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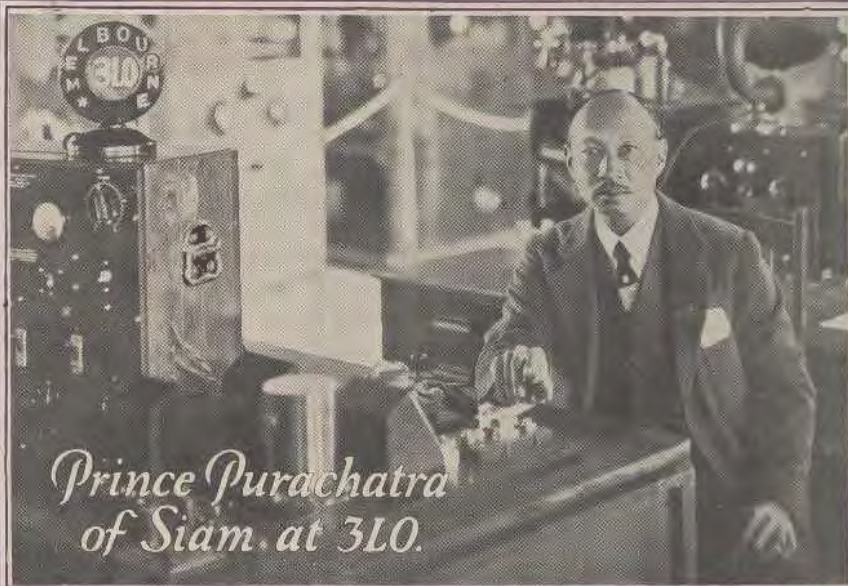
# WIRELESS WEEKLY

Broadcast Programmes a Week in advance

VOLUME 10

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

NUMBER 21



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of Siam. at 3LO.*

Friday, September 16, 1927

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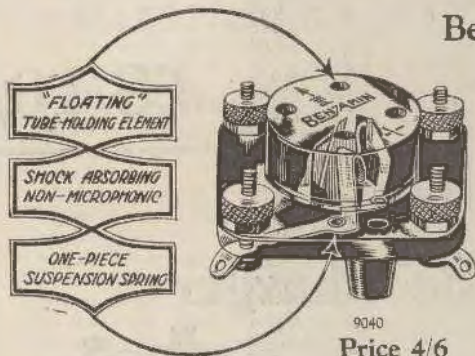
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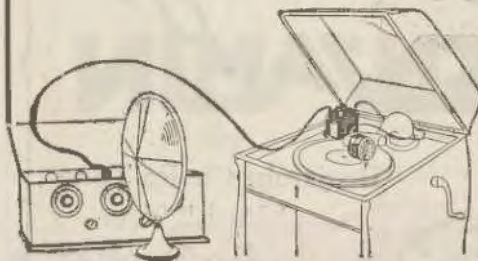
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# WIRELESS WEEKLY

VOL. 10, No. 21.

FRIDAY, 16th SEPTEMBER, 1927.

## *World Propaganda In Wireless*

**D**URING the past year signs have not been wanting of competition between the larger countries in the wireless business. Both in the propaganda, and in actual business, as reflected in export trade, has the evidence been striking of intense development.

High power stations, for the purpose of sending out propaganda in the form of press messages, have been operated for some years in Europe and America, but Great Britain was slow in getting a really strident voice on the air. A moderately high power arc station was started at Lendfield, near Oxford, in 1921, but it was not useful. The Rugby super station was opened last year so that Britain could shout as loud as the other countries. America had several moderately high power stations—really trans-Atlantic stations—in 1918, but the opening of the station or group of stations at Long Island in 1921 was heralded throughout the world in true American fashion.

But when the use of short waves became popular the competition became greater. With great economies in power short wave stations were started in America and Europe, and while their transmissions were primarily of an experimental nature—in order to test out thoroughly the new system—the opportunity was not lost to impress on the listening world the importance of the country in which the transmitting station was situated.

Now we find these short wave stations being utilised for telephony as well as telegraphy. (The whole of the foregoing refers to telegraph signalling.) Particularly in the United States do we find many stations arranging, at no inconsiderable expense, programmes for distant countries. Early last year the American stations broadcast special programmes for English listeners—to be rebroadcasted by the British Broadcasting Company's stations. Later on similar services were sent out for German stations to pick up and rebroadcast.

Then Australia was specially favoured with programmes from the principal American short wave stations, and some of the stations transmitted special programmes on their normal wavelengths.

We have recently had some excellent transmission from the now famous station of the Phillips Valve Coy., PCIJ. And strangely enough that station—as is the Company's factory—is in Holland. There is yet no British station capable of broadcasting on a short wavelength for reception in distant Dominions. At all events no such station has done any successful work in that direction.

The matter is in need of urgent attention, and it is refreshing to note that the Press in England is taking the question up seriously. Australian stations, which has broadcast Dutch and American stations, is, naturally, keenly anxious to rebroadcast a British station, but while it does not exist, the stations in other countries with a "world-voice" must be utilised.

# Catching Up with the Wireless World.

By R. E. CORDER.



APPROXIMATELY TWENTY MILLION radio fans heard the details of the Dempsey-Sharkey bout, which took place at the Yankee Stadium on the night of July 21 and was broadcast through twenty-nine radio stations of the Blue and Red Networks of the National Broadcasting Company, under the sponsorship of the New York "Telegram" and twenty-five other Scripps-Howard newspapers.

**COMMUNITY LAUGHING:** A proposal has been made to 3LO, Melbourne, to conduct a weekly community laughing session. The great idea is to bring people together in every part of Australia for 15 minutes once a week to join together in a huge hilarious outburst, and to spread the gospel of cheerio. In this sunny land of ours we certainly should not see so many careworn and worried expressions, and if community laughing by wireless only cast gloom aside for 15 minutes each week the experiment would surely be justified.

**ABOUT A DOG:** No doubt because of their intimate everyday touch with the people over the air, all sorts of extraordinary requests are received by 3LO. Only recently a listener in Sydney wanting a dog belonging to a breed almost extinct in this country, wrote stating that he had advertised extensively, and sought in vain for one and asking 2LO to broadcast an appeal. The result was that within a day 3LO got in touch with a man who had a dog of the breed required, and now the Sydneysider is forever happy.

**ANOTHER DOG:** It is not generally known, but it is a fact, that the "voice" of a dog was actually broadcast by 3LO, Melbourne, recently, during one of the children's hours, when Miss F. Shepherd's quaint little pekinese spaniel, "Tiny Tot," uttered his charming little "barks" to amuse the children. The children are hoping that "Tiny Tot" will be induced to give another demonstration before the microphone.

A WOMAN in England who was fined recently for owning and operating a wireless set without a license, gave the explanation that she thought a set was like a dog; so long as it was not over six months old it need not be licensed.

ACCORDING to the statistics compiled by the Society for Electrical Development of New York, New York State has 655,850 receiving sets, and is thus ahead of all other States in this respect. Pennsylvania and Illinois are next on the list with 603,100 and 468,000 receivers respectively. The poorest State from a wireless viewpoint is Nevada, which has only 5,200 sets.

**SIMULTANEOUS BROADCASTING:** A remarkable broadcast was carried out by 5CL on Thursday, August 25. A singer, situated in Victor Harbor, sixty miles from Adelaide, was accompanied by a pianist at Tanunda forty-five miles distant, and both broadcast simultaneously by 5CL.

ON A RECENT SATURDAY afternoon there were no less than 28 change-overs at 3LO to and from various sporting grounds. These included football, baseball, horse racing, foot racing, parachuting, lacrosse, with the usual studio items sandwiched in between—surely a record afternoon's broadcasting for variety.

THE LAST MAIL from America brings an account of a wedding march being broadcast by radio to match the music of a marriage ceremony. The march was played by a jazz orchestra in a Broadway restaurant and the young couple sailed up the aisle in a suburb of Washington. The broadcasting station was WEAF. The newspaper account states that this is believed to have been the first time that a wedding party has depended on music played in a distant city. The claim, however, is erroneous.

OVER A YEAR ago the Sydney Station 2FC was asked to play for a wedding at Ashfield, and 2BL several months ago performed the same service for a young couple at Huntley's Point. The Melbourne Station 3LO played the wedding march for a young couple who were married at Ballarat, and these three stations—probably all the other A class stations in Australia—are always prepared to oblige on such an occasion. All the bridegroom has to do is to arrange a time, and on the tick of the clock the organ or orchestra in a broadcasting studio will send forth the Mendelssohn strains. It only remains for the wedding party to have the radio set in readiness to receive the glad music.

## "THRILLS AND CHILLS."

Of course you were pleased when you heard that Karateck.  
Emerging at length from his list and horatic.  
Was trying a lighter and brighter  
vocalion.  
Of half-raising 2LO story narration.  
At wrestling he's good, but he's really  
superior!  
When talking of thrills in the chills of  
Siberia.  
With stories for children that often  
have overed.  
To queer babies by iceberg distributed;  
With yarn for all others, of slaves  
and of free men,  
Sufficient for ever the best of ho-men.  
Adventures he tells of with bear and  
with blizzard,  
With wolf and with Russian and foot-  
sillied lizard.  
His stories will grip you and hold you  
and show you,  
The way that the wind of the Arctic  
can blow you.  
You hear his first start in the wrestling  
mat line.  
By dumping his man down a thousand-  
foot mine!  
Of headlocks on moons, of using eye  
locks  
On bear, beating wolves with a quick  
bring-fist!  
His talk is most thrilling, but what do  
we care.  
We'll listen as long as he's willing to  
speak.  
His English and Spanish and French,  
yes, and Prussian.  
Graves dull when you listen to swearing  
in Russian.  
August 16th, 1927. C. H. W.

# How To Tune In PCJJ

**D**URING these last years the opinion has existed that the very small wave-lengths offer many advantages for radio-telegraphy. To-day this opinion has become a conviction, and attention is specially drawn to these small wave-lengths by the results obtained by PCJJ at Eindhoven, Holland, on a wave-length of 30.2 metres.

In principle, telephonic transmission on a wave-length of about 30 metres has been applied for some years, particularly by various American broadcasting stations. But it has remained for the Philips station to prove their efficiency.

PCJJ has been heard with a wonderfully great signal strength in nearly all parts of the world.

In the letters and reports on the reception of this station sent in from the most distant places of our globe, again and again the question is asked: How is it possible to reach us with such a wonderful pureness and signal strength?

From U.S.A. many reports have been received stating that the transmission is better than that of the local broadcasting stations, others, in Japan, Hindustan, and Java, communicate that the reception surpasses that of all other foreign broadcasting stations.

In many cases the reception of short waves is subjected to fading—by which is understood the fast or slow decreasing of the signal strength. Various amateurs, however, emphatically state that there was little or no fading at all on PCJJ.

When radio waves of a short wave-length are transmitted, it often occurs that the reception is very good in distant places, whereas in countries nearer to the transmitter those transmissions cannot be heard. As may be considered well known already, this fading is explained by supposing that the ionised layer of air in the atmosphere—the Heaviside layer—casts the rays directed upwards back to the earth by refraction at a larger or smaller distance from the transmitter.

The fact, however, that the Philips short-wave transmitter is also heard in all European countries without any exception and that moreover reports

*An article, translated from the Dutch, by the engineer in charge of the Philips Short Wave Station in which the type of receiver circuit best suited for reception of PCJJ is discussed at length and constructional hints are given for building.*

are received from many places in Holland stating a strong reception, may be considered as a particularly interesting and justifies the question: "How can the Philips' shortwave transmitter be heard?"

The wave-length of 30.2 metres differs very much from the smallest wave-lengths, normally in use for broadcasting generally between 200 and 400 metres. Hence an alteration of the receiving sets is necessary in order to enable the tuning for the reception on a wave-length which is about seven times as small.

First it may be mentioned that it cannot be expected from a normal receiving set for wavelengths between 200 and 2000 metres, that it can be brought up to the point of oscillation when receiving on 30 metres. In this case the losses are too high with this extraordinarily high frequency (about 10 million cycles per sec.).

However, good reception can be obtained with apparatus in which the tuning coils are arranged at the outside of the panel, and, can be interchanged, or if the diagram of connections is a diagram with a H.F. Valve and a tuned plate circuit. In this case first the H.F. Valves is to be taken from the valve socket, as the use of this valve for the reception of a wave-length of 30 metres is rather a drawback—it very much hinders the exact tuning.

By an alteration of the circuits in which the aerial coil, the coil in the tuned plate-circuit of the H.F. Valve and the reaction-coil in the plate-circuit of the detector are connected, the change resolves itself into a simple circuit for inductive reception.

The aerial condenser has no further use on the very short wave-lengths, hence, if possible, it is to be connected in series with the aerial coil and otherwise to be kept out of circuit.

Further on honeycomb coils, of which 25 turns are the smallest type,

cannot be used to tune wavelengths below about 100 metres, and for the reception of the Philips shortwave transmitter the coils must be replaced by smaller ones, which can be constructed from a piece of insulated wire three windings of about 10 cm. (4 inches) diameter and putting same in the coil-holders.

When it is realised that the coils formed in this way make good contact in the coil-holders the three coils can be brought very near together and after the apparatus is set to work the exact tuning can be found with the second condenser, very near to zero of the scale and which as a rule asks for a very sharp tuning.

In relation with the fact that the dimensions and the construction of the various aerials are very different, it is to be recommended to try a coil of two turns, or even of one turn, as an aerial coil, if the tuning experiment should give negative results.

If the receiving set does not show too great losses, in many cases the Philips transmitter can be heard well, but, of course, the maximum volume of sound of a specially constructed short-wave receiving set cannot be expected.

The construction of a small short-wave receiver for this purpose is not difficult. As a circuit that consisting of a simple reactance detector with inductive aerial coupling is to be used, where the aerial is not tuned.

If short connections are provided for and if a tuning condenser of .00025 mfd. is used for the tuning of the grid-circuit of the detector, the point of oscillation can be reached, or at least nearly reached, when using coils as described above.

As a matter of course, a L.F. amplifier with resistance coupling or transformers can be connected in this apparatus in order to obtain loudspeaker reception.

Normal valves, e.g., A409, A425 or A141 can be used. It is not necessary to remove the caps.

Those who might be induced by the above to follow the transmissions of the Philips short-wave transmitter can assist to obtain general information re the strength of reception and the occurrence of fading at certain dates. Such information is of general interest as well for distant as for points situated nearer to the transmitter.

# The Safety Valve

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



## ABOVE AVERAGE INTELLIGENCE

Dear Sir,—I read "Jack Blair's" letter with interest and also the replies which it evoked, and was not surprised to find that those who favoured church services were too bigoted to agree that those who did not were entitled to any consideration. There can be no doubt that the programmes at present broadcast on Sundays are very unpopular with the majority of listeners. It is absurd to say that a large proportion of country people are interested in religious services; the small attendance at Church which has been the usual thing for many years should be sufficient reply to this assertion.

When it is taken into consideration that wireless set owners are slightly above the average in intelligence, it will be realised that church services are even more boring for them, and that the majority prefer to switch off until our "Finest Intellectuals" have ceased to make the air hideous with their silly noises. However, there are a number of people who like this sort of thing, so that I think that one station should continue to broadcast church services, while the rest adopt programmes similar to those of week days.

Yours, etc.,

Dumedeo. J. GOVERNOR.

## SELFISH.

Dear Sir,—As a constant reader of your paper, I wish to express my opinion of the letter written by J. Blair ("W.W.," 29.7.27). I cannot understand why Mr. Blair opposes church services being broadcast. Even if he is a jaaz "fun," surely he has enough jaaz during the week! I think it is only selfishness on his part. Surely he can give a thought to those who live in the country, in some cases miles from a church, and, again, these unfortunate people who are unable to go to church. Think what a comfort it must be for those people who have given up hope of ever being able to go to church again. Although I live near three churches, I like to listen to the services broadcast.

Yours, etc.,

C. L. CLARKE.

Werrington, via St. Marys.

## A PLEBISCITE.

Dear Sir,—I suggest that readers be afforded, through "Wireless Weekly," an opportunity of expressing their opinions on broadcast religious services by means of voting on the following questions: One vote only should be recorded by a cross in the square. The proportion of voters whose circumstances of living fulfil the condition indicated by a cross in the bottom square to the number favoring any question should be recorded, and is of deep importance to the subject and would lend greater interest to the result.

Yours, etc.,

G. J. COLDIT.

Woodfordleigh.

Acting upon Mr. Coldit's suggestion we publish below with a few minor alterations the questionnaire submitted by him. Readers are invited to record their votes by placing a cross in the square opposite the question or questions they favour. The votes will be counted and the result published in an early issue. Coupons should be forwarded to this office bearing the inscription, "Sunday Programmes?"

- (1) Are you in favour of eliminating all religious matter from the broadcasting programmes?
- (2) Are you in favour of the Sunday broadcasting programmes as given at present?
- (3) Are you in favour of increasing the number of religious items in the Sunday broadcasting programmes?
- (4) Are you in favour of decreasing the number of religious items in the Sunday broadcasting programmes?
- (5) Are you in favour of any of the following changes in the present Sunday broadcasting programmes?

(a) Religious addresses instead of church services.

(b) New sacred music.

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

## SELF CENTRED.

Dear Sir,—Please allow me space to voice my condemnation of the ideas of Mr. Blair and his fellow egoists regarding the broadcasting of church services. I am not ecclesiastical and like any amount of jaaz and sporting programmes, but unlike J. C. Bessett and our dealer friend, I realise that I am only one of many. Not Mr. Bessett, there is not a superabundance of religion in the programmes and if you were transplanted from your convenient city home to a God-forsaken, crab-holed, suburb part of the country, it might dawn on your self-centred brain that some people cannot go to church of run their own station either.

My opinion is that since J.C.B. has added his voice to the so-called mass, its mentality has suffered a further drop of some few hundred per cent.

The grumblers are in a class of their own, with minds as narrow as the streets in which they live, and ideas like those of the three gentlemen whom I have mentioned.

In conclusion, I hope the stations will continue to broadcast church services every Sunday for the sake of the men and women of the west, and for the sake of the sick and distressed and will not be influenced by such narrow-minded, self-centred, and egoistic townies who have no more idea of country conditions than they have of Antarctica. Yours, etc.,

Binna Barra. J. W. PRIESTLEY.

## ONE NIGHT FOR DX.

Dear Sir,—I have before me your number dated 26th, and think "Country View," unsigned (page 6), hits the nail on the head well and truly.

I think every A and B class station should be off the air one night a week, as we never get a chance to get over seas. I have never had America properly since 3:0 came down in their wake. I am sure the bulk of those that pay the fee would welcome one silent night a week for A and B class stations. Why not Sunday night, not afternoon after 5? I am sure Uncle and Hello men would think it a fair go.

Yours, etc.,

Tanworth. RAWDON K. SUTTON.



# It's All in the Air

## Coming Features in the Broadcasting Programs

**DAVID CRAVEN** is back at 2FC, and listeners will have an opportunity of hearing this popular baritone on 27th September.

**SAM STERN**, comedian, continues to entertain 2FC audiences. He will be at the Studio again on Thursday, 18th September.

**DAGMAR THOMSON**, gifted violinist, has arranged for a series of appearances at 2FC, which commence on 15th September.

"**RADIO REVELLERS**" are revealing again on Tuesday, 27th September. Gwladys Firnister, Wally Baynes and Charles Lawrence will assist their able director, Laurence Halbert.

**TENNIS ENTHUSIASTS:** Listen to 2FC on Friday, 16th September, for a few words from Mr. Henry Marsh on this splendid sport, and matters of personal interest to all those who have the improvement of the game and its conditions at heart.

"**IS IT YOUR BIRTHDAY?**" A series of very intriguing talks have been in progress at 2FC. The "Birthday Lady," as listeners call her, is in the happy position of being able to define the characteristics of individuals by the date of their birth. Many of the weaker sex—and not a few men, too—have written asking for her insight into their respective characters. Wise philosopher who said: "Man, know thyself!" The next "reading" will be given on Monday, 12th September.

### BEETHOVEN'S "FIDELIO."

An important event in the musical world of Melbourne is the production of Beethoven's opera, "Fidelio," of which three performances are to be given at the Playhouse Theatre, and, in order that listeners in the back blocks and many others may not be debarred from hearing this masterpiece, arrangements have been made for a studio performance to be broadcast from 3L.O. Melbourne, on September 14th. Mr. Fritz Hart has been superintending the rehearsals for some time past, and a performance of all-round excellence is promised.

**R.A.S. SPRING FAIR:** The Band Contest, from 28th to 30th September, will be broadcast by 2FC, from the Royal Agricultural Showground.

**POLICY SPEECH:** The Policy Speech by Mr. T. R. Bavin was broadcast from Chatawood Town Hall on Thursday, 6th September.

**BRITISH MUSIC SOCIETY CONCERT** of Australian composers, to be held at the Conservatorium, on Tuesday, 20th September, will be broadcast by 2FC.

**RADIO SYMPHONISTS:** Charles Smythe's new combination rendered excellent dance music from 2FC Studios on the evening of 8th September. We hope to hear more of these melody makers.

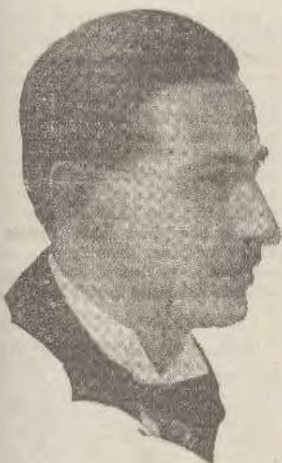
**ORGAN MUSIC:** Lovers of organ music enjoyed the thoughtfully arranged programme given by Mr. E. J. Robinson, and broadcast by 2FC from Pitt Street Congregational Church on Sunday, 11th.

**CHORAL MUSIC:** Accepted by the most critical as the most successful item on the air, will be rendered by the Royal Sydney Apollo Club, and broadcast by 2FC, on Monday, 19th September.

"**RUDDIGORE:**" The 1st Act of the Gilbert and Sullivan opera, "Ruddigore," broadcast for the first time in the world by 2FC on Friday, 2nd inst., was very much appreciated by listeners. The music of this little known opera is delightful, and listeners had an opportunity of enjoying the 2nd Act on Friday, 9th September.



Uola George of 2BL broadcasting from the football ground.



**LAWRENCE MACAULEY**, noted Scotch bass baritone, who has just landed in Sydney, bringing with him a great reputation as a broadcasting and concert artist. He is broadcasting from 2FC.

**STRELLA WILSON**, principal soprano of the Gilbert and Sullivan Co., by kind permission of J. C. Williamson, will thrill her unseen audience from Studio 2FC on Sunday, 18th inst. This golden-throated song-bird is a source of never-ending delight to listeners.

**WENTWORTH DANCE NIGHT:** Trippers of the light fantastic were able to arrange enjoyable little private dances to the music of one of the best dance orchestras in Sydney on Saturday, 10th September—the New Wentworth Symphonic Dance Orchestra. This is the forerunner of a series of similar dance nights, when listeners will have the opportunity of dancing to Cyril Kaye's excellent combination.

**THE MUSIC CLUB:** Oliver King is responsible for the organisation of this excellent institution, and the club will hold its first concert at the War Memorial Hall, Rose Bay, on Wednesday, 19th October. The artists on this occasion are Mowat Carter, A. E. Y. Benham, A. D. Cree and Eileen Moreau. The concert will be broadcast by 2FC. Mr. King, who has been singing regularly for 2FC since his return from abroad, was well known in the "Old Country." He was offered principal bass and soloist by Lionel Powell and Holt, but decided to return to Australia, and is now devoting his attention to the organisation of the Music Club.

**SHIRLEY COOKE**, one of the cleverest entertainers on the air, appearing regularly from Station 2FC, is a woman of many parts—none of them "square." Like the schoolboy's definition of a fly, she is a very present help in time of trouble. If the studio programme presents an artistic difficulty, in her particular class of work, the little lady with the golden hair is commissioned to overcome it. On Wednesday, September 21st, however, she is off on an entirely different tack. She is going to play a Musical Romance; that in itself has been done quite recently. But wait until you hear the melodies—the number and date thereof—which she has had to master! The announcer will read the story, and Shirley will fill in the blanks with appropriate melodies.

**VERSATILE COMEDIAN:** Much to the delight of listeners is the special brand of humor dispensed by Mr. Ern Trotman from Studio 3LO, Melbourne, whose gaiety is infectious, and whose songs are distinctly original. Unlike other humorous entertainers, Mr. Trotman need not fear that listeners have heard "this" particular song dozens of times, or that "that" favorite song of his has been done to death—for the simple reason that, not only does he write them himself, but he carries both words and music "in his head" and has not committed the secret to paper.

**SPECIAL FOR JUNE:** Fresh evidence is reaching 3LO Melbourne every day that the majority of wireless listeners throughout New South Wales depend upon 3LO Melbourne for their broadcasting services.

It is mainly for that reason that a special request from June for an extension of the famous dance programme of 3LO on Thursday, 8th September, is to be satisfied. Dancers throughout Australia will therefore be able to fox-trot to "Bye-bye Blackbird" and other popular numbers which will be played by Joe Aronson's Symphonists specially for June dancers until an hour after midnight on Thursday.

**FOR HOUSEWIVES:** Among those good people who have been engaged by Studio 3LO, Melbourne, to give talks on various subjects for the benefit of the housewife, few have met with more success than Mrs. Dorothy Silk, who dispenses much valuable information over the air, regarding "Neodcraft." Listeners in the country, who have not the facilities of taking a few lessons in fancy work, or are at a loss as to how to use a remnant to the best advantage, have been greatly helped by these "Lectur-ettes," which are the very essence of practical knowledge.

**SUCCESSFUL BROADCASTERS:** With the nation wide audience of broadcasting, radio has now become one of the most fruitful fields of advertisement. "The Broadcasters," a company of entertainers who are at present touring Victoria, find that listeners comprise a large section of their nightly audience, and that their late association with 3LO, Melbourne, has been the attraction of considerable business. "The Broadcasters" are a costume comedy company including Joe Brennan, Ida Newton, and the Futurists of whom "Dismal" Desmond, Cyril Northcote, Ida Vanda and Gus Dawson are well-known members. So far their tour has been a great success, and the company have many requests for numbers made popular "over the air" from 3LO, Melbourne.

**BROADCASTING SPORTING RESULTS:** When the announcer gives the latest football score, or the winners of the last race, there are few of his listeners who appreciate the tremendous detail and organisation required to make such results possible. On Saturday afternoon 3LO becomes for the time being a vast scoreboard in which the sporting activities and interests of the entire continent are catered for. Special representatives are present at all important sports grounds, and from the races and football grounds special announcers are switched on from time to time. Private lines to newspaper offices are working continually; wires flood in from all corners of the continent, and at a critical moment it is quite probable that somebody wants to 'phone in the result of a junior school girls' basket ball match. But whether it be the result of the Melbourne Cup, or the score of a minor match, the call receives just the same attention.

**IN THE SAME MAIL**, there came to 3LO letters from two distant and widely different lands. From Saskatchewan, Canada, an appreciative listener said that the privations of being kept in the house by snow drifts 10 feet deep were lightened by listening into 3LO. Strangely enough, many letters come from this region of Canada. The other letter was from Assam, India. The writer picked up most of the transmission of March 7, 1927. The reception was at good telephone strength. It must give the 3LO announcers a thrill to know that wherever they switch on the microphones there are eager ears in Canada, U.S.A., Japan, New Zealand, India, Africa and even in the remote Antarctic whaling ships.

**DELIGHTFUL TENOR:** Among the many tenors who come and go to Studio 3LO, Melbourne, few have met with greater response and appreciation from listeners than Mr. James Riley, the young South Australian tenor, who is once again, charming our ears with his melodies from Grand Opera and Classical Ballads. Great hopes are entertained of this young vocalist, for Mr. Alfred O'Shea, on hearing him sing, said that Mr. Riley's voice was the nearest in tone and quality to that of John McCormack he has heard in Australia.

**NOR-WEST MISSIONER:** Few people will be more welcome to Studio 3LO, Melbourne, than the Rev. R. Gribble, who is at present on furlough after twelve years' work with the Forest River Mission, and has many tales of thrilling adventure, and hairbreadth escape to tell us. Many listeners will have already seen Mr. Gribble's film, "The Mentamers," which has been touring the suburbs—and it is in connection with the making of this film that many escapades took place, over one thousand square miles of wild northern country being traversed to get the material. Now, by means of the wireless, many thousands more are to enjoy it by means of the skillful word pictures that the Rev. Gribble will draw for the benefit of listeners.

**EMPIRE BROADCAST:** To attempt to crystallize 2FC's effort, and its world-wide effect, when for the first time in the history of wireless, Australia was heard in England, is a well nigh impossible task—for the 'practise pen of the writer. But there are one or two little delights of humorous interest to our readers. We may "humorous," but possibly Mr. Cochrane did not consider his non-stop run, from 11 a.m. on Sunday to 12 noon on Monday, in the same light. He is a man of remarkable physical resistance and mental concentration. In the midst of the seething excitement at the Studio at midnight, on Sunday, 4th September, he sat quietly at his table, with the usual tremendous pile of letters from his beloved radio family before him, addressing photos, of "Uncle Rus and Jerry," and of himself, to his enthusiastic little enquirers. When the time came, he would be ready to participate in the event that created radio history, but meanwhile how could he better fill in time than by answering "Mary Mary's" letter, and a hundred like it?

# In Theatre, School and Kindergarten

I WAS interested to read in a London paper recently an article by Reginald Berkeley, the capable author of the play which has become the sensation of London, "The White Chateau."

Mr. Berkeley is always interesting, but he wrote this time on a subject which touches listeners very nearly. His play did not begin life as a successful dramatic favorite; it was a poor orphan, started its career humbly in a broadcasting studio and shot into the ether with a prayer for its non-static reception. As such it appealed to a vast number of listeners.

The point Mr. Berkeley makes is one on which I have expressed myself many times. He says that his play would have had no chance ever to see a real London audience in the living, breathing, present flesh had it not been for the preparation given it by the broadcasting. No manager would have listened to it, except on the radio; no financial "butter-and-egg man," as they call backers in the glorious United States, would ever have dug down into his pocket had it not been known to hundreds of thousands of wireless fans, who clamored for more like it.

And here is the reason for its success on the real stage. A radio play must forget all appeal to the eye, and address itself to the ear.

Mr. Berkeley wonders how theatre managements have come to fear the radio as a menace to their business. Fighting the radio will do no good. It has come to stay, and by and by both it and the theatre and the concert promoter will come to work hand in hand, for a mutual benefit.

**IL TROVATORE:** Those listeners—and there were thousands of them—who enjoyed the Studio presentation of "Faust"—recently broadcast twice from Studio 3LO, Melbourne, will be delighted to hear that yet another of these favorite operas is due for production—"Il Trovatore"—and is to be played by the same company. Rehearsals, under the capable baton of Mr. Sutton Crow, have been going on for some time. The tuneful familiar duets, "Home to our Mountains" and "The Miserere," will be greatly enjoyed by listeners, and it is safe to say that the ever harmonious "Anvil Chorus," rendered by the well-balanced Auburn Methodist Choir, will be one of the "hits" of the production.

Notes by—

H. ELLO

FROM the beginning of Broadcasting in Australia, 3LO has agitated for the establishment of regular educational sessions for schools. Not only have they offered to supply the programmes, but they actually inaugurated a weekly educational session which is conducted by an educationalist of the highest standing every Thursday afternoon.

Although the Governments for the time being have not officially co-operated in the schemes, no obstacle has been placed in the way of school teachers and committees installing the necessary apparatus to give scholars the benefit of this service. Hundreds of schools throughout Australia now have a receiving set, and it is estimated that over 20,000 children listen-in regularly to the educational sessions from 3LO, Melbourne.

It is not difficult to visualise the tremendous advantages and possibilities of broadcasting for educational purposes. If the outcome of the efforts of 3LO is to make better scholars and widen the views of those in outback country districts, isolated from all the facilities of the higher educational systems, then they will have achieved a signal success.

Hundreds of appreciative letters have already been received by 3LO, Melbourne, and they all point to excellent results.

**HAMILTON BATEMAN,** a young English violinist who is meeting with success at the Tivoli Theatres in Sydney and Melbourne, has been engaged for a series of recitals by 3LO, Melbourne. Bateman is a natural musician, having taken to the violin at the age of six, and practically taught himself. At the age of twelve he was sent to the Royal College of Music, London, where he studied under Professor Achilles Ravardo. The young musician found that his self-taught technique required very little amendment. In England, Hamilton Bateman has appeared in recitals at the Queen's Hall, and his appearances on the professional stage were also successful.

ONE of the kindly things done by 3LO is its Children's Party, at which hundreds of youngsters are rendered happy seeing their radio favourites in the flesh. The great Tivoli Revel recently held will be among the happiest and most treasured memories of the children lucky enough to be there.

It was a capital idea to choose the Tivoli, because Olsen and Johnson are exactly the right sort of comedians to entertain infancy. They enter into the spirit of the thing so completely. It was worth a lot to see Olsen's face, shining with his exertions and lit by a smile that ought to have been measured in yards, it was so very expansive. Elizabeth Morgan was another American who worked hard to give these little guests a treat. I noticed nothing of an American boycott at this entertainment. Sacco and Vanzetti with their sordid memories had no place here. The party was one long yell from start to finish. When it is recalled that the comedians and their fellow-workers had two more strenuous performances ahead of them the same day, the full measure of their generosity will be realised.

**JAZZ MUSIC:** 3LO, Melbourne, has actually discovered one listener who does not approve of Joe Aronson's Syncopated Symphonists. In fact, this listener writes that "Joe has much to answer for in the next world for inflicting upon the community such Hellish Discords." Be that as it may, the fact remains that Joe Aronson's Band delights hundreds of thousands of people during the hour before midnight, when many listeners who do not like jazz are snugly tucked away in their cots. Verily musical taste differs, and even the "Pipes of Heaven" would not please everybody.

## SCOTCH NIGHT.

On September 19 a special Scottish Night will be broadcast through 3LO. This will consist of an hour from 3LO, and a half hour from Sydney and Adelaide respectively. I understand that the whole thing is being arranged by the Scottish Federation in each city as a measure of economy. The arrangement will save the hire of three halls. The best Scottish music will be broadcast.

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1 Double Circuit Jack	0	2	0
1 Single Circuit Jack	0	2	0
1 Push Pull Battery Switch (Jack Type)	0	2	6
1 Philmore Adjustable Crystal Detector, with Glass Cover	0	2	6
2 3in. lengths Radion Tubing	0	6	0
1 1/2-lb. reel 24 D.C. Wire	0	3	2
2 Crescent Audio Transformers, 0 to 1 x 24 to 1, 12/6	1	7	0
1 Terminal Board	0	2	9
1 Doz. Square Tinned Buswire	0	0	10
2 Mr. Genuine Kurtz Kash Bakelite Dials, 2/3	0	4	6
	£4	0	5

### Genuine Bargains in Radio Parts

	£	s.	d.
Philmore Rheostats, 6 or 30 ohms	1	10	
Philmore Certified One-hole Fixing Rheos., 30 ohms	2	0	
Econotron Audio Transformers, 34 to 1	8	6	
201A Valves: Our Famous Econotrons	5	6	
UX109 Valves: Our Famous Econotrons	6	9	
<b>A Better Detector, the Econotron Super Detector Valve</b>	<b>15</b>	<b>9</b>	
Patentmeters: Ajax or Tillman, 400 ohms	2	6	
201A Sockets: Black Base	1	6	
S.L.F. Condensers: The Quaker, 0005	0	6	
Variable Condensers: 0005	0	6	
Thorla Condensers: Brass, 0005	10	6	

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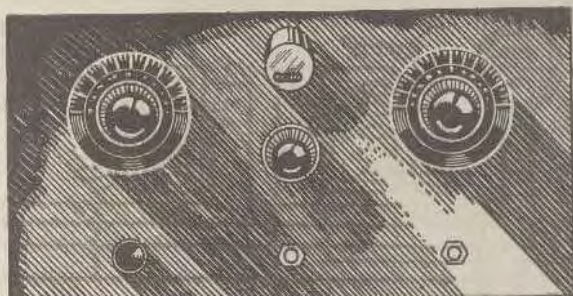
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## The Harkness Reflex Receiver

*The demand for the back number of "Wireless Weekly" containing this circuit has so far exceeded the supply that we are constrained to publish it again. Hundreds and hundreds of reports have been received from constructors showing that it is undoubtedly the most popular circuit of its kind.*

**R**EFLEX receivers are not in any way a new idea. Shortly after the inception of the three-electrode valve, reflex or dual amplification receivers were produced. Many are their advantages, the main one being economy in cost of construction and upkeep. This economy is produced by the fact that one valve does the work of two, thereby saving the cost of a valve and the cost of keeping up battery power.

There are many reflexed receivers, the more popular being the ST.100, the Grimes Inverse Duplex and the Harkness Reflex. The latter is the loudest and sweetest two valve receiver I had heard. A most remarkable volume, combined with clarity of tone, places the Harkness Reflex in a category of its own. While being tested at Dulwich Hill, those present were pleasantly surprised to hear the comparisons between this two-valve and a four-valve receiver. The volume was comparable and the purity was superior. Now, who is going to build a receiver of this type? Look at the illustrations and assure yourself that you are looking at a remarkable set. The front view is quite pleasing—no coils sticking out in front—just two condensers with a rheostat between these two, above which is the crystal detector. The battery switch, and the two jacks are seen at the bottom of the panel. Simplicity of tuning is thereby gained—no coil coupling to consider; simply turn

### Parts for the Harkness Reflex

- 1-Dilecto or Radion Panel 14 x 7 x 3-16.
- 2-6003 Geophones Variable Condensers.
- 1-30 Ohms Pilot Rheostat.
- 1-B.M.S. D.C. Jack.
- 1-B.M.S. S.C. Jack.
- 1-Battery Switch.
- 1-Harlie Crystal Detector, or
- 2-Lion Crystal Detector.
- 2-Geophone or Ferranti Audio Frequency Transformers.
- 2-H.T. Transformers (as described).
- 1-Terminal Board.
- 2-3in. x 3in. Dilecto or Radion tubing.
- 8-oss. No. 24 D.C.C. Wire.
- 1-Baseboard 12 x 0 x 1.
- Busbar, Screws, etc.



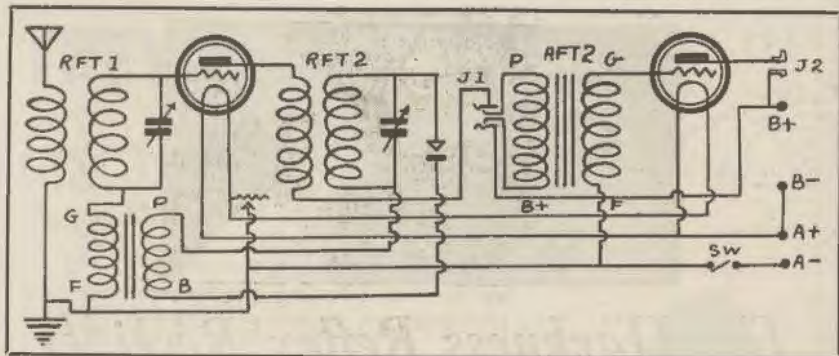
the condenser dials. The back of panel view shows the coils, transformers, valve sockets, and terminal board. The aerial and earth terminals are on the same board as the battery terminals, thus keeping ugly stray wires from the front of the receiver.

Although this layout is neat, maximum efficiency is not sacrificed to gain good looks, rather does it yield itself to efficiency, as may be seen from the back of panel wiring diagram.

The ready-wound coils for this receiver were once available on the local market, but with the exception of a spider-web type, the solenoid coils are all sold. But don't let this worry you, as they are easy to make, half an hour being all the time required.

An analysis of the circuit shows that the greatest drawback of most reflex receivers is absent in the Harkness. Usually in reflex receivers the crystal is in the plate circuit of one of the valves, and means that the plate current flows right through to the plate. This is a disadvantage, inasmuch as it is a constant wear on the crystal, which, sooner or later, gives trouble. In the Harkness, the crystal is entirely free from the plate potential, being included in the secondary circuit of radio frequency transformer (R.F.T.2).

