

WIRELESS WEEKLY

Vol. 3. No. 22.

Registered at the G.P.O. Sydney, for transmission by post as a newspaper. Friday, Sept. 24, 1926.



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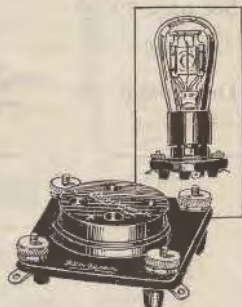
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<p>See page 39 for full Description</p>		<p>Wavelength Range 200-600 Metres</p>

[Block by courtesy of S.A. Wireless Weekly]

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WIRELESS WEEKLY

VOL. 8. No. 22.

SEPTEMBER 24, 1926.

2FC on 442 Metres

NOW that 2FC is finally broadcasting on the low wave length of 442 metres every trader and listener-in is out to see that radio in this State makes up the headway lost during the past year. Official figures show that there are 4.6 listeners-in to every hundred people in Victoria whereas there are only 1.8 in N.S.W., despite the progress made here before broadcasting began in Victoria.

Among the reasons advanced for this are: that the novelty of radio has not yet worn off in Victoria, that there is a great deal more home life in that State than there is in N.S.W., and that 3LO has a low wave length. The first two reasons are open to debate, but there is no doubt about the third.

Modern development has shown that the low wave station is the most efficient. Under the new conditions sets will employ simpler controls; there will be no need to change coils; they will look better and will possibly cost less.

This will be an era of selectivity, of super-heterodynes and neutrodynes, since the loading coils required on these sets for the high wave lengths are now unnecessary. Static will also receive a blow from

loop aerials, which will become more popular.

Every radio trader is prepared for a chorus of complaints during the next few weeks from listeners who are unable to separate the broadcasting stations from one another. The question of broad tuning will become a bone of contention until listeners-in realise that it is the old-fashioned receiver that is broadly tuned and not the transmitter.

Traders are divided on the question of the advantages of the new wave length. The chief objection raised has been that there will be an immediate influx of cheap American ready-made sets. This, they point out, will cripple our own radio industry, which has just gained its feet, mainly because the wide range of wave lengths in the past has required a specially-built receiver for Australian conditions. However, this remains to be seen. There is a formidable tariff on American radio goods.

Daylight reception of 2FC may not be as good over long distances on 442 metres, but the country listeners-in will be easily compensated by the night programmes, which will be received at a much greater volume. Unfortunately, the change will make no difference to fading.

Our cover picture this week is "Uncle Jack" Prentice, of 2BL. His happy, forceful personality has won the favour of listeners old and young.

Between You and Me and the Microphone

FARMER'S announce that 2FC will change over from 1100 to 442 metres immediately the necessary alterations can be made in the transmitting plant. The new wavelength was recently allotted by the P.M.G.'s department.

FIGURES COMPILED by the P.M.G. Department show that there are 134,736 radio receivers licensed in Australia. Victoria has 4.6 sets for every 100 people, while N.S.W. has a percentage of 1.8.

AN UP-TO-DATE broadcasting station, with call letters Ayre, has been placed in service recently for the Empresa Venezolana de Radio-telefonía in Caracas, Venezuela.

EXPERIMENTS with the Australian beam wireless system will begin next month. Work on the stations at Ballan and Rockbank, Vic., is almost finished.

THE Afticholaget Radiotjänst, the Swedish broadcasting company, reports a net profit of £11,351 for 1925 after meeting the deficit of £850 for 1924. This company operates stations at Stockholm, Goteborg, Malmo, Sundscall and Boden.



to Andrew White, famous American announcer.

THE PERFECT radio artist is sublimely unaware of his surroundings when before the microphone, according

THE activities of Broadcasting Station 2FC, Sydney, in connection with horse racing, was the subject of inquiry this week by Mr. Arthur V. Kewney, Secretary of the Victorian Racing Club, who has been on a visit to Sydney. Mr. Kewney spent some hours at Station 2FC with the "Special Tuff Commissioner." He is preparing a report for the committee of the V.R.C., in which he will emphasize that the broadcasting of race descriptions is conducive to clean sport.

Conducted by

R. E. CORDER

A NEW type of oscillating quartz crystals is developed from Germany, one which actually glows when oscillating. It is necessary, however, that it be placed in an evacuated chamber similar to the bulb of a vacuum tube.

RADIO experiments held over a period of two weeks in Naples, Italy, revealed unfavourable reception conditions, due to continuous interference. Perfect reception was never obtained during the course of the tests through the lack of adequate wave length regulation.

TAKING one's radio set to hospital is a frequent experience of the listener-in. We need more radio doctors.



MY OLD CRYSTAL SET.

I love it, I love it, and no one shall dare
To chide me for loving that ancient set there.
It's old and it's crude, but it's excellent yet—
That soap-box plus bell wire, that old crystal set.
When others at home want an early night's rest,
I stop the loud-speaker and hush up with zest
My old time contraption, my first wireless pet,
That ancient receiver, my old crystal set.
I put on the 'phones, and I switch out the light,
And smoke as I listen by freude on bright,
Neutrodyne, superonics, I quickly forget,
As I list with delight on my old crystal set.

B CLASS station 2 GB operated by the Theosophical Society, began transmitting on 3000 watts on September 15.



WITH a gas stove as an aerial and a waterpipe as an earth, Mr. Alfred Potter, manager of the Newtown District Ambulance, tunes in every broadcast station in Australia on his three-valve set. Local stations come in with almost sufficient volume to knock us over, he says. This freak reception is due to the capacity effect produced by the gas stove and a galvanised iron roof.

ALMOST a hundred people gathered at the home of Mr. J. Edwards, Charlton Park, Carinda, and joined in the service broadcast by 3LO from Scots Church, Melbourne, on Sunday, September 12. Clergymen visiting Carinda in the past have had difficulty in getting congregations together.

INVERELL Municipal Council is pushing on with its project of installing a public radio receiving set at the Town Hall. A number of radio firms have submitted prices and specifications, and demonstrations are being arranged to enable the council to make their choice.

A WITNESS before the Standard of Living Inquiry has been impressing the necessity of radio receiving sets being included in determining a reasonable standard of living. He reminded the Commissioner that although the basic wage commission had held that a worker was entitled to such comforts as newspapers, picture shows, and tobacco, broadcasting had not been taken into consideration.

ACCORDING TO figures just made public by the Postmaster General in England, the number of receiving licenses issued this year was 2,012,000. This represents an income of over £1,000,000 which is shared by the B.B.C. and the post office. However, the B.B.C., by a governing clause in their license, are limited to an income of 2500,000, so it now becomes apparent that the post office is receiving more for the trouble of handing out receiving licenses than the B.B.C. is for providing a complete service.

Russia Educates its Masses by Radio

In this article, specially written for "Wireless Weekly," the editor of "Radio Ljubitec," (Radio Amateur) Moscow, tells how Russia is seriously tackling the problem of educating its people by broadcasting

By A. F. Shevcoy, R.E.

IMEDIATELY you set eyes upon this article there jumped into your mind the one thought—propaganda. I am quite frank. This is propaganda, but not of the type you suspect. It is propaganda for radio.

For, despite the misunderstanding which we Russians meet when dealing with other countries, there are enthusiastic radio fans here, and I am one. As editor of the "Radio Amateur," I am delighted with the opportunity of acquainting Australians with the development of wireless here and of commenting on the part radio will play in the task of promulgating ideas throughout the whole world.

I know that the latter is the most interesting, because, naturally, what we broadcast will be heard in all countries, and so again that fearful thought creeps into your mind—propaganda. But there is no need for this fear. We are too busy with ourselves for, like you in Australia, our isolation is the stimulus which makes us think seriously of methods of quicker transportation and a better means of unifying international ideas.

The conditions in our country are to a certain extent similar to conditions in Australia. The means of putting schemes into effect between our various centres are not sufficiently developed and it is naturally much worse between unimportant villages. We have an immense territory sparsely populated and unopened up with lines of

communication. We also have an exceedingly burdensome heritage—a populace for the most part illiterate. Our vast spaces and lack of communication greatly hinders the rapid dissemination of ideas and with it an increase in culture.

There lies before us the tremendous task of conquering time and space. It is imperative that we raise the standard of culture among our people because we recognise that the lack of knowledge hinders production and an increase in the material resources of our country. The minds

of the people had stagnated, but the revolution with its strong forward movement has commenced to awaken them from their accustomed stupor. However, we need to electrify them into quicker motion in order to conquer a thousand years of conservatism.

In this respect we place great confidence in the efforts of radio amateurs and broadcasting. Broadcasting will provide an opportunity of improving the method of sending information across our vast spaces. This scheme was first undertaken at the

beginning of the revolution in 1918 by V. I. Lenin and in 1920 at the outset of civil war when the great and terrible famine prevailed, we had in use a powerful experimental radio-phone station which could be heard at a distance of 4,500 kilometres.

Radio amateurs, who are themselves purveyors of knowledge and upon whose favours we largely depend, will assist in using broadcasting to its fullest degree. Through radio amateur organisations a great number of people have become interested in the technical side of radio, a matter of extreme importance because the enormous task of implanting technical knowledge still lies before us.

At present we have more than a dozen broadcasting stations in operation, and at the end of the year we expect to have at least twenty-five, several of which have a power of from 4 to 10 kilowatts, and one even of 25.



Laurence Halbert, announcer, passing up the dinkum oil to Joe Reid, A.W.A. operator, before 2FC's aeroplane transmission recently. And the oil worked, for some of the quips from the clouds were laughable. At 10,000 feet, Mr. Halbert sang "Wondering, with a great deal of feeling in the last line, "Wondering if I shall see you again."

Then at 7,000 feet—"Captain Jones, our pilot, has sent a message through from the back—"Would you like a nose dive?" but we told him the only nose dive we had experienced was one into a mug of beer." At 8,000 feet—"We have just fallen into an air pocket, but did not suffer anything. Luckily these pockets are like mine—empty!" Passing over Sydney Harbour listeners were regaled with a description of its beauties.

At the beginning of the year there were upwards of 225,000 radio sets registered. The number of sets in use was increasing at the rate of 25,000 per month. Thousands of sets, equipped with loud speakers, are being used in village reading rooms and in workers' clubs in the cities and each of these is patronized by hundreds daily, particularly when the noonday and evening radio newspapers are broadcast from Moscow and other cities. Several million persons listen in on the various programmes every day.

The low current trust, which has virtually a monopoly in the manufacture of radio apparatus, is having difficulty in keeping up with the demand. It plans to provide 1,200,000 receiving sets during the next few years. This year's programme calls for an output of 27,000 sets, as against 6500 produced last year, and 48,000 crystal sets, as against 30,000 last year.

The elaborate programmes caught by the microphone in Moscow every day, including symphonic and chamber music, opera and drama, lectures and educational and newspaper material, are broadcast over a radius of 600 miles by a system of relays in which stations in Leningrad, Kharkov and various provincial cities participate. This system will be greatly enlarged this year, so that natives on the Arctic coast and on the shores of the Black and Caspian Seas will be able to get the Moscow programmes simultaneously with the simplest sets.

Radio enthusiasts are showing increasing interest in foreign programmes, which they get without dif-

ficulty in many places. Not long ago the city of Tomsk, Siberia, heard the full programme of the powerful Daventry station, England, over 3500 miles away.

I wish to draw attention to the special tendencies that broadcasting creates in our country in comparison with other countries. The work of improving broadcasting was first undertaken by Trade Unions in 1924, and results since obtained have affected our whole existence. Up to the present they have been most active in perfecting amateur societies, and their success in serving workers' clubs and villages by radio has definitely been established.

The Trade Unions also have their own radio-phone stations which they use for official purposes as well as for mental enlightenment in the form of lectures and concerts. At present there are more than one hundred thousand radio amateurs.

These are the most important of our tasks in using the development of radio in its present form. For us it assuredly has special local significance.

Simultaneously with the above we are seeking out new methods for conquering space. This work also has international significance because it concerns the use of short wavelengths. The best known experiments in this field have been carried out at the State Radio Laboratory in Nijni Novgorod by Professors M. A. Bench-Bruevich and V. V. Tatarinov. Extended experiments have been carried out in transmitting on wavelengths of 83, 23 and 40 metres on an output up to 25 kilowatts, using one

powerful valve from the Nichegoroda Radio Laboratory. These transmissions using the call-signs "RDW" and "RRP" have been heard throughout the world, including Australia, (Kandapo," in Windham Harbour), Gisborne, New Zealand; Hobart, Tasmania (N. V. Gillham, etc).

These preliminary results inspire confidence, proving as they do that space has been conquered—not only within the boundaries of our country, but throughout the world. The above is only a general outline of our activities in relation to radio.

As far as the prospects of an international exchange of ideas are concerned this may be immediately brought about with the aid of literature, whilst for the future international broadcasting may be depended upon. To me it seems that such exchange of thought will be carried out in the very near future by a combination of radio and the press.

Naturally broadcasting in its present state, the transmitting of the human voice by radio, will not ensure an exchange of thought, and one must not expect too much from this method.

In addition to world radio journals read in front of the microphone and the theatre by radio (bringing about television), there will also be printed radio journals and newspapers (transmitted by radio) adopting one of the many methods of sending designs. In this way a radio paper may appear on the same day and at the same hour before every radio amateur in the world. Similarly whole books may be broadcast.

If these newspapers and books are published in the same language, easily understood by everyone, then the barriers between people will be eliminated and creative thought, with every possibility of rapid diffusion to every place will enrich the whole world at the same time, leading mankind to wonderful new successes which cannot be envisaged by any stretch of imagination.



2BE Jazz Band heard every Thursday night.

PHILCO—"Have you got one yet?"—BATTERIES.

Jazz

may have popularised radio,
says the writer, but then,



Radio

is responsible for much
of the popularity of jazz



IT was a fortunate coincidence that radio achieved popularity shortly after jazz. In less than ten years jazz has spread from its birthplace on the Pacific Coast of America to Europe and the Far East, and there is little doubt that its enormous popularity, enjoyed by no other type of music, would have been impossible in so short a time without the aid of wireless.

But on the other hand would radio have achieved its present popularity without the aid of jazz? Remember that the average listener-in is tired. The housewife, who switches on the loud speaker at tea time, and the clerk who seeks relaxation after supper, both have done a hard day's work under the trying conditions of modern life.

Neither is in a receptive mood for classical music. They wish to be amused rather than "educated"—to forget, if only for an hour, the worries of to-morrow. What is known as classical music has no greater admirer than myself, but to the majority of folk it is not relaxation. Personally, I am exhausted for a week after hearing such a great work as "Parsifal."

The Superior Highbrow.

For some reason or other best known to himself, theighbrow seems to take a pleasure in telling the average man that his musical taste is terrible. The truth of the

By Henry Santrey

whose symphonic orchestra was recently
broadcast from the Trioli

matter is that nobody—not even a music critic—has a monopoly of the capacity to appreciate music. The power to love music is everyone's birthright, for every normal human being has a sense of music. And broadcasting is helping us to learn that to be cultured does not mean that we must scorn those life-giving things which, in our secret hearts, we all love.

What is a Classic.

What is "classical" music? Even the critics cannot agree in their answer to this question. Some say that Wagner is the greatest of the classics; others say that his work is the very negation of classicism. The popular idea is that, to be ranked as a classic, a piece of music must have established its permanent value, it must be something to which we can listen again and again without getting tired. It matters not a jot who the composer is. Tunes, like good clothes, are those that wear well. And I do not hesitate to declare my belief that it will be found that, after the test of time, some of the syncopated music of to-day will merit the designation "classical."

It is, of course, notorious that many classical tunes have been paraphrased

in present-day music. Sacrilege, some people call it. But when Rachmaninoff heard his famous "Prelude" so treated, he remarked: "I prefer it that way." And thus it has come about that much of the popular music of to-day is based upon some of the loveliest themes of the great masters.

The famous "Yes, We Have No Bananas," is made up of sections from the Hallelujah Chorus of Handel's "Messiah," "The Bohemian Girl," and "My Bonny Lies Over the Ocean"! If you are sceptical, try it on your piano, a phrase at a time, and see if I am not right.

Beethoven, Chopin, Puccini and many more have been thus utilized. "I'm Always Chasing Rainbows" is but a transcription of Chopin's "Fantaise Impromptu"! "Crooning" is a variation of Liszt's "Liebestraume," and "My Baby's Arms" copies the "Cavatina" of Raff. These are a few facts of which, perhaps, the Highbrow is ignorant.

In my view, good music is being adapted to our modern environment, just as Shakespeare is read and acted not in the archaic language of his day, but in our modern speech. Let us, then, render the music of earlier centuries in our modern style.

Radiating Cheerfulness.

Symphonic syncopation is not "jazz," that nerve-torturing riot of

(Continued on Page 45.)



The Postmaster-General (Mr. Gibson), the only person having power to alter the broadcasting regulations.

THE broadcasting regulations are apparently receiving the attention of the Government authorities, with a view to alteration. The reduction of Farmer's wave length is probably the first move in the proposed re-allocation of wave lengths according to the schedule prepared by Mr. J. Malone, Director of Wireless and Telegraphs, and placed before Mr. H. P. Brown, head of the P.M.G.'s department, some time ago.

The existing regulations give the Postmaster General the power to alter them if he considers any amendment justified at the end of two years from the date of their commencement; that period was at the beginning of August. The regulation, says the P.M.G., may "review" the laws in the light of his experience of the working of the laws during the two years, and the review would also be in the light of the conditions now existing.

The proviso included in the regulation to ensure that they will be reviewed from time to time is a wise one, and the stipulation of a definite period during which no alteration would be carried out is a fair one. It would obviously be unfair to the companies that risked their capital in an uncertain enterprise—a new untried business—to be placed in the position that the revenue may be reduced or some irksome new laws might be introduced at the whim of political exigencies.

Are Radio Regulations Under Revision?

The companies naturally would be entitled to know that the prospects of revenue and the methods of conducting the business would be undisturbed, at least for a reasonable time: otherwise the risk would not justify the laying out of capital and plans. And as the licence given by the P.M.G. to the broadcasting companies covered a period of five years, the Government would have to produce sound reasons for making any vital alteration that would affect the business. It was doubtless the confidence which the companies had in the Government that led to the commencement of broadcasting services on a plan that would not be disturbed at least in the five years of the licence period.

But the review of the conditions now existing is apparently in progress. The usual critics of such enterprises have been active of late in conferences, in press propaganda and in political circles, telling the P.M.G. how the broadcasting business should be run. Some of these critics content themselves with condemning the present system without suggesting any alternative. Others more reasonably minded, even if not much better informed, have put forward alternative schemes, and it is worth considering some of the more complete proposals, and at the same time considering if they are practicable and likely to make for better broadcasting.

Several critics have recommended radical changes. Free licences—or no licence fees—is a favourite proposal. It undoubtedly would be a popular proposal with listeners, just as free electric light and water services would be. There are many services which cost money to render and thus involve a payment by the user, that we would like to see free from payment. But as the people

who render the services must have revenue to balance the expense involved in rendering satisfactory services, the users must pay for them, and indeed it is realised and accepted that Utopian ideas cannot be applied practically to these matters and we all pay our taxes, rates or subscriptions, more or less cheerfully.

Similarly in broadcasting there must be a regular source of revenue for the companies, and this revenue is very equitably obtained from the users of the service in the form of licence fees. Any abolition of these fees means the payment of the companies in some other manner. The critics suggest various ways of obtaining the revenue. Some would like to see the Government increase the general taxation so as to obtain a certain sum to pay the companies. Others would like to see a proportion of the customs revenue obtained from duty paid on imported wireless receiving equipment, set aside to pay the broadcasters. That would be another form of indirect taxation and is equally impracticable and inequitable.

In both cases the proposals are not fair, as people who are not making use of the broadcasting services would have to bear an equal share in the upkeep of the services with those people who are using them. The customs revenue is included in the consolidated revenue of the Common-

(Continued on Page 49.)





Free Trip to Java and Radio Career Attracts Readers

Details of "Wireless Weekly's" Subscription Competition are given below. A large number of readers have already entered

A LREADY readers from every part of N.S.W. have entered our subscription competition.

Wideawake listeners have realised the wisdom of beginning early. There are three months in which to win.

In that time the listener-in securing the greatest number of prepaid subscriptions to "Wireless Weekly" receives a first-class return passage to Java and Singapore on one of Messrs. Burns Philp's mail steamers. Here is almost two months' holiday touring the fascinating East Indies for the reader who knows how to make use of his spare time moments.

The vessel leaves Sydney, calling at Brisbane, Townsville, Thursday Island, Darwin, Sourabaya, Samarang, Batavia, and Singapore. Right through the spice islands, into the realm of romance, the ship carries the winner. At Java are to be seen the ruins of ancient civilizations, while around one are the millions of a later race, yet even older than our own. The voyage costs us £100, and the winner receives £50 for incidental expenses.

In addition to a trip to Java as first prize, we offer a special prize for the youth between 16 and 18 securing the greatest number of subscriptions. By special arrangement with Amalgamated Wireless, we will present a full course through the Marconi School of Wireless to the winner in this section.

Here is a career which in the ordinary course of events would cost £50 to begin, free to any youth willing to devote his spare time and energy in an attempt to grasp this opportunity.

An intensive Marconi course lasts approximately 12 months, and at the

end of that time the student sits for examination, conducted by the Postmaster-General's Department, and on passing receives a first class wireless operator's certificate. This qualifies him for the position of ship's operator, and paves the way to the position of a radio engineer.

It is immaterial whether the student be in the city or country, since the course will be dealt with by post until the student is well advanced, and then several weeks' personal tuition will be given in the school in Sydney.

No wonder young men of vision are entering our competition.

Subscription orders may be secured on "Wireless Weekly" forms. Books of 25 will be supplied to anyone filling in the following contract and sending it to Wireless Newspapers Limited.

To the Director,
Wireless Newspapers Limited,
51 Castlereagh Street,
Sydney.

Sir,—
In consideration of your allowing me to enter the "Wireless Weekly" Subscription Competition of Wireless Newspapers Limited, and supply me with a book of subscription forms, I undertake to remit to you within 24 hours after receiving same any signed subscription orders received and the amount of money received by me as represented on the order. I also undertake to account to you for all subscription order forms which you supply to me.

Signed.....
Address.....
.....



A native bazaar at Samarang, Java, one of the ports at which the mail boat calls.

Is a Radio Set a Necessity?

Giving evidence before the standard of living inquiry recently as to the necessity of radio being included in the essentials of home comfort

Mr. C. C. Faulkner explained the importance of radio as a service



Mr. C. C. Faulkner, Director of the Radio Broadcast Bureau, who gave the following evidence:

THE necessity of including radio when considering the needs of a family in determining a reasonable standard of living, was urged upon the Industrial Commission last week by Mr. C. C. Faulkner, director of Radio Broadcast Bureau.

The following examination of Mr. Faulkner by the Chairman of the Commission (Mr. A. B. Piddington) was interesting:—

Commissioner: What are you?—Mr. Faulkner: A journalist; at present I am director of the Radio Broadcast Bureau.

Commissioner: You wrote to the Commission saying that you desired to give evidence on a certain matter connected with the question of the standard of living?—Yes.

Commissioner: Will you tell us what your contention or submission is?—Mr. Faulkner: I wish to place before the Commission certain facts upon which I expect the Commission to come to the conclusion that in determining what is a reasonable standard of comfort for a family the possession of a radio receiving set is a necessity.

Commissioner: I do not think it is exactly necessary to give us information or arguments which should influence our judgment on that matter, but if you have any figures to put before us as to the average cost, it may be useful?

Mr. Faulkner: I should like to place before the Commission certain facts as to what is available to the possessors of radio sets, with a view to the Commission drawing whatever conclusion they choose, and I suggest that that conclusion will be along the lines I have indicated, namely, that radio is practically a necessity in every home.

Commissioner: Speaking for myself, I do not think that that is

necessary. In the Basic Wage Commission finding you will find an item for newspapers. Nobody needs to be told that the working-man reads the newspaper, or what he can find in it. We ought to have a pretty fair idea of what can be enjoyed by the possessor of a radio set?

Mr. Faulkner: So far as I know, in fixing the standard of living in the past the fact of broadcasting has not been taken into consideration.

Commissioner: Quite true.

Mr. Faulkner: I desire to place one or two facts before the Commission which, in my opinion, will make the Commission conclude that, just as you allow so much weekly for the purchase of newspapers and amusement, you will consider a radio set equally essential. The first thing that happens in the morning from the radio listener's point of view is that at 7 a.m. the exact time is broadcast from the Sydney station. The consequence is that many homes make a point of starting the day with the precise time. That is a valuable consideration. At the Nymboida School, the school bell rings at exactly 9 o'clock each morning, the time being received by the school radio set.

Commissioner: Have you any definite information as to the cost of the service?

Mr. Faulkner: The cheapest form is, of course, the crystal set, and about 25/- would be the limit of cheapness to instal it. The upkeep is practically nothing except the occasional renewal of a crystal at 1/6 or a catswhisker at 3d. The license fee costs 15/- a half-year or 27/6 a year. If you reckon up the amount of entertainment given by the broadcasting stations available you can calculate that a listener gets about 1500 entertainments for £1. With the simplest form of crystal set only one

person can listen in at a time unless you add extra headphones for further listeners. I suggest that to get a more reasonable standard of comfort a valve set should be installed. Prices vary very considerably, but keeping on the low side I would say that the cost of a single valve set is about £5, a two-valve set £10, three valves on which interstate stations can be received and from which a loud speaker can be worked for the whole house to hear, about £20; four valves £30; and five valves about £40. They can all be purchased on time-payment. For a two-valve set, which costs £13, you can deposit £1/9/- and pay 5/- per week until the £13 is worked out. I think it runs out in about a year. For a five-valve set which costs £37/10/-, there is a deposit of £1/3/-, and the weekly instalment is 14/6. Cases have come under my notice of people who, by the possession of a radio set, have had their cost of living affected. In the morning a woman listens in to the broadcasting station giving the market quotations for that day. She learns that eggs have dropped 2d. or risen 1d. A man comes round to her door shortly afterwards selling eggs, and she checks him up on the price because she has learnt it that morning. Similarly, I know of instances of agriculturalists in the country who, listening to the broadcasting reports, have learnt of a rise or fall in the sheep market. This fact has a direct bearing on the cost of living. A farmer near Young one morning tuned in his radio set to Melbourne and received market quotations. Then

(Continued on Page 36.)



Studio News & Notes

FROM THE PROJECTION ROOM.

