

# WIRELESS WEEKLY

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FEB 1927  
SYDNEY.

Broadcast Programmes a Week in advance

VOLUME 9

Registered at the G.P.O., Sydney, for  
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NUMBER 16



Friday, February 11, 1927.

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# WIRELESS WEEKLY

VOL. 9, No. 16.

FRIDAY, FEB. 21, 1927.

## *The Wireless Commission*

FEDERAL authorities have promised an early sitting for the Wireless Commission. That there should be no undue delay in the proceedings is vital to the welfare of the industry, for until the Commission's recommendations are made there will be little progress, and the listener will be the sufferer.

So far no date has been announced, but it is believed that the first evidence will be heard early in March. The Commission has been appointed and the terms of reference made public. The gentlemen selected to deal with the matter are very creditably representative of a variety of interests—legal, commercial, technical, and rural—all of which are concerned with wireless, and particularly with broadcasting, for there is scarcely any branch of social or commercial activities that does not experience some reaction to broadcasting.

And the terms of reference—the sailing orders, so to speak—are sufficiently comprehensive to give the Commission a very busy time. In short, it looks as if the discussion before the Commission will be confined not only to broadcasting, but also to wireless, telegraph and telephone services, existing or proposed; aircraft wireless, and every other form of wireless communication. When the Commission has had several weeks on broadcasting, we may read of them hearing evidence regarding

the use of wireless sets—sending and receiving—for inter-communication on large stations or other holdings in the back-blocks, where telephone lines are not available, and we may hear of requests for wireless fog stations or radio beacons for the guidance of mariners.

All of these subjects will be unimportant in comparison with the subject of broadcasting. That subject directly interests probably as many as a million people, and the decisions of the Commission may affect more than a half of these. The Commission will have put before it all manner of evidence, suggestions and possibly complaints regarding broadcasting. Some over-enthusiastic listeners may suggest alterations of the method of control of the business—suggestions that may be based on incomplete or inaccurate data.

The broadcasting regulations now in force have been very favorably commented on in many places. They have apparently formed the basis of regulations in South Africa, and New Zealand, and the method of control in Germany—introduced some time after the date of issue of the Australian regulations—differs very little in principle from ours.

It does appear that our conditions, in principle, at all events, are very reasonable, and that it is only in certain details that alteration could, with advantage, be introduced.

## Between You And Me And The Microphone

Conducted by Jack Plugge



THE SITE of the new Wellington EKW station has been selected on a high promontory 700 feet above the city. Upon this will be erected towers 250 feet high.

SINCE THE ARRIVAL of Mr. J. M. Prentice in the Dominion things have been moving rapidly. He took over the announcing at Auckland temporarily, pending the procuring of suitable staff which is a difficulty not yet overcome. Many scores of applicants for the position of Assistant Announcer were tried out without any result.

EDWARD BARNES, touring New Zealand, could not be located recently when his mother lay dying at Tamworth, so a message was broadcast from 2BL. A newspaper reporter listening in at Auckland heard the message and remembered having seen Mr. Barnes' name on a hotel list that day. He immediately communicated with Mr. Barnes, who left promptly for Sydney.

JUST AFTER WRITING the article which appeared in last week's issue, Mr. J. Flynn, superintendent of the Inland Mission, broadcast a message through 2FC asking Sister Small of the A.M. hospital, Alice Springs, to return to Sydney at once; her mother was seriously ill. By a miracle Sister Small heard the call and set out immediately on a 350 mile dash by car to catch the following day's weekly mail train from Oodnadatta. When she reached Sydney she had travelled almost two thousand miles.

ONE SHORT MESSAGE from SLO has brought joy to people on the other side of the world. The station last week received a letter from London in this strain: "I cannot thank you enough for your kindness in helping me to locate my brother, William Sherwood Clarke. It is a great relief to my mother and myself to know that he and his are well, and it seems wonderful that such a ready response should be given to an appeal for help from so many thousand miles away. It makes the great Dominion of Australia seem very near after all."

AIR LINES on the Imperial Airways are shortly to be equipped both with wireless telegraphy and telephony transmitters. This move is due to the present congestion on the telephones used for communication between the air liners in flight and the aerodromes. In future service messages will be sent out in Morse on a different wavelength, and a wireless operator will be carried.

ALTHOUGH residents of Fiji rely on KGO, California, for their musical programmes, they follow keenly the race descriptions from the Sydney stations, according to a visitor to 2BL this week. At Lautoka, he states, there is a group of racing enthusiasts who, choosing their fancies from the results and information broadcast from Sydney, invest on every important Australian meeting. From £300 to £400 comes to Sydney by every boat to be invested on horses picked by radio. The Fijians and Indians are born gamblers, but they do not appear to use the radio to any great extent, so far as the Sydney races are concerned.

THE PRESIDENT of the Otago Radio Association, Dunedin, New Zealand, has found Shakespearian broadcasting motto, which is printed upon the Association's notepaper. It is taken from "The Tempest," where Caliban says:

"The Isle is full of noises,  
Sounds and sweet airs that give  
delight and hurt not,  
Sometimes a thousand twanging instru-  
ments will hum about mine ears,  
And sometimes voices."



"SO YOUR husband has taken your radio all apart?" said Mrs. Suburbs. "Is he an expert?"

"Not yet," replied Mrs. Saylor, "He hasn't got it back together."

IN THE new rum blockade instituted by the U.S. Customs, every liquor-laden vessel leaving a Canadian or Mexican harbor is reported by wireless to coastguard officials, who can thus restrict their range of search to the vessels which are suspect.

AN AMERICAN Radio enthusiast in a letter to 2BL writes: "I was listening to your station at 5.25 a.m. (American time) and heard your announcer reading news items. One was a report of an awning fire in which a man got a ladder and tried to beat out the fire with presence of mind, while the lady from the floor above threw a bucket of water and drenched the man."

A FEW WEEKS AGO during the broadcasting of the children's hour from station 2BL, Sydney, a performer in the broadcasting studio gave an imitation of a cow mooing. A sequel was heard this week when 2BL received a letter from an American listener living at San Pedro, California who said: "I want a picture of that cow which I kept hearing over 2BL this a.m. I have heard roosters crow on the other side of the United States, but hearing a cow moo on the other side of the world beats me. Please don't forget the cow picture."

WHILE BROADCASTING a description of the interstate cricket recently 2FC received a telephone message something like this: "Why don't you send somebody out to the Cricket Ground who knows something about cricket and the men who are batting. Your announcer is talking about Hendry hitting MacNamee to the fence. Why, Hendry was out yesterday and could not possibly be batting to-day." He was gently informed that the Victorians had all been dismissed in the first innings for 35 runs and that Hendry was then batting in the second innings, but the only answer was a click.



The 2FC Dance Band with  
Eric Pearse at the Piano

## Do You Dance to the Loud Speaker ?

*The leader of the 2FC Dance Band, our contributor, recently established a world's record in conjunction with the Columbia Gramophone Co., by recording at 12 hours notice the popular number "Home to Ballarat," stocks of which were selling in that town four days later.*

*He attributes his success to the radio.*

I EXPECT an amazing increase in the popularity of dancing in country districts this winter. It will be mainly due to radio. I will tell you why.

It is to the simplification of dance steps and to greater facilities that the remarkable popularity of dancing during the last few years is due. But, another and no less important reason is the familiarity which the general public now enjoys with the newest dance music. This is proved beyond doubt when we compare the city with the country, and the enormous advantage the city has over the country in this respect. There was a time when it took many months for a popular melody to filter through from the city ball-room to the country hall, and then it never went further than the large centres. Few country musicians cared to master the new tune. The good old tunes of the old-time country dances reigned supreme.

Now, however, the country girl is humming the latest song just as soon as the city girl. And, what is more, she dances to it. Having the latest music at your hand leads you with its irresistible rhythm to dance, and the country girl is intrigued by the simplicity and easy grace of the modern dance. Her swan naturally follows, for to be left behind in such things is not to be thought of. That is why I believe modern dancing will jump into popularity in the country next year,

### By ERIC PEARSE

The magic of radio is responsible, for it brings the exhilaration of the finest ball-room into the care-free atmosphere of the listeners' own home.

There may be some who will express surprise at attributing this to radio and not to the gramophone. The radio has many advantages over the gramophone. The most telling argument in one of us. Once you have installed a good receiver and loud speaker your upkeep costs are comparatively negligible, and you hear the latest music played by the very best orchestras. But to maintain a gramophone library up to date is expensive. Then, of course, it is no easy matter to get the latest gramophone records in the country, and naturally one likes to hear the music played before purchasing. Some also bring forward the objection that the gramophone, to begin with, is hardly loud enough in a reasonably sized room; and the timing of the dance, which every dancer will appreciate as a most important matter, is regulated by the person working the instrument, and quite often is all wrong. However, I think that these views are super-critical.

Let nobody think that I am disparaging the gramophone, for it has done far more to make dance music popular than has radio. I am looking towards the future, for radio con-

quers distance as the gramophones cannot. I still believe that, despite the wonderful advances made by radio, considerable further technical research is necessary before radio music, as usually heard on the loud speaker, can be considered comparable, from a strictly musical point of view, with that produced by the latest electrical gramophone. Nevertheless, I am convinced that radio gets there and that it is the dance music medium of the future for those who are unable to enjoy our orchestras first hand. There is no reason either why one should clash with the other, for far from harming the gramophone record sales the radio helps to sell more, otherwise why would the gramophone companies allow their records to be broadcast?

I myself, owe a great deal to the radio, for it is through constant playing in the broadcasting studio that the 2FC Dance Band has been so successful in tests for the Columbia Gramophone Co. Right from beginning we realised that before we could broadcast satisfactorily we would have to experiment with the position of our various instruments. Months and months of changing about soon told us where each was heard best. Strange to say the drums must be close to the microphone. Then comes the trumpet and the trombone, followed by the two saxophones, with the banjo at the extreme rear just to the left of the piano.

# The Wa'ar'l's Sa'ab

The popular 2FC lecturer, in this article tells of his first experience with radio six years ago near Bagdad.

By MAJOR SANDFORD MORGAN, D.C.M.

**H**IS name was impossible to remember. I wrote it in my pocket book when he came to me, and from his pronunciation it sounded phonetically something like this: "Arboodey et Hasan, Karsim iben et Arbeem abdullah," which really meant that his proper name was: Aboudi el Hasan, Karsim iben el Asbin Abdullah. In any case, it conveyed the information to me that he was Aboudi of the Tribe of Hasan, which made him of Jewish descent, that his father's name was Karsim, who was the son of Asbin Abdullah.

Anyhow, I called him "Jim." And he very soon came to know his new name—but could never make himself properly understood because of the horrible mixture of dialects which he used to communicate anything and everything. I tried to ascertain for whom he had last been working as servant. All I could make of his reply was "Wa'ar'l's Sa'ab bil Hillah." This meant for someone in the town of Hillah, on the River Euphrates—but who or what "Wa'ar'l's Sa'ab" was, I could not, by any stretch of imagination, or concentrated thought, or close questioning of Jim, ascertain. I knew that Sa'ab was Jim's way of pronouncing Sahib. The Hindustanee

word for Sir, but beyond that I was lost.

Some months after he became my "Boy" I had to go to Hillah, and as soon as we came in sight of the town across the desert, Jim became quite excited, pointing towards the town and shouting out, "Hinak! Hinak! Sa'ab Wa'ar'l's Sa'ab!" Like a flash the explanation came to me in the distance I could see, towering up among the hovels of the town—the minarets and domes of the Mosques—a wireless mast.

That evening, I called at the camp pitched near the base of the mast, and discovered that the Commanding Officer of the Wireless Squadron was Jim's old master. This was my first introduction to wireless. It was in 1921, and I had the good luck to be present at the festival held in the mosque that night, in celebration of the fact that communication had been established that day, for the first time, between Hillah and Bagdad, some 40 miles, by wireless telephony. They had spoken from Hillah, and had been heard in Bagdad, from where they had received acknowledgment and congratulations.

I joined in the festivities with no less gusto, because at long last I had found out, who, what and where "The Wa'ar'l's Sa'ab" was.

## Do You Dance to the Loud Speaker?

(Continued from the previous page.)

When we came to make tests for gramophone records in a studio similar to that of 2FC, and through a microphone, we had the advantage over other bands. In this way we were able to make the record "Home to Ballarat" at twelve hours on January 28.

Many friends have told me that little dance music is transmitted by radio. It is often necessary to wait until the last of the programme, they explain, before a chance for a little dance occurs. This is perhaps often the case when a receiver is restricted to one station, but listening in the other night on a super-heterodyne I heard dance music pretty well right through the night, for as one pro-

gramme finished we switched on to another. This, of course, I realise is only possible on large and costly receivers which are, naturally, comparatively few. However, I believe that many stations have one dance night each week for the benefit of the dancers. I feel convinced that symphonic syncopation will find an increasingly large place in radio programmes. The public wants syncopation, and even the officials of the broadcasting stations must bow to public requirements sooner or later.

Dancing is the natural way normal human beings express joy. More syncopated music in radio programmes will make this happiness possible and in ever-widening surroundings.

Major  
Sandford  
Morgan  
D.C.M.



## Travelgrapologues

2FC scored a win in popularity when it persuaded Major H. Sandford Morgan, D.C.M., to broadcast topical talks on interesting events under the name of "Travelgrapologues," a word coined to describe a feature which embodies travel, pictures, and description over the air, all at one time. It meant that listeners-in could sit in their homes and see the scenes being described, reproduced in "The Evening News."

From letters received, these talks have made a great appeal to educational authorities. One school master takes full notes and uses the material thus provided for his head scholars to give lectures to their classes next day. Other letters have been received from all parts of Australia, especially from invalids unable to travel, saying how much more interesting it has been to be able to "look at a picture and at the same time hear all about the place," as one listener wrote. This feature is to be continued at intervals of about three weeks.

Major H. Sandford Morgan has been travelling to odd corners of the world since boyhood. He served for twenty years in the Imperial Army, passing safely through several wars. Beside the Distinguished Conduct Medal, won at the battle of Mons, he wears six others, the last one received being the Indian Frontier Medal with Clasp for Iraq. On retiring from the Army, he became a member of the Civil Service of Iraq. These facts qualify him to speak with authority on both travel and war.

HOO-OO-RA-A-A-EEE!  
I'VE GOT EVERY STATION  
IN AUSTRALIA



**G**OOD evening, ladies and gentlemen, of my great unseen audience. This is little Miss Flour-of-the-Basin, who will tonight give you the recipe for spinach salad. First you pick over, wash and cook... Miss Yvonne Litcoff, the Siberian soprano, who will... drain the stems and chop as finely as possible... Season well with salt, pepper, lemon juice and add one teaspoonful of... that peerless leader, that fine gentleman, that courageous statesman Luke Abraham Berlonie, who if elected will... butter the tan molds and pour the spinach into them and allow it to chill.

"Then remove the same from the molds and arrange on slices of cold boiled... selections from Puccini's last opera, which, as you all know, he wrote with the aid of... six little sprays of parsley.

\* \* \* \* \*

"Another very tasty dish, members of my great radio audience, is Salad Macedoine... and that other candidate, Mr. Sam Sliding-Panel, who has done more for this great country than... an equal portion of cauliflower, peas and carrots cut in small cubes and the outer stalks of celery finely cut. You then arrange the peas and carrots in alternate piles in centre of a salad dish and... you will get the kind of representation in Parliament to which you, my dear friends, are entitled.

"What has his opponent ever done to deserve... two minced onions and a grilled tomato... Pile the cauliflower on top, arrange celery in piles

at equal distances and at top of each pile place a gherkin... than whom there is no more splendid specimen than the Hon. Lucious Gristle.

"Flavor with salad oil and... the three Maloney Sisters, who have just come over from Perth.

\* \* \* \* \*

"Chandroid of eggs can be easily made... immediately following the Gazinkas Tap Rooting Company's Male Quartet... You cut six hard boiled eggs... the largest of which is the planet Saturn, which is one of the greatest of all the solar bodies and lies between... one-third cup of chopped chicken and half a pound of cheese.

"And two tablespoons cold cooked ham, well chopped, two tablespoons chopped raw mushroom caps and molten with Spanish sauce made of one part... the secretary of the Dingbat Club, who will tell you something of the year's work in that direction... and a liberal amount of truffles cut in fancy shapes... by Mrs. Peabody Glimp, chairlady of the Gaild for Kitten Welfare... with Russian dressing. Kindly stand by for the oyster chowder recipe by Prof. Noodle's Hungarian Band."

\* \* \* \* \*

"Tune in, kiddies, and I will regale you with the marvellous episode of the boy wizard, the enchanted maiden, and the magic silver... Bunk, ladies and gentlemen, is perhaps the most appropriate word with which to begin our analysis of the slang of all nations... it is a tale of childish purity couched in the delightful

## More Radio Irritations

BY THE MAN WITH A GROUCH.

This Week he gets same Radio Recipes, a Bedtime Story, and a Few Other Items on one of those Super-Selective Receivers that bring in Every Station in Australia in a Home where Everybody Works the Dials.

language of... youth is responsible for most of the slang words in our glorious language, for instance... Florimel returned home after his sojourn in the wicked world seeking his fortune. His arrival was a great event, for he had been a wizard with magic powers and had learnt how to make everything he touched turn into gold... Gee, what a whopper... did not join in the festivities for he was and. Nowhere could he see his beautiful Fairy Queen... 'that's the cat's whiskers' is a typical expression derived from wireless terms, proving that no matter how the studio managers try to keep the air clean... the Genie of the dervish whom he commanded to build him a castle. At the same time... those people who use slang resort to much stronger language when exasperated. Unfortunately, I am unable to give my listeners instances as... the eyes of the multitude were dazzled by the splendor of her recline. The great secret is that she was really only a poor little shop girl... clothed in beautiful English which... all the gnomes and fairies cheered... in picturesque Australian and... as they lived ever after... which plainly spoken constitutes a lie even when... .

A little bird tells me that Johnny Smith, of Ultimo... having concluded his address on the Danger of Slang when Broadcast we will now cross over to the Full-of-Pep-Jazz-Duo... will not wear knicker bockers when his mother tells him. Now, Johnny. You must... *Ever-to-lem girls, roll 'em*... and show mother and father that you respect them, for does not Shakespeare say... *Lough at Ma, Lough at Pa, Give 'em all the Ha, Ha, Ha...*

"Transmission, to-night, will be taken from... Madame La Tenton Parisienne who will deliver a short lecture on facial massage... at the Rossmore's Bay Stadium where Hurricane Jim Ironbark will meet... that tired feeling which assails us on those hot days, really I was only saying to Lady de Chair the other day that... a ten round bout for the Fly Wheel Belt of Australia... makes one perspire dreadfully, if I

may be permitted to use that word, and until I began this wonderful course of face exercises I suffered from a complaint...better known as the North Pole Alligator, who beat...a gentle massage of the loose skin beneath the eyes will be found to ease the strain while...a straight left by Hurricane was met with a counter blow followed by a short jab to the ribs...producing a slight tingling feeling down the spine. This is a sign of obesity which can be overcome by...clever footwork and the Crocodile has delivered a smashing blow to his opponent's mouth which now resembles a scrambled egg. This has so annoyed Hurricane that he has retaliated by a wild swing...which will not produce a harmful effect if used in moderation. A better method is to breathe in deeply through the nose until...both contestants have clinched and are about to butt each other with their heads. Hurricane is endeavoring to use his knee despite gentle reproof from the referee, who says that such tactics are unfair...except in the case of the ears, which should be cleaned regularly, say, once a week, otherwise hearing is likely to be affected...if the Alligator uses his teeth the fight may be stopped, but this is unlikely for the man from Ironbark has a tricky toothold...

\* \* \*

"Hello, Hello, everybody, this Wandering Freddie speaking, all happy, I'm sorry I can't see you, I mean you can't see me, because I'm smiling so sweetly at you...the gong has saved him, they're carrying him off...when exhausted the muscles of the face often twich nervously. Cold water...my jolly old friends...Next number by the Full-o-Pep...He's using the rabbit-punch...served with lamb cutlets...*Tou Rou Loi*, and Applesauages...Oh, Lovely night..."

#### Introducing . . .

#### Miss Daisy Mangan

THESE are sensations and sensations of course, half over one actress—*Miss Daisy Mangan*, the dainty Tasmanian singer, who illustrated Maurice Beatty's lecture recital on January 27, is "out burst to listen to." Her high C's please and delight twice another's leave the helpless listeners with a shivering spine.

Singing is as natural as breathing to Daisy.

Mr. Roland Foster, her tutor, regards her as one of the most accomplished and artistic singers he has taught, and Miss Mangan was personally complimented by Dame Clara Butt during her recent visit; the great contralto praising both Miss Mangan's singing and her sympathetic playing as accompanist during Dame Butt's audi-



MISS LILIAN FROST has returned from her vacation in Tasmania, and will resume her broadcast organ recitals through 2FC on Sunday, February 13.

JIMMY RAIN, comedian.—This name will recall to the previous generation memories of many hearty laughs, over the antics and drolleries of a famous comedian. He will broadcast from 2FC on Monday, February 12.

MISS GOODIE REEVE is back at 2FC. She is arranging interviews with Charles Wilson, Arthur Stilgout, of the newly-formed "Hullo, Reeo" Company, John Ralston, of the Gilbert and Sullivan Company, and others. She has already dealt with Stella Wilson, Judith Anderson, and T. Duffield.

THE RECEPTION of the Bishop of London at the Town Hall on Thursday, February 17, will be broadcast by 2FC. The Bishop will visit "Slavilah" at Wahroonga on Friday, February 18, to lay the foundation stone of a new home for children. His speech on this occasion will also be broadcast by 2FC. When he preaches at St. Andrew's Cathedral in March, his sermon may be heard on the air.



PHILCO—"You never need guess."

2FC will broadcast direct from the Town Hall on the following days: Wednesday, February 23, afternoon and evening; Saturday, February 25, afternoon and evening; Wednesday, March 2, afternoon and evening, and the afternoon of Thursday, March 3.

"LITTLE MISS KOOKABURRA" has been persuaded to talk to them during the children's hour on Tuesday night, in addition to Monday night. She has been busily collecting a budget of the most delightful stories—just the sort that children of all ages will love to hear.

SATURDAY EVENINGS, from 8 p.m. until 10 o'clock, 2GB allows its programme to be arranged by listeners-in. Requests can be made by telephone or letter, asking for popular songs, popular gramophone records, or popular poems, and every effort is made to satisfy the varied wishes of those desiring popular items.

"ROSE MARIE" finishes its record breaking run at Her Majesty's Theatre on Monday, February 21. 2FC hope to broadcast for the last time the 1st act, which runs from 7.55 to 9.40 p.m., and also to take the speeches at the fall of the curtain.

DREW AND ROMAINE are the latest recruits to the ranks of good people who broadcast from 3LO. Their contribution to the programme consists of clever work at the piano—good effects—and bright, breezy selections and should prove a welcome item in the programme.