With one valve, good speaker



strength is obtainable, but the addition of a second valve means much greater volume without sacrificing purity.

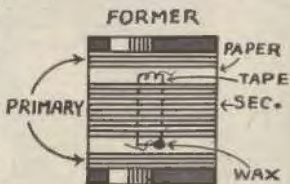
#### Construction.

The coils or radio frequency transformers, as they are known, are the first consideration in the construction of this two-valve. The two pieces of bakelite or composition tubing are required for this purpose. Half an inch from one end of the tubing drill two holes with a small drill, about one-sixteenth of an inch in diameter. Through these two holes, doubling back from one to the other, thread the beginning of your No. 24 D.C.C. wire, leaving about 6in. free from connections. Then wind on this tube, one turn close to the other, sixty turns of your wire, and hold the wire securely and prevent any slipping which may

take place. Procure a strip of good, strong paper, 12in. long and 1in. wide, and wrap this around this winding just completed, keeping it in the middle. Apply a little gum to hold this firm, and wind on your primary, which consists of 15 turns of the same gauge wire wound in the same direction. It may be a bit difficult to hold the beginning of this wire securely, but here's how to do it.

A piece of tape, 1in. wide by 2 1/2in. long, is pressed into service. Fold the tape in two, now giving a double piece, 1in. wide and 1 1/2in. long. Into the top of the fold, slip one turn of your wire, leaving about 6in. hanging free, and lay this tape longways across the present winding and on top of the paper, and proceed to wind your primary turns over this tape until you have fifteen wound on. Cut

your wire, holding your primary turns over this tape until you have fifteen wound on. Cut your wire, holding your primary turns in place with your

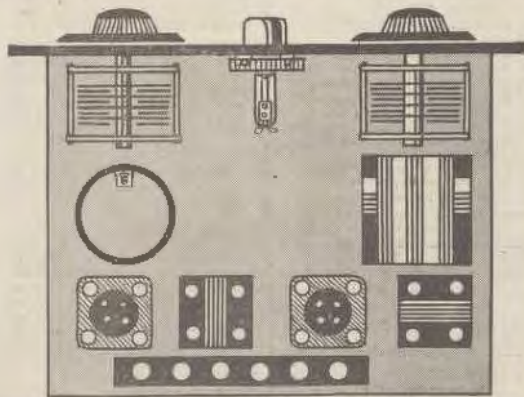


finger, and make secure by applying a small portion of sealing-wax at that particular place where the last turn crosses the protruding tape at the bottom.

The second radio frequency transformer (R.F.T.2) is wound in a similar manner to the first, only instead of having a 15-turn primary this coil boasts of a 35-turn primary, which should be wound in a manner similar to the primary of the first transformer. Carefully place these transformers out of harm's way until you drill your panel.

#### Panel Layout.

The panel layout is indeed simple, as may be seen from the plan. Again I must advise that provision only is made for the centre spindle of the condensers, on account of the many different makes of condensers with different templates. As previously mentioned, the crystal detector is above the rheostat, but the position of this depends upon the type of detector used. I, myself, used the Harze detector for this receiver and found it to be satisfactory, but the Carborundum detector, frequently employed in our different circuits, would, no doubt, be quite satisfactory. Quite a lot de-

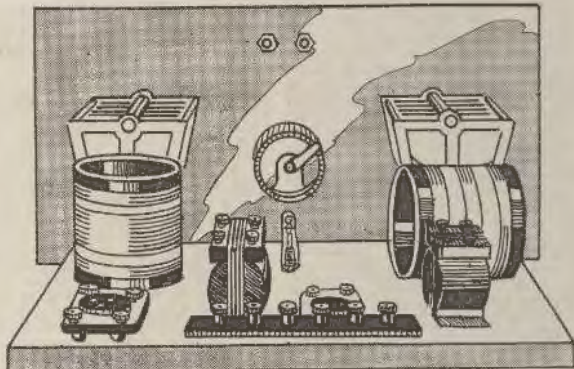


pends upon the crystal, so, whatever type you use, be sure that it is a good brand, and of stable qualities. Again, you will find that one rheostat only controls the two valves, this being quite in order, as both valves are amplifying valves.

Beneath the rheostat is found the double circuit jack, the single circuit being to the right and the battery switch situated to the left. Take care in drilling this panel, for, after all, it is the show window. When the drilling has been completed, mount your panel apparatus, screwing everything up tightly and securely, as there is nothing more annoying than a rattle in your receiver, which is caused by imperfect contact or loose screw.

#### Baseboard.

On the baseboard are mounted the coils, valve sockets, transformers, and terminal board. The layout adopted will be easily seen from the back view of the panel. I don't think you could do better than follow this out. The coils or radio frequency transformers are secured to the baseboard by means of two brackets in each case. Strips of thin brass will be found efficacious here, and the height of the coils should be 1 in. above the baseboard. The fashioning of these brackets calls for



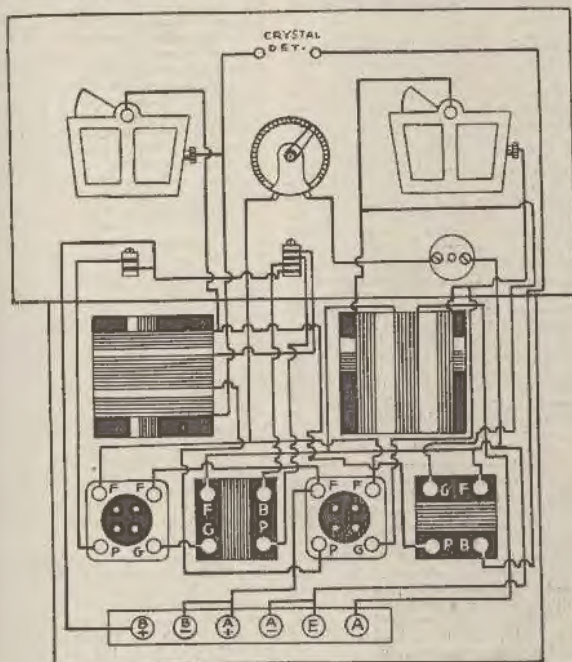
practically no engineering skill, a pair of pliers and a drill sufficing to make the bends and fill the holes. Attention must be paid to these coils, inasmuch as one must be mounted at right angles to the other. Perhaps, I should have advised you in the winding of these coils to begin and finish your primary windings on the opposite

sides of the formers to the side on which you started and finished your secondary winding. Don't forget, of course, that your secondary winding is wound first, and your primary winding is wound on the top of this coil. Don't confuse these terms.

#### Wiring.

Carefully proceed with your wiring, consulting the back of panel wiring diagram and the circuit diagram to attain success in this. Before permanently attaching your panel, connect one side of your battery switch to the nearest side of your rheostat, this wire being somewhat awkward to insert after the panel is permanently secured to the baseboard. Take this wiring in easy stages, making neat right angled bends in your busbar and check off carefully with back of panel diagram and the circuit diagram. A consultation with the back of panel view will assist you greatly, as quite a number of these connecting wires may be seen in the illustration. Properly solder every joint, where soldering is called for. A small piece of mica placed underneath two joints to be soldered, and held close to the bottom of these joints, will ensure the soldering running in properly, and not dropping on the baseboard or on any instruments which may be underneath. Always wipe off the residue of flux, or soldering fluid, after you have soldered the joints, as this will prevent any corrosion at a later date.

When everything is wired and checked off carefully the receiver is in a condition to be tested on the air. Connect up your "A" and "B" batteries, insert your valves in their sockets, hook on the aerial and earth, and plug in your 'phones on the first jack (J1). Being assured that your crystal is properly inserted, turn up your rheostat and slowly move your condensers and you will hear the station at most astounding volume, considering that only one valve and a crystal is in the circuit. Bring this



## Vibration Causes Microphonic Noises in a Radio Receiver

station up to its maximum volume, and plug your speaker into the second jack (J2), and you will be surprised at the volume your speaker yields. Listen carefully to the excellence of tone quality. It is really wonderful! Turn your condensers until you find the next station; note again the volume and clarity. Of course, if you emmesh the moving plates of your second condenser too far into the fixed plates, a certain mushiness may result, which can be overcome generally by finding another setting on your crystal detector or re-tuning with your first condenser.

Buzzing is seldom present in this receiver, only the slightest sometimes registering itself, and is overcome either by lowering your rheostat current or readjusting your crystal detector.

Any standard make of valve will suit this receiver, which functions best with a "B" battery voltage of between 60 and 90 volts, the latter being preferable if maximum volume is desired. As before mentioned quite good music may be obtained on the speaker with one valve only, and there is no particular care required in balancing or adjusting the Harkness. There are no howls or squeals to worry you or your neighbours, so that this receiver comes under the class of non-radiating receivers, which will be the most popular of all very shortly.

### BRITISH POST OFFICE EXPERIMENTS IN SHORT WAVE TRANSMISSION.

A very interesting announcement was made from 2FC on Friday last in regard to experiments to be carried out by the British Postal Authorities in short wave transmission. The information was received by 2FC by radio from Rugby and reads as follows:—

"In a week's time an interesting wireless experiment will be undertaken by the General Post Office. There are certain areas in different parts of the world where wireless signals transmitted on long wave lengths can only be received with difficulty at all, while in other places such signals can only be received at certain hours of the day. With the object of ascertaining to what extent short wave transmission may be capable of reaching such areas, the British official press will be transmitted for two months beginning on September 8th on long and short wave simultaneously. The same call sign will be used and the long wave will remain as it is at present. The short wave will be twenty-two metres at noon, Greenwich meantime transmission, and thirty-seven metres at eight p.m. and midnight. Reports on reception by stations will be welcomed by the General Post Office."

**M**ICROPHONIC noises are the sounds produced in the telephones or loudspeaker of a wireless set when the cabinet is subjected to jarring or vibration. They are due to movements of the electrodes within the valves. As an experiment, tap each valve in the set in turn lightly with the finger. Nothing may be heard when the high or low-frequency amplifiers are treated in this way, but the rectifier is almost sure to respond, a "pong," which may or may not be very loud, being heard. Similar "pongs" will be produced by any valve in the set that is oscillating or close to the point of oscillation. Where microphonic effects are particularly marked the lightest touch upon the cabinet or even walking across the floor may be sufficient to cause the ringing noise to occur. Microphonic tendencies are likely to give rise to a fault that may be very puzzling if the cause of it is not known.

Shortly after the loud-speaker has been brought into action a low noise not unlike that made by the propeller of a distant aeroplane may be heard accompanying speech or music. The noise rapidly grows in strength until it completely drowns signals; it is by then a loud booming sound, which remains constant in its pitch. The way in which a low-frequency howl of this kind is produced is of interest.

Under the effects of the fluctuations in the current passing through the magnet windings the diaphragm of the loud-speaker is caused to vibrate. These vibrations give rise to sound waves which strike the drums of our ears and cause them to vibrate in the same way as the diaphragm of the instrument. The sound waves also impinge upon the valves of the receiving set, causing slight vibrations to occur in them. They respond by passing back to the diaphragm of the loud-speaker electrical impulses which give rise to a ringing sound. The sound is emitted from the loud-speaker, corresponding air waves travelling to the valves, where they increase the strength of the vibrations already occurring. And so the process continues, the sound building up in strength until it becomes at times almost deafening in its intensity. A vicious circle of this kind can be produced deliberately with almost any receiving set using a full-emitter rectifying valve, mounted in a solid holder without springs.

Within the bulb of the valve are three electrodes, the grid, the filament, and the plate, which are attached to the glass pinch by means of metal supports. All of these, the electrodes and their supports, have natural frequencies of their own at which they vibrate when jarred. Experiments have shown that microphonic effects are due mainly to vibrations of the filament, of which the natural frequency is often such as to produce an audible note. In the old, bright valves, the filaments were, comparatively speaking, stout, and there was for this reason little tendency on the part of the valves to ring. Many of the modern dull emitters have filaments considerably finer than a human hair. When the bulb of the valve is tapped, or when vibrations caused in any other way reach it, they are conveyed to the pinch and thence, by way of the filament supports, to the filament itself. The filament is thus set vibrating, which means that it is continually changing its position with regard to the other electrodes. The equilibrium of the valve is upset, fluctuations in its anode current occur, and these, when passed on in amplified form to the loud-speaker, produce the familiar ringing noise.

All full-emitter valves are to some extent microphonic, though some kinds are considerably worse in this respect than others. Since the rectifier is more apt than the other valves in the set to produce microphonic noises it should always be mounted in a holder provided with spring contacts. The springs absorb the greater part of such vibrations as come the way of the receiving set, preventing them from being transferred to the valve itself. Where the existing holder is of the solid type an improvement will generally result if several folds of some soft thick material are placed between the base of the cabinet and the top of the table upon which it stands. Another very good palliative—there is at present no known cure—for microphonic tendencies, is to fit the cabinet with small rubber feet, which can be done by attaching revolving rubber foot heels or small door-stops to the underside of the base at the corners.

Where low-frequency howling of the kind referred to is encountered care should be taken to place the loud-speaker at some distance from the receiving set, and it should always be operated with the mouth of its horn turned away from the cabinet.



# An Explanation of a Radio Wave.

BEFORE the earliest days of practical wireless communication, experiments were carried out which demonstrated the validity of the theoretical deductions that the electromagnetic waves of modern wireless practice are identical with light waves. The only difference between the two sets of waves is in the matter of their length: while the waves constituting visible light have a length equal to a very small fraction of an inch, those used in wireless communication have a length of from a few yards to several miles. Making due allowance for this difference in wavelength the two sets of waves should have similar properties and be subject to the same laws.

Now, one of the laws governing light waves is that, in a uniform medium, they are transmitted in straight lines. In a similar manner, therefore, it is to be expected that wireless waves would travel in straight lines along the earth's surface where this is uniform and not be interrupted by mountains, buildings, and so forth. Hence, when the practicability of communicating by wireless over short distances was demonstrated by experiments, it was thought that the extension of this distance would necessitate the provision of excessively high masts at both the transmitting and receiving stations in order to take account of the curvature of the earth, and that the range would be limited by the ordinary visual horizon obtained from the tops of the masts supporting the aerial. Reasoning upon these lines it was definitely predicted that it would be impossible from a practical standpoint to establish communication over a distance of more than a few hundred miles at the most.

When, therefore, experiments were made which showed that signals could successfully be sent across the Atlantic and later from England to South America, about a quarter of the way round the earth, there was naturally much interesting speculation among scientific men as to the manner in which the waves overcame the curvature of the earth. Following upon a great deal of theoretical investigation a large amount of experimental evidence has been obtained during the last few years which shows that the secret of this problem lies in the upper regions of the earth's atmosphere. At and above a height of about 50 miles from the earth's surface the atmosphere becomes ionized or electrically conducting under the influence of the sun. Under suitable conditions this zone of ionized air is enabled to deflect wireless waves arriving therein and return them to the earth's surface.

Thus some of the waves which leave the transmitting station in an upward direction become deflected down again and may reach a receiving station on the ground at a considerable distance—much greater, in fact, than the range of those waves propagated directly along the ground. Further, some of the waves reaching the ground at an inclined angle may be reflected upwards and be deflected a second time by the ionized upper atmosphere. Such waves will evidently reach a receiver at a still greater distance and will be enabled to travel very considerably around the curvature of the earth.

Numerous tests have been specifically carried out, with great success, to check the validity of this explanation, and the problem of the transmission of waves even half-way round the earth, such as from England to Australia, is considered to be well understood. Unfortunately, the ionized regions are beyond the range of direct experimental investigation as employed in meteorology, but there is accumulating a certain amount of other independent scientific evidence for the existence of such regions, and many methods are now being actively pursued for investigating the properties of the upper atmosphere.

We have shown that by successive deflections at the earth's surface and in the upper regions of the atmosphere these waves were enabled to travel round the curved surface of the earth. A few years ago the progress of long-distance wireless telegraphy led to the satisfactory transmission of signals between England and Australia or New Zealand, that is, half-way round the earth. Now, although this gave the condition of maximum distance between the transmitter and receiver, it raised the very interesting problem whether it would ever be possible to send a signal round the earth and intercept it, at or near the transmitter, coming from the opposite direction. In other words, would it ever be possible to detect wireless waves which had actually travelled the whole way round the earth?

The rapid development in the technique of short-wave communication of recent years has now made it possible for this speculation to be converted into an accomplished fact. In connection with some work carried out by engineers of Marconi's Wireless Telegraph Company, it had been noticed that at times signals were duplicated in the records obtained at the receiving station, indicating the reception of two sets of waves, one

set arriving at a short interval after the first. On carrying out a special experiment with the receiver situated only a few miles from the transmitter, it was shown that the time lag of the second signal was such as to indicate that it was due to waves which had travelled right round the earth.

A similar duplication of signals was observed in Germany on the printed records of the reception of American short-wave stations. Later, with a special short-wave transmitter at Nauen and a wavelength of 15 metres, signals were successfully sent right round the earth and graphically recorded by photographic methods. From these records the time taken by the waves to travel round the earth could be accurately measured, and this was found to be a little over one-seventh of a second. Assuming that the waves travel with their normal velocity, which is equal to that of light, this time is greater than that required to travel round the actual surface of the earth. This is due to the fact that the waves do not travel along the earth's surface but through the upper regions of the atmosphere. Indeed, the time measurement indicates that the path of the waves corresponds to a circle around the earth at a height of about 110 miles. Such an experiment thus affords an interesting confirmation of the now generally accepted theory as to the assistance rendered to the passage of wireless waves by the earth's atmosphere.

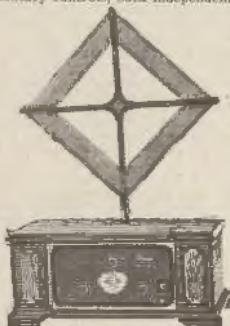
## ROYAL SHOW.

SHOW Week in Melbourne is going to be made interesting by S.L.O. Melbourne. Every evening a talk will go over the air, giving salient facts for show visitors. I don't know whether judges can be persuaded to tell just why Blossom won the First Prize for Prime Dairy Fed Merinos, or why the Aylesbury Bull in the Kindergarten Class was ignominiously beaten by something not as heavy as Sam Chapham, but it will be interesting, even if they only broadcast the moo of a cow from Castleton, announcing it has been placed. Think how Castleton will feel about it. Flugs will fly there half a minutes after the judges' decisions are known, and Strawberry health will be pledged in milk Plus. It is the secretary of the Royal Agricultural Society, Mr. Henry Schwieger, who will do most of the talking, though special broadcasters will describe ring events.

# Recent Radio Apparatus

## PRIESS DE LUXE SET.

Manufacturers Products Pty., Ltd., have demonstrated to us a Standard One Dial Central Priess De Luxe 8-Valve Set. The set itself operates direct from a loop, and has all the characteristics of ultra selectivity with tremendous volume. The main feature is, of course, the single control, which makes tuning easy and cuts out complications. The circuit of the Eight Valve Set comprises five stages of Radio Amplification, Detector and two stages of Audio Amplification. Tuned Radio Frequency has been successfully and efficiently linked with untuned Radio Frequency amplification with complete stability. The control settings are visible through a window in the panel, in wavelengths. There are two supplementary controls, both independent of



the tuning control, one for sensitivity and one for volume. A Toggle switch controls the filaments and cuts in one or two audio stages. Great precautions have been taken to eliminate or reduce energy losses to a minimum. In the loop contact system, instead of using the ordinary telephone plug and jack system of control, air insulation over the major path of the opposite polarity contact areas with hard rubber insulation is employed, thus ensuring the least possible energy losses. The switch is equipped with coin silver contact points, and the high Radio Frequency potential leads are shielded. The magnetic fields in the later-stage coupling devices are balanced so as to be separately independent and to avoid inter-stage reactions.

The cabinet is finished in two-tone Inlaid mahogany with battery compartments on each side, and a Baldwin Switch Lead Speaker or Tower Cone

Speaker is supplied with each set. An interesting departure from the customary practice is seen in the panel, which is of etched malloy metal finished in duo tone. This gives a refined appearance, and at the same time shields the set against hand and body capacity effects while tuning.

## THE HEATH CONDENSER.

Maling and Company have forwarded to us a sample of the latest type of Heath Condenser, which has markedly improved characteristics. The new Heath Condenser displaces the usual end plates with sturdy aluminium end plates, into which small solid pieces of hard rubber are forced, thus forming the insulation of the Rotor from the Stator plates. Riveting these end plates cuts out leakage and the necessity for shielding. The metal end plates prevent warping and disalignment of the condenser plates, this point being added to by the fact that the Stator and Rotor plates,



spacing supports, and end plates are made practically all in one piece—thus forming a rigid non-warping piece of metal.

The New York laboratories in conducting exhaustive tests upon the model illustrated here, found an equivalent series resistance of only 0.1 ohm, and a phase difference of less than one minute.

The Heath Condenser has a geared micrometer vernier control which gives it an easy gradual movement and free from backlash. Of attractive appearance, it unquestionably represents one of the best types on the market.

## EMMCO DE LUXE DIAL.

Electricity Meter Company have now placed on the market an entirely new type of Dial, known as The Emmco de Luxe Dial, as illustrated here. The sample submitted to us proves that the manufacturers in producing this Dial have more than maintained the high quality standard so long associated with their well-known brand of radio parts. Finished in black or mahogany, or with clock-

wise or anti-clockwise movement, the De Luxe Vernier Dial is, at the same time of solid construction, being manufactured throughout of high-grade Bakelite. Adapted to a set, it proved to possess an easy yet firm vernier



movement without jerkiness and giving a steady, firm, tuning control over the whole scale.

A feature of the Dial is that its special construction eliminates hand capacity whilst the logging windows at either side and the hair line adjustment are features which will be appreciated by all who use it. The small knob at the top is attached to an E-musco, which may be obtained with the Dial if desired.

Our sample from Manufacturers Products Pty., Ltd., sole selling agents,

## FERRANTI OUTPUT TRANSFORMER.

The use of an Output Transformer is desirable for use with all types of loud speakers, and in many cases



essential. The Ferranti 1-1 Ratio Transformer has for its main objects

## Recent Radio Apparatus

(Continued.)

the elimination of the D.C. plate current of the last valve from the windings of the loud speaker. It also completely isolates the loud speaker from its high tension voltage. This results in the following advantages:—

(1) The heavy plate current taken by large power valves cannot damage the loud speaker windings.

(2) The magnets of the loud speaker cannot be impaired by re-zeving the connections.

(3) The signals will not be distorted through magnetic saturation of the loud speaker pole pieces.

(4) The gap of the loud speaker can be more finely adjusted because no D.C. current passes around the windings.

(5) It removes the possibility of shock from the loud speaker terminals when using an H.T. battery eliminator, either pole of which may be at a high voltage relative to earth.

(6) It enables greater volume to be obtained without overloading by allowing almost the full H.T. voltage to be applied to the plate of the power valve, which avoids the excessive volt drop normally occurring in loud speaker windings.

The use of a Ferranti Output Transformer is preferable to a choke filter unit because (a) the majority of chokes are inefficient with a large plate current passing through them, and (b) the blocking condenser has to be large if the lower notes are to be reproduced properly. The result is that the lag caused by charging and discharging the condenser as the signal varies, spoils music, involving sharp changes, such as given by drums, plucked strings, the harp and even the piano.

### Construction.

In construction and appearance, Ferranti Output Transformers are similar to the well-known Ferranti Audio Frequency Transformers, the same care being taken in winding and testing to render them reliable and free from the possibility of breakdown.

The windings are arranged on the well-known Ferranti patent sectionalised system by which the potential between turns is reduced to a minimum, and the self capacity kept low and in suitable proportion to the other properties. The transformer is available in two ratios:—

Type OP 1-1 to 1 for use with ordinary loud speakers of the diaphragm

and cone type, and Type OP 2-25 to 1 for operating loud speakers of the coil driven cone type. Distributors, A. Beal Pritchett (Aust.), Ltd.

## The Clyde Radio "A" Power Unit.

The Clyde "A" Power Unit is the latest development in the radio battery world. It is a combination radio "A" Battery and trickle charger power unit, housed in a one-piece container with a special compartment for the charger itself. The unit incorporates either a 6-volt or a 4-volt Clyde battery with a current rectifier and transformer. Left permanently attached to the power supply, the unit will deliver strong unwavering life for many years after installation, with only the addition of a little distilled water to the cells of the battery and trickle charger every three months. This unit will prove a boon to many thousands of valve set users in areas supplied by alternating current, as the total cost very little exceeds that of the ordinary battery only. The unit ensures a fully charged battery at all times.

The outfit delivers current at 6 to .75 of an ampere, which, under normal operation of, say, a five-valve radio set, requires to be run three



hours for every hour of operation of the set, using bright valves taking 1 ampere. Furnished complete with a liberal length of cord and plug, the outfit is supplied all ready for immediate and permanent service. The charger itself is fool-proof, and can neither overcharge, short-circuit, nor undercharge the battery in any way. In emergencies it may be used while the set is in operation without interfering with the receipt and the battery will be unaffected by variations in line voltage.

A specially designed transformer of the automatic self-regulating type, made specially for Clyde, gives the proper charge rate, and prevents overloading of the rectifier. No protecting fuses are required, and the charger meets all the requirements of the Fire Underwriters' Regula-

tions. The efficiency of this Clyde "A" Power Unit has been conclusively demonstrated by a series of very exhaustive tests and comparisons with other chargers on the market.

It was found that there was an absolute minimum of hum or rattle in the Clyde Unit, due to stoutness of construction of the transformer, efficiency of operation of the rectifier, combined with the ruggedness and constant voltage of the Standard Clyde Battery used. Our sample from The Clyde Engineering Co., Ltd., Battery Service Dept., 106 Goulburn Street, Sydney.

## RADIO DRY BATTERIES DROP 25,000 FEET FROM ARMY BALLOON AND ARE STILL IN USE.

Just how durable is a radio dry battery? Captain Hawthorne C. Gray, of the U.S. Army Air Corps, satisfied himself on this point recently when he broke all previous world altitude records for free balloon flights in reaching a height of 42,470 feet at Scott Field Air Depot, Belleville, Ill.

At a height of approximately 25,000 feet the radio "B" batteries and dry cells, with which his balloon was equipped, were hurled overhead in a specially made parachute; were recovered uninjured and returned by parcel post to Captain Gray without packing, in the condition shown in these photographs.

Captain Gray, in a letter to National Carbon Company, makers of the Columbia Batteries, so ignominiously treated, writes:

"The same set of batteries was used in my altitude flight of March 9th and is still in condition to be used again. The 'B' Batteries (originally 22½ volts) tested 21 volts each, and 'A' batteries tested 23 amps."

## THE ANNUAL MEETING OF THE LISTENERS' LEAGUE OF N.S.W. will be held in the Real Estate Hall, Martin Place, on Tuesday, September 20, at 8 p.m.

The president, Mr. A. N. Brain, states that during the year excellent work has been done by the League, and as a result of the energies of the Committee the case of the Listener was placed in no unmistakable manner before the Wireless Commission. However, in spite of all efforts to stimulate the interest of listeners in matters that vitally concern them, in spite of instructive lectures, the majority of listeners remain apathetic, he states.

# THE FAMOUS LION FAMILY

:: OF ::

## Permanent Detectors

The Latest Development in Detectors for all Reflex Valve Circuits and Crystal Receivers. You will be astounded with the results. The Whole secret is the use of a great South American Rare Mineral Crystal discovered in 1923.



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Polished Ebonite



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especially suited for all  
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.....and ELECTRICAL STORES.....

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SYDNEY.

BRANCH:  
384 Pitt Street,  
Near Goulburn Street.

Sole Agents for Australasia

# BROADCASTING PROGRAMMES

For the COMING WEEK

## Friday, Sept. 16 2FC, SYDNEY.

Farmer's Broadcasting Service.

Wave Length, 442 Metres.

### EARLY MORNING SESSION.

7 a.m. to 8 a.m.

#### MORNING SESSION.

- 10 a.m.—"Big Ben" and announcements.  
10.30 a.m.—Studio music.  
10.45 a.m.—"Sydney Morning Herald" news service.  
11.00 a.m.—Studio music.  
11.15 a.m.—A reading.  
11.30 a.m.—Studio music.  
11 a.m.—"Big Ben." Marching music for school children.  
11.30 a.m.—A.P.A. and Reuter's cable services.  
11.45 a.m.—Studio music.  
11.55 a.m.—A talk on home cooking and recipes by Miss Ruth Purse.  
12.10 a.m.—Close down.

### MIDDAY SESSION.

- 12 noon—"Big Ben" and announcements.  
12.15 p.m.—Stock Exchange, first call.  
12.30 p.m.—Official weather forecast, rainfall.  
12.45 p.m.—Studio music.  
12.55 p.m.—Summary of "Sydney Morning Herald" news service. Rugby wireless news.  
1.15 p.m.—Studio music.  
1.30 p.m.—Marching music for school children.

- 1.45 p.m.—Doris Crossman, contralto:  
"Trees" (Rasbach) (by special request).  
1.55 p.m.—THE OAK HALL INSTRUMENTAL TRIO.

- 1.55 p.m.—Studio music.  
2 a.m.—"Big Ben." Weather intelligence.  
2.15 p.m.—"Evening News" today news service. Producers' Distributing Society's report.

- 2.30 p.m.—THE OAK HALL INSTRUMENTAL TRIO.  
2.45 p.m.—Stock Exchange, second call.  
2.50 p.m.—Marching music for school children.

- 1.45 p.m.—Doris Crossman, contralto:  
"Hills of Heaven" (Lobb).  
1.45 p.m.—Studio music.  
1.50 p.m.—THE OAK HALL INSTRUMENTAL TRIO.  
2 p.m.—"Big Ben." Close down.

### AFTERNOON SESSION.

- 2 p.m.—"Big Ben" and announcements.  
2.15 p.m.—Kathleen Collis, mezzo:  
"A Royal of Beams" (Clarke).  
2.1 p.m.—Studio music.  
2.15 p.m.—A reading.  
2.30 p.m.—Marching music for school children.  
2.35 p.m.—Frank Botham, baritone (from "Hills of Duneagal" (Sanderson).  
2.45 p.m.—THE OAK HALL INSTRUMENTAL TRIO.  
2.55 p.m.—Annie Payne, mezzo:

- "The Swallows" (Coven).  
4 p.m.—"Big Ben." Grace Ambro, soprano:  
"The Pipes of Pan" (Monckton).  
4.5 p.m.—Studio music.  
4.10 p.m.—THE OAK HALL INSTRUMENTAL TRIO.  
4.15 p.m.—Netta Mullarkey, mezzo:  
"Here's to Love" (Robens).  
4.20 p.m.—Frank Botham, baritone:  
"Give a man a horse he can ride" (O'Hara).  
4.24 p.m.—Kathleen Collis, mezzo:  
"Mighty like a Rose" (Nevin).  
4.25 p.m.—THE OAK HALL INSTRUMENTAL TRIO.  
4.35 p.m.—Annie Payne, mezzo:  
"Cannon" (for the King) (Old Scotch).  
4.40 p.m.—Grace Ambro, soprano:  
"At My Window" (Parker).  
4.45 p.m.—Stock Exchange, third call.  
4.47 p.m.—Netta Mullarkey, mezzo:  
"The Sweetest Flower" (Hawley).  
4.50 p.m.—The Wentworth Symphonic Dance Orchestra, under the baton of Mr. Cyril Kaye.  
5 p.m.—"Big Ben." Close down.

### EARLY EVENING SESSION.

- 5.40 a.m.—The Chimes of 2FC.  
5.45 a.m.—"The Hello Man" Talks to the Children.  
5.50 p.m.—Story Time for the Young Folk.  
6.40 p.m.—Dinner Music.  
7.0 p.m.—"Big Ben"; Latest Sporting Information by the 2FC Racing Commissioner.  
7.10 p.m.—Daley's Market Reports (Wool, Wheat and Stock).  
7.18 p.m.—Fruit and Vegetable Markets.  
7.20 p.m.—Weather and Shipping News.  
7.25 p.m.—"Evening News" Late News Service.

### NIGHT SESSION.

- 7.40 p.m.—Programme Announcements.  
7.45 p.m.—Under the Auspices of the Australian Examination Board, a lecture on Evolution by Mr. Walter Hunt.

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

- 2FC.—Farmer's Broadcasting Station, Ltd., Sydney, wavelength 442 metres, power 1600 watts.  
2BL.—Broadcasters' Ltd., Sydney, wavelength 353 metres, power 5000 watts.  
2GB.—Theosophical Broadcasting Station, Ltd., Sydney, wavelength 314 metres, power 1000 watts.  
2GL.—Trades and Labor Council, Sydney, wavelength 280 metres, power 1500 watts.  
2LW.—Giro Sandel, Sydney, wavelength 267 metres, power 500 watts.  
2MKA.—Mucker Bros. Bathurst, wavelength 275 metres, power 250 watts.  
2IE.—Electrical Utilities Supply Co., Sydney, wavelength 393 metres, power 250 watts.  
2BE.—Barrin Electric Co., Sydney, wavelength 318 metres, 100 watts.  
2ED.—R. A. Douglas, Newcastle, wavelength 498 metres, 100 watts.

- 8.0 p.m.—"Big Ben"; The Crystal Palace Theatre Orchestra, under the baton of Mr. Harry Stone.  
8.30 p.m.—Raymond Ellis, English Baritone, in Operatic Numbers.  
8.35 p.m.—A Bridge Talk by Mr. Graham Kent.  
8.45 p.m.—Charles Lawrence, Entertainer:  
"Thoughts" (Grey).  
8.50 p.m.—Cyril Monk, Violinist.  
9.0 p.m.—"Big Ben"; Latest Weather Forecast: Win and Windle, English Entertainer.  
9.3 p.m.—The Crystal Palace Theatre, conducted by Mr. Harry Stone.  
9.18 p.m.—Raymond Ellis, Operatic Baritone.  
9.22 p.m.—A Talk on "Auldry Wood."  
9.30 p.m.—Harrison White, Banjo Solo.  
9.40 p.m.—Win and Windle, English Entertainer.  
9.48 p.m.—Cyril Monk, Violinist.  
9.55 p.m.—Charles Lawrence, Entertainer:  
(a) "A Canned Cinema Play" (Kest).  
(b) "Public Conversations" (Lea).  
10.5 p.m.—The Crystal Palace Theatre Orchestra, under the baton of Mr. Harry Stone.  
10.13 p.m.—Win and Windle, Entertainer.  
10.15 p.m.—Harrison White, Banjo Solo.  
10.25 p.m.—The Crystal Palace Theatre Orchestra.  
10.30 p.m.—The Wentworth Symphonic Dance Orchestra, conducted by Mr. Cyril Kaye.  
10.40 p.m.—Harrison White, Banjo Solo.  
10.45 p.m.—The Wentworth Symphonic Dance Orchestra.  
10.57 p.m.—Late News and Announcements.  
11.0 p.m.—"Big Ben"; The Wentworth Symphonic Dance Orchestra, conducted by Mr. Cyril Kaye.  
Intervals at the Wentworth filled by musical items from this studio.  
11.30 p.m.—National Anthem; Close Down.

## 2BL, SYDNEY.

Broadcaster's Ltd.

Wave Length, 353 Metres.

Friday

### EARLY MORNING SESSION.

7 a.m. to 8 a.m.

#### MORNING SESSION.

- 10.30 a.m.—G.P.O. clock and chimes.  
10.40 a.m.—Musical programme from the Studio.  
10.45 a.m.—News from the "Daily Telegraph Pleistural."  
10.50 a.m.—Musical programme from the Studio.  
11 a.m.—G.P.O. clock and chimes.  
11.5 a.m.—Musical programme from the Studio.  
11.15 a.m.—Talk on "Laminin," by Miss Gwen Varry, Broadcasters' women's sports authority.  
Social notes. Replies to correspondents by Mrs. Jordan.  
12 noon.—G.P.O. clock and chimes.  
Special ocean forecast and weather report.  
12.5 a.m.—Brunswick Panopticon musical rental.  
12.15 p.m.—Information. Mail, shipping, and user directory.  
12.18 p.m.—Bells in call by wireless.

For Purest Music Use Only Philca.

12.30 p.m.—Fruit market report.  
 12.32 p.m.—Vegetable market report.  
 12.34 p.m.—London metal market report.  
 12.35 p.m.—Dairy and farm produce market report.  
 12.40 p.m.—G.P.O. clock and chimes.  
 Forage market report.  
 12.52 p.m.—Fish market report.  
 12.54 p.m.—Rabbit market report.  
 12.55 p.m.—News from the "Sun".  
 12.58 p.m.—Hiller's Instrumental Quartet—  
 Direction, Caryl Cantling.  
 1.00 p.m.—G.P.O. clock and chimes.  
 Talk in children and special entertainment  
 for children in hospital.  
 2 p.m.—G.P.O. clock and chimes.  
 Close down.

## AFTERNOON SESSION.

Racing information broadcast immediately  
 after each race by courtesy of the "Sun".  
 2 p.m.—G.P.O. clock and chimes.  
 News from the "Sun".  
 2.15 p.m.—Civil Service Stores Trade—  
 direction, Miss de Courcy Brumer.  
 2.30 p.m.—G.P.O. clock and chimes.  
 News from the "Sun".  
 2.40 p.m.—Country women's session—  
 in objects, by Miss Wilkinson.  
 2.50 p.m.—News from the "Sun".  
 4 p.m.—G.P.O. clock and chimes.  
 Civil Service Stores Trade.  
 4.15 p.m.—Serial story.  
 4.35 p.m.—Musical programme from the  
 Studio.  
 4.40 p.m.—News from the "Sun".  
 4.55 p.m.—Resume of night's programme.  
 4.57 p.m.—Racing resume.  
 4.40 p.m.—Special women forecast.  
 5 p.m.—G.P.O. clock and chimes.  
 Close down.

## EARLY EVENING SESSION.

5.45 p.m.—G.P.O. clock and chimes.  
 (Children's session).  
 6.30 p.m.—Musical programme from the  
 Studio.

## SPECIAL COUNTRY SESSION.

7 p.m.—G.P.O. clock and chimes.  
 Australian Mercantile, Land and Finance  
 Club report.  
 Weather report and forecast by courtesy  
 of Government Meteorologist.  
 Producers' Marketing Society's fruit and  
 vegetable market report.  
 Stock Exchange reports.  
 Grain and fufdow reports ("Sun").  
 Inter-Province Report ("Sun").  
 7.20 p.m.—Talk by Mr. Gregory of the  
 N.R.M.A.  
 7.45 p.m.—Talk on "Gardening Science," by  
 Mr. Cooper, Park Superintendent, City  
 Council.  
 8 p.m.—G.P.O. clock and chimes.  
 Broadcasters' Typical Chorus.  
 8.5 p.m.—Broadcasters' Light Orchestra,  
 under the direction of Mr. J. Knight Bar-  
 net.  
 9.13 p.m.—Mr. Raymond Baxter, bass.  
 9.20 p.m.—Miss Millie Hughes, soprano.  
 9.27 p.m.—Mr. Bernard Roberts, entertainer  
 at the piano.  
 9.34 p.m.—Duet, Miss Millie Hughes and Mr.  
 Raymond Baxter.  
 9.35 p.m.—Broadcasters' all-sports expert will  
 talk on Football.  
 9.40 p.m.—Cec. Morrison and his Glee-  
 choirs broadcast from the ballroom of the  
 Bondi Casino.  
 9.45 p.m.—G.P.O. clock and chimes.  
 9.51 p.m.—Weather report and forecast by  
 courtesy of Mr. C. J. Mares, Government  
 Meteorologist.  
 9.52 p.m.—Broadcasters' Light Orchestra.  
 9.52 p.m.—Dorothy Manning and Harry  
 Graham in song and story.  
 9.52 p.m.—Cec. Morrison and his Glee-  
 choirs broadcast from the ballroom of the  
 Bondi Casino.