Captain Frank Hurley will give listeners a graphic description of the taking of his new film, "Hounds of the Deep," on Friday, September 24. Captain Hurley will punctuate his series with incidental music, and 2FC dual broadcasting will be carried out, whereby a lecture will be given from one spot and incidental music will be given from another spot, and superimposed one to another, so that the music will form an effective background to the description. This novelty, which was originated from 2FC, opens up further opportunities for broadcasting work in the future.

WEEK-END PROGRAMME.

On Saturday, the usual sporting information will be broadcast. At 8 p.m. the first act of "Katinks," by permission of Messrs. J. C. Williamson Ltd., will be broadcast from the Rockdale Town Hall. The opera is being produced by the Langlea Operatic Society. From the Studio, a talk on "Rowing," by Captain Fred Aarons; comic numbers, by Charles Kingsley, comedian, orchestral music from the Crystal Palace; baritone solos by Mr. Laurence Halbert; tenor solos by Mr. James Donnelly, together with a musical play specially written for 2FC by Mr. Donnelly.



Ella Goodman, a new 2FC artist.

The morning service will be taken from St. Mark's, Darling Point, the evening service from Petersham Congregational Church. Mr. Conley will deal with "Boy's Week" in the

afternoon. A musical programme from the Lyceum, and in the evening an organ recital by Mr. Christian Hellemann. From the studio, Mr. Cyril Monk will give his final talk on his "Travels Abroad." After the church service, the Leichhardt Band will be heard.

CLEVER INNOVATIONS.

Two new effects have been introduced into broadcasting by Station 2FC, Sydney, within the last few days.



Miss Betty Stuart, 2GB's pianiste.

Firstly, 2FC transmitted from two places at once. While an announcer described Rudolf Valentino's new picture, "Cobra," as it was screened at the Film House, the Operatic Orchestra played at the Haymarket Theatre half a mile away. The music was "superimposed" on the words of the announcer, and the two went out on the air by radio together.

The significance of this is that henceforth the broadcasting stations will be able to join up two separate programmes from any place. A duet can be sung by artists miles apart—each hearing the words of the other by loud speaker; two musicians can play separate parts in different

rooms, yet listeners will receive the two parts perfectly blended.

Secondly, Station 2FC has adopted the principle of fading in and out when changing their programme from one concert hall to another. Hitherto listeners have been accustomed to hear the announcer say "that *Joseph Blight, saw* concludes our *solist, a regular* programme from *devil from 7ZL.* the Town Hall, we are now crossing over to the King's Hall." Then followed a moment of silence, and suddenly the new programme was heard. Now the Station has adopted a method of making the first programme die away in the distance, and the second is heard, at first faintly, gradually swelling in volume until it is heard on full strength.



Innovations of this kind may sound trivial, but they show the high standard to which broadcasting has been raised in Australia.

MOTOR TALKS BY RADIO.

The Traffic Department is broadcasting through Station 2BL a series of talks on traffic problems. The question of different coloured lights on vehicles is one important subject to be dealt with. The first took place last Thursday.

**BURGESS—"They're on the Leviathan"—
BATTERIES.**

3LO is out to Please Listeners

ONCE more the mothers of the State are agitating themselves about the sweet warblings of Sarah and Willie, for 3LO are beginning another Radio Song Competition for the kiddies.

Everyone will remember how successful the last one proved. This is likely to be even more popular, both with the public and the competitors themselves.

No performer is so utterly lacking in self-consciousness as a child. Generally speaking, the contestants in a competition like this are not at all nervous. That comes only with later years, and the confident way they face the microphone gives joy to the officials in charge.

There can be no doubt that these tests are very useful. The radio is so comparatively recent that there is everything to be learnt, even in such a thing as voice production before a radio. Not every good voice broadcasts well, and some, not so good, come beautifully through the air. A case in point is that of Jack O'Hagan, the song writer, who warbles his own ditties through 3LO. Mr. O'Hagan would be the last to claim that he had a very fine voice, yet so artistically does he sing, and so exactly does he adjust himself to the microphone, that it is doubtful if any other singing voice comes so clearly over the air. No one can say wherein he differs from other singers, in relation to his position before the microphone, the loudness of his voice, and its timbre. Further study of radio acoustics may yield the secret.

Getting these children young, and studying them, may develop some natural radio voices as excellent as Mr. O'Hagan's. 3LO is always on the look-out for talent, and these kiddies are all listened to with the utmost attention, in case some one or more may show that little degree of unusualness that may be developed into something good.

Already, I am told, over 100 entries have been received for the three classes.

The adjudicator, Mr. Alfred Lane, is well known in Victoria. He looks forward to the tests, for he, too, is

always on the lookout for talent.

Gold and silver medals will be given as first and second prizes in each of the three sections. The first is for children over 11 and under 14, who may sing any of the following songs:—"Lilac Tree," "Peter Rabbit," "Rain Fairy," or any from the compilation known as "Real Australian Children's Songs."

"Hello," our 3LO correspondent, has some good news from the southern studio. He discusses the children's radio voice competition and the "Fading" hunters.

The next section is for children over 8 and under 11, who may choose any song from "Recreation Songs for Children." The third section is for those under 8, who may choose any song, from "Primary Melodies," or "Songs the Children Love to Sing."

Can't you imagine the pandemonium that is going on in more than a hundred Australian homes just now. "What a cater-wauling do you keep here?" asks Maria of Sir Toby Belch and Sir Andrew Aguecheek in "Twelfth Night," and the question might be repeated. Only assiduous practice can win gold and silver medals, and if father qualifies for a strait-jacket in the process, well, that's his affair.

WHAT CAUSES FADING.

The hunters from 3LO have gone out looking for the cause of fading and distortion in certain country districts of Victoria. They set up their camp wherever report has spoken badly of reception and from hour to hour tune-in to the various stations and "log" the results. They have found that complaints were not without cause, for their first telegram from Bairnsdale showed that conditions there were "indiscribably bad." Daylight signals were good, but from

sunset to 10.20 p.m. not more than a few consecutive words were intelligible, and music came through greatly distorted. Then followed an interval of 25 minutes, when reception was perfectly clear. The last 15 minutes were again distorted, with sharp, quick "fades."

So much for 3LO, Melbourne. Brisbane showed very slight fading and no distortion, but 2BL and 5CL showed both. Farmer's were slightly indicative of fading, but otherwise clear. 3AR were too weak for useful observations between Bairnsdale and Yallourn.

The expedition began at Yallourn, where they found daytime service from 3LO very good indeed. Then intervals of very good alternated with very bad. After 10.30, distortion was most marked on 3LO, 2BL, and Adelaide. Farmer's were clear and steady throughout. Brisbane faded slightly, but was free from distortion.

The latest report came from Orbst. Conditions there were a decided improvement on Bairnsdale, though the places are so near together. Here fading was more regular, but distortion was never sufficient to render the programme unintelligible. Sale conditions resembled those of Bairnsdale, though not so pronounced. Of interstate stations, Brisbane and Farmer's have so far proved most consistent.

What happens to the atmosphere during those hours when the programme "goes west"? That is the nut for the experts to crack. The problem will be solved, of course. Man does anything he sets his mind to. One thing is certain, that the faults are not due to the stations themselves, but to something in the "lie of the country," or the condition of the atmosphere. All that can be done is being done, investigation being the first step.

BROADCAST GHOST STORIES.

I have been amused at some of the letters sent in to 3LO about the ghost stories being broadcast every fortnight or so from that station. Most people, whether they believe in

ghosts or not, get a decided thrill from the exciting denouement of a skilfully told story. A ghost story, if it is successful, should make the most sceptical feel just a little reluctance to leave the bright room and climb the dark stairs to bed. If it doesn't thrill, it is a dire failure.

Yet correspondents have written to 3LO, complaining that these stories are very bad for nervous people. Why on earth the nervous people, knowing that for fifteen minutes a ghost story is to be on the air, don't tune out and put the cat out in readiness for bed, or mix the supper toddy, is more than I can say. It would seem that it is as impossible for these nervous wrecks to go without their ghost yarn as for a dipsomaniac to do without his whisky. They sit with twittering nerves, ready to scream at a shadow, possibly with the lights out, in obedience to the programme order, and then write to the station about it being so bad for them. People are genuinely funny, there's no doubt of it.

One last paragraph, and I am done. 3LO's new studio is practically finished. Indeed, it is now in partial use, and in a week or two Show visitors will be down in town, possibly wondering where the studio is from which comes so much delight. They needn't wonder; they may come up and see it. 3LO will be glad to welcome any country visitor who comes up to the studio. They will be shown round, and have the modern magic explained to them. They may sit down comfortably and rest their pavement-tired feet, while they listen to what of the programme happens to be going on. The studio is in Cambridge Buildings, Collins Street, next to the old "Argus" office.

In answering readers' queries, we regret that our correspondence has reached such a volume that we have had to cease replying to queries by post. Under the new system, the Technical Editor will answer questions through the columns of the journal only. Owing to the increase of business since the reorganisation of "Wireless Weekly," we are unable on any condition to answer queries made by personal callers or by telephone.

Dealer Agents Wanted

To sell up-to-date and efficient Radio Sets under our sound merchandising plan.

If you have the business organisation and sales ability to sell profitable Radio Sets we are in the position of being able to stand right behind you.

Are you ready to advance your business along the lines of a sane, sensible and constructive radio merchandising programme?

If so, tell us who you are, what your business is, the territory you can profitably cover, your financial position and your sales policy. This will be held in strictest confidence. We will then send you full particulars of how we can help you.

Our Dealer-Agency is the assurance policy of your future business.

It gives you:—

- (1) A line of the highest quality radio products to meet a demand all the year round.
- (2) The protection of a Dealer-Agency, giving exclusive representation in your locality. We mean a *Real Dealer-Agency*, NOT a "Scrap of Paper."
- (3) A line built by many years of experience with financial strength and a reputation of fair dealing.
- (4) New stocks supplied promptly, making it unnecessary to carry large stocks.
- (5) A Sales and Finance scheme that permits of easy selling.
- (6) A ready public demand from our proposed National Advertising Campaign.

If you want to take the safe, sure road to lasting success, write to-day for full information about a Mingay's Wireless Dealer Agency in your district.

Mingay's Wireless Mfg. Ltd.

56 ALMA STREET, DARLINGTON, N.S.W.
City Office: Dalton House, 115 Pitt St., Sydney

Telegrams—"Mingaywire," Sydney.

BURGESS RADIO BATTERIES

Win Again



The illustration pictures the take-off of the winning flight and in the insert is the radio equipment carried. (Burgess "A," "B" and "C" Batteries furnished the electrical energy to operate the set.)

WHEN the Goodyear III won the right to represent the United States at Belgium, Burgess Radio Batteries supplied the electrical energy for the operation of the balloon's radio equipment.

Almost every day from somewhere in the world news comes to us of new Burgess adventures.

And that Burgess Batteries have contributed their bit in so many interesting events of sport, commerce and science reflects the esteem in which they are held.

"Ask Any Radio Engineer"

Your own radio dealer down the street sells Burgess Batteries. He probably sells the famous Burgess Flashlights, too.

Only obtainable from High Class Dealers.

Wholesale:

NEW SYSTEM TELEPHONES Pty. Ltd.,
Melbourne — Sydney — Adelaide





Miss Gwen Barham,
3LO.

What's on the Air in Melbourne



Miss Alice Mallon,
3LO.

SHOW ITEMS POPULAR.

One of the most popular items with Melbourne Show visitors was the transmissions which 3LO made thrice daily from the Show Grounds, at 12, 2, and 4 o'clock. These were heard at Messrs. Allan's music stand.

NEW OPERATIC SINGER.

Among the "specially good" items to be broadcast from the 3LO Studio this week, attention must be drawn to a series of dramatic recitals by Elsie Davies, which should arouse considerable interest among the musical circles in and around Melbourne. Born in Victoria, Miss Davies trained at the Melbourne University Conservatorium, gained an Ormond Scholarship, and finally went to Italy to complete her studies of grand opera. This accomplished, she made several successful tours throughout Sweden, Russia, Finland, and England, scoring heavily in "Coloratura" parts. However, home ties proved too strong and she returned to her native land, partly because she wished to place her daughter, a promising young vocalist at the Conservatorium, which is, according to Madame Davies, one of the finest of its kind in the world. Choosing at random from the selections that Madame has decided to include in her broadcasting repertoire, one must mention the inspiring "Inflammatus" from Rossini's "Stabat Mater" (in which a chorus under the able direction of Mr. Sutton Crow will lend support), "Gallia" (Gounod), and the familiar "Hear My Prayer" (Mendelssohn).

RAYMOND ELLIS BACK.

To all those 3LO correspondents who have been enquiring "where Raymond Ellis had got to," and why his name has not appeared on the 3LO programmes for some little time, 3LO announces that, after a successful season in Sydney he has returned to

Melbourne, and is again at his old place in the Studio. Many "request numbers" have poured in from all quarters—chiefly for operatic selections.

TOLD BY A 3LO ARTIST.

Although Miss Gwen Barham, the popular English contralto, only arrived (per "Jervis Bay") on August 19, she has gleaned one or two facts about Melbourne. "I was awfully disappointed to find Melbourne so modern, she said, everyone seemed to be in an awful rush, and where I expected kangaroos and adventures I simply found business. When taking my first 'bus ride, the conductor eyed me thoughtfully, scratched his head, and finally said, "Are you from the Old Country?" I replied in the affirmative, wondering why he should address me. "I'm looking for a conductress," he said (here his eyes narrowed and his brain worked visibly), "one about eight stone—a lightweight." Again he pondered, and finally business conquered, "I prefer

UNDILUTED PRAISE.

It is always a source of gratification to receive letters of praise—we all like our measure of appreciation, and the Directors of the 3LO studio are no different from their fellow creatures. This praise is all the more valued when it comes from someone who has been "globe trotting," and has had a chance to study broadcasting conditions and programmes in more than one country. Quite recently 3LO's post bag contained such a letter. "I would like to tell you," wrote the correspondent, "that you have the finest resident orchestra that I have ever heard, although I have listened-in to the transmissions from most of the broadcasting studios in the principal cities of England, and America."

LONG DISTANCE WIRELESS

Excellent long distance wireless results were achieved by the wireless officer of the T.S.S. "Hobson's Bay" on a recent voyage from Australia to England and return.

The vessel was in communication with Perth radio up to 1,000 miles in daylight and nearly 5,000 miles at night, while the new A.W.A. Thursday Island radio station was worked with ease when the vessel was midway between Perth and Cocos Island.

When the "Hobson's Bay" was in the Great Australian Bight, all Australian stations were received during the day, while at night reception was effected from Honolulu, Japan, Manila, Hongkong, Madras, Colombo, Aden, Java, Singapore, Lorenzo Marques (East Africa), New Zealand and Suva.

The receiving set used was a standard A.W.A. P.I receiver utilising one valve. Both the transmitting and receiving apparatus on the "Hobson's Bay" were manufactured at the Radio Electric Works of Amalgamated Wireless (A/sia.) Ltd.



Major Dettman appearing at 3AR studio.

'em Scotch, they got the fares better," he remarked. Can you wonder that I made a hasty exit?" Miss Barham will broadcast from 3LO.

BURNS PHILP TOURS

JAVA

The Wonderland of the East

Famous Temples

Interesting People



Native Bazaars

Tea Gardens

Regular Monthly Sailings by the Favorite Liners—

“MARELLA” - - - - 7,375 Tons

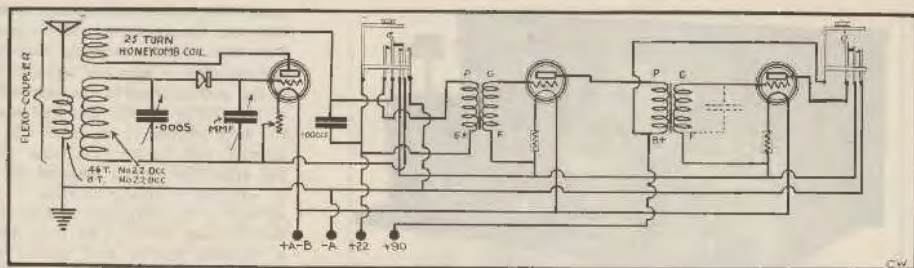
“MALABAR” - - - - 5,000 Tons

Via the picturesque Torres Straits Route

Full particulars from

BURNS PHILP & CO. LTD.

BRIDGE STREET, SYDNEY



Make a Regenerative Interflex for Farmer's New Wavelength

A single control receiver which is selective and yields astounding volume on the loud speaker. The circuit is reproduced above.

NOW that station 2FC has brought its wavelength down to 442 metres, the design of many sets will be altered considerably. Coil changing—the bug-bear of many receivers—will now not be necessary, and those sets so equipped will, we feel sure, gradually disappear.

Multiplicity of controls on a receiver often makes it difficult to receive any station at its best and leaves opportunities for the set owner to tinker with the knobs and dials, much to the annoyance of the rest of the family.

What is Ideal Set?

Were you to ask anyone to tell you what is considered the ideal radio set, you would invariably be told that such a set should only have a single control. No doubt you would also be told that there should be no batteries, etc., but simply an arrangement whereby the power for the valves could be obtained by simply plugging into the electric light socket. This latter possibility is gradually becoming practicable, but we have no hesitation whatever in recommending this receiver as a single control which lives up to its name.

Regenerative Interflex.

Looking through some old radio publications, we came across this Regenerative Interflex, which was originally described by that well

known American, Hago Gernsback. Such outstanding claims were made for it that we built it and found it extremely efficient. Remarkable volume and clarity resulted, and Interstate stations were easily tuned in and maintained on the loud speaker. When properly balanced you will be surprised at the wonderful results obtainable even on the first valve alone. This first valve is not a detector—actually it is an amplifier, the crystal acting as a detector. The crystal must necessarily be stable, hence the specification of the carborundum detector already popularised in these pages.

Crystal Action Explained.

Although the crystal acts as a detector, it also is a resistance, which, if too great, will tend to stop oscillation and thereby unbalance the circuit. Again, of course, if the crystal shows too little resistance, it will be

found somewhat difficult to control oscillation.

It will be readily understood that, as in valves, no two crystals are alike. It therefore follows that some means of reconciling the crystal to the valve is necessary.

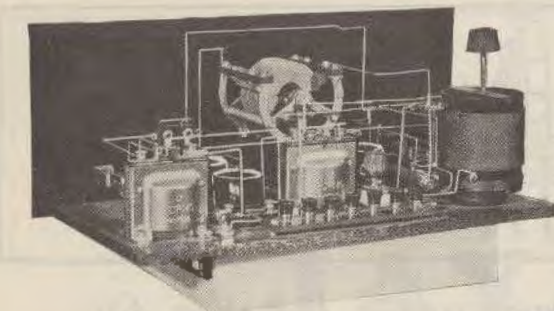
The method adopted is filament adjustment of the valve, and for this purpose a Bradleystat is incorporated in the receiver. Once this Bradleystat is properly adjusted it need seldom be touched again, in fact, only when new batteries are installed, or when a new valve is inserted. As a further means of stabilising the crystal detector a miniature condenser is necessary. For the sake of space and also efficiency, we should certainly advise constructors to use the Mikro Mike specified in the list of parts on page 21. This is a neat little arrangement and is most suitable.

Filament Wiring.

It will be seen that Amperites are used instead of rheostats, thereby reducing the number of controls. When purchasing your amperites specify the type of valve you intend using, as there are different Amperites for different valves. Also you will notice that filament control jacks are employed in such a fashion that when you plug into the double open circuit jack, one valve only lights up, the three valves being used when you



The panel view of the set showing the single control.



Back of panel view of the Regenerative Interflex showing Flexo-Coupler.

plug into the single open circuit jack.

Construction.

Looking at the back of panel view of this receiver one of the most outstanding features is the flexo-coupler. This type of coupler is the only kind suitable for this receiver. As you will perceive from the drawings given here very little difficulty should be experienced in making this flexo-coupler. Study the drawings carefully before you proceed and everything will be plain sailing. Should any difficulty be met with in tapping the spindle hole in the top supporting strip marked B, here is a means of overcoming it.

Instead of threading the whole length of the spindle rod, simply cut a thread for say $1\frac{1}{2}$ inches just sufficient to take the coil with its attendant discs and nuts. The spindle hole in the top supporting strip B may now be drilled with a $\frac{3}{8}$ inch hole and bushed with a bushing so frequently to be found in a rotary switch. These bushings are invariably just the right size to allow the $\frac{3}{16}$ inch rod to pass through nicely, but should the rod slide too freely, a small cut extending about half way up the thread will leave a small opening which may be pressed closely with a pair of pliers and thereby give the grip to the spindle which will prevent the reaction coil from slipping right down to the bottom. Don't balk at making this flexo-coupler; it is really quite a simple little job and the bakelite tube and rod and all other materials are easily obtainable.

Panel Layout.

The panel layout is perhaps the simplest that has so far appeared in this journal, and dispenses with the necessity of making a special drawing. As will be seen in the illustration, the variable condenser is situated right in the centre of the panel. At 2 $\frac{1}{2}$ inches from each end and about $1\frac{1}{2}$ inches from the bottom, will be found the jacks, the double jack being at the flexo-coupler end. Drill the panel to suit your components, and mount them thereon.

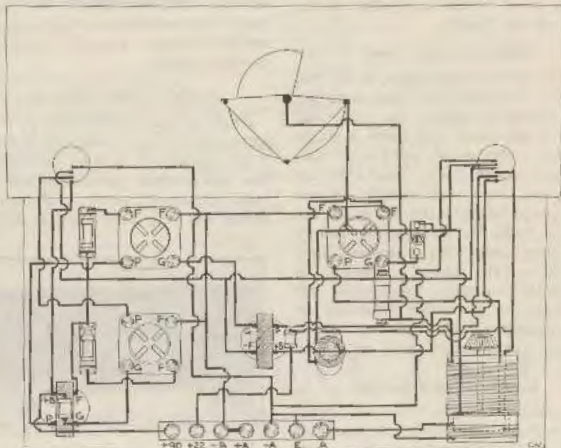
Baseboard Layout.

Carefully study the back of panel wiring diagram and also the back of

panel view before attempting to lay out your baseboard, as this is most particular. Note carefully that the carborundum is mounted straight on to the grid terminal of the first valve socket. The shorter the lead here, the more efficient it becomes. Keep all wires away as far as possible from the other end of the detector, as it is sensitive to strong currents. Be advised at this stage not to drop this carborundum detector, as it is quite a delicate article and should be treated as carefully as a valve. The flexo-coupler may be attached to the baseboard by small brackets, or by a countersunk wood screw from the bottom of the baseboard through the bottom of the coupler. See that the screw is not too long or it may interfere with the action of the reaction coil. Follow out the baseboard layout as far as is possible and you will be ready for the wiring.

Wiring.

The wiring will be found very easy indeed, a certain amount of care being necessary with the jacks. The circuit diagram will show this wiring a little more clearly perhaps than the back of panel. Wire up carefully reconciling the circuit diagram with the back of panel diagram. Where soldering is called for, be most particular with this. A well tinned, good, clean, hot soldering iron with



Wiring diagram showing layout of baseboard.

some soft solder and a tin of fluxite is an invaluable asset to any radio constructor. Don't simply stick your busbar together, but allow the iron to remain on the joint long enough to permit the solder to run freely. A damp rag to wipe the excess flux off after soldering is an excellent thing and certainly prevents any corrosion which may take place, as well as leaving a nice clean job. Be careful not to spread too much flux around your jack contacts—a very small portion applied with a match is ample.

Where the busbar is gripped beneath nuts and terminals, make sure that good contact is made by tightening every nut well with the pliers. Don't be satisfied with the finger tightness only—it will create trouble later on.

When you complete the wiring, check over all your work, carefully rectifying any errors which may have crept in.

The Tickler Leads are Important.

Don't solder these at first, as the set will only function with the tickler leads connected in one way. Don't connect these permanently until you find which is the correct way, then make them permanent by soldering.

Operation.

However, granted that everything is wired correctly, proceed to connect up your A and B batteries, aerial and earth, and plug in your phones on the first valve. You will no doubt find that 22½ volts is ample for the first valve and between 80 and 90 for the second and third valves.

Balancing.

Immediately you plug in your phones, push or screw your tickler down very near the bottom of the unit and tune with the variable condenser. The receiver should oscillate violently—if it doesn't do this, move your tickler up and down until it squeals, and bring it back a little. If you cannot stop the squealing, adjust the Mikro Mike. Use a long, sharpened stick for this purpose or a long wooden handled screw-driver and slowly screw down your moving plate (a screw is provided for the purpose), until the howl disappears. Don't touch your coupler during this process.

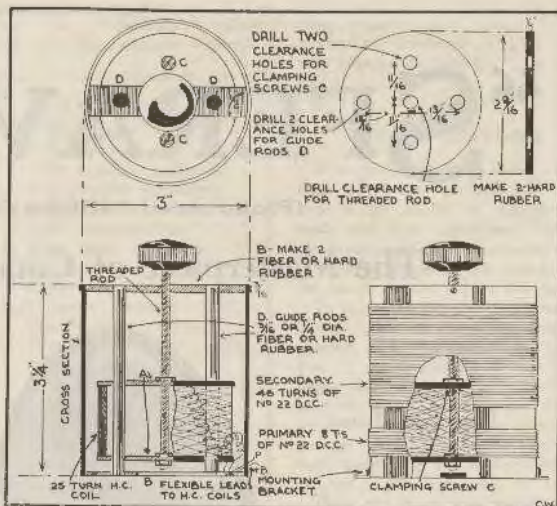
Having stopped the squealing, adjust your Bradleystat. An ordinary wire rheostat is useless here as the

adjustment is so critical, that even an eighth of a turn will make all the difference in the world. Perhaps you will find that a very high hissing takes place showing that your filament is too bright. Slowly reduce your filament until the hissing is eliminated and then readjust your reaction coil and Mikro Mike until maximum results are obtained.

We will admit this operation of balancing requires a certain amount of care, but it is worth it, as when properly balanced, you need never worry with it again unless you install a new valve or renew your B batteries, when the leeway will be picked up on the Bradleystat alone.

Speaking of valves, by the way, reminds us that all valves are not suitable for detectors. Some valves work better in one position than in another. Change your valves about until you find just the best position for each individual valve.

Read over again the two previous paragraphs and understand the balancing of the set. Let us impress upon you again just how critical the Bradleystat adjustment is. All the howls and squeals should be dismissed from the set, and this is done by locating the correct position of the reaction coil, the Mikro Mike and the Bradleystat.



Constructional details of Flexo-Coupler.