ZGR AIMS at the greatest educational service possible, and as well as providing in its programmes to come talks on psychology, philosophy and travel. Arrangements are now well forward to engage leading authorities on economic subjects to give fifteen minutes talk on Australian problems. A list of appointments will be shortly established to include debates, in which listeners-in will be asked to adjudicate.

An article by Uncle Jack, who resigned from 2BL recently to take over the organisation of the Radio Broadcasting Co. of New Zealand.



The staff of 1YA, Auckland photographed Specially for Wireless Weekly. Mr. Prentice is seen seated in the centre of the group.

## Radio Development in the Dominion

By UNCLE JACK PRENTICE

HERE are two features which will make wireless of tremendous value to the Dominion, the first is the utility value, for wireless is a means by which information may be conveyed to those people who are more or less out of touch with things as the people of the towns and cities know them, those people who receive their newspapers late, people who require the latest market reports in a form most suited to their requirements. Conditions in New Zealand are very different from those in Australia, in that there are here a large number of towns dotted about in each island, in place of the few large cities and the ever-dwindling population as one travels out from them in Australia. Therefore in New Zealand your performers are more spread about the country; there is not the concentration of value that is found in Australia.

The ultimate value of wireless is likely to be found in the provision of information and entertainment for the dwellers on the land, rather than the provision of entertainment for city dwellers, although at the present time the great number of licenses is held in the main cities of the Dominion.

One of my main ideas is to introduce an educative as well as an entertainment value into every session, but this should never be allowed to become heavy and dry, and should not be allowed to be used for propaganda purposes of any sort.

As an example of this class of broadcasting, I mention the following. During the two years of my association with 2BL, Sydney, I conducted courses in English literature, psychology, and philosophic thought. It was estimated that the courses were followed with the closest attention by at least 10,000 people, and it is possible that similar courses might be arranged at a later date in New Zealand. Talks on international affairs also proved popular, and valuable work might also be done in the direction of giving instructions to owners of receiving apparatus in the development of their sets. Lecturettes upon the work of the great composers undoubtedly have a definite educational value, and recently in Auckland I presented two items of this nature. On the first occasion I was assisted by artists of international reputation and on the second used gramophone records to illustrate the development of the genius of Richard Wagner.

The type of receiver now being placed on the market in the Dominion is excellent and appears to be far in advance of anything in Australia, where local conditions necessitated the development of a type of receiver covering a range outside that of the American developed sets. The neutrodyne receiver, which is largely used in New Zealand, had scarcely made an impression upon Australia up to the time of my departure.

At the same time I am concerned over the problem of the howling valve, which is far too prevalent, and which considerably mars the pleasure of listening-in. The greatest factor in removing the nuisance will be the co-operation of dealers, in instructing purchasers of sets as to its possibilities and limitations. Almost invariably the howling valve is the result of an endeavour to push a receiving set beyond its capacity, but with the development of local stations and the provision of better programmes the trouble will be minimised, through owners of sets being satisfied to accept the offerings of local sets and not reaching out for Australia or America.

In half a dozen departments of activity the competition of wireless has resulted in increased efficiency; for instance, in the cable service, in the gramophone, and in the recording of mechanical music generally, advances have been made which, without the stimulus of the competition of wireless, might not have been achieved for half a century.

There is no question as to whether wireless has come to stay. I do not wish to commit myself in regard to local conditions until I have had an opportunity of covering the whole of the Dominion, but I anticipate very considerable developments, all of which will tend to bring about more satisfactory service.

# The Safety Valve

A department in which readers are invited to relieve their feelings by commendation or condemnation of broadcasting stations and their programmes. All letters must be addressed to "The Safety Valve," Wireless Weekly, 51 Castlereagh St., Sydney.



## ANTI-ANNOUNCER.

Dear Sir,—I for one, am sick and tired of hearing announcers announcing items at the broadcasting stations. Some of them will "chew" every word they can. I enjoy radio most when a station switches on to some pace where the announcer is unable to drag the items about just before presenting them. Some stations give out the programme before they really begin; at 4.00 p.m. they say what is the programme from 8 p.m. till 12 midnight. Would not this suffice, instead of grinding out a yarn about the items while the programme should be progressing? Announcers are good fellows, and all that, but they often spoil an otherwise good programme while making good fellows of themselves.

Yours, etc.,  
NOANNOUNCER

Lawrence.

## A MUCK-UP NIGHT.

Dear Sir,—I am not the only one who has complained about the good programme at 2BL which was spoilt on a recent Saturday night with a Car Hunt. Just as one would get interested in a vocal or musical item, someone would chime in with some foolish statement, such as "the car has gone over the Gap, or was seen in the Zoo. If 2BL are anxious to put such stuff on the air, why not reserve some night for a Muck Up Night, instead of spoiling a good night's entertainment, especially a Saturday night, when things of interest can be broadcast.

Yours, etc.,  
A. PLAYFARE.

## BURP—CRACKLE—CRASH!

Dear Sir,—Broadcasters, are you listening? Your programmes are good, your artists are good, but isn't there something wrong with your transmission. I think so. Attempt to tune in your own station. My experience is that after considerable "Sweet, Sweet, Joey, Joey" at last you land the bird, and you are enjoying some item when your neighbor comes along. "Sweet, Joey, Joey, Squeak, burp, crash!" he has missed that bird (station), so he tries another with the same results, comes back and gives you some more.

Now, I put it to the broadcasting engineers, isn't 2BL tuned too close?

Yours, etc.,  
"BUSHIE."

Bull.

We would advise our correspondent to examine his set carefully for faults. The symptoms mentioned here would indicate that he has a non-selective receiver.

## AN HISTORICAL CIRCUIT.

Dear Sir,—The radio bug has been much contorted of late, but now the "cat" is out. So here goes—

"The Neutraline may grow and whine;

The Howling Broke may quack;  
The sweater leaps aside, and sweeps  
All lumber from the track!"

If you will kindly show how to add a tourist value to the Mewflex, you will have published something historical.

Yours, etc.,  
LICENCE No. 44801,  
Sans Souci.

## BETTER CLASS MUSIC.

Dear Sir,—I recently listened, with keen enjoyment, to a performance by Madame Evelyn Greig and M. Henri Stael, of the first Beethoven Sonata for piano and violin. It was announced that this would be the first of a series embracing the performances of the whole of these magnificent works. Apart from their great educational value to students, also an antidote to the existing jazz epidemic, the performance of these Sonatas, so capably interpreted by Madame Greig and M. Stael, is of special interest at this time in view of the coming Beethoven Centenary.

I congratulate 2FC on the excellence of the programmes. Notwithstanding the tendency now-a-days towards the frivolous in music, there is, in the great majority of listeners, a keen appreciation of the good old masters; also of the instructive and interesting lectures to which we have, from time to time, had the privilege of listening.

Yours etc.,  
P.S.

Woollahra.

## CUT OUT SOPRANOS.

Dear Sir,—Considering the very high standard of modern gramophone records, I think it a distinct advantage to broadcast a few each evening. If anything is to make room for them, I say cut out a few sopranos.

Yours, etc.,  
Wollongong.

J.R.J.

## PREFERS LOCAL TALENT.

Dear Sir,—I believe that purely local talent is far better than gramophone records of any kind, and I think that there are too many gramophone records on the programme in the daytime. I suggest that some young talent in pantomime numbers should be broadcast with orchestral accompaniment, say for about 45 minutes one night a week. I would also like to hear some fox-trots, old melodies and marches on the player piano in the daytime.

Yours, etc.,  
V.P.

Gordon.

## GRAMOPHONE IS BETTER.

Dear Sir,—Most emphatically I say, broadcast records over the air, especially good quality stuff, either vocal or instrumental. I would like to hear at least three double-sided records, during the night sessions. I think records give listeners an excellent opportunity of hearing talent from the other side of the world, artists that probably a good many of us would never hear, in any other way. Anyone who is broadminded must admit that much of the talent employed on these records is infinitely better than can be procured locally at all times.

I fail to see why people object to records. I myself have an excellent gramophone, and a collection of very good and varied records; still I like to hear new records put over the air. The aim of everyone is to hear the best, so what matters whether it comes indirectly from a record or direct from the artist? Another suggestion I would like to make—I think a few numbers by the 2FC Dance Band between, say, 8 and 10 p.m. would be very acceptable.

Yours, etc.,  
G.H.D.

Laura.

# JAZZ

**Syncopated melody as rendered by a new and highly expensive Jazz Band at 3LO is discussed by our correspondent this week.**

**J**AZZ is the great modern god, and Joe Aronson is his prophet. Now and again, in moments of social aberration I have wandered along the haunts where men and girls dance. In one of these excursions, I chanced to hear the strains of tortured melody that seem to please millions of ears. The head and front of the offending was one Joe Aronson, aided and abetted by eleven disciples.

No one knows to whom the saxophone is due, except that it was someone named Sax. Anyway, it is too late to do anything about it now the mischief's done. I had to admit that if jazz must be played, it is better it should be dealt with by an artist like Joe than by an inferior. I am willing, too, to admit that the million have a far greater right to preserve their enjoyment than a solitary, embittered cuss like me. For this reason I was pleased to hear that Monsieur Joseph Aronson had been given an opportunity to please a larger audience than was possible to him in Wattle Path Palais. When the Americans wish to say that a man is not wanted they describe him as being "given the air." Then we "give him the air," we mean just the opposite. It is Joseph's exceeding popularity that is giving him the air, for 3LO has just engaged him at a fabulous salary to play the latest melodies from the studio. His eleven merry men will assist.

This engagement is important. My somewhat flippant tone must not be taken to mean that I laugh at these creators of syncopated melody. I realise their great place in the present musical scheme of the world, and I doubt not that the engagement of this expensive band will give more genuine pleasure to listeners than a mere highbrow programme. It is, too, a telling reply to some critics of Australian Broadcasting, who allege that only these artists are engaged who are willing to work for nothing. I once had an opportunity



*This picture was taken when the new 3LO Studios were in a state of chaos. In another week they will present an entirely different aspect.*

to peek at a salary list of 3LO, and it filled me with envy and admiration. Why, these performers are lords of the air, and could all keep tame Rolls-Roads, if they liked. Seriously, broadcasting has meant to many a singer the difference between living well and existing precariously.

#### A New Musical Venture.

Agropos of this, I was very pleased to hear a day or two ago that 3LO is in treaty with William James, the pianist, to engage him to put on special concerts of opera and opera bouffe, with the aid of four solo singers, and, possibly, a chorus.

Everyone who loves decent music has lamented the difficulty of getting a good supply of it in a form as will make it really acceptable to the average listener. Classical concerts are good, and they unquestionably help to mould public taste, but they generally begin on so high a plane that the non-musical public find it difficult to follow. William James is shrewd enough to realise this. He knows there is a great body of excellent music, tuneful, easy to understand and appreciate, and which serves as a threshold to even better composition. Many grand operas are in this category. It is his intention to train good singers as a company, and with their aid to put on the air whole operas. Not all these will be of the sort known as "grand," either. In the past there have been many popular operas of which the people

have the tenderest recollections. When a chance air from one of these is played, oldsters prick up their ears, and begin to hum the tune, while eager fingers drum an accompaniment. Such operas as "Floradora," "The Country Girl," "San Toy," belong to this category, and their recreation in shrill form by Mr. James' company of singers will be welcome.

His wife has already made herself very popular to listeners. She is Saffo Arnold, a Russian soprano, who played the lead at Daly's Theatre in London. Akin to our own Gladys Moncrieff, and to Josie Collins, musically speaking, she sings the songs made so attractive by these artists. Personally, very delightful and charming, these qualities seem to have got over the air, and the announcement of her singing in the programme is always greeted with enthusiasm. She, of course, will be Mr. James' lieutenant in the new venture.

**THE PIED PIPERS:** Great success is attending the contributions of the "Pied Pipers" to the vocal portion of the 3LO Children's Hour every Sunday evening. The somewhat unusual arrangements of old songs, glee, and even nursery rhymes, which are set to well known hymn tunes, are a delight to the ear of both young and old alike, greatly attracting and interesting the juvenile mind.

**MILES BY CYCLE:** Is there a man in Sydney who is interested in cycles, motor bikes or walking tours who has not heard of Joe Pearson? There is hardly a square mile in this vast continent of ours which has not been pedalled over by Joe, on his trusty "bike." Although Mr. Pearson confesses to having reached the allotted span of life, he thinks nothing of a ten mile spin before breakfast. He has been induced by 2FC to tell radio listeners some of his impressions on Early Sydney, and to describe the then methods of transportation.

**RADIO EXHIBITION.** 2FC have booked an array of artists and bands for the exhibition at the Town Hall, commencing on February 23. The opening programme on February 23 will include Madame Elsa Stralia, the well-known Australian dramatic soprano, Maxine Brodie (tenor), the 2FC Dance Band of nine members, the Bondi Beach Concert Band (winners of 1927 Australian Band Championship), Miss Eileen Boyd (contralto), Mr. Ernest Archer (tenor), Mr. Wally Baynes (comedian), Mr. Cliff Arnold (novelty pianist), Mr. Jack Lumsdaine (entertainer), and Mr. Russ Garling, with the inimitable "Jerry" in ventriloquial patter.

**IN ADDITION** to the Ladies' Pipe Band, which has been broadcasting some excellent selections lately from 3LO, Miss Gertie Armstrong, one of the foremost lady pipers of Australia, has been engaged for a short season. Like a true Scotch lassie, Miss Armstrong includes only Scotch airs in her repertoire, of which she possesses ten books of manuscript, all transcribed by herself. Each air, she will tell you, has its own history, and some of them very stirring histories, too, and date back to the lusty days when "Bonnie Prince Charlie stepped over the Border."

**MR. SYD SMITH,** manager of the 1921-1922 and 1925-1926 tours of the Australian cricketers, gives the second of a series of talks from Station 2FC on Friday at 8.40 p.m. He will describe the selection of the team, the tour home, the reception of the team abroad and its social activities. He will also trace the politics of cricket in the big English conference, and the play of the Australians in England and Scotland. Mr. Smith will then tell of the difficulties in transit through the strike, and give some humorous sidelights on the tour. He will express an opinion on the players met while in England, and the prospects of the future tests.

## IT'S ALL IN THE AIR

**Coming Features in the  
Broadcasting Programs**



*Miss D. Bertram, who is a very old favourite with many listeners to 2BL. Some time ago Miss Bertram severed her connection with that station, and has since been taking things easy. She leaves by the R.M.S. "Niagara" for Vancouver on February 10, and after crossing through Canada and the Eastern part of U.S.A., she will leave for England, where, upon arrival, she is to be married to Mr. John Harland-Livingstone. The honeymoon will be spent in England and France, and the bride and bridegroom are then departing for Burma. Mr. Livingstone has been a prominent racing personality in India for some time.*

**MISS ALICE PROWSE** (contralto), will be heard from 2FC in a series of recitals. She will be associated with Mr. James Brash, who will act as her accompanist. She first appears on Sunday, February 13.

**QUARTETTE WORK,** whether vocal or instrumental, while being one of the most pleasing forms of musical performance, is at the same time one of the most difficult. To ensure a satisfactory result, it is necessary to have four well-balanced artists with one common aim. Station 4QG has been very fortunate in its selection of this type of musical organisation, and feels it will well sustain its reputation on February 13 when the 4QG Harmony Four, who by the way will have the able assistance of Mrs. Hilda Woolmer as Pianiste, will broadcast a choice programme of concerted male voice part singing.

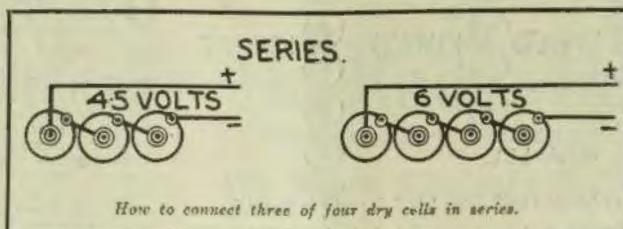
**IS BEETHOVEN POPULAR WITH LISTENERS?** Madame Evelyn Grieg, a Sydney pianist, and M. Henri Staell (violinist) are quite certain that there is a big listening public for Beethoven. Sonata No. 2 will be heard on Monday, February 14. These appearances at the present time are particularly suitable, as the Beethoven Centenary will be celebrated in Sydney on March 26.

**MISS MAGGIE FOSTER,** the clever violinist, who has been playing from 3LO, has an original "specialty" number called the "Canary," which was specially composed for, and presented to her during a New Zealand tour. Miss Foster delights in playing on "Muted Strings," and, when she includes any Scotch selections in her repertoire, contrives to introduce a spirited imitation of the bagpipes, making the "approach" and "retreat" startlingly realistic.

**JOE ARONSON** and his syncopated symphonists, who have made an enviable name for themselves at the Wattle Path Palais de Dance, Melbourne, are now under contract to 3LO, and will broadcast every night from 11 o'clock to 11.40, on two afternoons a week, during one lunch hour, and will carry out the usual dance programme on Thursday night. Each session will be played by the "Symphonists" instead of the 3LO Melody Masters, as has hitherto been the case.

**THE DAILY WOMEN'S SESSIONS** of 2BL have been strengthened by the addition of Miss Dorothy Bowden, B.A., who is giving a series of talks on "Common Sense and Dietetics." Miss Bowden deals with the chemical changes which take place in the cooking and eating of green vegetables, lentils, and legumes, meat and fruit, and will explain in simple language the food values of each. The women's sessions of 2BL are held at 11.30 each day, and constitute one of the most important functions of the station.

# Looking For Trouble In Your Set



**Another Article of the Fault-finding Series by W.L.H.**  
**This week the reader is shown how to trace crackling noises to their source and how to remedy faults in reflex receivers.**

Last week we learned how to test a fixed condenser, using a lamp and a battery in series. Another method of doing this is described here:

Fixed condensers sometimes break down, and are very difficult to detect. This time the C. battery and the flash lamp are useful. Take a wire from the positive terminal of the battery to one side of the fixed condenser, then join the other side of the fixed condenser to one side or connection for the lamp, and take a lead from the other connection of the lamp to the remaining terminal of the battery. If the fixed condenser is broken down, the lamp will light.

Another method of testing a fixed condenser is to charge it up with current from the B. battery. Touch the positive of the B. battery to one side of the condenser at the same time as the negative of the B. battery is touched to the other side of the condenser. Don't touch the condenser terminals with the fingers, but remove the B. battery and holding the ends of a phone cord in the fingers, allow the tips of the phones to rest momentarily on each contact of the fixed condenser, and at the moment of contact, a slight click should be heard. Only at the moment of application, mind you, will this click be heard.

These are just a few of the troubles one may have to meet. There are many others, and they will be dealt with all in good time.

While on the subject of condensers, we may be pardoned for reverting back to the subject of variable condensers. The other evening, the writer had a four valve set submitted to him, the owner complaining that a terrible crackling noise was always present during and spoiling reception. The B. batteries were tested, and found to be alright and after careful

elimination of many possibilities, the noises were traced to the variable condensers.

Evidently, the receiver had not been kept in a cabinet, and consequently, small particles of dust had settled in between the movable and fixed plates of the condenser. As the B. battery was impressed on this condenser every movement of the dial caused the annoying crackling referred to. A pipe cleaner served the purpose of removing the cause and everyone was happy again.

Crackling in a radio receiver is a most annoying trouble. Often the B. battery is blamed, and rightly too. When a dry B. battery gets worn out, all the crackling in the world takes place. Examine the battery, and invariably it will be found that it should be discarded when crackling takes place. Static is often blamed wrongly when the B. battery is the miscreant.

Another potent cause of crackling is located in a common cause—loose connections. Frequently a nut is not tightly screwed down or a terminal is just left loose. This is easily remedied by process of elimination until the offender is found and corrected.

A few months ago a very pronounced crackling presented itself in an otherwise perfectly good receiver. For some time the same set had been the pride of the writer's heart, and often the headphones were resorted to instead of the speaker when seeking the long distance station. Comprising a detector and two stages of audio, no trouble at all had been experienced until one night a most frightful crackling took place every time a movement was made.

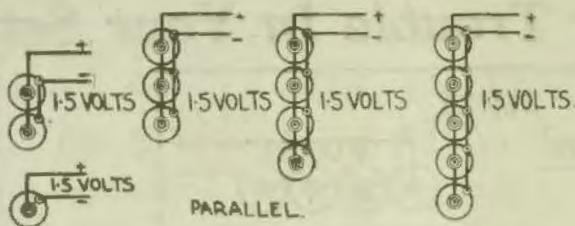
The phone cords were suspected, and tested, only to be found quite satisfactory and in good going order. Every joint was tight, the valve

sockets proved good contact with the phone pins, and other possible sources revealed that everything was in perfect order. Really, it seemed that the Aspro bottle would be called into commission. Finally, the fault was traced to the battery cord, which consisted of ordinary electric light flex in which the rubber had perished. The wire strands inside had just parted and made a rubbing contact, which caused the crackling.

Phone cords have a happy habit of getting worn inside, particularly near the tips and the ear pieces. Fortunately, cords are renewable for a few shillings, and are obtainable everywhere.

A prevalent source of annoyance is frequently found in receivers equipped with coil holders. Sometimes it happens that the screws which are found on the sides of the coil holder plugs are not quite long enough to reach the socket or the pin inside. This has happened in the writer's experience, scores of times, and can be found with the battery and phones in series (see last week's "Wireless Weekly"). To go about this test remove the coil from the holder and place the lead from the battery on one pin of the coil holder and test back to the screw at the side. A click indicates that this one is in order. Go right through all of them until the absence of a click points to the open circuit, and rectify it.

Reflex sets seem to develop many faults. Occasionally we receive a letter from a constructor who accuses the designer of being wrong. We have gone to great lengths to get a neatly and efficiently designed reflex set, and then, within a week, in comes the usual letter. "The layout has been followed carefully and all the parts are of the best, yet the crystal refuses to be of any practical value whatever. In fact, when the crystal



Methods of arriving at 1.5 volts with from 1 to 5 dry cells in parallel.

is removed, signal strength is increased." Such is the tone of the letter, and our correspondent is quite correct, in many instances.

But the fault is his, through not being familiar with reflex receivers. Every time we publish a description of a reflex set we stress the necessity of employing a high voltage B battery. In reflex receivers 40 volts as a B battery are not sufficient as a rule, as often the valve with this B battery is working at or near the lower bend of its characteristic curve. Therefore, the valve rectifier or detector instead of amplifying at both radio and audio frequency, as is intended.

Now, in this instance, the working point of the valve should be on the straight portion of the curve, so to do this, increase the plate voltage to 50 volts or even more. A grid bias or C battery is frequently found very useful to aid in this direction, and is easily applied. The circuit in this article is the Harkness Reflex, with the addition of a C battery, and this alteration will help many who are experiencing trouble with this wonderful receiver. In every reflex set different crystal points require different tuning settings, so always remember this.

