tenor, will continue his series on the evolution of the "Blues."

- 10.10 p.m.—St. Quintin Downer, pianist:
"Fairy Suite."
"The Princess."
"The Ogre."
"The Spect" (Frank Bridge).
"The Prisoner."

- 10.30 p.m.—Selwyn Seymour, humorous item.
10.35 p.m.—James Donnelly, tenor.
10.50 p.m.—Dance music. Late weather forecast.

- 10.40 p.m.—Len Maurics, baritone.
10.45 p.m.—Dance music.
10.55 p.m.—Late news and announcements.
11 p.m.—"Big Ben." Dance music.
11.10 p.m.—Len Maurics, baritone.
11.15 p.m.—Dance music.
11.50 p.m.—National Anthem.
Close down.

- 11 a.m.—G.P.O. Clock and chimes. Announcements.
11.5 a.m.—Musical programme from the studio.
11.15 a.m.—Social Notes. Replies to correspondents by Mrs. Jordan. Architectural Talk: "The £250 Home" by Mr. Brogan.
12 noon.—G.P.O. Clock and chimes. Special Ocean Forecast and weather report.
12.8 p.m.—Brunswick Panatropo Musical recital.
12.15 p.m.—Information, mails, shipping, and port directory.
12.18 p.m.—Hosin in call by wireless.
12.20 p.m.—Fruit Market report.
12.22 p.m.—Vegetable Market report.
12.24 p.m.—London-London Metal Market report.
12.28 p.m.—Dairy and Farm Produce Market report.
12.30 p.m.—G.P.O. Clock and chimes. Forage Market report.
12.32 p.m.—Fish Market report.
12.34 p.m.—Harris Market report.
12.35 p.m.—Stock Exchange report.
12.38 p.m.—News from the "Sun."
12.45 p.m.—Hiffers Instrumental Quartet-direction—Caryl Oudling.
1.27 p.m.—Stock Exchange report.
1.30 p.m.—G.P.O. Clock and chimes. Talk to children and special entertainment for children in Hospital.
2 p.m.—G.P.O. Clock and chimes. Close down.

AFTERNOON SESSION.

- Racing information broadcast immediately after each race by courtesy of the "Sun."
3 p.m.—G.P.O. Clock and chimes. Musical programme from Studio.
3.10 p.m.—News from the "Sun."
3.20 p.m.—Musical programme from Studio.
3.30 p.m.—News from the "Sun."
3.40 p.m.—Dunedin Dance Band, broadcast from the Dunedin Calcutt.
4 p.m.—G.P.O. Clock and chimes. News from the "Sun."
4.15 p.m.—Serial Story.
4.30 p.m.—Dunedin Dance Band.
4.50 p.m.—News from the "Sun."
4.55 p.m.—Resume of night's programme.
4.57 p.m.—Racing Resume.
4.59 p.m.—Special Ocean Forecast.
5 p.m.—G.P.O. Clock and chimes. Close down.

EARLY EVENING SESSION.

- 5.45 p.m.—G.P.O. Clock and chimes. Children's Session.
6 p.m.—The pupils of Miss Monica Scully will entertain the kiddies.
6.30 p.m.—Musical programme from the studio.

SPECIAL COUNTRY SESSION.

- 7 p.m.—G.P.O. Clock and chimes. Australian Mercantile Land and Finance Co's report.
Weather report and forecast by courtesy of Govt. Meteorologist.
Producers Distributing Society's Fruit and Vegetable Market report.
Stock Exchange reports.
Grain and Fodder report ("Sun").
Dairy Produce report ("Sun").
Weekly Traffic Bulletin.
7.15 p.m.—Country News from the "Sun."
7.20 p.m.—Helpful Hints to Listeners by Mr. Alan Burrows.
7.30 p.m.—Talk on "Modern Cancer Research Work" by Mr. Mackham, B.E.

2BL, SYDNEY.

Thursday.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

- 10.30 a.m.—G.P.O. Clock and chimes. Musical programme from studio.
10.40 a.m.—News from the "Daily Telegraph" Pictorial.
10.50 a.m.—Musical programme from the studio.

- 8 p.m.—G.P.O. Clock and Chimes.
Broadcasters' Tiptical Chorus.
An hour's programme presented by Home
Recreations Limited.
- 8.5 p.m.—Dance Music.
- 9.15 p.m.—Mr. Roger Jones, baritone.
- 9.17 p.m.—Dance Music.
- 9.27 p.m.—Mr. Compton Costin, comedian, in
childish stories.
- 9.35 p.m.—Dance Music.
- 9.45 p.m.—Miss Grace Quine, descriptive artist.
- 9.50 p.m.—Dance Music.
- 9 p.m.—G.P.O. Clock and chimes.
- 9.1 p.m.—Weather report and forecast by
courtesy of Mr. C. J. Mares, Govt. Meteorologi-
cal.
- 9.9 p.m.—The Marrickville Salvation Army
Band (bandmaster Mr. N. H. Knight) broad-
cast from Wentura Street, Marrickville.
- 9.22 p.m.—Mr. Roger Jones.
- 9.29 p.m.—Miss Grace Quine.
- 9.37 p.m.—The Marrickville Salvation Army
Band.
- 9.37 p.m.—Resume of following day's pro-
gramme.
- 10 p.m.—G.P.O. Clock and chimes.
- 10.1 p.m.—Dorothy Manning and Harry Gra-
ham in song and story.
- 10.15 p.m.—Al. Jack's Crackerjacks broadcast
from the ball room of the Bondi Casino.
During intervals between dances "Solo" news
will be broadcast.
- 11 p.m.—G.P.O. Clock and chimes.
National Anthem.

3LO, MELBOURNE

Thursday.

MIDDAY SESSION.

- 12 noon.—Melbourne Observatory Time signal.
Metal prices received by the Australian
Minerals and Metals Association from the London
Stock Exchange this day. Enter's and
the Australian Press Association cables.
British official wireless news from Rugby.
Argus news service.
- 12.15 p.m.—Under the auspices of the Concert-
goers and Community Singers' Association—
COMMUNITY SINGING, transmitted from
the Assembly Hall, Collins street, Melbourne.
- 1.45 p.m.—Stock Exchange Information.
Weather forecasts for Victoria, Tasmania,
South Australia, and New South Wales.
Ocean forecast. River reports. Rainfall for
Victoria, Tasmania, South Australia and
New South Wales.
- 2 p.m.—Class down.

AFTERNOON SESSION.

- 3 p.m.—Melbourne Observatory time signal.
- 3.1 p.m.—Rev. KENNETH HENDERSON will
speak on:
"Topics of the week."
9.15 p.m.—MR. FRIZ HART will speak to
students of music.
- 9.30 p.m.—Rev. D. G. GLYN JONES, B.A.,
"A Welsh man's struggle for education—
Life of St. Henry Jones."
Professor of Moral Philosophy at Glasgow
University.
- 9.45 p.m.—STUDIO QUARTET:
"Adieu" (Fring).
- 9.55 p.m.—MARIE LAWTON will entertain
you with songs and harp.
- 9.5 p.m.—AGNES FORTUNE, piano:
Selected.
- 10 p.m.—GLADYS LAMPE, contralto:
"O Sunny Beam" (Schumann),
"Hundo roses" (Schubert).
- 10.15 p.m.—STUDIO QUARTET:
"Romance from King Manfred" (Behncke).
- 10.30 p.m.—Herald news service. Stock Ex-
change information.
- 10.45 p.m.—EVENING, transmitted from ST.
PAUL'S CATHEDRAL.
- 10.50 p.m.—Acceptances for Saturday's races,
Moonee Valley.

Read what Mr. Maclurcan says about the "D. J. SUPER-SIX"

Messrs. David Jones Ltd.,
Radio Department,
22 York Street, SYDNEY.

Dear Sirs,

I have carried out some
tests with your Six-valve
"King" Neutrodyne wireless set
with very good results.

The volume obtained from
Interstate stations was all
that could be desired and was
equal to that obtained with
any set that I have so far
tested. The tone quality was
very pleasing, and the single
dial tuning made the set
delightfully easy to handle.

Only a short aerial was
used during the test—15 feet
high and 60 feet long.

I am,

Yours faithfully,

Chas. Maclurcan

A.M.I.R.E.

The "D.J. Super-Six" is supplied complete with the highest
grade accessories—speaker, valves, aerial equip-
ment—everything ready to instal. Cash Price .. £45

Or you may take delivery on payment of £4/10/- deposit
—the balance to be paid in 52 weekly instalments of 17/3.

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MAXIMUM

range and selectivity.
 finest possible tone and
 ease of manipulation under
 all conditions, instantly accurate
 construction and handsome appearance
 —such is the STERLING "Straight-
 Eight." To ensure absolute perfection
 of quality, the use of reaction has been
 avoided, sensitivity and selectivity
 having been obtained by increasing the
 number of valves. The first five valves
 are High Frequency Amplifiers, the
 sixth a Detector and the last two Low
 Frequency Amplifiers. Even from
 distant stations the volume is more than
 sufficient for any ordinary type of loud
 speaker.

The instrument is contained in a hand-
 some lock-up cabinet, with space for
 housing the H.T. Batteries.

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Straight Eight
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Write for full partic-
 ulars and prices of
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 Receivers, Loud
 Speakers and
 Accessories



EVENING SESSION.

- 5.30 p.m.—Answers to Letters and Birthday Greetings, by "MARY GUMLEAF."
- 6.0 p.m.—STUDIO QUARTETTE: "Children's Suite," Part I (Debus).
- 6.15 p.m.—MR. F. BUTCHER will talk to the Children on: "Stamps."
- 6.30 p.m.—STUDIO QUARTETTE: "Children's Suite," Part 2 (Debus).
- 6.40 p.m.—"Herald" News Service; Weather Reports; Shipping Movements.
- 6.47 p.m.—Stock Exchange Reports.
- 6.52 p.m.—Fish Market Reports by J. R. Barrett Ltd.; Rabbit Prices.
- 6.53 p.m.—River Reports.
- 6.58 p.m.—Market Reports; Official Reports of Newmarket Sheep Sales by the Associated Stock and Station Agents, Bourke Street Melbourne; Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.
- 7.0 p.m.—Market Reports of Fruit by the Victorian Fruitgrowers' Association; Ballarat Pig Market Report, by the Ballarat Stock and Station Agents.