Minor Points.

It may be advisable to reverse the leads of the detector. Don't hesitate to do this, as, often much better results may accrue.

Again the 00025 fixed condenser is most important. It may be advisable to change that lead of this condenser which is connected to the B+ 22½ volts to the B—. Try it, anyhow.

Should an audio howl develop when you plug in your speaker, this can quickly be eliminated by inserting a fixed condenser across the secondary of the second transformer, or perhaps from the grid to the B+ of the transformer. It may even be possible that you have used two different makes of transformers the terminals of which don't agree. If a high-pitched audio whistle results, try reversing the leads of one transformer. Either of these methods will cure this whistle.

The person who builds this set will have a receiver to be proud of. Just think of it — one control, easy, so easy in fact, that anyone can turn the dial and bring in the Interstat stations one after another.

The tone quality is excellent,—the crystal detector insures that, and the volume is terrific. Take some pains over it and you will be well repaid.

"SFERAVOX"

(Pronounced "SERRAVOX")

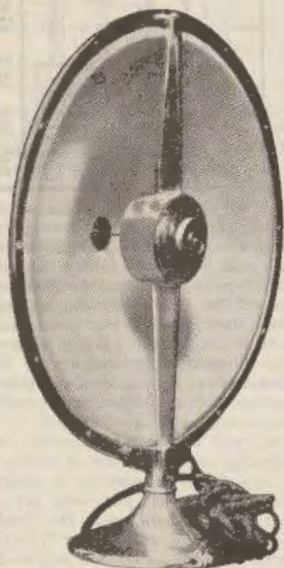
The Masterpiece of Cone Speakers

Purity of Tone.
Powerful.

Toned in Silver.
Distortionless.

Moderately
Priced

£5-5-0



Sferavox Cone

Produced by

Societe Francaise Radio
Electrique, Paris

Insist on

Hearing one before buying
your Speaker

IN ORDER to appreciate the qualities of a SFERAVOX it is necessary to listen to a pure transmission taken up by a receiving set of such quality as not to cause distortion in the set. Transmissions are not by any means uniform in purity and thus a single test will not be conclusive unless the reproduction is absolutely perfect. The "SFERAVOX" does not distort the tone in any way, but reproduces everything that is put into it by the receiving set and thus it may be taken for granted that if the production is racious the fault has to be looked for elsewhere.

Australasian Representatives:

And at Melbourne, Perth, Brisbane
Auckland & Wellington, N.Z.

BROWN & DUREAU, Ltd. Broughton House
Clarence St., SYDNEY

The list of parts enumerated here-with are necessary to construct this most excellent receiver. When purchasing them, be advised to obtain good quality parts, as it often happens that cheap shoddy parts are next to useless, the efficiency of the receiver being greatly impaired.

Care of the Condenser.

Not only does this apply to the Regenerative Interflex, but to all other receivers irrespective of the circuit employed. Be careful of the condenser in particular. It often happens that the moving plates touch the fixed plates at different parts. Overcome this by straightening out the wrongly spaced plates to ensure free running.

Look carefully to your valve sockets and see that the spring contacts are of sufficient tension to ensure good contact with the valve pins. Nothing is more annoying than a rattle in a receiver — it is generally hard to trace, and bad spring contacts often are the cause.

Pay attention to these minor details and the Regenerative Interflex

will serve you as well as it has served us. Simplicity, volume, clarity and selectivity are ensured.

List of Parts.

- 1 Dilecto Panel, 18 x 7 x 3/16 inches.
- 1 .0005 variable condenser.
- 1 Dial (vernier preferred).
- 3 Valve sockets.
- 2 Audio transformers.
- 1 Mikro Mike condenser.
- 1 Bradleystat.
- 2 Amperites.
- 1 Filament control jack (double open circuit).
- 1 Filament control jack (single open circuit).
- 1 .0025 fixed condenser.
- 1 .001 fixed condenser.
- 1 Carborundum detector.
- 1 Flexo-coupler.
- 7 Terminals on strip.

Next Week's Article.

It is proposed to give full constructional details of a 4 valve

Browning Drake receiver next week. This receiver also boasts of the quality of selectivity and is really very simple of control. Look out for it.

PHONE HEADACHE

Most of those who have had to wear telephones for long periods on end in the course of experimental work will have experienced the unpleasantness of phone headache, which is brought about by the pressure of the bands on the top of the head.

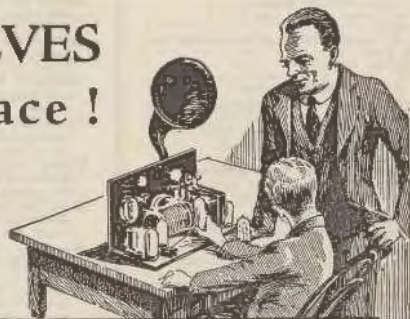
To minimise this inconvenience the bands should be shaped as nearly as possible to fit the head. This can be done by starting at the middle of one band and working downwards the earpiece with the thumb and fingers, gradually straightening or curving as you go. When one of the bands has been dealt with the other should be treated in the same way.

When the bands have been made as comfortable as possible in this way, a small pad made of soft material should be fixed to the middle of them.

THE RIGHT VALVES in the Right Place!

THERE is a decided affinity, a quite definite link between each Ediswan Receiving Valve and Ediswan Power Valve.

The Receiving Valves are supplied either H.F. or L.F., and the best Power Valve to use is shown in the table below.



EDISWAN VALVES

Stocked in
American and
English caps

Leading Dealers Sell Them!

EDISON SWAN ELECTRIC CO. LTD.

58 Clarence Street, SYDNEY

Also at Melbourne, Brisbane and Adelaide

THE VALVES TO USE:

Receiving.	Accumulator or Battery Volta.	Power.
A.R.	4-6	PV5
A.R.D.E.	2	PV8
A.R.06.	3-4	PV8

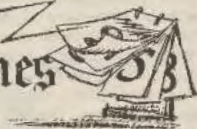
With these groups and Ediswan H.T. and L.T. Accumulators the ideal is attained.

PRICES:

A.R. & R.	5/-
A.R. 06	13/8
A.R.D.E.	12/6
P.V. 5	12/6
P.V. 6	13/6
P.V. 8	18/6



Broadcasting Programmes for the Coming Week



Friday, Sept. 24

2FC

Early Morning Session.

- 7.—Time Signals. The Chimes of 2FC. Announcements.
7.6—Music from the Studio.
7.10—Weather information. Commercial news. Shipping Intelligence; Mail Service.
7.25—Investment Market, Mining Share Market. Metal Quotations.
7.35—Wool Sales, Broadstuffs Markets, Interstate Markets, Produce Markets.
7.45—"Sydney Morning Herald" news services.
8.—Time Signals; Cricket Scores; A "Cheerio Talk" by Mr. J. K. Powell.
8.15—Close down.

Morning Session.

- 8.15—The Chimes of 2FC and Announcements.
8.20—Celloid scores. Music from the Studio.
10.—The Chimes of "Big Ben." Music from the Studio.
10.5.—Late "Sydney Morning Herald" news services.
10.15—Music from the Studio.
11.—The Chimes of "Big Ben."
11.5—Cables.
11.15—A Cooking Talk and Recipes by Miss Ruth Hurst.
11.30—Close down.

Midday Session.

- 12.—Time signals. The chimes of 2FC and Announcements.
12.5—Stock Exchange. First Call.
13.10—Music from the Studio.
12.60—Jugby News.
1.—Time signals. Weather intelligence.
1.5—"Evening News" midday news services.
1.20—Music from the Studio.
1.30—Stock Exchange. Second Call.
1.35—Music from the Studio.
2.—Time Signals; Close down.

Afternoon Session.

- 2.30.—The Chimes of 2FC and Announcements.
2.35—Broadcast from the Haymarket Theatre, Orchestra under the baton of Mr. Stanley Porter.
3.30.—From Farmer's Tea Rooms—The Oak Hall Trio.
3.40—Miss Gladys Briggs, contralto.
3.45.—From Farmer's Tea Rooms: The Oak Hall Trio.
3.50—Music from the Studio.
4.—Miss Chris. Hawksford, soprano.
4.5—A Music Talk by Mr. R. Chapple.
4.15—Music from the Studio.
4.20—Miss Gladys Briggs, contralto.
4.25.—From Farmer's Tea Rooms: The Oak Hall Trio.
4.35—Music from the Studio.
4.40—Miss Chris Hawksford, soprano.
4.45—Stock Exchange. Third Call.
4.45—Music from the studio.
5.—Close down.

Early Evening Session.

- 6.—Time signals. The chimes of 2FC and announcements.
6.5—"The Hello Man" talks to the children.

- 6.40—Talk to the Older Children.
6.50—Broadcast from the Hotel Australia, Orchestral Items.
7.5—Racing talk.
7.15—From the Studio: "Evening News" late news service. Weather information.
7.30—Market reports.
7.40—A Trip to the East.

Night Session.

- 7.55.—The Chimes of 2FC and Announcements.
8.—Broadcast from the Lyric Wintergarden Theatre, orchestra under the baton of Mr. Alfred Moulton.
8.20.—Mr. Walter Kingsley, baritone.
8.35.—Miss Margaret James, soprano.
8.45.—Mr. Cyril Monk will give the 4th Travel Talk, dealing with Brussels, Paris, and London, playing violin solos typical of the places visited.
9.15.—Mr. Walter Kingsley, baritone.
9.3.—Miss Margaret James, soprano.
9.20.—From the projection room of Film

Farmer's service, Sydney, call sign 2FC, wave length 1140 metres.
Broadcasters Ltd., Sydney, call sign 2BI, wave length 953 metres.
Trades Hall Broadcasting Station, call sign, 2KY, wavelength, 280 metres.

Theosophical Broadcasting Service, call sign, 5GB, wavelength, 916 metres.
Burgin Electric Coy. Ltd., Sydney, call sign, 2BE, wavelength, 916 metres.

Broadcasting Co. of Australia, Melbourne, call sign 3LO, wave length 371 metres.
Associated Radio Co., Melbourne, call sign 3AR, wave length 454 metres.

Queensland Radio Service, Brisbane, call sign 4QG, wave length 355 metres.
Central Broadcasters Ltd., Adelaide, call sign 3GL, wave length 395 metres.

Radio Broadcasting Co. of N.Z., Auckland, call sign 1YA, wave length 420 metres.
Westralian Farmer's, Perth, call sign 5WF, wave length 1250 metres.

Teamanian Broadcasting Pty. Ltd., Hobart, call sign 72L, wave length, 535 metres.

House, Captain Frank Hurley, the famous explorer, will give listeners the enthralling story of the adventures attached to the making of the new picture, "Hounds of the Deep," which has just been completed. Listeners will be initiated into all the technical details of film making, and will have first-hand accounts by the author of the particulars of the filming. While Captain Hurley is speaking from the projection room by means of 2FC's novel dual transmission a background of orchestral music will be superimposed into the transmission. Native music and effects will be worked into the programme at intervals.

- 10.45.—Broadcast from the Wentworth Hotel, Sydney—Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.
12.—National Anthem, Close down.

2BL

Early Morning Session.

- 7.15—Physical Training and Health Exercises.
7.30—Talk on Health and Hygiene.
7.35—Physical Training and Health Exercises.
7.45—Broadcasters' Special News Service.
7.52—Special News from Rugby.
7.56—Musical Programme from the Studio.
8.—G.P.O. Clock and Chimes. Close down.

Morning Session.

- 10.—G.P.O. Clock and Chimes, Special News Service from the "Daily Telegraph."
10.10—Music from the Studio.
10.25—Special news from the "Daily Telegraph."
10.45—Music from the Studio.
11.—G.P.O. Clock and Chimes. Special Cricket Session.
11.5—Musical Programme from the Studio.
11.15—Markets.
11.20—London Metal Quotations.
11.25—Broadcasters' Information Service, including Mails, Shipping, Weather, Rainfall.
11.45—Women's Session. Social notes by Mrs. Jordan, and talk on "Catering for the Family."
12.25—Talk by Miss Helen Jean Beedling, on "The Art of Penciling."
12.30—Shopping Guide.
12.32—Broadcasters' Turf Expert will discuss the training operations and horses' form from Randwick.
12.45—Hillier's Instrumental Quartet, under the direction of Cecil Gauffin.
1.30—Sydney Stock Exchange calls.
1.45—Latest spotting information from the "Sun."
2.—G.P.O. Clock and Close down.

Afternoon Session.

- During the afternoon, results of races broadcast immediately after each race, by courtesy of "Sun" Newspapers.
2.—G.P.O. Clock and Chimes. Weather Report and Social Notes from "The Sun."
3.10—Resume of Night's Programme.
3.16—Civil Service Restaurant Trio under the direction of Miss De Currey Bremer.
3.30—A talk on English Literature and Poetry by Mr. J. M. Franklin.
3.45—Music from the Studio.
4.—G.P.O. Clock and Chimes. Music from the studio: Civil Service Restaurant Trio, under the direction of Miss De Currey Bremer.
4.15—Musical Programme from the studio.
4.30—Serial Story, entitled, "The Scarlet Cocherol" by C. M. Sulejato.
4.45—Music from the Studio.
5.—G.P.O. Clock and Chimes; Producers Distributing Society's Market Report.
5.1.—Shipping Information when available.
5.15.—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

- 6.—G.P.O. Clock and Chimes. The pupils of Miss Monica Scully will entertain the kiddie.
6.45.—Broadcasters' Dinner Orchestra.

Special Country Session.

- 7.15—Australia's Mercantile Land & Finance Co.'s Stock and Wool Report.
7.25—Weather Report.
7.3.—Stock Exchange Reports.
7.31—Producers' Distributing Society's Fruit and Vegetable report.
7.35—Grain and Poultry reports.
7.45—Egg and Poultry Market report.
7.47—Country news from "The Sun."
7.55—Close down.

Evening Session.

- 6.—G.P.O. Clock and Chimes; Hoyt's Imperial Orchestra under the direction of Mr. Lionel Hart, broadcast from Hoyt's Picture Theatre.
- 7.20—Miss Grace Saville, contralto.
- 8.37—Talk concerning your valve set.
- 8.57—Mr. Austin Punch, baritone.
- 9.45—Hoyt's Imperial Orchestra.
- 9.—G.P.O. Clock and Chimes; Resume of following day's programme.
- 9.8.—Weather Report and Forecast by courtesy of Mr. J. C. Macrae, Govt. Meteorologist.
- 9.55—Sporting Talk by the Senior Sporting Expert of "The Sun," on "The Prospects of To-morrow's Races."
- 9.55—Interval.
- 9.45—Miss Grace Saville, contralto.
- 9.47—Mr. Austin Punch.
- 9.55—Lecture by Mr. J. M. Prentice.
- 10.15—Cec. Morrison and The Gloomchasers, from the ballroom of the Bondi Casino.
- 10.45—During the interval between dances, News Reports, by courtesy of the Sun will be broadcast.
- 11.—From the Studio: The Palmgrove Orchestra under the direction of Mr. Stan Fotheringham.
- 12.—G.P.O. Clock and Chimes; National Anthem.

2 GB

Evening Session.

- 7.—Talks to Children, by Capt. Emihour Clarke.
- 7.30—Music from the Studio.
- 7.45—Announcement.
- 7.56—Chamber Music.
- 8.5—Address by Dr. J. J. Van der Leeuw, I.L.B.
- 8.25—Organ recital, by Wilfred Arlson, from St. Alban's Church, Redfern.
- 8.30—Songs by Miss Tompson.
- 8.38—Violin solos by Lloyd Davies.
- 8.45—Songs by Ethelbert Elliott.
- 8.55—Organ recital, by Wilfred Arlson, from St. Alban's Church, Redfern.
- 9.17—Questions and Answers, by Professor Ernest Wood.
- 9.25—Songs by Miss Tompson.
- 9.33—Chamber Music.
- 9.45—Songs by Ethelbert Elliott.
- 9.53—Violin solos by Monica Holder.
- 9.58—God Save the King.

2 KY

Luncheon Hour Session.

- 12.15—Popular fox trots, musical interlude, news items, Hawaiian steel guitar selections, Union news and meetings, vocal items, closing down at 1.45 p.m.
- Children's Hour.
- 6.50—Mr. Thompson.
- Evening Session.
- 7.—Sporting feature, turf topics. Review of candidates and their prospects for to-morrow, Mr. T. G. Hopkins.
- 7.45—Lectures: Industrial History, Mr. J. Rynn (Director Labor Research and Information Bureau).
- 8.—A Talk on Motor Cycling, Mr. J. H. Hoskins.
- 8.10—Pianoforte solo, Miss Mary Dean.
- 8.18—Soprano solo, Miss Edith Welsh.
- 8.25—Monologue, Mr. David Edelstein.
- 8.35—Musical Interlude (Palaio Royal).
- 9.—Selections, mouth organ, Mr. William Card.
- 9.18—Sporting Feature, full description of main contest from ring side of McHugh's Leichhardt Stadium.
- 9.25—Music from Studio.
- 10.—Close down.

3 LO

Midday Session.

- 12.—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
- 12.30—Community Singing, transmitted from the Assembly Hall, under the auspices of the Community Singers' and Concert Goe's Association.
- 1.45—Stock Exchange Information; Meteorological Information; Weather Forecast for Victoria, Tasmania, South Australia and New South Wales.

- 2.—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
- 2.30—Close down.

Afternoon Session.

- 2.—Studio Orchestra.
- 3.10—Miss Frances Fraser "In a French Village."
- 3.25—Agnes Fortune, pianist.
- 3.32—Raymond Ellis, baritone.
- 3.40—Studio Orchestra.
- 3.50—"Au Fait" of Messrs. Buckley & Nunn Ltd. Fashion Talk.
- 4.—Transmission from Messrs. Alan's stand at the Royal Show Grounds.

442 METRES ON
OCTOBER 2.

The Postmaster-General having approved of the change in 2FC's wave length from 1,100 to 442 metres, it is now definitely stated that the change will be made on Saturday, October 2. The new apparatus for the 442 metres has been completed and tested with excellent results. It was thought that the change to the lower wave length would be made on Saturday, September 18, but the Station has been officially requested by the Postmaster-General's Department to delay the change for a further 14 days, as it is desired to give ample notice to listeners to make any alterations that may be necessary to their sets, so that 2FC's wave length will remain at 1,100 metres until Friday, October 1, and the change will be made in the early morning session at 7 a.m.

- 4.30—Raymond Ellis, baritone.
- 4.37—Studio Orchestra.
- 4.45—"Herald" News Service; Stock Exchange Information.
- 6.—Close down.

Evening Session.

- 6.45—Children's Hour. Answers to letters and Birthday Greetings.
- 6.—Songs by Jessie Slmith; Stories by Eilly Bunn; Little's Fairy Story; Black Beauty; The Lost Princess.
- 6.40—"Argus" and "Herald" News Services; Reuters and the Australian Press Association.
- 6.55—Weather synopsis. Shipping movements.
- 6.57—Stock Exchange information.
- 7.2—Fish Market Reports by J. R. Borrett Ltd.
- 7.4—River Reports.
- 7.5.—Market Reports by the Victorian Producers Co-operative Co. Ltd., Haymarket sheep sales; Poultry, grain, chaff, straw,

jute, dairy produce, potatoes and onions; Market prices of oranges and lemons, supplied by the Victorian Central Citrus Association Pty. Ltd.

Night Session.

- 7.20—Under the auspices of the Department of Agriculture, Mr. A. J. Gill, Senior Merd Tester, The Scrub Dairy.
- 7.40—Marie Burke, now playing the leading role in "Katja," at the Theatre Royal, will speak to you from her dressing room, by permission of J. C. Williamson Ltd.
- 8.—Collingwood Citizens' Band.
- 8.10—Mr. E. C. H. Taylor, Hon. Secretary, Associated Public Schools; School Life and Sport.
- 8.30—Raymond Ellis, baritone (by permission of J. C. Williamson Ltd.).
- 8.37—Collingwood Citizens' Band.
- 8.47—Raymond Ellis, baritone.
- 8.55—Collingwood Citizens' Band.
- 9.—Opera in three acts: "Orphans," by Gluck.
- 10.45—Road Reports, supplied by the Automobile Club of Victoria; British Official Wireless News from Rugby; Announcements; "Argus" News Service; Meteorological Information.
- 11.—Dance Music by Le Cassick's Quartette.
- 11.45—God Save the King.

3 AR

Morning Session.

- 11.30—The British Official Wireless Press, received by 3AR's operator from Rugby Wireless Station, England. Express train information. "Age" news bulletin.
- 12.—Time Signal Chime from the G.P.O.
- 1st Weather Forecast; Studio Barometer and Out-door Thermometer Readings.
- 12.5—Musical Selections, relayed from Hoyt's de Luxe, Bourke Street, Mr. T. L. Campbell at the organ.
- 12.30—Stock Exchange News; Market Reports
- 12.40—Musical Selections.
- 12.55—Mail Notices. Shipping Movements.
- 1.—Close down.
- Afternoon Session.
- 2.30—Hoyt's Premier Orchestra, under the direction of Miss Ella Brien, special Birthday month programme.
- 3.0—Musical Items from Studio.
- 4.—Time Signal Chime from G.P.O.
- 4.5—Hoyt's Premier Orchestra.
- 4.30—Mr. Stanley Haines.
- 6.0—Time Signal; Studio Barometer Readings; Close down.

Early Evening Session.

- 6.45—The Children's Corner, by Uncle Rad.

Evening Session.

- 7.45—The British Official Wireless Press; Studio Barometer and Out-door Thermometer Readings.
- 8.—Time signal from G.P.O.
- 8.2—Miss Phyllis Shattock (pianist).
- 8.9—Mr. Wilton Cove (baritone).
- 8.15—Mr. David Shaw (Flautist).
- 8.23—Miss Dorothy Adams (Soprano).
- 8.30—Mr. R. Stanley Haines, talk, "Around the Flower Garden."
- 8.45—Mr. Jack Harris (humorist).
- 8.52—Miss Phyllis Shattock (pianist).
- 8.52—Vocal duets, Miss Dorothy Adams (soprano), and Mr. Wilton Cove.
- 9.9—Miss Betty Jenkin, Humorous Recital.
- 9.16—Mr. David Shaw (Flautist).
- 9.23—Miss Dorothy Adams (Soprano).
- 9.30—Mr. W. W. Fothergill, "How to become quick at Figures."
- 9.45—Mr. Jack Harris (humorist), "Stiek M. Jerry."
- 9.53—Miss Betty Jenkin, A.L.C.M. (dramatic recital).
- 10.0—Time Signal Chime from G.P.O.; Studio Barometer and Out-door Thermometer Readings; "Age" news service, exclusive to 3AR.
- 10.15—Leggitt's Ballroom Orchestra, under the leadership of Mr. Harry Nangle.
- 11.—Close down.

4QG

- Midday Session.
10.—"The Daily Mail" News Service.
1.—Market Reports, Weather Information.
2.—"The Daily Mail" news, the "Daily Standard" news.
1.20.—From the Hotel Carlton, Lunch Hour Music by the Carlton Orchestra.
3.—Close down.

- Afternoon Session.
3.30.—From the Hotel Carlton: A programme of Music by the Carlton Symphony Orchestra.
4.15.—From the studio: "The Telegraphic" News; Close down.

- Early Evening Session.
6.25.—Tune-in.
6.50.—The Children's Session. Stories by "The Sandman."
7.—From the Council of Agriculture studio: The Farmer's Session; Market Reports; Lectures: Dawson Valley Irrigation Scheme; Life on an Irrigation Settlement—its Attractive Features, by Mr. A. F. Partridge (Commissioner for Irrigation and Water Supply).

- Night Session.
7.45.—Lecture Session—A Talk arranged by the Workers' Educational Association.
8.—A miscellaneous programme of musical and vocal numbers from the studio, including The Federal Band.
9.—Week-end Road Information for motorists supplied by the Royal Automobile Club of Queensland.

- Radio Voice Contest Items: Overture, The Savoy Orchestra; Tenor solo, Signor Corti.
9.20.—Weather Information officially supplied by the Commonwealth Weather Bureau; Announcements.
9.30.—Valse, The Savoy Orchestra; soprano solo, Miss Ethel Peters; Hawaiian instrumentalists, The Kalua Trio; vocal duet, Miss Dorothy Stewart and Signor Curti; Selection, The Savoy Orchestra; soprano solo, Mrs. Con. Thomas; Hawaiian instrumentalists, The Kalua Trio; March, The Savoy Orchestra.
10.—"The Daily Mail" News Service; Close down.

5CL

- Morning Session.
11.30.—G.P.O. Chimes.
11.31.—Featuring a Steek Duo Art Number.
11.40.—"Advertiser" News Service.
11.45.—Vocal number.
12.—G.P.O. Chimes.
12.1—"Advertiser" News Service and Cricket scores.
12.15.—Featuring a Steek Duo Art Number.
12.30.—SCL Studio Orchestra will be heard in a series of classical numbers.
1.15 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
2.—G.P.O. Chimes.

- Afternoon Session.
3.—G.P.O. Chimes.
3.15.—Relay from "Maple Leaf" Cafe—Orchestra numbers.
3.45.—From Studio—Serial Story.
4.—G.P.O. Chimes.
4.1.—Broadcast from "Arcadia" Cafe—Orchestra numbers.
4.55.—Stock Exchange Reports, General Information, and Station Announcements.
5.—G.P.O. Chimes.

- Evening Session.
6.30.—G.P.O. Chimes.
6.31.—Bedtime Stories, by "Auntie Peggy."
7.30.—Market Reports.
7.40.—Sporting Talk, by "Old Timer."
8.—G.P.O. Chimes.
8.1.—The Merry-makers Orchestra, interspersed with vocal items by Miss Hilda Wheeler and quartette party.
9.0.—G.P.O. Chimes.
9.1.—Weather reports.
9.3.—Studio concert, continued.
10.15.—"Advertiser" news service and ships within wireless range.
10.20.—Studio concert, continued.
10.55.—Station announcements.
11.8.—G.P.O. Chimes, National Anthem, and close down.

7ZL

- Morning Session.
7.1.—"The Mercury" news, stock market, shipping, commercial intelligence, weather information, Records from the Studio.
7.2.—Selections on the Sabonola. G.P.O. clock and chimes. Close down.

- Afternoon Session.
3.—G.P.O. Clock and Chimes.
3.30.—Hobart Stock Exchange quotations.
3.55.—Weather information.
4.—G.P.O. Clock Chimes. Close down.

- Early Evening Session.
7.—Children's Corner, "Big Brother" chats to his Pals.