Just the other day we received a letter reading as follows—"Sometimes when listening in my loud speaker starts to howl, destroying all reception. It starts with a low moan, rising in volume in a few moments, and no alteration in the variable condenser will rid it. The note is more like a violin note than a whistle. Is my loud speaker faulty?" or what is the matter? I may mention that this effect is not produced on the phones.

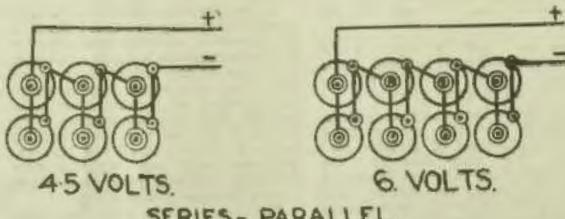
This, by the way, is a common occurrence, and has been experienced by the writer. Always a relief given when the speaker is tipped up and the sound "poured" out of the speaker. When replaced in its position, the same noise arises and maintains itself.

The explanation is that sound waves emitted from the loud speaker, or actual mechanical vibrations of this instrument, are communicated to the

valves, the electrodes of which begin to vibrate, which, in turn, causes variations in their plate currents. These variations, taking place at audio frequency, give rise to the note which ruins your reception. The action is a cumulative one, finally building up to a sufficient strength to drown all signals.

If the loud speaker is on the same table as the set and facing the valves remove it to some other portion of the room. A felt or rubber pad underneath the set and on the table, will assist in overcoming it, or the installation of Benjamin Anti-mechanical valve sockets will prove worth while. Sometimes by turning the filament rheostat a little lower a cure will be effected.

In closing, we may be pardoned for bringing under this heading the subject of filament current for the valves. When dry batteries are employed for this purpose it is quite common to see mistakes in connecting up the dry cells. To overcome this there will be found in this article some drawings showing how to connect several dry cells to gain a certain voltage. The most interesting will be the series-parallel system, and it is hoped that much better understanding of this matter will now take place. Next week it is our object to take an actual receiver and point out the many possible faults which may crop in.



Showing how to connect dry cells in series-parallel.

### RADIO EXHIBITION THIS MONTH.

ONE of the most interesting features of the Radio and Electrical Exhibition to be held in the Sydney Town Hall from February 23 to March 5, will be a display of the results of competitions now being organised by 2BL.

Mrs. Jordan, the woman announcer at 2BL, who talks to women listeners every day commencing about 11.30, is inviting her hearers to various cooking contests. For instance, a prize will be awarded for the best sponge cake made from a recipe given over the air, the best fruit cake, the best decorated cake, jars of preserves, marmalade, home decorations, Batik work, lamp shades, dresses.

Prizes will also be awarded to school children taking part in these competitions. The prize winning articles will be displayed at the exhibition, remaining, of course, the property of the competitors. Mrs. Jordan is to be heard talking about the competitions pretty well every morning, and already a number of entries have been received.

The following prizes will be contested for in the amateur section of the exhibition.

1. The best homemade piece of apparatus. First Prize, £2; Second Prize, 10/-.
2. The best home-power Transmitter. First Prize, £2; Second Prize, 10/-.
3. The best designed Short-wave receiver. First Prize, £2; Second Prize, 10/-.
4. The most novel crystal set. First Prize, £2; Second Prize, 10/-.
5. The most novel valve set. First Prize, £2; Second Prize, 10/-.
6. The best multivalue set (main features to be power of output, selectivity, sensitivity, attractive design). First Prize, £2; Second Prize, £1.

"Moggs, W. G. Watson & Co., Ltd., Clarence Street, Sydney, have just been appointed New South Wales agents for the A.S.E. A. Products of the Swedish General Electric Ltd., London. This announcement should be noted by all who are interested in heavy duty plant—Motors, Generators, Transformers, Control Gear, High and Low Tension Switch Gear, etc."

## Ancient Mariner Surprised

**C**APTAIN R. C. GHOST, who after sailing the seas for over 50 years, has retired from the bridge, tuned in his radio set at his home at Five Dock one night last week to hear what was doing.

A man was talking about a shipwreck and the ancient mariner pricked up his ears. The raconteur told how the vessel sailed down the English Channel into the Bay of Biscay, and there in a dreadful gale was overwhelmed. The description awoke a memory in the mind of the listener and as the story proceeded he called out to members of his family, "By Jove, he's talking about the old 'London'."

Curiously enough up to this point the lecturer, Mr. William Adams, had not mentioned the name of the ship—not while Captain Ghost had been listening at any rate, but the story, which dated back to 1886, caused the captain to visit 2FC next day.

"I remember the loss of the 'London' quite well," he informed officials of the station. "I was second mate in the old ship 'Cornwallis' at the time and we were coming from Calcutta. We met the 'London' just off Deal and we remarked on the unseamanlike fashion of her. She was an auxiliary vessel and the masts and sails were anyhow. She was down like a sand barge and the deck was loaded with coal. That is all we saw of her, but she went down in the Bay of Biscay and only one boat's crew was saved."

"Yes, I'm 80 years of age," added the old skipper, "and I've seen some strange things at sea, but I'll never forget the loss of the 'London'."

"Radio? No there was no radio in those days."

## Some Forward Features

With February comes the Choral programmes. The Royal Sydney Apollo Club, consisting of 80 or 20 chosen voices, will under the baton of Mr. Arnold Mote, resume rehearsals on Monday evening, February 14. 2FC will broadcast a programme specially prepared for the air.

**MARCHING MUSIC FOR SCHOOL CHILDREN:** During the closing months of last year, 2FC in response to widespread requests, included regularly in their programmes, special marching music for the particular benefit of country school children. With the resumption of school, this music is being continued at 9.30 a.m., 1.30 p.m. and 3.30 p.m. Not only the schools, but many homes, tune in to the spirited strains of a good military march.

# Mr. Radio-Dealer

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# A Single Valve Set

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As described in this issue of Wireless Weekly.

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## The "Throttle-Controlled Single Valver"

Requires the following set of Parts:

	£   s. d.
1 Bakelite Panel, cut true, with polished surface, 12 x 7 x 1.8	0 5 3
1 3-Coil Tuner. The "Grodan," with fixed primary	0 14 6
2 .0005 "Quaker" SLF Condensers, brass plates, 10/6 each	1 1 6
1 .01 Fixed Mica Condenser	0 3 6
1 Mica Grid Condenser with Clips, .00025	0 1 9
1 Ajax Fixed Gridleak	0 1 0
1 200 Turn Unmounted Honeycomb Coil, "The Apex"	0 2 10
4 Engraved Terminals, A+, A-, B+, B-, at 4d. each	8 1 4
1 Bakelite Terminal Strip	0 0 6
4 Nickel-plated Telephone Terminals, at 2d.	0 0 8
1 Wooden Base-board (framed), 11in. x 7in. x 3in.	0 1 0
2 Ajax 3-inch Black Engraved Dials, 1/3	0 2 6
1 Ajax 30 ohm. Rheostat	0 1 10
1 Valve Socket, black base, metal shell	0 1 11
	<b>£2 18 8</b>

Mullard, PM3. Standard UX base, 4 volts, .1 amp.

Cossor Point One. Standard UX base, 1.8 volts, .1 amp.

De Forest, DV3 Standard American base, 4 volts, .06 amp.

Radiotron, UV199 or UX 109, 4 volts, .08 amp.

Radiotron, 201A. Standard UX base, 5

volts, .25 amp.

Radiotron 201A. Standard UX base, 6 volts, .25 amp.

Philips' D4. Superb "soft" detector, .5 amp.

Philips' C500. Standard UX base, 5 volts, .25 amp.

The Philips' D4 Valves are specially suitable for the "Throttle Controlled Single Valver," but an accumulator "A" Battery must be used.

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**Type D IV. Soft detector.  
American base. .5 amp.  
The best detector valve.**

### VALVES SUITABLE FOR THIS SET.

Dry Cell Type—	£   s. d.
Econotron 199. 199 base, 3 volts, .06 amp.	0 6 9
Philips' B406. Standard UX base, 4 volts, .1 amp.	0 13 6
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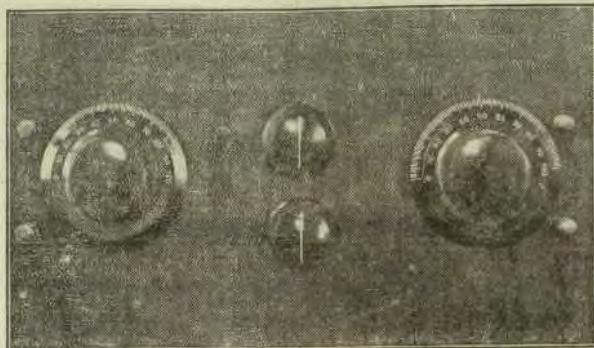
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# A Throttle-Control One Valve Receiver



*An exceptionally smooth form of reaction in this new circuit enables the owner to bring in the long distance stations.*

IT often happens that when we make claims, through our columns, of remarkable results obtained with any given set, some people cannot achieve anything like the results they should.

There are many reasons for this. Possibly the aerial-earth system is not of the best or may be the batteries are weak or again some component may be faulty. Often, too, the layout of the receiver is altered by the constructor to suit a cabinet or something equally strange may have happened. There are many other reasons which may preclude the home constructor from getting good results, and it would take up too much space in this article to enumerate all.

But there are occasions when a constructor has made his receiver an exact pattern of the one described in the paper and then fails to get the desired results. The time once was when a single valve set fulfilled its purpose when it tuned in all the local stations, but nowadays most people want inter-State results on a one valve set. Of course, in the summer season, this is by no means an easy matter, but it is not impossible. It is recognised that some nights are better for reception than other nights, so, realising this, why is it that even 4QG Brisbane cannot be tuned in?

Generally speaking, this is easily answered. The greatest drawback lies in the fact that not everyone knows how to tune. The constructor may tell himself he can tune, and firmly believe he can until he is shown just that he can't. The writer remembers once, a few years ago, he thought he could draw well, and it was a great

surprise to find out that he just couldn't when coming in contact with people who could draw. Certainly he had a smattering of how to draw, but that was all, and this comparison is applicable to tuning a radio receiver.

It is admitted that when radio frequency is employed, it is easier to bring in the inter-State stations than

when a straight out detector is used. This is only natural, provided the radio frequency portion is efficient. But under suitable conditions it should be possible to bring in on a detector at least one inter-State station, provided always that the receiver is sufficiently selective.

A most important factor in tuning is the correct use of reaction. If the reaction is too fierce, or perhaps too fiercely employed, difficulty will be experienced in bringing in even Brisbane. Just imagine what happens to a car with a very fierce clutch. Well! That's what happens if the reaction is too fierce. There are many methods of smooth reaction, the most popular being the Reinhartz method, which has been described over and over again in this journal.

Here is a method which was popularised by "Insulator" a few years ago in his article on "A Progressive Unit Panel Receiver," and it is known as "throttle control." Thus we have a means of easy reaction control. It is very easy to handle, and the reaction just glides in quite regularly without the "plop" which is characteristic of other forms of reaction.

Again, a good feature is that the wavelength is not in any way, and the reaction effect is even over the whole band of wavelengths. This means quite a lot. Have you ever been tuning in a long distance station, finding the reaction a great assistance to you. The station sought is found, weak, very weak, and as you build up with the reaction, the volume becomes more and more, and then "plop," off it goes into violent

## PARTS USED IN THE THROTTLE-CONTROL SINGLE VALVE RECEIVER.

- 1-Dilecto or Radion Panel, 12 x 7 x 1.
- 1-Grodun 3-Coil Tuner.
- 1-0005 Commodore Variable Condenser.
- 1-0005 Commodore Variable Condenser.
- 1-0.0025 m.f.d. Wetless Condenser.
- 1-0.0025 m.f.d. Wetless Grid Condenser.
- 1-2 meg. Grid Leak.
- 1-All American Valve Socket.
- 1-200 turn Honeycomb Coil.
- 1-Fixed Coupling Plug on small strip of Dilecto.
- 4-Terminals on Terminal Board
- 1-30 ohms, Centralab Rheostat.
- 2-1/2 inch Ajax Dials.
- 1-Baseboard, 11 x 8 x 1.

Quantity of wiring wires, screws, etc.

oscillation. Annoying, isn't it? Thus course reaction. Throttle control is different altogether.

Discussing the circuit, we find that it is really our old friend the standard three coil regenerative receiver with a few additions. The aerial, earth coil is L1, while L2 C1 forms the grid circuit, and L3 the reaction. A radio frequency choke is included between the reaction coil and the telephone. This choke consists of a honeycomb coil of between 75 and 200 turns. Its purpose is to ensure that the radio frequency currents flow through the reaction condenser C2. Sometimes this choke may be dispensed with altogether, as the self capacity of the phones act as a bypass condenser which serves the purpose of the choke. However, this can be decided by yourself.

The reaction condenser C2 is of .0003 mfd. or .00025 mfd., and as may be seen, is connected from one side of the choke to the positive A battery.

If the moving plates touch the fixed plates in this condenser, frightful crackling noises will be heard in the phones, so to overcome this, C3, which is an .01 fixed condenser, is inserted as shown in order to keep the B battery off the plates of the reaction condenser.

#### Construction.

The panel layout is nice in appearance and is well balanced. Radianor Delecto is used for this purpose and may be either 1-8th or 3-16th of an inch in thickness. Mark out the

panel as shown in the accompanying diagram, using a centre punch or a nail to make the neat indentation which allows the drill point to enter and not wander all over the panel. The panel should be laid on a flat surface and the drill should be held erect. Light pressure and high speed is the secret of drilling panels and is very easily accomplished. Always drill the smaller holes first, leaving the larger ones till later. Should you not possess a large enough drill for the bigger holes, drill the panel with the nearest size smaller and enlarge the hole with a rat tail round file or reamer the hole with a tang of a larger file.

However, having drilled the panel, assemble the components. Watch carefully that the rheostat doesn't foul the tuner, hence it is necessary to use a thin rheostat, the Centralab specified being ideal.

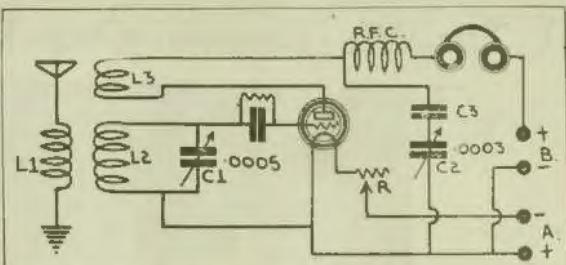
Fix the panel in position on the baseboard and lay out the baseboard parts. This is very easy indeed, there being only a socket, the choke and .01 mfd. fixed condenser and the terminal board. The positions for these parts can be found on the back of panel wiring diagram. Follow this out exactly and success will reward your efforts.

#### Wiring.

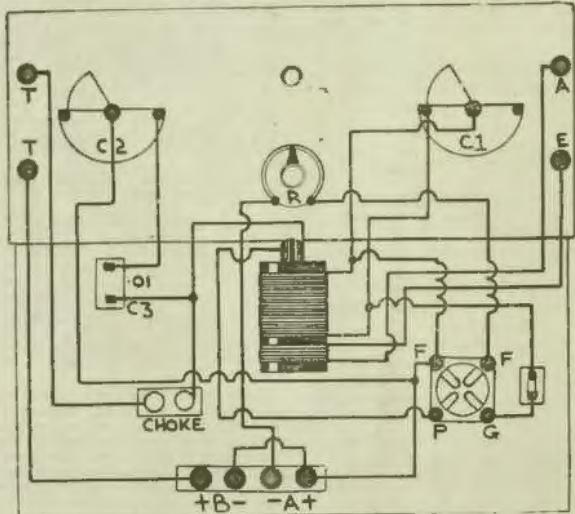
The wiring may now be proceeded with. You have the choice of using one of the many different types of wiring wire now for sale by all radio dealers. Busbar, Belden Fort, Ceintite or Spaghetti covered wire all are good—Busbar being, perhaps, the most difficult to handle. All other three mentioned are covered wires and are ideal for many reasons. Point to point wiring is worthy of consideration, which although it does not look as neat as the right angled bends of Busbar is, maybe, a little more efficient. Soldering should not present any great difficulty. The other day we came across a product known as Clinton's Wunderflux—a non-corrosive flux which is sold complete with solder. With this combination it is simplicity itself to solder and has the advantage of being quick, simple and non-corrosive. In wiring always tighten up every nut tightly and securely, and when completed check off carefully. Check the wiring with the back of panel wiring diagram and also the circuit diagram.

#### Operation.

When satisfied that everything is O.K., test the set on the aerial. Insert the valve in its socket and plug,



The circuit diagram is similar in all respects to the standard 3 coil regenerative receiver. Note the position of the reaction condenser C3.



The back of panel wiring diagram is quite clear. A honeycomb coil is plugged into the holder marked "choke."

say, a 200 turn honeycomb coil into the choke position. Apply the B. battery to its terminals, beginning, say, with 225 volts and link the A battery to its terminal. With the aerial and earth connected and the 'phones in use slowly turn up the rheostat.

Leaving the reaction condenser C2 at zero and the reaction knob at right angles to the secondary coil tune with C1. Locate the local station first on C1, then move the reaction knob until louder signals are heard. Don't reach that point when the receiver breaks into oscillation—keep off it, then turn C2, which will not alter the wave length in any way. Having determined the best position for the reaction knob or rotor, leave it at this. All the stations should then be tuned in on C1 and then finalised on C2.

The reaction condenser C3 should be handled very cautiously. If the receiver is too weak in strength increase the plate voltage and then retune. If, of course, too much plate voltage is used it will be found difficult to stop the oscillation. Reduce the B battery voltage then. Be a good wireless neighbor—don't oscillate. A gentle rushing sound is always an indication that your receiver is oscillating. Keep just below this point—it is the best operating position for all wave lengths and ensures purity of reception.

#### WIRELESS WEEKLY.

Will readers kindly note that all technical queries are answered through the columns of Wireless Weekly. There is no occasion to send either stamps or addressed envelopes. The only condition is that the number of questions be limited to four. We unfortunately cannot deal with technical queries by telephone or by personal callers.

## The Resco Neutrodyne

**Details of a commercially built receiver tested by the Technical Editor. It is sold by the Radio and Electrical Co.**

ONE always associates a neutrodyne receiver with a long panel and a large cabinet, but the Resco Neutrodyne proves that this is not always necessary. The floor model only, similar in design to a gramophone cabinet, has a large cabinet, for contained inside it are the batteries and the loud speaker.

The finish of the cabinet of the model tested was polished Rosewood, but the same receiver may be had in polished maple or oak to match the furnishing of any room. A table model is also available.

The panel is 18 inches long by seven inches high. Three vernier dials are evenly spaced on its surface, with a rheostat and a volume control located below, yet between, the three dials. The battery switch and loud speaker jack complete the fittings on the panel, which is neatly engraved and the golden black effect adds charm to the design. The vernier dials are unique inasmuch as there is absolutely no backlash whatever, an important feature when tuning in the long distance stations.

The Resco Neutrodyne is a sub-panelled receiver and all that is visible from above are the three variable condensers, the five anti-microphonic valve sockets and all the terminals, including the aerial and earth terminals. Each terminal has an engraved metal tag firmly fixed, indicating its purpose in order to prevent any error when connecting up to the batteries.

When lifted from the cabinet and turned upside down, all the wiring is

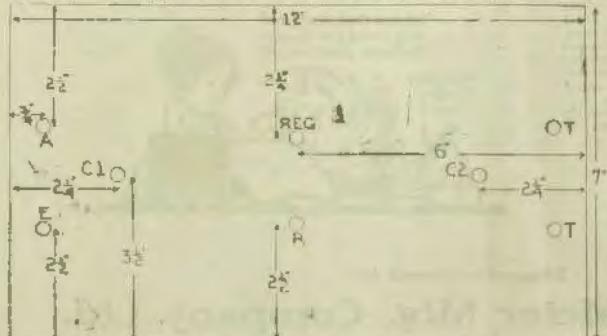
revealed, and also the neutroformers, the audio transformers and the other accessories. By a special arrangement of the radio and audio frequency portions of the receiver neutralising condensers are entirely dispensed with.

We connected up the respective A, B and C batteries and the aerial and earth, and fitted the five B406 valves which are standard equipment, and plugged in the speaker. A few moments twirling of the dials soon brought in 2BL, at splendid volume with the utmost degree of clarity. The dial settings for this station were 32 on all dials, a feature which made tuning very simple indeed. 2FC was located and dial settings 52 all round. Then 3AR was tuned in on 59 all round at very satisfactory volume considering the power of this station.

Lower down the scale 4QG on dial setting 40, was proved to be as loud as 2BL, whereas on setting all dials at 35 the big Melbourne station 3LQ was heard to great advantage. Not one sound of any other station was heard while listening in to any of the above-mentioned stations, thus proving that the selective qualities of the Resco Neutrodyne were of a very high order. 5CL was listened to on the speaker with the dial settings of 42, and in fact, was so loud that at first it was mistaken for the Brisbane station.

The announcements from each station could be heard comfortably all over the house, fading and static, of course, being present on all of the inter-State stations. The clarity and tone quality of the local B class stations was of such an order that noaneous distortion was discernible. The volume control regulated reception from softest pitch to the loudest, and it was remarkable just how well the undertones and overtones were produced. Throughout the whole of the reception nothing marred the quality of tone, not a whistle nor a buzz nor a roar spoilt reception. Neutralisation was complete, and the gradual sliding away from one station into the other without the usual high pitched shriek places the Resco Neutrodyne in a category entirely on its own.

The compactness of this receiver is such that it could be easily adapted to a portable set, there being sufficient power to operate a speaker from a small loop aerial.



Drill your panel according to this diagram. Besides giving the measurements this diagram is drawn to scale.

## *How Can You Hope for Good Reception when you use Obsolete Radio Parts?*



A hair-line adjustment which assists extremely fine tuning is a feature of the Emmco Vernier Dial.  
Bakelite frame, 9/6  
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Made of moulded Bakelite, adaptable for all standard valves and with rubber shock absorbing cushions. Emmco valve sockets cannot become displaced by long usage. Price, 4/6.



Emmco transformers amplify music and speech without distortion, because they are designed and manufactured to the highest possible degree of electrical and engineering efficiency. Ratios 2 to 1, 2½ to 1, 4 to 1, 7½ to 1. Price, 21/-.



Bakelite moulded frame, ball-bearing adjustment and pigtail connection are main features of the Emmco straight line frequency condenser. Prices, .00065, .001-1, .00035, .0016, .00025, .00016, .00008, .00005, .000025, .000016. Price, 22/-.



Constructed with new style metal frame and Bakelite knob the Emmco rheostat cannot lose its adjustment, because of the double inside grip on sliding arm. Price, for 8, 16, 28 and 50 ohms, 4/6.

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**I**T can't be done. You may have had excellent reception of local stations two years ago on your present set, but since then the number of stations has doubled, wavelengths have become crowded, tuning sharper, and thousands of new sets have added to the din of oscillating valves.