4.42 p.m.—The sporting editor of the "Sun"  
 will talk on the prospects of Saturday's  
 racing.  
 10.2 p.m.—The Kahua Trio in an act, featur-  
 ing kielakos and steel guitars.  
 10.12 p.m.—Mr. Raymond Baxter.  
 10.13 p.m.—Broadcasters' Light Orchestra.  
 10.23 p.m.—Miss Millie Hughes.  
 10.34 p.m.—Cec. Morrison and his Glee-  
 choirs broadcast from the ballroom of the  
 Bondi Casino.  
 10.45 p.m.—Mr. Bernard Roberts.  
 10.53 p.m.—Cec. Morrison and his Glee-  
 choirs broadcast from the ballroom of the  
 Bondi Casino.  
 11 p.m.—G.P.O. clock and chimes.  
 National Anthem.

8.36 p.m.—Instrumental Quartet, Dan Scully,  
 Monica Horner, Murielle Lang, Ada Brook.  
 9 p.m.—Address by Mr. J. K. Powell.  
 9.10 p.m.—Songs by Madam Weidelo.  
 9.23 p.m.—Instrumental Quartet, Dan Scully,  
 Monica Horner, Murielle Lang, Ada Brook.  
 9.42 p.m.—Songs by Mr. W. J. Steiner.  
 1. "Kashmir Song" (Woodford Finsen).  
 2. "Love, please I only tell thee" (Capel).  
 9.50 p.m.—Talk down.  
 10.30 p.m.—Close down.

## 2UW, SYDNEY.

Sandel Radio, Ltd.

Wave Length, 267 Metres.

## Friday.

8 a.m.—News, shipping, mail, musical items.  
 9.45 a.m.—Women's session.  
 9.59 a.m.—Resume of forward programme.  
 10 a.m.—Close down.  
 2 p.m.—Musical items and announcements.  
 2.30 p.m.—Resume of forward programme.  
 3 p.m.—Close down.  
 5 p.m.—Musical items and announcements.  
 5.30 p.m.—Resume of forward programme.  
 6 p.m.—Close down.  
 7 p.m.—Where to go.  
 7.10 p.m.—Musical items and announcements.  
 7.30 p.m.—Mr. Greenwood—Talk to motorist.  
 "Clutches, Trips and Actions."  
 7.40 p.m.—Musical items.  
 8.25 p.m.—Resume of forward programme.  
 9.25 p.m.—Close down.

## 2GB, SYDNEY

Theosophical Broadcasting Service.

Wave Length, 315 Metres.

## Friday.

## MORNING SESSION.

9 a.m. to 10 a.m.

3.30 p.m.—Music.  
 3.37 p.m.—Address.  
 3.52 p.m.—Music.  
 4.3 p.m.—Address.  
 4.22 p.m.—Music.  
 4.30 p.m.—Close down.  
 7 p.m.—Music.  
 7.6 p.m.—Address by R. K. Renzell.  
 7.15 p.m.—Music.  
 7.20 p.m.—Address by F. Houston, N.A.  
 7.30 p.m.—Music.  
 7.40 p.m.—Address by Mr. Walter Hunt. The  
 Daily Messenger.  
 "Chimes of the Light Brigade."  
 7.55 p.m.—Songs by Madam Weidelo.  
 8.6 p.m.—Address by Professor Ernest Wood.  
 8.20 p.m.—Violin solos by Dan Scully.  
 1. "Air" (Bach).  
 2. "Minuet" (Mozart).  
 8.28 p.m.—Songs by W. J. Steiner.  
 3. "Far you above" (Glee).  
 4. "The song that reached by heart" (Jordan).

## 3LO, MELBOURNE

Broadcasting Co. of Aust.

Wave Length, 371 Metres.

## Friday.

## MIDDAY SESSION.

12 noon—Time signal. Metal price resolved  
 by The Australian Press Association from  
 the London Stock Exchange this day.  
 British official wireless news from Rugby.  
 Reuter's and The Australian Press Associa-  
 tion cables. "Argus" news service.  
 12.30 p.m.—WENDLING AND MOLLOY.  
 Entertainment.  
 "Walk Walk."  
 12.36 p.m.—STUDIUM QUARTETTE.  
 March: "Solennite" (Caeuz Cu).  
 12.40 p.m.—Stock Exchange information.  
 12.43 p.m.—BERTHA JOHNSON, violinist  
 "A L'ombre" (Godard).  
 12.46 p.m.—ERN THOMAN, humorist.  
 "The Chairman's Remarks."  
 "Crazy Talking the Gossip."  
 12.56 p.m.—STATION TRIO:  
 "Trauerlied" (Schumann).  
 "Abendlied" (Schumann).  
 1 p.m.—Time signal.  
 1.1 p.m.—STATION TRIO:  
 "The Last Lullaby" (Raccol).  
 1.7 p.m.—Meteorological information.  
 Weather synopsis for Victoria, Tasmania,  
 South Australia and New South Wales.  
 Ocean forecasts. Five reports for Victoria,  
 Tasmania, South Australia, and New South  
 Wales.  
 1.15 p.m.—WALTER CHAMPNEY, assisted by  
 GILBERT GILBERT: (Raccol).  
 "What Will They Say in Whooop Whooop."  
 "I Do Love my Lip" Old Ball-roomed  
 House.  
 1.35 p.m.—AGNES FORTUNE, Piano.  
 BERTHA JOHNSON, Violin.  
 Sonata No. 2, Part 1 (Beethoven).

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

31.0.—Broadcasting Company of Aus-  
 tralia, Ltd., Melbourne, wavelength  
 311 metres, power 1000 watic.  
 34K.—Associated Radio Co., Ltd., Mel-  
 bourne, wavelength 315 metres, power  
 6000 watic.  
 44U.—Queensland Radio Service, Bris-  
 bane, wavelength 355 metres, power  
 4500 watic.  
 54L.—Central Broadcasters' Ltd.,  
 Adelaide, wavelength 285 metres,  
 power 5000 watic.  
 67V.—Western Farmers, Ltd., Perth,  
 wavelength 1250 metres, power 4000  
 watic.  
 72L.—Tasmanian Broadcasters, Ltd.,  
 Hobart, wavelength 285 metres, 3500  
 watic.  
 10B.—British Business and Technical  
 College, Melbourne, wavelength 265  
 metres, power 500 watic.  
 10Z.—J. J. Nilson & Co., Melbourne,  
 wavelength 315 metres, power 100  
 watic.  
 40G.—Gold Radio Electric Service, Tre-  
 wanna, Queensland, wavelength 254  
 metres, power 150 watic.  
 50S.—Spang & Co., Broadcasting  
 Station, Adelaide, wavelength 240  
 metres, power 1000 watic.  
 60N.—6BN Pty., Ltd., Adelaide, wa-  
 velength 313 metres, 350 watic.

Ask any Radio Engineer about Burgess.

- 1.35 p.m.—JAMES RILEY, tenor:  
"Ave Maria" (Kahn)  
"Mother O' Mine" (Tours).
- 1.42 p.m.—STUDIO QUARTETTE:  
"Scherzade" (Rimsky Korsakov).
- 1.52 p.m.—BERYL HAYDEN, Comedienne:  
"Cattles in the Air."  
"Tommy Boy."
- 2 p.m.—Close down.
- 2.30 p.m.—Musical programme from Messrs. Allan and Co.'s stand at the Royal Agricultural Show Ground.
- Selection.
- BOB MOLYNEUX:  
"Song of the Wanderer."  
Finestyles—TAY HERRL.  
JACK HAGAN:  
"Sweetie O' Mine."  
FRANCES LEA:  
"Collette."  
BOB MOLYNEUX AND JACK O'HAGAN.  
Selected.

## AFTERNOON SESSION.

- 3 p.m.—STUDIO QUARTETTE:  
"Carmen March" (Bizet).  
"Persian March" (Strauss).
- 3.15 p.m.—MISS FRANCES FRASER will give a recital of music by Australian composers—arranged by WILLIAM G. JAMES, assisted by MIDDLE SAFFO ARNAY.  
MR. REGINALD BRADLEY, THE STUDIO QUARTETTE.
- 4 p.m.—STATION TRIO:  
Selection from Hadyn's Works.
- 4.18 p.m.—ROY GALLOWAY, baritone:  
"A Song of Thanksgiving."  
"A Sailor's Grave."
- 4.31 p.m.—REGINALD BRADLEY, violin:  
"Mendelssohn Concerto—Acadmic."
- 4.37 p.m.—MRS. M. CALDWAY MAHOOD:  
"The Art of Decoration."
- 4.45 p.m.—"Herald" news service. Stock Exchange information.
- 5 p.m.—Close down.

## EVENING SESSION.

## CHILDREN'S HOUR.

- 5.30 p.m.—"BILLY BUNNY" will say "Many Happy Returns" and "Thank you for your nice letters. Boys and Girls."
- 6 p.m.—CLIFFORD BRADSHAW will sing to you of the beauties that live in the forests.
- 6.7 p.m.—"BILLY BUNNY":  
"Tell-me-why Stories about Animals."
- 6.11 p.m.—THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY is for EVERYONE:  
"Always look both ways before crossing. Don't suddenly step off the footway without looking and with your back to oncoming traffic."
- 6.18 p.m.—CLIFFORD BRADSHAW will sing you more songs of the forest creatures.
- 6.25 p.m.—"BILLY BUNNY" will commence a story:  
"The Story of the Treasure Seekers."
- 6.40 p.m.—"Herald" news service. Weather synopsis. Shipping movements.
- 6.44 p.m.—Stock Exchange information.
- 6.52 p.m.—Fish market reports by J. R. Barrett Ltd. Rabbit prices.
- 6.56 p.m.—River reports.
- 6.58 p.m.—Newmarket sheep sales by the Associated Stock and Station Agents, Bourke street, Melbourne. Market reports by the Victorian Producers' Co-operative Company Ltd. Poultry, grain, hay, straw, jute, dairy produce, potatoes and onions.
- 7.12 p.m.—Market reports of fruit by the Victorian Fruitgrowers' Association.

## NIGHT SESSION.

- 7.15 p.m.—Under the auspices of the DEPARTMENT OF AGRICULTURE, MR. G. A. COCK, Chief Instructor, will instruct you in the culture of that Food of the Gods—"The Navel Orange."  
And—don't forget—"One a day keeps the doctor away."
- 7.30 p.m.—COLLINGWOOD CITIZENS' BAND:  
March, "King Copplin."  
Overture, "The Barber of Seville."
- 7.40 p.m.—WINDLING AND MOLLOY, Entertainers:  
"Ten Thousand Years from Now."  
"Duck-doodle-Im of My Noo-dee."
- 7.50 p.m.—MR. H. K. LOVE will be glad to attend to your wireless difficulties, and we ask you to write to him for any advice that you may require. He will now give his usual talk:  
"Technicalities."
- 8 p.m.—COLLINGWOOD CITIZENS' BAND:  
Waltz, "Dreams on the Ocean."
- 8.10 p.m.—GRACE JACKSON, contralto:  
"Down the Burn" (Mauvell).  
"Keep on Hoping" (Mauvell).
- 8.17 p.m.—COLLINGWOOD CITIZENS' BAND:  
Corset Solo—"Love's Old Sweet Song" (Soliel).  
W. W. SIMMONDS:  
8.25 p.m.—ERN TROTMAN, humorist:  
"Limericks" (Original).  
"The Presentation of Prices" (Murdock).
- 8.32 p.m.—DONALD McBRIDE, violin, vocal:  
"Love Song" (Saxmartini).  
"Capricetto" (Haydn).  
"Lambourn" (Gosse).
- 8.42 p.m.—MR. G. J. WILLIAMS will shed the injustice of old and young—not omitting the athletes for the Olympian struggle at the Stadium to-morrow night.
- 8.52 p.m.—COLLINGWOOD CITIZENS' BAND:  
Fantasia, "Smally in the Wood."  
Gavotte, "Sunflower."
- 8.9 p.m.—COLLINGWOOD CITIZENS' BAND:  
Grand Selection—"La Sonnambula."
- 8.2 p.m.—MELBOURNE CHORAL UNION:  
Two Irish Airs:  
"The Hurst Road."  
"The Man That Once."
- Parl. Song—"Love" (Bridge).
- 8.19 p.m.—MR. H. SCHWEGELT will speak to you from the ROYAL AGRICULTURAL SHOW GROUNDS.
- 8.25 p.m.—COLLINGWOOD CITIZENS' BAND:  
Selection, "Boccaccio" (Suppe).

- 8.30 p.m.—MELBOURNE CHORAL UNION:  
Excerpts from "Carmen," arranged by Maurice Bloyer.
- 8.45 p.m.—"Argus" News Service:  
"The Argus" News Service, "Australia," will present to you the professional peregrinations of "Pegasus" at to-morrow's races.
- THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY is for EVERYONE:  
"Always look both ways before crossing. Don't suddenly step off the footway without looking and with your back to oncoming traffic."
- 8.58 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS—and the camp of gorgeous songs:  
"The Gal" (Kahn).  
"Sam the Old Accordion Man" (Donaldson).  
"The More We are Together" (Campbell).
- 10.8 p.m.—GRACE JACKSON, contralto:  
"Christina's Lament" (Dvorak).  
"The Little Hills" (Hornos Gleason).
- 10.13 p.m.—"Argus" news service. British official Wireless news from Rugby.
- 10.20 p.m.—COLLINGWOOD CITIZENS' BAND:  
Waltz, "Thelma" (Tait).
- 10.27 p.m.—GILBERT AND CHAMPEY:  
"Whops-a-daye."  
Duet, "My Sunshine Lane."  
10.37 p.m.—Road notes and arrangements.
- 10.40 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS:  
"Sundays" (Miller).  
"Let's All Heavey Ford" (Boat).  
"The Original Black Bottom" (Henderson).
- 10.54 p.m.—ERN TROTMAN:  
"The Village Concert" (ad piano).
- 11 p.m.—OUR GREAT THOUGHT:  
"He only is advancing in life whose heart is getting softer, whose blood warmer, whose brain quicker, whose spirit is entering into living power."—Ruskin.
- 11.1 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS:  
"I Didn't Know" (Swill).  
"Ruffenbary" (Berry).  
"Perhaps You'll Think of Me" (Stinson).  
"Mindy Water" (De Rose).  
"Camille" (Berthel).  
"I'm on My Way Home" (Berlin).  
"Chinese Moon" (Naudsonna).  
"Because I Love You" (Berlin).  
"For My Sweetheart" (O'Hagan).  
"Fogotten" (O'Hagan).  
"If You See Sully" (Kahn).  
"Just a Bird's Eye View" (Donaldson).  
"Brewer Eyes in Your Dreams" (Tennant).  
"Hello, Binish" (Friend).
- 11.40 p.m.—GOD SAVE THE KING.

## NEW ZEALAND STATIONS:

(Corrected List.)

- 1YA, Auckland, The Radio Broadcasting Co. of New Zealand, Ltd.  
Power 500 Watts; Wave-length, 333 Metres. Silent Night, Monday.
- 2YA, Wellington, The Radio Broadcasting Co. of New Zealand, Ltd.  
Power 3000 Watts; Wave-length, 420 Metres.
- 3YA, Christchurch, The Radio Broadcasting Co. of New Zealand, Ltd.  
Power 500 Watts; Wave-length, 305 Metres. Silent Night, Thursday.
- 4YA, Dunedin, The Radio Broadcasting Co. of New Zealand, Ltd.  
Power 750 Watts; Wave-length, 463 Metres.

## 3AR, MELBOURNE

Associated Radio Co.

Wavelength, 516 metres.

Friday.

MORNING NEWS SESSION.

11 a.m. to 12 noon.

MIDDAY CONCERT SESSION.

Transmitted from Pausanepa House, 253 Collins Street the exclusive permission of Wills and Paton Ltd., on the Brunswick Peninsula.

MATINEE SESSION.

DANCE CONCERT.

8.30 p.m.—STUDIO ORCHESTRA:  
"Three Bavarian Dances" (Elsner).

3AR, ROYAL SHOW FEATURES.  
During the afternoon the leading exhibitors at the Royal Agricultural Show and the important ring competitions will be fully described from the Show Grounds at Flemington by 3AR's special Commentators.

- 2.45 p.m.—Mr. Ernest Petouff, clarinet; Second Movement of Clarinet Concerto' (Wabner).
- 2.49 p.m.—Ayers Danzonians.
- 3.10 p.m.—Miss Ethel Beazley, piano; 'Pastorale' (Schubert).
- 3.15 p.m.—Tonal Test. Test. Plans 23/27. The orchestra will play an amusing series of familiar tunes. Write down as many as you can guess, in the order played, and afterwards compare answers. T.V.T.—S.A.R. Melodians. Test continuing through the week (see programme). Last day of entry, Saturday, 27th September. Results: Tuesday night, 15th September at about 9 p.m.
- 3.30 p.m.—Mr. Fred Chapman, humorous Entertainment.
- 4.00 p.m.—Ayers Danzonians.
- 3.36 p.m.—Mr. Herbert Paster, violin; 'Minuet' (Mozart).
- 4.0 p.m.—G.P.O. Clock says "Four."
- 4.1 p.m.—2nd Weather Forecast.
- 4.15 p.m.—Announcements.
- 4.3 p.m.—Interval Talk. Miss Emily Noble. (Cooking demonstrations of the Metropolitan Gas Company) will include an "Omelette" (Savory and Sweet).
- 4.23 p.m.—Mr. Fred Chapman, Entertainment.
- 4.25 p.m.—Studio Orchestra. 'The Merry Widow' (Strauss).
- 4.30 p.m.—Studio Orchestra. 'The Merry Widow' (Strauss).
- 4.35 p.m.—Ayers Danzonians.
- 4.45 p.m.—Tonight's Entertainment.
- 4.50 p.m.—G.P.O. Clock says "Five." Close down.

**CHILDREN'S ENSEMBLE.**

8.30 p.m.—'The Farmyard Five.'

**EVENING SESSION.**

**CAMP FIRE CONCERT.**

- 7.30 p.m.—Mr. George Beattie, Principal of the Health College of Physical Culture; 'Physical Fitness.'
- 7.45 p.m.—'Field Glasses.' Special review and test for luncheon's views.
- 7.50 p.m.—Newmarket stock news.
- 7.55 p.m.—Weekend Tourist's guide.
- 8.0 p.m.—G.P.O. Clock says "Eight."
- 8.1 p.m.—The Vegaphone Tris. Directed by Mr. Will Jerram (Mr. Will Jerram, band). Marchion-Barry and Fleasome. Mr. Tom Giddister (band). Miss Amy Green (solo).
- 8.14 p.m.—Miss Ellen Kerwin, contralto; 'My dear old' (Bardolani).
- 8.15 p.m.—The Lousie Clark and 'The Marie Fendel.'
- 8.21 p.m.—Brigades and Band. Weekly series of adventures actually experienced in the wilds of Persia by a British officer, who for international reasons, takes under the name of "Iron".
- 8.25 p.m.—'Method of Travel in Persia.'
- 8.30 p.m.—'Robber Camps—Bandits and Pigeons.'
- 8.31 p.m.—Mr. Edward Beacher, tenor; 'The Flower Song' from the opera 'L'Esperanza' (Boni).
- 8.34 p.m.—'The Birds of Mars' (Loren).
- 8.38 p.m.—Mr. Walter Barker, barp; 'Autumn' (Thomas).
- 8.44 p.m.—Radio Comedy. Sketch 'The Upper Ten' (especially written for radio and produced by Mr. Jack Bell).
- 8.45 p.m.—The Vegaphone Tris directed by Mr. Will Jerram.
- 8.50 p.m.—'Round the Camp Fire'.
- 8.55 p.m.—Mr. V. Eton-Brown. Music. Story and Verse. Grave and Gay, by the writers and poets of Australia.
- 9.0 p.m.—Mr. Jack Bell, Comedian; 'The favorite G.P.A. Comedian in a droll interlude.'
- 9.17 p.m.—Mr. Walter Barker, Harry; 'Grand Victoria March' (Parab-Alcari).
- 9.20 p.m.—Miss Edna E.—traits; 'A Christian Lament' (Joh Rignot).
- 9.24 p.m.—'Just Aworries for You' (Hood).
- 9.28 p.m.—G.P.O. Clock says "Ten."
- 10.1 p.m.—Australia's Young's Week 12th—16th September. Mrs. Genuin Davidson, well known Australian authoress, particularly noted for her play-writing and poem

doing of plays, will talk on 'The Advantages of Advertising Australia through Literature.'

10.14 p.m.—Dance Time; Leggett's Ballroom Orchestra (direction, Mr. Harry Naugle).

10.20 p.m.—'Age' News Bulletin, exclusive to R.A.N.

10.55 p.m.—Tomorrow's Entertainment.

10.58 p.m.—Weather Forecast.

10.59 p.m.—Our Australian Good Night Thought is taken from the new 'An Australian Symphony' by A. Essex Evans.

11.5 p.m.—G.P.O. Clock says "Eleven." Good Save the King.

**4QG, BRISBANE**

**Queensland Radio Service**  
Wave Length, 365 Metres.

Friday.

**MIDDAY SESSION.**

1 p.m. to 2 p.m.

**AFTERNOON SESSION.**

3.30 p.m.—Afternoon tea music played by Royal Carlton Symphony Orchestra.

4.10 p.m.—News service supplied by "The Telegraph."

4.30 p.m.—Close down.

**EARLY EVENING SESSION.**

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

6.15 p.m.—Lectures: A talk under the auspices of the Queensland Radio Transmitters' League.

6.30 p.m.—Bedtime stories by "The Sandman."

7 p.m.—Special news service; market reports; stock reports.

7.30 p.m.—Weather news; announcements.

7.45 p.m.—Standard time signal.

7.55 p.m.—Lectures: To be announced.

**NIGHT SESSION.**

**SILKSTONE APOLLO CLUB.**

Tonight's programme will comprise a benefit recital by the Silkstone Apollo Club, and will be relayed from the National Talk Room.

**PROM BOOVAL.**

**FOREIGN BROADCASTERS.**

- JOCK—Nagasaki Radio Broadcasting Co., Nagasaki, JAPAN; 245 metres, 1600 watts. (Announcement in English and Japanese).
- JOKE—Osaka Central Broadcasting Co., Osaka, JAPAN; 285 metres, 1000 watts. (Announcement in English and Japanese).
- JOAK—Yokohama Broadcasting Co., Tokyo, JAPAN; 374 metres, 1500 watts. (Announcement in English and Japanese).
- JFC—Batavia Radio Vereeniging, BATAVIA; 325 metres, 40 watts.
- KZRM—Manila, PHILIPPINE ISLANDS; 415 metres, 1000 watts. (Announcement in English and Philippines).
- KHUI—Honolulu Advertiser. Honolulu, HAWAII; 570 metres, 500 watts.
- KIG—Oakland, CALIFORNIA; 361.3 metres, 5000 watts.
- KFI—Los Angeles, CALIFORNIA; 467 metres, 1000 watts.
- KOG—Denver, COLORADO; 523.4 metres, 5000 watts.

- 8 p.m.—Chorus, "Strike the Lute" (Gosset), Silketons Apollo Club; tenor solo, "Maestria" (Barnum); Mr. A. Weiss; chorus, "Belinda's Song" Apollo Club; violin solo, "Adagio and Rondo"—from Six Concertos (de Ricci), Mr. A. Lawrie; chorus, "Destruction of Gaza" (Laurent G. Rille), Apollo Club; monologue, "The Student," Mr. D. Green; piano/forte solo, selected, Miss T. Marsh; chorus, "Anchored" (Wilson) Apollo Club; vocal solo, selected, Miss T. Marsh; chorus, "The Rhonda," Apollo Club.
- 9 p.m.—Metropolitan weather forecast; tenor solo, "Come Into the Garden, Maud" (Mr. T. Westwood); piano/forte duet, selected, Miss T. Marsh and Miss N. White; chorus, "The Escalator" (Sullivan), Apollo Club; baritone solo, "Beautiful Garden" (Marsh Little), Mr. A. Lawrie; chorus—(a) "In the Evening" (Anon.), (b) "Massa's in de Cold Ground," Apollo Club; violin solo, "Scott's Harp" (Mr. A. Lawrie; duet, "The Fisherman" (Johnson), Messrs Westwood and Morris; chorus, "The Viking Song" (Colebridge Taylor); Apollo Club; concertina solo, selected, Mr. Griffiths; chorus, "John Peel" Apollo Club; monologue selected, Mr. D. Green; chorus, "The Grandeur" (Protheroe), Apollo Club.
- 10 p.m.—THE STUO—10 p.m.—Working men's information for motorists officially supplied by the Royal Automobile Club of Queensland. "The Daily Mail" news; weather news; sporting news.
- 10.30 p.m.—Close down.

**5CL, ADELAIDE**

**Central Broadcasters, Ltd.**  
Wave Length, 305 Metres.

Friday

**MORNING SESSION.—12 to 2 p.m.**

**AFTERNOON SESSION.**

- 2 p.m.—Chimes.
- 2.1 p.m.—Relay from the Maple Leaf Cafe; Orchestral selections.
- 2.45 p.m.—From the Studio; Musical Items and Social Notes.
- 4 p.m.—Chimes.
- 4.1 p.m.—Relay from the Arville Cafe; Orchestral selections.
- 4.55 p.m.—Station announcements.
- Messrs. S. L. Ward and Co.'s Stock Exchange Intelligence.
- 5 p.m.—Chimes.

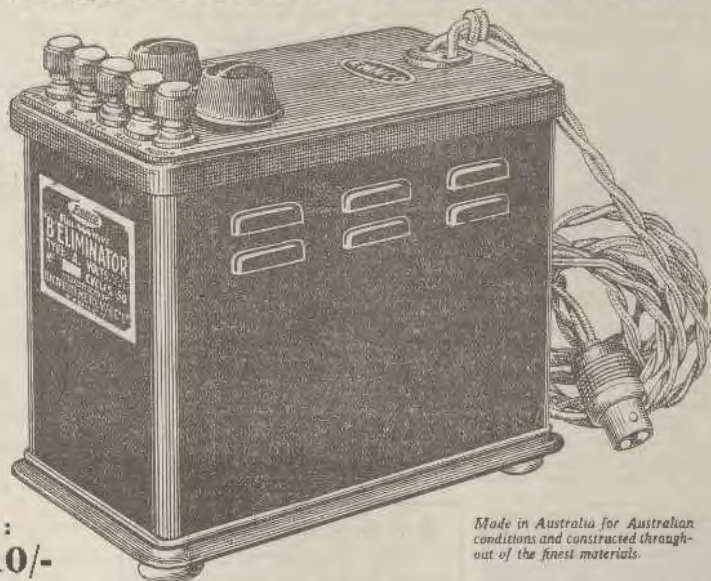
**EVENING SESSION.**

- 6 p.m.—Chimes.
- 6.1 p.m.—Relay from the Crown Garden Restaurant; Dinner music.
- 6.30 p.m.—Bedtime Stories.
- 6.45 p.m.—Running time of the East West Express.
- 6.55 p.m.—Bedtime Stories, continued.
- 7.25 p.m.—Messrs. S. L. Ward and Co.'s Stock Exchange Intelligence.
- Market Reports by Messrs. A. W. Sigford and Co., A. E. Hill, Messrs. S. Dalrymple and Co., A. E. Ferguson's Co-operative Union, Taylor Bros., Metell Grocers' Association, and Daw's Fish Market Reports.
- 7.35 p.m.—Sporting talk by "Windbag."
- 7.50 p.m.—Football talk by "Highback."
- 8 p.m.—Chimes.
- 8.1 p.m.—Musical Orchestra.
- 8.15 p.m.—Melba Langley, contralto.
- 8.25 p.m.—Will Range, baritone.
- 8.35 p.m.—Melba Langley, contralto.
- 8.45 p.m.—The Harp Quartet.
- 8.48 p.m.—Will Range, baritone.
- 8.55 p.m.—The Harp Quartet.
- 9.1 p.m.—Meteorological information.
- 9.2 p.m.—Dalrymple's wheat report.
- 9.3 p.m.—Will Range, baritone.



# EMMCO

**LIGHT SOCKET POWER IS  
CLEAN, SAFE, AND ECONOMICAL**



Price :  
**£10/10/-**

*Made in Australia for Australian conditions and constructed throughout of the finest materials.*

Here is the finest "B" Power Unit money can buy—and at a price made possible only by mass production along highly organized lines, in one of Australia's largest engineering establishments.

EMMCO "B" power, provided by the EMMCO ELIMINATOR gives you that constant, full, effortless power which your receiver demands. Banish battery worry once and for all. Fit an Emmco Eliminator NOW.

**AT ALL DEALERS**  
**BUY EMMCO RADIO PRODUCTS**

9.11 p.m.—Studio Orchestra.  
 9.19 p.m.—Under the auspices of the B.A. Agricultural Society, Mr. E. W. Pritchard (Botanical Assistant) will talk.  
 9.30 p.m.—Studio Orchestra.  
 9.40 p.m.—Harbert King, tenor.  
 9.47 p.m.—Walt Songs, homorist.  
 9.53 p.m.—Studio Orchestra.  
 10.01 p.m.—"Advertiser" News Service.  
 Wireless Whispers.  
 "Windbag's" sporting service.  
 10.15 p.m.—Harbert King, tenor.  
 10.19 p.m.—Studio Orchestra.  
 10.30 p.m.—Robby from Glasgow.  
 The Mahori Orchestra.  
 11.10 p.m.—Tomorrow's programme.  
 Station announcement.  
 Meteorological information.  
 National Anthem.

## 6WF, PERTH

Westralian Farmer's.  
 Wave Length, 1250 Metres.

### Friday.

12.30 p.m.—Tune in.  
 12.35 p.m.—Maths, News, and Cables.  
 1 p.m.—Time signal from Perth Observatory.  
 1.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.  
 1.2 p.m.—Studio Quintette.  
 2 p.m.—Close down.  
 8.30 p.m.—Tune in.  
 8.35 p.m.—Musical programme from the Studio, including vocal and instrumental items. Organ selections, relayed from the Grand Theatre, Murray Street.  
 9.40 p.m.—Close down.  
 9.45 p.m.—Tune in.  
 9.53 p.m.—Musical evening for the Keldies, by Annie Mazzareo, and Ursula Henry, Leslie Terry, Ray and Duff.  
 10.30 p.m.—Stock and Share Intelligence.  
 Market Reports.  
 Cable News by courtesy of "The West Australian" Newspaper Coy.  
 10.5 p.m.—Racing talk, by the Sporting Editor of "Truth" Newspaper Coy.  
 9 p.m.—Time signal from Perth Observatory.  
 9.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.

### POPULAR NIGHT.

8.3 p.m.—Items, by the "Madrigal Singers" Orchestra, conducted by Mr. Val Smith, relayed from the Grand Theatre, Murray Street.  
 9 p.m.—Talk: "Gardening Notes," by Mr. E. A. Hughes, representing Messrs Dawson and Harrison, Ltd.  
 10 p.m.—Late news items, by courtesy of "The Daily News" Newspaper Coy.  
 Ships within range announcement.  
 Weather Report and Forecast.  
 10.30 p.m.—Close down.

## 7ZL, HOBART

Tasmanian Broadcasters, Ltd.  
 Wave Length, 535 Metres.

### Friday

#### MORNING SESSION.

11 p.m. to 12 noon.

#### AFTERNOON SESSION.

9 p.m.—G.P.O. Clock and chimes.  
 9.11 p.m.—Tune in, selection.  
 9.15 p.m.—Robert Stock Exchange quotations, weather information.  
 Items of interest—announcements.  
 9.30 p.m.—Selections by 7ZL Studio Trio.  
 4.15 p.m.—Educational Talk.  
 4.30 p.m.—Close down.

#### EARLY EVENING SESSION.

8.30 p.m.—Children's Corner with the "Radio Lady".  
 7.35 p.m.—Young Folks gardening chat by Mr. George Nation.  
 EVENING SESSION.  
 7.30 p.m.—Fruit Faculty and produce reports through the courtesy of Roberts and Co. Ltd., Murray Street Hobart.  
 7.25 p.m.—Gardening talk by Mr. G. Nation (Glen Nurseries, Clarendon).  
 7.30 p.m.—"Mercury" special Tasmanian news service.—Railway auction produce sales.—Weather forecasts.—Hobart Stock Exchange quotations.  
 8 p.m.—G.P.O. Clock chimes.  
 8.1 p.m.—Sports Budget supplied by Mr. H. W. Newton of Hobart.  
 8.5 p.m.—Studio concert.  
 Miss Mona Metcalfe (soprano), Miss Dulcie Tate (contralto), Miss Ruby Preece (pianist), Miss Nora Freney (soprano), Mr. P. Togan (baritone), Mr. Victor Flanagan (Bajo voice), Mr. George Hook (comedian).  
 9.3 p.m.—Chat on Saturday's Football match by "Snappy" Marsh.  
 9.40 p.m.—British Official Wireless News.  
 9.58 p.m.—"Mercury" special interstate news service.—Ships with in wireless range.—Tasmanian Districts.—Weather reports.—5 p.m. Weather forecasts.—Travellers week-end information.—Station announcements.—National Anthem.

## Saturday Sept. 17

### 2FC, SYDNEY.

#### EARLY MORNING SESSION.

7 a.m. to 8 a.m.

#### MORNING SESSION.

10 a.m.—"Big Ben" and announcements.  
 10.5 a.m.—Studio music.  
 10.15 a.m.—"Hobart Morning Herald" news service.  
 10.30 a.m.—Studio music.  
 10.35 a.m.—A talk by the 2FC racing commissioner.  
 10.45 a.m.—Studio music.  
 11 a.m.—"Big Ben" Studio music.

### Short Wave Broadcasters

Schedules and Wavelengths Subject to Change.

8E-2NE, Gerald Marcus, Caterham, England, 28 and 33 metres (B.D.C. Programme).  
 8N-PGJ, Philips Experimental Station, Edenhoven, Holland, 30.5 metres (R.I.C. Programme).  
 8U-IXA, General Electric Co., Schenectady, New York State, U.S.A., 22.77 metres (W.G.Y. Programme).  
 8U-IXAB, General Electric Co., Schenectady, New York State (W.G.Y. Programme).  
 8U-KDKA, Westinghouse Electric Co., Pittsburgh, Penn., U.S.A., 32.5 and 14 metres.  
 8U-WLW, Cressler Radio Corporation, Cincinnati, Ohio, U.S.A., 32 metres.  
 8U-XXAL, "Radio News," New York City, U.S.A., 30.31 metres (W.R.N.Y. Programme).  
 8V-JB, Johannesburg Broadcasting Company, South Africa, 26 and 25 metres.

11.5 a.m.—A.P.A. and Zeeler's cable news.  
 11.10 a.m.—Studio music.  
 11.15 a.m.—A talk on gardening by Mr. G. J. Leasky ("Hortum").  
 11.30 a.m.—Close down.

#### MIDDAY AND AFTERNOON SESSIONS.

12 noon—"Big Ben" and announcements.  
 12.2 p.m.—Stock Exchange, first call.  
 12.3 p.m.—Studio music.  
 12.40 p.m.—"Hobart Morning Herald" news service.—Rugby history news.  
 12.55 p.m.—Studio music.  
 1.04 p.m.—The 2FC racing commissioner will describe in the running of the events of the Rosehill Racing Club's meeting.  
 1 p.m.—"Big Ben" Studio intelligence.  
 1.3 p.m.—"Evening News" midday news service.  
 1.38 p.m.—Studio music.  
 1.40 p.m.—During the afternoon the following musical items will be given:  
 Cliff Arnold, novelty pianist.  
 Sid Montague, cabaret numbers.  
 The Westwark Symphonic Dance Orchestra (under the baton of Mr. Cyril Kaye) at intervals throughout the afternoon.  
 4.30 p.m.—Complete resume of the day's sporting events.

6 p.m.—"Big Ben" Close down.

#### EARLY EVENING SESSION.

5.48 p.m.—The chimes of 2FC.  
 5.48 p.m.—The "Hefo Man" talks to the children.  
 5.54 p.m.—Story time for the young folk.  
 6.10 p.m.—Dinner music.  
 7.0 p.m.—"Big Ben" Talent Spring Information.  
 7.18 p.m.—Weather Intelligence.  
 7.18 p.m.—"Evening News" Late News Service.

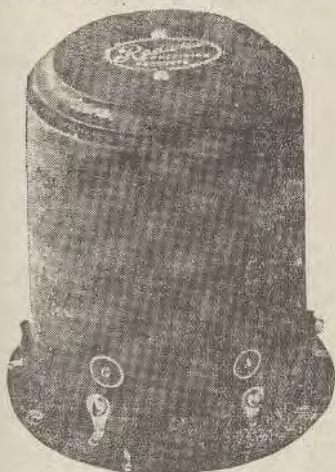
#### NIGHT SESSION.

7.48 p.m.—Programme Announcements.  
 7.48 p.m.—A Talk on "Authors' Week".  
 7.50 p.m.—Nellie Chadwick, Soprano:  
 (a) "Solange's Song" (Greig).  
 (b) "Lullaby" (Goet).  
 8.0 p.m.—"Ye Idlers Minstrel Troupe," Opening Chorus  
 "Ye Idlers Gay Are We" . . . The Company  
 8.5 p.m.—"Here Comes the Chocolate Major,"  
 by the Shipway and Company  
 8.18 p.m.—"Mass' in the Cold, Cold Ground"  
 by the Company  
 8.15 p.m.—Song, "What a Month,"  
 Sgt. Sergeant  
 8.20 p.m.—"Old Kentucky Home,"  
 The Company  
 8.25 p.m.—Racination, "Jimminy Koots,"  
 Ted Wright  
 8.30 p.m.—Song, "Work" . . . Wally Hazam  
 8.34 p.m.—"De Old Banjo,"  
 Jack Cocks and Company  
 8.38 p.m.—Song, "Swing Low, Sweet Chariot,"  
 Tom Burgess  
 8.43 p.m.—Quartette . . . "The Four Wails"  
 8.47 p.m.—Song . . . Tom Quinn and Company  
 9.0 p.m.—"Big Ben"; Latest Weather Forecast.  
 "My Dusky Rose"; Can, Ross and Company  
 9.4 p.m.—"Asleep in the Deep."  
 H. Marshall and Company  
 9.4 p.m.—Song . . . . . Ronald Peiser  
 9.15 p.m.—"Pennsylvania" . . . The Company  
 9.28 p.m.—Song, "Mary."  
 J. Mofan and Company  
 9.24 p.m.—Shine, Shine Mellow . . . The Company  
 9.28 p.m.—Chorus, "Idlers All, Are We."  
 The Company  
 9.38 p.m.—Les de Georgie, Violinet.

# Popularity!

**RADIOKES** big factory is increasing staff and working day and night in an endeavour to supply the enormous demand created by the excellence of guaranteed

## RADIOKES PRODUCTS



Radiokes New and Improved R.F. and R.F. Filler Chokes.

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Radiokes Browning Drake—the most popular Kit in Australasia. Beautiful, efficient, and guaranteed, 42/- per kit.

The New Famous Radiokes-Solodyne Unit, 25/- each, 75/- per kit of three



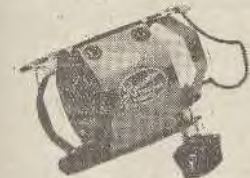
Amperite is rapidly gaining public favour. Controls your tube filament quite automatically.