- Evening Session.
8.—G.P.O. Clock Chimes. "The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information.
8.5.—Hobart Stock Exchange quotations.
9.10.—Weekly gardening chat, by Mr. George Nation.

- 9.20.—"Sports Budget" supplied by Mr. T. W. Newton, of Hobart Sports Depot.
9.30.—Miss Bertha Marshall, soprano; Miss Jean Hibbard, mezzo soprano; Reverend Arthur C. Nelson, Elocutionist; Master Victor Pharoah, Bass solo.
9.50.—"The Mercury" special interstate news service. Weather synopsis. Station announcements. National Anthem.



Saturday, Sept. 25

2FC

- Early Morning Session.
7.—Chimes of "Big Ben" and Announcements.
7.2.—Music from the Studio.
7.10.—Weather Information, Commercial News, Shipping Intelligence and Market Reports. Mail services. Rainfall, Temperatures. Astronomical memoranda.
7.25.—Investment Market, Mining Share Market, Metal Quotations.
7.35.—Wool Sales, Breadstuffs Markets, Interstate Markets, Produce Markets.
7.45.—"Sydney Morning Herald" News Service.
8.—The Chimes of "Big Ben." Music from the Studio.
8.15.—Close down.

- Morning Session.
9.15.—The Chimes of 2FC and Programme Announcements.
9.20.—Music from the Studio.
9.45.—A Talk by the 2FC Racing Commissioner.
10.—Chimes of "Big Ben." Cricket Series.
10.5.—Late "Sydney Morning Herald" news service.
10.15.—Music from the Studio.
11.—Australian Press Association and Reuter's Cable Service.
11.15.—A Talk on Gardening by "Red Gum."
11.30.—Close down.

- Midday Session.
12.55.—The Chimes of 2FC and Announcements.
1.—Chimes of "Big Ben." "Evening News" midday news service and weather information. Race results will be transmitted at regular intervals.

- Afternoon Session.
2.55.—The Chimes of 2FC and Announcements.
3.—Time Signals; Musical Items will be transmitted from the studio during the intervals between race and sporting results.

- 4.50.—A complete resume of the afternoon's sporting events.
5.—Time Signals. Close down.

- Early Evening Session.
6.—The Chimes of 2FC and Announcements.
6.5.—The "Hello Man" talks to the children.
6.45.—Broadcast from the Hotel Australis, Auckland Home.
6.50.—A Talk to the Elder Children.
7.15.—"Evening News" late news service and weather information.
7.30.—Late Sporting Results.
7.40.—Motor Talk, by Mr. J. L. Austin.

- Night Session.
7.55.—The Chimes of 2FC and Announcements.
8.—Broadcast from the Crystal Palace. Items by the Orchestra, under the baton of Mr. Harry Stone.
8.15.—Broadcast from the Rockdale Town Hall (by permission of Messrs. J. C. Williamson), the 1st Act of the musical comedy "Kastinka," played by the Langley Operatic Society.
9.30.—A talk on "Rowing" by Captain Fred Arsons.
9.45.—A musical play, especially prepared for 2FC by Mr. James Donnelly.
10.30.—Mr. Charles Kingsley, comedian.
10.40.—2FC Dance Band, broadcast from Bundick Home.
10.50.—Mr. Charles Kingsley, comedian.
11.—2FC Dance Band, broadcast from Burdick House.
11.30.—Broadcast from the Wentworth Hotel, Sydney; Wentworth Cafe, Dance Orchestra, under the baton of Mr. Sydney Simpson.
12.—National Anthem; Close down.

2BL

- Early Morning Session.
7.15.—Physical Training and Health Exercises.
7.30.—Talk on Health and Hygiene.
7.35.—Physical Training and Health Exercises.
7.45.—Broadcasters' Special News Service.
7.55.—Special News from Rugby.
7.58.—Musical Programme from the Studio.
8.—G.P.O. Clock and Chimes. Broadcasters' Turf Expert will discuss the training operations and horses' form from Rand.
8.15.—G.P.O. Clock and close down.
Morning Session.
11.—G.P.O. Clock and Chimes. Special news service from the "Daily Telegraph."
11.10.—Musical programme from the Studio.
11.25.—Special news from the "Daily Telegraph."
11.35.—Broadcasters' Information service, including mails, shipping, weather, rainfall.
11.45.—Women's Session. Social Notes. A talk on "Simple Cooking for Children," by Mrs. Jordan.
12.30.—London Metal quotations.
12.35.—Musical Programme from the Studio.
12.50.—News from "Sun" Cable Edition.

- Afternoon Session.
1.—G.P.O. Clock and Chimes. Music from the Studio.
1.10.—Talk on Sporting and Athletic Fixtures for the day—Lawn, Hockey, Tennis, Rugby League all fixtures. Rugby Union all fixtures, Soccer, Australian Rules, Baseball, Racing, Trotting, Coursing, Bowls. During the afternoon sporting information will be broadcast by courtesy of "The Sun" Newspaper.
5.15.—G.P.O. Clock. Close down.
Early Evening Session.
6.—G.P.O. Clock and Chimes. Uncle George and the Kiddies.

PHILCO—"For less worry and better results"—
BATTERIES.

- 8.45—Pavilion Dinner Orchestra, under the direction of Mr. Cec. Morrison.
- 7.15—Special Sporting Information, by courtesy of "The Sun," including Football, Rugby League all fixtures, Rugby Union all fixtures, hockey, lacrosse.
- 7.50—Special Country News from "The Sun."
- 7.45—Close down.

Evening Session.

- 6—G.P.O. Clock and Chimes. Emmore Theatre Symphony Orchestra, under the direction of Mr. F. Wudkins.
- 5.50—Mr. Clem Williams, baritone.
- 5.47—Lecture from the Studio.
- 5.47—Miss Thelma Houston, contralto.
- 5.44—Resumé of following day's programme.
- 5.37—Announcements.
- 9—G.P.O. Clock and Chimes. Special Concert Programme from the Studio.
- 9.50—Interval.
- 9.35—Lecture from the Studio.
- 9.55—Mr. Clem Williams.
- 10.2—Miss Thelma Houston.
- 10.10—Al. Hamilton, and The Ambassadors Dance Band, broadcast from the ballroom of The Ambassadors. During the intervals between dances, news reports, by courtesy of "The Sun" will be broadcast.
- 12—G.P.O. Clock and Chimes; National Anthem.

2KY

Evening Session.

- 7.15—Sporting Feature, Mr. T. G. Hopkins: Complete review of to-day's racing.
- 7.45—News Items.
- 8—Contra-tenor solo, Miss Joan Walsh.
- 8.10—Recitation, Mr. Bob. Corbett.
- 8.20—Tenor solo, Mr. Ray Hamilton.
- 8.30—Musical interlude, Palais Royal Cabaretians, Leader, Mr. Beahan (by kind permission of J. C. Hendroff Ltd.). Comedy, Miss Edna Ohlson.
- 9—Sketch, Mr. Hub. Cohen.
- 9.1—Labor Legislation Series, Mr. J. C. Elbridge.
- 9.30—Humorous odds and ends, Herbert Beaver.
- 9.45—Musical Interlude, Palais Royal Cabaretians.
- 9.50—Special Announcements.
- 9.55—Music from Studio.
- 10—Close down.

3LO

Morning Session.

- 11—Sonata Recital.
 - 11.10—Harold Rodgers, Organ.
 - 11.20—Raymond Ellis, baritone (by permission of J. Williamson Ltd).
 - 11.30—Sonata Recital.
 - 11.40—Harold Rodgers, piano.
 - 11.50—Raymond Ellis, baritone.
 - 12—Transmission from Messrs. Allan's Stand at the Royal Show Grounds.
 - 12.30—British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Argus" and "Herald" News Services; Shipping Intelligence.
 - 12.45—Stock Exchange Information.
 - 12.50—Meteorological Information. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports.
 - 1—Time signal.
 - 1.1—Studio Orchestra.
 - 1.10—Bessie Gannon, violin.
 - 1.17—Rosa D'Arcy and Inez Vinnard, entertainers.
 - 1.24—Studio Orchestra.
 - 1.34—Bessie Gannon, violin.
 - 1.40—Rosa D'Arcy and Inez Vinnard, entertainers.
 - 1.47—Studio Orchestra.
 - 2—Result of the Pascoe Hurdle, Moonee Valley Races.
 - 2.1—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
 - 2.30—Result of Merri Maiden Plate, Moonee Valley; Close down.
- Afternoon Session.
- 3—Result of the Arundel Steeplechase, Moonee Valley Races.
 - 3.1—Studio Orchestra.

- 3.40—Result of Tullamarine Handicap, Moonee Valley Races.
- 3.41—The Studio Orchestra.
- 4—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
- 4.30—Result of Quality Handicap, Moonee Valley.
- 4.31—Studio Orchestra.
- 4.45—"Herald" News Service; Sporting Results; Result of the Alma Handicap.
- 5—Close down.

Evening Session.

- 5.45—Sporting Results.
- 6—Children's Hour: Answers to letters and Birthday Greetings; Songs by Jessie Smith; Mary Gamble, Poems: Jonathon Jo has a mout like an O; and Rice Pudding; Story for the lilies; coss: Blue Bell and Bumble Bee; Music in Fairland; by Betty Bononia; For the boys and girls, The Angel.
- 6.40—"Argus" and "Herald" News Services;

- 9.2—Elsie Davies, soprano.
- 9.3—3LO Dance Orchestra.
- 9.15—"Argus" News Service; British Official Wireless News from Rugby; Meteorological information; Sporting.
- 9.25—3LO Dance Orchestra.
- 9.40—Arch. Clarke, comedian.
- 9.47—G.L.G. Dance Orchestra.
- 9.57—Raymond Ellis, baritone.
- 10.4—3LO Dance Orchestra.
- 10.14—Sporting Results: Races, Football, Metropolitan Soccer League; Metropolitan Amateur Association Lacrosse.
- 10.24—3LO Dance Orchestra.
- 10.34—Elsie Davies, soprano.
- 10.41—G.L.G. Dance Orchestra.
- 10.51—Arch. Clarke, comedian.
- 10.52—3LO Dance Orchestra. Dance music by the 3LO Dance Orchestra will be continued till 11.45.
- 11.35—God Save the King.

3AR

Morning Session.

- 11.40—The British Official Wireless Press, received from Rugby Super Wireless Station, England, by 3AR's operator. Express Train Information. "The Age" news service.
- 12—Time Signal Chime from G.P.O. Studio Barometer Readings, 1st Weather Forecast.
- 12.5—Musical Selections, relayed from Hoyt's De-Luxe, Bourke Street. Mr. T. L. Campbell at the Worktable.
- 12.30—Stock Exchange News. Foreign Exchanges of the World, Supplied by Messrs. Thos. Cook and Sons.
- 12.35—Market Reports.
- 12.40—Musical Selections.
- 12.55—Mail notices. Shipping movements.
- 1—Close down.

Afternoon Session.

- 2.30—Hoyt's Premier Orchestra (Special Birthday Programme); Racing results from Mentone immediately after each race.
- 4.0—Time Signal from G.P.O.'s Hoyt's Premier Orchestra; Half-time football results.
- 5—Time Signal from G.P.O. Close down.

Early Evening Session.

- 6.45—Children's Corner, by "Uncle Peter."

Evening Session.

- 6—Time Signal from G.P.O.; Studio Barometer and Out-door Thermometer Readings; The British Official Wireless Press; Sporting results; Local News.
- 8.15—Dance Night, The Rhythmic Dance Orchestra, relayed from the Maison de Luxe, Broadway, St. Kilda, under the direction of Mr. George Lewis.
- 9.30—Week-end Travellers' Information, supplied by the Victorian Railways Department and the Melbourne Tramways Board.
- 9.45—The Maison de Luxe Rhythmic Dance Orchestra.
- 10.0—Time Signal from G.P.O.; Studio Barometer Reading; "Axe" News Service.
- 10.5—The Maison de Luxe Rhythmic Dance Orchestra.
- 11.0—Time Signal from G.P.O. Close down.

4QG

No Midday Transmission.

Afternoon Session.

- 4.25—Tune-in.
- 3.30—A Matinee for Little Haters.
- 4.30—Close down.

Early Evening Session.

- 8.25—Tune in.
- 6.30—The Children's Session, Bedtime Stories by "Uncle Ben" and "Uncle Jim," assisted by "Mabel Sunshine."
- 7.15—Sporting News.
- 7.30—Close down.

Night Session.

- 7.45—A Sporting Talk.
- 8—From the Gaiety Theatre, Toowoong: A quartet of a hour's music by the Gaiety Theatre Orchestra.

Instead of publishing in detail the Auction Bridge games broadcast from 2FC, in future only the key hands will be given.

The complete hands held by each of the players of the Radio Auction Bridge Game, played on September 23, were as follows:—

"South" deals and holds:
Spades, K, J, 7, 4; Hearts, 5; Diamonds, K, J, 4; Clubs, Ace, K, 7, 4, 2.

"West" holds: Spades, 10, 5; Hearts, 8, 7, 2; Diamonds, Q, 5, 3; Clubs, Q, J, 10, 9, 3.

"North" holds: Spades, Ace, 9, 6, 3; Hearts, K, Q, 10, 9, 4; Diamonds, 6, 2; Clubs, 8, 5.

"East" holds: Spades, Q, 8, 2; Hearts, Ace, J, 6, 3; Diamonds, Ace, 10, 9, 8, 7; Clubs, 6.

Sporting results. Reuters and Australian Press Association cables.

- 5.53—Weather synopsis. Shipping movements.
- 5.57—Stock Exchange information.
- 7.2—Fish Market Reports by J. R. Borrett Ltd.
- 7.4—River Reports.
- 7.6—Market Reports by Victorian Producers' Co-operative Co. Ltd.: Grain, chaff, hay, straw, lute, dairy produce, potatoes and onions.

Night Session.

- 7.50—Under the auspices of the Australian Commonwealth Engineering Standards Association: "Aids to Progress."
- 7.40—Some Bridge Problems, by Norman McEwan.
- 8.30—3LO Dance Orchestra.
- 8.20—Hon. F. Hagelthorne, "National Efficiencies."
- 8.35—3LO Dance Orchestra.
- 8.40—Raymond Ellis, baritone.
- 8.55—3LO Dance Orchestra.

- 8.15—From the Studio: Radio Voice Contest Items.
 8.40—Weather Information, officially supplied by the Commonwealth Weather Bureau. Announcements.
 9—From Lennon's Ballroom, By courtesy of the proprietors of Lennon's Hotel, dance music will be relayed from Lennon's Ballroom.
 10—From the Studio, "The Daily Mail" news service. Close down.

5 CL**Morning Session.**

- 10.30—G.P.O. Chimes.
 10.31—Studio Orchestra.
 11.45—"Advertiser" News Service.
 Afternoon Session.

- 2—From the Studio: Interstate sporting results and "A" grade football results as available.
 Evening Session.

- 6.30—G.P.O. Chimes.
 6.31—Hedding stories by "Auntie Sybil."
 7.30—Market Reports.
 7.40—Resume of the chief sporting results throughout the Commonwealth.
 8—G.P.O. Chimes.
 8.1—A programme of dance music, relayed from the Palais Royal, interspersed with vocal items by V. McMurray, Miss E. Speed, D. Saltmarsh, and Don. Parnell.
 9.1—Weather reports.
 9.5—Studio concert, continued.
 10.55—Station announcements.
 11—G.P.O. Chimes, National Anthem, and close down.

7 ZL**Morning Session.**

- 11—G.P.O. Clock Chimes. "The Mercury" news, Stock Market, Shipping, Commercial Intelligence, Weather information and Sporting anticipations.
 11.45—Selections on the Saloons. Hobart Stock Exchange quotations.
 12—G.P.O. Clock Chimes. Close down.

Early Evening Session.

- 7—Children's Corner, "Big Brother" chats to his Pals.
 Night Session.
 8—G.P.O. Clock Chimes. "The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information and sporting results.
 8.8—Hobart Stock Exchange quotations.
 8.10—"Come to Tasmania Movement," by Mr. C. H. Lamprell; "The Wonder Isle of the Commonwealth."
 8.20—Palais de Dance Band, City Hall.
 9.45—British Official Wireless news, copied direct from Rugby by our own operator. Weather synopsis. Station announcements. Close down.

**Sunday, Sept. 26****2 FC****Morning Session.**

- 10.55—The Chimes of 2FC and Announcements.
 11—Broadcast from St. Mark's Church of England, Darling Point, Morning Service. Rev. E. Howard Lea, preacher.
 12.20—From the Studio—News Session.
 12.30—Close down.

Afternoon Session.

- 2.55—The Chimes of 2FC and Announcements.

- 8—Broadcast from the Lyceum Hall, Pitt Street. Pleasant Sunday afternoon service, arranged by the Central Methodist Mission.
 4.30—A talk on "Hymns"—Missionary—by Mr. William Adams.
 4.45—Close down.

Night Session.

- 6—Chimes of "Big Ben" and announcements.
 6.5—Broadcast from the Petrosham Congregational Church. Organ recital, by Mr. Christian Helleman.
 6.30—The 5th of the series of travel talk, by Mr. Cyril Monk, interspersed with appropriate music, dealing with Brussels, Paris, London.
 7—Broadcast from the Petrosham Congregational Church—Evening Service. Mr. W. G. Conkey, President of the N.S.W. Rotary Club will deliver an oration on "Boys' Week."
 8.30—Broadcast from Strand Theatre, Letcherit. Items from the Concert by the Leichhardt District Band, under the conductorship of Mr. E. P. Kerry.
 10—National Anthem. Close down.

2 BL**Morning Session.**

- 11—Services, broadcast from Chalmers Presbyterian Church.
 Afternoon Session.
 3.30—Bible Class, conducted by Mr. W. (Cairo) Bradley.
 4—Organ Recital.

Evening Session.

- 7.30—St. Jude's Church, Randwick.
 8.30—Marly Municipal Military Band, broadcast from Rialto Theatre, Manly.
 9.30—Concert from the Studio.

2 GB**Morning Session.**

- 9.50—Music from St. Alban's Church, Redfern.
 The morning service from St. Alban's Church, Redfern; High Celebration of the Holy Eucharist and Sermon.
 12 noon—Close down.

Evening Session.

- 6.45—Music from the Studio.
 6.55—Announcements.
 7—Concert from Adyar Hall; 1. Wind Quintette; 2. Violin solos; 3. Choral Music; 4. Trio; 5. Violin Solo; 6. Wind Quintette.
 8—Announcements and music from studio.
 3.15—Grand Concert from Adyar Hall by South Sydney Band; Songs by Miss Gladys Edwarde.
 9.15—Close down.

3 LO**Morning Session.**

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

Afternoon Session.

- 3—Pleasant Sunday Afternoon Service from Wesley Church, Lonsdale Street. Chairman: Rev. J. H. Cain.
 4.30—Close down.

Evening Session.

- 6.45—Children's Hour. Answers to letters and Birthday Greetings. "Billy Bunnies" and his "New Rabbits" will sing to the children. Stories will be "Mimosa" and "Lovell's Life."
 6.40—Close down.

Night Session.

- 6.45—Service from Central Mission, Wesley Church, Lonsdale St., Melbourne. Conducted by Rev. J. H. Cain.
 8.30—Concert transmitted from the Newtown Methodist Church, Geelong.
 9.50—"Argus" News Service: Announcements, etc.

- 10—God Save the King.

3 AR**Morning Session.**

- 10.30—The Bells from Old St. James' Cathedral.
 11.0—Morning Service from St. James' Old Cathedral.
 3.0—Miss Iris Norton (soprano).
 3.7—Mr. Tom Henderson (baritone).
 3.14—Mr. Carlo Dumini, violin solo.
 3.21—Miss Marjorie Lawrence (contralto).
 3.28—Miss Iris Norton, piano solo.
 3.35—Mr. Tom Henderson (baritone).
 3.42—Miss M. Lawrence (contralto).
 3.48—Mr. C. Domini, violin solo.
 3.56—Miss I. Norton (soprano).
 Evening Session.

- 6.30—The Bells from St. James' Old Cathedral.
 7.0—Evening Service from Church of Christ, Swanston Street.
 8.30—From Studio: Mrs. H. Rowe (soprano) 3.87—Miss Rona Kohn, violin solo.
 6.44—Mr. H. Sutcliffe (baritone).
 6.51—Miss Nancy Lyndhurst (contralto).
 6.58—Miss Claire Miles, A.L.C.M., entertainer at the piano.
 9.5—Miss Edna Baker (soprano).
 9.12—Miss E. Kohn, violin solo.
 9.19—Mr. H. Sutcliffe (baritone).
 9.26—Mrs. H. Rowe (soprano).
 9.33—Miss C. Miles, entertainer, at the piano
 9.40—Miss Nancy Lyndhurst (contralto).
 9.50—"Age" News Service.
 9.50—Close down.

4 QG**Morning Session.**

- 10.55—Tune-in.
 11—The complete morning service, will be relayed from the Wharf Street Congregational Church.
 12.30—Close down.

Afternoon Session.

- The Concert provided by the Citizens' Band (conductor, Mr. A. E. Kauer) will be relayed from the Botanical Gardens.
 3.10—Tune-in.
 3.15—Band Concert.
 4.30—Close down.

Night Session.

- The complete Evening Service will be relayed from the Wharf Street Congregational Church.
 7.35—Tune-in.
 7.30—Church Service.
 8.30—Conclusion.
 At the conclusion of the Church Service, the Concert provided by the Greater Brisbane Municipal Concert Band (under the leadership of Mr. E. Jackson), will be relayed.
 9.30—Close down.

5 CL**Morning Session.**

- 11—G.P.O. Chimes. Relay from St. Bartholomew's Church, Divine Service.
 Evening Session.
 6.30—G.P.O. Chimes.
 6.31—Sunday stories for the children.
 6—G.P.O. Chimes.
 7.1—Relay from the Black Forest Baptist Church, Divine Service.
 8.16 (approx.)—Relay from the Railways Institute, Holden's Silver Band.
 9.1—Weather reports.
 9.3—Holden's Band, continued.
 10—G.P.O. Chimes. National Anthem.

BURGESS—"Constant satisfaction assured"
—BATTERIES.

7 ZL

Evening Session.

- 7—Service from Melville Street Methodist Church, Hobart; Preacher: Rev. Robert Williams.
- 8.45—Concert from the Studio: Miss Frances Evans, contralto; Miss Ruby Piesse, accompanist; Mr. W. E. Fuller, dramatic recital; Mr. Ch. G. Tennant, baritone; Mr. L. M. Barnett, cornet solo.
- 9.45—"The Mercury" special Interstate news service. Weather synopsis, Station announcements, National Anthem.



Monday, Sept. 27

2 FC

Early Morning Session.

- 7—The Chimes of 2FC and Announcements.
- 7.15—Time signals.
- 7.5—Music from the Studio.
- 7.10—Weather Information, Commercial News, Shipping Intelligence, Rainfall, Temperatures, Astronomical Memoranda.
- 7.25—Investment Market, Mining Share Market, Metal Quotations.
- 7.35—Wool sales, broadstuffs, markets, produce markets.
- 7.45—"Sydney Morning Herald" news service.
- 8—Time signals. A Choric Talk, by Mr. J. K. Powell.
- 8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Programme Announcements.
- 9.20—Music from the Studio.
- 10—Time Signals. Music from the Studio.
- 10.5—Late "Sydney Morning Herald" news service.
- 10.15—Music from the Studio.
- 10.45—A Morning Reading.
- 11—The Chimes of "Big Ben" and Announcements.
- 11.5—Last minute sporting information, by the 2FC Racing Commissioner.
- 11.15—Music from the Studio.
- 11.30—Close down.

Midday Session.

- 12—Time Signals. The Chimes of 2FC and Announcements.
- 12.5—Stock Exchange, first call.
- 12.14—Music from the Studio.
- 12.50—Rugby Wireless News.
- 1—Time Signals. Weather Intelligence.
- 1.5—"Evening News" Midday News Service, Producer's Distributing Society's Report.
- 1.20—Music from the Studio.
- 1.30—Stock Exchange—second call.
- 1.45—Music from the Studio.
- 2—Time Signals; Close down.

Afternoon Session.

- 2.30—The Chimes of 2FC and Announcements.
- 2.35—A Recital on the Behning Player Piano.
- 3.30—From Farmer's Tea Rooms: The Oak Hall Trio will play (leader, Mr. Horace Kents).
- 3.40—Miss May Craven, mezzo.
- 3.45—From Farmer's Tea Rooms: Oak Hall Trio.
- 3.55—Music from the Studio.
- 4—Miss Slapofski, soprano.
- 4.5—From Farmer's Tea Rooms: The Oak Hall Trio.
- 4.15—Music from the Studio.
- 4.20—Miss May Craven, mezzo.
- 4.25—From Farmer's Tea Rooms: The Oak Hall Trio.
- 4.35—Music from the Studio.
- 4.40—Miss Jeanne Slapofski, soprano.
- 4.45—Stock Exchange, Third Call.
- 4.45—Music from the Studio.
- 5—Time Signals. Close down.

Early Evening Session.

- 6—Chimes of "Big Ben" and Announcements.
- 6.5—The "Tello Man" talks to the children.

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n

SYDNEY

6.40—For the Elder Children. A serial story, "Three Real Bricks," by Grant Smith.
6.50—Broadcast from the Hotel Australia, orchestral items.
7.15—From the Studio: "Evening News" late news service and weather information.
7.30—Judge's Market Bulletin. "What's on the Stock, Fruit and Vegetable Markets."
7.40—Mr. J. K. Powell will talk on "Thought Miracles."

Night Session.

7.55—The Chimes of EPC and Announcements.
8.—Broadcast from the Haymarket Theatre, Sydney: Operatic Orchestra, under the baton of Mr. Stanley Porter.

8.25—Broadcast from St. Thomas' Memorial Hall, North Sydney. Elocutionary and Dramatic Recital, by Mr. William Collins.
8.32—Mr. William Collins, recitals.
8.45—Miss Dorothy Ewbank, solo.
8.48—Mr. Tom Williams, violin.
8.55—A Fencer Drawing by Mr. Nevill Teasdale.

9.5—Continuation of concert, by Mr. William Collins.
9.25—Items by the Royal Sydney Apollo Club.
9.55—A one act play, by Mr. Walter Hunt and Miss Eve Warburton.

10.—Broadcast from the Haymarket Theatre, Sydney, orchestral items.

10.25—Mr. Walter Hunt, Gramofon.
10.40—Broadcast from the Wentworth Hotel, Sydney, Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.
12.—National Anthem; Close down.