To bring in the same results as you had two, maybe one year ago, you must double the efficiency of your set. It is not necessary to buy an entirely new receiver, it can be done by discarding old worn components for new parts that have been designed to meet these conditions.

Emmco parts manufactured in Australia to withstand climatic conditions unmet with in any other part of the globe where radio parts are made, will meet your requirements. For instance, the Emmco Super-het kit supplies you with the most essential parts for building the King of Receivers (designed and matched for uniform efficiency by experts), full instructions, diagrams, etc., for putting it together, and all at a price that makes it available to everybody. The new way—the **Emmco way**—is not only far better in results, but it is far cheaper.

The **Emmco Radio Handbook** is now available free to all users of Emmco parts. Contains 24 pages, including all Australian and New Zealand call signs, selective circuits and up-to-date information. Get a copy from your dealer.

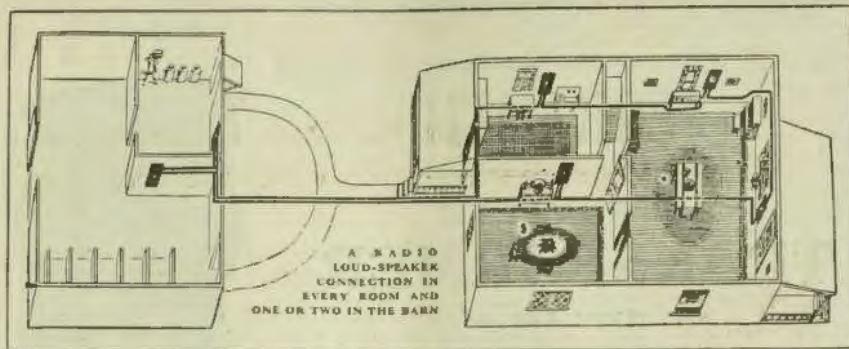
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and send for doctor  
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## Extending the Use of Radio

*A short article for the countryman, explaining in non-technical language how a radio set can be made to serve more than one room.*

**T**HIS is an age of extensions—extended time payments, extension telephones, and now a method for extending the use of the radio, having particularly in mind the interest of the farmer and his wife who are deprived of some of the benefit of their radio set by reason of the fact that many interesting and worthwhile programs are broadcast just at a time when the evening odd jobs must be attended to outside.

Now he can have a loud-speaker in the barn, the separator room or any convenient place near his work, so that both he and the family can enjoy the same programs from two separate loud-speakers operated by the same receiving set in the house.

A very practical application of this system has been in use on a farm for some time. When this farmer has a crop to sell, whether livestock or grain, the radio set is turned on during the entire day, tuned to the station which will broadcast the latest price fluctuations. In the event of a change this farmer's wife sends one of the children out to the field to notify her husband and, if it is advisable, the produce can be loaded up and taken to market on the afternoon of the same day.

It frequently happens that this farmer's wife has duties in various parts of the house which would be out of range of the loud-speaker if it were not possible to have the benefit of it some distance from the radio receiver. With this system, however, she takes the speaker with her to any part of the house and listens to the programs while awaiting the desired market quotations. On wash day she

particularly enjoys having the loud-speaker in the wash-house, located some twenty yards from the house.

The wiring of homes for loud-speakers is now being incorporated in the planning of modern residences in all parts of the country and it is only a matter of time until a radio loud-speaker connection in every room will be taken as much for granted as are the wall switches and baseboard outlets for electric lights at the present time. The obvious advantages of such an arrangement are that it is possible to locate permanently the receiver and batteries in a convenient part of the home and, by means of the plug on the speaker cord, plug into any wall outlet and enjoy all the benefits of a portable receiver with none of its disadvantages.

Most four or five valve receivers will produce power enough to operate three loud-speakers connected in different parts of the home, and the volume from each will be sufficient to fill the average-size room. Obviously, using several speakers in the circuit will slightly decrease the volume you are now getting. Much better quality and increased volume may be had through the use of a power valve in the last stage of the audio-frequency amplifier of the receiver. These valves require additional B batteries, but they are well worth the cost when the improved results are considered.

The average three-valve set will not operate more than one loud-speaker and a set of headphones at the same time unless it is extremely efficient. A push-pull power amplifier may easily be constructed, however, for increasing the volume from such

a receiver before it is passed on to the loud-speakers. This same push-pull amplifier may also be used with a larger receiver when more than three loud-speakers are to be operated at the same time.

Now for the installation of this new circuit. The material required will be determined by the number of places at which you desire to have loud-speaker connections. These connections are made by means of jacks or outlets into which the loud-speaker plugs are inserted for connecting to the circuit from the radio receiver. A number of manufacturers are making specially designed jacks for the purpose outlined in this article. They are provided with a polished brass plate having the word "radio" engraved over the aperture for the plug, thus making a neat and attractive outlet resembling the plates used for wall switches. These or similar plug jacks are obtainable at practically all radio dealers. It is very important that the closed-circuit type be used. As a substitute, a closed-circuit jack of the type used in radio receivers may be used, mounting it on a piece of old panel or other insulating material.

As many outlets as are desired may be installed, but great care must be exercised in connecting them. It is strongly recommended that the connecting wires be soldered to the jacks, for a loose or poor connection will offer resistance to the flow of current through the circuit and result in greatly reduced signal strength. The wiring is comparatively simple and can be done by anyone having the most elementary knowledge of electric-

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# INTERVALVE TRANSFORMER

TYPE AF3

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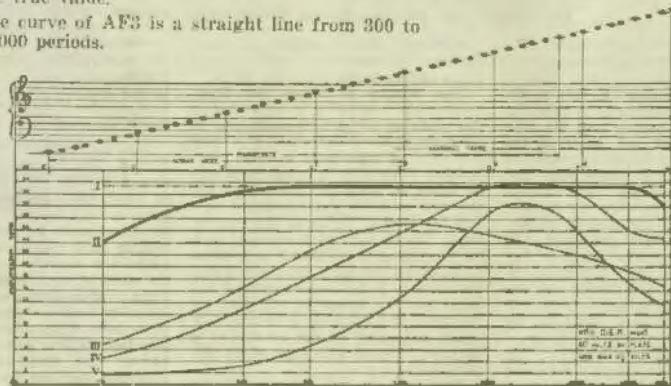
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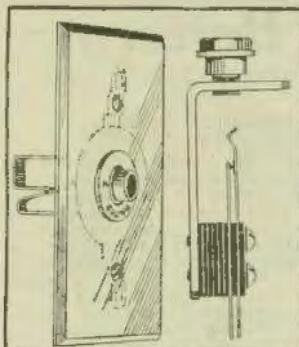
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On the left is a drawing of a closed circuit radio jack. The manufactured type of outlet is on the right.

city. The connections are shown in the drawings above.

The quantity of wire needed can be estimated by measuring from the receiver to the first point at which you contemplate installing an outlet and then to each succeeding one, then back to the receiver, keeping in mind the fact that only a single wire will be used for connecting each of the jacks in series. The first jack should be placed within several feet of the receiver for plugging in either a speaker or headphones to tune the set. No. 18 cotton-covered bell wire may be used for indoor work, and rubber-covered wire is best for all outdoor leads which may be exposed to the weather. A plug, similar to the one on the loud-speaker cord, will be required for connecting the beginning and the end of this new circuit to the radio set.

The outlets may be mounted to suit the convenience of the individual. A neater job will result by concealing the wires between the walls or else behind the baseboards. The wire may be stained or painted to make it harmonise with the wood to which it is fastened. The loud-speaker wire should be kept well away from the electric-light wires and if alternating current is supplied the speaker wires should not parallel them at close range, or a hum in the speaker may result.

As a suggestion an outlet in one or more of the bedrooms will be desirable, particularly in the event of illness or for bedtime stories for children; another in the kitchen will probably prove very acceptable to most housewives, while another may be provided near a window opening on to the porch, so the speaker may be placed outside.

## Listeners I Hate

**H**AVE you ever realised how wireless makes you hate people? You'd think that all the improvising talk we get would make us better lads, but I've known quite a mild-tempered man who wouldn't normally hurt even a rate-collector, get up and make a savage kick at a spider that was spinning its web too noisily when he was adjusting his cat's-whisker.

At one time I regarded the rest of the world tolerantly. I liked A for his sense of humor, B for his honesty, and I distrusted C because he had the bad taste to support Free Trade instead of Protection. But all that is past. Like most listeners, I now regard the rest of the world, in a manner of speaking, through the ear-phones. I ignore all those misguided persons who do not yet possess sets, and I admire all listeners.

### Not to be Trusted.

With reservations. Not all listeners ought to be trusted with sets. There is the villain whose set oscillates. I spent the whole evening recently trying to eliminate a circular saw, and next day the man next door told me, with a grin, that he had just discovered he was oscillating. I believe he was a good husband and father, and I hope his family won't miss him too much.

Then I hate the fanatic who has a set with as many electric lights sprouting from it as a centenarian's birthday-cake has candles. He talks familiarly of JOAK, and of what KDKA said in '85. Mine is a twenty-five-shilling set, and what with rates and rent where they are now, I shall never have a better one. I wish his set would electrocute him!

### The Scientific Reptile.

Akin to him is the scientific reptile who knows all about it. Myself, I like to fancy that it is the fairies whispering, but it takes all the gitz off it when he superciliously explains that it is worked in the same way as the electric bell you work with a row of bottles.

Then, of course, you all knew the scoundrel who, when you have invited him, for the good of his soul, to listen, hums the piece that is being played half a bar late and two and a third tones flat. I hate him as much as I do the man who breathes like an asthmatic rhinoceros. A further development of this type is the man who, when the set is operating beautifully, and a favorite piece of yours is being gently wafted through the ether, begins to tell you how he heard it played so much better on the Manly ferry last Sunday.

### Musical Maniacs.

On the other hand, there is the ill-mannered brute who snaps out "Shut up!" just as you attempt to tell him how you prefer the same composer's Op. 42 in B. A cousin of his, who also makes me fizz with suppressed rage like an overcharged syphon, is the idiot who sits there with a fatuous leer on his face thoroughly enjoying some extremely classical excerpt I can't make head or tail of. I would bury him in the same grave as the man who wags his shoulders boisterously when the studio orchestra is playing some fox-trot of which I am perfectly tired.

But worst of all is the unmusical oaf who is never content to leave well alone. He concludes, during a piano arpeggio for strings, that the reception is faulty, and undoes a terminal or shifts a plug, with the result that you think you've got a firework display right inside your ear.

You may ask, has wireless made me lose anybody? I think not. All I want now is a comfortable chair, a quietly burning fire, a copy of the programme, one pair of good ear-phones, and the rest of the world shut up in a soundproof cellar, where they can't interfere between me and my broadcasting station.

## Long Distance Broadcasts

The old saying "distance lends enchantment to the view" may well be applied to the long distance transmissions by 4QG during the past few days. Since Christmas Day no less than six long distance transmissions have been most successfully effected by the Queensland Radio Service. Some 60 or 70 miles of land line separates 4QG and Coolangatta, but so well were the transmissions effected that it was impossible to tell that the service of a local church or concert from the studio was not being broadcast. First came the bedtime stories from the Kirra Surf Sheds and then a concert from Cahills Jazz Floor, both of which were very popular and very suitable for a Christmas night transmission.

Coolangatta, by the sea, was resplendent in all its summer beauty, and the portion of the staff of 4QG, which was picked for the job, certainly had a very wonderful time. Four very fine services were also broadcast from St. Augustine's Church, Coolangatta, including the dedication service on Boxing Day by Archibishop Duhig.

# More about the "A" Battery

By H. K. LOVE

(President of the Victorian Division of the Wireless Institute)

SINCE a recent talk on A, B and C batteries, I have received so many letters asking questions on this subject, that I have decided to take the subject of A batteries again. The A battery which is used to feed the filaments of the tubes can be of several types—1, the dry cell; 2, the lead cell accumulator; 3, the alkaline accumulator; and 4, the wet type of Primary Cell. The dry cell A battery is strictly limited in its use, as it is one which is composed of certain chemicals made up in paste form contained in a zinc container. The mixture during the process of making electricity eats away the zinc casing, and when this action has taken place the cell becomes inactive.

Dry cells should, therefore, only be used where a very small current demand is required, as they cannot be recharged and have to be replaced by

new cells when they have exhausted their useful life.

The lead cell accumulator is the type of battery perhaps most commonly used, and is the one that requires the most attention. The plates of this form of accumulator should at all times be covered with from 4 to 5 of liquid, and when evaporation takes place, pure distilled water should be used to fill up. Never put in more acid, as the acid does not evaporate, and if more acid is added the strength of the mixture will be altered and the battery will not function correctly. Should an accumulator by accident be tipped over and lose some of its acid it should be taken at once to a service station and be filled with the correct proportion of acid and water by a battery expert.

The lead cell accumulator should always be kept in a charged condition,

as its life depends on this. If it has to be left idle for any length of time it should be left fully charged. Most makers state or a tab on the cell the correct charging rate; this should not be exceeded, but it will not harm the battery to give it a long charge at the fixed rate. In effect a battery will not be harmed the least bit by a long occasional over charge provided the charging rate is not exceeded during the period of charge. After about 18 months or two years it will be found that a lead cell battery requires recharging more frequently than when it was new—this is due to general depreciation of the cell, and is an indication usually that the positive plates are nearing a point when they will require replacing. If no instruments are on hand with which to test a battery the color of the plates is an unfailing indication. The negative plates are always slate grey, while the positive plates are of a rich chocolate brown when fully charged and they change to a clay pink as the cell becomes discharged.

This clay color should be regarded as the danger signal, and the battery should at once be placed on charge.

The alkaline accumulator calls for very little description. This type employs iron and nickel in place of the lead plates, and caustic soda solution in place of acid and water. These cells are fool proof; they may be left dry, discharged, can be charged up the wrong way with little or no damage to the cell, they last for years. They are expensive, but they pay.

The wet primary cell is a useful one where no facilities are available for charging accumulators, and where dry cells are too costly to replace from time to time. When these wet cells run down, they can be filled up with a new lot of chemicals and they are right for a long period of service. There are a number of makes of this type of cell, but the most suitable for wireless work is the Edison primary cell, which is a most useful type for country listeners.

Several of my correspondents have requested a description of the construction of a battery charger to work off the A.C. mains—this is a difficult subject to describe in a talk, as sketches help such a lot, but I may attempt something of this nature in the near future.



BY E. K. (EDISON PRIMARY)

We have heard a lot of speakers tell  
How often they get scared.  
When they have to bind an after-  
dinner spell.  
Though for weeks they were pre-  
pared;  
It seemed that when they rose upon  
Their feet the long-familiar words  
were gone.

And many times from actors' lips  
We've had the story, too,  
How on the stage they made bad slips  
And hardly managed to get through,  
And stage fright is a thing to fear,  
According to the rumors that we hear.

But worse than all, when quite alone,  
Without a soul in sight,  
You stand before the microphone  
And feel the coming fright;



Your lips can't move, your tongue is  
stuck;  
Your hash is cocked, you're out of  
luck.

You look into the clammy face  
Of that blamed, queer machine;  
It grimly stands upon its place,  
Its frame like a skeleton seen;  
And as you talk its circled case  
Frowns at you like a many-eyed face.

You wonder how'll that funny thing  
Can swallow all the words you say,  
And in a second's passing fling  
Them to the listeners far away;  
You wonder if the whole thing is a  
fake—  
The sweat rolls down, your muscles  
shake.

The mike is small, but when you stand  
In front of it, it's like the sun;  
And oh! the feeling, glorious, grand,  
That comes when you are done.  
The fright of stage, or dinner speech,  
is small.  
For what they call mike-fright is  
worse than all.

Vast quantity production has reduced the cost of manufacture  
of

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It has a friction control that prevents the slightest backlash.

Finally, while being as mechanically strong as any offered to the public, it is the cheapest bakelite moulded vernier dial available in Australia to-day.

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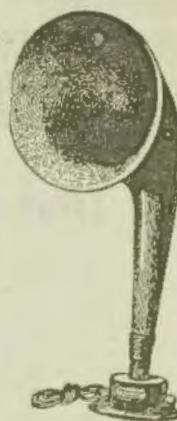
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# BROADCASTING PROGRAMMES

*for the COMING WEEK*

**Friday, February 11**

**2FC, SYDNEY**

Farmer's Broadcasting Service.  
Wave Length, 442 Metres.

**EARLY MORNING SESSION.**

- 7.00 a.m.—“Big Ben” and announcements.
- 7.55 a.m.—Music from the Studio.
- 7.58 a.m.—Official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, mail services, commercial news.
- 7.58 a.m.—Investment market, mining share markets, inter-State market, produce markets.
- 7.58 a.m.—Wool sales, broadcast markets, inter-State markets, produce markets.
- 7.58 a.m.—“Sydney Morning Herald” news service.
- 8.00 a.m.—“Big Ben.” Studio music.
- 8.15 a.m.—Close down.

**MORNING SESSION.**

- 9.15 a.m.—The chimes of 2FC. Music from the Studio.
- 9.20 a.m.—Marching music for school children.
- 9.40 a.m.—Studio music.
- 10.40 a.m.—“Big Ben” and announcements.
- 10.55 a.m.—“Sydney Morning Herald” news service.
- 10.15 a.m.—Studio music.
- 10.40 a.m.—A morning reading.
- 11.00 a.m.—“Big Ben.” Australian Press Association and Reuters’ Cable Services.
- 11.15 a.m.—Studio music.
- 11.15 a.m.—A talk on home cooking and recipes by Miss Ruth Furst.
- 11.20 a.m.—Marching music for the school children.
- 11.35 a.m.—Close down.

**MIDDAY SESSION.**

- 12 noon—“Big Ben” and announcements.
- 12.10 p.m.—Stock Exchange, first call.
- 12.40 p.m.—Studio music.
- 12.45 p.m.—FROM FARMER'S OAK HALL—Instrumental item by the Oak Hall Trio.
- 12.50 p.m.—Rugby wireless news.
- 12.55 p.m.—Miss Milda Nelson, mezzo.
- 1.00 p.m.—“Big Ben.” Weather intelligence.
- 1.30 p.m.—“Evening News” birthday news service. Producers’ Distributing Society’s Report.
- 1.30 p.m.—FROM FARMER'S OAK HALL—Instrumental item by the Oak Hall Trio.
- 1.28 p.m.—Stock Exchange, second call.
- 1.30 p.m.—Marching music for school children.
- 1.40 p.m.—Miss Milda Nelson, mezzo.
- 1.45 p.m.—Studio music.
- 1.50 p.m.—FROM FARMER'S OAK HALL—Instrumental item by the Oak Hall Trio.
- 2.00 p.m.—“Big Ben.” Close down.

**AFTERNOON SESSION.**

- 2.30 p.m.—The chimes of 2FC.
- 2.35 p.m.—Some new records.
- 2.38 p.m.—Pianoforte reproduction on the “Bechini” Player Piano.
- 3.00 p.m.—A reading.
- 3.15 p.m.—Studio music.
- 3.30 p.m.—FROM THE WENTWORTH CAFE—The New Wentworth Symphonic Dance Orchestra, under the baton of Mr. Sydney Simpson.
- 3.45 p.m.—FROM FARMER'S TEA ROOMS—Miss Peggy Dunbar, contralto, “In an Old Fashioned Town,” (Squire).
- 3.45 p.m.—The Oak Hall Trio.
- 3.55 p.m.—Studio music.
- 4.00 p.m.—“Big Ben.” Miss Diana Booth, soprano, “When all was Young,” (Gounod).
- 4.05 p.m.—The Oak Hall Trio.
- 4.10 p.m.—Studio music. Delicieux solo by Mr. Everett Chapman.
- 4.20 p.m.—FROM FARMER'S TEA ROOMS—Miss Peggy Dunbar, contralto, “Galathia” (Lang).
- 4.25 p.m.—The Oak Hall Trio.
- 4.35 p.m.—Studio music.
- 4.40 p.m.—FROM FARMER'S TEA ROOMS—Miss Diana Booth, soprano, “Arise O Sun,” (Day).
- 4.45 p.m.—Stock Exchange, third call.
- 4.50 p.m.—Close down.

**EARLY EVENING SESSION.**

- 5.15 p.m.—The chimes of 2FC.
- 5.30 p.m.—The “Hello Man” Talks to the Children.
- 5.30 p.m.—A Story for the older ones.
- 5.45 p.m.—FROM FARMER'S OAK DINING HALL—Instrumental and Vocal Items.
- 6.00 p.m.—“Big Ben.” Last minute sporting information by the 2FC Racing Commissioner.
- 6.15 p.m.—“Evening News,” late news service, Weather information.
- 6.30 p.m.—Dalgety's Market reports (Wool, Wheat, Stock), Fruit and Vegetable market.
- 7.15 p.m.—Close down.

**NIGHT SESSION.**

- 7.35 p.m.—Announcements.
- 7.40 p.m.—“Big Ben.” FROM THE LYCEUM THEATRE, 19th Street, Sydney. Items by the Orchestra, under the baton of Mr. Emanuel Axman.
- 7.45 p.m.—FROM THE STUDIO—Signor Alberto Martin, tenor, “The Sailor's Grave,” (Gilliame).
- 7.45 p.m.—Mr. Lindley Lewis, pianoforte solo.
- (a) “Overture” (Bach-Saint-Saens).
- (b) “Goldberg” (Bach).
- 8.00 p.m.—Miss Eileen Boyd, contralto.
- 8.00 p.m.—FROM THE LYCEUM THEATRE—Items by the Orchestra, under the baton of Mr. Emanuel Axman.
- 8.40 p.m.—FROM THE STUDIO—Miss Vina de Laitte will continue her series of talks on the present Gilbert and Sullivan season.
- 8.52 p.m.—Signor Alberto Martin, tenor, “Had I Known” (Nicholas).
- 8.56 p.m.—Mr. Jack Lomaxine, Entertainer—(a) “Take Me” (Lamontane).
- (b) “Calling” (Lamontaine).
- 9.00 p.m.—FROM THE LYCEUM THEATRE—Pit Street, Orchestral items.
- 9.16 p.m.—FROM THE STUDIO—Miss Eileen Boyd, contralto.
- 9.20 p.m.—Mr. Arthur Seymour, Entertainer.
- 9.25 p.m.—FROM THE LYCEUM THEATRE—The Union Master Attraction.
- 9.35 p.m.—FROM THE STUDIO—Mr. Lindley Lewis, pianoforte solo—  
(a) “Gavotte” (Gluck-Brahms).  
(b) “Seguidilla” (Albeniz).
- 9.44 p.m.—Miss Vina de Laitte, soprano.
- 9.49 p.m.—Signor Alberto Martin, tenor—  
(a) “I Pitch My Laundry Overay at Night” (Cosbie).
- (b) “At Dawnin,” (Cadmian).
- 9.55 p.m.—Mr. Jack Lomaxine, Entertainer—  
(a) “Tales From” (David).
- (b) “Hello Helen” (Jannink).
- 10.15 p.m.—Miss Eileen Boyd, contralto.
- 10.15 p.m.—FROM THE LYCEUM THEATRE—Pit Street, Sydney. Items by the Orchestra conducted by Mr. Emanuel Axman.
- 10.30 p.m.—Dance music free from Studio.
- 10.40 p.m.—Mr. Archie Seymour, Entertainer.
- 10.50 p.m.—Studio music.
- 11.00 p.m.—“Big Ben” and announcements.
- 11.30 p.m.—Music from the Studio until midnight.
- 12 midnight—“Big Ben.”
- National Anthem. Close down.