NIGHT SESSION,

- 7.15 p.m.—MR. G. MILLS, will speak on: "In the Nursery."
- 7.30 p.m.—"China and its Relations to Pacific Problems," by Australian.
- 7.45 p.m.—MRS. GREGG McMAHON of the Melbourne Repertory Theatre, will speak from his dressing-room at the King's Theatre, by permission of J. C. Williamson, Ltd.
- 8.0 p.m.—THE HEALTH ASSOCIATION'S MESSAGE for to-day is: "Rest prolongs life. Take at least eight hours of each day for sleep. Sleep is better than medicine and costs nothing."
- 8.1 p.m.—MR. ROD McTIGHEE, "Ticked."
- 8.15 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 Contralto: "Four by the Clock" (McAlister).
- 8.22 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 MARIÉ LAWTON, Soprano: "Harp Solo."
- 8.30 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 LILLY BURNAND AND ARTHUR SLATER: "Oh, What a Difference in the Morning."
- 8.37 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 NORMAN HILL, Comedian: "Shoe Shops."
- 8.41 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 Contralto: "Beal of Mine" (Fidel Burrows).
- 8.45 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 MARIÉ LAWTON, Soprano: Selected.
- 8.53 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 LILLY BURNAND AND ARTHUR SLATER: "When I Was a Gliby Girl."
- 9.01 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 Contralto: "Arctic" News Service; Meteorological Information; British Official Wireless Sporting Notes by "Olympus." THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS: "Jack and Jill went up the hill Lett Safety for bakled them. Jack came down with a broken crown. And Jill she never did find her."
- 10.18 a.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 NORMAN HILL, Comedian: "How We Sewed the Bases."
- 10.30 a.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 Contralto: "Sail as the Night" (Polka).
- 10.45 a.m.—JOE ARONSON AND HIS SYM-PHONISTS.
 MARIÉ LAWTON, Soprano: Harp Solo.

- 11.0 p.m.—OUR GREAT THOUGHT FOR TO-DAY IS: "When ill news comes too late to be serviceable to your neighbor, how it to yourself," Zimmerman.
- 11.1 p.m.—JOE ARONSON AND HIS SYM-PHONISTS.
- 11.40 p.m.—GOD SAVE THE KING.

7ZL, HOBART

Thursday.

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION

- 3 p.m.—G.P.O. Clock chimes.
- 3.1 p.m.—Tune in selection.
- 3.5 p.m.—Hobart Stock Exchange quotations, Weather Information, Terms of Interest—announcements.
- 3.15 p.m.—Orchestra selections by 7ZL Studio Trio.
- 4.15 p.m.—Chat by Child Welfare Nurse.
- 4.30 p.m.—Close down.

EARLY EVENING SESSION.

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

NIGHT SESSION.

- 7.30 p.m.—Musical selection.
- 7.35 p.m.—Talk by Chas. H. Sims, Manager, Kodak Ltd, Hobart, Subject, "Replics to correspondence."
- 7.50 p.m.—"Mercury" special Tasmanian news service. Railway auction produce sales. Weather forecast. Hobart Stock Exchange quotations.
- 8 p.m.—G.P.O. Clock chimes. Results of Judging at Royal Show, Hobart.
- 8.1 p.m.—Selections by Jones L.X.L. Band (Conductor Mr. L. M. Barnett).
- 8.45 p.m.—British Official Wireless news.
- 9.50 p.m.—"Mercury" special interstate news service. Shims within wireless range. Tasmanian District Weather reports, Station announcements. 9 p.m. Weather forecasts. National Anthem.

Friday, Oct. 21
2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

- 10 a.m.—"Big Ben" and announcements.
- 10.5 a.m.—Studio music.
- 10.15 a.m.—"Sydney Morning Herald" news service.
- 10.30 a.m.—Studio music.
- 10.45 a.m.—Studio music.
- 11 a.m.—"Big Ben." Marching music for school children.
- 11.5 a.m.—A.P.A. and Reuter's cable est-views.
- 11.10 a.m.—Studio music.
- 11.15 a.m.—A talk on home cooking and re- dices by Miss Ruth Furst.
- 11.30 a.m.—Close down.

MIDDAY SESSION.

- 12 noon—"Big Ben" and announcements.
- 12.2 p.m.—Stock Exchange, first call.
- 12.3 p.m.—Official weather forecast, rainfall.
- 12.5 p.m.—Studio music.
- 12.10 p.m.—Summary of "Sydney Morning Herald" news service.
- Rugby wireless news.
- 12.25 p.m.—Studio music.
- 12.30 p.m.—Marching music for school children.
- 12.40 p.m.—Malmore Morris, soprano.
- 12.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
- 12.55 p.m.—Studio music.
- 1 p.m.—"Big Ben." Weather intelligence.
- 1.3 p.m.—"Evening News" midday news service.
- Producers' Distribution Society's report.
- 1.30 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
- 1.25 p.m.—Stock Exchange, second call.
- 1.30 p.m.—Marching music for school children.
- 1.40 p.m.—Malmore Morris, soprano.
- 1.45 p.m.—Studio music.
- 1.50 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
- 2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 3 p.m.—"Big Ben" and announcements.
- 3.15 p.m.—The Piedra Carolers, duet.
- 3.7 p.m.—Popular records from the Studio.
- 3.26 p.m.—A Reading.
- 3.25 p.m.—Netta Mullarkey, mezzo.
- 3.30 p.m.—Marching music for school children.
- 3.40 p.m.—Percin Butter, soprano (from Farmer's Oak Hall).
- 3.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
- 3.55 p.m.—Will Bowyer, basso.
- 4 p.m.—Frank Boham, baritone (from Farmer's Tea Room); "A Disher Courtship" (Costes).
- 4.5 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
- 4.15 p.m.—Nes Hallett, contraltos; "What does it Matter" (Berlin).
- 4.20 p.m.—Percin Butter, soprano (from Farmer's Oak Hall).
- 4.25 p.m.—THE OAK HALL INSTRUMENTAL TRIO.
- 4.25 p.m.—Netta Mullarkey, mezzo.
- "Danny, Boy" (Wendalby).
- 4.40 p.m.—Frank Boham, baritone; "Bluesome" (Taylor).
- 4.45 p.m.—Stock Exchange, third call.
- 4.47 p.m.—Nes Hallett, contraltos; "Because I Love You" (Berlin).
- 4.50 p.m.—Will Bowyer, basso.
- 4.54 p.m.—Studio music.
- 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 6.40 p.m.—The chimes of 2PC.
- 6.45 p.m.—The "Hello Man" talks to the children.
- 6.50 p.m.—Story time for the young folk.
- 6.40 p.m.—Studio music.
- 6.58 p.m.—Late racing information by the 2PC commissioner.
- 7 p.m.—"Big Ben." Dalry's market reports (wool, wheat and stock).
- 7.5 p.m.—Fruit and vegetable markets.
- 7.19 p.m.—Weather and shipping news.
- 7.15 p.m.—Late "Evening News" news service.

NIGHT SESSION.

- 7.30 p.m.—Programme announcements.
- 7.35 p.m.—A talk on Vacuum Hoses.
- 7.45 p.m.—Alice Frowse, contralto.
- 7.52 p.m.—Eden and Jack Landerson, entertainers; "She's still my baby" (Baskins-Little). "Two-time Dan."

The House of Quality KEOGH RADIO SUPPLIES

Sydney's Pioneer Radio House
40a PARK STREET

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Ever-Ready, 42 Volt	12/6
Ever-Ready, 60 Volt	13/-
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5 Cord, with Spades	5/3
7 Cord, with Spades	5/6

CONDENSERS, VARIABLE.

.0025 S.L.F.	9/4 to 15/6
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BYPASS CONDENSERS.

2 mf. Electro	8/-
2 mf. Mansbridge	3/6
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4in. Plain	3/-
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Illuminated, Back Panel, 6/8 to 10/-	

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Single Circuit	1/5, 1/4, 1/3
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Motor Phone Plug	3/6
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LOUD SPEAKER CORDS.

6ft., with Spades	2/9
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LOUD SPEAKERS.

Complete Range, from £3/10/- to £16/10/-.

TRANSFORMERS.

R.C.A., No. 712	15/6
Pivotal, 3 1/2 and 5 to 1	12/6
A.W.A., 3 1/2 to 1	18/-
Emmo, 3 1/2 and 5 to 1	15/6
Ferranti	22/6 and 42/6
Hauland Lyric	45/-
Amstron, 3 1/2 and 5 to 1	19/6
Predice, 5 to 1	33/-

VALVES.

Inspect Our Stock of Mullard Valves. Reduced from 12/6 to 6/- and 7/6. Complete Stock of:
Mullard, UX base

Concor, UX base	18/6
Phillips, UX base	15/6
Radiotron, UX base	11/-

VALVE SOCKETS, U.X.

Pilot Sub-panel	1/3
Booster	1/3
Advance, Facetain	2/6
Pilot Shock Absorber	3/3
Benjamin Shock Absorber	6/-

WIRE.

All Gauge, D.C.C. and Enamel, 1/4lb. and 1/2lb. reels.	
Balden Hook-up, 5ft.	2/10
Single Flexible, per yard	2/6d.
1/4lb Insulated, lead in, per yard, 2 1/2d.	
Bushar, Square, tinned, per doz., 10s.	
Insulated, Bushar, 2ft.	2d.

Are you having trouble with your Super Heterodyne Set? No other expert has had the experience of our Engineer, Chas. W. Slade (Technical Editor, "Daily Telegraph"), with this class of Set. Let him rewire it for you. Results absolutely guaranteed.

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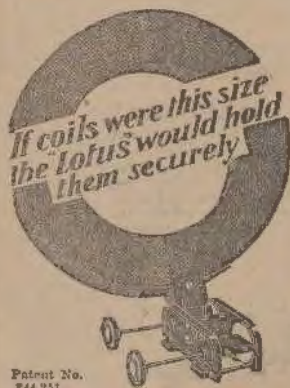
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The Moving Block Cannot Fall

The vernier movement comprises three sets of enclosed precision machine-cut gears, and reduces the speed of the moving block by eight times. Side plates, coil blocks, and knobs in artistic bakelite mouldings. All metal parts heavily nickel plated. Made for left as well as right hand.



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COIL HOLDERS

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Liverpool, England.

John Arnold, P.O. Box 871,
Degraeves Buildings, Degraeves
Street, Melbourne.

3 p.m.—"Big Ben." From the Lyceum Theatre, Pitt Street, Sydney. Orchestral Hems.

8.12 p.m.—From the Studio:
Notes—This night has been set aside by various broadcasting stations for the purpose of paying tribute to the winners of electricity, and in association with the Radio Broadcast Bureau a special programme has been arranged.

Announcer's foreword.
8.15 p.m.—A message to be read, from Thomas Edison.