2 BL

Early Morning Session.

7.15—Physical Training and Health Exercises.
7.30—Talk on Health and Hygiene.
7.35—Physical Training and Health Exercises.
7.45—Broadcasters' Special News Service.
7.52—Music from the Studio.
8.—G.P.O. Clock and Chimes. Close down.

Morning Session.

10.—G.P.O. Clock and Chimes. Special News Service from the "Daily Telegraph."
10.15—Music from the Studio.
10.25—Special news from the "Daily Telegraph."
10.35—Music from the Studio.
11.—G.P.O. Clock and Chimes. Special Cricket Session.
11.5—Musical programme from the Studio.
11.15—Mr. Foca.
11.20—Musical programme from Studio.
11.30—Hindooaster's Information Service, including mail, shipping, weather, rainfall.
11.35—Women's Section—Special Notes by Mrs. Jordan, and a talk on "Preserves."
12.25—A talk on "Salt Water and Manure," by Miss Helen Jane Beurling.
12.30—Broadcasters' Trip Report will discuss the training operations and horses' form from Randwick.
12.45—Hiller's Instrumental Quartette, under the direction of Gary Castling.
1.30—Sydney Stock Exchange news.
1.45—Latest sporting information from the "Sun."
2.—G.P.O. Clock and Chimes. Close down.

Afternoon Session.

During the afternoon results of races will be broadcast immediately after each race.
3.—G.P.O. Clock and Chimes. Weather report and Social News from the "Sun."
3.10—Resume of night's programme.
3.15—David Jones' "Tom Boom Trio."
3.35—"A Course in Philosophic Thought," by Mr. J. M. Frenkel.
3.45—Musical Programme from the Studio.
4.—G.P.O. Clock and Chimes. David Jones' "Tom Boom Trio."
4.30—Serial story entitled "The Scarlet Cocktail," by C. M. Sublette.
4.45—Music from the Studio.
5.—G.P.O. Clock and Chimes; Producers' Distributing Society's Market Square.
5.10—Shipping information when available.
5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

8.—G.P.O. Clock and Chimes; Uncle George and the Kiddies.

6.45—Pavilion Dinner Orchestra, under the direction of Mr. Cec. Morrison.
Special Country Session.

7.15—Austrian Mreositable Land & Finance Co.'s Stock, Wood and Hides Report.
7.30—Weather Report by Courtesy of Mr. C. W. Government Meteorologist.
7.34—Stock Exchange Reports.
7.37—Producers' Distributing Society's Fruit and Vegetable Report.
7.45—Fruit and Vegetable Report (Sun).
7.53—Grain and Poultry Report (Sun).
7.42—Egg and Poultry Market Report.
7.45—"What's On," a guide to the visitors.
7.55—Close down.

Night Session.

8 p.m.—G.P.O. Clock and Chimes; Embarrassment by Dory's Clock in connection with Dory's Week, broadcast from the Spring Town Hall; from the Studio, Mr. Richard McLehann's choir.
9.—G.P.O. Clock and Chimes; Al Hammett and the Ambassadors' Dance Band; during the intervals between dances, social notes and a description of trucks will be given by Mrs. Potts.
9.35—Lecture from the Studio.
9.55—Newtown Band, broadcast from Industrial Hall, Newtown.
10.15—Al Hammett and The Ambassadors Dance Band, broadcast from the ballroom of The Ambassadors. During the intervals between dances news reports by courtesy of "The Sun" Newspapers will be broadcast.
12.—G.P.O. Clock and Chimes. National Anthem.

2 KY

Luncheon Hour Session.

12.15—Popular fox trots, musical interlude, news items, Hawaiian steel guitar selections, Union news and meetings, vocal items, closing down 1.45 p.m.
Children's Hour.
3.—Mr. Thompson.

Evening Session.

7.30—Sporting Talk, Mr. Routledge.
7.45—Political and Industrial topics, Mr. J. S. Gordon.
8.—Jan's solo, Mr. Thompson.
8.15—Musical solo, Miss Nellie Graves.
8.15—Monologue, Miss Amy Rowland.
8.23—Tenor solo, Mr. Tom O'Connor.
8.33—Musical interlude, Palais Royal Californians, Mr. Trosnan, leader, by kind permission of J. C. Bendroit Ltd.
8.55—Special announcements.
9.—Soprano solo, Miss Ethel Mitchell.
9.10—Songs at the piano, Miss Amy Rowland.
9.20—Baritone solo, Mr. R. Webster.
9.30—Piano solo, Mr. Les. Sproule.
9.35—Musical and vocal items.
10.—Close down.

3 LO

Midday Session.

12.—Time Signal; British Official Wireless News from Rugby; Reuters and the Australian Press Association; Cables; "Argus" and "Herald" News Services; Shipping Intelligence.
12.45—Shipping Intelligence, Stock Exchange information.
12.50—Meteorological information. Weather forecasts for Victoria, Tasmania, New Australia and New South Wales. Ocean forecast. River reports.
1.—Time signal.
1.15—Studio Orchestra.
1.25—Helen Dancy, soprano.
1.27—Tosma Tierpan, cello solo.
1.24—C. Richard Chapp, Tasma Tierpan, Agnes Fortune, Trio.
1.30—Musical items, soprano.
1.41—C. Richard Chapp, Auto.
1.47—Studio Orchestra.
2.—Close down.

Afternoon Session.

3.—Studio Orchestra.
3.15—Raymond Ellis, baritone.
3.17—Mrs. Ella, will give a talk on "Hotcrafts."

3.32—Walter Smith, cornet.
3.39—Gwen Barham, contralto.
3.46—Studio Orchestra.
3.55—Miss Helen Hill, Supervisor: Domestic Arts, Education Department: Domestic Economy.
4.—Frank Storbam, clarinet.
4.45—Raymond Ellis, baritone.
4.11—Agnes Fortune, Reginald Bradley, Tasma Tierpan, Trio.
4.27—Gwen Barham, contralto.
4.31—Studio Orchestra.
4.46—"Herald" News Service; Stock Exchange Information.
5.—Close down.

Evening Session.

5.45—Children's Hour. Answers to letters and birthday greetings.
6.—Pat McLean, entertainer.
6.7—Lottie Miss Kookaburra, will introduce a poem, "The Jolliest Bird of all," with special Kookaburra laughing.
6.27—Pat McLean will sing.
6.34—Miss Kookaburra will now tell the 8th instalment of "The Girl who Played the Game."
6.40—"Argus" and "Herald" News Services; Reuters and the Australian Press Association Cables.
6.45—Weather synopsis, Shipping movements; Overseas Shipping.
7.—Stock Exchange information.
7.5.—Fish Market Reports, by J. R. Borrett Ltd.
7.6.—River reports. Aerial mail information by Australian Aerial Services.
7.8.—Market reports by the Victorian Producers' Co-operative Co. Ltd.: Haymarket news, sheep sales, poultry, grain, chads hay, straw, Jute, dairy produce, potatoes, and snices. Market prices of oranges and lemons, by the Victorian Central Citrus Association Pty. Ltd.

Night Session.

7.25—Under the auspices of the Develop Australia League, Mr. R. S. Taylor, Modernising the Wheat Industry, Marketing.
7.40—Under the auspices of the Department of Agriculture, Plant Diseases, by Mr. C. C. Brittlebank, Biologist.
8.—First set of "Katia," transmitted from Tuzaco Boggs, by permission of J. G. Williamson Ltd.
9.15—Under the auspices of the Victorian Amateur Athletics Association, Hon. Theodore Fink, will speak, "Amateurism in Sport."
9.30—Studio Orchestra.
9.40—Raymond Ellis, baritone.
9.50—Under the auspices of the Launceston 50,000 League, Mr. H. Webb, will give a talk on Launceston.
10.—"Round the Camp Fire. Music, Story and Verse. Gray and Gray, by poets and writers of Australia and New Zealand. Harman, Mr. V. Upton Brown.
10.30—Raymond Ellis, baritone.
10.35—British Official Wireless News from Rugby; Announcements, etc.
10.42—Agnes Fortune, piano; Tasma Tierpan, cello; Frank Storbam, clarinet.
10.52—"Argus" News Service; Weather Forecast; Announcements.
11.—Dance Music by the Studio Orchestra.
11.45—God Save the King.

3 AR

Morning Session.

11.30—The British Official Wireless News, received from Rugby Super Wireless Station, England, by 2AR's Operator; Express Train Information; The Age News Bulletin.
12.—Time Signal Chime from G.P.O.; Scotch Barometer and Outdoor Thermometer Readings.

PHILCO—"Experience teaches"—BATTERIES.

ing; 1st Weather Forecast; Events of the day.

- 12.5—Musical Selections, relayed from Hoyt's de Luxe, Bourke Street, Mr. T. L. Campbell at the organ.
- 12.56—Stock Exchange news.
- 12.40—Musical Selections.
- 12.35—Mail Notices; Shipping Movements.
- 1—Close down.

Afternoon Session.

- 2.39—Hoyt's Premier Orchestra, under the direction of Miss Ella Brien (Special Birthday Month Programme).
- 2.0—Melbourne Piano Trio.
- 2.16—Miss Iris Shaw (entertainer).
- 2.23—Mr. Ronald Brooking (solo).
- 2.30—Miss Lillian Furlong (entertainer).
- 2.37—Mr. Bert Lettifer (violinist).
- 2.44—Miss Iris Shaw (entertainer).
- 2.51—Melbourne Piano Trio.
- 4—Time Signal Chimes; 2nd Weather Report; Hoyt's Premier Orchestra.
- 4.55—Evening Amusement Guide.
- 5—Time Signal Chimes; Studio Barometer Readings. Close down.

Early Evening Session.

- 4.45—The Children's Corner, by Uncle Rad.

Evening Session.

- 7.55—Studio Barometer Readings; British Official Wireless Press.
- 8—Time Signal Chime.
- 8.2—Mr. Eric Aitken (pianoforte items).
- 8.11—Mr. Gerald Wall (tenor).
- 8.21—Miss Marjory Viner (violinist).
- 8.25—Mr. Wallis Gill (humorist).
- 8.32—Mr. A. J. Sullivan, talk, "Lost in the Australian Bush."
- 8.47—The Tarnes Trio (soprano, cello, piano).
- 8.57—Mr. John H. Booth (humorous entertainer).
- 9.7—Mr. Eric Aitken (pianoforte items).
- 9.17—Mr. Gerald Wall (tenor).
- 9.24—Marianne Sartori (entertainer at the piano).
- 9.51—Mr. Walker Binks (character analyst and vocational advisor), "Adjusting the Machine," (Final Talk).
- 9.56—Miss Dolly Haines (cello).
- 9.53—Mr. Wallis Gill (humorist).
- 10.0—Time Signal from G.P.O.
- 10.15—Mr. John H. Booth, Dickens' Festival, Hoyt's Premier Orchestra.
- 10.40—Close down.

4 QG

Midday Session.

- 12.55—Tune-in.
- 12.53—Time Signal.
- 1—Market Reports supplied by the Council of Agriculture; Stock Exchange Information, supplied by the Committee of the Brisbane Stock Exchange; Weather Information supplied by the Commonwealth Weather Bureau; News Service supplied by "The Daily Mail." News service supplied by "The Daily Standard."
- 1.5—From the Hotel Carlton, lunch hour music by the Carlton Orchestra.
- 2—Close down.

Afternoon Session.

- 2.30—Programme of music by the Carlton Symphony Orchestra.
- 4.15—News Service supplied by "The Telegraph."
- 4.56—Close down.

Early Evening Session.

- 6.35—Tune-in.
- 6.40—The Children's Session—Stories by "The Sandman."
- 7—The Farmers' Session. Market Reports supplied by the Council of Agriculture. Lectures: "A Queenslander's Impressions of Scottish Stock Breeding," No. 4 of a series, by Mr. J. K. P. Reid (Editor, Queensland Agricultural High School and College).
- 7.20—News Service supplied by "The Standard." Stock Exchange Information supplied by the Committee of the Brisbane Stock Exchange.
- 7.40—Announcements.

Night Session.

- 7.45—Lecture Session: "A Talk by the Officers of the Queensland Preference League."
- 8—The Federal Bond.
- 9—Radio Voice Contest Items.
- 9.20—Weather Information, officially supplied by the Commonwealth Weather Bureau Announcements.
- 9.40—From the Centennial Hall, dance music.
- 10—From the Studio, "The Daily Mail" News Service. Close down.

5 CL

Morning Session.

- 11.40—G.P.O. Chimes.
- 11.51—Featuring a Stack Duo Art Number.
- 11.46—"Advertiser" News Service.
- 11.55—Vocation number.
- 12—G.P.O. Chimes.
- 12.1—"Advertiser" News Service and Cricket scores.
- 12.14—Featuring a Stack Duo Art Number; 12.30—T.C. Studio Orchestra will be heard in a series of classical numbers.
- 1.53 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
- 2—G.P.O. Chimes.

Afternoon Session.

- 2—G.P.O. Chimes.
- 2.1—Roly from "Maple Leaf" Cafe—Orchestral numbers.
- 2.46—From Studio—Serial Story.
- 4—G.P.O. Chimes.
- 4.1—Broadcast from "Arcadia" Cafe—Orchestral numbers.
- 4.56—Stock Exchange Reports, General Information and Station Announcements.
- 5—G.P.O. Chimes.

Evening Session.

- 6.30—G.P.O. Chimes.
- 6.31—Bedtime Stories, by "Annette Peggy."
- 7.30—Market Reports.
- 7.40—W. W. Frederickson will give his weekly motor talk.
- 7.50—Mr. A. E. Dunree will talk on "Care of the Teeth."
- 8—G.P.O. Chimes.
- 8.1—Convent of Mercy Choral Class, interspersed with vocal items by A. Robertson, Linda Wald, T. Hamman, and S. Morrell.
- 9.20—"Twinklers" Boys' Club.
- 8.40—Studio Concert, continued.
- 9—G.P.O. Chimes.
- 9.1—Weather reports.
- 9.5—Studio concert, continued.
- 10.15—"Advertiser" news service and ships within wireless range.
- 10.30—Studio concert, continued.
- 10.55—Station announcements.
- 11—G.P.O. Chimes, National Anthem, and close down.

7 ZL

Morning Session.

- 11—G.P.O. Clock Chimes. "The Mercury" news, Stock Market, Shipping, Commercial Intelligence. Weather information and Selections on the Salento.
- 12—G.P.O. Clock Chimes. Close down.

Afternoon Session.

- 2—G.P.O. Clock Chimes. Musical items from the Studio.
- 3.55—Hobart Stock Exchange quotations.
- 3.55—Weather information.
- 4—G.P.O. Clock Chimes. Close down.

Early Evening Session.

- 7—Children's Corner, "Big Brother" chats to his pals.

Evening Session.

- 8—G.P.O. Clock Chimes. "The Mercury" special Tasmania news service. Railway auction produce sales. Weather information.
- 8.5—Hobart Stock Exchange quotations.
- 8.15—Talk by Dean Rivers, subject: "Church Music."
- 8.30—Musical items from Findlay's Pty. Ltd., Music Studio, Elizabeth Street, Hobart, including selections on the Gulleransen self recording player.
- 9.50—"The Mercury" special interstate news service. Weather synopsis. Station announcements. National Anthem.



Tuesday, Sept. 28

2 FC

Early Morning Session.

- 7—The Chimes of 2FC and Announcements. Time Signals.
- 7.5—Music from the Studio.
- 7.10—Weather information, commercial news, shipping intelligence, rainfall, temperatures, astronomical memoranda. Mail services.
- 7.25—Investment market, mining share market, metal quotations.
- 7.35—Wool sales, breadstuffs markets, produce markets.
- 7.45—"Sydney Morning Herald" news service.
- 8—Time signals. Cricket scores. A Cheerio Talk, by Mr. J. K. Forcell.
- 8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Announcements.
- 9.20—Music from the studio.
- 9.45—Last minute sporting information, by the 2FC Racing Commissioner. The Official Opening of the N.S.W. Local Government Conference.
- 11.5—Australian Press Association and Reporter's Cable Service.
- 11.15—A Talk on Home Cooking and Recipes, by Miss Ruth Purst.
- 11.30—Close down.

Midday Session.

- 12—Time Signals; The Chimes of 2FC and Announcements.
- 12.5—Stock Exchange—First Call.
- 12.10—Music from the Studio.
- 12.40—Rugby Wireless News.
- 1—Time signals. Weather intelligence.
- 1.5—"Evening News" midday news service. Producer's Distributing Society's reports.

NOTICE! SUPER HETERODYNE RECEIVING SETS COMMONWEALTH PATENT 16552/20

To MANUFACTURERS—SELLERS—USERS—of the above type of Wireless Receiving Sets:—

A license under the above Patent is required by all manufacturers, sellers and users of Super Heterodyne Wireless Receiving Sets.

Full information will be furnished on application to STANDARD TELEPHONES & CABLES (ASIA) LTD., Box 525-B, General Post Office, Sydney.

- 1.50—Music from the Studio.
- 1.30—Race Exchange, Second Call.
- 1.35—Music from the Studio.
- 2.—Time Signals: Close down.
- Afternoon Session.
- 2.30—The Chimes of 2FO and Announcements.
- 2.30—A recital by the pupils of Miss Mabel Estabrook.
- 2.50—A Mariette from Burdakin House.
- 3.25—The Oak Hall Trio.
- 3.35—Miss Marjory Cole, soprano.
- 3.45—Music from the Studio.
- 4.45—Stock Exchange, Third Call.
- 4.45—Music from the Studio.
- 6.—Time Signals: Close down.

Early Evening Session.

- 6.—The Chimes of 2FO and Announcements.
- 6.45—"Hello Man" talks to the children.
- 6.45—Story for the Elderly Children.
- 6.50—Broadcast from the Hotel Australia, or choral items.
- 7.15—From the Studio: "Evening News" late news service, weather information.
- 7.20—Delight's Market Reports (wool, wheat, stock), fruit and vegetable markets.
- 7.40—Dr. T. J. Merrit, 2nd Talk, "More About Hollywood."

Night Session.

- 7.55—The Chimes of 2FO and Announcements.
- 8.—From the Studio—Items by the Metropolitan Band.
- 8.20—Broadcast from the Adyar Hall, musical items.
- 8.45—Items by the Metropolitan Band.
- 8.55—Miss Kitty Elliott, comedienne.
- 9.13—Items by the Metropolitan Band.
- 9.25—Broadcast from the Lyric Winter Garden Theatre. Items by the orchestra, under the baton of Mr. Alfred Moulton.
- 9.55—Mr. Ifould, N.S.W. Public Librarian, will deliver an address, "Boys and Citizenship."
- 10.10—Broadcast from the Lyric Winter Garden, orchestral items.
- 10.30—Miss Kitty Elliott, comedienne.
- 10.40—Broadcast from the Wentworth Hotel, Sydney, Wentworth Cafe Band Orchestra, under the baton of Mr. Arthur Simpson.
- 12.—National Anthem. Close down.

2BL

Early Morning Session.

- 7.15—Physical Training and Health Exercises.
- 7.30—Talk on Health and Hygiene.
- 7.35—Physical Training and Health Exercises.
- 7.45—Broadcasters' Special News Service.
- 7.52—Special News from Rusby.
- 7.55—Musical Programme from the Studio.
- 8.—G.P.O. Clock and Chimes. Broadcasters' Turf Expert will discuss the training operations and horses' form from Randwick.
- 8.15—G.P.O. Clock and Close Down.

Morning Session.

- 10.—G.P.O. Clock and Chimes. Special news service from the "Daily Telegraph."
- 10.10—Music from the Studio.
- 10.25—Special news from "Daily Telegraph."
- 10.45—Musical programme from the Studio.
- 11.—G.P.O. Clock and Chimes. Special cricket session.
- 11.5—Musical programme from the Studio.
- 11.15—Marbets.
- 11.20—London Metal Quotations.
- 11.25—Broadcasters' Special Information Service, including mails, shipping, weather, rainfall.
- 11.40—Musical Programme from the Studio.
- 11.45—Women's Session: Social Notes by Mrs. Jordan, and a talk on "Labor-saving devices."
- 12.25—Miss H. J. Beegling will talk on "Hobbies and Health."
- 12.30—Sydney Sitoch Exchange calls.
- 12.45—Hillier's Instrumental Quartet, direction "Caryl Gaining," 1st violin, Miss Vera Wareham, Obligato Violin, Mr. Jack West, Cello, Miss Daisy Nalton.
- 1.15—Musical Recital broadcast from the Fine Art Gallery, Anthony Hordern.
- 3.—G.P.O. Clock and Chimes. Close down.

Afternoon Session.

- During the Afternoon results of races will be broadcast immediately after each race by courtesy of The Sun Newspaper.
- 3.—G.P.O. Clock and Chimes; Weather Report and Special Notes from "The Sun."
- 3.15—Radio Science Series: Trio, under the direction of Miss De Curry Bremer.
- 3.30—"Talk on Modern Psychology" by Mr. J. M. Prentiss.
- 3.45—Musical Programme from the Studio.
- 4.—G.P.O. Clock and Chimes; Civil Service Stores' Trio.
- 4.15—Musical Programme from the Studio.
- 4.30—Serial Story, entitled, "The Scarlet Cockerel" (Sublette).
- 4.45—Musical programme from the studio.
- 5.—G.P.O. Clock and Chimes: Producers' Distributing Society's Market Report.
- 5.10—Shipping information, when available.
- 5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

- 6.—G.P.O. Clock and Chimes; Uncle Jack and the Kidnies.
- 6.45—Broadcasters' Dinner Orchestra.
- 7.15—Australian Mercantile Land & Finance Co.'s Stock, Wool and Hides Report.
- 7.20—Weather Report by Courtesy of Mr. C. Mares, Government Meteorologist.
- 7.24—Stock Exchange Reports.
- 7.35—Producers' Distributing Society's Fruit and Vegetable Report.
- 7.35—Fruit and Vegetable Report (Sun).
- 7.35—Grain and Poultry Market Report.
- 7.42—Egg and Poultry Market Report.
- 7.45—Special report on Land Matters, by courtesy of the Department of Lands.
- 7.55—Close down.

Evening Session.

- 8 p.m.—G.P.O. Clock and Chimes. Broadcasters' Miniature Orchestra under the direction of Mr. J. Knight Barnett.
- 8.15—Miss Gladys Verana (soprano).
- 8.20—Lecture from the Studio.
- 8.30—Mr. Stanley Cabell (tenor).
- 8.47—Resume of following day's programme.
- 9.—G.P.O. Clock and Chimes.
- 9.1—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.
- 9.3—Announcements.
- 9.5—Broadcasters' Miniature Orchestra.
- 9.8—Mr. Reg. Harrison (comedian).
- 9.15—Mr. Crosby Browne (Clarinet solos).
- 9.22—Miss Mabel Barnett (contralto).
- 9.30—Interval.
- 9.35—Lecture from the Studio.
- 9.55—Miss Gladys Verana.
- 10.10—Mr. Crosby Browne.
- 10.17—Mr. Reg. Harrison.
- 10.25—Miss Mabel Barnett.
- 10.35—Miss Dulcie Blair (soprano solos).
- 10.40—Mr. Stanley Cabell.
- 10.47—News Reports, by courtesy of "The Sun" Newspapers.
- 11.35—From the Studio: Palmgrove Orchestra, under the direction of Mr. Stan. Fotheringham.
- 12.—G.P.O. Clock and Chimes. National Anthem.

2KY

Luncheon Hour Session.

- 12.15—Pianoforte solo.
- 12.23—Musical interlude.
- 12.45—Latest news items.
- Baritone solos.
- 1.10—Selections, Hawaiian steel guitars.
- 1.25—Union News and Meetings.
- 1.30—Musical and vocal items, closing down 1.45 p.m.

Afternoon Session.

- 1.15—Tune-in to the ticking of the clock.
- 3.1—Popular fox trots, "Orpheus" Gramophone.
- 3.30—Book Reviews.
- 3.45—Musical interlude.
- 4—Popular Science Talks, Mr. A. T. Keeble, B.Sc.
- 4.10—Musical and vocal items.
- 4.45—Theatre Attractions.

Children's Hour.

- 6.30—Mr. Thompson.
- Evening Session.
- 7.30—Latest news items.
- 7.40—Lesson in German, Mr. F. T. Simon.
- 7.55—Shipping log.
- 8.—Pianoforte solos, Mr. Bryn Bedford.
- 8.10—Mezzo soprano solos, Miss Marie Carroll.
- 8.15—Violin solos, Master Roy Deal.
- 8.25—Tenor solos, Mr. Alec Jamieson.
- 8.35—Musical Interlude, Palmis Royal California leader, Mr. Keenan (by kind permission of J. C. Hendroit Ltd.).
- 8.55—Special Announcements.
- 9.—Soprano solos, Miss Helen Cameron.
- 9.10—Novelty interlude, Herbert Heaver, An Interception, Victor Belkmore.
- 9.20—Tenor solos, Mr. A. Fields.
- 9.30—Musical interlude.
- 9.40—To be announced.
- 10—Close down.

3LO

Midday Session.

- 12—Time Signals: British Official Wireless News from Rusby; Reuters and the Australian Press Association Cables; "Austral" and "Herald" News Services.
- 12.45—Stock Exchange Information.
- 12.50—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia and New South Wales. Ocean forecast. River reports.
- 1.—Time Signal.
- 1.1—Haymond EPBs, baritone.
- 1.7—Ivan Johnson, Mr. Carlo Band.
- 1.83—Raymond Ellis, baritone.
- 2—Close down.

Afternoon Session.

- 3.—Will Page and his popular Players.
- 3.10—Raymond Ellis, baritone.
- 3.17—Will Page and his Popular Players.
- 3.27—Au Pair, of Messrs. Buckley & Nunn Ltd., will give a Fashion Talk.
- 3.42—Will Page and his Popular Players.
- 3.52—Kathleen Rochford, soprano.
- 3.58—Will Page and his Popular Players.
- 4.13—Raymond Ellis, baritone.
- 4.18—Morton Morand, Infant Welfare.
- 4.23—Will Page and his Popular Players.
- 4.38—Kathleen Rochford, soprano.
- 4.47—Will Page and his Popular Players.
- 4.48—"Herald" News Service; Stock Exchange Information.
- 5—Close down.

Evening Session.