**2KY, SYDNEY**

Trades Hall Broadcasting Station.

Wave Length, 280 Metres.

**LUNCHEON HOUR SESSION.**

- 12.15 p.m.—Tuneful to the tickling of the stock.
- 12.45 p.m.—Popular Entertainer, “Orpheus” (Gordon).
- 12.55 p.m.—Musical Interlude.
- 12.40 p.m.—New songs.
- 1.15 p.m.—Vocal items.
- 1.15 p.m.—Hawaiian Steel guitar Selections.
- 1.25 p.m.—Union news and meetings.
- 1.30 p.m.—Locum Records.
- 1.40 p.m.—Where to go tonight.
- 1.45 p.m.—Closing announcements.

**CHILDREN'S HOUR.**

- 6.30 p.m.—The Storyman, Mr. Thompson.

**EVENING SESSION.**

- 7.30 p.m.—Sporting feature; Turf topics; Review of conditions and their prospects for tomorrow. Mr. A. H. Powell.
- 7.40 p.m.—Tomorrow's Sporting Events and news items.
- 7.50 p.m.—Talk on motor cycle racing, Mr. J. G. Bowles.
- 7.50 p.m.—Pianoforte solo, Miss Monica Larcombe.
- 8.00 p.m.—Soprano solo, Miss Edith Welsh.
- 8.10 p.m.—Monologue, Mr. David Edelstein.
- 8.40 p.m.—Musical interlude; Charming Dance Orchestra, Billy Romaine, Leader. By kind permission of G. C. Irving.
- 9.00 p.m.—Soprano solo, Miss Lila Stephens, solo.
- 9.15 p.m.—Sporting feature; Ringside description of multi-contest from McHugh's Leagues' Stadium.
- 9.25 p.m.—Result of fight.
- 9.30 p.m.—Music from the Studio.
- 10.00 p.m.—Closing announcements.

**2KY**

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3 Valve ( <sup>Better</sup> Type)	21 0 0	2 10 0	5/6
4 Valve	25 0 0	3 0 0	7/6
5 Valve	30 0 0	3 10 0	8/6
5 Valve ( <sup>Better</sup> Type)	32 10 0	3 15 0	8/6
6 Valve	45 0 0	5 0 0	10/6

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489 Pitt Street	29 Royal Arcade	10A Victoria Arcade
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## 2GB, SYDNEY

Theosophical Broadcasting Service.

Wave Length, 316 Metres.

## MORNING SESSION.

"Cheerio" Hour conducted by the Cheerio Man.  
9.30 a.m.—Music.  
9.30 a.m.—Goodness Chat.  
9.45 a.m.—Music.  
10 a.m.—Home Betterment Topics.  
10.15 a.m.—Music.  
10.20 a.m.—Five minutes with Children at Home.  
10.25 a.m.—Announcements. Close down.

## WOMEN'S NEWS SESSION.

3.30 p.m.—Music.  
3.40 p.m.—Humanitarian Movements in Service.  
3.55 p.m.—Music.  
4.5 p.m.—News from everywhere for women.  
4.20 p.m.—Music.  
4.30 p.m.—Close down.  
6.45 p.m.—The Children's Session, conducted by the "Cheerio Man."  
7.30 p.m.—Music from Studio.  
7.45 p.m.—Announcements.  
7.50 p.m.—"Cheerio" Trio: Dan Scully, Jack Post, Ada Brock.  
8.3 p.m.—"Trans," by J. Van der Leeuw.  
8.15 p.m.—Violin Solo by Dan Scully.  
8.25 p.m.—Piano Solo by Edna Bourke.  
8.35 p.m.—Instrumental Quartette: Dan Scully, Monica Harder, Jack Post, Ada Brock.  
8.45 p.m.—Address by Prof. Ernest Wood.  
8.55 p.m.—Cello Solos by Jack Post.  
9.2 p.m.—Announcements.  
9.15 p.m.—Piano Solo by Edna Bourke.  
9.22 p.m.—Selections from Operas, with short talk: Hilda Boyle, Miss Francis, Wm. Green, E. R. Butterworth.  
9.50 p.m.—"Cheerio Talk."  
Great Thoughts from Great Minds.

## 3LO, MELBOURNE

Broadcasting Co. of Aust., Wave Length, 371 Metres.

## MID-DAY SESSION.

SUPERPHONIC SONORA RECITAL.  
THE STUDIO ORCHESTRA:  
Musical Director, REGINALD BRADLEY;  
BOB MOLYNEUX, baritone.  
THE MUSICAL GARDINERS:  
DREW AND ROMAINE; C. RICHARD CHUGG, flute.  
Accompanist ..... AGNES FORTUNE  
12 noon.—Time Signal. British Official wireless news from Derby, Reuter's and the Australian Press Association. Cables, "Argus" and "Herald" news services.  
12.15 p.m.—Stock Exchange information.  
12.29 p.m.—SUPERPHONIC SONORA RE-CITAL.  
12.30 p.m.—STUDIO ORCHESTRA:  
Selection: "Sometime" (Friml).  
12.40 p.m.—BOB MOLYNEUX, baritone: "I've Lost All My Love for You." "Idolising."  
12.47 p.m.—THE MUSICAL GARDINERS:  
Drew, Romaine. Mandolin Duets.  
French Horn Solo.  
Steel Guitar, French Horn, and Mandolin. Xylophone.  
Organ Chimes Selection.  
12.52 p.m.—BOB MOLYNEUX, baritone: "Nobody but You." "In a Little Spanish Town."  
12.59 p.m.—STUDIO ORCHESTRA:  
"Chanson D'Amour."

1.15 p.m.—Meteorological information. Stock Exchange information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales.  
1.20 p.m.—DREW AND ROMAINE, Two Boys and a Piano: "The Digger Melody," "Back to My Home Town."

1.25 p.m.—C. RICHARD CHUGG, flute: "Girls We've Met," "Protesting Blues."  
1.30 p.m.—STUDIO ORCHESTRA: "Serenade" (Cajane).  
2 p.m.—Close down.

## AFTERNOON SESSION.

Speakers: "UA FAIT," Mrs. MARGUERITE C. MAHON.  
THE STUDIO ORCHESTRA:  
Musical Director, REGINALD BRADLEY; JESSIE BATCHELOR, contralto; BESSIE GAUNSON, violin. THE ESTELLE MARK TRIO.  
THE MUSICAL GARDINERS.  
Announcer ..... ALFRED ANDREW  
Accompanist ..... AGNES FORTUNE  
3 p.m.—STUDIO ORCHESTRA: "Ballet Egyptian," Part 1 (Lucigni).  
3.10 p.m.—"UA FAIT," Mrs. Buckley & Nancy will give a Fashion Talk.  
3.15 p.m.—JESSIE BATCHELOR, contralto: "The Last Rose of Summer." "Macbeth."  
3.30 p.m.—BESSIE GAUNSON, violin: "Deutscher Tanz" (Mozart).  
3.40 p.m.—THE ESTELLE MARK will entertain you with vocal and instrumental numbers of the Seventeenth Century.  
3.50 p.m.—STUDIO ORCHESTRA: "Ballet Egyptian," Part 2.  
4.5 p.m.—JESSIE BATCHELOR, contralto: "The Shy One." "The Early Morning."  
4.12 p.m.—THE MUSICAL GARDINERS: "Banjo and Mandolin Duets." French Horn Solo: Mr. Gen. Gardiner. Steel Guitars, French Horn, and Mandolin. Organ Chimes Selection. Xylophone Solo.  
4.30 p.m.—Mrs. M. CALLAWAY MAHOOD: "Art in Modern Life." "The Night before Christmas." "Hark! The Herald News service. Stock Exchange information.  
4.55 p.m.—Close down.

## EVENING SESSION.

5.40 p.m.—CHILDREN'S HOUR. Answers to letters and Birthday Greetings.  
5.55 p.m.—ELSIE FURLONGER: "A Morning at School." "Johnny, Me 'an You?"  
6.1 p.m.—BILLY LUNNY: Story for the little ones.  
6.12 p.m.—THE MUSICAL GARDINERS: Instrumental Music for the Children.  
6.26 p.m.—Stories for the bigger children by "Bilby Bunny."  
"The Queen Bee."  
"The Black Princess."  
6.35 p.m.—"Argus" and "Herald" news service. Weather synopsis. Shipping movements.  
6.47 p.m.—Stock Exchange information.  
6.55 p.m.—Fish Market reports by J. R. May, Delta Ltd.  
6.55 p.m.—Flower reports.  
6.55 p.m.—Market reports by the Victorian Producers' Cooperative Co. Ltd. Ham, market sheep sales, Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.

## 3UZ, MELBOURNE

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1.45 p.m.—Market prices of Oranges and Lemons, by the Victorian Central Citrus Association Pty. Ltd.

## NIGHT SESSION.

Speaker: Mr. H. A. MULLETT.  
"CARDIGAN," Mr. H. K. LOVE.  
THE STUDIO ORCHESTRA: Musical Director, REGINALD BRADLEY; JACK DUNNE, baritone; WILLIAM KING, xylophone. JESSIE BATCHELOR, contralto. THE ESTELLE MARK TRIO, HARRY WOTTON, baritone. GERTRUDE ARMSTRONG. BOB MOLYNEUX, baritone. DREW AND ROMAINE. JOE ARONSON and HIS SYNCOPATING SYMPHONISTS.

Announcer ..... AGNES FORTUNE  
Accompanist ..... AGNES FORTUNE  
7.15 p.m.—Under the auspices of the Department of Agriculture, Mr. H. A. MULLETT, Superintendent of Agriculture: "Results of Experimental Work."  
7.30 p.m.—STUDIO ORCHESTRA: "Ballet of the Flowers," Part 1 (Hadley).  
7.40 p.m.—JACK DUNNE, baritone (by permission of J. C. Williamson, Ltd.): "Yo San" (Finland). "A Glance" (Bohemia).  
7.45 p.m.—WILLIAM KING, Xylophone Selections.  
7.55 p.m.—JESSIE BATCHELOR, contralto: "Prelude" (Donald). "That's all" (Grace).  
8 p.m.—COLLINGWOOD CITIZENS' BAND: March, "The Outpost." Fanfare.  
8.14 p.m.—THE ESTELLE MARK TRIO will illustrate by instrumental and vocal items the works of SCHUMANN.  
8.30 p.m.—GERTRUDE ARMSTRONG, the "Lady of Glaciers": Picnic Selections.

8.40 p.m.—HARRY WOTTON, baritone (by permission of J. C. Williamson, Ltd.): "Two Grenadiers" (Schumann). "O Mistress Mine" (Quiller).  
8.47 p.m.—COLLINGWOOD CITIZENS' BAND Waltz, "A Night of Gladness." Hymn: "Fierce Raged the Tempest." 8.47 p.m.—JACK DUNNE, baritone: "Sing Happy Birds" (Hedge). "Morning of a Convalescent" (Collision).  
9.4 p.m.—WILLIAM KING will again entertain you on his Xylophone.  
9.14 p.m.—JESSIE BATCHELOR, contralto: "Three Fishers." "You're a Gentleman" (Clark).  
9.21 p.m.—"CARDIGAN," Mr. H. A. LOVE. Sporting Editor of the "Argus" and "Australian" will speak on Saturday's races.  
9.31 p.m.—HARRY WOTTON, baritone: "Eleanor" (Coleridge-Taylor). "Mister Fox" (Korngold).  
9.38 p.m.—COLLINGWOOD CITIZENS' BAND, Selection: "The Gondoliers."  
9.53 p.m.—BOB MOLYNEUX, baritone: Selections.  
"Tessell's Serenata."  
10 p.m.—British Official Wireless news from Rugby. Announcements.  
10.19 p.m.—STUDIO ORCHESTRA: "Ballet of the Flowers," Part 2.  
10.25 p.m.—MR. H. K. LOVE will now give a Technical Talk.  
10.26 p.m.—DREW AND ROMAINE, Two Boys and a Piano: "Far away in Honolulu." "Dudley's Farm."  
10.30 p.m.—BOB MOLYNEUX, baritone: "I Heard You Go By." "When I Go Home."  
10.37 p.m.—JOE ARONSON and HIS SYNCOPATING SYMPHONISTS: "A Cup of Coffee, Sandwich, and You" (Mayo).  
"Until Tomorrow" (Vivian Almyne).  
10.45 p.m.—"Argus" news service. Announcements. Weather forecast.  
11 p.m.—OUR GREAT THOUGHT: "Act well at the moment, and you have performed a good action to all eternity." —Lavater.  
11.15 p.m.—JOE ARONSON and HIS SYNCOPATING SYMPHONISTS: "Somebody's Lonely" (Davis).



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"Diddle Diddle" (Coon).  
 "Neopolitan Nights Waits" (Zemcaneht).  
 "To Climb the Highest Mountain" (Brown).  
 "Kalinka" (Rousseff).  
 "Fire, Fire, Fire" (Whiting).  
 "Fancy," "Then I'll be Happy" (Friend).  
 "The Good-night Song."  
 11.15 p.m.—GOD SAVE THE KING.

## 4QG, BRISBANE

Queensland Radio Service,  
Wave Length, 385 Metres.

### MIDDAY SPECIAL SESSION.

ADDRESS BY THE BISHOP OF LONDON  
 The address delivered by the Right Honourable and Right Reverend the Lord Bishop of London (A. E. Winnington Ingram, D.D., P.C.), to the employees of the railway workshops at Ipswich will be relayed.  
 12.15 p.m.—Workshop Meetings.

### MIDDAY SESSION.

12.35 p.m.—Time in.  
 12.38 p.m.—Time Signal.  
 1 p.m.—Market reports. Weather information. The "Daily Mail" news. "The Daily Standard" news.

12.39 p.m.—FROM HOTEL CARLTON.  
 Lounge Music from the Lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.

12.45 p.m.—FROM THE OBSERVATORY:

Standard Time Signal.

2 p.m.—Close down.

### AFTERNOON SESSION.

5.30 p.m.—FROM HOTEL CARLTON:  
 Afternoon Tea. Music from the Lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.

4.45 p.m.—FROM THE STUDIO:  
 "The Teacher," news.

4.50 p.m.—Close down.

### EARLY EVENING SESSION.

6 p.m.—"Daily Standard" news. Weather information. Announcements.

6.30 p.m.—Pantomime Stories to "The Sandman." Market reports. Lectureette—"The Responsibilities of the Banana Industry," by Professor Goddard.

7.30 p.m.—Stock reports. Weather news. Announcements.

7.45 p.m.—Standards Time Signal.

### NIGHT SESSION.

7.45 p.m.—Lecture Session—A talk arranged by the Workers' Educational Association and given by Mr. F. Crichton (vice-president).

BISHOP OF LONDON—the complete meeting which will be held in the Exhibition Hall, Brisbane, and which will be addressed by the Right Honourable and Right Reverend the Lord Bishop of London (A. E. Winnington Ingram, D.D., P.C.), will be relayed.

8 p.m.—FROM THE EXHIBITION HALL:  
 Public Meeting—Address by the Bishop of London.

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

## 5CL, ADELAIDE

Central Broadcasters, Ltd.,  
Wave Length, 395 Metres.

### MORNING SESSION.

11.16 a.m.—G.P.O. Chimes.  
 11.31 a.m.—Stock Duo Art Number.  
 11.36 a.m.—"Advertiser" news service.  
 11.55 a.m.—Vocal on number.  
 12.11 a.m.—G.P.O. Chimes.  
 12.11 a.m.—"Advertiser" news service continued.  
 12.16 p.m.—Vocal on number.  
 12.20 p.m.—Market reports.  
 12.30 p.m.—G.P.O. Chimes.  
 12.31 p.m.—Studio Orchestra: Selection, "Tina"; fox trot, "To-night's my night with baby"; waltz, "Mignonette"; novelties,

"Cupid's charm"; cornet solo, "While you're away"; selection, "La Bonnemarie"; barcarolle, "The dream lagoon"; Oriental "Chinese lantern dance"; snare, "Madame Pompadour."

1.35 p.m.—Ward and Co.'s Stock Exchange reports, official weather synopsis and station announcements.  
 2 p.m.—G.P.O. Chimes and close down.

### AFTERNOON SESSION.

3 p.m.—G.P.O. Chimes.  
 3.1 p.m.—Relay from Maple Leaf Cafe—Orchestral numbers.  
 3.45 p.m.—From Studio—Stock Duo Art and Vocalion numbers.  
 4 p.m.—G.P.O. Chimes.  
 4.15 p.m.—Relay from Maple Leaf Cafe—Orchestral numbers.  
 5 p.m.—Stock Exchange reports, general information and station announcements.  
 6 p.m.—G.P.O. chimes and close down.

### EVENING SESSION.

6.30 p.m.—G.P.O. chimes.  
 6.35 p.m.—Stock Duo Art numbers.  
 6.45 p.m.—Children's Hour. Reading stories.  
 7.30 p.m.—Market reports.  
 7.45 p.m.—Sporting talk by "Stanley."  
 8 p.m.—G.P.O. chimes.  
 8.1 p.m.—Relay from Moore Malcolm Reid and Co.  
 8.15 p.m.—Tenor solo, Mr. V. McMurray.  
 8.19 p.m.—Relay from Moore, Malcolm Reid and Co.  
 8.23 p.m.—Soprano solo, Mrs. K. Stewart.  
 8.24 p.m.—Relay from Moore, Malcolm Reid and Co.  
 8.45 p.m.—Baritone solo, Mr. Malcolm Jones.  
 9 p.m.—G.P.O. chimes.  
 9.15 p.m.—Stock market news.  
 9.25 p.m.—Dalyell's wheel report.  
 9.30 p.m.—Contralto solo, Miss M. Pirie.  
 9.35 p.m.—Merrymakers' Orchestra.  
 9.45 p.m.—Tenor solo, Mr. V. McMurray.  
 9.57 p.m.—Merrymakers' Orchestra.  
 10.02 p.m.—Soprano solo, Mrs. Keith Steward.  
 9.45 p.m.—Merrymakers' Orchestra.  
 9.56 p.m.—Baritone solo, Mr. Malcolm Jones.  
 9.55 p.m.—Baritone solo, Miss M. Pirie.  
 10.00 p.m.—G.P.O. chimes.  
 10.15 p.m.—"Advertiser" news service.  
 10.15 p.m.—Merrymakers' Orchestra.  
 10.25 p.m.—Tenor solo, Mr. V. McMurray.  
 10.29 p.m.—Merrymakers' Orchestra.  
 10.47 p.m.—Merrymakers' Orchestra.  
 10.52 p.m.—Baritone solo, Mr. Malcolm Jones.  
 11 p.m.—G.O.P. chimes and close down.

## 6WF, PERTH

West Australian Farmer's.

Wave Length, 1250 Metres.

12.30 p.m.—Time in.

12.35 p.m.—First local news bulletin.  
 Market reports.

Cables.

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

1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.  
 1.2 p.m.—STUDIO QUINTETTE.

Overture: "Peat and Peasant" (Suppe).  
 "Meditation in Ice" (Gounod).  
 Intermezzo: "A Pagan's Lady" (Ancilice).  
 Selection: "Lucretia Borgia" (Tobolni).  
 "Liebestraum No. 3" (List).  
 Suite: "A Dream of Egypt" (Finzi).

The programmes of 7ZL, Hobart, will not appear in our column until the change over from low to high power is completed.

2 p.m.—Close down.  
 2.10 p.m.—Tune in.  
 2.15 p.m.—Musical programme.  
 4 p.m.—STUDIO TRIO.  
 4.30 p.m.—Close down.  
 5 p.m.—Time in.  
 7.30 p.m.—Magical evening for the kiddies, by Auntie Kate and Evans and Uncle Harry, Leslie, Jerry, Kate and Dolly.  
 7.45 p.m.—Stock and Share intelligence.  
 Market reports.

Cables. News supplied by the courtesy of "The West Australian" Newspaper Co.

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

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

9.2 p.m.—Talks—"Books of the Month," by Mr. F. P. Burkhardt.

9.15 p.m.—A NIGHT OF VARIETY.  
 Items by Mission, Sutton and Foley, Instrumental Duo, of the S.S. Karoola. Mr. Cedric Messner, baritone; "The Singers" (Lofts). "The King's Minstrel" (Pingall). "Still as the Night" (Edwin). "There was I Roved the Mountains" (Lofts). Miss Evelyn Willis, A.R.G.M.M., pianiste.

10 p.m.—Second local news bulletin supplied by courtesy of "The Daily News" Newspaper Co.  
 10.30 p.m.—Close down.

**Sat., February 12**

## 2FC, SYDNEY

### EARLY MORNING SESSION.

7 a.m.—"Big Ben" and announcements.  
 7.45 a.m.—Music from the Studio.  
 8 a.m.—Official Weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, commercial news, mail services.

7.25 a.m.—Inverment market, mining share market, metal quotations.  
 7.30 a.m.—Wood sales, breadfruit markets, interstate markets, produce markets.  
 7.45 a.m.—"Sydney Morning Herald" news service.  
 8 a.m.—"Star News," Music from the Studio.  
 12.15 a.m.—Close down.

### MORNING SESSION.

9.30 a.m.—Studio music.  
 9.45 a.m.—Local mining sporting information by the NSW Racing Commissioner.

10 a.m.—"Big Ben" and announcements.  
 10.45 a.m.—"Sydney Morning Herald" news service.

11.15 a.m.—A. Tait on "Gardening by Mr. G. Lockie" (Readings).  
 12.45 a.m.—Close down.

### MIJDAY AND AFTERNOON SESSION.

12.35 p.m.—Announcements.  
 1 p.m.—"Big Ben," Stock Exchange information.  
 1.15 p.m.—"Evening News" midday news service. Weather intelligence.

1.20 p.m.—Studio music.  
 NOTE: DIRECT FROM THE ROSEHILL RACECOURSE.—Results will be described in the morning interspersed with items from the New Wentworth Symphony Dance Orchestra, and musical numbers from the Studio.

4.30 p.m.—Full sporting results of racing, grade cricket, tennis, golf, etc.  
 5 p.m.—"Big Ben," Close down.

### EARLY EVENING SESSION.

5.45 p.m.—Chimes.  
 5.50 p.m.—"Hello Man" talks to the children.  
 6.30 p.m.—A Story for the older ones.  
 6.45 p.m.—Dinner music.  
 7 p.m.—Resume of late sporting news.  
 7.15 p.m.—"Evening News" late news service.