8.21 p.m.—Scott Alexander will present an original electric episode, entitled "The Birth of the Electric Lamp." Specially written for this occasion by Codrington Hall.

8.37 p.m.—Mabel Batchelor, soprano: "Tender Ties" (Delbruck).

8.40 p.m.—A short message.

8.41 p.m.—R. A. Bartleman, baritone: "Thou art riam, my beloved" ("Taylor).

8.46 p.m.—Scott Alexander presents an original radio play, entitled "The Electric House," introducing an electric piano, electric gramophone, and electric radio receiver. During the course of this scene, Miss Mabel Batchelor, soprano, will sing.

8.53 p.m.—A short address.

9 p.m.—"Big Ben." Late weather forecast.

9.1 p.m.—R. A. Bartleman, baritone: "O'Connell Fair" (Halliday).

9.4 p.m.—From the Lyceum Theatre, Pitt Street, Sydney, Orchestral Hems.
9.12 p.m.—From the Studio; Alice Frowae, contralto.

9.18 p.m.—Cyril Monk, violinist: "Fantasie Irlandaise" (arr. Monk).

9.25 p.m.—Eden and Jack Landeryou, entertainers:

"I've grown so lonesome" (Gordon).

"What did I tell ya" (Meyer).

9.34 p.m.—Mabel Batchelor, soprano: "Carry me back to old Virginia."

"O, how delightful" (Molloy).

9.40 p.m.—Harrison White, banjo solo.

9.45 p.m.—R. A. Bartleman, baritone: "Port of many ships" (Keel).

"Time to go" (Sanderson).

9.52 p.m.—Cyril Monk, violinist: "Songs my mother taught me" (Dvorak, arr. Kreisler).

"Slavonic Dance" (Dvorak, arr. Kreisler).

10 p.m.—"Big Ben." Eden and Jack Landeryou, entertainers:

Piano and banjo novelties.

10.7 p.m.—The Lyceum Theatre Orchestra, from the Lyceum Theatre, Pitt Street, Sydney.

10.20 p.m.—Harrison White, banjo solo.

10.30 p.m.—Late weather forecast.

10.41 p.m.—Dance music.

10.57 p.m.—Late news and announcements.

11 p.m.—"Big Ben." Dance music.

11.30 p.m.—National Anthem.

Close down.

Friday.

MORNING SESSION.

9 a.m.—Music.

9.5 a.m.—Cherico Talk.

9.15 a.m.—Music.

9.30 a.m.—Psychological Class.

9.40 a.m.—Music.

9.45 a.m.—Health and Diet.

10 a.m.—Close down.

AFTERNOON SESSION.

3.30 p.m.—Music.

3.35 p.m.—Address.

3.47 p.m.—Music.

3.55 p.m.—Address.

4 p.m.—Music.

4.22 p.m.—Address.

4.30 p.m.—Music.

EVENING SESSION.

7 p.m.—Music.

7.6 p.m.—Address.

7.15 p.m.—Music.

7.32 p.m.—Address.

7.39 p.m.—Music.

7.45 p.m.—Address.

7.50 p.m.—Announcements.

7.55 p.m.—Instrumental Trio, Monica Horner, Murielle Lang, Ada Brock.

8.5 p.m.—Address by Professor Ernest Wood.

8.20 p.m.—Songs by Madam Weidke.

8.28 p.m.—An half hour of Chamber Music.

Dan Sedy, Monica Horner, Murielle Lang.

9 p.m.—Address J. K. Powell.

9.15 p.m.—Songs by Lela Zolinski.

9.23 p.m.—Songs by Madam Weidke.

9.31 p.m.—Cello Solo, Murielle Lang.

1. "Thale" (Mussenet).

9.40 p.m.—Songs by Lela Zolinski.

9.50 p.m.—Talk.

10 p.m.—Close down.

3LO, MELBOURNE

Friday

MIDDAY SESSION.

12 noon—Melbourne Observatory. Time Signal. Metal prices received by the Australian Mines and Metals Association, from the London Stock Exchange this day. British Official Wireless news, from Rugby. Reuter's and The Australian Press Association cables. "Argus" news service.

12.20 p.m.—STUDIO QUARTETTE:

Wedge, "The Magic of Love" (Van)

12.30 p.m.—Official Opening of the Victorian Agricultural Show, transmitted from the Kyabram Show Grounds.

1 p.m.—Melbourne Observatory. Time

Signal. Do something for somebody—In-

terns is the Suez of Naughtiness.

1.1 p.m.—STUDIO QUARTETTE:

"Scherzo Fandango" (Macgarra).

1.10 p.m.—Meteorological information.

Weather groups for Victoria, Tasmania,

South Australia and New South Wales

Ocean forecast. River reports for Victoria,

Tasmania, South Australia, and New South

Wales.

1.18 p.m.—LILY BURNAND AND ANTHONY

SLATER, Entertainers:

"Just a Song at Twilight."

"The Whistling Bowers Boy."

1.25 p.m.—STATION TRIO:

"No. 2—First Movement" (Mendelssohn).

1.35 p.m.—M. MARIE LAWTON, will entertain

you with Selections from her repertoire.

1.45 p.m.—STUDIO QUARTETTE:

"String Quartet" (Dvorak).

1.50 p.m.—REGINALD BRADLEY, Violin:

Finale—Mendelssohn Concerto.

2 p.m.—Close down.

Results of Secondary School Sports will be

given as they come to hand.

AFTERNOON SESSION.

2 p.m.—Melbourne Observatory Time Signal.

2.1 p.m.—STUDIO QUARTETTE:

"In Arcadian Day" (Woodstock).

2.10 p.m.—MISS FLIANCES FRASER:

"Hercules in Fiction—Robin Hood."

2.25 p.m.—TASMA TIERNAN, Oboe:

"Romance" (Schumann).

"Dreaming" (Squire).

3.33 p.m.—ALMA HOLLOCK, Soprano:

"Be Still, Rose" (Arctis).

"Daffodils from My Garden" (Beauvois).

2.40 p.m.—STUDIO QUARTETTE:

"The Song of the Mountain" (Elie).

3.50 p.m.—DOROTHY ROXBURGH, Viola:

"Berceuse" (Debussy).

- 3.57 p.m.—E. MASON WOOD, Baritone:
"A Birthday" (Cowen).
"Go Lovely Rose" (Quiller).
- 4.4 p.m.—STUDIO QUARTETTE:
"String Quartette"—1st Movement (Ranel).
- 4.10 p.m.—ALMA HORLOCK, Soprano:
"There Lies the Warmth of Summer"
(Mallinson).
- "Song of India" (Rimsky-Korsakov).
- 4.17 p.m.—STATION TRIO:
"String Quartette"—Part 2 (Ranel).
- 4.24 p.m.—E. MASON WOOD, Baritone:
"The Sweetest Flower" (Hawley).
"Green Hills of Switzerland" (Coates).
- 4.30 p.m.—MRS. M. CALLAWAY MAHOOD
will speak on
"The Art of Decoration."
- 4.45 p.m.—"Herald" news service. Stock Exchange information.
- 5 p.m.—Close down.

EVENING SESSION.

- 5.30 p.m.—Answers to Letters and Birthday Greetings by "BILLY BUNNY."
- 6 p.m.—GWEN HUMFRAY, Contralto:
"Blackbirds' Song" (Smith).
"Will o' the Wisp" (Spruce).
- 6.7 p.m.—MISS M. SHEPHERD has some very strange things to tell the children.
- 6.22 p.m.—LESLIE BRADSHAW:
Songs at the Piano.
- 6.29 p.m.—BILLY BUNNY will tell the children about
"The Adventures of the Treasure Seekers."
- 6.40 p.m.—"Herald" news service. Weather synopsis. Shipping movements.
- 6.47 p.m.—Stock Exchange information.
- 6.52 p.m.—Fish Market reports by J. R. Barrett, Ltd. Rabbit prices.
- 6.58 p.m.—River reports.
- 6.58 p.m.—Newmarket Sheep sales by the Associated Stock and Station Agents, Bourke Street, Melbourne. Market reports by the Victorian Producers' Co-operative Co., Ltd. Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes, and Onions.
- 7.12 p.m.—Market reports of fruit.

NIGHT SESSION.

- 7.15 p.m.—Under the auspices of the Department of Agriculture, MR. G. T. LEVIOK, Science Field Officer,
"The House Fly."
- 7.30 p.m.—COLLINGWOOD CITIZENS' BAND:
March, "Sons of the Son."
Fox trot, "Just the Same."
- 7.40 p.m.—LILY BURNARD and ARTHUR SLATER:
In Selections from their repertoire.
- 7.50 p.m.—MR. H. K. LOVE, will speak to you about:
"The effects of aerials on selectivity."
Mr. Love will be glad to attend to your wireless difficulties, and we ask you to write to him for any advice that you may require.
- 8 p.m.—THE HEALTH ASSOCIATION'S MESSAGE FOR TO-DAY IS:
"How long you live depends largely on how well you live."
- 8.1 p.m.—COLLINGWOOD CITIZENS' BAND:
Overture, "England's Boys."
March, "The Flag Victory."
- 8.15 p.m.—GLADYS LAMPE, contralto:
"Pleading" (Elgar).
"Like to the Danes' Rose" (Elgar).
- 8.17 p.m.—CORNET SOLO:
"Love's Old Sweet Song."
Part Song, "Sweet and Low" (soloist, W. Simmonds).
- 8.25 p.m.—MR. C. J. WILLIAMS will comment on
"To-morrow's Stadium Event."
- 8.33 p.m.—COLLINGWOOD CITIZENS' BAND:
Grand Naval Fantasia, "Trafalgar."
- 8.45 p.m.—MARIE LAWTON, soprano:
Selected.

A good battery is essential

The battery is a vital part of your radio set. On it depends the volume—on it hinges the pleasure or otherwise of your reception.

To purchase an Ever-Ready Radio Battery is to ensure enjoyable wireless, for into each and every one has been built that long life and extra power for which Ever-Ready has become so popular with the radio public.

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cheap, untested condensers—it's
only looking for trouble.

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(W.M.F.)

8.52 p.m.—MR. J. HOWLETT ROSS will
speak on:

"The Battle of Trafalgar."

9.7 p.m.—HORATIO S. DICKSON, tenor:

"The Death of Nelson" (Brahms).

"Hail on the Bowline."

9.12 p.m.—COLLINGWOOD CITIZENS'

BAND:

Trombone solo, "The Switchback" (soloist,

A. Whelan).

Fox trot, "The Wanderer."