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Radiokes Standard Neutrodyne Kit. Lowloss construction, easy to wire and assemble and most efficient. Price ..... £1/12/6 per kit



Radiokes Distinctive Three Circuit Tuner. Excellent performer and one of our most admired products. New Price ..... 14/6 each

**SHOP FROM THE DEALER WHO DISPLAYS RADIOKES PRODUCTS**

METROPOLITAN ELECTRIC CO. LTD., 27-29 KING STREET, SYDNEY

- 8.24 p.m.—Nellie Chadwick, Soprano:  
(a) "Nightingale's Trill" (Goss).  
(b) "A Song of Quietness" (Ward).
- 9.40 p.m.—Scott Alexander will present the first of a series of reminiscences entitled, "Famous People I Have Met" (George H. Sims, the author).
- 9.50 p.m.—Ernest Archer, Tenor.
- 10.04 p.m.—Les de Georgia, Violist.
- 10.09 p.m.—"Big Ben"; Scott Alexander will present a new and interesting comedy recently written by Robinson Hall, entitled "Mr. Twerp of London." In this comedy, Mr. Alexander will be supported by his own Radio Company.
- 10.12 p.m.—Ernest Archer, Tenor.
- 10.23 p.m.—Les de Georgia, Violist.
- 10.28 p.m.—Scott Alexander will give the fifth of the Martin Block dissertations: "On the Point of Poverty Point." Specially written for broadcasting by Robinson Hall.
- 10.33 p.m.—The Westworth Symphonic Dance Orchestra, under the baton of Mr. Cyril Kaye.
- 10.43 p.m.—Ernest Archer, Tenor.
- 10.47 p.m.—The Westworth Symphonic Dance Orchestra.
- 10.54 p.m.—Len Maurie, Popular Baritone.
- 10.57 p.m.—Leta News and Announcements.
- 11.0 p.m.—"Big Ben"; The Westworth Symphonic Dance Orchestra.
- 11.10 p.m.—Len Maurie, Popular Baritone.
- 11.12 p.m.—The Westworth Symphonic Dance Orchestra.
- 11.23 p.m.—Len Maurie, Popular Baritone.
- 11.30 p.m.—The Westworth Symphonic Dance Orchestra.
- 11.38 p.m.—Len Maurie, Baritone.
- 11.45 p.m.—The Westworth Symphonic Dance Orchestra.
- 11.45 p.m.—National Anthem; Close Down.

## 2BL, SYDNEY

Saturday.

EARLY MORNING SESSION,  
7.0 a.m. to 8.0 a.m.

MORNING SESSION.

- 11.0 a.m.—G.P.O. Clock and Chimes; Musical Programme from the Studio.
- 11.15 a.m.—Social Note by Mrs. Jarman, Talk on "Simple Cooking for Children," by Mrs. Jarman.

AFTERNOON SESSION.

- 12.0 noon.—G.P.O. Clock and Chimes; Special Gossip Forecast and Weather Report.
- 12.4 p.m.—News from the "Sun."
- 12.11 p.m.—Sporting and Athletic Fixtures.
- 12.15 p.m.—What's on at the Pictures and Theatres.
- 12.29 p.m.—Brunswick Panoptoe Musical Notion.
- 12.49 p.m.—News from the "Sun."
- 12.50 p.m.—Kareem Resumé.
- 12.55 p.m.—Musical Programme from the Studio.
- 1.0 p.m.—G.P.O. Clock and Chimes; Musical Programme from the Studio.
- 1.10 p.m.—Sporting Talk and Athletic Fixtures for the Day; Lacrosse, Hockey, Tennis, Football, Billiard, Bowling.
- 1.20 p.m.—Musical Programme from the Studio.
- 1.30 p.m.—G.P.O. Clock and Chimes; Talk to Children and Special Entertainment for Children in Hospital.
- 2.0 p.m.—G.P.O. Clock and Chimes; Retail Storey.
- 2.15 p.m.—Musical Programme from the Studio.
- 2.25 p.m.—Racing Resumé.
- 2.30 p.m.—G.P.O. Clock and Chimes; News from the "Sun."
- During the Afternoon, Sporting Information will be broadcasted by courtesy of the "Sun," interspersed with Musical Items and Broadcasting of Football Matches.
- 6.0 p.m.—G.P.O. Clock and Chimes; Racing Resumé.
- 6.15 p.m.—Close Down.

EARLY EVENING SESSION.

- 6.55 p.m.—G.P.O. Clock and Chimes; Children's Session.
- 6.58 p.m.—Musical Programme from the Studio.
- 7.15 p.m.—Results of All Sporting and Athletic Information.
- 7.20 p.m.—Country News from the "Sun."
- 8.0 p.m.—G.P.O. Clock and Chimes; Broadcaster's Typical Chorus.
- 8.2 p.m.—Sporting Programme; Musical Items by Miss Mabel Potheringham (Soprano), Mr. Reg Harrison (Comedian), Miss Edna Lister (Contralto), and Broadcaster's Instrumental Trio.
- 10.13 p.m.—The Ambassadors' Dance Band Broadcast from the Ballroom of the Ambassadors. During intervals between Dances, "Sun" News will be broadcast.
- 10.0 midnight.—G.P.O. Clock and Chimes; National Anthem.

## 2UW, SYDNEY

Saturday

- 7 p.m.—Where is go.
- 7.15 p.m.—Musical Items and announcements.
- 8.25 p.m.—Resumé of forward programmes.
- 9.30 p.m.—Close down.

## 3LO, MELBOURNE

Saturday.

MORNING SESSION.

- 11 a.m.—STUDIO QUARTET: "Heirloom Lull" (Wagner).
- 11.10 a.m.—WENDLING AND MOLLOY, entertainers:  
"Out in the new moon has."  
Popular choruses.
- 11.17 a.m.—BERTHA JOERGENSEN, violin:  
"Meditation" (Massenet).
- 11.25 a.m.—STATION TRIO:  
"Andalusian Serenade" (Bouquet).
- 11.35 a.m.—JAMES HILLY, tenor:  
"Down in the Forest" (London Household).  
"I Heard You Singing" (Eric Coates).
- 11.42 a.m.—TASMA TIERNAN, solo:  
"Gipsyella" (Cio).  
"Gondoliers" (Trevell).
- 11.50 a.m.—STUDIO QUARTET:  
"Dance of Arles and Slaves" (Arensky).
- 12 noon.—Time signal. Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange this day. Serial official wireless news from Rugby, Rouler's and the Australian Press Association cables. "Argus" news service.
- 12.20 p.m.—STUDIO QUARTET:  
"Intermezzo Chinoise" (Wagner).
- 12.50 p.m.—WALTER CHAMFENEY, assisted by Hilera Gilbert:  
"At Zoumpet Fair."  
"Lullaby."  
Eileen Gilbert, "Alice."
- 10.40 p.m.—Stock Exchange information.
- 10.43 p.m.—SERVIL HAYDEN AND BOY GALLOWAY:  
Dance, "Happy Childhood Days"  
"Impassioned."
- 10.44 p.m.—STATION TRIO:  
"And the Raven Sings" (Bonfret).
- 1.0 p.m.—Time signal.
- 1.1 p.m.—ERN TROTSMAN, baritone:  
"Singers and Talkers" (Kont-schvedt-E. Trotsmann).  
"Rubenstein Cade" (Clary).
- 1.7 p.m.—Meteorological information. Weather forecast for Victoria, Tasmania, South Australia and New South Wales. Ocean forecasts. River reports. Rainfall for Victoria, Tasmania, South Australia and New South Wales.

- 1.15 p.m.—AGNES FORTUNE, pianist:  
"Water Wraith" (Hendel).
- 1.20 p.m.—JAMES HILLY, tenor:  
"My Snow-crowned Pearl" (Old Irish).  
"Trumpeter" (Dix).
- 1.22 p.m.—BOB BRADLEY, violin:  
"The Swan" (St. Sterns).  
Sonata C. Minor, 2nd movement (Greig).
- 1.40 p.m.—BASEBALL.
- 1.47 a.m.—STUDIO QUARTET:  
"Introduction and Aria des Lenax" (Tchaikovsky).
- 2.0 p.m.—Close down.
- 2.0 p.m.—Description of beach-fair Bands by Mr. Percy Bost.
- 2.30 p.m.—BASEBALL.
- 2.45 p.m.—Description of Open Handicap, etc. Jockeys, MENTONE RACES, at "Musketa" of the "Sporting Globe."
- 2.50 p.m.—Description of LEAGUE FOOTBALL, semi-finals, at M.C.G., by Mr. Rod McGregor.

AFTERNOON SESSION.

- 2.5 a.m.—JOE ARONSON and HIS SYN-COPATING SYMPHONISTS.
- 2.15 a.m.—Description of Bush Steeplechase, 3 miles 18 chains, MENTONE RACES, at "Musketa" of the "Sporting Globe."
- 2.30 p.m.—Description of LEAGUE FOOTBALL, semi-finals, at M.C.G., by Mr. Rod McGregor, Quarter Time.
- 2.30 p.m.—JOE ARONSON and HIS SYN-COPATING SYMPHONISTS.
- 2.45 p.m.—Description of Mentone Handicap, MENTONE RACES, at "Musketa" of the "Sporting Globe."
- 2.50 a.m.—JOE ARONSON and HIS SYN-COPATING SYMPHONISTS.
- 3.0 p.m.—Description of LEAGUE FOOTBALL, semi-finals, at M.C.G., by Mr. Rod McGregor, Half Time.
- 3.15 p.m.—Description of Walter Handicap, 1 mile, MENTONE RACES, at "Musketa" of the "Sporting Globe."
- 3.45 p.m.—JOE ARONSON and HIS SYN-COPATING SYMPHONISTS.
- 3.58 p.m.—Description of LEAGUE FOOTBALL, semi-finals, at M.C.G., by Mr. Rod McGregor, Three-quarter Time.
- 4.40 p.m.—JOE ARONSON and HIS SYN-COPATING SYMPHONISTS.
- 4.45 p.m.—Description of Jumpers Flat Race, 1 1/4 miles, MENTONE RACES, at "Musketa" of the "Sporting Globe."
- 4.50 p.m.—JOE ARONSON and HIS SYN-COPATING SYMPHONISTS.
- 4.55 p.m.—"Herald" News Service; Stock Exchange Information.
- 5.0 p.m.—Description of LEAGUE FOOTBALL, semi-finals, at M.C.G., by Mr. Rod McGregor, Final Score.
- 5.10 p.m.—Close Down.

EVENING SESSION.

CHILDREN'S HOUR.

- 6.30 p.m.—Sporting Results.
- 6.40 p.m.—MISS KOOKABURRA will send birthday salutations to all on to-day's honor roll, and thank all their writers for their friendly letters.
- 6.10 p.m.—MISS ELBE BRADENAW will sing for the children.
- 6.17 p.m.—MISS KOOKABURRA will tell her Goodnight stories, "Bobby and the Moon Fairies," and "The Cruise of the Snory Jean."
- 6.42 p.m.—"Herald" News Service; Weather Forecast; Sporting News Service.
- 6.55 p.m.—Stock Exchange Information.
- 7.45 p.m.—Fish Market Reports by J. H. Barrett, Ltd., Balshi Prima.

# The Mullard Master-Valve with the Wonderful P.M. Filament with English or U.X. Base Remains the Same Price - - - 13/6

## BUT

## WHILE THE STOCKS LAST

the following previous types will be sold at reduced prices

HF and LF Bright Filament .. .. .	2/- each
D SERIES .. .. .	6/- each
DFA SERIES .. .. .	7/6 each

with English or U.V. Base

### CHARACTERISTICS AS PER THIS TABLE.

	2/-	2/-	6/-	6/-	6/-	6/-	6/-
Type	H.F.	L.F.	D06 H.F. 3.0	D06 Det. 3.0	D06 L.F. 3.0	MD06	D3 H.F. 1.8—2.0
Filament voltage.	3.2—3.8	3.2—3.8				3.0	
Filament current, amps. ....	0.6	0.6	.06	.06	.06	.06	0.3
Anode voltage ....	30—90	30—90	50—125	20—100	30—100	30—100	50—125
Total emission, m/a. ....	5	5	8.0	8.0	8.0	8.0	8.0
Impedance, ohms.	90,000	30,000	60,000	17,000	17,000	17,000	60,000
Purpose .....	Radio, also Resistance Coupling	Audio	Radio, also Resistance Coupling	Detector	Audio	Audio	Radio, also Resistance Coupling
	6/-	6/-	6/-	7/6	7/6	7/6	7/6
Type	D3 Det.	D3 L.F.	MD3	DFA0	DFA1	DFA3	DFA4
Filament voltage.	1.6—2.0	1.8—2.0	1.8—2.0	3.5	5.5	5.5—6.0	5.5
Filament current, amps. ....	0.3	0.3	0.3	0.35	0.2	.06	0.2
Anode voltage ....	20—100	30—100	30—100	50—100	50—100	50—100	75—125
Total emission, m/a. ....	8	8.0	8.0	20.0	25.0	15.0	15.0
Impedance, ohms.	16,000	16,000	16,000	7,000	8,300	13,000	27,000
Purpose .....	Detector	Audio	Audio	Power Amplifier	Power Amplifier	Audio	Resistance Coupling

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# Mullard

THE MASTER VALVE

**6.50 p.m.—River Reports.**  
**8.50 p.m.—Newmarket Sheep Sales**, by Associated Stock and Auction Agents, Bourke Street, Melbourne. Market Reports, by the Victorian Freeholders' Cooperative Cattle party, Ltd., Footscray. Grain, Dry Straw, Jute, Dairy Produce, Potatoes and Onions.  
**7.15 p.m.—Market Reports of Fruit** by Victorian Fruitlers' Association.

NIGHT SESSION.

**7.15 p.m.—MR. C. ELLIS:**  
 "Fiazare and Pyramids."  
**7.30 p.m.—MR. F. CHAPMAN:**  
 "Popular Scientific Authorship in Australia."  
**7.45 p.m.—MR. H. SCHWIEGER** will speak to you from the ROYAL AGRICULTURAL SHOW GROUNDS.  
**8.0 p.m.—MANZONI'S HAWAIIAN BAND:**  
 Blue skin, coral strands, monahū waters—The perfume of strange flowers—the shade of spreading palms—the songs of dusky maidens—all intermeshed into entrancing melody—the music of Manzoni's Hawaiian band, who will now play:  
 Waltz "Kamohani."  
 "Mai Poina Ge I De."  
 Quartette, "Forget-me-not," for two alto sopranos and guitar and guitar.  
**8.10 p.m.—KENNETH IMPETT, Baritone:**  
 "To Anthem" (Hanson).  
 "Spring's a Lovely Lady" (Keith Elliott).  
**8.11 p.m.—DONALD McBEATH, Violist:**  
 "Grande Song" (Max Rogus).  
 "Ave Maria" (Gounod).  
 "Spanish Serenade" (Jhaninade-Kruehler).  
**8.17 p.m.—MANZONI'S HAWAIIAN BAND:**  
 "Alma O" (Farewell to Thee).  
 "La Paloma"—Mexican Serenade.  
 "My Hawaiian Maid."  
**8.30 p.m.—KENNETH IMPETT, Baritone:**  
 "The Ringers" (Hermann Lohr).  
 "Companion of My Heart" (James James).  
**8.45 p.m.—DANCE-ACT PLAY:**  
 "Sand in the Eyes"  
 Played by Stanton Eckleside and Jessie McWhirter.  
**9.0 p.m.—AGNES FORTUNE, Piano:**  
 "Rabbit Simon" (Eggar).  
 "Spring Song" (Mendelssohn).  
**9.15 p.m.—Description of a recent visit** to the North of Ireland by "The Man from Glangary."  
**9.30 p.m.—KENNETH IMPETT, Baritone:**  
 "In Sunnimeetion on Bruden" (Graham Peel).  
 "Fleeting" (Eggar).  
**9.51 p.m.—MANZONI'S HAWAIIAN BAND:**  
 Selection, "Hawaiian Melodies."  
**9.52 p.m.—EIN THROTAM, Harmonist:**  
 Exit 3, at piano with harmonium. Story-songs.  
**10.3 p.m.—Announcements.**  
**10.4 p.m.—WALTER CHAMPNEY, assisted** by KILEEN GILBERT.  
 "I Do Like an Egg For My Tea."  
**10.15 p.m.—MANZONI'S HAWAIIAN BAND:**  
 Mandolin Solo, "Bodie," by O. G. Manzoni.  
**10.27 p.m.—WENDLING AND MOLLOY, Entertainers:**  
 "To-night You Belong to Me" (David).  
 "Mary Ann" (Henderson).  
**10.32 p.m.—MANZONI'S HAWAIIAN BAND:**  
 Band, "There O'Clock in the Morning."  
 "Puff! Puff!"  
 "Hula."  
**10.40 p.m.—Late Sporting Notes.**  
**10.55 p.m.—MANZONI'S HAWAIIAN BAND:**  
 "Serenade" (Gounod).  
 Mandolin Solo, by O. G. Manzoni.  
**11.0 p.m.—THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS FOR:**  
 EVERYBODY: "None was not built in a day. Neither is safety achieved through mere good resolution. Keep continually at it."

**OUR GREAT THOUGHT:**—It is a Dutch proverb that 'pains costs nothing,' such are its preservative qualities in damp climates. Well, smoking costs less and so, of cigarettes, the more it is spent the more it remains.—Emergen.

**11.1 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS:**  
**11.40 p.m.—GOD SAVE THE KING.**

# 3AR, MELBOURNE

Saturday.

MORNING NEWS SESSION.

11.0 a.m. to 12 noon.  
**MIDDAY CONCERT SESSION,**  
 12.1 p.m. to 1.5 p.m.

Transmitted from Panopticon House, 232 Collins Street, by exclusive permission of the Royal and Palace, Ltd., on the Brunswick Passages.

MATINEE SESSION.

ORCHESTRAL CONCERT.

**2.30 p.m.—Studio Orchestra:**  
 Selection from the Light Opera, "Merrie England" (German).  
 "Elegiac" from The Two Arenaks).  
**3AR ROYAL SHOW FEATURES:**  
 During the afternoon the leading exhibitors at the Royal Agricultural Show and the important Ring Competitions will be fully described from the Show Grounds at Flemington by 3AR's Special Correspondents.  
**2.45 p.m.—Miss Dorothy Eaton-Jones, Contralto:**  
 "Lament of Isis" (Hancock).  
 "Wind Song" (Rogus).  
**2.53 p.m.—Studio Orchestra.**  
**3.13 p.m.—Mr. Ronald Hearsey, Solo:**  
 "Largo" (Handel), by request.  
**3.15 p.m.—Mr. V. Upton-Brown, Narrator** with Musical Illustrations by the Studio Orchestra).  
**3.17 p.m.—Studio Orchestra:**  
 "Suite Orientale" (Poggi).  
**3.25 p.m.—Miss Dorothy Eaton-Jones, Contralto:**  
 "Blackbird Song" (Isert).  
 "The Fuchsia Tree" (Quilter).  
**3.33 p.m.—Popical Time Test, Prize 5/2/4.**  
 The Orchestra will play an amusing variety of familiar tunes. Write down as many as you can guess in the order played, and address your envelope "T.T.T." 3AR Melbourne. Test continued through the week (see programmes). Last day of entry, Saturday, September 24th. Results, Tuesday night, September 27th at about 9 p.m.  
**3.35 p.m.—Mr. James Scott, Bass:**  
 "Trier No" (MacFarlan).  
 "The Fortune Hunter" (Wilde).  
**4.0 p.m.—G.P.O. Clock Says "Four,"**  
 at 1.0 p.m. Announcements.  
**4.15 p.m.—Studio Orchestra.**  
**4.45 p.m.—Mr. Herbert Pettifor, Violist:**  
 "Summer Idyls" (Pozzi) (Wainiawaki).  
**4.25 p.m.—Studio Orchestra:**  
 "Summer Days Suite" (Dantze).  
**4.35 p.m.—Mr. James Scott, Bass:**  
 "The Company, Sergeant-Major" (Henderson), by request.  
 "The Blind Pilgrimage" (Clarke).  
**4.44 p.m.—Studio Orchestra:**  
 "La Senora" (Haller Suite) (Destiles).  
**4.55 p.m.—To-night's Entertainment.**  
**5.0 p.m.—G.P.O. Clock says "Five,"**  
 Close down.

CHILDREN'S SESSION.

**6.30 p.m.—Uncle Mac's Entertainment.**

EVENING SESSION  
**WESTBURY CONCERT PARTY.**  
**7.30 p.m.—Studio Master, Mr. Stephen** McDell, Mr. Everett's Garden. Special week-end talk by Mr. W. R. Warner (Prat).

and of the Nureyeva's and Dedering's Association of Victoria.  
**7.50 p.m.—Queen and Little Lads, Notices:**  
 "To-day's Sports" (Beville).  
**8.0 p.m.—G.P.O. Clock says "Eight,"**  
 Fanfare introduced by Mr. Colin Hinck.  
**8.1 p.m.—Miss Alice Wells, dramatic soprano:**  
 "The Lady" (Laird).  
 "Daddy, Hey" (Wainwright).  
**8.7 p.m.—Mr. Norman Heymannson, entertainer:**  
 "The Work of Art" (Anton Choler).  
**8.14 p.m.—Mr. Frank Thomas, baritone:**  
 "I'm a Good Boy" (Standeron).  
 "I'm a Goodie, dear for you" (Hathaway).  
**8.21 p.m.—Miss Etie Bernard, contralto:**  
 "The Tomb of the Unknown Woman" (Hancock).  
 "The Lament of Isis" (Hancock).  
**8.28 p.m.—Shakopspeare's Heron** (taken from "Hamel").  
**8.40 p.m.—Miss Edith Barnes, piano:**  
 "Prelude."  
 "Polish Dance" (Schubert).  
**8.47 p.m.—Mr. Colin Hinck, entertainer:**  
 "A Note from the Bank" (Anon).  
**8.54 p.m.—Miss Alice Wells and Mae Etie Bernard:**  
 Duet, "Four Little Subscribers."  
**9.1 p.m.—Mr. Norman Heymannson, entertainer:**  
 "How we played Julius Caesar" (Anon).  
**9.8 p.m.—Mr. Frank Thomas, baritone:**  
 "Route Marchin" (Stow).  
 "Robin Adair" (Carriv J. Hood).  
**9.15 p.m.—Radio Play: "April the First" (V. L. Troutman).**  
**9.22 p.m.—Miss Etie Bernard, contralto:**  
 "The Lady" (Laird).  
 "Fren" (Habsch).  
**9.24 p.m.—Mr. Colin Hinck, entertainer:**  
 Scene from "King John" (Shakopeare).  
**9.43 p.m.—Miss Alice Wells, dramatic soprano:**  
 "Jewel song" from Faust (Gounod).  
 "Helene" (Loyal).  
**9.48 p.m.—Westbury Concert Party Quartet:**  
 "Hills Shire."  
 "Underneath the Mellow Moon."  
 10 p.m.—G.P.O. Clock says "Ten."  
**10.1 p.m.—Lester Ross, Legation's Hallmarks** Orchestra (direction, Mr. Harry Mangro).  
**10.45 p.m.—Tomorrow's entertainment,**  
**10.50 p.m.—Weather forecast.**  
**10.55 p.m.—Description of an interesting good-night** thought from the poem, "The Silphs and the Sun" by Henry Lawson).  
**11 p.m.—G.P.O. Clock says "Eleven,"**  
 God Save the King.

# 4QG, BRISBANE.

Saturday.

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

CHURCH SERVICE.

The afternoon service will be played from the Seventh Day Adventist Church at Buranda.  
**5.30 p.m.—Buranda—**  
**5.50 p.m.—Church Service.**  
**6.00 p.m.—Close down.**  
**7.00 p.m.—BARELY EVENING SESSION.**  
**8.0 p.m.—Helding service** by Doree Hen.  
**7.15 p.m.—Racing results.**  
**7.30 p.m.—To-day's football play described.**  
**7.40 p.m.—Sitting notes** by Mr. F. Smith.

NIGHT SESSION.

To-night's programme will comprise the playing of a recital from the Studio of Mr. Louis Amadeo Paros, "Hall of the Muses," George Street, Brisbane.  
**FROM THE HALL OF THE MUSES:**  
**8.0 p.m.—mandolin solo, "Reverie" (for left** hand)—Wibshely). Miss Gertrude Anderson; violin duo, "Herd Girl's Dream" (Labeley). Mrs. Attenborough and Mr. L. A. Paros; vocal, "No-nonsense," Mrs. Wilson; studio solo, "Sally's Answer" (Eggar); Mr. Tom Win-

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violin; electro-gram from selected, Mr. Phillip O'Brien Hoare; violin solo, "Dance de Malin" (de Berlin); Miss Madeline Wilson; violin quart, "Mittag" (Beethoven), Mr. Donald Trout and Mr. L. A. Farrow; baritone solo, "On Wings of Song" (Mendelssohn); "Frottoles" (from "Barber of Seville" - Danza), Professor Killo; contralto solo, selected, Miss Irene Phipps; violin solo, "Kol Nidrei" (Schoch), Miss Madeline Wilson; violin solo (a) "Requiem" (Vieuxtemps); (b) "Catalonia Lullaby" (Pares), by request, Mr. Louis A. Farrow; piano solo, "Liedchen" (Liszt), Miss Gertrude Andersen.

## FROM THE STUDIO—

10 p.m.—"The Sunday Mail" news. Close down.

NOTE.—During the evening a description of the main race will be given from the Lewis Park Speedway.

## 5CL, ADELAIDE.

Saturday.

## MORNING SESSION.

11 a.m.—Chimes.  
11.1 a.m.—Studio Music.  
11.10 a.m.—"Advertiser" News Service.  
11.25 a.m.—Studio Music.  
11.35 a.m.—"Advertiser" News Service.  
11.55 a.m.—Studio Music.  
12 noon.—Chimes, Mission announcements, and close down.

## AFTERNOON SESSION.

2 p.m.—Chimes.  
3.1 p.m.—Fox Pize and Mission Racing Results and International Racing Results (a). League Football Scores.  
During the afternoon Musical items will be broadcast from the Studio.  
6.15 p.m. (approx.)—Final scores of all S.A. League Football Matches and Results of Racing.

## EVENING SESSION.

8 p.m.—Chimes.  
8.1 p.m.—Relay from the Cavendish Garden Musical Dinner Music.  
8.30 p.m.—Madeline Wilson.  
9.25 p.m.—Messrs. S. C. Ward and Co.'s Stock Exchange Intelligence.  
Market Reports by Messrs. A. W. Sandford and Co., A. E. Hall and Co., Dalrymple and Co., S.A. Farmers' Co-operative Union, Taylor Bros., Retail Grocers' Association, General Sporting Information.  
9 p.m.—Chimes.  
9.1 p.m.—Talk by the Rev. G. E. Hale, D.A.  
9.16 p.m.—Laurence Haggis, pianoforte solo.  
9.30 p.m.—Gladys Minto, contralto.  
9.45 p.m.—Messrs. Brown, violin.  
9.55 p.m.—Gladys Minto, contralto.  
9.59 p.m.—Mowen Brown, violin.  
9.59 p.m.—Relay from the Robinson Building, by kind courtesy of the Management, a description of the Wrestling will be given.  
10.30 p.m. (approx.)—General Sporting Information.  
10.45 p.m.—Relay from Glenelg: The Malton Orchestra.  
11.15 p.m.—To-morrow's programmes.  
Station announcements.  
Meteorological information.  
National Anthem.

## 6WF, PERTH.

Saturday.

12 noon.—Tune in.  
12.15 p.m.—Musical programme, including vocal soloists, piano and pianoforte selections by Miss Evelyn White, S.C.M.  
12.55 p.m.—Market News and Cables.  
1 p.m.—Time signal from Perth Observatory.  
1.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.  
1.5 p.m.—Close down.  
6.15 p.m.—Tune in.

## SPORTING SESSION.

5.25 p.m.—Football Results (Quarter-time score).  
Hacing Results.  
5.30 p.m.—Close down.  
6.45 p.m.—Tune in.  
6.50 p.m.—Coles Perry and Rag with the Madis Bird, with Wreath greetings.  
7.10 p.m.—Sports Results, by courtesy of "The Mirror" Newspaper Coy.  
7.30 p.m.—Market Reports.  
Cables, News by arrangement with the "West Australian" Newspaper Coy.  
7.45 p.m.—Talk.  
8 p.m.—Time signal from Perth Observatory.  
8.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.

## MUSIC AND SONG.

8.3 p.m.—Musical programme, including vocal soloists and artists.  
Dance Music, by Colin Smith and his Jazz Orchestra, relayed from the Perth Palais Royal, under direction of Mr. E. H. Banks.  
10 p.m.—Late news items, by courtesy of "The Daily News" Newspaper Coy.  
Chimes with news announcements.  
Weather Report and Forecasts.  
Sports Results, by courtesy of "The Mirror" Newspaper Coy.  
10.30 p.m.—Close down.

## 7ZL, HOBART.

Saturday.

## MORNING SESSION.

11 a.m. to 11.30 a.m.  
AFTERNOON SESSION.  
3 p.m.—G.P.O. Clock and Chimes.  
3.1 p.m.—Broadcast by direct wire from North Hobart Oval Eye-witness description of football match New Town versus Leifroy.  
Close down.

## EARLY EVENING SESSION.

8.30 p.m.—Children's Corner by "Uncle Hector"  
7 p.m.—"Uncle Peter's" ball house.  
NIGHT SESSION.  
7.30 p.m.—Musical selection.  
7.45 p.m.—Talk by Mr. G. F. Davis, subject "Tasmania to-day."  
7.55 p.m.—"Mercury" special Tasmanian news service. Railway, steamer, produce sales, weather forecasts, Hobart Stock Exchange quotations.  
8 p.m.—G.P.O. Clock and Chimes.  
8.15 p.m.—Dance numbers by Mrs. Sheppard's trio from Imperial Hotel, Hobart, interspersed from the studio.  
10.25 p.m.—British Official Wireless News.  
Weather information. Station announcements.  
National Anthem.

Sunday, Sept. 18  
2FC, SYDNEY

## MORNING SESSION.

10.45 a.m.—Programme announcements.  
11 a.m.—"Big Ben." From St. Andrew's Cathedral, George Street, Sydney.  
The Morning Service continued by The Very Rev. Dean Tallon.  
11.15 p.m.—From the Studio.  
News Session.  
12.35 p.m.—Close down.

## AFTERNOON SESSION.

2.45 p.m.—Programme announcements.  
2.45 p.m.—A talk by Mr. Fred Woods.  
3 p.m.—"Big Ben." Organ and Vocal Recital by the Congregational Church, Fishmarket.  
3.30 p.m.—A talk on "Theatre and Compositions" by Mr. Gordon Lavers.

4.48 p.m.—A recital by Murray Gibbon, Australian Composer, Victoria.  
(a) "Dance of Memory" (Gibbon).  
(b) "Sad Eyes" (Gibbon).  
(c) "Just memories" (Gibbon).  
(d) "So long ago" (Gibbon).  
6 p.m.—"Big Ben." Close down.

## NIGHT SESSION.

8 p.m.—"Big Ben" and news announcements.  
8.3 p.m.—A musical programme by the Auburn School Domestic Science Club.  
(a) "A Nudge in Venice" (Lorenzini).  
(b) "Put us on like a silent ivy" (Coleridge-Taylor).  
(with explanatory remarks by Miss Elsie Mann, auditor).  
11.5 p.m.—Lionel Lawson, violin solo.  
12.10 p.m.—The Abnig School Domestic Science Choir.  
(a) "Retrospection" (Lacombe).  
(b) "In the Springtime" (Newton).  
(with explanatory remarks).  
12.35 p.m.—Captain Fred Astor—Some Biographical observations.  
"Charlemagne and Napoleon."  
12.55 p.m.—Lionel Lawson, violin solo.  
1.48 p.m.—The Abnig School Domestic Science Choir.  
(a) "A Dream asleep."  
(b) "When twilight wanes" (Beethoven).  
(with explanatory remarks).  
4.48 p.m.—Lionel Lawson, violin solo.  
5.55 p.m.—A talk on "Author's Week."  
7 p.m.—"Big Ben."

The evening service arranged by the Central Methodist Mission, Luton Hall, Pitt Street, Sydney.  
8.30 p.m.—The Conservatorium Ladies' String Quartet make their first appearance at the Studio.  
"Quartet No. 14," Movements 1 and 2. (Haydn).  
9.1 p.m.—Strella Wilson, Principal of the Gilbert and Sullivan Opera Company; Soprano solo.  
9.44 p.m.—The Conservatorium Ladies' String Quartet.  
"Quartet No. 14," Movements 3 and 4 (Haydn).  
9.6 p.m.—Strella Wilson, soprano (Principal of the Gilbert and Sullivan Opera Company).  
1.14 p.m.—Selwyn Seymour, electrician.  
3.20 p.m.—The Conservatorium Ladies' String Quartet.  
(a) "Melody" (Svendsen).  
(b) "Requiem" (Hugo-Frederic).  
3.30 p.m.—Strella Wilson, soprano (Principal of the Gilbert and Sullivan Opera Company).  
3.45 a.m.—Selwyn Seymour, English abbequianist.  
3.46 p.m.—The Conservatorium Ladies' String Quartet.  
(a) "Relief Movement from Quartet in A" (Schumann).  
(b) "Requiem" (Mendelssohn).  
10 p.m.—"Big Ben."  
10.55 p.m.—"Aisham."  
Close down.

## 2BL, SYDNEY

Sunday.

10.45 a.m.—Special News Service.  
11.0 a.m.—Service Broadcast from Newtown Congregational Church.  
1.0 p.m.—G.P.O. Clock and Chimes; Children's Session.  
2.12 p.m.—Recital by J.M.V. Gramophone.  
2.45 p.m.—News Service.  
3.0 p.m.—G.P.O. Clock and Chimes.  
3.1 p.m.—Anniversary Service, St. Cuthbert's Presbyterian Church, Five Dock.  
4.20 p.m.—Bible Class, Conducted by Mr. W. Caird Bradley.  
5.15 p.m.—G.P.O. Clock and Chimes; Close Down.  
5.45 p.m.—Children's Session.  
8.30 p.m.—Organ and Orchestra Recital Broadcast from Newtown Congregational Church.  
1.0 p.m.—Service Broadcast from Newtown Congregational Church.



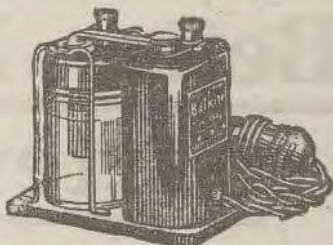
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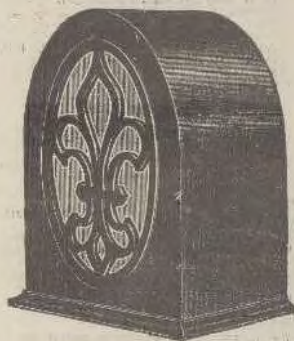
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8.30 p.m.—Band Recital by the North Sydney Trolley Band, broadcast from Mantra Hall, North Sydney.  
 9.15 p.m.—Weather Report and Forecast by courtesy of Mr. G. J. Mars, Government Meteorologist.  
 9.16 p.m.—Broadcasters' Trio.  
 9.24 p.m.—Miss Phyllis Ashmore (Newcastle Soprano).  
 9.33 p.m.—Mr. Roger Jones (Baritone).  
 9.40 p.m.—Broadcasters' Trio.  
 9.50 p.m.—Miss Phyllis Ashmore.  
 9.57 p.m.—Mr. Roger Jones.  
 10.4 p.m.—Resume of Following Day's Programme.  
 10.8 p.m.—Broadcasters' Trio.  
 10.15 p.m.—G.P.O. Clock and Chimes; National Anthem.

## 2GB, SYDNEY

Sunday.

### MORNING SESSION.

10.15 a.m.—Organ Music from St. Alban's Church, Sydney.  
 10.20 a.m.—Service. Holy Eucharist. St. Alban's, German.  
 11 a.m.—Close down.

### EVENING SESSION.

8.15 p.m.—Music from Studio.  
 9 p.m.—Lecture from Adler Hall; Dr. P. K. Ross.  
 9.15 p.m.—Music from Studio.  
 Vocal Recital by pupils from the Studio of Cleveport Hosking.  
 9.45 p.m.—Talk by Professor Ernest Wood.  
 10 p.m.—Close down.

## 2UW, SYDNEY

Sunday.

7 p.m.—Musical Items.  
 8 p.m.—Les Lawes and his "Moonshiners" Orchestra:  
 (a) "The Waltz," fox trot.  
 (b) "The Blue," fox trot.  
 (c) "Red Riding Hood," fox trot.  
 8.24 p.m.—Les Lawes, novelty pianoforte solo:  
 "Hogwash."  
 8.30 p.m.—"Caldon Duo," steel guitars:  
 (a) "Our Two, Three, Four"  
 (b) "Bliss of Honolulu"  
 (c) "In a little Spanish town."  
 9 p.m.—Studio Items.  
 9.30 p.m.—Resume of forward programme.  
 9.45 p.m.—Close down.

## 3LO, MELBOURNE.

Sunday.

### MORNING SESSION.

10.30 a.m.—Bells from St. Paul's Cathedral.  
 11.15 a.m.—Express train information.  
 British Official Wireless news from Hailey.  
 11 a.m.—SERVICE FROM ST. JOHN'S CHURCH, COLLING STREET.  
 Preacher: The Rev. W. BORDLAND, M.A., D.D.  
 Organist: Mr. MANSLEY GREER.  
 Hymn 234.  
 Prayer.  
 Psalm Psalms 4 and 1.  
 Old Testament Lesson.  
 Church Num. 8/25-7/21.  
 Hymn 87.  
 Prayer of Intercession.  
 New Testament Lesson, St. John 1:1-14.  
 Anthem, "The Wilderness," Sir John Goss.  
 The Lord's Prayer.  
 SERMON, "His Countenance."

Numbers 6/28.

Prayer.  
 Intercessions.  
 Offices.  
 Organ Solo, "Cantata Nuptials (Dobie),  
 Hymn 236.  
 Benediction.  
 11.15 a.m.—Close down.

### AFTERNOON SESSION.

PLEASANT SUNDAY AFTERNOON SERVICE FROM WESLEY CENTRAL SESSION, LONSDALE STREET.  
 Chairman: Rev. Dr. S. J. ROHAN.  
 Conductor: Mr. G. M. WILLIAMS.  
 2 p.m.—Hymn No. 13, "Come Ye That Love the Lord."  
 Prayer, Rev. J. H. CAIRN.  
 Organist's Selection.  
 Hymn No. 29, "Hail Thee Once Deigned Jesus."  
 Solo, Mr. KENNETH IMPETT:  
 "Crossing the Bar" (Wilsby).  
 Organist's Selection.  
 Solo, Mr. KENNETH IMPETT:  
 "Two Negro Spirituals—  
 1. "Bene Awee,"  
 2. "O Didn't It Rain" (Barleigh).  
 Notices.  
 Offering.  
 Orchestra.  
 Address, Rev. J. ERNEST JAMES, B.D., National Anthem.  
 Benediction.  
 4.30 p.m.—Close down.

### EVENING SESSION.

6.30 p.m.—Answers to Letters and Periodic Questions to all the little friends of "BILLY BUNNETT."  
 8 p.m.—Hymns and Music by "THE FIELD CHURCH."  
 Hymn, "God is Love."  
 Chorus, "Thou knowest Lord."  
 Chorus, "The Lonely Doll," by Gertrude Hart.  
 Music by William G. James.  
 Hymn, "There's a friend for little children."  
 8.25 p.m.—REV. E. R. GRIBBLE, who has spent many years among the natives of North-West Australia, will have a chat with the children.  
 8.45 p.m.—Bells from St. Paul's Cathedral.