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*Mick Simmons Ad.*

"The World's Greatest Sports Store"

Headquarters: HAYMARKET, SYDNEY  
And at BRISBANE

## NIGHT SESSION.

7.50 p.m.—Chimes of 2FC and announcements.  
7.55 p.m.—Studio music.  
8 p.m.—"Big Ben." FROM THE CRYSTAL PALACE THEATRE George Street, Sydney—Items by the Orchestra conducted by Mr. Harry Stone.  
8.15 p.m.—FROM THE STUDIO—Mr. Alfred Cunningham, baritone: "Mélinande" (Goetz).  
8.19 p.m.—Mr. Joe Cahill, Entertainer—"The Shrike" (Louis).  
8.24 p.m.—Miss Nea Hallett, Soubrette—"Thinking of You" (Donaldson).  
8.28 p.m.—Mr. James Donnelly, tenor.  
8.32 p.m.—Mr. Gladstone Bell, cello solo.  
8.37 p.m.—Mr. Alfred Cunningham, baritone—(a) "The Crown of the Year" (Easthope Martin).  
(b) "Fair House of Joy" (Quiller).  
8.44 p.m.—THE 2FC DANCE BAND (conductor Mr. Eric Pearce), with Mr. Len Maurice, popular baritone.  
8.50 p.m.—Miss Nea Hallett, soprano: "Little Spanish Town" (Young).  
8.54 p.m.—Mr. Gladstone Bell, cello solo.  
9 p.m.—"Big Ben." FROM THE CRYSTAL PALACE THEATRE: The Orchestra conducted by Mr. Harry Stone, in popular numbers.  
9.12 p.m.—FROM THE STUDIO: Mr. Alfred Cunningham, baritone:  
"The Merry Month" (Bevan).  
9.16 p.m.—Ballet—Item for the first time, a Cossodietta: "MARY IN PARIS," specially written for 2FC by Miss Annie Hughes.  
The Scene takes place inside a famous Cafe in the Latin Quarter of Paris.

## CHARACTERS:

Mademoiselle Charmante  
Miller MARIE SEGUR  
The Englishman LAURENCE HALBERT  
The American JAMES DUNNE  
The Head Waiter JOE CAHILL  
Mary ANNIE HUGHES  
Baritone NEA HALLETT  
Orchestral and Dance Music supplied by the TFC DANCE BAND, conducted by Mr. Eric Pearce.  
The effects under the direction of Mr. Laurence Halbert.  
Musical programme directed by Mr. Ernest Chapley.

10.15 p.m.—FROM THE CRYSTAL PALACE THEATRE: Items by the Orchestra, conducted by Mr. Harry Stone.  
10.30 p.m.—FROM THE STUDIO: Celebrity records.  
10.40 p.m.—The 2FC Dance Band, with Mr. Len Maurice, popular baritone.  
10.50 p.m.—Announcements.  
11.15 p.m.—"Big Ben" The 2FC Studio Dance Band, with Mr. Len Maurice, will be heard in popular numbers until midnight.  
12 mid-night—"Big Ben."  
National Anthem. Close down.

## 2KY, SYDNEY

## EVENING SESSION.

7.15 p.m.—Sporting feature: Complete review of today's racing. Mr. E. A. Powell.  
7.50 p.m.—News items and latest sporting results.  
8.0 p.m.—Pianoforte solos, Miss Alma Hunghey.  
8.10 p.m.—Sketch, Miss Voelkow and Mr. Corbin.  
8.30 p.m.—Musical Interludes. Glaslarium Dance Orchestra, Billy Romaine, Leader. (By kind permission of Geo. C. Irving.)  
9 p.m.—Recital, Mr. Bob Corbin.  
9.15 p.m.—Labor Legislation series, Mr. J. C. Elbridge.  
9.20 p.m.—Sporting feature: From the track of the Speedway Royal, description and results of motor cycle racing.  
9.45 p.m.—Humorous odds and ends, Mr. Herbert Beaver.  
10.00 p.m.—From the Speedway Royal.  
10.00 p.m.—Glaslarium Dance Orchestra, Billy Romaine, Leader. (By kind permission of Geo. C. Irving.)  
10.20 p.m.—Closing announcements.  
2KY—

## 3LO, MELBOURNE

## MORNING SESSION.

## THE STUDIO ORCHESTRA:

Musical Director REGINALD BRADLEY.  
ADELE INMAN, soprano.  
MAGGIE FOSTER, violin.  
JACK DUNNE, basso.  
WALTER MCGOWAN, concert.  
THE ESTELLE MARK TRIO.  
DREW AND ROMAINE.  
TASMA TIERNAN, 'cello.  
Announcer ALFRED ANDREW.  
Accompanist AGNES FORTUNE.  
11 a.m.—STUDIO ORCHESTRA:  
"Suite Romantique" (Kettry).  
11.10 a.m.—ADELE INMAN, soprano.  
"Butterflies and Lilies" (Roxana).  
"Carmen" (Bizet).  
11.17 a.m.—MAGGIE FOSTER, violin.  
"Sous le Soleil" (Drida).  
"My old Kentucky Home."  
11.27 a.m.—JACK DUNNE, baritone, by permission of J. C. Williamson Ltd.  
"Tommy Bell" (Flinn).  
"Mishany" (Forster).  
11.34 a.m.—STUDIO ORCHESTRA.  
"Coppelia Ballet Suite" (Delibes).  
11.44 a.m.—ADELE INMAN, soprano.  
"Roses" (Adams).  
"Tillie back to Erin" (Old Irish).  
11.51 a.m.—WALTER MCGOWAN, concert.  
"The last rose of summer."  
12 noon—Time signal. British Official Wireless news from Rugby, Reuters and the Australian Press Association cables. "Argus" and "Herald" news services. Shipping Intelligence.

12.15 p.m.—Stock Exchange Information.  
12.20 p.m.—SUPERPHONIC SONORA SECTION.  
12.30 p.m.—STUDIO ORCHESTRA.  
"Consolation No. 1" (List).  
12.40 p.m.—ESTELLE MARK TRIO.  
E. Mark, Soprano. "Should one of us be sleeping?"  
Margot Sheridan, piano. "Romance" (Silbersack).  
E. Mark, soprano. "Her dream."  
Celia Kilduff, Violin. "Moto Perpetua" (Gershwin).  
12.45 p.m.—JACK DUNNE, baritone.  
"Ticked to death I'm singin'" (Gleeson).  
"I did feel a dreadful ax" (Braham).  
12.50 p.m.—THE MUSICAL GARDINERS.  
Piano and Mandolin Duo.  
French Horn Solo.  
Steel guitar, French Horn and Mandolin.  
Organ Chimes selection.  
Xylophone duet.  
1.17 p.m.—Meteorological information.  
1.24 p.m.—DREW AND ROMAINE.  
"The girl I love."  
"Yin-yang me two bob."  
1.31 p.m.—Description of Warrean Hurdle, Caulfield Races, by "Musket" of the Sporting Globe.

1.35 p.m.—TASMA, 'cello.  
"Allegro Appassionato" (Saint Saens).  
1.45 p.m.—STUDIO ORCHESTRA.  
"Gavotte and Musette" (Raffi).  
2 p.m.—Close down.

2.50 p.m.—Description of the Federal Stakes, Caulfield Races, by "Musket" of the Sporting Globe.

AFTERNOON SESSION.  
JOE ARONSON AND HIS SYNCOPONISTS.

3 p.m.—JOE ARONSON AND HIS SYNCOPONISTS.

"Dreaming of Castles in the Air" (Ward).

3.5 p.m.—Description of the Bond Cup, Caulfield Races, by "Musket" of the Sporting Globe.

2.10 p.m.—JOE ARONSON AND HIS SYNCOPONISTS.

"Angry" (Braniés).  
"Wish I Had My Old Girl Back Again" (Vladimír).  
"Sparrow" (Krengler).  
"Rose Colored Glasses" (Stevens).  
"Calling Me Home" (Gillhart).  
"The Village Blacksmith Owns the Village Now" (Moore).  
"By the Sign of the Rose" (Whiting).

"That's Why I Love You" (Donaldson).  
3.45 p.m.—Description of the Oakleigh Plate, Caulfield Races, by "Musket" of the Sporting Globe.  
3.55 p.m.—JOE ARONSON AND HIS SYNCOPONISTS.

"Am I wasting my time on you" (Blink).  
"Birds in Oliver" (Kahn).  
"Beside a garden wall" (Kahn).  
"Schubert is back again with boom boom."  
"Don't be angry with me" (Donaldson).  
4.20 p.m.—Description of the St. George Stake, Caulfield Races, by "Musket" of the Sporting Globe.  
4.35 p.m.—JOE ARONSON AND HIS SYNCOPONISTS.

"The Sunshine on the Valley" (Coppel).  
"I don't want nobody but you" (Kaba).  
"Landscape and water" (Conrad).  
"Crying for the moon" (Conder).  
"There never was a pal like you" (O'Hagan).  
"Plauder" (Nicholas).  
"Sweet Hawaiian Bands" (O'Hagan).  
4.45 p.m.—"Herald" news service. Race results. Stock exchange information.  
4.55 p.m.—Description of the Saltaire Welfare, Caulfield Races, by "Musket" of the Sporting Globe.  
5.00 p.m.—Close down.

## EVENING SESSION.

5.30 p.m.—Sporting results.  
5.45 p.m.—CHILDREN'S HOUR. Answers to letters and birthday greetings.  
5.45 p.m.—"Little Miss Kokaburra" is going to tell the tiny tots a second story for this week.  
6.0 p.m.—JESSIE RATCHETOR, contralto.  
"Mighty Lak a Rose."  
"Little Brown Owl."  
6.15 p.m.—Zoo and Open Harrison will play the violin and piano for the Children.  
**3LO SATURDAY, 12TH FEBRUARY, 1927**  
6.30 p.m.—JESSIE RATCHETOR, contralto.  
"Fairies."  
"For a miniature."  
6.37 p.m.—"Little Miss Kokaburra" will tell a thrilling tale to the boys and girls.  
6.38 p.m.—"Argus" and "Herald" news services. Weather information. Aerial information by the Australian Aerial Services Ltd.  
6.45 p.m.—Stock Exchange Information. Overseas Shipping.  
6.52 p.m.—With market reports by J. R. Horrell Ltd.  
6.55 p.m.—River routes.  
6.58 p.m.—Market reports by the Victorian Producers' Cooperative Co. Ltd. Haymarket sheep sales. Poultry, Grain, Cheese, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions. Market prices of Oranges and Lemons by the Victorian Central Citrus Association Pty. Ltd.

## NIGHT SESSION.

TO SUIT ALL TASTES.  
Speakers: MR. P. D. PHILLIPS.  
MR. E. PESCIOTTI.  
DR. LEACH.  
ST. VINCENT DE PAUL'S BAND.  
DREW AND ROMAINE.  
DON ALFONSO ZELAYA, piano.  
THE CLASSIC FOUR.  
ADELE INMAN, soprano.  
THE MUSICAL GARDINERS.  
HARRY WOTTON, baritone.  
ESTELLE MARK TRIO.  
MAGGIE FOSTER, violin.  
JOE ARONSON AND HIS SYNCOPONISTS.

Announcer MAURICE DUDLEY  
Accompanist AGNES FORTUNE

7.15 p.m.—Under the auspices of the Institute of Pacific Relations, Mr. P. D. Phillips, "Immigration Policies of Pacific Countries."

7.35 p.m.—MR. E. PESCIOTTI.  
"Homemakerc Trees and their Allies."

7.45 p.m.—Dr. Leach.  
"Australian Grapes."

8 p.m.—ST. VINCENT DE PAUL'S BAND, conductor, Mr. Les. Huffman.  
Selection, "Pinafore."

# The Rug and the Radio Bug

**T**HERE are times when certain sided metropolis enjoy an ascension of business in this many-colored of activity quite independent of the trend and tendencies of the economic structure of the country as a whole. These individual improvements are not inspired by the Dominion Prime Ministers' Conference or by the more equitable adjustment of the ratio of values of agricultural products to those of manufactured merchandise. They are usually attributable to nothing more momentous than the caprices of the city's million.

For example, the feminine bobbing of hair has boomed the barbershop business. The prevailing popularity of the slender silhouette immediately increased traffic in lamb chops and pineapple. The Charleston is reported to have promoted a decided demand for arch supporters. The monthly report of the Licensed Victuallers' Association shows that a recent heat wave stimulated the sale of cold water.

Then, too, the augmented interest in radio has given an unprecedented impetus to rug repairing herabouts. It is reported on fairly good authority that, because of the spilling of the predatory solution of storage battery cells, there is almost as much Oriental carpet weaving being done in Sydney and Melbourne as in all of Armenia. This lethal liquid devours mohairs, warps and wools with all the voracity of a hungry tramp attacking his Christmas dinner at the Central Mission.

A veteran rug repairer not far from Rialway Square, claiming many years' residence in Persia (he was with the A.I.F. in Palestine), says that of late he's seen quite a number of Chinese rugs and Persian carpets that had acquired a rather close resemblance to Irish potato acre.

"When these radios first came out, they were about as popular with me as a raise in rent," he said. "The electrical shop across the street began selling some, and stuck out a loud shouter over the doorway to tell us so. I had to spend most of the day

listening to lectures on how to set the table for afternoon tea or how to make an icebox out of a soapbox and a fire escape. It was quite some months before I felt any favorable effects of this new invention on my business."

"I had relied in the past upon wear and tear, lighted cigars and babies with tool chests to supply me with work. One day a man came to my shop and said that, for no reason at all, about a square foot of his dining-room carpet had disappeared, and he wanted me to come around and find it. It was one of the cleanest bites out of a carpet I had ever seen. In fact, I took a scientific interest in it and found that a hungry acid had swallowed the missing part. The man admitted that in moving his battery across the room to recharge it some of the water in it had slopped over. I told him that ceiling it water was putting it mildly."

"To-day, 70 per cent. of my business is in what I call radio rugs, and I'm thinking of sending Marconi a box of big black cigars."

## Better Results from Your Wireless

Why be content with indifferent results which breed dissatisfaction? With an efficient Loud Speaker and your battery well charged, you can depend on maximum results. Here is the equipment you need.

### G.G.H. Majestic Reproducer

It responds to every tone variation in the reproducing circuit. Projector Horn is non-resonant and practically unbreakable.

### Ultra Battery Charger

Will charge any size radio or car battery. No liquids or troublesome bulbs—requires no watching —will not overcharge.

Obtainable from radio dealers and electrical stores.

Factory Agents,

### W. G. WATSON & CO. LIMITED

279 CLARENCE STREET, SYDNEY.

29 Hunter Street, NEWCASTLE.

200 Queen Street, MELBOURNE.

AND ALL STATES.



# It's NOT Static!

WHY blame static for those annoying crackles which come from a poor battery? And why continue buying dry batteries when you can save time and money by installing the finest rechargeable "B" battery in the world at a reasonable price? Answer both questions to-day with a Philco Battery! You will also be free from the hum and roar which accompany cheap eliminators.

## PHILCO DRYNAMIC RADIO BATTERIES

These Aristocrats of Radio will serve you perfectly for three or four months, and then can be easily recharged for a few pence, if you have your own charger. In any case, the cost will be negligible.

The new Eighty-Three X Philco "B" Battery gives trouble-free service for years. It is specially designed for Super-Hets, and other sets, having four or more valves. Purity and Strength combine with Long Life in a Philco!

Obtainable only from High-class Dealers, or Wholesale from  
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BATTERY

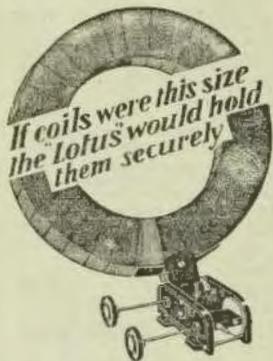


IN  
THE  
WORLD

N.S.W. S.B.

## The Moving Block Cannot Fall

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



Patent No.  
244,251

### TWO TYPES:

For outside panel mounting, two-way,  
11/16, and three-way, 19/16,  
5 inch handle, two-way, 12 1/2, and  
three-way, 19/16.

## LOTUS VERNIER COIL HOLDERS

Made by the makers of the famous Lotus Buoyancy Valve Holder.

Garnett, Whiteley & Co. Ltd.  
Lotus Works, Broadgreen Rd.,  
Liverpool, England.

John Arnold, P.O. Box B71,  
Degraves Buildings, Degraves  
Street, Melbourne.

9.30 p.m.—**FROM THE STUDIO:**  
 Mr. David Craven, baritone.  
 9.34 p.m.—Mr. Lionel Lawson, violinist;  
 9.39 p.m.—Miss Alice Prouse, contralto;  
 9.44 p.m.—Mr. David Craven, baritone.  
 9.48 p.m.—Mr. Lionel Lawson, violinist.  
 9.52 p.m.—Miss Alice Prouse, contralto.  
 10 p.m.—Mr. Lionel Lawson, violinist.  
 10.05 p.m.—Mr. David Craven, baritone.  
 10.15 p.m.—Close down. National Anthem.

## 2GB, SYDNEY

10.10 a.m.—Organ music from St. Alban's Liberal Catholic Church.  
 10.30 a.m.—Morning Service from St. Alban's Celebration of the Holy Eucharist Sermon. Celebrant the Rt. Rev. G. Tatterton. 12 noon—Close down.  
 6.45 p.m.—Music.  
 7.15 p.m.—Social Questions. Applied Theosophy. Professor Ernest Wood. Education for State and individual purposes. The cities in the making. Religious disputes, and how they must end. The International question.  
 8.00 p.m.—Music.  
 8.15 p.m.—Wind and String quartette. DAN SCULLY, MONICA BORDER, MR. CLINIE, MR. INGANELLIS.  
 8.30 p.m.—Songs by MISS JOSEPHINE LEE.  
 8.35 p.m.—  
 8.40 p.m.—  
 8.45 p.m.—Violin solos by MONICA BORDER.  
 8.50 p.m.—  
 8.55 p.m.—  
 8.45 p.m.—Songs by MR. W. GREEN.  
 1. "Mappari Tutt' Amor" from "Martha" (Flotow).  
 2. "Vale" (Kennedy-Rossell).  
 8.51 p.m.—Duets for two violins with piano accompaniment. DAN SCULLY, MONICA BORDER, AND MISS ADA BROOK.  
 9.14 p.m.—Song by MISS JOSEPHINE LEE.  
 9.12 p.m.—Violin solo by DAN SCULLY.  
 9.20 p.m.—Wind and String Quartette. DAN SCULLY, MONICA BORDER, MR. CLINIE, MR. INGANELLIS.  
 9.25 p.m.—Songs by MR. WILLIAM GREEN. "A Walk in the Woods." (Herman Lohr). "Love Lily." (Thomson).  
 9.45 p.m.—God Save the King.

## 3LO, MELBOURNE

10.30 a.m.—ST. PAUL'S BELLS.  
 10.45 a.m.—Service from St. Paul's Cathedral, Melbourne.  
 Sentence.  
 Exhortation.  
 General Confession.  
 Absolution.  
 The Lord's Prayer.  
 Versicles and Responses (Festal).  
 The Venite.  
 Psalm.  
 1st Lesson.  
 The Te Deum and Benedic.  
 2nd Lesson.  
 The Apostles' Creed.  
 The Collects.  
 ANTHEM.  
 Prayers.  
 Hymn.  
 SERMON.  
 Homily.  
 The Benediction.  
 12.15 p.m.—British Official Wireless news from Rugby.  
 12.30 p.m.—Close down.

### AFTERNOON SESSION

1 p.m.—Service from CENTRAL MISSION WESLEY CHURCH, Lonsdale Street. Please, Sunday Afternoon. Chairman, REV. J. H. CAIN.  
 Orchestral Selection (Mr. G. M. Williams, conductor).  
 Hymn: "Jesus Lover of My Soul."  
 Prayer: Rev. J. H. CAIN.  
 Hymn: "The Gospel Bells are ringing."

Doct. Messrs. JOHN and PERCY GODFREY:  
 "I Heard the Voice of Jesus Say"  
 Notices, Offering, and  
 Orchestral Selection.  
 Address: HON. SAMUEL MAUGER,  
 "MAKING THE GREATER BRITAIN."  
 National Anthem.  
 Benediction.  
 4.30 p.m.—Close down.

### EVENING SESSION

5.10 p.m.—CHILDREN'S HOUR. Hymns by  
 "THE PIED PIPERS":  
 "At Eventide."  
 Doct and Chorist: "God is Love."  
 Solo and Chorus: "Go and Tell."  
 5.30 p.m.—"BILLY BUNNY" will continue the story of the "Christmas Carol."  
 6 p.m.—MUSICAL PROGRAMME by "THE  
 PIED PIPERS."  
 Chorus: "To the Top of the Deem."  
 Chorus: "Little Indian Baby."  
 "The Wind."  
 Piano: "The Cuckoo."  
 Solo: "A Little Birdie."  
 Chorus: "The Brown Thrush."  
 Bed-time Song: "The Land of Nod."  
 6.25 p.m.—ANSWERS to Letters and Birth-day Greetings.  
 6.45 p.m.—Close down.

### NIGHT SESSION

SERVICE from ST. OT'S CHURCH.  
 ST. VINCENT DE PAUL'S ORPHANAGE BAND.  
 HARRY WOTTON, baritone.  
 WESLEY CHURCH CHOIR.  
 AUGUST DE CILLIO, violin.  
 MARGARET SUTHERLAND, piano.  
 Announcer: ALFRED ANDREW  
 Accompanist: AGNES FORTUNE.  
 6.00 p.m.—Service from ST. PAUL'S CATHEDRAL  
 6.00 p.m.—Service from ST. PAUL'S CATHEDRAL  
 Collins Street, Melbourne.  
 Minister: REV. DR. BOBLAND. Organist: MR. MASSEY GREEN.  
 Psalm (Metrical Version) 57: "Lord, Bless and Put us." Tune 182.  
 Prayer.  
 Psalms Psalms, 29 and 30.  
 Chants 23 and 30.  
 Old Testament Lesson, Prov. 16.25-26.  
 Hymn 144: "Spirit Divine, Attend Our  
 Prayers."  
 New Testament Lesson: 2 Cor. 8.1-18.  
 Prayer of Intercession.  
 ANTHEM: "By Babylon's Wave" (Gounod).  
 The Lord's Prayer.  
 SERMON: "Reincarnation".  
 Hymn 205: "Lord, Speak to Me."  
 Intimations.  
 Offering.  
 Hymn 267: "Saviour, Breathe an Evening  
 Blessing."  
 Benediction.