9.23 p.m.—Announcement. ROYAL AUTO-

MOBILE CLUB OF VICTORIA'S SAFETY

MESSAGE FOR TO-DAY IS:

"One man's efforts towards safety may be

small, but all together we can do a

great deal."

9.28 p.m.—"GARDIAN"—Mr. H. A. Wolfe,

sporting editor of the "Argus" and the

"Australasian," will speak on to-morrow's

race.

9.35 p.m.—COLLINGWOOD CITIZENS'

BAND:

Intermezzo, "An Evening Song."

9.43 p.m.—GLADYS LAMBE, contralto:

"Heavenly Hymn" (Frank Bridge).

"My Heaven" (Squibb).

9.50 p.m.—Read Notes, supplied by the

Royal Automobile Club of Victoria. British

official wireless news from Rugby.

9.57 p.m.—COLLINGWOOD CITIZENS'

BAND:

Grand Selection, "Der Wildschütz."

10.4 p.m.—MARIE LAWTON, baritone:

Selected.

10.11 p.m.—"Argus" news service. Meteorolo-

gical information.

10.18 p.m.—COLLINGWOOD CITIZENS'

BAND:

Selected.

10.28 p.m.—HORATIO S. DICKSON, tenor.

"In the Day."

"Love's Springtime" (Vincent).

10.36 p.m.—JOE ARONSON AND HIS

SYNCPATING SYMPHONISTS.

10.45 p.m.—BILLIE LORRAINE, contralto:

"Little Honey Coo" (with ukulele).

"Sweet Hawaiian Sand" (with ukulele).

10.52 p.m.—JOE ARONSON AND HIS

SYNCPATING SYMPHONISTS.

11 p.m.—OUR GREAT THOUGHT:

"Happiness is increased not by the en-

largement of the possessions, but of the

heart."—Ruskin.

11.1 p.m.—JOE ARONSON AND HIS

SYNCPATING SYMPHONISTS.

11.40 p.m.—GOD SAVE THE KING.

4QG, BRISBANE

Friday.

MIDDAY SESSION.

1 p.m.—Market reports, weather information,

"The Daily Mail" and "The Daily Standard"

R.M.F.

FROM HOTEL CARLTON:

1.20 p.m.—Lunch hour music, played by Hotel

Carlton Symphony Orchestra.

FROM THE OBSERVATORY.

1.58 p.m.—Standard time signal.

2 p.m.—Close down.

AFTERNOON SESSION.

3.30 p.m.—A programme of music from the

Studio.

4.15 p.m.—"The Telegraph" news.

4.50 p.m.—Close down.

EARLY EVENING SESSION.

6 p.m.—"Daily Standard" news, weather in-

formation, announcements.

6.15 p.m.—Lecture.

6.30 p.m.—Balltime Stories, by "The Sand-

man."

7 p.m.—Market reports, stock reports.

7.30 p.m.—Weather news; announcements:

"Daily Standard" news.

7.45 p.m.—Standard time signal.

7.48 p.m.—Lecture: "Earning in Frater,

Some Economic Phases," by Mr. J. F. B.

Reid (Editor, "Queensland Agricultural

Journal.")

NIGHT SESSION.

RECITAL BY MRS. ROBERT BELL'S
STUDENTS.

The first portion of to-night's programme

will comprise a Recital by the students of

Mrs. Robert Bell, assisted by Mr. John

Steel (tenor) and Mr. G. Clark (baritone).

Accompanied, Miss Rae Phillips.

FROM THE STUDIO:

8 p.m.—Mazo-soprano solo, "Butterfly Wings"

(Phillips), Miss Thelma Marsh; soprano

solo, "Grazioso and Kind Art Thou, My

Queen" (Brahms), Miss Miriam Blumberg;

contralto solo, "My Dear Solo" (Handel);

Mrs. L. L. Conley; baritone solo, "The

Deer" (Eubank), Mr. G. Clark; soprano

solo, "Ave Maria" (Boswell), Miss Mary

Morressey; soprano solo, "Love Pipes of

Juno" (Earl), Mrs. Hector Daugherty; vocal

duet, "As I went A-Rooming" (Hague),

Mrs. Edwards and Mrs. Stubbins; soprano

solo (a) "With Courty Grace" (Phillips),

(b) "The Gipsy" (Phillips), Miss Ella Elee;

contralto solo, "When the Flowing Tide

Comes In" (Barth), Miss Sarah Jones;

soprano solo, "Schubert's Serenade" (Schubert),

Miss Ellen Hegarty; soprano solo,

"Morning" (Speaks), Mrs. Angus; tenor

solo, selected, Mr. John Steel; mezzo-

soprano solo, "Energy Follows Tune" (Hornby),

Miss Phyllis Foley; soprano solo, "Cuckoo

Gills" (Deane), Miss Everingham; vocal

duet, "From Dream Pentagons—Hansel

and Grisel" (Humpstead), Miss Ella Elee

and Miss L. L. Conley; mezzo-soprano solo,

"Love's Valley" (Foster), Miss E. Suther-

land; soprano solo, "Sing Sweet Bird"

(Genie), Mrs. Edwards; soprano solo, "San-

tuza's Song" (from "Cavalleria" Rucciani)

(Mazzoni), Miss Ruth Forriest; vocal

duet, "Miserere Scene" from "Il Trovatore"

(Verdi), Mrs. Robt. Bell and Mr. John Steel.

PART II. (To commence at 9 p.m.).

ONE-ACT DIGGER PLAY: "THE BAT-

TALION REUNION."

Written and produced by Miss Thelma

Champion. Instrumental music by the

Studio Orchestra. Mechanical effects by

Mr. Robt. Gibbs.

"The Battalion Reunion" is a sequel to

"Off Duty" and "Homeward Bound"—the

one-act digger plays which have been broadcast

from 4QG. In it the adventures of four

Diggers who meet after twelve months in

civilian clothes are depicted.

SYNOPSIS.—Scene 1: "At the Anzac

Club, Brisbane." Scene 2: "At Snowy's

Home."

CAST—"Dad," Mr. Tom Muller;

"Snowy," Mr. Ray Bruce; "Bill," Mr. Hugh

Gilroy; "Longan," Mr. J. P. Corwell;

"Yvonne," Miss Thelma Champion; "The

Colonel," Mr. Geo. Williamson. Battalion

acquaintances, speakers, taxi drivers, etc.,

by 4QG artists and staff.

MUSICAL NUMBERS.—The musical com-

ponents will include: "Comrades in

Arms," "The Bushy Way," "Dude," "The

Battle Eve," "Roses of Pickin'ly," solo,

"The Death of Nelson," "Just Before the

stille, Mother," "Pale," "A Chip of the Old

Block," "I Was Dreaming," "I'll Be All the

Same," monologue, "Tommy," "Fren-

ch," "The King," "Our Battalion,"

"Fallen Comrades," "The Ladies" choruses,

"Froch Browsers," "Sweet Genevieve,"

"When the Sunset Turns the Ocean's Bos-

om," "The Mad, Mad, Mad, Mad, Mad,"

"Sweet Adeline," "When Moses was a Little

Boy," "The Best of a Perfect Day."

10.30 p.m.—"The Daily Mail" news, weather

news. Close down.

7 ZL, HOBART

Friday,

MORNING SESSION.
11 a.m. to 12 noon.

AFTERNOON SESSION.

- 3 p.m.—G.P.O. Clock chiming.
3.1 p.m.—Tune in selection.
3.4 p.m.—Hobart Stock Exchange quotations.
Weather information.
Items of interest; announcements.
3.16 p.m.—Orchestral selection by 7ZL Studio trio.
4.15 p.m.—Educational talk.
4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 8.30 p.m.—Children's Corner with the "Radio Lady."
7.15 p.m.—Gardening chat by Mr. George Nelson.

NIGHT SESSION.

- 7.30 p.m.—Musical selection. Fruit Poultry and produce reports through the courtesy of Roberts and Co, Hobart.
7.35 p.m.—Gardening talk by Mr. George Nelson, Glen Nursery Co, Glenorchy.
7.50 p.m.—"Mercury" special Tasmanian news service. Railway auction produce sales. Hobart Stock Exchange quotations.
8 p.m.—G.P.O. Clock chiming.
8.1 p.m.—Sports Budget supplied by Mr. H. W. Newton of Hobart Sports Dept., Collins St., Hobart.
8.4 p.m.—Studio Concert:
Miss Elsie Knight (mezzo-soprano), Miss E. Henry (solicitor), Miss Bertha Marshall (soprano), Miss Ruby Pease (pianist), Mr. Victor Phoenix (bass soloist), Mr. C. Becham (baritone), Mr. Harry Foster (baritone).
9.20 p.m.—Sporting chat by "Mid Off."
9.40 p.m.—British Official Wireless news.
9.50 p.m.—"Mercury" special Interstate news service. Ships within wireless range. Tasmanian District weather reports. 9 p.m. Weather forecasts. Station announcements. Traveller week-end information. National Anthem.

Saturday, Oct. 22

2FC, SYDNEY

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

- 10 a.m.—"Dis Ben" and programme announcements.
10.5 a.m.—Studio music.
10.15 a.m.—"Sydney Morning Herald" news service.
10.30 a.m.—Studio music.
10.35 a.m.—A talk by the 2FC Ladies Commissioner.
10.45 a.m.—Studio music.
11 a.m.—"Big Ben" Studio music.
11.5 a.m.—A.F.A. and Baxter's Club services.
11.10 a.m.—Studio music.
11.15 a.m.—A talk on Gardening by Mr. C. J. Lockley ("Redgum").
11.30 a.m.—Close down.
MIDDAY AND AFTERNOON SESSIONS.
12 noon—"Big Ben" and announcements.
12.4 p.m.—Stock Exchange, first call.
12.5 p.m.—Studio music.
12.30 p.m.—"Sydney Morning Herald" news service.

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There is no need to use headphones. Interstate stations are quite as easy to pick up as the local ones. The Colmox will give complete satisfaction, and is guaranteed to stay in perfect mechanical order for twelve months.

For the benefit of clients who find it difficult to decide, we are willing to give a demonstration in their own home, and prove the all-round superiority of the Colmox. Just ring B2261, or call, and we will arrange a demonstration to suit you at any time without obligation to purchase.