### NIGHT SESSION.

7 p.m.—EVENING SERVICE FROM ST. PAUL'S CATHEDRAL.  
 Anthem, "Ascribe unto the Lord" (Travers).  
 Psalm 121.  
 Hymns:  
 118, "God the Father's only Son."  
 152, "Jesus Lover of my Soul."  
 477, "The day thou gavest Lord is ended."  
 Sermon—The Archbishop.  
 FROM THE STUDIO—  
 8.30 p.m.—MALVERN TRAMWAY BAND:  
 Grand Chorus, "Judge us, O God" (Mendelssohn).  
 Selection, "Hymn of Praise" (Mendelssohn)  
 8.45 p.m.—ETHEL FORBROW, Soprano:  
 "Mignon's Song" (Holt).  
 "The Three Gipsies" (Hart).  
 8.47 p.m.—Selections from "Elisha," arranged by Wm. G. JAMES, with appropriate items by Malvern Tramway Band.  
 MELBOURNE CHORAL UNION—  
 Chorus, "Be Not Afraid."  
 MR. HORACE WHITE:  
 Recit. and Air:  
 "Ye People read your Hearts."  
 MALVERN TRAMWAY BAND:  
 Selection, "The Creation" (Haydn).  
 Mr. W. TOWNSEND:  
 Air, "It is enough."  
 MELBOURNE CHORAL UNION:  
 Chorus, "We are watching your Israel."  
 MOLLIE SAFFO AIRMAN:  
 Air, "Hear ye Israel."  
 Mr. W. TOWNSEND:  
 Air, "Lord God of Abraham."  
 Mr. J. ALWAY:  
 Cornet solo, "A Dream of Paradise" (Gray).  
 MALVERN TRAMWAY BAND:  
 Hymn, "Lead, Kindly Light" (Dykes).  
 MISS B. HORSBURGH:  
 Recit. and Air, "Aria Elphah."

"O Rest in the Lord."  
 MELBOURNE CHORAL UNION:  
 Chorus, "Thanks be to God."  
 MALVERN TRAMWAY BAND:  
 Selection, "L'Arlesienne" (Hart).  
 8.55 p.m.—"Arioso" news service. Announcements.

THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE for TO-DAY is for MOTORISTS: "Safety means a clear mind, a steady hand and quick action in emergencies."  
 OUR GREAT THOUGHT:  
 "Speeches cannot be made long enough for the speakers, nor short enough for the hearers."  
 10 p.m.—GOD SAVE THE KING.

## 3AR, MELBOURNE

Sunday.

### MORNING CHURCH SESSION.

11 a.m.—Morning service from Cairns' Memorial Church, East Melbourne.

### AFTERNOON SESSION.

#### ORCHESTRAL CONCERT.

5.15 p.m.—Thompson Lodge Orchestra.  
 March, "The Beau Ideal" (Scott).  
 6.15 p.m.—Thompson Lodge Orchestra.  
 Overture, "Dedication of the Temple" (Kielce-Jela).  
 6.25 p.m.—Thompson Lodge Orchestra:  
 "Shepherd of the Hills" (Niccolini).  
 6.28 p.m.—Mrs. A. E. Smith, soprano:  
 "There be no Gods" (Hilshorn).  
 6.27 p.m.—Mrs. Holly Pearce, first.  
 "Globe Frogs" (Glarus).  
 6.44 p.m.—Miss Eileen Passon-Webb, entrance.  
 Musical Monologues, "Foolish Questions."  
 6.50 p.m.—Master Jack Henney, the "Dog" Entertainer.  
 6.58 p.m.—Thompson Lodge Orchestra.  
 4.10 p.m.—Mrs. Holly Pearce, solo:  
 Selected.  
 4.15 p.m.—Miss Eileen Passon-Webb, entrance.  
 "A Musical Evening."  
 4.23 p.m.—Thompson Lodge Orchestra:  
 "Midsummer Night's Dream" (Alberty).  
 4.28 p.m.—Thompson Lodge Orchestra:  
 "By the Waters of Minnetonka" (Laurance).  
 4.32 p.m.—Mrs. A. E. Smith, soprano:  
 "Oh for the wings of a swallow" (Loche).  
 4.40 p.m.—Master Jack Henney will again entertain you.  
 4.55 p.m.—Thompson Lodge Orchestra:  
 "Waiting for the rainbow" (Touquet).  
 4.58 p.m.—God Save the King.  
 4.59 p.m.—Close down.

### CHILDREN'S SESSION.

8 a.m.—Conducted by the Starry Lad during Rev. Rabbin's holiday in the country.  
 EVENING CHURCH SESSION:  
 7 p.m.—Special service from the Independent Church, Collins Street, Melbourne.

### EVENING SESSION.

8.30 p.m.—Special Patriotic Concert broadcast from Panatone House, 242 Collins Street, Melbourne, under the direction of the Patriotic Programme Committee.  
 Programme Committee's President, Mr. A. H. Willis, vice-president, Mr. W. S. Paton; chairman, Mr. W. D. S. Taylor; secretary, Mr. Sydney Ellis.  
 Studio Master, Mr. V. Upton-Brown.  
 9.56 p.m.—The "Age" news bulletin, exclusive to 3AR.  
 10 p.m.—To-morrow's entertainment.  
 10.4 p.m.—Our Australian Goodnight Thought from the poem "September in Australia," by Henry C. Kendall.  
 10.5 p.m.—God Save the King.

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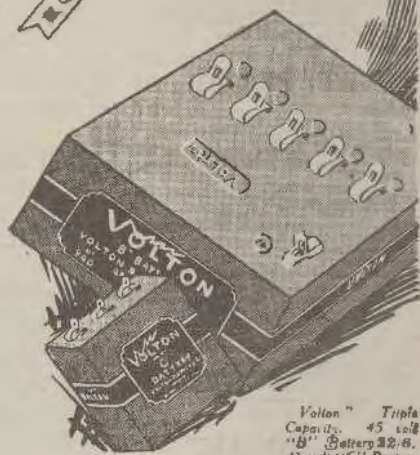
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## BATTERIES

## 4QG, BRISBANE.

Sunday.

## MORNING SESSION.

## ST. STEPHEN'S CATHEDRAL.

The complete morning service will be relayed from St. Stephen's Roman Catholic Cathedral, Brisbane.

11 a.m.—Church service.  
12.30 p.m.—Close down.

## AFTERNOON SESSION.

## BAND CONCERT.

The concert by the Racerall Band will be relayed from the Brisbane Gardens.

2.15 p.m.—Band concert.  
4.30 p.m.—Close down.

## NIGHT SESSION.

## ST. JOHN'S CATHEDRAL.

The complete evening service will be relayed from St. John's Anglican Cathedral.

7.30 p.m.—Church service.  
8.30 p.m.—Close down.

## HAND CONCERT.

At the conclusion of the church service, the concert by the Brisbane Municipal Concert Band will be relayed from Wickham Park. The programme will include—"Wangy" (Herold); "Oh, Uffina, Giorni di 'Sull' (Ferrari); "Rural Scenes" (Mati).

8.30 p.m.—Close down.

## 6WF, PERTH.

Sunday.

10.45 a.m.—Tune in.

11 a.m.—Morning Service, relayed from St. George's Cathedral, Cathedral Avenue, Perth.

12.15 p.m.—Close down.

2.30 p.m.—Tune in.

## FROM THE STUDIO.

2.30 p.m.—Musical programme, including vocal and instrumental artistes.

4.30 p.m.—Close down.

7 p.m.—Tune in.

7.5 p.m.—Children's Bedtime Stories.

7.50 p.m.—Evening Service, relayed from St. George's Cathedral, Cathedral Avenue, Perth.

## IN THE STUDIO.

8.45 p.m.—Talk: "Play the Man," by Mr. L. J. DONALDSON, of Lottsda, who for the last twelve years has been a missionary among the Chinese in Singapore.

9 p.m.—Musical programme, including vocal and instrumental artistes.

10.5 p.m.—Close down.

## 7ZL, HOBART

Sunday.

## MORNING SESSION.

11 a.m.—Church service from St. David's Cathedral, Hobart.

At conclusion of Church service Mast Express information.

Close down.

## AFTERNOON SESSION.

2.30 p.m.—Selections by Hobart Children Band (Conductor Mr. Ray Setchell).

4.30 p.m.—Close down.

## EARLY EVENING SESSION.

7 p.m.—Church service from Methodist Church, Hobart.

At conclusion of Church service Mast Express information.

Close down.

Mrs. E. Bailey, L.A.B. (contralto), Miss Ruby Pines (soprano), Miss Esel Brown (soprano), Mr. T. Joe (baritone), Miss Joyce Rowland (mezzo-soprano), Mr. W. J. Clarke (Trumpeter).

8.45 p.m.—"Mercury" news service, British Official wireless news, Weather forecasts, Station announcements.

National Anthem.

## Monday, Sept. 19

## 2FC, SYDNEY.

## EARLY MORNING SESSION.—1 to 3 a.m.

## MORNING SESSION.

10 a.m.—"Big Ben" and announcements.  
10.5 a.m.—Studio music.  
10.15 a.m.—"Sydney Morning Herald" news service.  
10.50 a.m.—Studio music.  
10.55 a.m.—Last Minute Sporting Information, by the PFC Racing Commissioner.  
10.45 a.m.—Studio music.  
11 a.m.—"Big Ben."  
Marching music for school children.  
11.5 a.m.—A.P.A. and Butler's Cables.  
12.15 a.m.—A reading.  
11.30 a.m.—Close down.

## MIDDAY SESSION.

12 noon—"Big Ben" and announcements.  
12.5 p.m.—Stock Exchange, first call.  
12.3 p.m.—Weather forecast, rainfall.  
12.5 p.m.—Studio music.  
12.15 p.m.—Summary of "Sydney Morning Herald" news service.  
12.25 p.m.—Rugby wireless news.  
12.30 p.m.—Marching music for school children.  
12.40 p.m.—Kathleen Horne, soprano: "The Great Awakening" (Kraemer).  
12.45 p.m.—The Oak Hall Instrumental Trio.  
12.45 p.m.—Studio music.  
1.1 p.m.—"Big Ben." Weather intelligence.  
1.3 p.m.—"Evening News" midday news service.

Producers' Distributing Society's Report.  
1.20 p.m.—The Oak Hall Instrumental Trio.  
1.28 p.m.—Stock Exchange, second call.  
1.30 p.m.—Marching music for school children.  
1.40 p.m.—Kathleen Horne, soprano: "Romance From Myron" (Thomas).  
1.45 p.m.—Studio music.  
1.50 p.m.—The Oak Hall Instrumental Trio.  
2 p.m.—"Big Ben." Close down.

## AFTERNOON SESSION.

2 p.m.—"Big Ben" and announcements.  
2.5 p.m.—A Piano-forte Recital by the Pupils of Miss Iris De Caires Regu.  
3.15 p.m.—Mazette, Grimsbow, mezzo.  
3.20 p.m.—Piano-forte numbers, by Pupils of Miss Iris De Caires Regu.  
3.30 p.m.—Marching music for school children.  
3.40 p.m.—May Craven, mezzo-soprano (from Farmer's Tea Rooms): "The Kerry Dance" (Malloy).  
3.45 p.m.—The Oak Hall Instrumental Trio.  
3.50 p.m.—Further items from the Piano-forte Recital by Miss Iris De Caires Regu.  
4 p.m.—"Big Ben."  
Hilda Nelson, mezzo soprano: "Star of Evening" (Hain).  
4.15 p.m.—The Oak Hall Instrumental Trio.  
4.18 p.m.—Muriel Watt, contralto: "The Silver Ring" (Chamaine).  
4.15 p.m.—Madeline Hall, mezzo soprano: "In the Shade of the Ash" (Creswell).  
4.42 p.m.—Stock Exchange, third call.  
4.47 p.m.—Madeline Hall, mezzo soprano: "Oh, When We Flung" (Godard).  
4.50 p.m.—The Waverley Symphonic Dance Orchestra, under the baton of Mr. Cyril Kaye.  
5 p.m.—"Big Ben." Close down.

## EARLY EVENING SESSION.

5.30 p.m.—The chimes of 2FC.  
5.35 p.m.—The "Hello Mike" talks to the children.  
5.40 p.m.—Story time for the young folk: Mr. J. B. Kinghorn: "A Visit to Frog Hollow".  
5.45 p.m.—Piano music.  
5.50 p.m.—"Big Ben." Latest sporting news.  
5.55 p.m.—Daily's Market Reports (wood, wheat and stock).  
6.10 p.m.—Fruit and vegetable markets.  
6.20 p.m.—Weather and shipping news.  
7.25 p.m.—"Evening News" late news service.

## NIGHT SESSION.

7.35 p.m.—Programme announcements.  
7.50 p.m.—Mrs. H. B. Allard and Emil Susenich in a Vocal Recital.  
1 a) "A Song of Faith" (Chamaine), Emil Susenich.  
b) "Afar in the Wood" (Kjerfve), Mrs. H. B. Allard.  
c) "Drifting" (Grieg), Mrs. H. B. Allard.  
d) Duet, "Greeting" (Mendelssohn).  
7.55 p.m.—Bradford Hill, contralto, sings series of talks on Personalities, dealing this evening with Ellen Terry.  
7.58 p.m.—"In a Year's Birthday".  
8 p.m.—The Haymarket Operatic Orchestra, under the baton of Mr. Stanley Porter.  
8.15 p.m.—Further Items from the Vocal Recital by Mrs. H. B. Allard and Emil Susenich.  
8.20 p.m.—"A Song of Faith" (Chamaine), Emil Susenich.  
b) "The Birds at their Mutins" (de Lara), Mrs. H. B. Allard.  
c) Duet, "In Love's Domain" (Spicce).  
8.25 p.m.—The Salvation Army Congress Band:  
a) "March 'Herald of Peace'" (Dickens).  
b) Selection, "Pilgrimage" (Grove).  
8.40 p.m.—Ad Cree, Scotch comedian.  
8.45 p.m.—The Salvation Army Congress Band:  
a) Carrol solo, "Song that Reached My Heart" (Mendelssohn).  
b) Handman T. South.  
c) Enthusiastic solo, "If With All Your Hearts" (Mendelssohn).  
Deputy Bandmaster Shepherd (with Band Accompanist).  
8.50 p.m.—"Big Ben".  
Latest weather forecast.  
8.51 p.m.—Ad Cree, Scotch comedian.  
8.55 p.m.—The Vocal Act from the Haymarket Theatre, conducted by Mrs. H. B. Allard and Emil Susenich:  
a) "The Sweetest Song" (Heim).  
b) "The Hymn of Memories" (Arward).  
Mrs. H. B. Allard.  
c) "I Would that My Love" (Mendelssohn).  
Duet.  
8.58 p.m.—The Salvation Army Congress Band:  
"Songs of Ireland" Selection (Steeves).  
9.00 p.m.—The Royal Sydney Apollo Club (Grand Master's Saloon):  
a) "Give a House" (Bantock).  
b) "When Evening's Twilight" (Hatten).  
c) Solo.  
d) "Ring Charles" (Bantock).  
9.00 p.m.—The Salvation Army Congress Band:  
March, "Song of the Army."  
9.05 p.m.—The Royal Sydney Apollo Club (Grand Master's Saloon):  
a) "Barcarolle" (Grieg) (Elliot).  
b) Solo.  
c) "Cain is his Son" (Pfeil).  
9.10 p.m.—"Big Ben".  
9.17 p.m.—The Haymarket Operatic Orchestra of 17 members, under the baton of Mr. Stanley Porter.  
9.25 p.m.—Ad Cree, Scotch comedian.  
9.28 p.m.—The Haymarket Operatic Orchestra.



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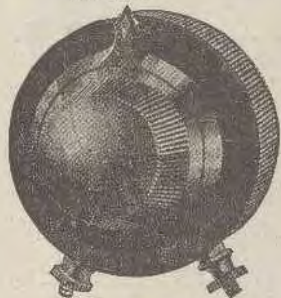
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# 2BL, SYDNEY

Monday.

## EARLY MORNING SESSION.

7 a.m. to 8 a.m.

### MORNING SESSION.

- 10.30 a.m.—G.P.O. Clock and chimes.
- 10.40 a.m.—Musical programme from Studio.
- 10.45 a.m.—News from the "Daily Telegraph" (Special).
- 10.50 a.m.—Musical programme from the studio
- 11 a.m.—G.P.O. Clock and chimes. Announcements.
- 11.5 a.m.—Musical programme from the studio.
- 11.15 a.m.—Talk on "Trains" by Miss Gwen Varley, Broadcasters' Women's Sports Authority.
- 11.34 a.m.—Notes—Replies to correspondents by Mrs. Jordan. Talk on "The Science of Eating" by Mrs. Jordan.
- 12 noon.—G.P.O. Clock and chimes. Special Ocean Forecast and Meteorological.
- 12.05 p.m.—Brunswick Panatone Musical recital.
- 12.15 p.m.—Information, Mails, Shipping, and port directory.
- 12.18 p.m.—Boats in call by wireless.
- 12.20 p.m.—Fruit Market report.
- 12.22 p.m.—Vegetable Market report.
- 12.24 p.m.—London Metal Market report.
- 12.28 p.m.—Dairy and Farm Produce Market report.
- 12.30 p.m.—G.P.O. Clock and chimes. Foreign Market report.
- 12.32 p.m.—Fish Market report.
- 12.34 p.m.—Retail Market report.
- 12.38 p.m.—News from the "Sun."
- 12.40 p.m.—Billie's Instrumental Quartet—direction—Caryl Castles.
- 1.10 p.m.—G.P.O. Clock and chimes. Talk to children and special entertainment for Children in Hospital.
- 1.30 p.m.—G.P.O. Clock and chimes. Close down. Description of clock race at the Empire trials broadcast direct from the race course by Mr. Basil Kirke.

### AFTERNOON SESSION.

- Having information broadcast immediately after each race by courtesy of the "Sun."
- 2 p.m.—G.P.O. Clock and chimes.
- Musical programme from studio.
- 2.14 p.m.—News from the "Sun."
- 2.20 p.m.—Musical programme from Studio.
- 2.30 p.m.—News from the "Sun."
- 2.40 p.m.—Dungowan Dance Band, broadcast from the Dungowan Casino.
- 3 p.m.—G.P.O. Clock and chimes. News from the "Sun."
- 4.15 p.m.—Serial Story.
- 4.30 p.m.—Dungowan Dance Band.
- 4.40 p.m.—News from the "Sun."
- 4.55 p.m.—Resume of night's programme.
- 4.57 p.m.—Having Tennis.
- 4.58 p.m.—Special Ocean Forecast.
- 5 p.m.—G.P.O. Clock and chimes. Close down.

### EARLY EVENING SESSION.

- 5.45 p.m.—G.P.O. Clock and chimes.
  - Children's Session.
  - 6.30 p.m.—Musical programme from the Studio.
- ### SPECIAL COUNTRY SESSION.
- 7 p.m.—G.P.O. Clock and chimes.
  - Amputation Mercantile Land and Finance Co's report.
  - Weather report and forecast by courtesy of Govt. Meteorologist.
  - Producer's Distributing Society's Fruit and Vegetable Market report.
  - Stock Exchange reports.
  - Train and Fosters report ("Sun").
  - Dry Produce report ("Sun").
  - 7.15 p.m.—Country news from the "Sun."
  - 7.25 p.m.—Talk on "How to maintain your health" by Dr. Du Mesurier.
  - 7.40 p.m.—Talk on "The Motor Car" by Mr. Martin.

### EVENING SESSION.

- 8.5 p.m.—G.P.O. Clock and Chimes; Broadcasters' Topical Course.

- 8.5 p.m.—An Hour's Programme Presented by Lindeman's Wines, The Parrishy Band Band.
  - 9.10 p.m.—Miss Nancy BENTY (Continued).
  - 9.17 p.m.—A Humorous Sketch entitled "The House Across the Way."
- Characters:
- John ..... William Collins
  - Robert ..... Max Mansergh
- 9.25 p.m.—The Newtown Band Broadcast from the Newtown Hall, Newtown.
  - 9.45 p.m.—Hazel de Lane (Violin).
  - 9.52 p.m.—Mr. Tommy Chide (Soprano Comedian).
  - 9.58 p.m.—G.P.O. Clock and Chimes.
  - 9.1 p.m.—Weather Report and Forecast by courtesy of M. C. J. Morris, Government Meteorologist.
  - 9.2 p.m.—Cec. Morrison and His Glomacshers, broadcast from the Ballroom of the Bondi Casino.
  - 9.17 p.m.—Broadcasters' All Sports Expert will talk on General Sports.
  - 9.26 p.m.—Bingo Band.
  - 9.34 p.m.—Miss Nancy Benty.
  - 9.41 p.m.—The Newtown Band.
  - 9.41 p.m.—A Dramatic Sketch, presented by Miss Nellie Ferguson.
  - 9.45 p.m.—Hazel de Lane.
  - 10.28 p.m.—Cec Morrison and His Glomacshers broadcast from the Ballroom of the Bondi Casino.
  - 10.35 p.m.—Mr. Tommy Chide.
  - 10.45 p.m.—Resume of Following Day's Programme.
  - 10.50 p.m.—Cec Morrison and His Glomacshers broadcast from the Ballroom of the Bondi Casino.
  - 11.0 p.m.—G.P.O. Clock and Chimes; National Anthem.

# 2BG, SYDNEY

Monday.

### MORNING SESSION.

- 9.0 a.m.—Music.
  - 9.5 a.m.—Chorus' Talk.
  - 9.10 a.m.—Music.
  - 9.20 a.m.—Psychological Class.
  - 9.30 a.m.—Music.
  - 9.45 a.m.—Health Talk.
  - 10.0 a.m.—Close Down.
- ### AFTERNOON SESSION.
- 2.30 p.m.—Music.
  - 2.37 p.m.—Address: Professor Ernest Wood.
  - 3.52 p.m.—Music.
  - 4.0 p.m.—Address, Political: National Association of N.S.W.
  - 4.30 p.m.—Music.
  - 4.45 p.m.—Close Down.

### EVENING SESSION.

- 7.8 p.m.—Music.
- 7.2 p.m.—R. E. Bennett.
- 7.15 p.m.—Music, Instrumental Trio.
- 7.30 p.m.—Political Address by National Association of N.S.W.
- 8.0 p.m.—Songs by Rupert Marshall: 1. "Maire, my Girl" (Allison). 2. "Harlequin" (Sanderson).
- 8.10 p.m.—Dinah Soka, Ada Brooks: 1. "Way on, Cowboy" (Maxwell). 2. "Blonday" (Drabman).
- 8.18 p.m.—Instrumental Quartette: Dan Scully, Monica Border, Murielle Lang, Ada Brook.
- 8.41 p.m.—Songs by Miss E. Lansing.
- 8.40 p.m.—Songs by Rupert Marshall: 1. "Miffany" (Festing). 2. "Way on, Cowboy" (Maxwell).
- 9.0 p.m.—Rev. Mr. H. S. Hammond: "Mending Broken Mea."
- 9.10 p.m.—Vivette Solo, Monica Heister: 1. "From" (Frouth). 2. "Fule Mow" (Kraljick).
- 9.23 p.m.—Songs by Miss E. Lansing.
- 9.33 p.m.—Duets for two violins with piano accompaniment: Dan Scully, Monica Border, Ada Brook: 1. "The Song of the Volvo Boatman" (Arc. by Jensen). 2. "Meditation" (Bach-Gould).

- 9.40 p.m.—Political Address by National Association of N.S.W.
- 10.0 p.m.—Close Down.
- 10.10 p.m.—North Symphonie Dance Orchestra, under the baton of Mr. Carl Kay.
- 10.12 p.m.—Len Mariner, vocal solo.
- 10.41 p.m.—The West-wark Symphonie Dance Orchestra.
- 10.57 p.m.—Late news and announcements.
- 11 p.m.—"Big Ben."
- 11.05 p.m.—Hazel de Lane.
- 11.3 a.m.—The West-wark Symphonie Dance Orchestra.
- 11.10 p.m.—Len Mariner, vocal solo.
- 11.22 p.m.—The West-wark Symphonie Dance Orchestra.
- 11.55 p.m.—National Anthem. (Close down.)

# 2UW, SYDNEY

Monday.

- 8 a.m.—News, shipping, mails, musical items.
- 8.40 a.m.—Women's session.
- 9.00 a.m.—Resume of forward programme.
- 9.10 a.m.—Close down.
- 9.20 p.m.—Musical items and announcements.
- 9.30 p.m.—Resume of forward programme.
- 9.40 p.m.—Close down.
- 9.50 p.m.—Musical items and announcements.
- 10.00 p.m.—Resume of forward programme.
- 10.10 p.m.—Close down.
- 10.20 p.m.—Where to go.
- 1.10 p.m.—Special musical programme arranged by Broadcasters' Women's.
- 1.20 p.m.—Resume of forward programme.
- 9.30 p.m.—Close down.

# 3LO, MELBOURNE.

Monday

### MIDDAY SESSION.

- 12 noon—Time signal, British Official Wireless News from Radio, Bentley's and the Australian Press Association cables. Argus press service.
- 1.00 p.m.—JOE ARONSON AND HIS SYNCOP-SYMPHONISTS. "Blue Blues" (Berlin). "Blue Blues" (Du Silva). "Lonely Arms in the West."
- 12.30 p.m.—WENDLING AND MOLLOY, Entertainers. "More and More I Miss You" ("Plantation House" (Brennan). 12.40 p.m.—Stack Exchange Information.
- 12.45 p.m.—ERN TROTMAN, comedian. "A Limerick Competition." "Women."
- 12.50 p.m.—JOE ARONSON AND HIS SYNCOP-SYMPHONISTS. "There Ain't No Maybe in my Baby's Eyes" (Kobal). "I've got the Girl" (Donaldson). "Kentucky Lullaby" (Miller).
- 1.0 p.m.—M.L.O. time signal.
- 1.1 p.m.—SPEECHES FROM THE ROYAL AGRICULTURAL SOCIETY'S LUNCHEON AT THE SHOW GROUNDS.
- 2 p.m.—Close down.
- 2.30 p.m.—Musical Programme, transmitted from Messrs. Allan and Co.'s stand at the ROYAL AGRICULTURAL SHOW GROUNDS.

### AFTERNOON SESSION.

- 3 p.m.—STUDIO QUARTET: Selections "Tale of Hoffmann" (Offenbach).
- 3.10 p.m.—MRS. GOROTHY SILK will assist you with your "Homework."
- 3.15 p.m.—BERTHA JOHNSON, violin. "Miser" (Pavane-Kreisler).
- 3.25 p.m.—STATION TRIO: "The Ebbing Tide" Valse Lente.



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TV 57,  
26/9/27.

8.42 p.m.—We have great pleasure in introducing for the first time in Australia **ELSIE BOWER AND BILLY RUTHERFORD**, Duoists, "Aur Tium," "Aret."

In various dialects of English.

8.52 p.m.—**STUDIO QUARTET**, "Somes from The Proverbs," Pt. 1 (Bath).

9.2 p.m.—**TASMA TIERNAN**, "Cello," "Chains Blues" (Laid).

9.10 p.m.—**JAMES RILEY**, tenor, "My Pretty Jane," "Arlina" (Cyril Scott).

9.17 p.m.—**AGNES MORTUNE**, piano, "Mistake in F" (Chopin).

9.25 p.m.—**STUDIO QUARTET**, "Scenes from The Proverbs," Pt. 2.

9.30 p.m.—**MRS FLOA PELL**, Inspector of Schools, "Domestic Economy."

9.45 p.m.—"Harold" news service. Stock Exchange Information.

9.50 p.m.—(Line down).

EVENING SESSION.

CHILDREN'S HOUR.

8.30 p.m.—I.O.'s Special Reading Information—Acceptances for Wednesday's Race at Geelong.

8.35 p.m.—Answers to children's letters and happy birthday greetings to all, by "LITTLE MISS KOOBURRA."

8.45 p.m.—**STUDIO QUARTET**.

8.50 p.m.—"Drama of the Flower Fairies" (Coban).

9.0 p.m.—**FREDA NORTHCOTE**, contralto, "Fairy Piper Man" (Elliot), "Fairy Bells" (Gaily).

9.17 p.m.—**REV. E. R. GRIBBLE** will continue his story about the Nations of the North-West of Australia.

9.25 p.m.—**FREDA NORTHCOTE**, contralto, "The Fairy's Lullaby" (Needham), "Darling Nones" (Schubert).

9.30 p.m.—Official reports of Newmarket Stock Sale by the Associated Black and Station Agents, Bourke Street. Number of sheep and cattle drawn for week's sale.

9.40 p.m.—Herald news service.

9.50 p.m.—Fish Markets information.

9.55 p.m.—Rabbit results.

9.59 p.m.—Stock market reports by J. R. Scocket Ltd. Rabbit price.

10 p.m.—Market reports by the Victorian Produce Co-operative Co. Ltd., poultry, grain, live, straw, tins, dairy produce, potatoes and onions. Market reports of fruit.

NIGHT SESSION.

7.15 p.m.—Under the auspices of the Boy Scouts' Association, **COMMISSIONER DE FLANK MEADAM**, "A Talk on Scouting."

7.30 p.m.—**MR. E. C. H. TAYLOR** will speak to both boys and girls on "The Boy's Own Life and School Sport."

7.45 p.m.—Under the auspices of the Department of Agriculture, **MR. H. W. DAVEY**, Chief Orchard Supervisor, "Orchard Practice in the Control of Pests."

8 p.m.—**MR. H. SCHWIEGER** will continue on the series of talks at **THE ROYAL AGRICULTURAL SHOW**.

**A SCOTCH GATHER-ROUND**

8.15 p.m.—**BRUNSWICK CITY BAND**, "Scenes of Scotland."

8.15 p.m.—**COLIN THOMPSON**, tenor, "Mary," "Marty of Argyle."

8.25 p.m.—**PIPE MAJOR L. McLENNAN**, Five Selections, "The Royal Scots," "Sisterhood," "Magnificat Cameron," "A Danceset."

8.30 p.m.—**MR. J. D. MACINNIS**, Chairman of the Scottish Delegation, will speak about the proposal for entering a party of Five Hundred Australian Scots to their homeland.

8.40 p.m.—**ELLA RIDDELL**, contralto, "Lush Lovers" (Wheatley), "An Air Tune."

8.47 p.m.—**BRUNSWICK CITY BAND**, "Edinburgh Tone."

8.57 p.m.—**SCOTCH FOLKIES**, by Fennimore Scott.

9.7 p.m.—**BRUNSWICK CITY BAND**, March, "The Battle of Stirling."

9.12 p.m.—**COLIN THOMPSON**, tenor, "Merrin" (Shelton), "The Road to the Isles" (Fraser).

9.19 p.m.—**PIPE MAJOR L. McLENNAN**, Air, "Over the Sea to Skye," "Top of Ten Lomond."

9.24 p.m.—**ELLA RIDDELL**, contralto, "Whin a Bide," "The Inebriate Love Lilt."

9.31 p.m.—**BRUNSWICK CITY BAND**, "John Peel."

9.35 p.m.—**ELLA RIDDELL AND COLIN THOMPSON**, "Duet," "After Water."

9.42 p.m.—**A TOUR ROUND AUSTRALIA ON AN AIRKRAFT**.

9.55 p.m.—**BRUNSWICK CITY BAND**, "Plantation Melodies."

9.57 p.m.—**EILEEN CASTLES**, soprano, "Jewel Ring from 'Faust,'" "The Last Rose of Summer."

10.5 p.m.—Agnes news service. British official wireless news from Rugby, Announcers.

10.14 p.m.—**ELSIE BOWER AND BILLY RUTHERFORD**, Duoist, "Study of an American Negro," "Two Little Danco's."

10.21 p.m.—**BRUNSWICK CITY BAND**, "Two Little Danco's."

10.21 p.m.—Meteorological Information, **THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS FOR—MOTORISTS**; "Don't follow too closely behind another car, or Old Man Accident will get you."

10.24 p.m.—**BRUNSWICK CITY BAND**, March, "La Vivandiere."

10.32 p.m.—**EILEEN CASTLES**, soprano; "Daisy Bell" (Strauss), "Daisy Boy" (Wheatley).

10.38 p.m.—**JOE ARONSON AND HIS SYNCOPATED ENSEMBLE**, "The Cat" (Rahm), "Sam, the Old Accordion Man," "The Moon was An' 'Twas Together."

11 p.m.—**OUR GREAT THOUGHT FOR TO-DAY IS**, "Discretion and hardy valor are the twins of honor, and shared together, make a conqueror, divided but a taker."

11.1 p.m.—**JOE ARONSON AND HIS SYNCOPATED ENSEMBLE**.

11.14 p.m.—**GOD SAVE THE KING**.

3AR, MELBOURNE

Monday.

**MORNING NEWS SESSION.**  
11 p.m. to 1 p.m.

**MIDDAY CONCERT SESSION.**  
12 noon to 1 p.m.

Transmitted from Panatrope House, 325 Collins Street (by exclusive permission of the City and Petch Ltd.) on the Brunswick Panatrope.

**MATINEE SESSION.**

**ORCHESTRAL CONCERT.**

1.00 p.m.—LARP Show Features.

2.0 p.m.—Studio Orchestra, Dancer Suite, "The Shoe Ballet" (Ansell).

2.45 p.m.—Miss Vera Buck, songs at the piano; "Timothy" (John) (Peter Brown).

2.49 p.m.—Studio Orchestra, "Indian Summer" (Lake).

2.5 p.m.—Miss Vera Buck, songs at the piano; "The Spoth Child" (Groom).

2.5 p.m.—Studio Orchestra, "Gowned's Fantastic" (Hilber), "Scene Pastoral" (Beetz).

3.0 p.m.—"Raffi."

3.11 p.m.—Miss Ethel Brewley, piano; "Audeate" (Hilber).

3.15 p.m.—Studio Orchestra.

3.25 p.m.—Miss Vera Buck, songs at the piano; "Naughty little word" (Norton).

3.34 p.m.—Studio Orchestra.

2.52 p.m.—Mr. Edward Piper, tenor; "The Cavatina" from Faust (Giordani), "Thunder Water" (Coban).

2.55 p.m.—G.P.O. Clock says "Ten."

3.0 p.m.—Studio Orchestra, "Fest."

3.1 p.m.—2nd Weather forecast.

3.2 p.m.—Announcements.

3.3 p.m.—Studio Orchestra.

3.35 p.m.—Mr. Herbert Vellifer, violin; "Meditation Panastamus" (Lefski).

3.38 p.m.—Studio Orchestra.

3.45 p.m.—Studio Orchestra, "Popper."

3.51 p.m.—Mr. Edward Piper, tenor; "My Jean" (Wood), "Wild Rose" (Martin).

3.55 p.m.—Studio Orchestra.

3.59 p.m.—Studio Orchestra, Entertainment.

4.05 p.m.—Special Racing Report, Acceptances and barrier positions for Geelong race by "Hayburn."

4.10 p.m.—G.P.O. Clock says "Ten." Close down.

CHILDREN'S SESSION.

8.30 p.m.—The Farmyard Fife.

EVENING SESSION.

DANCE CONCERT.

7.30 p.m.—"The Way to the Top." A short series of important community talks by Rev. Andrew Roberts.

7.45 p.m.—Newmarket Stock Sale.

8.0 p.m.—G.P.O. Clock says "Eight."

8.1 p.m.—Miss Sylvia Van Ansoche, soprano; "The Hindoo Song" (Hemberg), "A Little Gypsy Prayer" (Hiby).

8.2 p.m.—Miss Marie Jackson, soprano; "Caro Mio Ben" (Giordani), "In a Monastery Garden" (Jachoby), "The Moon was An' 'Twas Together" (Elsasser) (Courage-Taylor), "You in a Gondola" (Cunningham Clarke).

8.23 p.m.—Dance Session.

8.29 p.m.—Leggitt's Ball Room Orchestra.

8.30 p.m.—Astoria's Week: 2.30-3.30 September.

Dr. Booth, President of the Australian Literary Society, Science as written by the Australians.

8.45 p.m.—Dance Session.

8.50 p.m.—Leggitt's Ball Room Orchestra.

9 p.m.—Miss Freda French, mezzo; "A Bracket of Bird Songs," "The Cuckoo" (Lehmann), "The Wood Thrush" (Lehmann).

9.7 p.m.—Mr. Paul Miklos, tenor; "Away in Aethlon" (Lehr), "A Brown Bird Singing" (Haydn Wood).

9.11 p.m.—Dance Session.

9.12 p.m.—Leggitt's Ball Room Orchestra.

9.20 p.m.—Mr. Alfred Finnan, Chief Librarian of Mullumbidgee, "Fennimore ready for Harold Brown" on books of releases, today, and tomorrow.

9.40 p.m.—Miss Sylvia Van Ansoche, soprano; "The Hawk" (Cunningham Clarke), "The Hawk" (Laurie).

9.47 p.m.—Miss Marie Jackson, soprano; "Melody in F" (Rahm), "Chimes of Wexhill" (Wadding).

9.54 p.m.—Miss Freda French, mezzo; "A Bracket of Negro Spirituals," "Swing Low, Sweet Chariot" (arr. Frey), "Swing Away" (arr. Frey).

10 p.m.—G.P.O. Clock says "Ten."

10.1 p.m.—Miss Elsie Van Houshous, Dancing Lessons by radio from a noted Melbourne instructor.

10.19 p.m.—Australia's Know Australia Vivid and interesting news from our own country. This one deals with Rukergerg, Victoria. Specially prepared for 3AR by Mr. Thomas Drenan, Editor of "The Sun," Rukergerg.

10.21 p.m.—Dance time: Leggitt's Ballroom Orchestra (direction Mr. Harry Nanton).

10.29 p.m.—"Agri" News Bulletin, exclusive to 3AR.

10.35 p.m.—To-morrow's Entertainment.

10.38 p.m.—Our Australian Good-night thought is taken from the poem, "The Pathfinder," by Vance Palmer.

11 p.m.—G.P.O. Clock says "Eleven."

11.02 p.m.—"God Save the King."



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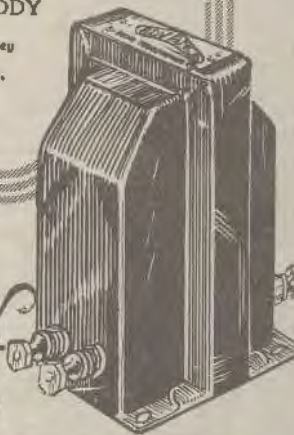
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**17/6**

## 6WF, PERTH.

Monday,

- 12.30 p.m.—Tune in.  
 12.35 p.m.—Markets, News, and Cables.  
 1 p.m.—Time signal from Perth Observatory.  
 1.1 p.m.—Weather news, supplied by the Meteorological Bureau of Western Australia.  
 1.2 p.m.—Sinfonia Quintetta, conducted by Mr. Val Heath.  
 2 p.m.—Close down.  
 2.30 p.m.—Tune in.  
 2.35 p.m.—Musical programming, including Piano-forte Selections by Miss Evelyn Willis, A.R.C.M.  
 Afternoon Tea Concert, relayed from the Carlton Tea Rooms, Vocal assisting artists. Instrumental numbers by Mrs. Hugo's Orchestra.  
 4.30 p.m.—Close down.  
 4.45 p.m.—Tune in.  
 4.50 p.m.—Stories for the kiddies, by Uelmo Henry and Daffs.  
 7.00 p.m.—Stock and Share Intelligence.  
 Market Reports.  
 (Cable News by courtesy of "The West Australian" Newspaper Coy.  
 7.45 p.m.—Talk.  
 8 p.m.—Time signal from Perth Observatory.  
 8.1 p.m.—Weather news, supplied by the Meteorological Bureau of Western Australia.

## CONCERT NIGHT.

- 8.2 p.m.—Hymn by the Riverside Choir.  
 10 p.m.—Late news items, by courtesy of "The Daily News" Newspaper Coy.  
 Short talks, range announcements.  
 Weather Report and Forecast.  
 10.40 p.m.—Close down.

## 7ZL, HOBART

Monday.

## MORNING SESSION.

11 a.m. to 12 noon.

## AFTERNOON SESSION.

- 2 p.m.—G.P.O. Clock and chimes.  
 2.1 p.m.—Tune in selection.  
 2.5 p.m.—Hobart Stock Exchange quotations. Weather information, items of interest. Announcements.  
 3.15 p.m.—Musical selections by 7ZL Studio Trio.  
 4.15 p.m.—Fashion Talk by "Ann Edan" of Hovershield.  
 4.30 p.m.—Close down.

## EARLY EVENING SESSION.

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

## NIGHT SESSION.

- 8.30 p.m.—Musical selections.  
 9.30 p.m.—Physical Culture talk by Lieutenant Reginald McLesloch.  
 9.50 p.m.—"Mercury" special Tasmania news service. Railway station procedure news. Weather forecast. Hobart Stock Exchange quotations.  
 10 p.m.—G.P.O. Clock and chimes.  
 11 p.m.—Vocal and instrumental numbers from Findlay's Marie Showman, Elizabeth Street, Hobart.  
 11.30 p.m.—"Mercury" special Interstate news service. Tasmania District Weather reports, 3 p.m. weather forecasts. Station Announcements.  
 National Anthem.