5.30 p.m.—**FROM THE STUDIO:**  
 ST. VINCENT DE PAUL'S ORPHANAGE BAND:  
 "Musical Switch" (Alford).  
 6.00 p.m.—WESLEY CHURCH CHOIR, under direction of MR. WILLIAM JAMES: "O Gladsome Light (The Golden Legend)" (Sullivan); "Hallelujah Chorus" (Mount of Olives) (Beethoven).  
 6.15 p.m.—VIOLIN and PIANOFORTE RECITAL, by AUGUST DE CILLIO and MARGARET SUTHERLAND.  
 Violin: "Kreutzer Sonata" (Slow and Fast movt.) (Beethoven).  
 Piano: "Chorale Prelude" (Bach).  
 Violin: "Hesvaria" (Vieuxtemps).  
 Piano: "Seguidilla" (Albeniz).  
 Violin: "Feu-Folle" (Grieg-Papini).  
 6.7 p.m.—HARRY WOTTON, bagpipes (by permission of J. C. Williamson, Ltd.): "Wee! Not Beloved Friends" (Col. Taylor); "The Lass Is My Love" (Allison).  
 6.14 p.m.—ST. VINCENT DE PAUL'S ORPHANAGE BAND:  
 Fanfare: "Hi Trouvaille".  
 Maori Dance: "Po Po".  
 6.24 p.m.: HARRY WOTTON, baritone.  
 "Song of Farewell" (Tosti).  
 "You are all that is Lovely" (Woodfords-Finden).

9.11 p.m.—ST. VINCENT DE PAUL'S ORPHANAGE BAND: Scotch Melody: "Sandy's Frolic." Cornet Solo: "Bacchanal".

9.15 p.m.—WESLEY CHURCH CHOIR: "Angels Laundry" (unaccompanied).

"Soldiers' Chorus" (Faust) (Gounod).

9.18 p.m.—"Argus" news service. Weather forecast. Announcements.

9.58 p.m.—OUR GREAT THOUGHT: "It is well to think well; it is divine to act well."—Horace Mann.

10 p.m.—GOD SAVE THE KING.

## 4QG, BRISBANE

### MORNING SESSION

ST. STEPHEN'S CATHEDRAL.—The complete Morning Service will be relayed from St. Stephen's Roman Catholic Cathedral.

11 a.m.—INTROIT: Kyrie, Mass in hon. Cordis Jean (Turton); Gloria, Mass in hon. Cordis Jean (Turton); Gradual; Sermon: Credo (Turton); Offertory: Motet, O Sacrum Communionis Panis; Sanctus (Turton); Communion: Agnes Dei (Turton); Communion: Organ Solo, 12 noon.—Close down.

### AFTERNOON SESSION

BAND CONCERT.—The concert provided in the Brisbane Botanic Gardens by the Excelsior Band (conductor, Mr. G. Holmes), will be relayed.

3 p.m.—March: "Ravenswood" (Rimmer); overture: "Meritans" (Wallace); cornet solo: "Hallstoria" (Rimmer); trumpet, Mr. G. Holmes (Australian champion); tones poem: "Looseley" (Nevezich); interval; Operatic selection: "Maid of the Mountains" (old hymn); popular hits selected; hymn selected; march: "Australian" (Rimmer). 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, Brisbane. The sermon will be preached by the Right Honorable and Right Reverend the Lord Bishop of London (A. F. Wimington Ingram, D.D., P.C.).

8.00 p.m.—Benediction.

BAND CONCERT.—At the conclusion of the Church Service the concert provided by the Brisbane Municipal Concert Band will be relayed from Wickham Park. The programme will include—Overture, "Sicilian Vespers" (Verdi); selection, "Tales of Hoffmann" (Offenbach); suite, "Bandanna Sketches" (White).

STUDIO CONCERT.—At the conclusion of the Band Concert a Special Rental by the 4QG Harmony Four will be given in the Studio.

9.30 p.m.—Male Quartette, "But it is so," the 4QG Harmony Four; tenor solo, "For All Eternity"; Mr. George Williamson (violin obbligato) by Miss G. Fagg; vocal duet, "Watchman, What of the Night?" (Sergeant); Mezzo, Virgin King (tenor); and H. R. Hindle (baritone); pianoforte solo, "The Riddle of Spring" (Sinding); Mrs. Hilda Woolner (baritone solo), "Hateful Bell" (Martin); Mr. G. V. Woodland; male quartette, "Aloha" (Zionkowsky); 4QG Harmony Four; violin obbligato, "Humoresque" (Dvorak); Miss G. Fagg; tenor solo, "Off in the Still Night"; Mr. Virgin King; vocal duet, "Parted" (West); Mr. George Williamson (tenor); and Mr. C. V. Woodland (baritone); pianoforte solo, "Fifth Murphy" (Gould); Mrs. Hilda Woollner (baritone solo), "Wait" (D'Harclot); Mr. H. E. Hindle (male quartette), "Sweet and Low" (Barrett); the 4QG Harmony Four.  
 10.15 p.m.—Close down.

## 5CL, ADELAIDE

### SUNDAY, FEBRUARY 18.

### MORNING SESSION

11 a.m.—G.P.O. chimes.

11.15 a.m.—Relay from Rose Park Congregational Church—Devote services.

*Half the cost—  
because double the life*

## Burgess Batteries Meet Every Need

Your wireless deserves the best. How many exquisite sets are spoiled to listeners-in by the foolish economy of a bad battery! Only a Burgess can give just that clear strength and purity which win the praise of your guests. Long life adds to efficiency. During adventures have taken the Burgess Battery above the clouds, beneath the sea, among the ice-floes of the Arctic and into the blazing heat of New Guinea jungles. Each time the Burgess stood the test triumphantly—and it will do the same for you.

*Buy right and you must buy Burgess!*

The Burgess Line takes care of every Radio Battery demand. Burgess "A's" are especially designed for radio filament lighting, and have remarkably long life. Burgess "B's" meet every need—from the smallest size for portable sets up to oversize for especially heavy current drains—horizontal type or vertical type, whichever is preferred. The over-size 10308, gives the greatest power and has the longest life. Burgess "C's" are for dependable "grid bias duty." With Burgess Radio Batteries you know that you get quality and service, the two essentials.

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WHOLESALE:  
New System Telephones

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Adelaide.



### WINGS OR LEG IRONS?

Which would you prefer to do for your baby—give it wings to lift ambition, or clamp leg irons on it which will clank through life?

You can do either when you give it a name!

Fancy christening an unlucky boy "Jellicoe" Jones! He would always be known as "Jelly" and inevitably become a soft blob.

One friend was christened Burnett Ham and for forty years he has been dear to all his friends as "Burnt Ham!" Poor beggar!

The energetic secretary of a temperance alliance in Australia is called Drinkwater. Who can doubt that his name has been his lodestar?

But the best illustration of all is the great American flyer, Commander Richard Byrd, who drove his plane like a flashing rocket across the North Pole, and told the wide-eyed world about it by means of Burgess Batteries while he flew.

You can bet that from the time he climbed into short pants he was hailed as "Dicky Bird" and that only the blue sky was his limit, as the Yanks would put it.

On the other hand, suppose that he had been only John Ground Hog! Why not even an oversize Burgess 10308 would ever have lifted him higher than an underground railway!

Talking of Byrd's amazing exploit reminds me that not only was he the first man to fly across the Pole, but he was also the first to carry a radio set with Burgess Batteries—any other battery would have been frozen stiff in an hour.

Byrd knew that his life must depend on his radio batteries if his plane came down in that icy wilderness. The one hope left would be a wireless call for help. Therefore, he picked the finest dry cell batteries ever made, and they never failed once in the great adventure.

You can talk batteries to me till the cows come home, but the kind of proof I want is the choice an expert makes in a matter of his own life and death.

There is a mighty lot in a name—when it's Burgess, and no "just-as-good" can come within a mile of it. Ask Byrd!

So I take my hat off with pleasure to the two mighty B's—Byrd and Burgess!

12.30 p.m.—(APPROX.)—Close down.  
EVENING SESSION,  
6.30 p.m.—G.P.O. chimes,  
6.31 p.m.—Stock Dow Arix number.  
6.38 p.m.—Studio music.  
7.1 p.m.—G.P.O. chimes.  
7.1 p.m.—Relay from St. Peter's Cathedral:  
8.10 p.m.—(approx.)—From Studio—Vocal  
numbers by Miss Alice Newby, Miss Grace  
Collett and Signor Tonic Accordionist, Miss  
M. Meegan.  
8.45 p.m.—Relay from S.A.R. Board.  
9 p.m.—G.P.O. chimes.  
9.1 p.m.—Weather report.  
9.2 p.m.—Talk by Mr. H. Nichols.  
9.7 p.m.—Relay from S.A.R. Institute—Vocal  
numbers and band music.

## 6WF, PERTH

10.45 a.m.—Tune in.  
11 a.m.—Morning service relayed from St. George's Cathedral, Perth.  
12 p.m.—Tune in.  
12.45 p.m.—B.S.L. Band and Vocal Concert relayed from the Zoological Gardens, South Perth.  
Conductor: Mr. Leo, S. Melor.  
Moderator: Mr. L. Somer will give a short talk on the animals of the Zoo.  
1 p.m.—Close down.  
1 p.m.—Tune in.  
1.30 p.m.—Children's bedtime stories.  
2 p.m.—Evening service relayed from the Congregational Trinity Church, Perth, Preaching.  
3.15 p.m.—Perth City Band and Vocal Concert relayed from the Government Gardens, Perth. Conductor: Mr. W. A. Halverson.

## Mon., February 14 2FC, SYDNEY

### EARLY MORNING SESSION.

5 a.m.—"Big Ben" and announcements.  
5.45 a.m.—Studio music.  
7.10 a.m.—Official weather forecast, rainfall, temperatures, astronomical, meteorological, shipping intelligence, mail service, commercial news.  
7.35 a.m.—Investment market, mining share market, metal quotations.  
7.35 a.m.—Wool sales, broadcloth markets, interstate markets, produce markets.  
7.45 a.m.—"Sydney Morning Herald" news service.  
8 a.m.—"Big Ben," Studio music.  
8.15 a.m.—Close down.

### MORNING SESSION.

8.45 a.m.—Marching music for school children.  
9 a.m.—Some popular records.  
10 a.m.—"Big Ben" and announcements.  
10.45 a.m.—"Lake Sydney Meeting Herald."  
11.30 a.m.—"Big Ben," Studio music.  
12.30 p.m.—Close down.

### MIDDAY SESSION.

12 noon—"Big Ben."  
12.15 p.m.—Stock Exchange, first call.  
12.30 p.m.—Studio music.  
12.45 p.m.—FROM FARMERS OAK HALL—  
The Oak Hall Trio (leader, Mr. Horace  
Reeves).  
12.50 p.m.—Rugby wireless news.  
12.55 p.m.—Mr. Kenneth Wilkinson, baritone.  
1 p.m.—"Big Ben." Weather intelligence.

1.15 p.m.—"Evening News" midday news service. Producers' Distributing Society's report.

1.20 p.m.—FROM FARMERS OAK HALL—Instrumental item by the Oak Hall Trio.  
1.25 p.m.—Stock Exchange, second call.  
1.30 p.m.—Marching music for school children.  
1.40 p.m.—Mr. Kenneth Wilkinson, baritone.  
1.45 p.m.—Studio music.  
1.50 p.m.—FROM FARMERS OAK HALL—Instrumental item by the Oak Hall Trio.  
2 p.m.—"Big Ben." Close down.

### AFTERNOON SESSION.

2.30 p.m.—The choice of EFC and announcement.  
2.35 p.m.—A piano solo relay by the pupils of Mr. S. Gordon Lavers.  
3 p.m.—"Big Ben." Music about the Navy League Hall during the Duke's visit.  
3.30 p.m.—Pianoforte solo arranged by Mr. S. Gordon Lavers.  
3.45 p.m.—FROM FARMERS TEA ROOMS—Mr. Frank Nathan, baritone: "Up from Somerset" (Somerset).  
3.45 p.m.—The Oak Hall Trio.  
3.55 p.m.—Studio music.  
4 p.m.—FROM FARMERS TEA ROOMS—Miss Chris Haworth, soprano: "Down in the Forest" (Birdland).  
4.15 p.m.—The Oak Hall Trio.  
4.15 p.m.—Studio music.  
4.25 p.m.—FROM FARMERS TEA ROOMS—Mr. Frank Nathan, baritone: "Veronica Devon" (German).  
4.30 p.m.—The Oak Hall Trio.  
4.45 p.m.—FROM FARMERS TEA ROOMS—Miss Chris Haworth, soprano: "The Lilac Tree" (Gershwin).  
4.45 p.m.—Stock Exchange, third call. Close down.

### EARLY EVENING SESSION.

5.45 p.m.—The choice of 2FC.  
5.45 p.m.—"Hello Ned" talk to the children.  
6.30 p.m.—A story for the older ones.  
6.45 p.m.—Dinner music.  
7 p.m.—Late sporting news.  
7.15 p.m.—Debtors' market reports (wool, wheat and stock).  
7.25 p.m.—Fruit and vegetable markets.  
7.30 p.m.—Weather and shipping intelligence.  
Stock Exchange information.  
7.45 p.m.—Late "Evening News" service.

### NIGHT SESSION.

7.45 p.m.—Announcements and resume of programme.  
7.45 p.m.—The Whitchurch Trio, in popular dance numbers.  
8 p.m.—"Big Ben," FROM THE HAYMARKET THEATRE, George Street, Sydney. The Haymarket Operatic Orchestra of 20 members, conducted by Mr. Stanley Porter.  
8.15 p.m.—Miss Virginia Basnett, contralto ("Beulah" & "Prayer") (EGS).  
8.15 p.m.—FROM LOCAL CONCERT SALONS Items by the Royal Sydney Apollo Club, conducted by Mr. Arnold Mote.  
8.45 p.m.—FROM THE STUDIO A talk by Captain Fred Astaire.  
8.45 p.m.—The 2FC Studio Dance Band, conducted by Mr. Eric Purser, in popular numbers.  
9 p.m.—Miss Virginia Basnett, contralto ("Nostalgia" & "Birds").  
"Nostalgia" Movements, "Circus".  
9.15 p.m.—FROM THE HAYMARKET THEATRE—Vocal Act.  
9.25 p.m.—FROM BEALE'S CONCERT SALON Items by the Royal Sydney Apollo Club, conducted by Mr. Arnold Mote.  
9.45 p.m.—FROM THE STUDIO, first appearance of Mr. Jim Ross, well-known comedian:  
(a) "The Little Wallaby."  
(b) "Style of Kissing."

9.45 p.m.—Miss Virginia Basnett, contralto ("Barney O'Riley" (Lover)).  
9.45 p.m.—Mr. Jim Bain, comedian, Scotch comedy: "I never enjoyed myself so much before."

9.45 p.m.—Mr. Frank Snyder banjo solo.  
9.55 p.m.—Mr. Jim Bain, comedian: "Imitations."  
9.55 p.m.—The EFC Dance Band with the popular baritone Mr. Len Matthews. Two dances ("Fifteen-legged") and other dances.  
10.15 p.m.—FROM THE HAYMARKET THEATRE, Items by the Orchestra, conducted by Mr. Stanley Porter.

10.30 p.m.—The EFC Studio Dance Band and Mr. Len Matthews, popular baritone.  
10.45 p.m.—Mr. Frank Snyder banjo solo.  
10.55 p.m.—Celebrity records.  
11 p.m.—"Big Ben" and announcements.  
11.30 p.m.—The EFC Dance Band with the popular baritone Mr. Len Matthews, will be heard until midnight.  
11 midnight—"Big Ben."  
National Anthem.  
Close down.

## 2KY, SYDNEY

### LUNCHEON HOUR SESSION.

12.15 p.m.—Tune in to the ticking of the clock.  
12.15 p.m.—Popular fox-trots, "Orgiegs" (Gramophone).  
12.45 p.m.—Music interlude.  
12.45 p.m.—Studio music.  
1.15 p.m.—Vocal items.  
1.15 p.m.—Hawaiian Steel Guitar selections.  
1.25 p.m.—Union news and meetings.  
1.30 p.m.—Lincoln Records.  
1.45 p.m.—Where to go tonight.  
1.45 p.m.—Closing announcements.

### CHILDREN'S HOUR.

2.45 p.m.—The Storyman, Mr. Thompson.

### EVENING SESSION.

2.45 p.m.—Tune-in to the ticking of the clock.  
2.45 p.m.—Local news items.  
2.45 p.m.—Industrial and political topics, Mr. J. S. Gordon.  
3.45 p.m.—Shipping log.  
3.45 p.m.—Mezzo Soprano voice, Miss Nellie Graves.  
3.50 p.m.—Monologues, Miss Amy Roward.  
3.50 p.m.—Musical interlude, Guarneri Dance Orchestra, Billy Romaine, Leader. (By kind permission of G. Irwin).  
3.55 p.m.—Contrebas solo, Miss Amy Roward.  
4 p.m.—Bass Solo, Mr. Gardner.  
3.45 p.m.—Drum solo, Miss Mitchell.  
3.45 p.m.—Banjo solo, Mr. B. Webster.  
3.45 p.m.—Musical interlude from the Studio, Mac Maloney (Makinson, N. J. McAllister).  
3.45 p.m.—Closing announcements.

## 2GB, SYDNEY

### MORNING SESSION

CHEERIO HOUR CONDUCTED BY CHEERIO MAN.

9.30 a.m.—Music.  
9.35 a.m.—Children's chat.  
9.50 a.m.—Cheerio!  
10 a.m.—Home Retirement.  
10.15 a.m.—Shade.  
10.25 a.m.—Five minutes with children at home.  
10.35 a.m.—Announcements. Close down.

### WOMEN'S NEWS SESSION.

10.35 a.m.—Music.  
10.45 a.m.—Humanitarian Movements in Sydney.  
10.55 a.m.—Music.  
4.35 p.m.—News from everywhere for women.  
4.45 p.m.—Music.  
4.55 p.m.—Close down.

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**SERIES**

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This valve is similar to the A109 but of higher voltage. It can be supplied in the small American base.

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Plate . . . . .	20—100 V.
Amplification . . . . .	9

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Filament . . . . .	3.4—4 V. .06 amps.
Plate . . . . .	20—120 V.
Amplification . . . . .	25

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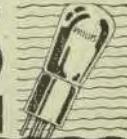
Filament . . . . .	3.4—4 V. .1 amps.
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Amplification . . . . .	6

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## EVENING SESSION.

6.45 p.m.—The Children's Session conducted by the Cheerio Man.  
 7.15 p.m.—Popular song number. Piano. Gramophone.  
 7.30 p.m.—Cheerio Talk to Men.  
 7.45 p.m.—Song by MISS MARY MACCORMICK.  
 8.21 p.m.—PROFESSOR ERNEST WOOD.  
 8.20 p.m.—Vocal duet. MISS MARY MACCORMICK and MR. AMBROSE BOURKE.  
 8.30 p.m.—String quartette. LLOYD DAVIES, MONICA HORDER, CHARLES BOULT, JACK POST.  
 9.00 p.m.—Announcements.  
 9.10 p.m.—Songs by MR. AMBROSE BOURKE.  
 9.15 p.m.—Instrumental Trio. MONICA HORDER, JACK POST, ADA BROOK.  
 9.30 p.m.—Talk on Radio.  
 9.38 p.m.—Violin solo by LLOYD DAVIES.  
 9.46 p.m.—Vocal duet by MISS MARY MACCORMICK and MR. AMBROSE BOURKE.  
 9.51 p.m.—Cheerio Talk.  
 10.00 p.m.—Great Thoughts.

## 3LO, MELBOURNE

## THE STUDIO ORCHESTRA.

ADELE INMAN, soprano.  
 MAGGIE FOSTER, violin.  
 BRUCE GREEN, famous Pantomime Dame.  
 JACK DUNNE, baritone.  
 C. RICHARD CHUGG, flute.  
 Accompanist ..... AGNES FORTUNE  
 Announcer ..... MAURICE DUDLEY  
 "A MUSICAL LUNCH HOUR."  
 12 noon—Time-Signal. British Official Wireless news from Rugby. Reuters' and the Australian Press Association cables. "Argus" and "Herald" news service.  
 12.15 p.m.—Stock Exchange information.  
 12.30 p.m.—STUDIO ORCHESTRA:  
 "New Sullivan Selections" (Higgs).  
 12.30 p.m.—ADELE INMAN, soprano:  
 "God remembers when the world forgets" (Bond).  
 "Love's Downing" (Beaumais).  
 12.37 p.m.—MAGGIE FOSTER, violin:  
 Old Time Melodies.  
 12.47 p.m.—BRUCE GREEN, famous Pantomime Dame:  
 "It all comes out of the rates."  
 "Oh, Carmenita."  
 12.54 p.m.—STUDIO ORCHESTRA:  
 Selection: "High Jinks" (Grim).  
 1.45 p.m.—JACK DUNNE, baritone (by permission of J. C. Williamson, Ltd.):  
 "Lead On, O Captain! Lead On."  
 "Till I Wake" (Finner).

1.12 p.m.—Meteorological information. Shipping intelligence. Weather forecast for Victoria, Tasmania, South Australia and New South Wales. Ocean forecast. River reports.  
 1.22 p.m.—ADELE INMAN, soprano:  
 "A Perfect Day" (Bond).  
 "Sunburnertime" (Bonais).  
 1.29 p.m.—C. RICHARD CHUGG, flute:  
 "Distant Voices" (unaccompanied). (Lemmune).  
 1.34 p.m.—JACK DUNNE, baritone:  
 "A Rose for You" (Liddie).  
 "Siss Eyes" (Roberts).  
 1.41 p.m.—STUDIO ORCHESTRA:  
 Overture: "Magic Flute" (Mozart).  
 1.54 p.m.—BRUCE GREEN, famous Pantomime Dame, in a few minutes' frivol,  
 2 p.m.—Close down.

## AFTERNOON SESSION.

Speakers: Mrs. DOROTHY SILK, Miss FLORA PELL, THE STUDIO ORCHESTRA, DREW AND ROMAINE, GERTHREE ARMSTRONG, HARRY WOTTON, baritone.  
 Announcer ..... MAURICE DUDLEY  
 Accompanist ..... AGNES FORTUNE  
 "ART AND SCIENCE."  
 STUDIO ORCHESTRA:  
 Suite: "A Day in May" (Prins).

8.10 p.m.—Mrs. DOROTHY SILK:  
 Homecrafts.

8.25 p.m.—DREW AND ROMAINE, Two Boys and a Piano:  
 Michaelides.  
 "Can't we have a jar about Australia?"  
 8.30 p.m.—GERTRUDE ARMSTRONG, The Girl fra' Glasgow; Pipe Serpentine.  
 8.45 p.m.—HARRY WOTTON, baritone (by permission of J. C. Williamson, Ltd.):  
 "Mother o' Mine" (Tours).  
 "The Crown of the Year" (Eustache Martin).  
 8.50 p.m.—STUDIO ORCHESTRA:  
 Selection: "La Traviata" (Verdi).  
 4 p.m.—THE KENTUCKY THREE:  
 "Kentucky Medley,"  
 "Nigger in the Woodpile."  
 4.15 p.m.—HARRY WOTTON, baritone:  
 "Two Songs from Omar" (Rogers).  
 "Spring."  
 4.15 p.m.—STUDIO ORCHESTRA:  
 "The Nell Gwynn Dances" (German).  
 4.25 p.m.—MISS FLORA PELL, Inspector of Schools, Education Department, "Domestic Economy."  
 4.40 p.m.—"Herald" news service. Stock Exchange information.  
 5 p.m.—Close down.