2-Valve Set.	Cash Price ..	£16/10/-;	dep. £2/10/-;	Weekly 8/-
3-Valve Set.	Cash Price ..	£20/10/-;	dep. £3/-/-;	Weekly 7/6
4-Valve Set.	Cash Price ..	£27/-/-;	dep. £4/5/-;	Weekly 9/10
5-Valve Set.	Cash Price ..	£33/10/-;	dep. £5/-/-;	Weekly 12/3
Super Five Model	£49/10/-;	dep. £10/-/-;	Weekly 17/-

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1 Panel, 20 x 8 x 5/16th Diaeco	16/-	1 A.W.A. 5-1 Transformer	18/-
2,000 Condensers, Advance, ea.	19/6	1 1 stage Polymat Resistance Unit	18/-
4r Preels, each	.....	1 Advance Midcut Condenser	.....	6/6
4 inches of 3/16 Diaeco Tubing	2/8	1 Hudokes R.F. Choke	.....	3/6
2 1/2in. lengths Diaeco Tubing	2/-	1 .00025 Wireless Grid Condenser	.....	1/2
2oz. 24 D.C.G. Wire	.....	Or 1 Duobler Grid Condenser	.....	2/6
4oz. 36-gauge D.S.C. Wire	.....	1 B.M.S. Battery Switch	.....	3/9
3 Valve Sockets, Buffalo, each	1/3	Or 1 Electro-Adapt Battery Switch	.....	2/-
Or Benjamin Shock Sockets, ea.	1/6	1 B.M.S. Single Circuit Jack	.....	2/9
2 30 ohm. De-Jar Rheostats, each	2/9	Or 1 Marco Single Circuit Jack	.....	7/9
1 Bakelite Strip, 12 x 1	.....	11 Bakelite Terminals, each	.....	3d.

COUNTRY CLIENTS NOTE.—Postage Paid on Orders over 10/-, with the exception of Sets, Loud Speakers, Batteries, Aerial Wires and Value Payable Parcels. All goods sold with a money back guarantee if not satisfied and returned within ten days, MONEY WILL BE REFUNDED.

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- 50-1 Variable Dial
- New System Phones, only 25/- pair
- 2-Valve Sets, from £8, complete
- 3-Valve Sets, from £12/12/6, complete
- Speakers and Headphones. Replaced and Rewound.

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J. WETLESS,

28 KING ST., ROCKDALE

Phone: LW 1155.

- 12.32 p.m.—Rugby wireless news.
- 12.35 p.m.—Studio music.
- Notes: During the afternoon a description of the Caulfield Cup will be relayed from S.L.O. Melbourne.
- Racing events direct from Canterbury Park will be described in the running by the 2500 Racing Commission.
- 1 p.m.—"Big Ben." Weather intelligence.
- 1.2 p.m.—"Evening News" midday news service.
- 1.29 p.m.—Studio music.

During racing intervals the following musical items will be heard:

- The Crystal Palace Theatre Orchestra under the baton of Mr. Harry Stone.
- CHIF Azadi, Novelty pianist.
- Ed Montague, Ukulele numbers.
- 4.30 p.m.—A complete resume of the day's sporting events.
- 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 5.40 p.m.—The Chimes of 2 P.M.
- 5.45 p.m.—The "Radio Man" Talks to the Children.
- 6.30 p.m.—Story Time for the Young Folk.
- 6.40 p.m.—Studio Music.
- 7.0 p.m.—"Big Ben." Weather Intelligence.
- 7.15 p.m.—"Evening News" Late News Service.

NIGHT SESSION.

- 7.50 p.m.—Programme Announcements.
- 7.55 p.m.—Peggy Pent, Soprano.
- 7.58 p.m.—Dunmar Thomson, Violinist.
- (a) "Gull-iv" (Giedlowski-Sarasale).
- (b) "Capella Francesca" (Castlenovo-Tedesco).
- 7.59 p.m.—Madame Emily Marks, Soprano.
- 8.0 p.m.—From the Lyceum Edward Theatre, Canterbury Street, Sydney: The Prince Edward Theatre Orchestra, under the baton of Mr. Albert Caubon.

Items from the Orchestral score and vocal prologue to the film,

"BEN HUR."

- 2. Introductory Music, Albert Caubon and Concert Orchestra.
- 2. Leslie V. Harvey at the Orchestral Organ, from "Gipsy Love."
- 3. "Thrilling Around the World: A Box Variety arranged by Hal. H. Curleton.
- 4. Albert Caubon and the Prince Edward Concert Orchestra, playing selection, Overture to "Himmli."
- 5. John Florio, well known tenor, rendering "Star of Bethlehem," in atmospheric Prelude to "Ben Hur."

8.30 p.m.—From the Studio: Victor Evans, Baritone.

8.55 p.m.—Dunmar Thomson, Violinist, "Andante" from "Symphony" (Egagob-Lalo).

- 9. P.m.—Late Weather Forecasts: Charles Lawrence, Entertainer, "After the Accident"
- 9.10 p.m.—A Studio Production of Scenes from the drama, "The Light That Failed," Played by H. W. Varna and Company, by arrangement with J. C. Williamson, Ltd.

ACT I.

CAST:

- Dick Hedder
- Torpehove
- Osavovvov
- Nlghel
- Heron
- Mr. Haying
- Red Headed Girl
- Beside
- Maids

9.30 p.m.—Madame Emily Marks, Soprano:

(a) "Down in the Fort" (Ronald).

(b) "Long, Long Ago" (Bayly).

9.31 p.m.—Charles Lawrence, Entertainer.

(a) "Hedgeroon Gratory" (By Request).

9.42 p.m.—Peggy Pent, Soprano.

9.52 p.m.—Act Two of "The Light That Failed" produced by H. W. Varna and Company.

10.20 p.m.—Victor Evans, Baritone.

- 10.27 p.m.—Act Three of "The Light That Failed," produced by H. W. Varna and Company.
- 10.50 p.m.—Len Maurice, Popular Baritone.
- 10.57 p.m.—Late News and Announcements.
- 11.0 p.m.—"Big Ben"; Dance Music, interspersed with vocal choruses by Len Maurice.
- 11.45 p.m.—National Anthem; Close Down.

3.0, MELBOURNE.

Saturday.

MIDDAY SESSION.

- 11 a.m.—JOE ARONSON AND HIS SYNCO-SYMPHONISTS.
- 11.10 a.m.—GLADYS LAMPE, contralto. "O, Western Wind" (May Brahms). "Cam' Ye By Athol?"—Scotch. (Arr. by G. A. Macfarren).
- 11.17 a.m.—JOE ARONSON AND HIS SYNCO-SYMPHONISTS.
- 11.27 a.m.—LILLY BURNAND and ARTHUR SLATER, Entertainers. "I'll be your sweetheart," "Louisiana."
- 11.37 a.m.—JOE ARONSON AND HIS SYNCO-SYMPHONISTS.
- 11.47 a.m.—MARIE LAWTON, soprano and Harpist: Selected.
- 11.57 a.m.—JOE ARONSON AND HIS SYNCO-SYMPHONISTS.

12 noon.—MELBOURNE OBSERVATORY TIME SIGNAL.

Metal prices received by the Australian Mines and Metal's Association, from the London Stock Exchange this day. British official wireless news from Rugby, Renfer's and the Australian Press Association cables. Argus news service.

12.30 p.m.—JOE ARONSON AND HIS SYNCO-SYMPHONISTS:

12.30 p.m.—GLADYS LAMPE, contralto: "My Ain Folk" (Laura Lemson).

"Where the Bee Sucks" (Arnel).

12.37 p.m.—Stock Exchange Information.

12.40 p.m.—STUDIO QUARTET:

String Quartet, No. 4—Allergo (Beechova).

12.50 p.m.—ALMA HORLOCK, soprano: "Morning" (Turner).

12.57 p.m.—JOE ARONSON AND HIS SYNCO-SYMPHONISTS.

1 p.m.—MELBOURNE OBSERVATORY TIME SIGNAL.

The bell strikes ONE—it is the signal that demands attention. How much is to be done.

1.1 p.m.—Description of Henley on the Yarra, by Mr. Norman McCance.

1.18 p.m.—Meteorological information. Shipping Intelligence. Weather forecast for Victoria, Tasmania, South Australia and New South Wales. Ocean forecast. River reports. Rainfall for Victoria, Tasmania, South Australia and New South Wales.

1.25 p.m.—ALMA HORLOCK, soprano: "I Never Knew" (Bald).

"Waikata Poi."

1.32 p.m.—JASMA TIERNAN, Cello: "Chants Ducaen" (Salu).

1.40 p.m.—STUDIO QUARTET: "No. 4 Scherzo" (Beethoven).

1.47 p.m.—Description of Henley on the Yarra, by Mr. Norman McCance.

2 p.m.—Description of Mia Mia Hardie, two miles, Manne Valley Races, by "Musket," of The Sporting Globe.

2.6 p.m.—Description by Mr. Rod McGregor, of cricket match between South Melbourne and Northcote, at South Melbourne.

2.15 p.m.—Close down.

2.30 p.m.—Description of St. Albans Handicap, 4 furlongs, for colts, Manne Valley Races, by "Musket," of "The Sporting Globe."

2.35 p.m.—Description of Henley on the Yarra, by Mr. Norman McCance.

2.50 p.m.—Close down.

AFTERNOON SESSION.

8 p.m.—MELBOURNE OBSERVATORY

TIME SIGNAL.
Description of W. S. Cox Plate, $\frac{3}{4}$ furlongs, Moonee Valley Races, by "Musket," of "The Sporting Globe."

8.5 p.m.—REGINALD BRADLEY AND DOROTHY ROXBURGH. Viola and Viola Duet:
"Andante Minoretto."

8.25 p.m.—Description by Mr. Rod McGregor, of Cricket match between South Melbourne and Northcote, at South Melbourne.

8.30 p.m.—Description of St. Alban's Handicap, 4 furlongs, Moonee Valley Races, by "Musket," of "The Sporting Globe."

8.35 p.m.—Description of Henley on the Yarra, by Mr. Norman McCance.

8.50 p.m.—STUDIO QUARTETTE:

Selection, "The Little Dutch Girl."
4 p.m.—Description of Moonee Valley Cup, 1 mile $\frac{3}{4}$ furlongs, by "Musket," of "The Sporting Globe."

4.5 p.m.—STUDIO QUARTETTE:

"Oriental Suite" (Francis Popyer).
4.50 p.m.—Description of Broadford-dove Steeple, about 2 miles 8 chains, Moonee Valley Races, by "Musket," of "The Sporting Globe."

4.55 p.m.—Description of Henley on the Yarra, by Mr. Norman McCance.

4.50 p.m.—"Herald" news service. Stock exchange information.

5 p.m.—Description of Dundonald Welter, 8 furlongs, Moonee Valley Races, by "Musket," of "The Sporting Globe."

5.10 p.m.—Description by Mr. Rod McGregor, of Cricket match, South Melbourne and Northcote, at South Melbourne.