- 6.40—Children's Hour. Answers to letters and Birthday Greetings.
- 6.—Pat McLean will sing.
- 6.7—Mary Gurned, poems; Somebody's Mother, Ten True Friends, story for the littlest ones, Ray o' Light.
- 6.17—Pat McLean, songs.
- 6.24—Mary Gurned, story for the boys and girls, The Wings of Snuffkins, by T. G. Byron Moore.
- 6.40—Reuters and the Australian Press Association cables "Austral" and "Herald" News Services.
- 6.55—Weather synopsis. Aerial mail information by the Australian Aerial Services Ltd.
- 6.58—Stock Exchange information.
- 7.2—Fish Market Reports by J. E. Borrett Ltd.
- 7.4—River Reports.
- 7.6—Market Reports by the Victorian Producers' Co-operative Co. Ltd.: Haymarket sales, poultry, grain, chaff, hay, straw, jute, dairy produce, tallow and oils.
- Night Session.
- 7.30—Under the auspices of the Town Planning Association: Sir James Barrett, Dan-jenny Police Paddock.
- 7.40—Under the auspices of the University Extension Board: Miss Olga Parker, "Old Greek views of the World."
- 8.—Salvation Army Territorial Staff Band.
- 8.5—I. Nelson, violin solo.
- 8.15—Salvation Army Territorial Staff Band.
- 8.18—Capt. Saunders, song.
- 8.23—Conductor Dutton, cornet solo.
- 8.28—Band Glor.
- 8.30—Under the auspices of the Victorian

- Amateur Athletic Association, Mr. T. C.
- 8.50—E. Nelson, piano.
- 8.55—Salvation Army Territorial Staff Band.
- 9.5—Dr. Loftus Hills, Popular Science.
- 9.55—Staff Bandman Small, excerpts from "Messiah."
- 9.57—Studio Orchestra.
- 9.57—E. Nelson, violin.
- 9.58—Salvation Army Territorial Staff Band.
- 9.52—C. Richard Chngur, base; Bertha Jorgensen, violin; Agnes Fortune piano.
- 10—British Official Wireless News from Tokyo; Announcements, etc.
- 10.10—Vocal Quartette.
- 10.15—Tasma Tieraan, cello solo.
- 10.22—Salvation Army Territorial Staff Band.
- 10.37—"Argus" News Service; Weather Forecast; Announcements.
- 10.42—Studio Orchestra.
- 10.52—Agnes Fortune, piano solo.
- 11—Lance Murray and Studio Orchestra.
- 11.45—God Save the King.

3 AR

- Morning Session.
- 11.30—The British Official Wireless Press, received from Rugby Super wireless station, England, by 3AR's operator. Express train information. "Age" News bulletin.
- 12.0—Time Signal from G.P.O.; events of day. Studio Barometer Readings and Outdoor Thermometer Readings; 1st Weather Forecast.
- 12.5—Musical Selections relayed from Hoyt's de Luxe, Bourke Street, Mr. T. L. Campbell at the organ.
- 12.30—Stock Exchange News.
- 12.5—Market Reports.
- 12.40—Musical Selections.
- 12.45—Mail Notices; Shipping Movements.
- 1—Close down.

Afternoon Session.

- 2.30—Hoyt's Premier Orchestra, under the direction of Miss Ella Beien (Special Holiday Month Programme).
- 3 p.m.—Mr. Walter Quirk (pianist).
- 3.7—Mr. James G. Croft (humorist).
- 3.15—Miss Edna Stappers (soprano).
- 3.25—Mr. Tom. B. Carroll (baritone).
- 3.29—Mr. Walter Quirk (pianist).
- 3.37—Mr. James G. Croft (humorist).
- 3.45—Miss Edna Stappers (soprano).
- 3.52—Mr. Tom. B. Carroll (baritone).
- 4.8—Time Signal Chime; 2nd Weather Forecast; Hoyt's Premier Orchestra.
- 4.55—Evening Amusement Guide.
- 5—Time Signal Chime; Studio Barometer Readings; Close down.

Early Evening Session.

- 6.45—The Children's Corner, by Uncle Peter.

Evening Session.

- 7.45—The British Official Wireless Press; Studio Barometer Readings.
- 8—Time signal chime from G.P.O.
- 8.2—Mr. Vera Williams (soprano).
- 8.5—Mr. Anthony Lucas (sautist).
- 8.16—Mr. John Brennan (Lyric soprano).
- 8.28—Mr. Pettis (manager of Burns-Philp Co.) will speak on "A trip to Java and Singapore in the new Motor Vessel, 'Malabar'."
- 8.37—Miss Yety Landau (entertainer).
- 8.44—Mr. Ivan Vladimoff (violinist).
- 8.51—Mrs. Butterfield (contralto).
- 8.58—Mr. Vera Williams (soprano).
- 9.5—Mr. Athol Wilson will speak on "Amateur Athletics," 1st series.
- 9.19—Miss Rene Mason (contralto).
- 9.26—Mr. Anthony Lucas (sautist).
- 9.35—Mrs. Butterfield (contralto).
- 9.40—Mr. Ivan Vladimoff (violinist).
- 9.47—Mrs. John Brennan (Lyric soprano).
- 9.54—Miss Yety Landau (entertainer).
- 10—Time Signal from G.P.O.; Studio Barometer Readings; "Age" News Bulletin.
- 10.10—Leggett's Ballroom Orchestra, under leadership of Mr. H. Nangle.
- 11—Close down.

4QG

- Milday Session.
- 12.55—Tune-in Signal.
- 12.58—Time Signal.

- 1—Market Reports, Stock Exchange, Weather, "The Daily Mail" News, the "Daily Standard" News.
- 1.20—Lunch Hour Music by the Carlton Orchestra.
- 2—Close down.

Afternoon Session.

- 3.30—A programme of music from the Studio.
- 4.15—"The Telegraph" News.
- 4.30—Close down.
- Early Evening Session.
- 6.25—Tune-in.
- 6.30—The Children's Session, Stories by "Uncle Ben" and "Uncle Jim."
- 7—From the Council of Agriculture Studio—The Farmers' Section, Market Reports, Lethbridge "The Science of Breeding," by Professor Goddard (University of Queensland).
- 7.50—"The Daily Standard" News, Stock Exchange information.
- 7.40—Announcements.

Night Session.

- 7.45—Lecture Session: "Photography," by Mr. F. L. South (manager, Kodak Ltd.).
- 8—Irishane Apollo Club, from the Brisbane School of Arts.
- The Excelsior Band.
- 9.30—Weather information, officially supplied by the Commonwealth Weather Bureau, Announcements.
- 9.45—Mr. R. J. Robinson, tenor, Radio Voice Contest Notes.
- 10—From the Studio, "The Daily Mail" news service. Close down.

5CL

Morning Session.

- 11.30—G.P.O. Chimes.
- 11.31—Featuring a Stock Day Art Number, "The Advertiser" News Service.
- 11.55—Vocalion number.
- 12—G.P.O. Chimes.
- 12.1—"Advertiser" News Service and Cricket scores.
- 12.15—5CL Studio Orchestra will be heard in a series of classical numbers.
- 1.5—(approx.)—Ward & Co's Stock Exchange Intelligence; Weather Reports and Station Announcements.
- 2—G.P.O. Chimes.

Afternoon Session.

- 3—G.P.O. Chimes.
- 3.15—Relay from "Maple Leaf" Cafe—Orchestra numbers.
- 3.45—From Studio—Serial Story.
- 4—G.P.O. Chimes.
- 4.15—Broadcast from "Arcadia" Cafe—Orchestra numbers.
- 4.55—Stock Exchange Reports, General Information, and Station Announcements.
- 5—G.P.O. Chimes.

Evening Session.

- 8.30—G.P.O. Chimes.
- 8.31—Ballroom stories.
- 7.40—Milday talk by Mr. Jackell.
- 8—G.P.O. Chimes.
- 8.1—Brahms Evening, arranged by Miss Sylvia Thomas; also vocal items by Mrs. W. Keith Stewart and instrumental items by the Calcutta Quartette.
- 9—G.P.O. Chimes.
- 9.1—Weather reports.
- 9.3—Studio concert, continued.
- 10.15—"Advertiser" news service and ships within wireless range.
- 10.30—Studio concert, continued.
- 10.55—Station Announcements.
- 11—G.P.O. Chimes. National Anthem.

7ZL

Morning Session.

- 11—G.P.O. Clock Chimes. "The Mercury" commercial intelligence. Weather information and Shipping; Sabrosa Selections.
- 12—G.P.O. Clock Chimes; Close down.

Afternoon Session.

- 3—G.P.O. Clock Chimes. Musical items from the Studio.

- 6.30—Robert Stock Exchange quotations.
- 6.45—Weather information.
- 6.45—G.P.O. Clock Chimes. Close down.

Early Evening Session.

- 7—Children's Corner. "Big Brother" chats to his pals.
- 7.15—The adventures of George the Book-shelf cat. "The small boy who sweeps out has a little accident," by Aunt Stella.

Evening Session.

- 8—G.P.O. Clock Chimes. "The Mercury" special Tasmalian news service. Railway auction produce sales, Weather information.
- 8.45—Robert Stock Exchange quotations.
- 8.10—Literary Lapses and Library Lists, by Mr. W. E. Fuller.
- 8.50—Musical items from the Studio—special request numbers.
- 9.50—"The Mercury" special Interstate news service. Weather synopsis. Station announcements. Close down.
- National Anthem.



Wednesday, Sept. 29

2FC

Early Morning Session.

- 7—Time Signal. The Chimes of 2FC and Announcements.
- 7.5—Music from the Studio. Weather information, Commercial news, Shipping Intelligence, Rainfall, Temperatures, Astronomical Memoranda.
- 7.15—Investment Market, Mining Share Markets, Metal Quotations.
- 7.35—Wool sales, breadstuffs markets, produce markets.
- 7.40—"Sydney Morning Herald" news service.

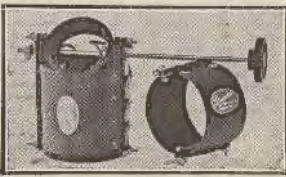
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8.—The Chimes of "Big Ben" and Announcements.
8.15—Close down.

9.—Morning Session.

9.15—The Chimes of 2FC and Programme Announcements.

9.20—Music from the Studio.

10.—The Chimes of "Big Ben."

10.15—Late "Sydney Morning Herald" news service.

10.15—Music from the Studio.

10.45—A Morning Reading.

11.—Australia Press Association and Reuters Cable Service.

11.15—Cooking Talk and Recipes by Miss Ruth Furse.

11.30—Close down.

MIDDAY SESSION.

12.—Time Signals. The Chimes of 2FC and Announcements.

12.5—Stock Exchange, first call.

12.15—Music from the Studio.

12.50—Rugby Wireless News.

1.—Time Signals. Weather Intelligence.

1.3.—"Evening News" midday news service; Producer's Distributing Society's Report.

1.20—Organ recital from the Pitt Street Congregational Church.

1.30—Stock Exchange, Second Call.

1.35—Music from the Studio.

2.—Time Signals. Close down.

AFTERNOON SESSION.

2.30.—The Chimes of 2FC and Announcements.

2.35—A recital by the pupils of Mr. Lawrence Campbell.

2.50—From Farmer's Tea Room: The Oak Hall Trio (leader, Mr. Horace Kente).

2.40—Miss Kathleen Beverley, soprano.

2.45—From Farmer's Tea Room: The Oak Hall Trio.

2.55—Music from the Studio.

3.—Miss Kathleen Beverley, soprano.

4.15—The Oak Hall Trio.

4.35—Mr. Frank Donohue, tenor.

4.40—Music from the Studio.

4.45—Stock Exchange, Third Call.

4.45—Music from the Studio.

5.—Chimes of "Big Ben." Close down.

EARLY EVENING SESSION.

6.—Time Signals. The Chimes of 2FC. Announcements.

6.5.—The "Hello Man" talks to the children.

6.10—A Talk to the Elder Children.

6.55—Broadcast from the Hotel Australia, orchestral items.

7.15—From the Studio: Late "Evening News" news service, weather information.

7.30—Dalgely's Market Reports (wool, wheat, stock), fruit and vegetable markets.

7.40—Close down.

NIGHT SESSION.

7.50—Broadcast from the Newcastle Cathedral—social on the grand organ, by Mr. T. H. Massey.

7.55—Short broadcast talk by Mr. Ellis Price on T. H. prepared by the Dean of Newcastle, the Rev. Horace Croft. To be delivered from the Dean's vestry at the Cathedral.

8.—From the Cathedral, as the procession enters the Great West Door, the massed choirs will sing the hymn, "How Bright These Gleaming Spirits Shine." The Padre will lead with the ritual on T. H. with responses from the whole congregation, after which, Padre Hayes, of the Central Methodist Mission, and Toch H. Padie, will read the Section. After the singing of the first two verses of the hymn, "Oh Valiant Heart," the Announcer, from the vestry, will describe the ceremony now going on, whereby His Excellency, the Governor-General, Lord Stonehaven, will light the Forster Lamp, and from it will light the group of trail lights of T. H. from Fremantle to Brisbane, etc.

9.—Broadcast from the Conservatorium of Music, Sydney. A concert by the Red Cross Society.

9.30—Mr. Jack Lunadeine, Musical Steeplechase Series.

9.40—Additional items from the Red Cross Concert.

10.—Broadcast from the Admir Hall, a concert arranged by Professor C. Baker.

10.30—Rev. F. H. Raward will talk on "Mogul-ines."

10.45—Mr. Jack Lunadeine, entertainer.

11.—Broadcast from the Wentworth Hotel, Sydney, Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.

12.—National Anthem; Close down.

2BL

Early Morning Session.

7.15—Usual Early Morning Session.

Morning Session.

10.—Usual Morning Programme.

Afternoon Session.

During the afternoon Race Results will be broadcast immediately after the race.

3.—G.P.O. Clock and Chimes; Weather Report and Social News from "The Sun."

2.10—Resume of night's programme.

2.15—Special Operatic Session with explanation talk by Mr. J. M. Prentice, illustrated with specially selected musical items.

2.45—Music from the Studio.

4.—G.P.O. Clock and Chimes; Music from the Studio.

4.30—Serial Story, entitled "The Scarlet Cookery," by C. M. Sublette.

4.45—Music from the Studio.

5.—G.P.O. Clock and Chimes; Producer's Distributing Society's Market Report.

5.10—Shipping Information.

5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

6.—G.P.O. Clock and Chimes; Uncle George and the Kiddies.

6.45—Favourite Dinner Orchestra, under the direction of Cec. Morrison.

Special Country Session.

7.15—Australian Mercantile Land & Finance Co.'s Stock and Wheat Report.

7.20—Weather reports.

7.24—Stock Exchange Reports.

7.31—Producer's Distributing Society's Fruit and Vegetable Report.

7.35—Fruit and Vegetable Report (Sun).

7.39—Grain and Poultry Market Report.

7.42—Egg and Poultry Market Report.

7.45—Country News from "The Sun."

7.45—Close down.

Evening Session.

8 p.m. G.P.O. Clock and Chimes; Broadcasters' Topical Chronus; City of Sydney Band, broadcast from Barlow Chambers.

8.20—Lecture from the Studio.

8.40—City of Sydney Band.

9.—G.P.O. Clock and Chimes; Resume of following day's Programme.

9.5—Weather Report and Forecast by courtesy of Mr. J. C. Marco, Govt. Meteorologist.

9.5—Announcements.

9.10—City of Sydney Band, broadcast from Barlow Chambers.

9.15—Mr. J. M. Prentice will talk on "Foreign Affairs."

10.0 G.P.O. Clock and Chimes; Cec. Morrison and his Glee-choirs broadcast from the ball-room of the Bondi Casino. During the intervals between dances, news reports, by courtesy of "The Sun" Newspapers, will be broadcast.

11.—City of the Studio; Jazz Band.

12.—G.P.O. Clock and Chimes; National Anthem.

2KY

Luncheon Hour Session.

12.15—Luncheon Hour Session: Popular Fox Trott. Musical Interlude. News Items, Hawaiian Steel Guitar Selections, Union News and Meetings, Vocal Items, Closing down at 1.45 p.m.

Evening Session.

7.—Sporting Feature. Turf Topics. A complete review of to-day's racing, by Mr. T. G. Hosking.

7.50—News Items.

7.40—Prison Reform, by Miss Irwin.

8.—Pianoforte solo.

8.10—Whistling solo, by Miss Lily Wallace.

8.15—Result of Lawn Cigarette Competition.

8.20—Ballroom solo, by Mr. Alf James.

8.30—Musical Interlude, by Palala Royal Californians (Walter Deehan, band, by kind permission of J. C. Bendroff Ltd.).

8.55—Special announcements and result of Competition.

9.—Selections, Hawaiian Steel Guitars.

9.10—Theatre Critiques.

9.15—Recital of latest Lincoln records.

10.—Close down.

3LO

MIDDAY SESSION.

12 noon—Time Signals; Reuters and the Australia Press Association Cables; "Argus" and "Herald" News Services; Shipping Intelligence.

12.30—Meteorological Information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales, Ocean forecast. River reports.

1.—Time Signals.

1.1—Studio Orchestra.

1.10—Raymond Ellis, baritone.

1.17—Walter Smith, tenor.

1.25—Studio Orchestra.

1.34—Raymond Ellis, baritone.

1.51—Dorothy Roxburgh, viola.

2.—Close down.

AFTERNOON SESSION.

3.—Studio Orchestra.

3.10—Elsie Davies, soprano.

3.17—C. Richard Chidge, flute.

3.24—Mrs. M. Callaway Mahood, Into Decoration; Wall Treatment.

3.40—Donald Williams, tenor.

3.47—Studio Orchestra.

3.57—Elsie Davies, soprano.

4.—Sister Peck, will give a talk on Mothercraft.

4.—Tanna Tjerman, 'cello.

4.31—Donald Williams, tenor.

4.35—Studio Orchestra.

4.42—Studio Orchestra.

4.45—"Herald" News Service; Stock Exchange Information.

5.—Close down.

EVENING SESSION.

5.45—Children's Hour; Answers to letters and Birthday Greetings.

6.—A musical programme arranged by Mr. Fritz Hart.

6.10—Ladies' Cricket scores, by courtesy of Reuters Ltd. "Argus" and "Herald" news services. Reuters and the Australian Press Association cables.

6.53—Weather. Springs; Shipping Movements; Overseas Shipping News.

7.—Stock Exchange Information.

7.—Fruit Market Reports by J. K. Borrett Ltd.

7.5—River Reports.

7.55—Market Reports by the Victorian Producers' Co-operative Co. Ltd.; Haymarket Sheep sales; poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.

Market Prices of oranges and lemons by the Victorian Central Citrus Association Pty. Ltd.

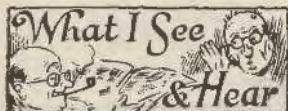
NIGHT SESSION.

7.20.—Under the auspices of the Department of Agriculture, Mr. R. Crowe, Exports Superintendent, Lessons from the Royal Show.

7.40.—Mr. H. C. Slocombe, will give a talk on Photography.

8.—National Nights: Gorman Night, Part I. Illustrated by the University Conservatorium Students, lecturer, Mr. Saiton Crow.

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IT HAS BEEN SAID:

That every week nearly 15,000 patents for new inventions in Wireless are lodged at the United States Patents Office.

That a full description of the radio short wave equipment, used on the Arctic Expeditions, can be obtained by writing the Burgess Battery Company, Madison, Wisconsin, U.S.A.

That we can now operate our Radio as easily as our electric light by using a "Philco" "B" Eliminator—costs £14/14/- complete. Ask to see one.

That 2FC's wave-length is coming down. Why not license fees also?

That "B" Batteries last longer if we only choose the right size and type. There's a Burgess for every circuit and set—all shapes, weights, and sizes. Use a "C" Battery on all but single valve sets and see the difference.

That heart beats are now analyzed by Radio. The internal sounds of the body by means of a Radio Stethoscope are separately recorded, so that a listening physician can single out the sounds of the heart and lungs.

That Captain Frank Hurley, of Shackleton Expedition fame, and other explorations, has added another Burgess Adventure to their long list, for he carried them with him as equipment on his 9-valve "General Radio" Receiver to Thursday Island. This week from 2FC he will tell of these Adventures.

The set used by Commander Byrd in his Polar flight, operates on wave-lengths of 13, 20, 40, and 80 metres. The electrical energy was supplied by Burgess dry batteries.

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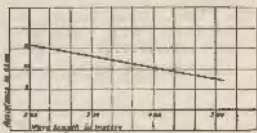
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inductance, embodying more than one idea, has been offered to the public. The ALL-AMERICAN Toroid Coil represents a departure from the standard designs of radio frequency transformers, and is the only coil having no external field. Thus the spacing of coils and setting at critical angles to minimize coupling, when used in multi-stage amplifiers is rendered unnecessary. In brief, ALL-AMERICAN Toroid Coils have the following advantages:—

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2. Feed-back between stages eliminated because this type of coil possesses no external magnetic field.
3. More compact and efficient set construction made possible because of the above features.



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"Standard Dragon." Model A.R.19,
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of flare, 14½ in. £6/10/-
"Concert Dragon." Model A.R.23.
Overall height, 24 in. Diameter
of flare, 21 in. £9/10/-
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with metal case. Width, 10 in.
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lish mahogany £8/10/-
Type, R.S.4 Tasmanian Black-
wood £9
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lish oak £9/9/-
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- 9.—Under the auspices of the Victorian Amateur Athletic Association, Dr. McAdam, Amateur Sport in the Health of a Nation.
 9.15—Captain Peters: Books, Wise and Otherwise.
 9.30—Bert Howell and his Concert Orchestra, transmitted from the Victory Theatre, St. Kilda.
 10.45—British Official Wireless News from Rugby: "Argus" News Service; Announcements; Weather Forecast.
 11.—Dance Music.
 11.45—God Save the King.

3AR

Morning Session.

- 11.30—British Official Wireless Press, received from Rugby Super Wireless Station, England, by 3AR's operator. Express Train Information. "Age" News Bulletin.
 12.—Time Signal Chime from G.P.O. Studio Barometer and Outdoor Thermometer Readings. First Weather Forecast. Events of the day.
 12.5.—Musical selections, relayed from Hoyt's de Luxe, Bourke Street. Mr. T. L. Campbell at the Warflier.
 12.40—Stock Exchange News; Market Reports
 12.45.—Musical selections.
 12.55.—Mail notices. Shipping movements.
 1.—Close down.

Afternoon Session.

- Ballarat Turf Club results after each race.
 2.30—Hoyt's Premier Orchestra relayed, special Birthday Month Programme.
 3.—The E. K. Venman Trio, No. 2.
 3.10—Miss Elsie Young (soprano).
 3.20—Miss Daphne Paton (violinist).
 3.30—Miss Elsie Young (soprano).
 3.37—Miss Connie Lee (banjoist).
 3.44—The E.K. Venman Trio, No. 2.
 4.—Time Signal Chime. Second Weather Forecast; Hoyt's Premier Orchestra.
 4.55.—Evening Amusement Guide.
 5.—Time Signal Chime. Studio Barometer Readings.

Early Evening Session.

- 6.45.—The Children's Corner by Uncle Rad.
 Evening Session.
 7.45.—British Official Wireless Press; Studio Barometer Readings.
 8.—Time Signal Chime.
 8.2.—A Trip across the World, with music, speech, and song.
 8.9.—Mr. Phil Bracey (Windage) will tell you a little about Pioneering days in Australia.
 8.19.—India, Miss Minnie Merle (soprano).
 8.28.—Japan, Mrs. A. E. Bone (mezzo).
 8.33.—America, The Felix Orchestra.
 8.40.—Miss Floretta Simmons (soprano).
 8.47.—England, Mr. Arthur Williams (baritone).
 8.55.—Scotland, Mr. John Watson (tenor).
 9.—Mr. Roderick MacLeod, on the bagpipes, selections.
 9.6.—Mr. Clement Kenny (tenor).
 9.16.—Ireland, Miss Minnie Merle (soprano).
 9.23.—Europe, Mr. Les. Jensen (baritone).
 9.30.—Miss Muriel A. Heughey, 1st of a series of talks, the youth movement in Central Europe.
 9.45.—France, Miss Floretta Simmons, the Cosmopolitan lady, will entertain at the piano.
 9.52.—Italy, Mr. Clement Kenny (tenor).
 10.—Time Signal Chime from G.P.O. Studio Barometer Readings. "Age" news bulletin, exclusive to 3AR.
 10.15.—Hoyt's Premier Orchestra.
 10.45.—Close down.

4QG

Morning Session.

- 7.—Physical Culture Session, exercises by Mr. Arthur Tibbety, Principal, Saxon School of Physical Culture.
 20.—Close down.

Midday Session.

- 12.55.—Tune-in Signal.
 12.58.—Time Signal.
 1.—Market Reports; Stock Exchange; Weather; "The Daily Mail" News; the "Daily Standard" News.
 1.20.—From Hotel Carlton, lunch hour music, by Carlton Orchestra.
 2.—Close down.
 Afternoon Session.
 3.30.—A Musical Programme by the Carlton Symphony Orchestra.
 4.15.—"The Telegraph" News.
 4.30.—Close down.

Early Evening Session.

- 6.25.—Tune-in.
 6.30.—The Children's Session; Stories by Little Miss Brisbane.
 7.—The Farmers' Session. Market Reports. Lectures: "Poultry—Exhibition and Utility," by Mr. V. Fleming.
 7.30.—"The Standard" news. Stock Exchange Information.
 7.40.—Announcements.

Night Session.

- 7.45.—Lecture Series: Travelogue Talk No. 7—"London to Suva," by Mr. C. V. Woodland.
 Students' Concert—students of Mrs. Robert Bell, assisted by Savoy Orchestra, "The Pacific Trio, Mr. D. E. Symes, and Mr. Claude Walker will assist. Radio Voice Contest items.
 9.15.—Weather information, officially supplied by the Commonwealth Weather Bureau.
 9.25.—Popular Items.
 10.—"The Daily Mail" news service.
 Close down.

5CL

Morning Session.

- 11.30—G.P.O. Chimes.
 11.31.—Featuring a Stock Duo Art Number.
 11.40.—Advertiser's News Service.
 11.55.—Vocalian number.
 12—G.P.O. Chimes.
 12.1.—Advertiser's News Service and Cricket scores.
 12.18.—Featuring a Stock Duo Art Number.
 12.40.—G.L.C. Studio Orchestra will be heard in a series of classical numbers.
 1.25 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
 2—G.P.O. Chimes.
 Afternoon Session.
 3—G.P.O. Chimes.
 3.1.—Relay from "Maple Leaf" Cafe—Orchestra numbers.
 3.35.—From Studio—Serial Story.
 4—G.P.O. Chimes.
 4.1.—Broadcast from "Aeradia" Cafe—Orchestra numbers.
 4.55.—Stock Exchange Reports, General Information, and Station Announcements
 5—G.P.O. Chimes.