## Tuesday, Sept. 20

## 2FC, SYDNEY

EARLY MORNING SESSION.—7 to 9 a.m.

## MORNING SESSION.

- 10 a.m.—"Big Ben" and announcements.  
 10.5 a.m.—Studio music.  
 10.55 a.m.—"Sydney Morning Herald" news service.  
 10.59 a.m.—Studio music.  
 10.45 a.m.—Latest Sporting Information by the 2FC Commissioners.  
 10.49 a.m.—Studio music.  
 11 a.m.—"Big Ben."  
 11.05 a.m.—March music for school children.  
 11.5 a.m.—A.P.A. and Braze's Cables.  
 11.40 a.m.—Studio music.  
 11.10 a.m.—A talk on Home Cooking and Nutrition, by Miss Ruth Furst.  
 11.30 a.m.—Close down.

## MIDDAY SESSION.

- 12 noon—"Big Ben" and announcements.  
 12.2 p.m.—Stock Exchange, first call.  
 12.5 p.m.—Detailed weather forecast, rainfall.  
 12.55 p.m.—Studio music.  
 12.59 p.m.—Announcement of "Sydney Morning Herald" news service.  
 1.05 p.m.—Studio music.  
 12.30 p.m.—Marching music for school children.  
 12.40 p.m.—Ivy Danstons, mezzo.  
 12.45 p.m.—The Oak Hall Instrumental Trio.  
 12.55 p.m.—Studio music.  
 1 p.m.—"Big Ben." Weather intelligence.  
 1.2 p.m.—"Evening News" midday news service.  
 1.30 p.m.—The Oak Hall Instrumental Trio.  
 1.37 p.m.—Stock Exchange, second call.  
 1.42 p.m.—Marching music for school children.  
 1.49 p.m.—Ivy Danstons, mezzo.  
 "The Joy Hymn" (German).  
 1.45 p.m.—Studio music.  
 1.50 p.m.—The Oak Hall Instrumental Trio.  
 2 p.m.—"Big Ben." Close down.

## AFTERNOON SESSION.

- 2 p.m.—"Big Ben" and announcements.  
 2.1 p.m.—Eileen Jenkins, soprano: "Bink, Red Sun" (Del Riego).  
 2.7 p.m.—Wilfred Westbury, tenor: "The Last Hour" (Kramer).  
 2.11 p.m.—Studio music.  
 2.15 p.m.—A reading.  
 2.23 p.m.—Iva Thornton, contralto.  
 2.30 p.m.—Marching music for school children.  
 2.40 p.m.—Jasentic Recovery, contralto: "Gossiping" (Dodge).  
 2.45 p.m.—The Oak Hall Instrumental Trio.  
 2.55 p.m.—Frank Adams, baritone: "Brown Eyes in Your Dreams" (Tennent).  
 4 p.m.—"Big Ben."  
 Florence Grant, soprano: "The Call of the Magpies" (Irish).  
 4.13 p.m.—The Oak Hall Instrumental Trio.  
 4.18 p.m.—Eileen Jenkins, soprano: "Canterbury Bells" (Carew).  
 4.19 p.m.—Wilfred Westbury, tenor: "A Dream" (Haydn).  
 4.20 p.m.—Jasentic Recovery, contralto: "What's in the Air 70-40?" (Eden).  
 4.25 p.m.—The Oak Hall Instrumental Trio.  
 4.30 p.m.—Iva Thornton, contralto.  
 4.35 p.m.—Frank Adams, baritone: "That Night in Araby" (Snyder).  
 4.40 p.m.—Florence Grant, soprano: "The Flies of Araby" (James).  
 4.45 p.m.—Stock Exchange, third call.  
 4.47 p.m.—The Westworth Symphonic Dance Orchestra, under the baton of Mr. Cyril Kaye.  
 5 p.m.—"Big Ben." Close down.

## EARLY EVENING SESSION.

- 6.40 p.m.—The chimes of 2FC.  
 6.45 p.m.—The "Hello Man" talks to the children.  
 6.50 p.m.—Story time for the young folk.  
 6.55 p.m.—Dinner music.  
 7 p.m.—"Big Ben" Sporting news.  
 7.10 p.m.—"Daily" market reports (wool, wheat and stock).  
 7.15 p.m.—Fruit and vegetable markets.  
 7.20 p.m.—Weather and shipping news.  
 7.30 p.m.—"Evening News" late news service.

## NIGHT SESSION.

- 7.31 p.m.—Programme announcements.  
 7.35 p.m.—Professor Le Gay Breton will, on behalf of the Sydney University, give a talk on "Some Poets I Have Met."  
 7.53 p.m.—Lawrence Macaulay, baritone: (a) "Song of Triump" (Anderson). (b) "Dreaming of Home" (Hoddy).  
 8 p.m.—"Big Ben."  
 "Is It Your Birthday?"  
 8.5 p.m.—Lawrence Macaulay, baritone: (a) "The Wrath" (Kenneth Rae). (b) "John of Devon" (Mortlake).  
 8.10 p.m.—From the Conservatorium Hall: A Concert by the British Musical Society, featuring Australian Compositions.  
 9 p.m.—"Big Ben."  
 Latest weather forecast.  
 8.1 p.m.—Wiss and Wiedle, English entertainers.  
 "Bubbles" (Win).  
 8.18 p.m.—From the Conservatorium Hall: A Concert by the British Musical Society's Concert.  
 10 p.m.—"Big Ben."  
 Win and Wiedle, English entertainers: "The First Lily" (Win).  
 10.4 p.m.—Dorothy Dewar, soloist.  
 10.15 p.m.—Win and Wiedle, English entertainers.  
 10.25 p.m.—The Westworth Symphonic Dance Orchestra, under the baton of Mr. Cyril Kaye.  
 10.35 p.m.—Len Maurice, popular baritone.  
 10.38 p.m.—The Westworth Symphonic Dance Orchestra.  
 10.45 p.m.—Dorothy Dewar, soloist.  
 10.55 p.m.—Len Maurice, popular baritone.  
 10.57 p.m.—Late news and announcements.  
 11 p.m.—"Big Ben."  
 The Westworth Symphonic Dance Orchestra.  
 11.7 p.m.—Len Maurice, baritone.  
 11.12 p.m.—The Westworth Symphonic Dance Orchestra.  
 11.50 p.m.—Len Maurice, baritone.  
 11.24 p.m.—The Westworth Symphonic Dance Orchestra.  
 11.50 p.m.—National Anthem.  
 Close down.

## 2BL, SYDNEY.

Tuesday.

## EARLY MORNING SESSION.

7.8 a.m. to 8.5 a.m.

## MORNING SESSION.

- 10.30 a.m.—G.P.O. Clock and Chimes. Musical Programme from Studio.  
 10.40 a.m.—News from the "Daily Telegraph" "Pictorial."  
 10.50 a.m.—Musical Programme from the Studio.  
 11.0 a.m.—G.P.O. Clock and Chimes. Announcements.  
 11.5 a.m.—Musical Programme from the Studio.  
 11.18 a.m.—Social Notes: Replies to Correspondents by Mrs. Jordan. Talk on "Oster Valley" by Mr. Adams, A.M.A.  
 11.4 a.m.—G.P.O. Clock and Chimes. Special Ocean Forecast and Weather Report.  
 12.5 p.m.—Brunswick Panopticon Musical Recital.

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## ARTICLES IN THE SEPTEMBER ISSUE

**Who is to Pay for Better Broadcasting?** An article by J. Garrick Eisenberg, of the Radio Corporation of America, who suggests that the best solution of the better broadcasting problem in Australia is the merging of the tax and toll systems of broadcasting.

**The Radio Maxims of Mac.** The most humorous contribution yet received from Charles D. Maclurcan.

**Wireless Beams Will Make Trans-Pacific Airways Safe.** Why radio is the only means of true and safe navigation for aviators. How radio could make the Trans-Pacific flight possible.

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## 2UW, SYDNEY

- 12.16 p.m.—Information: Made, Shipping and Port Directory.  
 12.18 p.m.—Guest, by Call by Wireless.  
 12.20 p.m.—Fruit Market Report.  
 12.22 p.m.—Vegetable Market Report.  
 12.24 p.m.—London Market Report.  
 12.26 p.m.—Dairy and Farm Produce Market Report.  
 12.30 p.m.—G.P.O. Clock and Chimes; Foreign Market Report.  
 12.32 p.m.—Fish Market Report.  
 12.34 p.m.—Rabbit Market Report.  
 12.36 p.m.—News from the "Sun".  
 12.46 p.m.—Hilfers' Instrumental Quartette.  
 Direction: Carl Castling.  
 1.30 p.m.—G.P.O. Clock and Chimes; Talk in Children and Special Entertainment for Children in Hospital.  
 1.5 p.m.—G.P.O. Clock and Chimes; Close Down.

## AFTERNOON SESSION.

- Race Information Broadcast immediately after each Race by courtesy of the "Sun".  
 2.0 p.m.—G.P.O. Clock and Chimes; News from the "Sun".  
 2.15 p.m.—Civil Service Radio Trib. Direction: Miss de Courcy Dipper.  
 2.30 p.m.—G.P.O. Clock and Chimes; News from the "Sun".  
 2.40 p.m.—Musical Programme from the Studio.  
 2.45 p.m.—News from the "Sun".  
 2.48 p.m.—G.P.O. Clock and Chimes; Civil Service Radio Trib.  
 2.55 p.m.—Musical Story.  
 3.05 p.m.—Musical Programme from the Studio.  
 3.10 p.m.—News from the "Sun".  
 3.15 p.m.—Resume of Night's Programme.  
 3.27 p.m.—Radio House.  
 3.30 p.m.—Special Ocean Forecast.  
 3.40 p.m.—G.P.O. Clock and Chimes; Close Down.

## EARLY EVENING SESSION.

- 5.45 p.m.—G.P.O. Clock and Chimes; Children's Review.  
 6.00 p.m.—Musical Programme from the Studio.

## SPECIAL COUNTRY SESSION.

- 7.8 p.m.—G.P.O. Clock and Chimes; Australian Mercantile Land and Finance Co's Report; Weather Report and Forecast by courtesy of Government Meteorological Department; Distributing Society's Fruit and Vegetable Market Report; Stock Exchange Report; Grain and Fowder Report ("Sun"); Dairy Production Report ("Sun").  
 7.15 p.m.—Country News from the "Sun".  
 7.30 p.m.—Talk by a member of the Listeners in League.  
 7.40 p.m.—Talk on "Tea-its," by Dr. McElhine.  
 8.0 p.m.—G.P.O. Clock and Chimes; Broadcasters' Topical Chorus; An Hour's Programme presented by Couase Valves.  
 8.4 p.m.—Broadcasters' Light Orchestra, under the Direction of Mr. J. Knight Harcourt.  
 8.11 p.m.—Mr. Allen Williams (Baritone).  
 8.18 p.m.—Mr. Gerald Walker (Violinist).  
 8.28 p.m.—Miss Gladys Vance (Soprano).  
 8.38 p.m.—Mr. J. M. Post (Bass Solo).  
 8.45 p.m.—Professor Handal Woodhouse (Tenor).  
 9.2 p.m.—Weather Report and Forecast by courtesy of Mr. C. J. Mann, Government Meteorologist.  
 9.2 p.m.—Broadcasters' Light Orchestra.  
 9.13 p.m.—Miss Ethel Friend (Contralto).  
 9.20 p.m.—Mr. Gwyn Williams.  
 9.27 p.m.—Mr. Gwyn Williams.  
 9.37 p.m.—Professor Handal Woodhouse.  
 9.44 p.m.—Mr. J. M. Post.  
 9.51 p.m.—Miss Ethel Friend.  
 9.58 p.m.—Resume of Following Day's Programme.  
 10.0 p.m.—G.P.O. Clock and Chimes.  
 10.15 p.m.—Announcement.  
 10.4 p.m.—Broadcasters' Light Orchestra.  
 10.15 p.m.—The Ambassadors Dance Band broadcast from the Ballroom of the Ambassadors. Further information between dances "Sun" News will be broadcast.  
 12.0 midnight.—G.P.O. Clock and Chimes; National Anthem.

## Tuesday,

- 9.0 a.m.—News; Shipping; Mails; Musical Items.  
 9.45 a.m.—Women's Session.  
 9.48 a.m.—Resume of Forward Programme.  
 10.0 a.m.—Clocer's Town.  
 10.2 p.m.—Musical Item.  
 10.30 p.m.—Resume of Forward Programme.  
 10.35 p.m.—Close Down.  
 10.45 p.m.—Stock Exchange Information.  
 10.50 p.m.—Resume of Forward Programme.  
 11.0 p.m.—Where to Go.  
 11.0 p.m.—Studio Items and Announcements.  
 11.20 p.m.—"The Purpose and Action of the Differential."  
 11.40 p.m.—Studio Items.  
 11.55 p.m.—Resume of Forward Programme.  
 12.00 p.m.—Close Down.

## 3LO, MELBOURNE.

## Tuesday,

## MIDDAY SESSION.

- 12.0 noon.—Time Signal; Metal Prices received by the Australian Mines and Metals Association from the London Stock Exchange this day; British Official Wireless News from "Light"; "Rover's and the Australian Press Association; Laban "Argus" News Service.  
 12.15 p.m.—"COMMUNITY SINGING" from the STUDIO, conducted by MR. G. J. MACKAY, and assisted by the STUDIO QUARTETTE, (Soloists).  
 EILEEN CASTLES, Soprano: "Nymphs and Dryads" (Humbert).  
 "The Song of the Sea" (Scott).  
 ELSIE BOWER and BILLY RUTHERFORD: Selections from their repertoire.  
 1.15 p.m.—Stock Exchange Information; Meteorological Information; Weather Forecast, E. Victoria, Tasmania, South Australia, and New South Wales; Ocean Forecast; River Reports; Rainfall in Victoria, Tasmania, South Australia and New South Wales.  
 1.30 p.m.—MUSICAL PROGRAMME transmitted from Messrs ALAN and CO'S STAND at the Royal Agricultural Show Grounds, Antwerp. Selection: "Song of the Wanderer."  
 CARLTON CHORUS: Song, "Paradise to Mother's Eye."  
 ANAHELEN Selection: FRANCES LEA. "A Few Short Stories," CARLTON CHORUS. Song, "Just the same," FRANCES LEA.

## AFTERNOON SESSION.

- 2.0 p.m.—JOE ARONSON and HIS SYM-COPATING SYM-PHONISTS: "At Oriental Garden" (Hayes). "So Blue" (De Sylva). "Blue Skies" (Hoddy).  
 2.10 p.m.—"ALL FAT!" "Pachito" (Tall).  
 2.25 p.m.—JOE ARONSON and HIS SYM-COPATING SYM-PHONISTS: "Cray Woods, Cray Town" (Yelles). "I See Sweet" (Hoddy). "Coast in the Plane" (Conroy).  
 2.35 p.m.—WENDLING and MOLLOY, Entertainers: "Walla Walla" (Wording). "Popular Songs Medley."  
 2.42 p.m.—JOE ARONSON and HIS SYM-COPATING SYM-PHONISTS: "Sweet" (Friend). "That Mountain Waltz" (Goldstein). "Meadow Lark" (Florida).  
 2.50 p.m.—ERN TROTMAN, Canadian: "My Friend from Wave Wasp" (Original). "Name."  
 2.58 p.m.—JOE ARONSON and HIS SYM-COPATING SYM-PHONISTS: "Shipping in Society" (Katz). "Where Do You Work, John?" "Honolulu Moon" (Lawrence).

- 4.10 p.m.—ELSIE BOWER and BILLY RUTHERFORD: "I Had Someone Else." Duet. Duet. Duet. Explain the Title Sol Fa to Bill. Duet. "Well It Looks Like Rain."  
 4.22 p.m.—"THE HANGERS AND HIS SYM-COPATING SYM-PHONISTS: "Colette" (Kahn). "The Hangings of Babylon" (Carle). "The Sun" (Edson).  
 4.32 p.m.—ERN TROTMAN, Canadian: "Yarrabankers" (Original).  
 4.40 p.m.—JOE ARONSON and HIS SYM-COPATING SYM-PHONISTS: "The Prisoner's Release" (Peth). "I'm Telling the Birds, Telling the News" (Hewitt). "A Country House" (Handy).  
 4.48 p.m.—Herald's News Service: Stock Exchange Information.  
 5.0 p.m.—Close Down.

## EVENING SESSION.

## CHILDREN'S HOUR.

- 4.40 p.m.—Answers to Children's Letters and Birthday Greetings to the many friends of "MARY GIMLEAY."  
 4.40 p.m.—STUDIO QUARTETTE: "Grandfather's Clock" (Castle).  
 4.10 p.m.—MARY GIMLEAY—Poema. Story by the Light Desk: "Tommy John."  
 6.20 p.m.—STUDIO QUARTETTE: "The Village Clock." "A Country Case."  
 6.27 p.m.—MARY GIMLEAY—Story for the older children: "Princess Moonbeam."  
 6.40 p.m.—Official Report of Newmarket Stock Sale by the Associated Stock and Station Agents, Bourke Street, Melbourne—number of Sheep and Cattle driven for week's sale.  
 6.45 p.m.—Herald's News Service: Weather Synopsis; Shipping Movement.  
 6.52 p.m.—Stock Exchange Information.  
 6.55 p.m.—River Report.  
 7.00 p.m.—Official Report of Victoria, by J. B. Barrett, Ltd.; Rabbit Prices.  
 7.2 p.m.—Market Reports by the Victorian Producers' Co-operative Co., Ltd., (Poultry, Eggs, Butter, Cheese, Bacon, Hides, Fruit, Potatoes and Onions, Market Reports of Fruit, by the Victorian Producers' Association.

## NIGHT SESSION.

- 7.15 p.m.—Under the Auspices of the Town Planning Association: Mr. F. E. DIXON, F.I.C.A., "Town Planning in America."  
 7.30 p.m.—Mr. H. SCHWEIGER will comment on the objects of the day at the ROYAL AGRICULTURAL SHOW GROUND, 7.45 p.m.—Under the auspices of the Univer-sity Extension Board: PROFESSOR F. M. WADHAM, M.A., A.S. B.H. (Camb. Professor of Agriculture at the University of the Empire of Agriculture in Victoria). "The Position of Agriculture in Victoria."  
 8.0 p.m.—FIRST ACT OF "TIP TOE!" A musical comedy in two acts. Book by Guy Bolton and Fred Thompson. Music by George Gershwin. Lyrics by George Ger-shwin. With a specially selected cast: THURZA ROGERS. LEO FRANKLYN. GUS KILLEWAY. GUS BLUETT. Sylvia Mitchell. BERTHA RICARDO. Betty Metzger. LEYLAND HODGSON. Al Kaye. LEONARD. LEO FRANKLYN. Ben Kaye. CECEL KILLEYWAY. "Tip Toes" Kaye. THURZA ROGERS. FORTY. LEO FRANKLYN. GUS BLUETT. Steve Barton. CECEL KILLEYWAY. Attendee at Surf Club ERIC GODBY. BERTHA RICARDO. WANNIE PATR. Denise Miller. MONA BARLEY. Steward JOHN STUART. Manager of Hotel CECEL SCOTT. BERTHA RICARDO. (Guests—B. by GERARDO and ENID ADAIR.

## MUSICAL NUMBERS, ACT I.

- Opening. Ensemble. Duet. Duet. Duet. Duet. Ensemble. BERTHA RICARDO and Girls and Boys. Song, "Looking for a Boy." THURZA ROGERS.

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# Satisfaction



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**RECEIVER**

6WF, PERTH.

**Opening ENSEMBLE**  
Trio. "When Do We Dance?"  
GUS BLUETT, WINNIE TATE, MONA BARKLE and Guests.  
Trio. "Three Charming People."  
THURZA ROGERS, LEO FRANKLYN, and GEORGE KELLEYWAY.  
Duet. "The In-a-Tell."  
GUS BLUETT, THURZA ROGERS and Guests.  
Duet. "That Certain Feeling."  
THURZA ROGERS and GUS BLUETT.  
Trio. "Sweet and Low Down."  
LEO FRANKLYN, WINNIE TATE, MONA BARKLE and Guests.  
Specialty Dances GERARDO and ADAIR  
Invented, arranged and performed by GERARDO and ADAIR.  
**Final** ..... THE ENTIRE COMPANY  
8.55 p.m.—Announcements: THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS FOR EVERYBODY:  
"The Safety Movement isn't a theory—it's a frantic, practical fact."  
9.15 p.m.—STUDIO PRESENTATION of the OPERA, "L'ETROUVÉE" under the direction of J. SUTTON CROW, assisted by THE STUDIO ORCHESTRA and AUBURN METHODIST CHORUS.  
CAST:  
Lovers ..... ELISE DAVIES, Soprano  
Jean ..... BEATRICE McVITT, Soprano  
Alouette .....  
MADAME AGNES JANSEN, Contralto  
Maurice ..... JOHN D. HULLIVAN, Tenor  
Ras ..... CHARLES D. RIGGALL, Tenor  
J. Conte .....  
ALEXANDER BROWN, Baritone.  
Ferrando ..... F. DAVIES, Bass  
10.05 p.m.—"Ampm" News Service, Meteorological Information; Sporting Notes by "Olympic."  
11.0 p.m.—OUR GREAT THOUGHT for today:—  
"None is poor but the mean in mind, the showiest, the weak, and unbelieving, none is wealthy but the affluent in soul, who is satisfied and forthright."  
—Tupper.  
11.1 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS.  
11.45 p.m.—GOD SAVE THE KING.

**CHILDREN'S SESSION**  
8.40 p.m.—Uncle Mac's Entertainment.  
**EVENING SESSION**  
**NIKKER MINSTREL SHOW.**  
1.30 p.m.—"The Captain, School life and school sport for all the boys and girls of Australasia."  
7.55 p.m.—"The Captain, School life and school sport for all the boys and girls of Australasia."  
8.1 p.m.—G.P.O. Clock says "Eight."  
8.1 p.m.—"The Regent Nigger Minstrel."  
8.1 p.m.—"The Regent Four Introduce themselves."  
Opening Chorus "Tark us to Sleep" (Meyer).  
8.1 p.m.—Miss Beatrice Oakley: "The Nigger Minstrel."  
"Lindy Lou" (Attributed).  
8.15 p.m.—Mr. Allan Bell: "Water Melon."  
T.M. "Darling" will now cause some for to rise riot:  
"Knock About Nigger" (Leo).  
"Kidding March" (Mitchell).  
8.20 p.m.—"The Niggers' on-stage in a short discourse. It's just a continuance of the previous riot."  
8.30 p.m.—Mr. Joseph Delaney's Here come "Old Black Joe" with his dear old song: "I want my Mammy" (Bliss).  
"Weep no more my Mammy" (Pollock).  
8.37 p.m.—"The Regent Four, More Samboes from the Sunny South."  
"Carry me back to old Virginia."  
8.45 p.m.—Miss Elsie Parker: "Gone with Dixie and her little banjo."  
"A Negro Lullaby" (Winters).  
"Old Log Cabin in the Dale" (White).  
"Ducktown Revals" (Elsie Parker).  
8.48 p.m.—Miss Marie Walker, an old black mammy who sings her niccantly to sleep with:  
"Close your dreamy eyes" (Johnson).  
And wakes him up with:  
"The Dancing Coon" (Franklin).  
9 p.m.—"The Regent Niggers break out again: "There is a Tavern in the Town" (Old English).  
9.5 p.m.—Mr. Joe Delaney "Old Black Joe" and Miss Marie Walker "Old Black Mammy", a couple of crooning duets for the old downy.  
"Rose of My Heart" (Lohr).  
"My Old Kentucky Home, Good-night" (Foster).  
9.10 p.m.—Mr. Allan Bell, "Water Melon" will tell you something:  
"Go the Quirt" (Lorenz).  
And if you don't understand him:  
"You ask your Uncle" (Lonsdale).  
8.23 p.m.—Niggers Again—another agreement—'s takes these niggers to be friendly?  
8.29 p.m.—Mr. Harold Wals "Barrow Tone Bill". He will sing in his best style:  
"Deep River" (Burleigh).  
"Daisy Dugan" (Dunroath).  
8.35 p.m.—"The Regent Four": "Kentucky Babe" (Cochran).  
"Sweet and Low" (Hornby).  
8.45 p.m.—Miss Elsie Parker, "Gone from Dixie" and her little banjo again:  
"Come Where my dear niggers do" (Foster).  
"Uncle Sam" (Homer).  
8.55 p.m.—"The Regent Niggers—Buckshot's all set for Home—Nigger Chorus": "Good-night, Ladies" (OH English).  
10 p.m.—G.P.O. Clock says, "Ten."  
10.1 p.m.—Inter-val Talk.  
10.2 p.m.—Answers by Audio. Report and Answers by R.A.R. Radio Engineers' Staff to Questions who seek expert advice.  
10.3 p.m.—"The Regent Niggers"  
10.11 p.m.—Dance Tune. Jagged's Bellows Orchestra (Director Mr. Harry Nangle).  
10.41 p.m.—Special "Reading program." Anticipation and latest track information about tomorrow's race, by "The Bitch."  
10.50 p.m.—"The Regent's" entertainment.  
10.55 p.m.—"The Ampm" news bulletin, assisted by R.A.R.  
10.58 p.m.—Weather forecast.  
10.59 p.m.—Our Australian Good-Night Thought, from the poem, "Wanderers" by James Bonbrake.  
11 p.m.—G.P.O. Clock says "Eleven," and God Save the King.

**Tuesday.**  
12.30 p.m.—Tune in.  
12.35 p.m.—Markets, News and Cable.  
1 p.m.—Time signal from Perth Observatory.  
1.15 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.  
1.45 p.m.—Studio Instrumental Trio, conducted by Mr. Val Smith.  
1.55 p.m.—Close down.  
1.55 p.m.—Tune in.  
2.05 p.m.—Musical programme, including Pianoforte Selections by Miss Evelyn Willis, A.R.C.M.  
2.45 p.m.—Health Talk, by Mr. H. S. Hatten, of the Hatten School of Physical Culture. Organ Selections, relayed from the Grand Theatre, Murray Street.  
4 p.m.—Climatic Instrumental Trio.  
4.50 p.m.—Close down.  
6.40 p.m.—Tune in.  
6.45 p.m.—Children's Playette: "Dick Turpin" (Act 8), by Louis Duff, with Audine Macrie, Evelyn and June, and Uncle Henry, Leslie, Perry and Duff.  
7.20 p.m.—Sticks, Marjatta, Nows.  
7.45 p.m.—Talk.  
8 p.m.—Daily signal from Perth Observatory.  
9.1 p.m.—Weather notes, supplied by the Meteorological Bureau of Western Australia.  
**BAND NIGHT.**  
8.1 p.m.—Concert, by the R.S.J. Band, conducted by Mr. W. A. Harcourt.  
10 p.m.—Latest news items, by courtesy of "The Daily News" Newspaper Co. News which range announcement.  
Weather Report and Forecast.  
10.30 p.m.—Close down.  
**100 METRE TRANSMISSION.**  
Simultaneous Broadcast on 100 Metres of Musical Programme given on 1255 Metres.

7ZL, HOBART

**3AR, MELBOURNE**  
**Tuesday.**  
**MORNING NEWS SESSION, 11 to 12 noon.**  
Studio Master: Mr. Allan Lorraine.  
**MIDDAY CONCERT SESSION, 12.15 to 2 p.m.**  
Transmitted from Panatropa House, 222 Collins Street, by exclusive permission of Wills and Eaton Ltd., on the Brunswick Pastorate.  
**MATINEE SESSION.**  
**ORCHESTRAL CONCERT.**  
8.30 p.m.—Studio Orchestra.  
"Leading Backward"  
"Memories of Melodies we Love" (Plink).  
R.A.R. Royal Show Features.  
2.15 p.m.—Miss Julie Rosenthal, Soprano:  
"Softly Awakes My Heart" (Saint-Saens).  
"Star Visions" (Gustavus Bona).  
2.35 p.m.—Studio Orchestra:  
"Sweet-Spelled" (Grieg).  
2.45 p.m.—Miss Julia Rosenthal, Soprano:  
"Orestes Vegetan" (Debussy).  
"Cradle Song" (Debussy).  
2.55 p.m.—Studio Orchestra:  
"Andezze Cantabile" (Dubslawski).  
3 p.m.—Studio Orchestra:  
"G.P.O. Clock says "Four."  
3.1 p.m.—2nd Weather forecast.  
4.2 p.m.—Announcements.  
4.5 p.m.—Mr. Richard G. Cole, Baritone:  
"The English Rose" (Ed. Germain).  
"Until" (Wardner).  
4.14 p.m.—Studio Orchestra.  
4.30 p.m.—Mr. Richard G. Cole, Baritone:  
"Let God of Abraham" (Handel).  
"Event Bravest Heart" (Gounod).  
4.45 p.m.—Studio Orchestra.  
4.55 p.m.—Tonight's Entertainment.  
5 p.m.—G.P.O. Clock says "Five" and Close down.

**Yuesday.**  
**MORNING SESSION.**  
11 a.m. to 12 noon.  
**AFTERNOON SESSION.**  
2 p.m.—G.P.O. Clock and chimes.  
2.1 p.m.—Tune in selection.  
2.4 p.m.—Hobart Stock Exchange quotations.  
Weather forecast.  
Items of interest—announcements.  
2.15 p.m.—Orchestral selections by 7ZL Studio Trio.  
4.15 p.m.—Cooking talk by "Regula."  
4.30 p.m.—Close down.  
**EARLY EVENING SESSION.**  
6.10 p.m.—"Uncle Hector" talks to the children.  
7 p.m.—"Uncle Peters" half hour.  
**NIGHT SESSION.**  
7.55 p.m.—Literary Lectures and Library Lists by Mr. W. R. Fuller.  
7.55 p.m.—"Mercury" special Tasmanian news service. Ballarat auction results sales. Weather forecast. Hobart Stock Exchange quotations.  
8 p.m.—G.P.O. Clock and chimes.  
8.1 p.m.—Concert from the studio by Robert Graham Clark, under the direction of Mr. G. M. Foster.  
8.45 p.m.—British Official Wireless News.  
9.10 p.m.—"Mercury" special Tasmanian news service. Ballarat auction results sales. Weather reports. 9 p.m. Weather forecast. Study programme.  
National Anthem.

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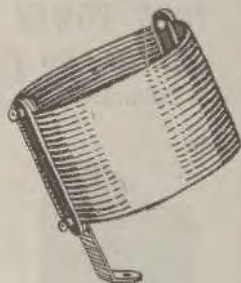
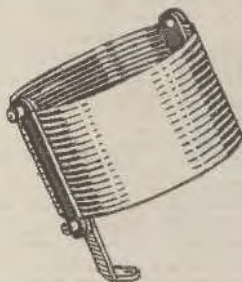
Wednes., Sept. 21  
2FC, SYDNEY.

**EARLY MORNING SESSION, 7.15 to 8 a.m.**  
**MORNING SESSION.**  
10 a.m.—"Big Ben" and announcements.  
10.30 a.m.—Studio music.  
10.15 a.m.—"Sunday Morning Herald" news service.

Leading Broadcasting Stations Use Burgess Batteries.

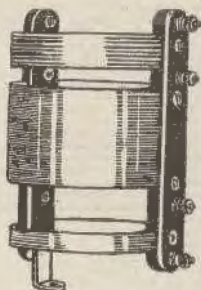


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.0003 .....		.001 .....		
.0004 .....		.002 .....		
.0006 .....		.0025 Clips .....		2/6
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.002 .....		.004 .....		2/6
.0025 Clips .....		.005 .....		3/-
B TYPE		.006 .....	3/4	
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.002 .....		.02 .....	8/8	
.002 .....				



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Just plug into your nearest electric light or power socket, and with Acme to rectify the current to suit your set, you have full force of silent power at trifling cost per hour.

Acme Socket Power never fails

Yours on Easy Terms

New System  
Telephones Pty. Ltd.

280 Castlereagh St.,  
Sydney

10.30 a.m.—Studio music.  
10.35 a.m.—A reading.  
10.41 a.m.—Studio music.  
11 a.m.—"Big Ben."  
Marching music for school children.  
11.1 a.m.—A.P.A. and Reuter's Cable.  
11.18 a.m.—Studio music.  
11.25 a.m.—A talk on Home Cooking and Recipes, by Miss Ruth Purst.  
11.30 a.m.—Close down.

### MIDDAY SESSION.

12 noon—"Big Ben" and announcements.  
12.2 p.m.—Stock Exchange, first call.  
12.3 p.m.—Official weather forecast, rainfall.  
12.5 p.m.—Studio music.  
12.15 p.m.—Summary of "Sydney Morning Herald" news service.  
Rugby wireless news.  
12.25 p.m.—Studio music.  
12.30 p.m.—Marching music for school children.  
12.45 p.m.—Daniel Hardy, baritone:  
"The Lutelayer" (Allison).  
12.45 p.m.—The Oak Hall Instrumental Trio.  
12.55 p.m.—Studio music.  
1 p.m.—"Big Ben." Weather Intelligence.  
1.3 p.m.—"Evening News" midday news service.  
1.30 p.m.—The Oak Hall Instrumental Trio.  
1.38 p.m.—Stock Exchange, second call.  
1.50 p.m.—Marching music for school children.  
1.40 p.m.—Daniel Hardy, baritone:  
"Blue Skies" (Berlin).  
1.45 p.m.—Studio music.  
1.50 p.m.—The Oak Hall Instrumental Trio.  
2 p.m.—"Big Ben." Close down.

### AFTERNOON SESSION.

2 p.m.—"Big Ben."  
Programme announcements.  
2.2 p.m.—A Piano-forte Recital, by the pupils of Miss Dorothy Gibbes:  
1. "Pastorale and Capriccio" (Scriabin), Miss Dorothy Gibbes.  
2. "Rhapsody in G-Minor" (Brahms), Miss Evelyn Edkins.  
3. "Gavotte" (Gardner), Miss Edith Harrison.  
4. "Caprice" (Schutz), Miss Barbara Wood.  
2.30 p.m.—Marching music for school children.  
2.40 p.m.—Aileen Bear, mezzo:  
"The Dawn has a Song" (Phillips).  
2.45 p.m.—The Oak Hall Instrumental Trio.  
2.50 p.m.—Symphony solo, by pupils of Miss Dorothy Gibbes:  
5. "Impromptu in A Flat" (Chopin), Miss Mary Fitzgerald.  
2.57 p.m.—Katherine Beverley, soprano:  
(a) "Twice in the Lovely Month of May" (Schumann).  
(b) "Thou'rt Lovely as a Flower" (Schumann).  
3 p.m.—William Bower, basso:  
"Shipmate of Mine" (Sanderzon).  
2.55 p.m.—The Oak Hall Instrumental Trio.  
2.45 p.m.—Symphony solo, by pupil of Miss Dorothy Gibbes:  
5. "Blacknote Study" (Chopin), Miss Daphne Harper.  
2.45 p.m.—Joyce Gillespie, mezzo:  
"The Seasons" (Rigolet).  
2.50 p.m.—Aileen Bear, mezzo:  
"A Flower" (Barry).  
2.25 p.m.—The Oak Hall Instrumental Trio.  
2.30 p.m.—Katherine Beverley, soprano:  
"I Hope" (Goss).  
2.4 p.m.—Studio music.  
2.45 p.m.—William Bower, basso:  
"The Floral Dance" (Mass).  
2.40 p.m.—Stock Exchange, third call.  
2.47 p.m.—Joyce Gillespie, mezzo.  
2.50 p.m.—The Wentworth Symphonic Dance Orchestra, under the baton of Mr. Cyril Kaye.  
3 p.m.—"Big Ben." Close down.

### EARLY EVENING SESSION.

2.40 p.m.—The strains of S.P.C.  
2.52 p.m.—The "Halls Man" talks in the children.  
2.45 p.m.—Story time for the young folk: Uncle Sam and "Jerry" will entertain.  
2.40 p.m.—Dinner music.

4 p.m.—Latest sporting information.  
5.10 p.m.—Dalgety's market reports (wool, wheat and stock).  
5.15 p.m.—Fruit and vegetable markets.  
5.20 p.m.—Weather and shipping news.  
5.25 p.m.—"Evening News" late news service.

### NIGHT SESSION.

5.30 p.m.—Programme announcements.  
5.35 p.m.—Fraser Coas, baritone:  
(a) "The Charmed Song" (Haeckel).  
(b) "Requiem" (Homer).  
5.43 p.m.—Simplic Lashmore, instrumentalist:  
(a) Mandolin solo "Una Platinie" (Ponsard).  
(b) Steel guitar solo "Hawaiian Waits" (Awali).  
5.48 p.m.—Ellis Price, entertainer:  
(a) "The Herrick" (Chambers).  
(b) "The Quilter" (Scott).  
(c) "Samuel the Stray" (Anon).  
5.57 p.m.—"Is it Your Birthday?"  
6 p.m.—"Big Ben."  
A Musical Romances: The story will be read by our announcer and the pieces will be filled by musical numbers, played by Miss Shirley Cooke, the titles of which will complete the story, including 55 new and old melodies. Prizes will be offered to winning competitors.  
6.14 p.m.—From the Peace Memorial Hall, Rose Bay:  
The first of a series of Recitals, by the newly formed Music Club, under the direction of Mr. Oliver King:  
Vocal duet, "La di Saravati" (Masani).  
Wilfrid Thomas (soprano) and Dorothy Ewbank (soprano).  
6.17 p.m.—Arrangement for two voices:  
(a) "Touchstone" (Goss).  
Lindsay Evans and Frank Hutchins.  
(b) "The Dream" (Arensky).  
(c) "Epona" (Chabrier).  
6.30 p.m.—Vocal solos:  
Dorothy Ewbank, soprano:  
(a) "Star Victim" (Salvato Russ).  
(b) "Voi che Sapete" (Mozart).  
(c) "Humming Breeze" (Gross).  
(d) "By the Mountainside" (Goss).  
(e) "Si Vous Avez dit de Aime" (Hahn).  
(f) "Ouvre Ton Jeune Homme" (Massenet).  
6.41 p.m.—Short Address, by the President of the Musical Association of N.S.W., Mr. Frank Hutchins.  
6.57 p.m.—Vocal solos:  
Wilfrid Thomas, basso:  
(a) "Sea Power" (Holand).  
(b) "Soe Lu Spritu" (Bolin).  
(c) "The Monkey's Carol" (Stanford).  
(d) "Fire Eyes" (Gibb).  
6.52 p.m.—A Recital for two voices, by Lindsay Evans and Frank Hutchins.  
(a) "Low Bolden" (Frank).  
(b) "Arabian Nights" (Godowsky).  
(c) "Bright and Lovely" (Rachmaninoff).  
(d) "Waltz" (Arensky).  
The latest weather forecast from the Straits at approx. 9 p.m.  
9.67 p.m.—Fraser Coas, baritone:  
(a) "The Malins Lovers" (Quilter).  
(b) "The Dawn" (d'Harleot).  
10.5 p.m.—Ellis Price, entertainer:  
(a) "The Paperbasher on Strake" (Anon).  
(b) "The Gainsborough Girl" (Hibby).  
10.12 p.m.—Simplic Lashmore, instrumentalist:  
(a) Banjo solo, "Park Parade" (Marshall).  
(b) Medley of Popular Songs.  
10.20 p.m.—Gibb, entertainer:  
10.20 p.m.—Charlie Lawrence, entertainer:  
(a) "Abbreviated-Vocal" (Waring).  
(b) "Old Sunshine" (Stanley West).  
10.25 p.m.—Al Jack and his "Crackerjacks" in popular dance numbers.  
10.45 p.m.—Charlie Lawrence, entertainer:  
"Alphabets" (Gardner).  
10.43 p.m.—Al Jack and his "Crackerjacks."  
10.57 p.m.—Late news and announcements.  
11 p.m.—"Big Ben."  
The "Crackerjacks" in popular dance music until 11.30 p.m.  
11.50 p.m.—National Anthem.  
Close down.