5.20 p.m.—Close down.

EVENING SESSION.

5.30 p.m.—Sporting results.

5.40 p.m.—Answer to Letters and Birthday Greetings by "LITTLE MISS KOOKABURRA."

6.10 p.m.—FREDA NORTHCOTE, contralto:

Selected.
"Little Brown Cottage" (Dickson).

6.17 p.m.—"LITTLE MISS KOOKABURRA" has story for boys.
"The Raid of the Red Indians"

6.22 p.m.—FREDA NORTHCOTE, contralto:
"Wister Bear" (Gatty).

"Falling Leaves" (Schneider).

6.40 p.m.—"Herald" news service. Weather reports. Shipping movements.

6.42 p.m.—Stock exchange information.

6.47 p.m.—Market reports.

6.50 p.m.—River reports.

6.50 p.m.—Newmarket Sheep sales by the Associated Stock and Station Agents, Bourke street, Melbourne. Market reports by the Victorian Producers' Co. Ltd., Poultry, Grain, Straw, Fats, Dairy Produce, Potatoes, and Onions.

7.10 p.m.—Market reports of Fruit by the Victorian Fruitellers' Association.

NIGHT SESSION.

7.15 p.m.—Mr. W. A. STEVENSON, the New Zealand champion sculler, will speak.

7.20 p.m.—Mr. P. CHAPMAN, of the National Museum:
"The Floor of the Ocean."

Under the auspices of the Health Association of Australia our HEALTH MESSAGE for to-day is—

"Preventive medicine is concerned with the mind and spirit of man as well as his body, with his habits and customs, his work and recreation, as well as with the housing of the people, their dietary, physical exercise, and rest, with fresh air, sunlight, the healthy life and joys of being."—The Times, 7/4/27.

7.45 p.m.—Mr. H. E. LAMBE:

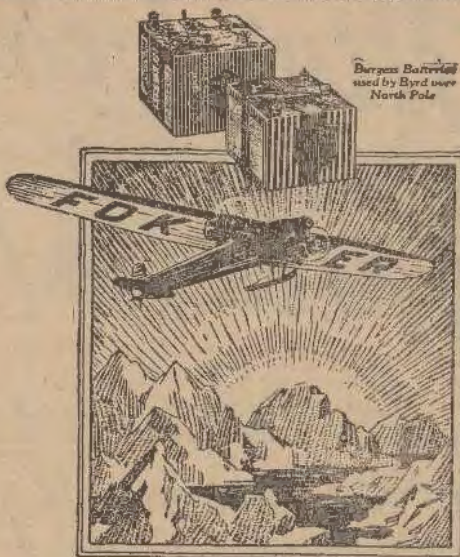
"History of Timekeepers."

The First Sun-dial—the Water Clock.

8 p.m.—BRUNSWICK BRASS QUARTETTE:

"Scott's" (Round).

"Passing Clouds."



Service Scarred Vockrans of a Supreme Test—

HARD usage has blackened and dented the paraffined sides. But a glorious name—"R. E. Byrd" adds everlasting lustre to the scars of service. None but exceptionally rugged and durable batteries could have been capable of the never-failing performance given Commander Byrd on his flight over the North Pole. . . . None but Burgess.

The Burgess Chrome Batteries you buy at your dealer's are identical with those Byrd used.

Chrome

New System
Telephones Pty. Ltd.

230 Castlereagh Street, Sydney
25 Queen's Bridge St. Melbourne
Charles Street, Adelaide

—the preserving element used in finest leather, metal, and paint, is also used in Burgess Batteries. It gives them unusual staying power. Burgess Chrome Batteries are patented.

Q'land Agents:
Canada Cycle and Motor
Agency (Q.) Ltd.
Creek and Adelaide Sts.
Brisbane

BURGESS radio BATTERIES

Murdoch's Radio Specials!

7/- Ediswan Valves for . . 1/-

A remarkable offer—never to be repeated. Ediswan Bright Emitter Valves, English Base. Secure yours now while this remarkable offer lasts.

£7/10/- Transmitting Valves for £5

Here is a bargain indeed—a genuine £7/10/- Mullard O—50 type, 50 watt transmitting valve at 33 1/3% off!

31/6 Value B Batteries for 22/6

Large capacity 60 volt B Batteries. Result of remarkable overseas buying by Murdoch's. Don't miss this!

3/6 Glass Insulators for . 2/-

Pyrex Glass Insulators, an absolute essential to an efficient aerial. Here's a chance to perfect your aerial at a small outlay.

Spaghetti Tubing—Special clearance, yard lengths. Usually 6d. NOW 3d.

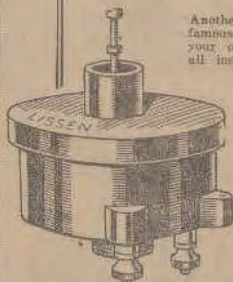
Harmonic 201A Type Valves—carefully tested before despatch, fit standard U.X. base, 4/9. U.X. 199 type, 7/9.

Lissenolas have arrived!

Another huge shipment just landed! The famous "Lissenola" Unit, for constructing your own Loud Speaker. Complete with all instructions.

Special Price

15/-



Freight paid on all Radio Goods, including Batteries up to 5-lbs. by weight, to nearest Post Office, Railway Station or Port in Australia. Batteries over 5-lbs. Half Freight Fee.

When writing, kindly address your letter to A2.

MURDOCH'S
IN-PARK ST. LTD. SYDNEY
"Specialists in all Radio Equipment."

- 8.30 p.m.—MELBOURNE CHORAL UNION:
Part Song, "Love" (J. C. Bridge).
Soloist: Chorus: Paves (Gounod).
- 8.45 p.m.—BRUNSWICK BRADLEY and AGNES
FORTUNE:
"Hyre Kall" (Hubay).
"Negro Spiritual" (C. C. White).
- 8.57 p.m.—MELBOURNE CHORAL UNION:
Madrigal: "Sweet Flowers" (Walmisley).
Chorus: "Thanks be to God." Eliah (Mer-
delascha).
- 8.54 p.m.—BRUNSWICK BRASS QUARTET:
"Autumn."
"Winter."
"Crown Diamond" (Aster).
- 8.40 p.m.—A Special Programme has been
arranged.
- 10.15 p.m.—BRUNSWICK BRASS QUARTET:
"La Filia Del Regimento" (Donizetti).
- 10.25 p.m.—GLADYS LAMPE, contralto:
"Sultana" (Laur).
"O, Night of Stars and Splendor" (Thomp-
son).
- 10.32 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS.
- 10.40 p.m.—ARTHUR SLATKE and LILY
BURBAND:
"Good-bye, Mignonne."
"Hello, MA Baby."
- 10.50 p.m.—Late Sporting results.
- 11 p.m.—OUR GREAT THOUGHT FOR TO-
NIGHT IS:
"The Clouds have silver linings, don't
forget."
- 11.11 p.m.—JOE ARONSON AND HIS SYN-
COPATING SYMPHONISTS.
- 11.40 p.m.—GOD SAVE THE KING.

4QG, BRISBANE.

Saturday.

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

8.30 p.m.—A matinee for *Little Women*, by
"Miss Warralah."

8.50 p.m.—Close down.

EARLY EVENING SESSION.

FROM THE STUDIO:

6.30 p.m.—Bedtime Stories, by "Uncle Ben."

FROM THE STUDIO:

7.15 p.m.—Racing results.

7.50 p.m.—To-day's Football Play described.

7.50 p.m.—Sailing Notes, by Mr. F. Smith.

NIGHT SESSION.

To-night's programme will comprise the
broadcasting of a Recital from the Studio
of Mr. L. A. Pares.

FROM THE STUDIO OF MR. PARES:

7 p.m.—Pianoforte solo, "Country Gardens"
(Gratinger), Miss Gertrude Anderson; violin
duet, "Hercules" (Mascha Hanus), Mr. Allen
Clark and Mr. L. Pares; song, "Schubert's
Serenade," Madame Holbova; violin solo,
soloist, Mr. Ronnie Jones; violin and forte
duet, "Andante in G" (Bastide), Miss
Pauline Gray and Mr. L. A. Pares; special
allocutionary item, "The Things that We
Suppose," Mr. Phillip O'Brien Hoare and
Miss Lily Harding; violin duet, "Zar-
carulle" (Orffbach), Mr. Robt. Finlay and
Mr. L. Pares; violin solo, "Zugunberweisen"
(Borstein), Miss Marjorie Wilson; song, "The
Little Damsel," Miss Ward; violin duet,

"Serenata" (Brusa), Miss Thelma Aspin and Mr. L. A. Pares; song, "Elbro Sainio" (Finland), Professor Eira; violin solo, "Eighth Concerto" (de Bortoli), Mr. Luis A. Pares; original item, by Miss Malua McLean; Hawaiian selections, Miss Francis' Hawaiian Band; tenor solo, "The Garden of Your Heart," Mr. White (Welsh tenor); violin duet, selected, Miss May Evans and Mr. L. A. Pares.

FROM LENNON'S BALLROOM:

10 p.m.—Dance music.

FROM THE STUDIO:

10.30 p.m.—"The Sunday Mail" news.

Weather news.

Close down.

NOTE: During the evening the main motor cycle race at the Davis Park Speedway will be described.

7ZL, HOBART

Saturday

MORNING SESSION.

11 a.m.—G.P.O. Clock chimes.

11.1 a.m.—Tune in selection.

11.5 a.m.—British Official Wireless News.

11.16 a.m.—"Mercury" news service.

11.30 a.m.—Shipping information. Ships

within wireless range.

11.45 a.m.—Mail notices. Commercial news. Foreign exchange market. Housewives guide.

11.46 a.m.—Hobart Stock Exchange Quotations

11.50 a.m.—Sporting anticipations.

11.55 a.m.—Tasmanian stations 0 a.m. weather report.

12 noon.—G.P.O. Clock chimes. Close down.

AFTERNOON SESSION.

3 p.m.—G.P.O. Clock chimes.

3.1 p.m.—Sporting events or musical items from the studio.

4.30 p.m.—Close down.

EARLY EVENING SESSION.

6.30 p.m.—"Uncle Peter's" half hour.

7 p.m.—"Uncle Hector" talks to the children.

NIGHT SESSION.

7.30 p.m.—Musical selection.

7.35 p.m.—Talk under the auspices of the Hobart Development League.

7.50 p.m.—"Mercury" special Tasmanian news service. Sporting results. Weather forecasts. Hobart Stock Exchange Quotations.

8 p.m.—G.P.O. Clock chimes.