Evening Session.

- 6.30—G.P.O. Chimes.
 6.45.—Time stories.
 7.30.—Market reports.
 7.40.—Hoyt's Sonnets' corner.
 8.—Palmis Roynl, interspersed with vocal items by Messrs. K. Huxley, A. Sheppard, Messrs. D. Gordon, and M. Pirie, from the studio.
 8.30.—Science talk by Messrs. F. H. Faulding and Co.
 8.40.—Studio concert, continued.
 9—G.P.O. Chimes.
 9.1.—Weather reports.
 9.8.—Studio concert, continued.
 10.15.—Advertiser's news service and alpha within wireless range.
 10.30.—Studio concert, continued.
 10.55.—Station announcements.
 11—G.P.O. Chimes. National Anthem.

7ZL

Morning Session.

- 11—G.P.O. Clock Chimes. "The Mercury" news. Stock market. Shipping. Commercial intelligence. Weather information and Sporting Anticipations; Salomola Selections.
 12—G.P.O. Chimes; Close down.

Afternoon Session.

- 3—G.P.O. Clock and Chimes; Musical Items from the studio; Story from the Illustrated Tasmanian Mail.
 3.30.—Robart Stock Exchange quotations.
 3.55.—Weather information.
 4—G.P.O. Clock Chimes. Close down.

Early Evening Session.

- 7.—Children's Corner. "Big Brother" chats to his pals.
 7.15.—Story from Illustrated Tasmanian Mail.
 7.30—"Guiding," by a Girl Guide.

Evening Session.

- 8—G.P.O. Clock Chimes; "The Mercury" special Tasmanian news service; Railway auction produce sales; Weather information and sporting results.
 8.4.—Robart Stock Exchange quotations.
 8.10.—Physical Culture talk, by Mr. George Collins.
 8.20.—Palais de Danse Band, City Hall, Hobart.
 8.55.—"The Mercury" special Interstate news service. Weather synopsis. Station announcements. National Anthem.
 Close down.

Thursday, Sept. 30

2FC

Early Morning Session.

- 7.—The Chimes of 2FC and Announcements.
 7.5.—Music from the Studio.
 7.10.—Weather Information, Commercial News, Shipping Intelligence, and Markets. Rainfall, Temperatures, Astronomical Memoranda. Mail services.
 7.25.—Investment Market, Mining Share Market, Metal Quotations.
 7.35.—Wool sales, breadstuffs markets, produce markets.
 7.45.—"Sydney Morning Herald" News Service.
 8.—The Chimes of 2FC and Announcements.
 8.15.—Close down.

Morning Session.

- 9.15.—The Chimes of 2FC and Programme Announcements.
 9.20.—Music from the Studio.
 9.45.—Last minute racing information, by the 2FC Racing Commissioner.
 10.—The Chimes of "Big Ben."
 10.5.—Late "Sydney Morning Herald" news service.
 10.15.—Music from the Studio.
 10.45.—A Morning Reading.
 11.—Australian Press Association and Reporter's Cable Services.
 11.15.—Musical Items from the Studio.
 11.30.—Close down.

Midday Session.

- 12.—Time Signals. The Chimes of 2FC and Announcements.
 12.5.—Stock Exchange, first call.
 12.40.—Music from the Studio.
 12.50.—Rugby Wireless News.
 1.—Chimes of "Big Ben" and announcements.
 1.3.—"Evening News" Midday News Service; Market Reports.
 1.25.—Music from the Studio.
 1.30.—Stock Exchange, Second call.
 1.35.—Music from the Studio.
 1.55.—Racing Information by the 2FC Racing Commissioner.
 2.10.—Close down.



"Dad—I want these batteries"

THAT'S the almost unanimous recommendation from Boyland. A spontaneous, good-natured, yet positive expression of preference.

Based upon—perhaps the building and rebuilding of set after set. The constant tinkering and improving of receiver equipment.

And who is more observant than these youngsters? Who in your family first recognises improved reception through the addition to your set of newly developed and superior parts?

It is not surprising then that every day, everywhere, when Dad buys batteries, he respects the experienced recommendation of his young adviser. And when he says, "Dad, I want these batteries with the black and white stripes"—well, what would you do?

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Also Melbourne and Adelaide



BURGESS RADIO BATTERIES

Is a Radio Set a Necessity?

(Continued from Page 10.)

he tried Sydney and heard the prices and checked them from Adelaide. From the information thus learnt he made a profit of £500 on a consignment of sheep.

Mr. Allport (member of the Commission): What is the cost of a machine to do that?—Mr. Faulkner: At least £10 I think should be paid by a man who intends to use his radio set for business in that way.

Commissioner: Is there anything else you wish to add?—Mr. Faulkner: Yes, I wanted to speak for a moment on the question of fixing time accurately, which I suggest has a definite influence on the general standard of life.

Commissioner: The evidence you have given about the cost of radio will be important if the Commission decides that radio ought to be included in the standard of living? Mr. Faulkner: I should like to mention that talks on cooking and cooking recipes are broadcast from the stations two or three times a week. This has a bearing on the cost of living.

Commissioner: I think we all know about that.

Mr. Faulkner: Radio has a further interest to listeners on account of the broadcasting of sporting information—results of races, talks on form.

Mrs. K. Dwyer (member of the Commission): Can it give you a sure winner? (Laughter).

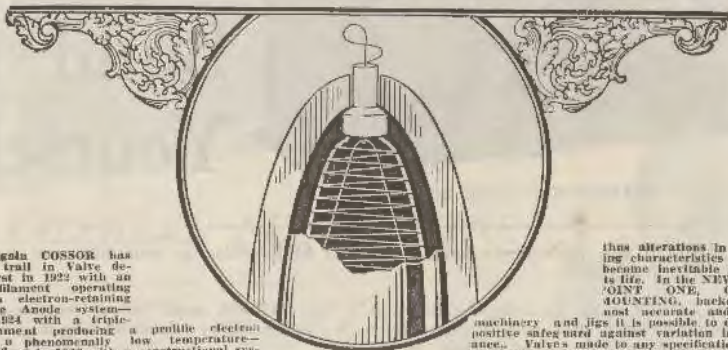
Mr. Faulkner: The broadcasting stations give you the winners either as they flash past the post or within a few minutes after. The special turf commissioners at the broadcasting stations also give you a good idea before the races of what animals are likely to be winners. (Laughter).

Mr. Faulkner, who had a bundle of notes in his hand, seemed prepared to continue his evidence all day, but the Commissioner indicated that the cost of radio was the only thing he was interested in, so this concluded the witness' evidence.

BURGESS—"Constant
warranty assured
—BATTERIES.

A Great Improvement in Valve Design

Filament, Grid and Anode are now secured at top and bottom in the new Cossor Point One.



Once again COSSOR has blazed a trail in Valve design. First in 1922 with an arched filament operating within an electron-retaining hood-shaped Anode system—first in 1924 with a triple-coated filament producing a prillite electron stream at a phenomenally low temperature—and now first in 1926 with a constructional system which automatically aligns and secures the filament, grid and anode at the top as well as at the bottom. THE ONLY VALVE IN WHICH THE ELEMENTS ARE FIXED IN THREE DISTINCT POSITIONS.

The principle of Co-axial Mounting is not new. In fact, it has been the ultimate goal of every valve manufacturer since the invention of the three-electrode valve. But for years the difficulties proved insurmountable until COSSOR—by reason of the peculiar advantages afforded by the hood-shaped Anode—was able to perfect a method sufficiently robust and accurate.

Co-axial Mounting ensures greater uniformity.

The COSSOR system of Concentric Mounting possesses far-reaching advantages. In the first place, it ensures absolute uniformity of characteristics for all valves made to a certain specification. Experienced wireless enthusiasts know that in the past—in spite of the most critical manufacturing supervision—it has been difficult to prevent variations between valves of the same class. Two valves—identical to the eye—might give varying performances owing to minute differences in the spacings of the internal elements. Even if complete uniformity were possible in the factory, the wear and tear of everyday use causes changes in the relative positions of the filament, grid and anode. And

Sectional view of the elements in the new Cossor Point One

In the above illustration a section of the Anode is cut away in order to expose the grid and the filament. Observe the ceramic insulator which securely holds in position the grid and the anode. To all intents and purposes this insulator becomes an integral part of these two elements—the slightest individual movement of either of them is quite impossible. Through the centre of the insulator is passed the fine wire which retains the filament in position. Thus—come what may—even the hardest shock cannot disturb the exact relative positions of the filament, grid and anode.

thus alterations in the working characteristics of a valve become inevitable throughout its life. In the NEW COSSOR POINT ONE, CO-AXIAL MOUNTING, backed by the most accurate and sensitive machinery and rigs it is possible to devise—is a positive safeguard against variation in performance. Valves made to any specification must be identical and constant throughout the whole period of use—variation is impossible.

THE SUPREME IMPORTANCE OF THIS WILL BE AT ONCE OBVIOUS TO USERS OF NEUTRODYNE AND "SUPER-HET" RECEIVERS EMPLOYING TWO STAGES OF MATCHED HIGH FREQUENCY AMPLIFICATION.

Tests prove a great increase in life.

A further tremendous advantage of this new system of construction lies in its shock-proof filament support. Whereas in many valves the filament, being straight, is retained under tension and is therefore subjected to considerable mechanical strain, that used in THE NEW COSSOR POINT ONE is arched and retained in position by a fine wire passing through a ceramic insulator.

It is not kept under tension, and the sole object of the fine wire support is to hold the filament in position and to permit the slight elasticity necessary should the valve be dropped or otherwise subjected to accidental rough usage. A series of tests—far more rigorous than any conditions under which the COSSOR POINT ONE would normally be used—has proved the complete efficacy of this new shockproof filament system. A concussion which caused an immediate fracture of the filament in an ordinary valve was easily and harmlessly absorbed by the filament in the Cossor Point One.

TYPES AND PRICES:	
PLAIN TOP. For Detector and Audio	13/6
1.8 volts .1 amp.	
RED TOP. For Radio Frequency use 1.8 volts .1 amp.	13/6
The new Cossor Stentor Two	
GREEN TOP. Power Valve 1.8 volts .1 amp.	17/6

The new Cossor Point One

Red Top: For H.F. use, 13/6.
(Consumption .1 amp.)
Plain Top: For Detector, 13/6.
(Consumption .1 amp.)

The New Cossor Stentor Two

Green Top: For power use, 17/6.
(Consumption .16 amp.)

All operate at 1.8 volts.

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COLMOVOX 4-VALVE SET

Build it Yourself

EVEN if you have never built a RADIO SET before in your life, you can build one now.

The COLMOVOX Ready-to-wire Set with a fine, polished maple cabinet, equipment already mounted on a panel of pure bakelite, is accompanied by a detailed wiring diagram showing how to fit up the receiver, *wire for wire*.

TWO VALVE SET.

	£	s.	d.
With polished maple cabinet and all panel equipment, wiring diagram, wire, solder, flex, etc., but without coils	4	10	0
Accessories required to fully equip this set are as follows:—			
2 Valves, Radiotron, Philips, Geco or De Forest	1	7	0
5 Mounted coils, covering 200-1300 metres	1	1	0
2 1.5 Columbia dry cells	0	5	6
1 Pair Headphones	0	15	0
1 60-volt high tension battery	0	18	0
100 ft. Aerial wire	0	2	6
15 ft. Lead-in wire and 4 insulators	0	1	7

THREE VALVE SET.

	£	s.	d.
With polished maple cabinet and all panel equipment, wiring diagram, wire, solder, flex, etc., but without coils	6	5	0
Accessories required to fully equip this set are as follows:—			
3 Valves, Radiotron, Philips, Geco or De Forest	2	0	6
5 Mounted coils, covering 200-1300 metres	1	1	0
3 1.5 Columbia dry cells	0	8	3
1 Pair Headphones	0	15	0
1 60-volt high tension battery	0	18	0
100 ft. Aerial wire	0	2	6
15 ft. Lead-in wire and 4 insulators	0	1	7



THE RADIOLUX AMPLICON, the latest addition to the famous Amplicon range of loud speakers.

FOUR VALVE SET.

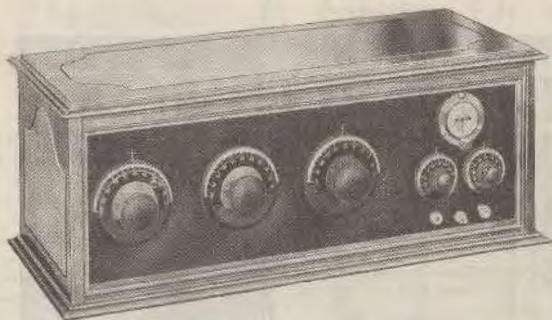
	£	s.	d.
With polished maple cabinet and all panel equipment, wiring diagram, wire, solder, flex, etc., but without coils	8	0	0
Accessories required to fully equip this set are as follows:—			
4 Valves, Radiotron, Philips, Geco, or De Forest	2	14	0
7 Mounted coils, covering 200-1300 metres	1	9	8
3 1.5 Columbia dry cells	0	8	3
1 Pair Headphones	0	15	0
1 60-volt high tension battery	0	18	0
100 ft. Aerial wire	0	2	6
15 ft. Lead-in wire and 4 insulators	0	1	7



THE RADIOLUX AMPLICON, the latest addition to the famous Amplicon range of loud speakers.

COLVILLE MOORE WIRELESS SUPPLIES LIMITED

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THE GILFILLAN NEUTRODYNE

THE official announcement of the alteration of 2FC's (Sydney) wavelength to 442 metres, immediately brings to notice of the experienced radio enthusiast the Neutrodyne receiver. All the important broadcasting stations in Australia and New Zealand are now operating on wave lengths between 200 and 600 metres, which is the wave length range of the Neutrodyne receiver. The Neutrodyne method of reception has everything to recommend it, and when one has handled a Neutrodyne, like the Gilfillan G.N. 2 five-valve, he becomes very critical of other types of receivers. Messrs Harringtons Limited, the Australian and New Zealand agents for the Gilfillan five-valve Neutrodyne, have sent us a receiver for test and the results are truly remarkable. The outstanding features are:—

(1) Selectivity.—No matter how close your home is situated to a local broadcasting station, it can be tuned out with ease and all Interstate and New Zealand stations tuned in on as much strength as is required.

(2) Sensitivity.—The Gilfillan Neutrodyne is extremely sensitive, bringing in the weakest signals with good loud speaker strength, and remarkable clarity, entirely free from any howl—in fact, it is impossible to make the Gilfillan Neutrodyne howl or oscillate.

(3) Simplicity.—The matched dial operation, the absence of switches and no coils to interchange makes the

simplicity of the Gilfillan Neutrodyne appeal to the non-technical listener-in. For example, to tune in 3LO, Melbourne, a glance at the wave length chart shows you that each of the three dials is to be set on No. 35, and with unerring precision the big Melbourne station comes in tuned as sharp as a knife.

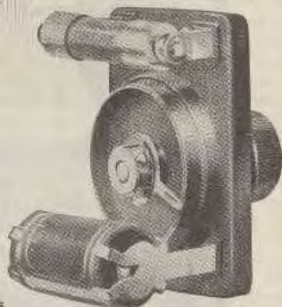
It seems almost too good to be true to be able to bring in stations over 1000 miles distant, at almost the same strength as the local stations can be received, but the writer's tests of the Gilfillan five proved this, and night after night the performances were duplicated by merely turning the dials to the previous logging position.

Above is shown the front view of the Gilfillan G.N2 five-valve receiver. The three tuning dials are on the left while the filament controls and jacks are on the extreme right. Above these is the combined "A" and "B" battery voltmeter.

Technical Details of the Receiver.—

The receiver is a five-valve Neutrodyne and it is built in keeping with the latest American practice. The majority of the apparatus is mounted on a sub-panel, and the wiring carried out underneath this. The adoption of this scheme of wiring gives the receiver a clean appearance, and has something to do with its efficiency by removing the various leads from the electrostatic fields of the neutroformers and the tuning condensers.

Carborundum Stabilizing Detector Unit



Indispensable to all Crystal users

Built around the Carborundum Fixed detector is this simple, highly efficient stabilizing device. By adjusting the detector resistance to match the circuit it absolutely controls self oscillation in the radio frequency tubes. It permits operation at peak of regeneration.

It gives greater sensitivity—increased selectivity—clearer tones.

The Carborundum Stabilising Detector Unit gives a potentiometer controlled booster voltage to the Carborundum Fixed Detector.

A small sized flash-light battery is all it needs. The unit comes equipped with the genuine Carborundum Detector.

The Genuine retailed by:
Economic Radio Stores,
Harringtons Ltd,
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Let your next Valve be a Philips



PHILIPS

LAMPS AND RADIO



Unstability Is Enemy Of Good Reception

By George Garden

GIVEN to the habit of personifying the inanimate, I derive silent satisfaction from likening the squealing, squawking mess confronting me as I listen in each night and for which I am indebted to my neighbors, to a huge chorus of spirit voices chanting their unearthly shrieks and moans in a symphony incomprehensible to those with mundane taint. Charming and though quieting this illusion may be, at times I turn on the radio with an actual desire to hear what is being broadcast, and on these occasions my fanciful imagination is turned into more hideous channels—of unmentionable torture to which I would subject offending set owners in the heat of my anger.

Approaching the problem from a less literary and more practical angle, the multivalve set owner is as great an offender, if not more so, than the possessor of the old reliable regenerator. With the latter type of receiving set it is possible for the operator to control regeneration, and consequently squealing at all times. With the former set, however, it is not balanced below 280 metres and no control for regeneration outside of rheostats, which is true in 90 per cent. of the existing sets using radio frequency transformers.

It then stands to reason that it is impossible for the operator to stop squealing when tuning within this range, since diminishing of filament brilliancy will result in mushy and unsatisfactory reception.

This changes the complexion of matters and I am wasting time conjuring new forms of torture for set owners. I must now concentrate in a like manner for the benefit of set manufacturers who are responsible for producing the five-valve squealer.

After a little thought on the problem, however, it is evident that the manufacturer is not entirely to blame for existing conditions, since the cause of deficiency of present receivers in this particular sense is one of design and consequently fraught with

engineering complexities. Apparently the problem reverts to a single fact—the more valves used to perform a single function the greater the instability.

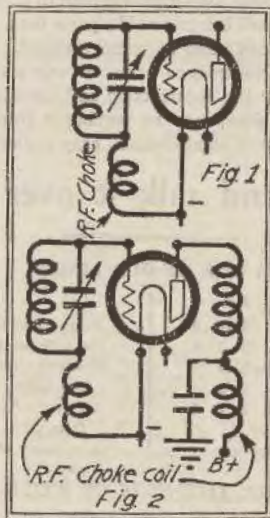
There is only one reason for instability in multi-valve receivers that are so designed to neutralize the effect of valve capacity, and that is interaction. The problem of eliminating interaction between circuits is far from solved, even if great care is taken to have radio frequency transformers out of each other's field. In-

path is provided for interaction between the various circuits.

In Figure 1 we see a means for preventing this undesirable effect by means of radio frequency choke coils. It will be found when these coils have been incorporated in a conventional five valve receiver that many more turns can be placed on the primary winding without upsetting the balance of the receiver, thereby securing considerably greater amplification and sensitivity.

However, this is eliminating the trouble in only one instance. The plate circuit, too, is responsible for much of the interaction that is present in the average set. The remedy of R.F. choke coils is again applied, but in this instance a condenser, .006 mfd. or larger, is connected from the B battery end of the primary to ground.

It would seem from this that the radio frequency choke coil is something of a cure all, and the average person might wonder why its application is not more universal. The answer is that this will soon be the case. With the use of radio frequency choke coils it is possible to obtain considerable amplification which is missing at present from a standard receiver and at the same time prevent squealing by keeping each circuit below the oscillation point on even the lowest wave length.



Placing R.F. Chokes.

interaction can and does occur through the many common leads linking different circuits.

As a perfect example let us take the various grid return circuits into consideration. All circuits, first radio, second radio, detector, first audio and second audio, are connected to the A battery, and it is not difficult to see that a perfect

RADIO Accumulator "B" Batteries, 96 Volts, with polished wood tray and lid, fully charged ready for use, \$4/15/-; also other sizes, as required. Apply by letter, to BLACKMAN, C/o. "Wireless Weekly," 51 Castlereagh Street.

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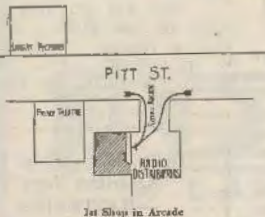
FOLLOWING upon the success of our easy payment system with complete receivers, we have now decided to extend this plan to accessories. A small deposit brings you the parts for a receiver which you can build at home yourself. Super-Het. Kits, Neutrodyne parts, or any accessories required for the construction and operation of a modern receiver, may be purchased from us on our well-known small-deposit, easy-payment plan.

Come in and talk it over with us

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Ferranti Audio Transformers ..	2 2 6		800 metres
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SYDNEY

MA 1790
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Does this Solve One of Your Many Problems?

A few of the causes of interference you may have met with on your broadcast receiver

PROBABLY no word in the vocabulary of the radio enthusiast is used more often or more broadly than "interference." It may be and frequently is used to designate everything from adverse atmospheric conditions to the wails and howls emitted by a radiating receiver in the hands of a careless or indifferent operator.

Every form of communication is subject to interference of one kind or another, but it may be safely said that radio is heir to more varied forms than any other. Space does not permit a detailed discussion of every kind of interference that may prevent good radio reception, but the more common ones will be considered and remedies suggested.

Static heads the list because it is one of the greatest offenders which is yet to be conquered. Interference from this source may be minimised through the use of either a loop—if it is a type of set which will operate with a loop—or an indoor antenna composed of five or six turns of wire suspended around the wall near the ceiling. Shortening the outdoor antenna may also have a tendency to reduce interference from this source.

Interference from broadcasting stations whose signals cannot be tuned out is another form which concerns a large proportion of the listening public. If a long outdoor antenna—more than 100 feet—is employed, much less difficulty will be encountered in tuning out unwanted signals if this wire is shortened. As stated, a short antenna—approximately 75 feet—permits much more selective tuning than with a long antenna. This change will always result in slightly decreased signal volume, but in such cases it remains with the enthusiast to choose between volume and selectivity.

The use of a wave trap also will aid materially in picking out the desired programme from the air when two or more stations are in operation. Such a device may easily be constructed with a little wire, a cardboard tube and a variable condenser.

Directions for making one of these devices will shortly be published in this journal.

It sometimes happens that interference from unwanted stations may be due to the fact that the set is not properly tuned. All of the newer model receivers are designed for simplicity of control; nevertheless, experience gained from the actual operation of a receiver will go far toward getting the utmost in results.

Coils for 2FC's New Wavelength

Many owners of the coil changing types of receiver will now desire to know the most suitable combinations of coils to receive Station 2FC on their new wavelength of 442 metres. To those who use the standard 3 coil regenerative receiver we recommend them the following list:—

Primary Secondary Reaction
50 75 75

We are considering that the primary is tuned with a .001 mfd. condenser, a .0005 mfd. tuning the secondary. A further guide will be obtained by those who have been hearing Station 3AR Melbourne on 448 metres, the same coils may be used for Station 2FC.

Again P1 (single circuit regenerative) receiver owners will find out that a primary coil of 50 turns and a reaction of 75 turns will suffice with a .001 mfd. condenser in parallel with the primary coil. Should a .0005 mfd. condenser be used in the primary, perhaps a 75 turn primary coil will be a little more satisfactory.

Rasping, buzzing noises in the radio set may be coming from a vacuum cleaner, sewing machine, or washing machine motor, violet-ray machine, electrical heating pad or a battery charger in operation in the same building with the receiver, or perhaps in a neighbour's house. The one answer to this interference problem is to turn off the device which is creating the disturbance.

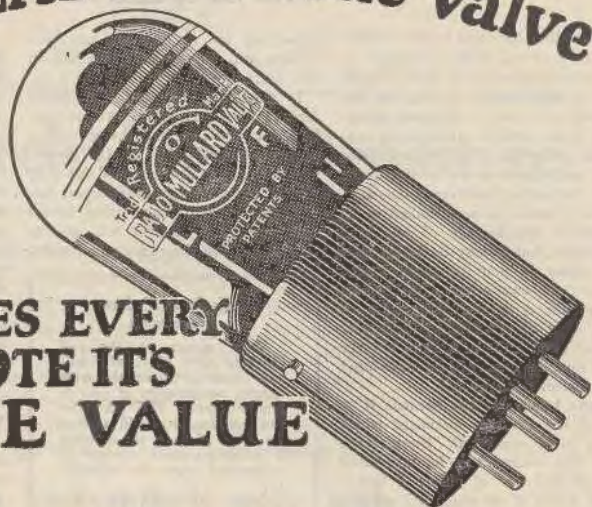
Recently a case was called to the writer's attention, in which a continuous crackling noise began promptly at nine o'clock, and ended about ten every night of the week, which prevented the satisfactory use of every radio receiver in the neighbourhood. Puzzled fans got together determined to locate and do away with the offender. With the use of a portable loop receiver mounted in a motor car, they traced the interference to the residence of two elderly spinsters. They learned that these ladies were in the habit of using a violet-ray machine every night. Now the fans want to know how to prevent individuals from using their violet-ray machines when radio fans are intently listening to what the wild waves are saying.

Another common source of interference is that created by some types of farm lighting plants when in operation. One method of minimising this disturbance is to connect two 1 mfd. fixed condensers across the line and ground the centre connection between the two condensers. Another plan is to enclose completely the engine and generator within a housing of copper screening, which is then grounded. Cleaning the commutator segments and brushes of the generator very often will reduce a large percentage of the noise present in the radio set when the generator is in operation.

This brings us to the receiver proper. A loose connection in any part of the set, or a broken wire in the head phone or loud-speaker cord, loose connections at the batteries, a defective tube, or socket in which the springs are loose, might cause interference. A careful examination of the set will doubtless lead to elimination of trouble from this source.

An imperfect variable condenser—the plates of which touch when the movable plates are rotated—a damaged grid leak, an imperfect fixed condenser or a run-down battery, may be other causes of interference of one kind or another.

The REAL Pure tone Valve



**GIVES EVERY
NOTE ITS
TRUE VALUE**



DESIGNED to give pure and strong amplification in all L.F. stages. Produces abundant volume free from distortion and will operate all loud speakers.