## 2BL, SYDNEY.

Wednesday.

## EARLY MORNING SESSION.

7.0 a.m. to 8.0 a.m.

## MORNING SESSION.

11.0 a.m.—G.P.O. Clock and Chimes; Musical

Programme from the Studio.

11.15 a.m.—Talk on "Golf," by Miss Gwen

Varley, Broadcaster; Women's Sports Auth-

ority. Social Notes. Replies to Corres-

pondents by Mrs. Jordan. Talk on "Dental

Hygiene," by a member of the Dental Board.

## AFTERNOON SESSION.

Racing Information Broadcast immediately

after each Race by courtesy of the "Sun."

12.0 noon.—G.P.O. Clock and Chimes; Special

Ocean Forecast and Weather Report.

12.3 p.m.—Brunswick Paratrope Musical Re-

cital.

12.15 p.m.—Information; Mails, Shipping, and

Port Directory.

12.18 p.m.—Boats in Call by Wireless.

12.20 p.m.—Fruit Market Report.

12.22 p.m.—Vegetable Market Report.

12.24 p.m.—Louisiana Metal Market Report.

12.26 p.m.—Dairy and Farm Produce Market

Report.

12.30 p.m.—G.P.O. Clock and Chimes; Forage

Market Report.

12.32 p.m.—Fish Market Report.

12.34 p.m.—Rabbit Market Report.

12.36 p.m.—News from the "Sun."

12.45 p.m.—Hillier's Instrumental Quartette.

Direction, Caryl Carlisle.

1.00 p.m.—G.P.O. Clock and Chimes; Talk to

Children and Special Entertainment for

Children in Hospital.

2.0 p.m.—G.P.O. Clock and Chimes; Musical

Programme from Studio.

2.10 p.m.—Racing Results.

2.15 p.m.—News from the "Sun."

2.20 p.m.—Operatic Talk, "The Great Com-

posers," by Mr. G. A. Saunders.

2.30 p.m.—G.P.O. Clock and Chimes; News from

the "Sun."

3.10 p.m.—Musical Programme from the

Studio.

3.20 p.m.—Talk on "How to Maintain Your

Health," by Dr. Du Maurier.

3.40 p.m.—Dungowan Dance Band, broadcast

from the Dungowan Cabaret.

4.0 p.m.—G.P.O. Clock and Chimes; News

from the "Sun."

4.15 p.m.—Serial Story.

4.30 p.m.—Dungowan Dance Band.

4.55 p.m.—News from the "Sun."

4.57 p.m.—Racing Results.

4.59 p.m.—Special Ocean Forecast.

5.0 p.m.—G.P.O. Clock and Chimes; Close

Down.

## EARLY EVENING SESSION.

8.45 p.m.—G.P.O. Clock and Chimes; Child-

ren's Session.

6.30 p.m.—Musical Programme from the

Studio.

## SPECIAL COUNTRY SESSION.

7.0 p.m.—G.P.O. Clock and Chimes; Australian

Merchandise List and Finance Co.'s Report;

Weather Report and Forecast by courtesy of

Government Meteorologist; Producers' Dis-

tributing Society's Fruit and Vegetable

Market Report; Stock Exchange Reports;

Grain and Fodder Report ("Sun"); Dairy

Produce Market Report ("Sun"); N.R.M.A.

Talk.

7.15 p.m.—Country News from the "Sun."

7.25 p.m.—Talk by a member of the St.

John Ambulance Association.

7.40 p.m.—Talk on "Production and Industrial

Interests," by Mr. Allan Pickering, B.E.O.

8 p.m.—G.P.O. Clock and Chimes; Broad-

casters' Typical Chorus.

8.5 p.m.—The Canterbury District Band (Band-

master, Mr. Stan Nichola), broadcast from

Baker's Hall, Campbell.

8.35 p.m.—Mr. Harrison Alton (Electronist).

8.55 p.m.—The Leone Vocal Trio.

8.45 p.m.—Mr. Warwick McKenzie (Violinist).

8.52 p.m.—Mr. Frank Herbert (Entertainer).

8.9 p.m.—G.P.O. Clock and Chimes.

9.1 p.m.—Weather Report and Forecast by

courtesy of Mr. C. J. Mars, Government

Meteorologist.

9 p.m.—Doc Morrison and His Gloom-

changers broadcast from the Ballroom of the

Bund Occasio.

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- 7.12 p.m.—Miss May Sullivan (Soprano).  
7.30 p.m.—Broadcasters' All Sports Expert will talk on "Boxing, Golf and Sporting News."  
7.54 p.m.—The Experimental District Band.  
8.34 p.m.—The Loose Vocal Trio.  
10.1 p.m.—Cec. Morrison and His Glomoblasters broadcast from the Ballroom of the Bondi Casino.  
10.31 p.m.—Mr. Warwick McKenzie.  
10.48 p.m.—Mr. Frank Harcourt.  
10.53 p.m.—Cec. Morrison and His Glomoblasters broadcast from the Ballroom of the Bondi Casino.  
10.55 p.m.—Miss May Sullivan.  
11.12 p.m.—Resume of Following Day's Programme.  
10.44 p.m.—"Sun" News Service.  
10.50 p.m.—Cec. Morrison and His Glomoblasters broadcast from the Ballroom of the Bondi Casino.  
11.0 p.m.—(G.P.O.) Clock and Chimes: National Anthem.

## 2GB, SYDNEY

Wednesday.

### MORNING SESSION.

- 9 a.m.—Music.  
9.5 p.m.—"Chorizo Talk."  
10.2 p.m.—Music.  
9.55 a.m.—Psychological Class.  
9.40 a.m.—Music.  
10 a.m.—Close down.

### AFTERNOON SESSION.

- 2.30 p.m.—Music.  
3.0 p.m.—Lectures: Professor Ernest Wood.  
3.52 p.m.—Music.  
4.7 p.m.—Address, Politics.  
National Association of N.S.W.  
4.25 p.m.—Music.  
4.30 p.m.—Close down.

### EVENING SESSION.

- 7 p.m.—Music.  
7.5 p.m.—Address: Mr. F. Boultaine.  
8.0 p.m.—A Public Address by National Association of N.S.W.

- 8 p.m.—Instrumental Trio:  
Dan Scully, Monica Harder, Ada Brook.  
8.10 p.m.—Songs by Clement Hosking:  
1. "Infelice" (Verdi).  
2. "Victoria" (Carlini).  
8.15 p.m.—Duet for two violins with piano accompaniment:  
Dan Scully, Monica Harder, Ada Brook.  
1. "Baccarole" (Liszt).  
2. "Norman Air" (arr. by Monk).  
3. "Serenade" (Widor).  
8.30 p.m.—Clement Hosking Quartet:  
1. "Sailors' Chorus" (Gounod).  
2. "Smile O' Mine" (Widor).  
3. "A Suianny Sharp did I behold" (Lizzy).  
Erlie Brown, Eva Croft, Theban Hall.  
Clement Hosking.

- 8.40 p.m.—Violin solo, Dan Scully:  
1. "Golan" (Kreutzer).  
2. "Mazurka" (Chopin).  
8.50 p.m.—Songs by Miss Brown:  
1. "The Waters of Minnetonka" (Thurloe).  
2. "The Walking of Spring" (del Russo).  
3. "Be still" by Mr. Beach (Hosking Selections from "Faintly").  
8.55 p.m.—Clement Hosking Quartet:  
1. "Since first I saw your eye" (Ford).  
2. "A Song of the Bushbush.".  
3. "House woe" (arr. by Clement Hosking).  
9.25 p.m.—Duet for two violins with piano accompaniment:  
Dan Scully, Monica Harder, Ada Brook.  
1. "Rustler Air" (arr. by Monk).  
2. "Romance" (Brahms).  
3. "A Perfect Day" (Hood).  
9.35 p.m.—Songs by Eva Croft:  
1. "Fainstia" (Tchabowsky).  
2. "Ingrid's Song" (Kyeval).  
9.45 p.m.—Public Address by National Association of N.S.W.  
10 p.m.—Close down.

## 2UW, SYDNEY

Wednesday.

- 8.0 p.m.—News; Shopping; Mail; Musical Items.  
8.45 p.m.—Women's Session.

- 9.45 p.m.—Resume of Forward Programme.  
10.0 a.m.—Close Down.  
2.0 p.m.—Musical Items.  
2.50 p.m.—Resume of Forward Programme.  
3.0 a.m.—Close Down.  
9.0 p.m.—Studio Items.  
9.50 p.m.—Resume of Forward Programme.  
1.0 p.m.—News in G.E.  
7.18 p.m.—Studio Items and Announcements.  
1.09 p.m.—Talk on "Nature's History" by GEORGE F. MANNING AND HIS.  
7.45 p.m.—Musical Items.  
9.29 p.m.—Resume of Forward Programme.  
9.34 p.m.—Close Down.

## 3LO, MELBOURNE.

Wednesday.

### MIDDAY SESSION.

- 12 noon.—Time signal. Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange this day. British official wireless news from Radio: "Rover" and the Australian Press Association cables. "Argus" news service.  
12.50 p.m.—JOE ARONSON AND HIS SYMPHONIC SYMPHONISTS:  
"Pal of My Lonesome Hours";  
"Don't Sing Aloud to Me" (Nero);  
"Call Me Early in the Morning" (Rue).  
12.55 p.m.—JAMES RILEY, tenor:  
"Hall" (Sanderson).  
"Friend of Mine."  
12.57 p.m.—Stock Exchange information.  
12.59 p.m.—JOE ARONSON AND HIS SYMPHONIC SYMPHONISTS:  
"The Gunga Charlatan" (Rack House) (Byron).  
"Lock a Doodle-Dee off My Noose: My Baby's Back" (John).  
"My Pal" (arr. "Roe" Head) (Sanderson).  
12.52 p.m.—RILEEN CANTLEY, soprano:  
"To the Angels" (Zardi).  
"Believe Me if All Those Endearing Young Charms"  
1 p.m.—3LO's time signal.

- 1.1 p.m.—JOE ARONSON AND HIS SYMPHONIC SYMPHONISTS:  
"How Could Red Riding Hood" (Sanderson).  
"The Student Prince Waltz" (Romberg).  
"He's the Last Word" (Kahn).  
1.10 p.m.—Meteorological information. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports. Rainfall for Victoria, South Australia, Tasmania and New South Wales.  
1.15 p.m.—JOE ARONSON AND HIS SYMPHONIC SYMPHONISTS:  
"Dog on the Piano" (Shapiro).  
"Me To Ma Ma, Ho Ho" (Woods).  
"Tonight You Belong to Me" (Russo).  
1.17 p.m.—ERIS TRITMAN, soprano:  
"The Song Without a Name" (Aron).  
"On Raging Nocturnes" (Evans)—revised by E. TRITMAN.

- 1.31 p.m.—JOE ARONSON AND HIS SYMPHONIC SYMPHONISTS:  
"Oh, Marie" (De Capua).  
"The Far Away Hills" (Gordon).  
"If I Didn't Know Your Husband, and You Didn't Know My Wife" (Ford).  
1.44 p.m.—ELSIE BOWER and BILLY RUTHERFORD, arr. with and without music:  
Hope, "I Suppose You Think That's Clever."  
1.52 p.m.—JOE ARONSON AND HIS SYMPHONIC SYMPHONISTS:  
"Oriental Moonlight" (Saxman).  
"Bokshay" (Jaffe).  
"Oh, How I Love Bulgarians" (Affenberger).  
2 p.m.—Description of Moorabool Hurdle, Geelong Race, by "Muskie" of the "Sporting Globe".  
2.5 p.m.—Close down.  
2.52 p.m.—Description of Novice Handicap, Geelong Race, by "Muskie" of the "Sporting Globe".  
2.55 p.m.—Musical programme transmitted from Moscow, Allan and the ROYAL AGRICULTURAL SHOWGROUND.

Song, Frances Lea, "Just Wonder'ing."  
Autumn selection of Popular Songs.  
Song, "Take in the Sun," Carlton Chase.  
Song, "The Prisoner's Release," Frances  
Lea.  
Song, "Sweetie O'Mine," Carlton Chase.

## AFTERNOON SESSION.

5 p.m.—Description of Springfield Handicap,  
Geelong Races, by "Musket," of the "Sport-  
ing Globe."  
8.5 p.m.—Description of Wednesday Football  
League Finals at Melbourne Cricket  
Ground, by MR. WALLACE SHARLAND.  
5.15 p.m.—STUDIO QUARTET:  
"Peer Gyn Suite"—Part 1. (Grieg).  
5.25 p.m.—EILEEN CASTLES, soprano:  
"Waltz Song"—Tom Jones.  
5.30 p.m.—Description of Brubi Steeplechase,  
Geelong Races, by "Musket," of the "Sport-  
ing Globe."  
5.35 p.m.—DOROTHY BOXBURGH, violin:  
"L'Agreable and Musette" (Mozart).  
5.45 p.m.—ERIN THOMMAN, comedian:  
"Falls of a School Teacher."  
"Discourse on the Voice."  
5.50 p.m.—Description of Wednesday Football  
League Finals at Melbourne Cricket Ground,  
by MR. WALLACE SHARLAND.  
6 p.m.—Description of Three-year-old Hand-  
icap, Geelong Races, by "Musket," of the  
"Sporting Globe."  
4.5 p.m.—STUDIO QUARTET:  
"Peer Gyn Suite"—Part 2.  
4.15 p.m.—WENDLING and MOLLOY, en-  
tertainers:  
"Morning" (Speaks).  
"High, High Up in the Hills" (Lewis-  
Young).  
4.23 p.m.—Description of Wednesday Football  
League Finals at Melbourne Cricket Ground,  
by MR. WALLACE SHARLAND.  
4.30 p.m.—Description of Barwon Welter,  
Geelong Races, by "Musket," of the "Sport-  
ing Globe."  
4.55 p.m.—SISTER LOCKHART will speak on  
"Infant Welfare."  
4.45 p.m.—"Herald" news service. Stock Ex-  
change information.  
5 p.m.—Description of Wednesday Football  
League Finals at Melbourne Cricket Ground,  
by MR. WALLACE SHARLAND.  
5.10 p.m.—Close down.

EVENING SESSION.  
CHILDREN'S HOUR.

5.30 p.m.—Answers to children's letters and  
birthday greetings by "MARY MARY."  
6 p.m.—STUDIO QUARTET:  
Humoresque, "Fanny Fellow."  
6.10 p.m.—FREDA NORTHCOTE will sing  
"The Discontented Duckling."  
"How is This?" (Gatty).  
6.17 p.m.—"MARY MARY" will tell the chil-  
dren about  
"So-sorry and the Gooes-Gril."  
"Giddy Giddy."  
6.43 p.m.—FREDA NORTHCOTE will now  
sing:  
"The Bullfrog and the Coo" (Nathan).  
"Cuckoo" (Gatty).  
5.40 p.m.—"Herald" news service. Weather  
reports. Sliding movements.  
5.47 p.m.—Stock Exchange report.  
5.52 p.m.—Fish market reports by J. R. Bor-  
rows, Ltd. Rabbit prices.  
5.55 p.m.—River reports.  
5.58 p.m.—Market report. Official reports of  
Newmarket sheep sales by the Associated  
Stock and Station Agents, Bourke Street,  
Melbourne. Poultry, grain, hay, straw, tulo,  
dairy produce, potatoes and onions.  
7.5 p.m.—Market reports of fruits by the Vic-  
toria Fruitgrowers' Association.

## NIGHT SESSION.

7.13 p.m.—Under the auspices of the Depart-  
ment of Agriculture: Mr. P. de CAS-  
TELLA, viticulturist, will speak on "Hints on  
Vine Growing."  
7.20 p.m.—Mr. H. SCHWIEGER will say  
a few words from the Royal Agricultural  
Show Grounds.  
7.45 p.m.—Capt. C. H. PETERS:  
"Booby, Waa and Coo-er-er."  
8 p.m.—A GRAND CONCERT,  
ST. GILES' CHURCH, GHERINGHAP

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## Silent Blessings

What a mighty reputation gathers round the man who says little! He may have the brains of a goat and a backbone which sags in the middle, but if he keeps his tongue paralysed the world will credit him with wisdom and stern strength.

Some day a woman will be born with an impediment of speech and she will be Prime Minister before she is forty!

There is a veritable worship of Silence. That is why balloon tyres, gold cylinders, noiseless typewriters, eight cylinder cars, electric trams and gas attacks are popular! One man in the country even hates young possums because they squeal at feeding time.

Civilisation is heading eagerly for the padded cell!

I know one blessing, however, which is silent—never cracks, hums, buzzes or dings painfully. Take three guesses. Good man! Right first shot—the Philco Battery.

The Philco does its work year in and year out with volume, strength, clarity and ease, but it does not make any noise itself. Continuous perfection of tone and reception in your radio set is the one sure proof that you have a Philco.

Here is another good thing about this proud aristocrat of the battery world. You can tell its exact condition by glancing at the tell tale balls in the glass calls.

The only anti-Philcoite I know is a hard up friend who says that the small visual balls remind him of a newshoop because they indicate the exact state of its credit! That type of kicker should go into business with the man who hates young possums because they make a noise when they're hungry.

My straight tip to every set owner is to save cash, worry and regret by putting in a rechargeable Philco battery on the long easy terms allowed by New System Telephones Pty., Ltd., 280 Castlereagh Street, Sydney.

## STREET, GEELONG, 8th ANNIVERSARY

CELEBRATIONS will be given by the GRUICH CHOR (Augmented)

Assisted by Mr. LOUIS HATTENBACH, violin, and the

MELBOURNE STRING QUARTETTE—Professor Edward Heineke.

Stanley Tomkins, William Lambie, Louis Hattenbach.

Messrs. HERTRAM JOHNSTON (tenor), ERNEST WILSON (bass), and MISS DULCIE BLAND (soprano).

Chairman: Rev. T. Woodroffe Maguire, B.A. Choir Master: Mr. W. M. Reid. Organist and Accompanist: Mr. Reg. Riley.

PART I.

Part Song, "The Sluggers" (A. C. Mackenzie)

CHOR.

String Quartette:

(a) "Tramway" (Belmont).

(b) "Memento" (Bosch).

MELBOURNE STRING QUARTETTE.

Recital: "Hiawatha's Wooing" (with musical accompaniment) (Longfellow).

MISS DULCIE BLAND.

Solo: "Uphill" (Bryce, Trehearne).

"On the way my heart should break" (Tchaikovsky).

(With cello accompaniment)

Mr. ERNEST WILSON.

"Gloria only: "Ave Maria" (Schubert).

Mr. LOUIS HATTENBACH.

Solo: "I will erid Thee" (Celan).

Mrs. W. M. REID.

String Quartettes: "Ave Verum" (Mozart).

"Canzona" (Mendelssohn).

MELBOURNE STRING QUARTETTE.

Vocal Quartette:

"The Bacchic and Dream" (McNaught).

"Lullaby" (Hector).

Miss DOROTHY ALLEN, Mrs. M. T. AXA, Messrs. A. McCASKILL and REG. RILEY.

INTERVAL.

FROM THE STUDIO—

Announcements, British official wireless news from Jough.

THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS FOR EVERYBODY: "Are you doing all you can every day to prevent accidents? Be safe, or you will be sorry."

FROM GEELONG—

Part Song: "Hymn to Music" (Dudley Buck)

CHOR.

Recital, "The Necklase" (Guy de Maupassant)

MISS DULCIE BLAND:

Solo, "The Arrow and the Song" (Balfé).

MR. HERTRAM JOHNSTON:

"Cello and "Carillon" (Gossmann);

"Serenade" (Dorff).

MR. LOUIS HATTENBACH:

Solo, "Angelo Guard These (Goddard).

MISS GLADYS WILLIAMS:

Trio, "Six Three Six" (Mendelssohn).

MRS. W. M. REID, MRS. OSWALD C. HEARNE and MISS E. GILL:

String Quartette, "Serenade" (Haydn)

"Moment Musical" (Schubert).

MELBOURNE STRING QUARTETTE.

Part song, "Mountain" (Eaton Fanning).

CHOR.

FROM THE STUDIO.

10.15 p.m.—JOE ARONSON AND HIS SYNCHOPATING SYMPHONISTS:

"Mole of Mine" (Donalson).

"Just the Same" (Donalson).

"Shee Fool" (Kirk).

"How long must I wait for you" (Malie).

10.25 p.m.—"Argus" news service. Meteorological information.

10.32 p.m.—JAMES RILEY, tenor:

"I Hear ye Calling Me" (Marshall).

"Maid of Mine" (Elliot).

10.40 p.m.—JOE ARONSON AND HIS SYNCHOPATING SYMPHONISTS:

"Half a Moon" is better than no moon" (Malie).

"Go Wash an Elephant" (Turker).

"In a little Spanish town" (Wayne).

10.50 p.m.—JAMES RILEY, tenor:

"Why Shouldn't I?" (Russell).

"Far Away Bells" (Gordon).

10.57 p.m.—OUR GREAT THOUGHT FOR TODAY:

"Fortune never seems so bitter as to those upon whom she confers no favors."—La Rochefoucauld.

11.05 p.m.—JOE ARONSON AND HIS SYNCHOPATING SYMPHONISTS:

11.40 p.m.—GOD HAVE THE KING.

## 6WF, PERTH.

Wednesday.

12.30 p.m.—Tune in.

12.35 p.m.—Markets, News, and Cables.

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

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

A RELATED CONCERT.

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

1.30 p.m.—Song Quartette.

2 p.m.—Close down.

3.30 p.m.—Tune in.

3.35 p.m.—Musical programme, including Piano-forte selections, by Miss Evelyn Willis, A.R.C.M.

4 p.m.—Studio Instrumental Trio.

4.30 p.m.—Close down.

6.45 p.m.—Tune in.

6.50 p.m.—Stories for the Tiny Tots, by Auntie Marjorie.

7.30 p.m.—Tina Lewis will talk to the Boys.

7.50 p.m.—Talks, Markets, News, and Cables.

7.40 a.m.—Talk "Instincts of Animals" by Mr. F. Lawson-Wallick.

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

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

VARIETY NIGHT.

8.2 p.m.—Items by the STUDIO STRING TRIO:

Miss Evelyn Willis, A.R.C.M. piano.

Mr. H. G. Brakham, cello.

Mr. T. T. Newton, violin.

10 p.m.—Late news hours, by courtesy of "The Newscaper Co."

Ships with large announcement.

Weather Report and Forecast.

## 7ZL, HOBART

Wednesday.

MORNING SESSION.

5.15 a.m.—To 12 noon.

AFTERNOON SESSION.

3 p.m.—G.P.O. Clock and chimes.

3.1 p.m.—Tune in selection.

3.15 p.m.—Hobart Stock Exchange quotations.

Weather information.

Items of interest—announcements.

2.15 p.m.—Radio Auction Bridge Game No 11.

4 p.m.—Social and Educational Calendar from Illustrated Newpaper Co.

4.15 p.m.—Story from Mail.

4.30 p.m.—Close down.

EVENING SESSION.

7.30 p.m.—Musical selection.

7.50 p.m.—"News Bulletin" from the Department of Markets and Migration.

7.50 p.m.—"Mystery" special Tasmanian news service. Railway section, produce prices.

Weather forecasts, Hobart Stock Exchange quotations.

8 p.m.—G.P.O. Clock chimes.

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

8.5 p.m.—Market selections by 7ZL Studio.

Two interspersed with items from the studio.

9.40 p.m.—British Official Wireless News.

## Thurs., Sept. 22 2FC, SYDNEY

EARLY MORNING SESSION—7 to 8 a.m.

MORNING SESSION.

10 a.m.—"The Sun and announcements."

10.5 a.m.—Studio music.

10.15 a.m.—"Sydney Morning Herald" news service.  
 10.30 a.m.—Studio music.  
 10.35 a.m.—A Racing Talk, by the ZFC Commissioner.  
 10.45 a.m.—Studio music.  
 11 a.m.—"Big Ben."  
 Marching music for school children.  
 11.5 a.m.—A.P.A. and Reuter's Cable Services.  
 11.10 a.m.—Studio music.  
 11.35 a.m.—A reading.  
 11.39 a.m.—Close down.

## MIDDAY SESSION.

12 noon—"Big Ben" and announcements.  
 12.2 p.m.—Stock Exchange, first call.  
 12.3 p.m.—Official weather forecast, rainfall, temperatures.  
 12.4 p.m.—Studio music.  
 12.10 p.m.—Summary of "Sydney Morning Herald" news service.  
 Rugby wireless news.  
 12.25 p.m.—Studio music.  
 12.30 p.m.—Marching music for school children.  
 12.40 p.m.—Kathleen Stolley, mezzo soprano.  
 12.45 p.m.—The Oak Hall Instrumental Trio.  
 12.55 p.m.—Studio music.  
 1 p.m.—"Big Ben." Weather Intelligence.  
 1.3 p.m.—"Evening News" midday news service.  
 Producers' Distributing Society's Report.  
 1.15 p.m.—A Lecture to Business Men, by Dr. John Tatt, of Chicago.  
 1.50 p.m.—Stock Exchange, second call.  
 1.51 p.m.—The Oak Hall Instrumental Trio.  
 1.56 p.m.—Last minute Racing Information, by the ZFC Commissioner.  
 2.5 p.m.—Close down.

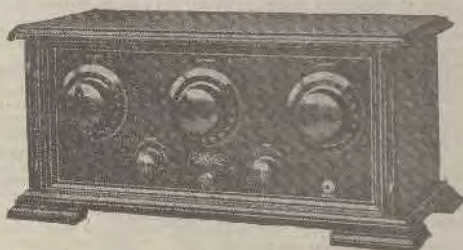
## AFTERNOON SESSION.

3 p.m.—"Big Ben" and programme announcements.  
 3.3 p.m.—John B. Fitter, baritone:  
 "A Castilian Lament" (Del Balso).  
 1.11 p.m.—Hilda Nelson, soprano.  
 3.15 p.m.—A reading.  
 3.25 p.m.—Elsie Roling, contralto:  
 "Thoughts Have Wings" (Lehmann).  
 3.30 p.m.—Marching music for school children.  
 3.35 p.m.—Eileen Moreau, soprano:  
 "The Fairy Laundry" (Phillips).  
 3.45 p.m.—The Oak Hall Instrumental Trio.  
 3.55 p.m.—John B. Fitter, baritone:  
 "A Vachelina" (Tacti).  
 4 p.m.—Ethel Muller, contralto:  
 "Sometimes at Dawn" (Wood).  
 4.5 p.m.—The Oak Hall Instrumental Trio.  
 4.10 p.m.—Elsie Roling, contralto:  
 "Hans" (Davies).  
 4.20 p.m.—Eileen Moreau, soprano:  
 "Thinking of You" (Coates).  
 4.25 p.m.—The Oak Hall Instrumental Trio.  
 4.35 p.m.—Hilda Nelson, soprano.  
 4.40 p.m.—Ethel Muller, contralto:  
 "Come Close to Me" (Carne).  
 4.45 p.m.—Stock Exchange, third call.  
 4.47 p.m.—The Wentworth Symphonic Dance Orchestra, under the baton of Mr. Cyril Kaye.  
 5 p.m.—"Big Ben." Close down.

## EARLY EVENING SESSION.

5.40 p.m.—The changes of ZFC.  
 5.45 p.m.—The "Hello Man" talks to the children.  
 5.50 p.m.—Story time for the young folk.  
 5.55 p.m.—Dinner music.  
 7 p.m.—"Big Ben." Late sporting news.  
 7.10 p.m.—Dalgety's market reports (wool, wheat and stock).  
 7.15 p.m.—Fruit and Vegetable markets.  
 7.20 p.m.—Weather and shipping news.  
 7.25 p.m.—"Evening News" late news service.  
 NIGHT SESSION.  
 7.55 p.m.—Programme announcements.  
 7.55 p.m.—A talk on old Suez, by Mr. G. J. Lockley.  
 7.45 p.m.—The N.S.W. Tramway Band, conducted by Mr. F. Philpott:  
 (a) March, "The Armistation" (Philpott).  
 (b) Waltz, "The Richmond" (Philpott).  
 7.57 p.m.—"Is it Your Birthday?"  
 8 p.m.—"Big Ben."  
 The N.S.W. Tramway Band:  
 Overture, "Sonora" (Philpott).

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The instrument is contained in a handsome lachup cabinet, with space for housing the H.T. Retriever.

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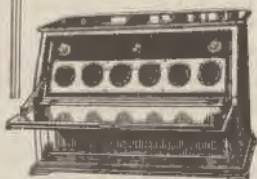
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Daily Telegraph Bldg.

SYDNEY, N.S.W.



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- 8.15 p.m.—Donald Mack, baritone: "Down Yarraball Way" (Olliver).  
8.20 p.m.—The N.S.W. Tramway Band: (a) Cornet solo, "Basses of the Band" (Clemens). (b) Fox Trot, "Blue Blues" (Mastin). (c) Fox Trot, "Song of the Wanderer" (Annelly).  
8.27 p.m.—Bertha Warren, soprano: In popular numbers.  
8.30 p.m.—The N.S.W. Tramway Band: "Bromotone, Musical Fragments" (Rimner).  
8.42 p.m.—Donald Mack, baritone: "A Dream" (Harlett).  
8.48 p.m.—Harrison White, banjo solo.  
8.50 p.m.—The N.S.W. Tramway Band: American sketch, "Down South" (Billgoold).  
8.55 p.m.—LATEST weather forecast.  
9 p.m.—"Big Ben."  
Clyde Gray, Professor of the Adelaide Observatory, in a Song Recital.  
8.10 p.m.—The N.S.W. Tramway Band: Mack, "The Brigade of Guards" (Alker-Kins).  
8.17 p.m.—Donald Mack, baritone: (a) "My Song to You" (Grant). (b) "Dream House" (Brook).  
9.24 p.m.—Harrison White, banjo solo.  
9.27 p.m.—Bertha Warren, soprano: Popular number.  
9.30 p.m.—The N.S.W. Tramway Band.  
9.38 p.m.—J. E. Kingshore will talk of the Economic Value of Reptiles.  
9.45 p.m.—The N.S.W. Tramway Band.  
9.55 p.m.—The Technical Editor of "Wireless Weekly" will give a few hints to listeners.  
10 p.m.—"Big Ben."  
Clyde Gray, baritone.  
10.15 p.m.—Harrison White, banjo solo.  
10.18 p.m.—Bertha Warren, soprano: Popular numbers.  
10.25 p.m.—The Wentworth Symphonic Dance Orchestra, under the baton of Mr. Cyril Kears.  
10.30 p.m.—Studio music.  
10.40 p.m.—The Wentworth Symphonic Dance Orchestra.  
10.47 p.m.—Late news and announcements.  
11 p.m.—"Big Ben."  
The Wentworth Symphonic Dance Orchestra will play until 12.30 a.m.  
11.05 p.m.—National Anthem.

**2BL, SYDNEY**

Thursday.

**EARLY MORNING SESSION.**

7 a.m. to 8 a.m.

**MORNING SESSION.**

- 8.00 a.m.—G.P.O. clock and chimes.  
8.05 a.m.—Musical programme from the Studio.  
8.10 a.m.—News from the "Daily Telegraph Visual."  
8.15 a.m.—Musical programme from the Studio.  
8.20 a.m.—G.P.O. clock and chimes.  
Announcements.  
8.25 a.m.—Musical programme from the Studio.  
8.30 a.m.—Social notes. Replies to correspondents by Mrs. Jordan.  
Talk on "How to choose pictures," by Mrs. Jordan.  
8.35 a.m.—G.P.O. clock and chimes.  
Special news forecast and weather report.  
8.40 a.m.—Brunswick Pathbrake musical retail.  
8.45 p.m.—Information. Mails, shipping, and port directory.  
8.50 p.m.—Boats in sail by wireless.  
8.55 p.m.—Fruit market report.  
9.00 p.m.—Vegetable market report.  
9.05 p.m.—London metal market report.  
9.10 p.m.—Daily and farm produce market report.  
9.15 p.m.—G.P.O. clock and chimes.  
Foreign market report.  
9.20 p.m.—Fish market report.  
9.25 p.m.—Rabbit market report.  
9.30 p.m.—News from the "Sun."  
9.35 p.m.—Hiller's Instrumental Quartet-Division, Cyril Cantling.

- 9.40 p.m.—G.P.O. clock and chimes.  
Talk to children—amuse and entertainment for children in hospital.  
9.45 p.m.—G.P.O. clock and chimes.  
Close down.

**AFTERNOON SESSION.**

- Racing information broadcast immediately after each race by speakers of the "Sun."  
9 p.m.—G.P.O. clock and chimes.  
Musical programme from the Studio.  
9.10 p.m.—News from the "Sun."  
9.15 p.m.—Musical programme from the Studio.  
9.20 p.m.—News from the "Sun."  
9.25 p.m.—Dunwoody Dance Band broadcast from the Langowan Club.  
9.30 p.m.—G.P.O. clock and chimes.  
News from the "Sun."  
9.35 p.m.—Serial story.  
9.40 p.m.—Dunwoody Dance Band broadcast from the Langowan Club.  
9.45 p.m.—Review of night's programmes.  
9.47 p.m.—Basing reunion.  
9.50 p.m.—Special ocean forecast.  
9.55 p.m.—G.P.O. clock and chimes.  
Close down.

**EARLY EVENING SESSION.**

- 8.45 p.m.—G.P.O. clock and chimes.  
Children's session.  
9 p.m.—The people of Miss Monica Evelyn will entertain the children.  
9.05 p.m.—Musical programme from the Studio.

**SPECIAL COUNTRY SESSION.**

- 9 p.m.—G.P.O. clock and chimes.  
Australasian Mercantile, Land and Finance Co's report.  
9.05 p.m.—News from the "Sun."  
9.10 p.m.—Weather report and forecast by courtesy of Government Meteorologist.  
9.15 p.m.—Dairy Producers report ("Sun").  
9.20 p.m.—Weekly trade bulletin.  
9.25 p.m.—Country news from the "Sun."  
9.30 p.m.—Herald hints to listeners by Mr. Alan Burrows.  
9.35 p.m.—Talk on "Eucharistic Congress at Sydney, 1928," by Mr. Rupert Mackham, B.L.C.  
9.40 p.m.—G.P.O. clock and chimes.  
9.45 p.m.—Broncos' Tenial Chorus.  
9.50 p.m.—The Versatile Two in piano and mandolin position.  
9.55 p.m.—Miss Leonora Giesek, soprano.  
10.00 p.m.—The Merryville Salvation Army Band (bandmaster, Mr. N. H. Knight) broadcast from Wemyss-street, Marrickville.  
10.05 p.m.—Competition.  
10.10 p.m.—Miss Grace Quinn, dramatic actress.  
10.15 p.m.—Mr. Phil Mountain, light comedian.  
10.20 p.m.—G.P.O. clock and chimes.  
10.25 p.m.—Weather report and forecast by courtesy of Mr. G. J. Harro, Government Meteorologist.  
10.30 p.m.—Mr. Jake Friedman, comedian of the Veterans of Variety.  
10.35 p.m.—Miss Leonora Giesek.  
10.40 p.m.—The Merryville Salvation Army Band.  
10.45 p.m.—Miss Grace Quinn.  
10.50 p.m.—Remains of following day's programme.  
10.55 p.m.—G.P.O. clock and chimes.  
11.00 p.m.—Mr. Phil Mountain.  
11.05 p.m.—Doc. Morrison and his Glenviewettes broadcast from the ballroom of the Bunnies Casino.  
11.10 p.m.—G.P.O. clock and chimes.  
National Anthem.

**3LO, MELBOURNE.**

Thursday.

**MIDDAY SESSION.**

- 12 noon.—This signal, Melb. prices received by the Australian Mines and Metals Association from London Stock Exchange this day. News and the Australian Press Association's cable. Brief official wireless news from Rugby. "Argus" news service.



12.15 p.m.—Under the auspices of the Concert-goers' and Community Singers' Association—**COMMUNITY SINGING** transmitted from the Assembly Hall, Collins-street, Melbourne.

1.0 p.m.—Stock Exchange Information.

Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales; Ocean forecasts; river reports; rainfall for Florida, Tennessee, South Australia, and New South Wales.

2 p.m.—Close down.

2.30 p.m.—Musical programme, transmitted from Messrs. ALLAN & CO.'s Stand at the **ROYAL AGRICULTURAL SHOW**.

Autotone selection:  
Song, "She's Just What the Doctor Ordered," **CARLTON CHASE**.

Autotone selection of popular songs:  
Song, "I'm of My Lonesome Hour," **FRANCES LEA**.

Some short stories, **CARLTON CHASE**.  
Song, "At Sundown," **FRANCES LEA**.

Autotone selection, "The Doll Dance."

**AFTERNOON SESSION.**

1 p.m.—Rev. **KENNETH HENDERSON** will speak on—

"Topics of the Week."

1.15 p.m.—**MR. J. SUTTON CROW** will speak on—

"The development of the piano and its make," Illustrated by Mabel Nelson.

1.30 p.m.—**MADAME BOWARD** will speak with students of French.

1.40 p.m.—**MISS G. FLOS GREIG, B.A., LL.B.** will speak on—

"The rapidity of development in the Malay States."

1.55 p.m.—**STUDIO QUARTETTE:**

"Mleanor" (Deppen).

4 p.m.—**EILEEN CASTLES**, Soprano:

"Scupper Lemon," "La Traviata," "Minnelonda."

4.15 p.m.—**HERTHA JOERGENSEN**, violin:

"Old Bettrin" (Kreiser).

"Mahaug Bell" (Kraemer).

4.15 p.m.—**EILEEN CASTLES**, Soprano.

"Ave Maria" (Gounod).

"Ye Banks and Braes."

4.25 p.m.—**STUDIO QUARTETTE:**

"The Comedian" (Deppen).

"A Violet" (Yansnich).

4.30 p.m.—"Herald" news service, Stock Exchange information.

4 p.m.—**EVANGELING**, transmitted from **ST. PAUL'S CATHEDRAL**.

5.30 p.m.—S.G.'s special racing information—

Acceptances for Saturday's races at Mounse Valley.

**EVENING SESSION.**

**CHILDREN'S HOUR.**

5.30 p.m.—Answers to Children's Letters and

Birthday Greetings, by **MARY GUMLEAF**.

6 p.m.—**STUDIO QUARTETTE:**

"Enchanted Moments" (Clemens).

"Secunde Mignonne" (Leigh).

6.12 p.m.—**MR. W. K. BUTCHER** will con-

duct his talk to the children on—

"Stamps Collecting."

6.15 p.m.—**STUDIO QUARTETTE:**

"Waterlilies" (St. Clair).

6.15 p.m.—"Herald" news service, Weather

synopsis, Shipping movements.

6.30 p.m.—Stock Exchange information.

6.35 p.m.—River reports.

6.40 p.m.—Fish Market reports by **J. E. Bor-**

**weth, Ltd.**, Rabbit prices.

7 p.m.—Market reports by the Victorian Pro-

ducers' Co-operative Co., Ltd., Poultry,

Grain, Hay, Straw, Jute, Dairy Produce,

Foodstuffs and Omeals.

7.15 p.m.—Market reports of Fruit.

**NIGHT SESSION.**

11.8 p.m.—**MR. A. W. JACKSON** will speak

about "Golf."

11.30 p.m.—**Rev. E. R. GRIBBLE** will speak on

"The aborigines, their past, present, future,

and mission."

7.45 p.m.—Miss **BERTHA BELMORE**, now

appearing in "Cradle Snatchers" at the

King's Theatre, will speak to you from her

dressing-room, by permission of **J. C. WIL-**

**LIAMSON, LTD.**

8 p.m.—**Mr. ROD McORROG** will speak on

"Football."

11.15 p.m.—**JOE ARONSON** and **HIS SYN-**

**COPATING SYMPHONISTS:**

"Mine" (Hanley).

"Don't Sing Alike to Me" (Moret).