8.1 p.m.—Broadcast by direct wire from Imperial Hotel Hobart. Dance numbers by Mrs. Shoppard's Trio.

10.30 p.m.—British Official Wireless News. Ships within wireless range. Weather information. Station announcements. National Anthem.



Farmer's Standard Five-valve Receiver, with Single-dial Control

Simple and direct in action, still more simple in control; the whole selective range is obedient to one main dial, battery current is controlled by a master switch, and a minor fitment increases or softens the tone volume.

This is a highly efficient "shielded" set, so perfect in its operation, that, if working from a properly situated interior aerial, all local stations can be eliminated, and interstate or New Zealand programmes "tuned-in" with ease.

The cabinet is a handsome decorative model, of genuine laminated figured American walnut, inlaid with burr walnut.



The equipment includes:

5 Radiotron UX201 "A" Valves, Willard Accumulator, 3 Burgess "B" Batteries, each 45 volts. 1 Burgess "C" Battery, 4.5 volts. Amplion "Dragon" (AR19) Loud Speaker, Set of aerial equipment. Complete .. £52/10/-

TRANSFORMERS

Built up to a specification and wound, lamination iron cut to any size from stock. Prices and estimates on application.

O'DONNELL, GRIFFIN & CO., LTD.,
83 Druitt Street, SYDNEY.
Phones: C 4445 and 4346.

F A R M E R ' S

BUSY BEES.

No one ever caught a bee in the 2FC studios, because only one lost to all sense to fear and security would dare to thus interfere with a hive of industry. Every morning when I first came to Sydney I used to indulge in a few minutes' health exercise. Then one day fatal to listeners-in, I was engaged with my partner by 2FC. Since that day ecsthetic contortions have been quite unnecessary. When I feel a bit stiff in the joints I just pop up to the studio, taking a position due north as the crow flies (no reference to Mr. Anderson intended), in a flash someone comes bustling out from nowhere with a sheaf of documents.

In order to save my young life, I take a flying leap to the west, just in time to meet someone else armed to the teeth with pens and pencils flying up north. With a hurried apology I skid down south, just in time to fetch up against the waistcoat of the Hello Man with about 3000 letters. He doesn't notice anything, and I come round to find I have impeded the progress of what seems to be a centipede, but it is merely one of the announcers on his way to all the points of the compass in search of information. When this process has been repeated half a dozen times, accelerated by the arrival of a hundred and one callers, every muscle has been brought into play and one feels in the pink.

You never find the men powdering their faces or doing fancy work or the ladies looking up the betting news or smoking pipes. No! Everyone is busy at 2FC, and strange to say everyone is smiling. To see Mr. Williams slide step around Mr. Cochrane is to realise the true poetry of motion. I remember just before the first occasion on which I broadcast I wanted some important information on a certain point, but seeing how busy everybody was I decided to go up in the evening in what I fondly thought was the slack time. As soon as I reached the studio, I heard typewriter tapping and the voice of one crying in the wilderness. In a pause I asked a lady typist—I mean typist—if it would make any difference to the microphone if I greased my hair.

The conversation ran like this: Lady: You want to know—excuse me, the telephone. Now with regard to—excuse me, the telephone, I should say—excuse me, the telephone. I find and the matter is still undecided. Now, if I want to find out similar things of national importance I go up on the roof garden about lunch time, sit on a piece of toast and pretend I'm a poached egg, then when the chief comes along I eggs claim, he stops to eggs amine the reason of blasting on the roof garden, and I eggs tract the desired information. Eggs curse me, the telephone!



THE more sensitive the receiver the more imperative becomes the need for perfection in condensers.

IGRANIC Gang Condensers are engineering jobs from start to finish. Excellence in design is evident in every detail. The whole construction is particularly rigid, assuring that there will be no fear of the frame-work becoming distorted.

FLEXIBLE connections between each connection ensure absolutely smooth tuning.

MICRO Condensers, fitted with insulated knobs are mounted on the framework in easily accessible positions, and connected in parallel with the sections tuning the H.F. circuits. Igranik Gang Condensers are particularly suitable for Solodynamic Circuits.

PRICES :

Twin	-	-	£3 15 0
Triple	-	-	£5 12 6
Four Gang	-	-	£7 7 0

Obtainable at all Radio Dealers.

WRITE for fully illustrated Handbook containing Theoretical Notes, General Description, Constructional Details, and Operating Data.

This Handbook is a treatise on all Super Heterodyne Receivers.

Price, 3/9. Post Free.

Sole Agents:

NOYES BROS. (Sydney) LTD
115 CLARENCE ST. SYDNEY
and at Brisbane and Newcastle.

2BL Radio Ball.

FOR an evening of sheer fun and merriment it would be hard to excel the ball held at the Bondi Casino by 2BL recently, to raise funds for equipping hospitals in various parts of New South Wales with radio installation. 2BL has already collected over £500, with which the Children's Hospital is being provided with wireless, and the Radio Ball resulted in over £300. The Casino was crowded, only the restriction on the sale of tickets preventing over-crowding. Uncle George, Little Willie, Uncle Bass, Rimbo, and all the other celebrities of the station were there, and the dancing was interspersed with all manner of entertainment.

The whole business was broadcast, and what it sounded like to listeners the writer, having given his receiving set a night's holiday, cannot say. It is a fact, however, that no one was left at the broadcasting studio. Except for the ball, Broadcasters—indeed, the whole of the radio trade—took a night off. Whatever listeners were left in their own homes—and no doubt there were thousands—must have been mystified at times to hear the babel of sound coming over the air. A burlesque dance of ballet "girls" made the hall rock with laughter, but whether listeners had any idea of what the crowd was laughing at can only be surmised. However, it was a great night, and many a weary patient in hospital will be grateful when, as a result, he finds it possible to wear a pair of headphones and listen in to the broadcast programmes.

A FORM OF ENTERTAINMENT that is becoming increasingly popular with the general public is community singing, and in Melbourne alone it has grown from a mere handful of people to a bright enthusiastic crowded audience, who come each week regularly, and "would not miss it for worlds." Naturally, they have their own especial favorites, and the conductor has his own especial method of tuition, and, as it is nice to make comparisons, studio 3LO, Melbourne, has made arrangements for the community singing to be broadcast from Ballarat on October 14th, so that listeners will be able to hear how the singing from their Ballarat cousins "comes over the air." Doubtless, also, they will be able to pick up a few hints, for, after all, one can always learn something new, and Ballarat is recognised the world over as the city of art and beauty.

NEW SUBURBANITE: "Two packages of flower seeds."

SHOP ASSISTANT: "Anything else, madam?"

Announcement

Jefferson Transformers

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

Type 41

NOW

15/-

Ratio: 3.75 to 1



ELECTRICAL CHARACTERISTICS.

No. 41—Ratio 3.75 to 1.

Designed for operation with all standard tubes.

1. Ratio of secondary to primary turns, 3.75 to 1.
2. Useful lone frequency range, 60/5000 cycles.
3. Allowable current on each winding, 10 milli-amperes.
4. Test voltage between primary and secondary, between primary, secondary and ground, 500 volts.
5. Maximum operating voltage in conjunction with tube, 300 volts.
6. D.C. Resistance of windings:
Primary, 1000 ohms. (approx.)
Secondary, 5000 ohms. (approx.)
7. Primary and secondary wound with No. 40 enamel-covered copper wire.

Obtainable from all Reputable Radio Dealers.

SOLE AUSTRALASIAN AGENTS:

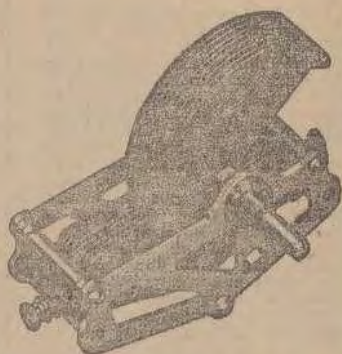
Fox & MacGillycuddy Ltd.

Daily Telegraph Buildings, King Street



BAKELITE SHIELDED TRANSFORMER 15/9

Specify Pilot Parts

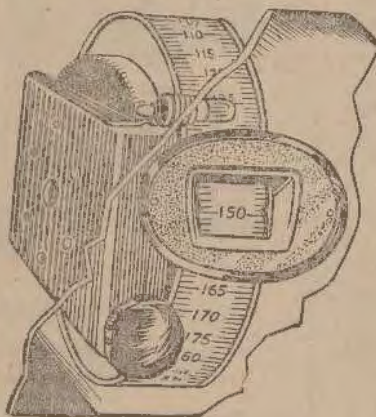


PILOT CENTRALINE 14/6

REMLER ILLUMINATED DRUM DIAL

Price, £2

Special Terms to the Trade



Price, £2

Special Terms to the Trade

The celebrated Remler Drum Dial. Brass mounted. Geared drive. The Remler Illuminated Drum Dial gives an elegant finish. It will smarten up your old set and make it look good as new.



PILOT RHEOSTAT

- 906—6-ohm
 - 910—10-ohm
 - 920—20-ohm
 - 930—30-ohm
- } 3/6

SOLE AGENTS:

UNITED DISTRIBUTORS LIMITED

28 MARTIN PLACE

72 CLARENCE STREET
SYDNEY



RESISTOGRAD 8/6

All Readers' Queries Answered Here.

J.P. (DARLINGHORST).—No type. A good indoor aerial about 60 feet long around the plate lead will do.

S.W.O. (ROSEVILLE).—Q: (1) My six valve set has only one B battery, 60 volts. Is this sufficient for best results?

A: No. I would rather see you with at least ninety volts. See back nos. of "W.W." for further particulars.

Q: (2) For best results, what should the length of aerial be?

A: Don't exceed seventy feet over all.

Q: (3) Is covered Electron wire or uncovered wire the best for aerial?

A: Both are equally good, provided they do not touch the gutting, or the side of the house.

L.E. (SYDNEY).—Don't be too sanguine of loud speaker reception with the Kitz. Install amperies on the radio and also on the audio valve, or, if desired, both these valves may be contained in one rheostat.

G.B. (CLIFTON, Q.L.D.).—Overcome your difficulty by using a Bradstreet or an Emmetstaid No. 1 instead of rheostat. Thanks for your other letter.

"AMATEUR" (WAGGA).—The Harkness Two-Valve Reflex should be suitable for you. Use a 5 to 1 Transformer in the first stage, followed by a 2½ to 1. The aerial should be not more than 100 feet over all.

R.H.C. (GOULBURN).—This can be overcome by reducing the plate voltage of the radio frequency valve.

A.H. (HAMILTON).—Yours is a very difficult query. Probably the trouble lies in the aerial or the earth connection.