MULLARD Double Green Ring VALVES

Type D.3 for 2 volt accumulator
EACH 13/6

Type D.06 for 2 or 3 dry cells or
4 volt Accumulator EACH 13/6

HF Amplification.				LF Amplification.				Power Valves.				Detectors.
Type	Fil. Volts	Fil. Current	Price	Type	Fil. Volts	Fil. Current	Price	Type	Volts	Fil. Current	Price	
BF	3.5	0.0	7/-	LP	3.0	0.6	7/-	DFA.1	5.0	0.25	13/0	When valve is followed by an Intervalve Transformer or telephones, use an LF Amplifier or Power Valve. When valve is followed by a resistance Capacity Inter-valve system, use HF Amplifying Valve.
D.06	3.0	0.00	13/0	D.05	3.0	0.00	13/6	DFA.3	3.0	0.00	13/0	
D.3	1.5	0.3	13/0	D.3	1.5	0.25	13/6	DFA.4	3.7	0.1	15/6	
DFA.4	5.0	0.25	13/0	DFA.1	5.0	0.35	13/0	DFA.0	3.5	0.25	13/0	
PMS.3	3 to 4	0.1	13/6	DFA.3	3.0	0.05	13/6	DFA.4	5.0	0.25	13/6	
				PMA.4	3.7	0.1	13/6					

All Mullard Valves are manufactured at Mullard Works, London, England.
OBTAINABLE FROM EVERY RADIO DEALER IN AUSTRALIA.

Mullard

THE MASTER VALVE

(ARKS. 2.)

Advertisement of the Mullard Wireless Service Co. Ltd., Balham, London, S.W.12, ENGLAND.

Jazz and Radio

(Continued from Page 7.)

sound which made its appearance during the war, when everything, music included, was in turmoil. "Jazz" and syncopated music have one thing only in common—a pronounced rhythm. Once upon a time, we are told, all music was crude rhythm, but it gradually came to be embellished with harmony and melody.

Harmony and melody are, of course, essential, but there is rhythm as well in modern symphonic syncopation, which I believe is the first really successful combination of these three elements ever evolved.

Why, then, is syncopated music so popular? As I see it, music, to be popular, must express what people in the mass are thinking or desiring. Modern syncopation does this. It expresses cheerfulness. We all want to be happy, to radiate cheerfulness. That is what all this work-weary world is wanting most of all to-day.

By broadcasting syncopated music, radio stations are scattering throughout the land among countless listeners, cheer, hope, and vitality. The full truth of this fact may not be realized at present, but here lies the reason why I believe that symphonic syncopation will find an increasing place in future radio programmes. The critics cannot stop it. Like everything else, broadcasting programmes are governed by the inexorable law of supply and demand. Undoubtedly, the public wants syncopation. Undoubtedly, they will get it.

The Appeal of Rhythm.

Have you ever watched a number of people listening to a radio programme? When a syncopated band starts up, heads begin to nod and feet to tap in sympathy with its cheery rhythm. A powerful force is at work, evidently. What is it? The psychological explanation of the appeal of rhythm of any sort lies in the fact that it engages the conscious attention in such a way that subconscious activity is stimulated. A state of heightened suggestibility is induced in which an accompanying suggestion is more powerful than usual.

In syncopated music, the suggestion unconsciously received by the listener is one of cheer. That universal demand for cheerfulness is thereby unconsciously gratified. Here is the secret of the success of syncopation.

FARMER'S

for all

Wireless Accessories

of uniformly high quality



"Jefferson" Transformers

"Jefferson" No. 41, an Audio Frequency transformer with a ratio of 3.75 to 1. Ideal for adding to a single valve receiver when desirous of converting it into a two valve receiver. Price 25/-



"Ayanbee" Hydrometers

A necessity for every set

No set owner should be without an "Ayanbee" Hydrometer, for with it the condition of the accumulator can at once be determined. Price 4/6



"Enmco" Vernier Dials

A dial with a micrometer movement, unsurpassed for critical adjustments, it is absolutely free from backlash. Price, each 9/6



"Advance" Variable Condensers

"Advance" .0005 Variable Condenser, with special single hole mounting, which enables it to be mounted on the panel neatly and quickly. Price 10/-

"Heath" Condensers

"Heath" .001 Variable Condenser with ebonite ends; an ideal condenser for an aerial circuit. Price 20/-

"Mars" Aerial Wire

"Mars" Aerial Wire, 84 strand, super Aerial Cable, has the lowest ohmic resistance yet obtained. 100 feet lengths. Price, per length 12/6



FARMER'S, SYDNEY

BOX 497 AA, G.P.O.

Carriage paid on Wireless Goods to 5 per cent. of cost

PHILIPS VALVES

Years of patient research and the enormous resources of the famous PHILIPS LAMP WORKS have combined to produce radio valves of unrivalled quality. The following series are specially recommended for Australasian broadcast reception.

A.109—"The One-Dry-Cell Valve." Price 13/6
Filament, 1.0-1.3 volts. 0.06 amp. Plate voltage, 20/100

A.109 consumes less current than any valve yet introduced and makes it possible to operate a set for many weeks with a single dry cell. It is the ideal valve for portable work.

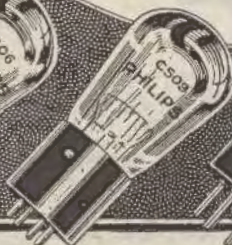
B.406—"The New Wonder Valve." Price 13/6
Filament, $3\frac{1}{2}$ to 4 volts. 0.1 amp. Plate voltage, 20/120.

Truly a "Wonder" Valve, gives all the volume and range of the 201A types with the remarkably low filament consumption of only 0.1 amp. Can be used with a 4-volt accumulator or 3 dry cells in series.

Obtainable at all radio dealers, with English or American, as well as the new American Cap.

When you order a receiving set, specify that it must be fitted with Philips Valves.

Let your next valve be a
PHILIPS



Are you building your Sets to excel others, and obtain superlative results?

NOT unless you are using the following:—

BREMER-TULLY.

23 plate SLF Condensers	£1 19 6
17 plate SLF Condensers	1 19 6
13 plate SLF Condensers	1 17 6
L.D. 13 plate double Condensers	3 0 0
L.D. 17 plate double Condensers	3 3 0
L. 13 plate Condensers.	1 11 6
L. 17 plate Condensers.	1 12 6
L. 23 plate Condensers.	1 14 6



Short Wave Outfit. £3 3 0



Bremer-Tully Tuning Control Dial £0 16 6



Bremer-Tully Euphonic 2.2 to 1 Transformer, No. 210 £1 14 0
 Bremer-Tully Euphonic 4.7 to 1 Transformer No. 410 1 17 0

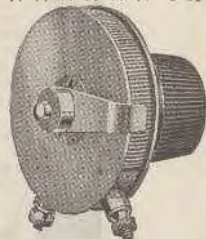


For every type of resistance control in receiving sets United Distributors Ltd. recommend as better than any that have ever been brought on the market that of the Centralab, manufactured by the Central Radio Laboratories. Their full line consist of:—



No. 2 M. Radiohms	£ s. d.
No. 50 M. Radiohms	0 14 6
No. 100 M. Radiohms	0 14 6
No. 200 M. Radiohms	0 14 6
No. 500 Modulators	0 14 6
No. 106 Variable Grid Leaks, without condensers	0 9 0
No. 107 Variable Grid Leaks, with No. 2035 condenser	0 10 6
No. 206, 8 ohm Rheostat	0 9 0
No. 230 ohm Rheostat	0 9 0
No. 110, 200 ohm Potentiometer	0 12 9
No. 111, 400 ohm Potentiometer	0 14 6
Centralab Push-Pull Battery Switch	0 3 6
Centralab Modulator Plug	0 18 0

The Centralab Rheostat the best obtainable—the standard in Udiseo Sets



Special attention is drawn to the Centralab Modulator 'Phone Plug, which combines the control of the wonderful Centralab Modulator with the ordinary 'Phone Plug; it can also be supplied with speaker cords for receiving sets which are not equipped with a jack. This controls the tone of speaker from the loudest that the set can produce down to a whisper, and is a wonderful eliminator of static effects. No such other item is on the radio market to-day.



SOLE AGENTS:

UNITED DISTRIBUTORS LIMITED

72 Clarence Street, Sydney

343 Queen St.,
BRISBANE.

27 Chesser St.,
ADELAIDE.

26 Queen St.,
PERTH.

Cr. Jervois Quay & Harris St.,
WELLINGTON, N.Z.

66 Charles St.,
LAUNCESTON, Tas.



Listen-In To-night with B406

LISTEN-IN to-night to an entertainment plucked from the air. Enjoy nights of perfect reception by equipping your set with Philips Valves. Philips Valves, especially the B406 which is designed for Loud Speaker Reception, combine undoubted economy with the highest efficiency. The B406 has a filament consumption of only one-tenth amp. but the purity of tone and wonderful volume given add merit to its name, the New Wonder Valve.

Price 13/6

Obtainable at all Radio Dealers.
Stocked with either Standard,
English or American Cap, also
the New UX Cap.
Makers of the Famous Philips
Lamps.

B406 Characteristics.

Filament Voltage	$3\frac{1}{2}$ to 4 Volts
Filament Current	0.1 amp.
Plate Voltage	20 to 20 Volts
Plate Current	12 mA

PHILIPS

Are Radio Regulations under Revision?

(Continued from Page 8.)

wealth from which it pays for the services that affect all taxpayers—defence, payment to the States, reduction of the war debts, etc. The application of a proportion of this revenue, that obtained from duty paid on imported wireless equipment, would be unfair, in that it would exempt local manufacturers who do not contribute, or contribute very little, to the upkeep of the broadcasting services.

But there are stronger objections to these proposals. In the first place the Customs revenue would be inadequate: the duties would not produce sufficient revenue to pay the broadcasters unless the duties were to be very considerably increased. And that, of course, would mean greater payments by the listeners for their equipment, including consumable and renewable items such as valves, batteries, etc. In the second place, the inducement for the broadcasters to give good services and improve them would be removed. The removal of that inducement would be a serious blow to the development of broadcasting. Improved service should be rewarded by increased revenue; and that would be impracticable if the revenue were simply to be handed out regularly by the Government like the payment of interest on bonds. We have only to consider what has been done by 3LO Melbourne in developing broadcasting. The service from that station was improved in many ways, and a big increase of licences—and revenue—followed. With this inducement the company continued to improve its services knowing that it would be rewarded—and doubtless knowing also that if it did not improve the service, the licences would fall off. Reasonable inducement must be held out to the companies to give good services and to improve them.

Proposals are also made to reduce the fees. These proposals are not based on a sound foundation or on a consideration of all the factors in the problem. It is too early to say whether or not the companies are receiving more than a fair return. Two years is not a long enough period on

(Continued on Page 53.)



KING QUALITY NEUTRODYNE SETS

Now that Station 2FC has announced the reduction of its wave length from 1,100 to 442 metres, the King Quality Neutrodyne becomes one of the most popular sets. This is because of its simplicity, clear reproduction, high standard of reception, and ability to receive all Australian stations with the exception of Perth. Anticipating this reduction, David Jones have just landed a shipment of these popular receivers.

64X6—"King Quality 5," Broadcast Receiver, equipped with tonal chamber, as shown from A to C in illustration, capable of producing perfect reception in any reasonable volume desired. Wiring is easy, tuning very sharp. Installation is very simple, only four lead wires being used, two to the "A" and two to the "B" battery; all leads plainly marked, no inside connections necessary. Supplied in two-tone American Walnut, or two-tone dark Mahogany Cabinet, as desired, complete with Valves and all accessories, as shown. Wave length range, 200 to 550 metres. PRICE £60.

64X7—Same Set, only without "built-in" Loud Speaker, as shown in illustration A to B. Without accessories. Price, £30.

5-Valve King Quality Neutrodyne Set, in laid cabinet. Complete with accumulator, "B" batteries, Trimm "Concert" Loud Speaker. Complete ready to instal. PRICE . . £50.

King Quality Kit, contains all parts necessary to build the 5-Valve Neutrodyne, and includes full working details, blue prints, all parts wire, etc. PRICE £18/18/-.

DAVID JONES'

12/6 "CANNON BALL" HEADSETS 12/6

A high grade Headset at a moderate price

	£	s.	d.
Filkostats: The supreme filament control	0	9	6
Genuine Straight Line Frequency Condensers: .0005	0	10	6
Neutrodyne Kits: Including neutralising condensers and Maclurean blue-print	1	12	6
Browning Drake Kits: With Maclurean blue print	1	5	0

"GRODAN" PARTS

We carry stocks of Grodan Spider formers, ECS Plugs and Sockets, Perikon detectors and refills, also cardboard tubes, valve adaptors and loops.

THE RADEX VALVE IS NOW MADE WITH UX BASE.

	£	s.	d.
Radex Valves: 199 type, .06 amps., 3 volts	0	6	9
Radex Valves: 201A type, .25 amps., 5 volts	0	6	9
See these valves checked on the Jewell Tube Checker.			
Philips Valves: B406, A109, C507, C509	0	13	6
Mullard Valves: PM3, PM4, D06	0	13	6
Radiotron Valves: UX199, UV199, UX201A, UV201A	0	13	6
Radiotron Power Amplifier Valves: UX120	0	17	6
Radiotron Power Amplifier Valves: UX112	2	5	0
Ediswan Valves: .75 amps. American base	0	3	0
Aerial Wire: 3 strands, 20 gauge copper, 100 feet	0	2	6
Standard Aerial or Loop Wire: Extremely flexible, 100 feet	0	3	0
Egg shape Aerial Insulators, per dozen	0	0	10
B Battery: Heavy duty "Volton," 45 volts	1	2	6
LOUD SPEAKERS: Call and hear them demonstrated.			
The Amplion Dragon Fly: AR102	1	5	0
The Amplion Swan Neck: AR38	3	0	0
The Amplion Junior De Luxe: AR114	4	0	0
The Amplion Dragon: AR19	6	10	0
Browns: H4	2	0	0
Browns: H3	4	2	6
Sferavox: Cone type speaker	5	5	0

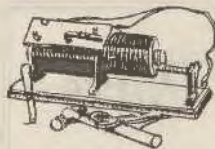
"Yours for Lower Prices"

THE ECONOMIC RADIO STORES

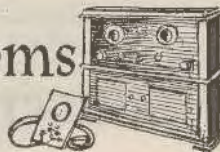
25 ROYAL ARCADE, SYDNEY

569 HUNTER ST. WEST, NEWCASTLE

Phone M 3049.



Beginners' Problems



C.C.H. (Concord):—

Q.: I would like to know how to make a simple charger for replenishing my 120 volt accumulator type "B" battery.

A.: The particulars of the chemical rectifier published on page 18 of "W.W." of 10/9/26, will meet with your requirements. As is mentioned there the lamp controls the charging rate, a 50 watt or 60 watt lamp being generally suitable.

G.W.M. (Newcastle), and R.M.G. (Newcastle):—

Q.: Will you please inform me which is the best type of five valve receiver to receive the Interstate broadcasting stations.

A.: Strongly recommend you to build a Neutrodyne, which will also tune to Farmer's new wavelength.

R.J.K. (Duntroon):—

Q.: (1) Will the Super Heterodyne Kits now on the market cover the wavelength range up to 2000 metres?

A.: (1) Now that 2FC has come down in wavelength over 600 metres is hardly necessary.

Q.: (2) Is the Super Heterodyne recently described in "W.W." efficient over all wavelengths?

A.: (2) Yes, excepting 6WF.

M.C. (Paddington):—

Q.: (1) Does the "W.W." Super Heterodyne receive 2FC?

A.: (1) The drop in the wavelength to 442 metres brings 2FC within range of this Super Heterodyne without any loading.

Q.: (2) Does the Multiformer used in this receiver include the three intermediate frequency transformers, and also the filter?

A.: (2) Yes.

E.V.D. (Arnccliffe), and S.P. (Lilyfield):—

Q.: I have a standard three coil regenerative receiver with tuned aerial coil, and I don't find it suf-

ficiently selective. Can you suggest something?

A.: Yes. Properly handled, you should receive Interstate stations on your receiver. See that all your coils are running in the right direction. It is a good plan to connect the beginning of the coil to the socket portion of your coil plug, and the end turn of your coil to the pin portion. Mount every one of your coils in this fashion, and note they are all mounted right way up.

You don't mention the sizes of the coils you are using, but I suggest you try P25, S50, and R75, for 3LO and 4QG. The reaction coil is critical of adjustment. Why not build the Regenerative Interflex?

C.A.A. (Concord):—

Q. (1): I desire to build a four-valve receiver suitable for Costamundra. Can you recommend a good four valve receiver which will be able to get daylight reception at loud speaker strength?

A. (2): We recommend the Browning Drake Receiver as being quite suitable, but we are afraid that we cannot guarantee loud speaker reception in daylight. It is an accepted fact that the short waves do not carry nearly so well in day time as they do at night time. If daylight reception is imperative, nothing short of the Super Heterodyne described in "W.W." recently will be satisfactory.

G.M.E. (Uralla):—

Many thanks for your suggestion in the first part of your letter, but we are afraid it would not be practicable. Refer to "W.W." of 23/4/26 for full particulars of the five-valve receiver you require.

W.A.T. (Fairfield):—

Q.: I wish to construct a four-valve tuned Anode receiver and would like a selective circuit.

A.: The "Sure Fire Circuit for 3LO" published in "W.W." of 31/7/25 will be found most suitable.

E.W. (Woodford):—

Q.: Could you give construction details of the intermediate radio fre-

quency transformers suitable for a Super Heterodyne receiver?

A.: See "Radio," 26/5/26.

H.L.D. (Rockdale):

Q. 1: Where can lead and zinc electrodes for a chemical rectifier be purchased?

A. 1: The lead need only be good quality dampcourse lead and No. 22 gauge aluminium is quite satisfactory. Both these materials may be cut to shape and are obtainable at any big department store.

Q. 2: What are the proportions of water and borax to make a solution for a rectifier?

A. 2: A saturation solution is advisable. Heat some pure distilled water and add as much borax (obtainable from any chemist) as the water will accept. If a sediment is left at the bottom pour off the saturated solution into another jar and empty out sediment.

Q. 3: Is it necessary to renew borax every time the rectifier is used?

A. 3: No; the one solution will last for months. Experience will tell you when it requires renewing.

Q. 4: What size lamp will be required to charge a B battery of 60 volts?

A. 4: You can arrive at this conclusion by calculation. It is a generally accepted theory to rate carbon filament lamps as consuming 3 watts per candle power. To arrive at the amperage divide the rated voltage of the lamp into the wattage, the amperage being the result. For example, a 50 candle-power carbon lamp consumes, say, 150 watts, the resultant amperage would be approximately half an amp. Metal filament lamps are approximately one watt per candle-power.

Q. 5: Is it necessary to have four jars to make a home-made rectifier?

A. 5: It is advisable so as to prevent overheating.

Concerning EMMCO Parts



Emmco Lightning
Arrester 4/3



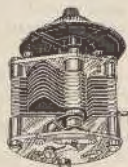
Emmco Vernier Dial
(bakelite) 9/8



Emmco Vernier Dial
(metal) 6/9



Emmco Sneklet (type
X520) 3/4



Emmco Vernier Con-
denser, 9000 .. 21/-



Emmco Transfor-
mer 21/-

THE unique position of esteem and confidence occupied by Emmco Radio Products, is a natural development of the policy which has always characterized their manufacture; a policy which employs the highest engineering skill --- rigid supervision --- and modern production methods. It will be of interest to the thinking buyer to know that an Emmco product is neither advertised nor sold until its efficiency has been proved by radio experts. To buy Emmco parts is to get the utmost in good value and dependability.

EMMCO PARTS

Obtainable at all Radio Dealers



Emmco Rheostat 1/4

Manufactured by

Electricity Meter Manufacturing Company Ltd.

SYDNEY, N.S.W.

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

(H. J. HAPGOOD)

Challis House, Martin Place
SYDNEY

Tel: BW 1928

Agents for all styles of Radio Products,
Including Clyde Batteries.

Elec. Meter Mfg. Co., "Eumoo."

Refriger Condensers, Leaks and
Fixed Rheos.Aircons Rheos, Pots, Special Coils
and Loops.Neutron Crystals, Brunet Phones,
Prompt Shipments from Sydney.We represent 34 Foreign Radio
Manufacturers

Write for Indent List.

Surplus Stocks sold Interstate.

SLINGSBY & COLES Limited

Under Central Station.
482 PITT STREET.

OUR SPECIAL SUPERTONE 3-VALVE SET (complete)

with Loud Speaker and All Accessories, in
handsome Cabinet.

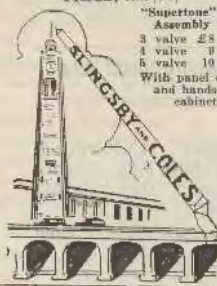
PRICE, £19/10/-

"Supertone" Home
Assembly Set.

3 valve £8 10 0

4 valve 8 0 0

5 valve 10 0 0

With panel drilled
and handsome
cabinet.

Also 4 and 5 valve sets.

The best value ever offered in 3-Valve Sets.
Call in and see it, hear it, buy it.

Easy Terms. Easy Terms.

Are Radio Regulations under Revision?

(Continued from Page 49.)

which to base any safe estimate of the future of broadcasting. Moreover, the figures quoted in the press as to the revenue received by the companies are apt to be misunderstood. The Government pays the companies in advance, and a large sum paid over, say in March or June, cannot be regarded as all the revenue for a year closing at the end of June; a big proportion of the sum must be carried forward in respect to the nine or eleven months' service that has to be rendered to the listeners, who paid in advance.

Thus those figures must not be accepted without proper consideration. Some reduction of the fees may be justified in distant country districts where the service is not so complete as in the city, and where more expensive receivers have to be employed by listeners. But there is no justification for reducing the already low fee—less than one penny per day.

It can safely be said that there is no need to amend the regulations in so far as they relate to fees; at least in the metropolitan and inner country districts. Other proposals to amend other aspects of the regulations can be considered in a later article.

NEW 2FC SPEAKER.

On Thursday, September 2, Farmers' were able to secure the services of Mr. W. Spender-Darby, a popular baritone, from England, who arrived in Sydney on board the P. & O. Branch liner, s.s. "Balranald" recently, in charge of 52 Dr. Barnardo Boys.

The Barnardo Boys gave selections on the mouth organ on the Saturday after arrival, and a talk by their leader clearly showed that he possesses the type of voice for effective broadcasting. Since then, Mr. Darby has appeared at the Studio several times.

The broadcasts on each occasion were particularly clear and without strain or force. Mr. Spender-Darby has figured on ELO London programmes, and his tenor-quality baritone voice should carry him far in the profession.

WANTED.—All kinds secondhand
Wireless Sets, Parts, Speakers, etc.
Best prices given. JACK RAKFEN,
16 George Street West. MA 1193.

BURGESS RADIO BATTERIES

Quality at Every Price

Cabinet or table space many times determine the size and type of radio batteries selected by the user.

Burgess manufactures a battery for every radio circuit and tube. Your choice of any one of many types involves no sacrifice of economy or service hours. The value and quality of Burgess Radio Batteries are constant—your satisfaction assured.

Ask Any Radio Engineer

Write to 213 Burgess Engineering Building, Madison, Wisconsin for the Burgess Radio Compass. It is amusing, unusual and useful.



One of several sizes of vertical "B" Batteries.



Burgess Block shape "B" Batteries, made in numerous types and voltages.



Standard Burgess Radio No. 6 "A" Battery. "Over twice the Life."

Obtainable only from High Class Dealers everywhere.

Columbia Dry Cell

"A" Radio Battery No. 6111



DESIGNED especially for use in connection with dry cell vacuum tubes. Lasts much longer and gives more power for this purpose than any other dry battery.

FACTORY REPRESENTATIVE
ELLIS & CO. (AUSTRALIA) LTD.
 516 KENT STREET, SYDNEY, N.S.W.

Columbia Radio Batteries

Made by the manufacturers of the Famous Columbia Dry Cell

143

British Made **CLARKE'S ATLAS** *British Made*

GRID CONTROL

(VARIABLE GRID LEAK AND FIXED CONDENSER)

Capacity of Leak $\frac{1}{4}$ to 10 megohms



Condenser Capacity .0003 mfd.

Combines the dual functions of a variable grid leak and fixed condenser. Uniform adjustment from $\frac{1}{4}$ to 10 megohms. Absolutely noiseless. Brings in those long distance stations. Silent in working. Unaffected by atmospheric conditions. One hole fixing. Only finest ruby mica and best copperfoil used in the condenser.

Price: Grid Control (variable grid leak and condenser combined) 6/9 each

If you cannot obtain from your dealer, please communicate with:—

THE GENERAL TRADING COMPANY

"Wingello House," Martin Lane (near Martin Place) SYDNEY.

Telephones: BW 6938; B 4917.

Sole Australian Distributors.

Subscription Form

The demand for copies of "Wireless Weekly" has so far exceeded the supply from the printing presses, despite increased output each week, that many listeners-in have complained that news-dealers were sold out before they could obtain their copy. In order to ensure delivery, fill in this subscription form and forward to the Editor, "Wireless Weekly," 51 Castlereagh Street, Sydney.

Please forward "Wireless Weekly" for a period of
for which I enclose for (add exchange
to country cheques).

Name

Address

Subscription Rates: 12 months (52 issues), 13/- post free; 6 months (26 issues), 6/6 post free.

SUPER-HETS MUST HAVE NUMBER PLATES NOW.

The supersonic or double detection principle of wireless reception, to which has been given the generic name of "Super Heterodyne" is likely, before long, to become a topic of interest to many people. For general use (that is to say, "omitting short-wave work"), it is undoubtedly the most selective circuit in use to-day. It is employed in the vast majority of totally enclosed sets, having no earth or aerial connection.

Many people then will be interested to learn that the patent rights of the circuit are the absolute property of Standard Telephones & Cables (A/asia) Ltd., within whose power, therefore it is to say under what circumstances the "Super-Het" may be manufactured or sold. On this point, an official notification of the Company's stand in the matter was delivered to the trade by Mr. C. R. Foster, Victorian representative of Standard Telephones, in an interview with a trade journal.

In-so-far as it affects the general

public, it may be summarised thus:

Every "Super-Het" sold in the Commonwealth must bear a numbered license-plate on which a small royalty is paid to "Standard Telephones & Cables (A/asia) Ltd."

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There are other exceptionally good features in this book, which make it probably one of the best issues we have yet had the pleasure of reviewing.



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