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Are you having trouble with your Super Heterodyne Set? No other expert has had the experience of Our Engineer (Chas. W. Slade) with this class of Set. Let him rewire it for you.

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Commodore S.L.P. Condensers—	
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4005 .....	9/6
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6, 15, 25, 30 ohm Electrostatic .....	2/6

## 7-VALVE SUPER-HET KITS (This Week Only.)

Kits of Parts to build this Kulla Royce  
42 Radio, 218, or Transformer only.  
25/15/- without double audio, 26/15/-  
Battery Chargers (3 amp. bulb), 25/5/-  
3 Amp. Charger Bulbs .....

Benjamin Shock-proof Sockets ... 5/9  
Loudly Musicans .....

Health 5 Stage Resonance Coupled Amplifiers, ready to attach to single valve sets, 45/- (Usually 55/-).

Eveready, Volvo, Rayovac, Burgess  
"B" Batteries, Krka, Philips, Radio-  
tron, De-Forest Valve Stocked.

Call for prices of all  
other lines. It costs  
nothing for advice.

## Palace Radio and Electric Co.

406 Pin Street, Sydney  
(NEXT PEOPLE'S PALACE.)  
Between Goobards and Hay Streets.

- "Pal of My Lonesome Days."  
8.25 p.m.—JAMES RILEY, tenor:  
"My Ain Fulk" (Lennon).  
8.30 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"Black Bottom's Got 'em and Won't  
Behave" (Jones).  
"It all depends on you" (De Sylva).  
"Give me a little kiss, will ya, huh?"  
(Tark).  
8.39 p.m.—Mrs. C. N. McRAY, first lady pilot  
in Victoria, will give her impression as a  
pilot of the Aero Club.  
8.49 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"Am I'm Today, Lulu?"  
"Because I Love You" (Berlie).  
"For My Sweetheart."  
8.59 p.m.—WENDLING and MOLLOY, enter-  
tainers:  
"Ten Thousand Years from Now" (Hall).  
9.2 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"Gee, Gosh! I'm off my noodle, my  
baby's back" (Johnson).  
"I'm 'Blew' the leads, tellin' the bees"  
(Brown).  
"Go Wash an elephant if you want to do  
something big" (Terrier).  
9.13 p.m.—ERN TROTMAN, comedian:  
"Striptease."  
9.17 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"Kentucky Lullaby" (Miller).  
"Let's the lull word" (Kahn).  
"Song of the Wanderer" (Brett).  
9.2 p.m.—BOWER and RUTHERFORD,  
studioville favorites, in selections from  
their repertory.  
9.31 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"I Didn't Know" (Palmer).  
"Who's (Kern).  
"Two Little Bluebirds" (Kern).  
9.35 p.m.—JAMES RILEY, tenor:  
"Minstrel Boy."  
9.48 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"A Message from Moscow" (Chester).  
"Spring Fever" (Lynn and).  
"Sing the Old Acropolis, Ma" (Kahn).  
9.49 p.m.—WENDLING and MOLLOY, enter-  
tainers:  
"American Melody" (Scener).  
9.55 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"Girl of Yesterday" (Lawrence).  
"Meadow Lark" (Koroto).  
"See, say, neighbor" (Cudlow).  
10.3 p.m.—ARDEN news service. British  
Official Wireless news from Bugby. Meteor-  
ological information. Sporting notes by  
"Glympse." Announcements.  
THE ROYAL AUTOMOBILE CLUB OF  
VICTORIA'S SAFETY MESSAGE FOR  
TODAY IS FOR  
PEDESTRIANS: "Stop, look and think  
before you act. Don't take chances."  
10.18 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"Takes to the Sun, Hang out the Moon"  
(Wood).  
"Ain't she sweet" (Yellen).  
"Moonbeam, kiss her for me" (Dixon).  
10.24 p.m.—ERN TROTMAN, comedian:  
"Rudyard."  
10.32 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"Gotta be live with you" (Meyer).  
"Whistle your blues away" (Meyer).  
"Do the Black Bottom with Me" (Meyer).  
10.42 p.m.—BOWER and RUTHERFORD,  
in another selection from their repertory.  
10.46 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
"Where do you work, John?" (Marks).  
"Cut me with something" (Dixon).  
"I'm looking over a four leaf clover"  
(Dixon).  
10.54 p.m.—ERN TROTMAN, comedian:  
"The Rural Concert."  
11 p.m.—ODE GREAT TROUPE:  
"Opposition may inflame the enthusiast,  
but never converts him" (Schiller).  
11.1 p.m.—JOE ARONSON and HIS SYN-  
COPATING SYMPHONISTS:  
11.10 p.m.—GOD SAVE THE KING.

## 7ZL, HOBART

- Thursday.  
MORNING SESSION.  
11 a.m. to 12 noon.  
AFTERNOON SESSION.  
2 p.m.—G.P.O. Clock chimes.  
2.15 p.m.—Tune in.  
2.3 p.m.—Hobart Stock Exchange quotations.  
Weather information.  
Items: telegrams—announcements.  
2.15 p.m.—Musical selections by 7ZL Studio  
Trio.  
4.15 p.m.—Chat by Child Welfare Nurs-  
ing—Cont. down.  
EARLY EVENING SESSION.  
6.30 p.m.—Children's Corner by "Uncle Peter."  
7 p.m.—"Big Brother" chats to his "Fala."  
NIGHT SESSION.  
7.30 p.m.—Musical selection.  
7.35 p.m.—The Photographic Corner: "The Re-  
sults obtained by Mr. C. H. Sims, Manager,  
Kodak Ltd., Hobart."  
7.40 p.m.—"Marsac" special Tasmanian news  
service. Railway section produce sales.  
Weather forecasts. Hobart Stock Exchange  
quotations.  
8 p.m.—G.P.O. Clock chimes.  
8.1 p.m.—Band Selections by John I.T.I.  
Band, Conductor Mr. "Clas Godard."  
8.40 p.m.—British Official Wireless News.  
8.45 p.m.—"Mercury" special interstate news  
service. Tasmanian Districts Weather Re-  
ports. 9 p.m. Weather forecasts. Station  
announcements.  
National Anthem.

## Friday, Sept. 23 2FC, SYDNEY.

- EARLY MORNING SESSION.  
7 a.m. to 8 a.m.  
MORNING SESSION.  
16 a.m.—"Big Ben" and announcements.  
16.25 a.m.—Studio music.  
16.31 a.m.—"Sydney Morning Herald" news  
service.  
16.35 a.m.—Studio music.  
16.42 a.m.—Studio music.  
11 a.m.—"Big Ben" Marching music for  
school children.  
11.15 a.m.—"E.F. and Bettine Cablan."  
11.20 p.m.—Studio music.  
11.16 a.m.—A talk on home cooking and  
recipes by Miss Ruth Farat.  
11.35 a.m.—Close down.  
MIDDAY SESSION.  
12 noon—"Big Ben" and programme an-  
nouncements.  
12.2 p.m.—Stock Exchange, first call.  
12.3 p.m.—Official weather forecast, rainfall.  
12.3 p.m.—Studio music.  
12.10 p.m.—Anniversary of "Sydney Morning  
Herald" news service. Bugby wireless news.  
12.25 p.m.—Studio music.  
12.30 p.m.—Marching music for school child-  
ren.  
12.50 p.m.—Fonse Brabel, contralto:  
"Hudson Song" (Ebenzer).  
NOTE: A description and results of the  
Dempster-Tanner Flight will be given during  
this session.  
12.48 p.m.—THE OAK HALL INSTRUMEN-  
TAL TRIO.  
12.55 p.m.—Studio music.  
1 p.m.—"Big Ben" Weather intelligence.  
1.13 p.m.—"Evening News" midday news ser-  
vice. Producers' Distributing Society's Re-  
port.  
1.20 a.m.—THE OAK HALL INSTRUMEN-  
TAL TRIO.  
1.25 p.m.—Stock Exchange, second call.  
1.30 p.m.—Marching music for school children.  
1.40 p.m.—Fonse Brabel, contralto:  
"Autumn" (Reinald).  
1.45 p.m.—Studio music.  
1.55 p.m.—THE OAK HALL INSTRUMEN-  
TAL TRIO.  
2 p.m.—"Big Ben" Close down.  
AFTERNOON SESSION.  
3 p.m.—"Big Ben" and announcements.  
3.3 p.m.—"John Freeman, contralto:  
"Trees" (Vaughan).

- 3.7 p.m.—The Lyceum Theatre Orchestra.  
 3.15 p.m.—A reading.  
 3.26 p.m.—Doris Crossman, contralto:  
 "Lis' Loree my Lute" (MacCann).  
 3.30 p.m.—Marching music for school children.  
 3.40 p.m.—Frank Betham, baritone:  
 "The Bedouin Love Song" (Pinsuti).  
 3.45 p.m.—The Lyceum Theatre Orchestra:  
 3.55 p.m.—Kathleen Call, mezzo:  
 "Ma Curly-Headed Baby" (Clutsam).  
 4 p.m.—"Big Ben." Gladys Aubin, soprano:  
 "A Gipsy Mignon II" (Parker).  
 4.4 p.m.—The Lyceum Theatre Orchestra.  
 4.15 p.m.—Jusie Freeman, contralto:  
 "You Lovely Thing" (Anderson).  
 4.20 p.m.—Frank Betham, baritone.  
 4.25 p.m.—The Lyceum Theatre Orchestra.  
 4.30 p.m.—Doris Crossman, contralto:  
 "So little time" (Lohr).  
 4.34 p.m.—The Lyceum Theatre Orchestra.  
 4.40 p.m.—Gladys Aubin, soprano:  
 "You don't believe in Fairies" (Hope).  
 4.45 p.m.—Stock Exchange, third call.  
 4.47 p.m.—Kathleen Call, mezzo:  
 "Love's Rhapsody" (d'Hardelot).  
 4.50 p.m.—The Westworth Symphonic Dance  
 Orchestra.  
 5 p.m.—"Big Ben." Chime down.

## EARLY EVENING SESSION.

- 5.40 p.m.—The chimes of 2FC.  
 5.45 p.m.—The "Hello Man" talks to the children.  
 5.50 p.m.—Story time for the young folk.  
 5.45 p.m.—Dinner music.  
 6 p.m.—"Big Ben." Latest sporting information by the 2FC. Commissioner.  
 7.10 p.m.—Dalgety's market reports (wool, wheat and stock).  
 7.15 p.m.—Fruit and vegetable markets.  
 7.20 p.m.—Weather and shipping news.  
 7.25 p.m.—"Evening News" late news service.

## NIGHT SESSION.

- 7.55 p.m.—Programme announcements.  
 7.55 p.m.—Walter Finlay, under the auspices of the Australian Examination Board, will give a lecture on "The Dactylic Measure. Mr. Hunt will recite "The Charge of the Light Brigade."  
 7.47 p.m.—William Bowyer, basso:  
 (a) "For the Green" (Lohr).  
 (b) "The Drover" (Stoneham).  
 7.55 p.m.—"What is your Birthday?"  
 7.57 p.m.—Details of the Dempsey-Tunney World Championship Fight.  
 8 p.m.—"Big Ben." The Prince Edward Theatre Orchestra, under the baton of Mr. Albert Casabon.  
 Mr. Leslie V. Harvey at the Grand Organ, with the Vocal Prologue to "BEN HUR" sung by Mr. John Priora.  
 The Orchestra will play the Overture to "Bened" (Wagner).  
 8.50 p.m.—A short talk on Bridge by Graham Kent.  
 9 p.m.—"Big Ben." Latest weather forecast.  
 9.1 p.m.—A pianoforte Recital by Mr. Frank Hutchens, Professor at the N.S.W. Conservatorium.  
 9.15 p.m.—Virginia Russett, contralto.  
 9.19 p.m.—Scott Alexander will present the latest Maria Meek dissertation.  
 "The Gentle Art of Flattery"  
 Written specially for 2FC, by Colbrington Hall.  
 9.24 p.m.—William Graham Smith and William Bowyer, basso, duet:  
 (a) "Polly Oliver" (Old English)  
 (b) "Watchman! what of the Night" (Sarjeant).  
 9.30 p.m.—Virginia Russett, contralto.  
 9.34 p.m.—Frank Hutchens, pianoforte solo.  
 9.50 p.m.—William Graham (tenor) and William Bowyer (basso) duet:  
 "Until" (Sanderson).  
 9.53 p.m.—Scott Alexander will present Colbrington Hall's latest Radio Fares, entitled: "The Twisters Twisted."  
 10.5 p.m.—Virginia Russett, contralto.  
 10.15 p.m.—The Prince Edward Theatre Orchestra conducted by Mr. Albert Casabon.  
 10.30 p.m.—The Westworth Symphonic Dance Orchestra under the baton of Mr. Cyril Kaye.  
 10.42 p.m.—Len Maurice, popular baritone.  
 10.47 p.m.—The Westworth Symphonic Dance Orchestra.  
 10.54 p.m.—Len Maurice, baritone.  
 10.57 p.m.—Late news and announcements.

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- 11 p.m.—"Big Ben." The Westworth Symphonic Dance Orchestra.  
11.10 p.m.—Lew Maurics, baritone.  
11.14 p.m.—The Westworth Symphonic Dance Orchestra.  
11.18 p.m.—National Anthem.  
Close down.

## 3LO, MELBOURNE

Friday

MIDDAY SESSION

- 12.0 noon.—Time Signal: Metal Prices received by the Australian Press Association from the London Stock Exchange via the British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Argus" News Service.  
12.05 p.m.—WEDDING AND MOLLOY, Entertainers.  
"She Knows Her Onion" (Pollock).  
"Lay Me Down to Sleep in Carolina" (Pollock).  
12.30 p.m.—STUDIO QUARTETTE:  
Waltz, "Gros Wein" (Strauss).  
12.40 p.m.—Stock Exchange Information.  
12.45 p.m.—JAMES HILEY, Tenor:  
"Somewhere a Voice is Calling" (Tate).  
"The Star" (Rogers).  
12.50 p.m.—STATION TRIO:  
"Hungarian Dance No. 3" (Brahms).  
1.0 p.m.—3LO's Time Signal.  
1.1 p.m.—ERN TROTMAN, Comedian:  
"Burlesque on Grand Opera"—with Banjo-Hue.  
1.5 p.m.—Meteorological Information: Weather Synopses for Victoria, Tasmania, South Australia and New South Wales; Ocean Forecast; River Reports for Victoria, Tasmania, South Australia and New South Wales.  
1.15 p.m.—STUDIO QUARTETTE:  
"Internacio" from Porgies's Marriage (Sibelius).  
1.25 p.m.—ELBIE BOWER AND BILLY RUTHERFORD:  
Selections from their repertoire.  
1.51 p.m.—TARMA TIEMMAN, Violin:  
"Reverie" (Vaucler).  
1.45 p.m.—STUDIO QUARTETTE:  
Reverie, "Nature's Adoration" (Strakos).  
2.0 p.m.—Class Down.  
2.18 p.m.—Description of Welter Handicap, Ballarat Miners' Races, by "Muskiet," of "The Sporting Globe."  
2.11 p.m.—Musical Programme, transmitted from Messrs. Allan and Co.'s Stand at the ROYAL AGRICULTURAL SHOW GROUND, Autiano Selection.  
Song, "Don't Sing Alone."  
CARLTON CHASE,  
Autiano selection of popular songs.  
Song, "Beshlahi Bang." FRANCIS LEA,  
Song, "If You See Sally."  
CARLTON CHASE,  
Short Stories, CARLTON CHASE.  
2.45 p.m.—Description of Nevie Handicap, Ballarat Miners' Races, by "Muskiet," of "The Sporting Globe."  
2.58 p.m.—Class Down.  
AFTERNOON SESSION.  
3.0 p.m.—STUDIO QUARTETTE:  
"Masurka and Nocturne."  
3.10 p.m.—ELLEN CASTLES, Soprano:  
"Waltz Song" (Rimsky and Juliet).  
3.15 p.m.—Description of September Handicap, Ballarat Miners' Races, by "Muskiet," of "The Sporting Globe."  
3.20 p.m.—MISS FRANCES FRASER:  
"A German Idyll."  
3.35 p.m.—STATION TRIO:  
"Serenade" (Vigna).  
3.45 p.m.—Description of Brush Steeple, Ballarat Miners' Races, by "Muskiet," of "The Sporting Globe" (Vardi).  
3.50 p.m.—ERN TROTMAN, Comedian:  
"The Cup Winner."  
"At a Musical Evening."  
3.57 p.m.—REGINALD BRADLEY, Violin:  
"Schubert Sonatina" (Kreutzer).  
"The Rosary" (Kevin Kraler).  
4.7 p.m.—ELLEN CASTLES, Soprano:  
"Nevie Handicap" (Vardi).  
"Callie Herrin" (Scottish).  
4.10 p.m.—Description of Novelty Pony Race, Ballarat Miners' Races, by "Muskiet," of "The Sporting Globe."

- 4.20 p.m.—**ELSIE BOWER AND BILLY RUTHERFORD** will entertain you with selections from new 78's, etc.
- 4.35 p.m.—**A. S. M. CALLAWAY MAHOOD** "The Art of Locomotion."
- 4.45 p.m.—Herald News Service, Stock Exchange Information.
- 4.50 p.m.—Description of Flying Machines, Helicopters, Airships, Balloons, by "Muskies," of the Sporting Globe."
- 5.0 p.m.—Close Down.

## EVENING SESSION.

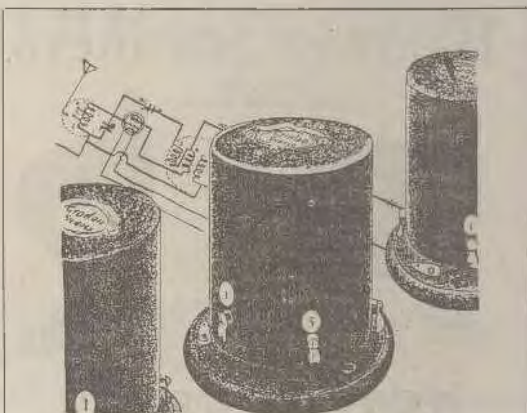
- 5.20 p.m.—Answers to Children's Letters and Birthday Wishes by "BILLY BONNY."
- 5.30 p.m.—**CLIFF BRADSHAW** has two funny little songs to sing to the children.
- 5.41 p.m.—"BILLY BONNY" will tell you some more:  
"Tell me why stories about animals."
- 5.47 p.m.—**CLIFF BRADSHAW** will now sing you something about animals!
- 5.55 p.m.—"BILLY BONNY" will continue "The Story of the Treasure Seekers."
- 5.56 p.m.—Herald News Service; Weather Synopsis, Shipping Movements.
- 6.47 p.m.—Stock Exchange Information.
- 6.52 p.m.—Fish Market Reports by J. R. Borrett Ltd.; Rabbit Prices.
- 6.55 p.m.—River Reports.
- 6.58 p.m.—Newmarket Sheep Sales by the Associated Stock and Station Agents, Bourke Street, Melbourne; Market Reports by the Victoria Poultry Co-operative Company Ltd.; Poultry, Grain, Hay, Straw, Juice, Dairy Produce, Potatoes, and Onions.
- 7.12 p.m.—Market Reports of Fruit by the Victorian Fruitgrowers' Association.

## NIGHT SESSION.

- 7.15 p.m.—Under the auspices of the Department of Agriculture, MR. S. G. HARRIS, Senior Potato Inspector:  
"Inspection of Potatoes and Onions."
- 7.30 p.m.—REV. F. R. GIBBLE:  
"The Aborigines—their past, present, future and mission."
- 7.40 p.m.—**COLLINGWOOD CITIZENS' BAND**:  
Overture, "La Vivanda."  
March, "Invincible Eagle."
- 7.50 p.m.—MR. H. K. LOVE will give his weekly talk on:  
"Technicalities."  
Mr. Love will be glad to attend to your wireless difficulties, and we ask you to write to him for any advice that you may require.
- 8.0 p.m.—**COLLINGWOOD CITIZENS' BAND**:  
Frambore Solo: "The Victory."
- 8.1 p.m.—**WENDLING AND MOLLOY**, Entertainers:  
"God Give Me Wonderful Dreams" (Nicolle).  
"What Has Become of Hinky Dinky Parley You" (Mellish).
- 8.17 p.m.—MR. C. J. WILLIAMS will comment on:  
"To-morrow Night's Stadium Event."
- 8.27 p.m.—**JAMES RILEY**, Tenor:  
"La Donna e Mobile" (Verdi).  
"Rose of My Heart" (Lohr).
- 8.34 p.m.—**COLLINGWOOD CITIZENS' BAND**:  
Waltz, "Pony."

## NIGHT SESSION.

- 8.41 p.m.—**ELSIE BOWER AND BILLY RUTHERFORD**:  
Selections from their Repertoire.
- 8.55 p.m.—"China and its relation to Pacific Problems," by an Australian.
- 9.10 p.m.—**EILEEN CASTLES**, Soprano:  
"Le Saran Rose" (Arditi).  
"Songs My Mother Taught Me" (Dvorak).
- 9.31 p.m.—**COLLINGWOOD CITIZENS' BAND**:  
Selection, "Songs of Wales."
- 9.37 p.m.—**MELBOURNE CHORAL UNION**:  
"Lullaby" (Brahms).  
"Irish Tune from County Derry" (Gräfenberg).  
"Annie Laurie" (by request).
- 9.47 p.m.—"CARDIGAN" Mr. H. A. Wolfe, Sporting Editor of "The Argus" and "Australasian," will speak on to-morrow's races.
- 9.47 p.m.—**EILEEN CASTLES**, Soprano:  
"Ave Maria" (Mascagni).  
"Dream of Day Girl" (German).
- 9.54 p.m.—**COLLINGWOOD CITIZENS' BAND**:  
Cornet Duet, "Romantic."



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Fox-trot, "Hi, Ho, the Merrie."  
10.12 p.m.—"Armagus" News, Interviews, Meteorological Information; British Official Wireless News from Kurly.  
10.14 p.m.—JAMES HILLY, Tenor:  
"Parade" (Tenor)  
"Elegance" (Col. Taylor).  
10.21 p.m.—COLLINGWOOD CITIZENS' BAND:  
Grand March, "Aida."  
Hymn, "Nearer My God, to Thee."  
10.30 p.m.—Road Notice, supplied by the Royal Automobile Club of Victoria; Announcements; THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY IS FOLLOWS:  
MOTORISTS: "Safety, first, last, always — is your car under control?"  
10.37 p.m.—MR. ERN TROTMAN, Comedian:  
"Dad Comes to Town."  
"My Share Was Underneath."  
10.45 p.m.—HAM JOHNSON'S MONTE CARLO ORCHESTRA:  
"Ain't She Sweet?"  
"You're the One for Me."  
"Mignonette."  
"In An Oriental Garden."  
11.0 p.m.—DUKE GREAT THOUGHT:  
"Hah honor is not only written and born by pain and danger, but must be nursed by the like, else it vanisheth as soon as it appears to the world."  
—Bir P. Sidney.  
11.11 p.m.—HAM JOHNSON'S MONTE CARLO ORCHESTRA.  
11.40 p.m.—GOD SAVE THE KING.

## Saturday, Sept. 24

### 2FC, SYDNEY

EARLY MORNING SESSION,  
7.0 a.m. to 8.0 a.m.

MORNING SESSION.

8.0 a.m.—"Big Ben" and Announcements.  
8.5 a.m.—Studio Music.  
9.0 a.m.—"Sydney Morning Herald" News Service.  
9.45 a.m.—Studio Music.  
10.30 a.m.—A Talk by the 2FC Racing Commissioner.  
10.45 a.m.—Studio Music.  
11.0 a.m.—"Big Ben" Studio Music.  
11.5 a.m.—A.P.A. and Kouzer's Cable Services.  
11.10 a.m.—Studio Music.  
11.15 a.m.—A Talk on Gardening by Mr. C. J. Lookley ("Redgum").  
11.30 a.m.—Close Down.  
MIDDAY AND AFTERNOON SESSIONS.  
12.0 noon—"Big Ben" and Announcements.  
12.2 p.m.—Stock Exchange, first call.  
12.3 p.m.—Studio Music.  
12.35 p.m.—"Sydney Morning Herald" News Service, Rugby Wireless News.  
12.35 p.m.—Studio Music.  
NOTE: Results of the Hawkesbury Racing Club's Meeting will be given at intervals throughout the afternoon.  
1.0 p.m.—"Big Ben"; Weather Intelligence.  
1.3 p.m.—"Evening News"; Midday News Service.  
1.50 p.m.—Studio Music.  
During the afternoon, the following musical items will be given:  
Howard Celestina, Novelty Pianist.  
The Crystal Palace Theatre Orchestra, conducted by Harry Stone.  
The Wentworth Symphonic Dance Orchestra, conducted by G. Rose.  
4.30 p.m.—Complete Sporting Results of the Day's Events.  
5.0 p.m.—"Big Ben"; Close Down.  
EARLY EVENING SESSION.  
5.45 p.m.—The Chimes of 2FC.  
5.45 p.m.—The "Hello Man" Talks to the Children.  
6.30 p.m.—Story Time for the Young Folk.  
6.40 p.m.—Dinner Music.  
7.0 p.m.—Latest Sporting Information.  
7.15 p.m.—Weather Intelligence.  
7.15 p.m.—"Evening News"; Late News Service.

NIGHT SESSION.

7.30 p.m.—Programme Announcements.  
7.35 p.m.—A Talk on Life Saving.

7.45 p.m.—Win and Windie, English Entertainers:

"The Shade of Shakespeare" (Win).

7.57 p.m.—"What is Your Birthday?"

8.0 p.m.—"Big Ben"; Win and Windie, English Entertainers:

"Home Made History" (Win).

8.5 p.m.—From the Sydney Town Hall. The

Complete Orchestra Concert by the N.S.W. Conservatorium

Orchestra. Conducted by

Mr. Armand Ormand. Station ZFC has en-

gaged this orchestra and arranged the concert

in connection with the University

Appeal.

8.8 p.m.—Overture, "William Tell" (Rossini).

8.26 p.m.—Prelude to "Lohengrin" (Wagner).

8.50 p.m.—Vocal Number, Alfred O'Shea,

Tenor.

8.48 p.m.—"Ride of the Valkyries" (Wagner).

8.58 p.m.—"Carmen" Suite (Bizet).

9.0 p.m.—"Big Ben"; Latest Weather Fore-

cast (from the Studio).

9.1 p.m.—Win and Windie, English Entertain-

ers.

9.8 p.m.—From the Sydney Town Hall. The

2nd part of the N.S.W. Conservatorium

Orchestra Concert.

Introduction to Act III, "Lohengrin"

(Wagner).

9.16 p.m.—Vocal Number, Alfred O'Shea,

Tenor.

9.24 p.m.—"Suite"—"Nutsacko" (Tchakow-

sky).

9.32 p.m.—"Minuet" (Boccherini).

9.40 p.m.—Overture—"Mélodramatique" (Wag-

ner).

10.0 p.m.—"Big Ben"; Sydney Calland, Barito-

tone.

10.10 p.m.—Jones and Raines, Entertainers.

10.24 p.m.—Frank Jay, Vocal Items with the

Ukulele.

10.25 p.m.—Sydney Calland, Baritone.

10.25 p.m.—The Wentworth Symphonic Dance

Orchestra, under the baton of Mr. Cyril

Key.

10.35 p.m.—Jones and Raines, Entertainers.

10.45 p.m.—The Wentworth Symphonic Dance

Orchestra.

10.45 p.m.—Sydney Calland, Baritone.

10.54 p.m.—Programme Announcements, and

Late News.

11.0 p.m.—"Big Ben"; The Wentworth Sym-

phonic Dance Orchestra.

11.14 p.m.—Frank Jay, Vocal Numbers with the

Ukulele.

11.24 p.m.—The Wentworth Symphonic Dance

Orchestra.

11.43 p.m.—National Anthem; Close Down.

### 3LO, MELBOURNE.

Saturday.

MORNING SESSION.

11 a.m.—JOHNSTON'S STUDIO BOYS:

Overture, "Post and Passport."

March, "The Frigate."

11.19 a.m.—WENDLING AND MOLLOY, en-

tertainers:

"Preparedness March" (Deloni).

"Johnny is Going to War" (Abrahams).

11.25 a.m.—CORNET SOLO:

"Australia."

"Because," Soloist, J. Robinson.

11.27 a.m.—JAMES RILEY, Tenor:

"The Stars Have Eyes" (Sanderson).

"Thank God for a Garden" (Del Rizzo).

11.34 a.m.—JOHNSTON'S STUDIO BOYS:

Selection, "Poetic Fancies."

11.44 a.m.—ERIK TROTMAN, comedian:

"The Whistling Yarn" (Snares);

"The Cup Winner."

11.50 a.m.—JOHNSTON'S STUDIO BOYS:

"Vision of Cayton."

12 noon.—Time signal. Metal Prices received

by The Australian Mines and Metals Asso-

ciation from the London Stock Exchange

this day. British Official Wireless news from

Rugby, Renter's and The Australian Press

Association Cables. "Argus" news service.

12.26 p.m.—ELSIE BOWER AND BILLY

BETHERFORD:

"In selections from their repertoire."

12.32 p.m.—JOHNSTON'S STUDIO BOYS:

Drum, Cornet and Trombone.

"Miserere."

12.40 p.m.—Stock Exchange Information.

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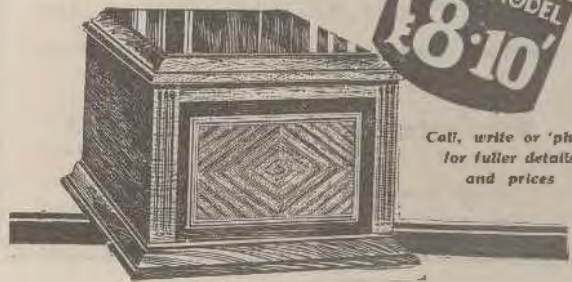
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- 12.42 p.m.—EILEEN CASTLES, Soprano:  
"Walk Bung"—La Boheme.  
"Serenade" (Gounod).
- 12.50 p.m.—JOHNSTON'S STUDIO BOYS:  
Selection, "Gems from Gilbert and  
Sullivan."
- 1 p.m.—R.D.'s Time Signal.
- 1.1 p.m.—ERN TROTSMAN, comedian:  
"The Two Crows."  
"Lips—squeezed."
- 1.5 p.m.—Meteorological information. Ship-  
ping intelligence. Weather forecast for  
Victoria, Tasmania, South Australia, and  
New South Wales. Ocean forecast. River  
reports. Rainfall for Victoria, Tasmania,  
South Australia, and New South Wales.
- 1.15 p.m.—JOHNSTON'S STUDIO BOYS:  
"Bells Across the Meadow."
- 1.22 p.m.—EILEEN CASTLES, Soprano:  
"Saber Vengeance"—Rollo in Nazareth;  
"Wind in the Trees" (Thomas).
- 1.30 p.m.—JOHNSTON'S STUDIO BOYS,  
March, "Anglo-Oriental."
- 1.35 p.m.—Description of Baseball Grand  
Finals, by Mr. Percy Steel.
- 1.45 p.m.—JAMES RILEY, Tenor:  
"The Rose and the Snow" (Dieckhoff).  
"Dusa" (McGill).
- 1.52 p.m.—JOHNSTON'S STUDIO BOYS:  
Fantasia, "La Petite."
- 2 p.m.—Description of Humeau Handicap, Moonee  
Valley Races, by "Muskiet" of "The Sporting  
Globe."
- 2.5 p.m.—Description of Baseball Grand  
Finals, by Mr. Percy Steel.
- 2.15 p.m.—Musical programme, transmitted  
from Messrs. Allan & Co.'s Stand at THE  
ROYAL AGRICULTURAL SHOW  
GROUNDS.  
Autophone selection:  
Song, "Forgotten," FRANCIS LEA.  
Song, "Sam, the Old Asseslin Man,"  
CARLTON CHASE.  
Autophone selection of popular songs.  
Song, "Love is just a little bit of Heaven"  
FRANCIS LEA.  
Song, "Al Sandown," CARLTON CHASE.  
2.30 p.m.—Description of Merri Maiden Plate,  
Moonee Valley Races, by "Muskiet" of "The  
Sporting Globe."
- 2.35 p.m.—VICTORIA FOOTBALL LEAGUE:  
Description of second semi-final, by Mr.  
Rod McGregor, from the M.C.C.
- 2.45 p.m.—Description of Baseball Grand  
Finals, by Mr. Percy Steel.
- 2.55 p.m.—Clue Down.
- AFTERNOON SESSION.**
- 3 p.m.—Description of Arundel Handicap,  
Moonee Valley Races, by "Muskiet" of "The  
Sporting Globe."
- 3.5 p.m.—JOE ARONSON AND HIS SYN-  
COPATING SYMPHONISTS:  
"Rolling Down the Rio" (Rieg).  
"Don't You Understand" (Flores).  
"When Lulu is Low in Distro" (Merckle).  
"That's Me Girl" (Brown).  
"St. Louis Blues" (Hendy).
- 4.20 p.m.—Description of Victoria Football  
League, second semi-final, by Mr. Rod  
McGregor, from the M.C.C. Quarter-time.
- 4.30 p.m.—Description of Tullamarine Handicap,  
Moonee Valley Races, by "Muskiet" of  
"The Sporting Globe."
- 4.35 p.m.—JOE ARONSON AND HIS SYN-  
COPATING SYMPHONISTS:  
"I'm Telling the Birds, Telling the Bees"  
(Brown).  
"The Planter's Release" (Pett).  
4 p.m.—Description of Victoria Football  
League semi-final, by Mr. Rod McGregor,  
from the M.C.C. Half-time.
- 4.10 p.m.—Description of Gumbly Handicap,  
Moonee Valley Races, by "Muskiet" of "The  
Sporting Globe."
- 4.15 p.m.—JOE ARONSON AND HIS  
COPATING SYMPHONISTS:  
"Sts. Lo-To" (Kahn).  
"The Hanging Gardens of Babylon" (Carlo)  
"Collecta" (Kahn).  
"Mountain Moon" (Lawrence).  
"Where Do You Work, John?" (Macka).  
"Ramping in Society" (Abe).  
4.30 p.m.—Description of Victoria Football  
League, second semi-final, by Mr. Rod  
McGregor, from the M.C.C. Threequarter time.



4.30 p.m.—Description of Alka Handicap, Meanes Valley Races, by "Munko," of "The Sporting Globe."

4.55 p.m.—"Herald" news service. Stock Exchange information.

5 p.m.—Description of VICTORIA FOOTBALL LEAGUE, second semi-final, by Mr. Rod McGregor, from M.C.C. Final scores.

4.10 p.m.—Close down.  
 Progress reports will be given during the afternoon of the 16-mile cycle race.

**EVENING SESSION.  
 CHILDREN'S HOUR.**

7.15 p.m.—Sporting results.  
 7.40 p.m.—Answers to letters and birthday greetings to one and all from "LITTLE MISS KOOKABURRA."

7.50 p.m.—STUDIO QUARTET:  
 "March of the Walling Dolls" (Cobb).

8.00 p.m.—"LITTLE MISS KOOKABURRA" has a most exciting story to tell.

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

8.25 p.m.—Stock Exchange information.

8.45 p.m.—Fish market reports, by J. R. Borrett, Ltd. Rabbit prices.

8.50 p.m.—River reports.

8.55 p.m.—Newmarket sheep sales, by Associated Stock and Station Agents, Bourke Street, Melbourne. Market reports, by the Victorian Producers' Co-operative Company, Ltd., poultry, grain, hay, straw, jute, dairy produce, potatoes and onions.

9.10 p.m.—Market reports of fruit, by Victorian Fruitgrowers' Association.

**NIGHT SESSION.**

7.16 p.m.—MR. H. WAKELING, honorary manager Victorian Boxing and Wrestling Team; MR. A. KAY, Australian Feather-weight Boxing Champion; MR. H. MORRIS, Victorian Middleweight Wrestling Champion, will speak on "Australian Boxing and Wrestling Championships."

7.36 p.m.—MR. E. F. PESCOTT will speak on "Backlogs as Timber Trees."

7.45 p.m.—REV. K. R. GRIBBLE will speak on "Associations—Their Past, Present, Future, and Mission."

8 p.m.—STUDIO QUARTET:  
 "Nydia" (Zemseniki).

8.15 p.m.—ELSIE BOWER AND BILLY KUTNERFORD, in selections from their repertoire.

8.25 p.m.—BLO WHISTLING COMPETITION—We have much pleasure in presenting the first, second and third prize winners in the competition.

FIRST—Mr. L. McDonald, of Richmond.

SECOND—Mrs. Daphne Whitehead, of East St. Kilda.

THIRD—Mr. George Tyle, of Auburn, N.S.W.

8.55 p.m.—EILEEN CASTLES, soprano:  
 "Battistella" (Pagliacci).

"Cradle Song" (Gutschmanoff).

8.40 p.m.—A special programme is being arranged.

10.15 p.m.—STUDIO QUARTET:  
 "Melody in F" (Rubinstein).

10.25 p.m.—ERN TROTMAN, comedian:  
 "Trials of a School Teacher."

"Discourse on the Voice."

10.40 p.m.—STATION TRIO:  
 "Largo" (Handel).

10.57 p.m.—JAMES RILEY, tenor:  
 "Nirvana" (Adams).

"Star of the Desert" (Banbury).

10.45 p.m.—Late sporting results.

THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TO-DAY is for

EVERYBODY—Safety means safeguarding the nation, the home and the industry from the demon Carelessness."

11 p.m.—OUR GREAT THOUGHT,  
 "Oppression is but another name for irresistible power, if history is to be trusted."—William Pittkey.

11.3 p.m.—JOE ARONSON AND HIS SYNCPATING SYMPHONISTS.

11.44 p.m.—GOD SAVE THE KING.

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### QUERIES

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N.C.A. (WAHROONGA).—Seemingly nothing is your trouble. 500 is a little more above the wavelength of 500, therefore only requires about one degree on the dial above Questioned, to place them. 52L should be within the range of your receiver. Your variable condensers are quite suitable. The egg aerial is worth building.

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J.C.P. (LEWISBURGH).—Take your battery and start on the Willard Battery diversion station, in Wentworth Ave. for alterations.

N.A. (BRISBANE).—I would not attempt to make these dry cells, it is cheaper to buy them.

W.N. (BRISBANE).—Your aerial is a right one in your set. Perhaps your musical notes in conjunction with your condensers will suit tone beyond 500 metres. If condensers are 3000, substitute for 5000.

E.J.H. (MANTY).—It doesn't matter where your wave trap is in relation to other parts.

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C.B.E. (GUILDFORD).—Obtain a 301 or 3000 fixed condenser and eliminate the 504 w/d. Everything else is OK.

A.R. (NORTH SYDNEY).—In a Reizartz receiver, where one or two stages of audio amplification follows the detector valve, when the choke can be dispensed with. Try without. A splendid substitute Two Valve Reizartz will be found in "W.W." 10/27. It is more sensitive than your present circuit.

I. McM. (HESSNOCK).—The aperiodic coil is not electrically connected to any other part of the circuit. The energy is conveyed from the primary to the secondary by induction. Any good valve will do.

K.M. (REIDERS).—You can add a further stage, but only one. See "Radio" of September, 1927.

S.H.G. (HOMEBUSH).—Full details of an improved Reizartz will be given in "W.W." shortly.

A.R. (DOUBLE BAY).—See "Radio" of September.

B.N. (ANNANDALE).—I can't tell from here without seeing the set. Call in a more experienced friend. The Bruvina Drake is an excellent receiver for intermediate work.

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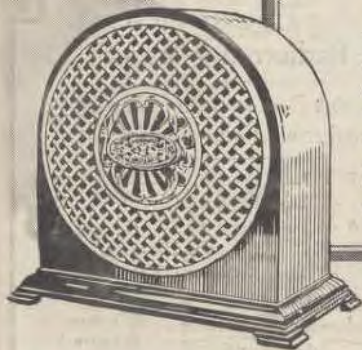
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