"FUZZLED" (TAROOM).—Write to the agent for your receiver. It appears to me that there are alternative connections for the speaker.

A.B.C. (LYSMORE).—The station you heard was probably the R.N. Siberia, on 50 metres. Mr. H. Reiskel, of Creswick, has written to us stating that he has heard them very clearly some time back. He also states that the strength from Wednesday night till Sunday night was so great that working a loud speaker on three valves R.F.N. could be heard three rooms away. This may interest other readers. Incidentally, this station works on 50 and 45 metres as well.

K.E.B. (MATHURST).—No, you could not adapt your receiver as at present constituted. The chemical resistor is not suited for the purpose you require.

A.L. (STRATHFIELD).—Q: (1) Can UX or UL1930 Radiotrons be used for radio amplification (Neutrodyne 5)? No doubt a special RF valve would be more suitable, but would the 1930 serve?

A: Yes, these valves are suitable.

Q: (2) Is there any B eliminator that can be used to eliminate at the same time the 4, 1½ v. C battery?

A: Yes, the Clark Atlas B Battery eliminator.

C.W.C. (GREVILLE).—Your trouble is certainly localized and lies in either your aerial or your earth. I can't help you beyond this.

E.M.C. (ELWOOD).—You will have to use some form of oscillator and choker irrespective of what kit you employed.

V.J. (ANNANDALE).—Don't expect this set to oscillate violently. Your other trouble lies in handling and in tuning. Remember also that the crystal detector plays a most important part.

QUERIES

Will readers kindly note that all technical queries are answered through the columns of *Wireless Weekly*. There is no occasion to send either stamps or addressed envelopes. The only condition is that the number of questions be limited to four. We unfortunately cannot deal with technical queries by telephone or by personal callers.

G.V.R. (MARTIN'S CREEK).—This will be answered at some future date.

R.H. (ABBOTSFORD).—Don't you remember I advised you not to use this with the reflex set.

J.W. (BONDI).—For your purpose, in your locality, the best set would be the "Cookday-Hartley," published in this week's paper.

A.N. (ARRAHMON).—There is no way of utilizing this eliminator for the A Battery.

S.R. (HILLSTON).—Don't worry too much about this. Pay particular attention to your R battery voltages. That's where your trouble lies.

G.L. (COOMA).—Yes.

W.H.W. (CHARSWOOD).—Insert a C battery by joining together the two P terminals of the two transformers and connecting the negative lead of the C battery to this common wire. Complete the circuit by joining the positive lead of the C battery to the A battery negative lead.

J.B. (MASCOT).—It will be much cheaper for you to buy the parts.

W.M. (CLARENCE RIVER).—Many thanks for your letter. It is indeed good news to hear that the Harkness Three is functioning so well.

F.E. (DULWICH HILLS).—Use your own wire, but have the same number of turns as specified.

W.H. (ENMOHE).—Yours is surely an old-fashioned set. Your trouble lies in body capacity and can be overcome by shielding the whole receiver.

S.L.P. (THEODORE, Q.L.D.).—Many thanks for your interesting letter. I am glad of the information contained therein.

H.A. (DULWICH HILLS).—The original Harkness reflex was tested out in your neighbourhood and gave Brisbane on the loud speaker very satisfactorily, but during fading periods a certain amount of interference was noticed from E.B.L. It is very difficult for me to say just how your own receiver would function as, naturally, you may not lay it out exactly as I did mine.

E.P. (TAMBAR SPRINGS).—Write to Mr. O. H. O'Brien, 39 Pitt Street, Sydney.

J.C.M. (GARRATHOOL).—Your presumptions are correct, but remember it may take you a few weeks to balance up all the circuits before the best results are obtained. Do not

be afraid to try different capacities, as usually the whole secret of a super heterodyne lies in the by-passing.

T.J.S. (NEWCASTLE).—Write to Colville Moore Wireless Supplies, Ltd., Rowe Street, Sydney. Thanks for your suggestions.

T.J.W. (HOMEBUSH).—Yes.

I.L.W. (CESSNOCK).—The Harkness Reflex, but use transformers. The short wave adaptor cannot be used with this set.

J.S. (SOUTH GRAPTON).—You may certainly use the .0005 and Variable condensers.

S.G.C. (KOGARAH).—Increase the B voltage on your detector valve.

T.W. (HELMORE).—Perhaps you had better reverse the direction of your reaction coil.

M.G.O.'S (DOOWOOMBA, Q.L.D.).—Q: Does an accumulator suit recharging at regular intervals irrespective of whether it is used?

A: Yes, but there are exceptions to the rule, such as some of the later types of Erida accumulators. The D.T.C. and the D.F.C. require charging once every six months if they are not used. We refer you to the advertisement of Messrs. Gilsen, Sutton and Co., Ltd., of Sydney, page 40 of "W.W." 7/10/27. There you will see this notice and it covers all the accumulators listed there: "If these cells are not fully discharged and left idle, they will stand six months without sulphating."

W.B. (BANKSTOWN).—I cannot discriminate between the receivers. The eliminator is suitable for your valve. Transformer tin is obtainable from O'Donnell, Griffin and Co., Ltd., 68 Druitt Street, Sydney. Sorry to say, May issue of "Radio" sold right out.

J.B. (ABERDARE).—The station you heard was 2MB, the A.W.A. Testing Station. It often communicates with the trapdoor.

J.F. (DEWILLY).—This is not practicable.

A.V. (DARLINGHORST).—For the Harkness Two-Valve Reflex, the 0005 and Variable Condensers will suit without altering the R.F. transformers. The plate voltage depends entirely on the valves used. Follow the maker's instructions, but try, say, 90 volts for a start, increasing if found necessary. The aerial should not exceed 75 feet over all.

R.H.B. (BURWOOD).—I would have to view your receiver before being able to give you good advice.

M.J.E. (BRANTON).—Build the Rice Neutrodyne.

"CURIOSODYNE" (NARBANDERA).—The information is given in "WIRELESS WEEKLY," dated 2/8/27.

A.R.K. (QUIRINDI).—The eliminator you mention is quite suitable for the purpose you require. See September issue of "RADIO."

P.W.L. (TAREE).—This will be described very shortly in a fully detailed article.

R.L.P. (THEODORE, Q.L.D.).—Your suggestion is interesting. I shall watch it in future.

W.R. (LAWSON).—I am sorry, I do not know this station.

"RINWARTZ" (MURSEVILLE).—You are seemingly experiencing an open circuit. Test all components for continuity.

G.H. (KANDWICK).—Your valves require reorientating.

D.F. (BANKSTOWN).—I would rather see you with three cells. Your aerial doesn't matter so very much.

K.B. (EARLWOOD).—No, you couldn't substitute this coil. A dull emitter valve generally consumes less than .25 of an amp., usually .04 or .1 of an amp. Bright emitters are those which consume from a quarter of an

All Readers' Queries Answered—continued.

amp upwards to the filament current. You could substitute the Radiocks Heinrich coil, and also rheostats in place of amperies.

J.F.M. (WAVERLEY).—Pay attention to the B battery valves, particularly on your radio frequency valves.

M.S. (LEICHHARDT).—A Cassar Point One.

H.W.B. (NORMANHURST).—Thanks for your letter. I would rather see you with a proper charger for this purpose.

G.R. (PETERSHAM).—I really couldn't recommend this.

"JOKER" (NEWCASTLE).—I am sorry I can't help you. Write to the Radio Inspector.

"CANOWINDRA" (CANOWINDRA).—The best height and length for an aerial in your locality would be 40 feet high and 70 feet long, erected at an angle of 30 degrees to electric light masts which may be near at hand. I regret that there is no cure for static, but "peaking" can be overcome by a well-constructed aerial whose connections are made and a well-insulated aerial.

F.R.E. (WENTWORTH FALLS).—Your present valve would be quite suitable with 45 volts B battery; three dry cells in series will be all right for an A battery.

B.T. (ARMIDALE).—Amalgamated Wireless of Australia Ltd., York Street, Sydney, is the reply to both queries.

"ENQUIRER" (LEADVILLE).—Increase the B battery detector voltage.

A.W.L. (GROWS NEST).—See "RADYO" for October.

G.G. (IPSWICH, QLD.).—I regret I have not received your previous letters, but your query will be answered in article form very shortly.

E.B. (WELINGTON, N.S.W.).—You seemingly have a filament control jack on the last stage. This jack is defective. Replace it.

W.S.E. (INVERELL).—Put up with this slight inconvenience for a few more weeks, when you will find the battery will hold its charge for a much longer period of time. Yes, use amperies.

T.L. (BEXLEY).—Install a 0001 Fixed Condenser in series with your aerial. I cannot recommend different brands of speakers. Call round some of the dealers and hear for yourself.

G.G.M. (HURSTVILLE).—Take a connection from the A positive terminal to one side of the battery switch. Join the other side of the battery switch to that wire which connects to one side of the filament of each valve socket.

F.L. (NEWTOWN).—Reverse the connections on the twentier turn portion.

F.C. (BATLOW).—Your only hope lies in fixing several large capacity condensers across the brushes of the generator, something round

about four microfrads may be tried for a start. Also erect a counter poise instead of an earth.

R.W. (KOORAWATHA).—This has been forwarded to you.

G.A. (ABERMAIN).—Write again giving me further particulars of the rest of your manual in your receiver, and I shall reply at length.

J.G.H. (TUGGERAH).—Particulars you give are too meagre to judge from.

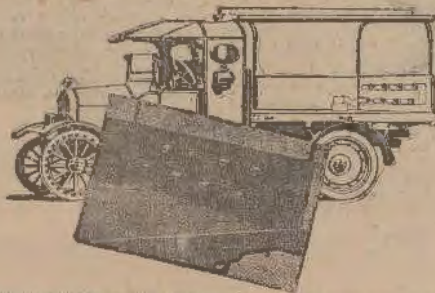
T.B. (LITHGOW).—One thousand. A.R. (BOOVAL).—Probably your receiver requires re-neutralising, and look to your B battery connections for errors.

M.J. (BARRWOOD).—Reduce the B battery voltage and the radio frequency valves to round about 60 volts.

N.H. (TARALGA).—The 0005 condenser will suit quite well in the Harkness Two-Valve Reflex Set.

R.C.L.R. (BENEREMBAH).—Your wiring is perfectly correct and there is no reason in the world why you should not get reception. Test everything for continuity and persevere a little further. Listen in after the first audio stage only for a couple of nights, then use the other stages. You are to be congratulated on your striving.

W.H.S. (ASHFIELD).—Endeavour to neutralise while receiving 5CL, but removing your amperies.



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