## EVENING SESSION.

5.40 p.m.—CHILDREN'S HOUR. Answers to letters sent with birthday greetings.  
 5.55 p.m.—ADELE INMAN, soprano, will sing to the children.  
 6.02 p.m.—"Little Miss Kookaburra," the children's big sister will tell her small sisters and brothers the story of "The Little Witch Girl."  
 6.15 p.m.—MAGGIE FOSTER, Violin:  
 Tiny pieces for tiny people.  
 6.20 p.m.—ADELE INMAN, soprano, has two more little songs to sing.  
 6.21 p.m.—"LITTLE MISS KOOKABURRA" will tell some more about "Robinson Crusoe".  
 6.35 p.m.—"Argus" and "Herald" news service. Weather and Aerial Mail information from the Australian Aerial Services Ltd.  
 6.45 p.m.—Stock Exchange Information. Overseas shipping.  
 6.48 p.m.—Fish Market reports, by J. R. Berrett, Ltd.  
 6.51 p.m.—River reports.  
 6.54 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd. Haymarket sheep sales. Poultry, Grain, Hay, Chaff, Straw, Jute, Dairy Produce, Potatoes, and Onions.  
 7.0 p.m.—Market prices of Oranges and Lemons, by the Victorian Central Citrus Association Pty., Ltd.

## NIGHT SESSION.

Speakers: Mr. E. A. GOLLAN, Mr. E. C. H. TAYLOR, MR. R. T. ARCHER, THE STUDIO ORCHESTRA: HARRY WOTTON, baritone. THE KENTUCKY THREE. BRUCE GREEN, famous Pantomime Dame. HAROLD ELVINS, pianoforte recital. NORMAN BRADSHAW, tenor. DREW AND ROMAINE.

THE MONKEY'S PAW.

JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS.

Announcer ..... ALFRED ANDREW  
 Accompanist ..... AGNES FORTUNE

7.15 p.m.—Mr. E. A. GOLLAN:  
 "Round the World on '22."

7.30 p.m.—Mr. E. C. H. TAYLOR:  
 "School Life and School Sport."

7.45 p.m.—Under the auspices of the Department of Agriculture, Mr. R. T. ARCHER, Senior Dairy Inspector:  
 "Feeding for Milk Production."

ST. VALENTINE'S DAY.

8 p.m.—STUDIO ORCHESTRA:  
 Overture: "Liebe Cavalier" (Suppé).  
 8.10 p.m.—HARRY WOTTON, baritone (by permission of J. C. Williamson, Ltd.):  
 "A Land of Silence" (Quilter).  
 "Passing Dreams" (Quilter).

## 8.17 p.m.—THE KENTUCKY THREE:

Selection: "Lilac Time."  
 "Romany Rye."  
 8.25 p.m.—BRUCE GREEN, farewell appearance of the famous Pantomime Dame:  
 "If you want to please a Portuguese," "Father's Photograph."  
 8.32 p.m.—HAROLD ELVINS, pianoforte recital:  
 "Prairie and Chorale" (C. Franck).  
 "Ballade in E Minor" (Chopin).  
 "Claire de Lune" (Debussy).  
 "Two Arabesques, A Major and E Major" (Debussy).  
 9.2 p.m.—NORMAN BRADSHAW, tenor:  
 "Thou Standest like a Flower" (List).  
 "Sweet Evening Come and Go" (G. Thomas).

## 9.30 p.m.—STUDIO ORCHESTRA:

Selection: "The Belle of New York."  
 9.35 p.m.—THE MONKEY'S PAW. A Story in three scenes by W. W. JACOBS. Dramatised by Louis N. Parker. Characters in the order of their speaking:  
 Mr. White ..... MAURICE DUDLEY  
 Herbert ..... E. MASON WOOD  
 Mrs. White ..... Mrs. MAURICE DUDLEY  
 Sgt. Major Morris ..... ALFRED ANDREW  
 Mr. Sampson ..... ALFRED ANDREW  
 Scene—The Living Room of an old-fashioned Cottage on the outskirts of Fulham. Time—

SCENE I.—Night. Storm raging outside.

SCENE II.—Next Morning. Day.

SCENE III.—Night—Ten days later. Produced by ALFRED ANDREW. (Listeners are advised to "PUT OUT THEIR LIGHTS AND LISTEN.")

9.52 p.m.—STATION TRIO:  
 "Tri No. 3—1st Movement" (Beethoven).  
 10 p.m.—British Official Wireless news from Rugby. Announcements.  
 10.10 p.m.—DREW AND ROMAINE, Two Boys and a Planet:  
 "Mother, she's the World to Me." "Lollipop Love."  
 10.15 p.m.—THE KENTUCKY THREE:  
 Selection: "Only Love." "Old English."  
 10.27 p.m.—NORMAN BRADSHAW, tenor:  
 "All in a Lily White Gown" (Easthope Marin). "Madrigal" (Chamindale).  
 10.34 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
 "Dreaming of Castles in the Air" (Ward). "To-night's my night with Baby" (Mayer).  
 10.44 p.m.—"Argus" news service. Announcements. Weather forecasts.  
 10.54 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
 "Angry" (Ward).

11 p.m.—OUR GREAT THOUGHT:  
 "Any one can give advice, such as it is, but only a wise man knows how to profit by it." Colton.

11.1 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
 "I Wish I had my old gal back again." "Sunday."

"Rose Colored Glasses." "Calling Me Home." "The Village Blacksmith owns the Village Now."

"By the Sign of the Rose." "I've, I've, Blackbird." "That's Why I Love You."

11.40 p.m.—GOD SAVE THE KING.

## 4QG, BRISBANE

## MIDDAY SESSION.

12.55 p.m.—Time In.  
 12.55 p.m.—Time Signal.  
 1.0 p.m.—Market Reports: Weather information supplied by the Commonwealth Weather Bureau. News reports supplied by "The Daily Mail" and "The Daily Standard".  
 1.20 p.m.—From Hotel Carlton: Lunch Music from the Lounge. Hotel Carlton played by Hotel Carlton Symphony Orchestra.  
 1.58 p.m.—From the Observatory: Standard Time Signal.  
 2.0 p.m.—Close Down.

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## AFTERNOON SESSION.

3.30 p.m.—From Hotel Carlton: Afternoon Tea Music, played by Hotel Carlton Symphony Orchestra.  
4.15 p.m.—From the Studio: News Service supplied by "The Telegraph."  
4.30 p.m.—Close Down.

## EARLY EVENING SESSION.

6.0 p.m.—News Service supplied by the "Daily Standard."  
6.10 p.m.—The Children's Reader—Stories by "The Sandman."  
7.0 p.m.—Market Reports; Lecturette, "Commerce of the Big Six"; part of a series "Time Products" by Mr. E. J. Shenton (Instructor in Pig Raising).  
7.30 p.m.—Stock Reports; Weather news; Announcements.  
7.45 p.m.—Standard Time Signals.

## NIGHT SESSION.

7.45 p.m.—Lecture Session: "The Children Music Corner" (conducted by "The Music Man").  
A RECITAL AT THE COURT OF KING LOUIS XIV. Tonight's programme has been arranged and organised by Mr. Erich John, and will comprise a musical recital at the Court of King Louis XIV. Choral, "The Heavens are Telling" (from the oratorio "The Angelus"), vocal octette, "Once There Was a Maiden" (Mozart), Miss Clarice Cox (contralto), and Mr. Fred Homer (baritone); "La Tannourine" (from Violin Sonata—Locatelli), string quartette; song, "Ye Powers That Dwell Below" (Glinka), Miss Mabel Mahon (soprano); chorus, "Dewy Violets" (Scaratti), vocal octette; instrumental—(a) "Bois Epais" (Lully), (b) "Gavotte" (Corelli); instrumental—recitative and aria, "For Behold, I Am Coming" (Handel); the oratorio "The Messiah"; Mr. Ben Chaire (baritone); duet, "Trust in Friendship" (Haydn); Miss Maye Hughes (soprano) and Mr. Jack Lord (tenor), instrumental, "La Grenouille" (Sammarini), string quartette; choral, "Children's Pleasures" (Mozart), vocal octette.  
8.0 p.m.—Metropolitan Weather Forecast; Instrumental, "Gavotte" (Gluck), string quartette; aria, "I Will Not Wear" (Mozart); Misses Goss Williamson (tenor), and Bon Chaire (baritone); aria, "The Spirit's Song" (Haydn); Miss Mildred Bell (contralto); instrumental, "Siciliano" and "Loure" (Bach), string quartette; aria, "When One Dear Emotion" (Mozart)—from the opera "Die Zauberflöte"; Mr. George Williamson (tenor); duet, "How Lovely is the Fair" (Handel); Misses Mabel Mahon and Mildred Bell instrumental, "Arioso" (Handel); the orchestra "Sense" (string quartette); choral, "Gentle Shepherd" (Pergolesi), vocal octette; aria, "Smiling Bacchus" (Handel)—from the opera "Hercules"; Mr. Fred Homer (baritone); choral, "Choosing the May Queen" (Moore)—from the opera "The Marriage of Figaro"; vocal octette.

10.0 p.m.—From the Studio: "The Daily Mail" News; Weather News; Close down.

## 5CL, ADELAIDE

## MORNING SESSION.

11.30 a.m.—G.P.O. chimes.  
11.31 a.m.—Stock Duo Art number.  
11.35 p.m.—"Advertiser" news service.  
11.35 a.m.—Vocalion number.  
11.36 a.m.—G.P.O. chimes.  
11.37 a.m.—"Advertiser" news service.  
11.38 a.m.—Vocalion number.  
12.20 p.m.—Market reports.  
12.30 p.m.—G.P.O. chimes.  
12.31 p.m.—Studio Orchestra: Overture, "Stradella"; waltz, "June Brought the roses"; fox trot, "Bye-bye, blackbird"; "Chant Sans Parole"; dance, "Tenazewee"; violin solo, "Gavotte"; selection, "Rose Marie"; trio, "Serenade"; finale, "Tripli."

12.30 p.m.—Ward and Co.'s Stock Exchange reports; official weather synopses and station announcements.  
2 p.m.—G.P.O. chimes and close down.

## AFTERNOON SESSION.

2 p.m.—G.P.O. chimes.  
2 1/2 p.m.—Relay from Maple Leaf Cafe—Orchestra numbers.  
2.45 p.m.—From Studio—Stock Duo Art and Vocalion numbers.  
2 p.m.—G.P.O. chimes.  
4.1 p.m.—Relay from Arcticus Cafe—Orchestra numbers.  
4.35 p.m.—Stock Exchange reports; general information and station announcements.  
5 p.m.—G.P.O. chimes and close down.

## EVENING SESSION.

6.30 p.m.—G.P.O. chimes.  
6.31 p.m.—Stock Duo Art number.  
6.35 p.m.—Bedtime stories.  
7.00 p.m.—Market reports.  
7.10 p.m.—Motor talk by Mr. Van Sender, of Vacuum Oil Co.  
7.10 p.m.—G.P.O. chimes.  
8.1 p.m.—Relay from Ascania Hall—Rehearsal numbers.  
8.10 p.m.—"Twinkler."  
8.10 p.m.—Solo, Mr. F. Groth.  
8.15 p.m.—Solo, Mrs. James.  
8.15 p.m.—Solo, Mr. J. Lenthall.  
8.20 p.m.—Solo, Mr. J. Goldsworthy.  
8.25 p.m.—Solo, Miss I. Penny.  
9 p.m.—G.P.O. chimes.  
9.1 p.m.—Weather report.  
9.2 p.m.—Dalgety's wheat report.  
9.30 p.m.—Relay from Ascania Hall.  
9.30 p.m.—Physical culture talk, Mr. Noel Hobble.  
9.45 p.m.—Solo, Mr. F. Groth.  
9.45 p.m.—Solo, Mrs. James.  
9.55 p.m.—Solo, Mr. J. Lenthall.  
9.55 p.m.—Solo, Mr. J. Goldsworthy.  
10 p.m.—G.P.O. chimes.  
10.1 p.m.—"Advertiser" news service.  
10.5 p.m.—Solo, Mr. G. Urth.  
10.10 p.m.—Solo, Mrs. James.  
10.15 p.m.—Solo, Mr. J. Lenthall.  
10.20 p.m.—Solo, Mr. G. Goldsworthy.  
10.25 p.m.—Relay from the Floating Palace.

## 6WF, PERTH

12.30 p.m.—Tune in.  
12.35 p.m.—First local news bulletin.  
Market reports.  
Cables.  
1 p.m.—Time signal from the Perth Observatory.  
11.00 p.m.—Weather news supplied by the Meteorological Bureau of Western Australia.  
11.30 p.m.—Studio QUINTETTE.  
1 p.m.—Close down.  
11.30 p.m.—Tune in.  
11.35 p.m.—Musical programme.  
1 p.m.—STUDIO TRIO.  
11.30 p.m.—Close down.  
11.35 p.m.—Children's bedtime stories by Uncle Perry and Daffy.  
11.35 p.m.—Stock and share intelligence.  
Market reports.  
Cables. News supplied by courtesy of "The West Australian" Newspaper Co.  
1 p.m.—Time signal from the Perth Observatory.  
2 p.m.—Weather news supplied by the Meteorological Bureau of Western Australia.  
2.30 p.m.—Beeskeepers' talk by Mr. C. Walshe, (under auspices of the Beeskeepers' Association).  
2.30 p.m.—MUSICAL NIGHT.  
Organ solo, released from St. Andrews Church, St. George's Terrace, Perth. Organist and conductor, Mr. H. C. Goff.  
March of the Belmontes" (Coast); "Evening" (Enthous Martin).

Soprano solo: "Ave Maria" (Lardelli); Mrs. Gertrude Hardwick, soloist;  
"Allegro" (Rinek);

"Madame Nutcracker" (Gruhnau); Miss Lydia Hocking, contralto;  
"Life" (Oley Speaks); "Beautiful Isle of Somewhere" (Pearce); "Unmindful of the Roses" (Caterlidge-Taylor);

"Open the Gates of the Temple" (Mrs. Joseph Knapp).

Mr. W. A. McDonald, tenor:  
"If I Might Only Come to You" (W. H. Suitor);

"Until" (Sargent); "While the Rivers of Love Flow on" (Ball);

"Parted" (Tosti); Mr. Gordon Clifton, cornet solo; Miss Evelyn Willis, A.R.C.M., pianiste.

10 p.m.—Second hand news bulletins supplied by courtesy of "The Daily News" Newspaper Co.  
10.30 p.m.—Close down.

## Tues., February 15

## 2FC, SYDNEY

## EARLY MORNING SESSION.

7.0 a.m.—"Big Ben" and announcements.  
7.15 a.m.—Studio music.  
7.16 a.m.—Official weather forecast, rainfall, temperatures, astronomical memoranda; shipping intelligence; mail service; commercial news.  
7.25 a.m.—Investment market; mining share market; special quotations.  
7.30 a.m.—World广播 markets; International markets; produce markets.  
7.45 a.m.—"Sydney Morning Herald" news service.  
8.0 a.m.—"Big Ben"; Studio music.  
8.15 a.m.—Close down.

## MORNING SESSION.

8.30 a.m.—Marching music for school children.  
8.40 a.m.—Comics—5 minute sporting information by the SWB Racing Commissioners.  
8.50 a.m.—"Big Ben" and announcements.  
10.0 a.m.—"Big Ben" and "Sydney Morning Herald" news service.  
10.15 a.m.—Studio Music.  
10.45 a.m.—A morning reading.  
11.00 a.m.—"Big Ben"; Australian Press Association and Reuter's Cable Services.  
11.10 a.m.—Studio music.  
11.15 a.m.—Talk on home cooking and recipes by Miss Ruth Ward.  
11.30 a.m.—Marching music for school children.  
11.35 a.m.—Close down.

## MIDDAY SESSION.

12.30 p.m.—"Big Ben" and announcements.  
12.35 p.m.—Stock Exchange, first call.  
12.45 p.m.—Studio music.  
12.45 p.m.—FROM FARMER'S OAK HALL Instrumental band by the Oak Hall Trio.  
12.50 p.m.—Rugby wireless news.  
12.55 p.m.—Miss Eileen Robinson, news.  
"The Wedding of Spring" (Del Rio).  
1.00 p.m.—"Big Ben"; Weather intelligence.  
1.05 p.m.—"Evening News" midday news service; Producers' Distributing Society's Report.  
1.10 p.m.—FROM FARMER'S OAK HALL: The Oak Hall Trio.  
1.20 p.m.—Stock Exchange, second call.  
1.30 p.m.—Marching music for school children.  
1.40 p.m.—Miss Eileen Robinson, news.  
"Were I a Star" (Barber).  
1.45 p.m.—Studio music.  
1.50 p.m.—FROM FARMER'S OAK HALL: The Oak Hall Trio.  
2.0 p.m.—"Big Ben"; Close down.

## AFTERNOON SESSION.

2.30 p.m.—The children of 2FC.  
2.35 p.m.—Elementary items by the pupils of Mr. Branton Gibb.  
2.45 p.m.—Band music.

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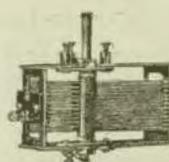
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**"STERLING"****Crystal Receivers**Priced at **84/-**

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Of Genuine Bakelite**

"Sensory" standard American base  
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A condenser built for those who desire  
an efficient and reliable straight line  
frequency condenser at a low cost.

Price ..... **14/-****"Beede" Volt Meters.**

A "Beede" pocket type volt meter is a necessity for the owner of a wireless receiver, for with it the state of the "B" batteries can at all times be determined.  
Price .....

**4/9****FARMER'S, SYDNEY**

BOX 497 AA, C.P.O.

Farmer's do not pay carriage on Wireless Goods

2.50 p.m.—Further items by the pupils of Mr. Brunton Gibb.  
 3.0 p.m.—Studio music.  
 3.20 p.m.—Pianoforte solos.  
 3.30 p.m.—FROM FARMER'S TEA ROOMS: Instrumental item by the Oak Hall Trio.  
 3.45 p.m.—Miss Florence Grant, soprano, "Nymphs and Fauns" (Bemberg).  
 3.45 p.m.—The Oak Hall Trio.  
 3.55 p.m.—Studio music.  
 4.0 p.m.—FROM FARMER'S TEA ROOMS: Miss Victoria Walther, contralto.  
 4.45 p.m.—The Oak Hall Trio.  
 4.55 p.m.—Studio music.  
 4.55 p.m.—FROM FARMER'S TEA ROOMS: Miss Florence Grant, soprano, "La Serenata" (Berga).  
 4.55 p.m.—The Oak Hall Trio.  
 4.55 p.m.—FROM FARMER'S TEA ROOMS: Miss Victoria Walther, contralto.  
 4.45 p.m.—Stock Exchange, third call.  
 4.45 p.m.—Close down.  
**EVENING SESSION.**  
 5.45 p.m.—The chimes of EPC.  
 5.55 p.m.—"The Hello Man" talks to the children.  
 6.30 p.m.—A story for the older ones.  
 6.45 p.m.—Dinner music.  
 7.0 p.m.—Late sporting news.  
 7.10 p.m.—Dalgety's Market reports; wool, wheat, stores.  
 7.15 p.m.—Fruit and vegetable markets.  
 7.20 p.m.—Weather and shipping intelligence: Stock Exchange.  
 7.24 p.m.—Late "Evening News" news service.

**NIGHT SESSION.**

7.45 p.m.—Announcements and resume of programme.  
 7.45 p.m.—A talk by Mr. W. P. Jackson on the Latin Quarter of Paris.  
 8.0 p.m.—"Big Ben": From the Royal Naval House, Sydney; Host: Mr. George V. of the New South Wales State Military Band.  
 8.12 p.m.—FROM THE STUDIO, Mr. William Dallison, tenor.  
 8.16 p.m.—FROM THE ROYAL NAVAL HOUSE: The N.S.W. State Military Band.  
 8.28 p.m.—FROM THE STUDIO, Miss Eileen Boyd, contralto, "I passed by your Window" (Brooks).  
 8.45 p.m.—Mr. Charles Lawrence, comedian: "The Roving Charmer".  
 8.56 p.m.—FROM THE ROYAL NAVAL HOUSE: The N.S.W. State Military Band.  
 8.55 p.m.—FROM THE STUDIO: Mr. Joe Pearson continues his impressions on the Early Methods of Transportation in Sydney.  
 9.02 p.m.—Mr. William Dallison, tenor.  
 9.10 p.m.—FROM THE ROYAL NAVAL HOUSE: The N.S.W. State Military Band.  
 9.18 p.m.—FROM THE STUDIO: Miss Eileen Boyd, contralto:  
     (a) "My Ain Folk" (Lemon).  
     (b) "Moonlight on the Ganges" (Myers).  
 9.25 p.m.—Mr. Lionel Lawson, violinist.  
 9.32 p.m.—Radio Cartoons by Mr. Kerwin MacGrath.  
 9.38 p.m.—Mr. William Dallison, tenor.  
 9.42 p.m.—FROM THE ROYAL NAVAL HOUSE: The N.S.W. State Military Band.  
 9.50 p.m.—FROM THE STUDIO: Mr. Charles Lawrence, comedian:  
     (a) "The Wedding Day" (Clarke).  
     (b) "I hear you singing" (Katti).  
 10.0 p.m.—"Big Ben": Mr. Lionel Lawson, violinist.  
 10.8 p.m.—Miss Eileen Boyd, contralto—  
     "Every step towards Kilbarney" (Evans).  
 10.12 p.m.—Mr. Charles Lawrence, comedian: "What's the matter with father?"  
 10.16 p.m.—Mr. Lionel Lawson, violinist.  
 10.22 p.m.—Celebrity records.  
 10.30 p.m.—THE WESTWORTH CAFE, SYDNEY: The New Wentworth Symphonic Dance Orchestra, conducted by Mr. Sydney Simpkinson.  
 11.0 p.m.—"Big Ben" and studio announcements.  
 11.5 p.m.—The New Wentworth Symphonic Dance Orchestra will play until midnight.  
 12 midnight—"Big Ben," National Anthem. Close down.

**2.I.Y., SYDNEY**

**LUNCHEON HOUR SESSION.**  
 12.15 p.m.—Tune-in to the ticking of the clock.  
 12.18 p.m.—Popular fox-trots. "Orpheus" (Gramophone).  
 12.25 p.m.—Pianoforte solos.  
 12.45 p.m.—Latest news items.  
 1.00 p.m.—Vocal items.  
 1.15 p.m.—Hawaiian Steel Guitar selections.  
 1.25 p.m.—Union news and meetings.  
 1.30 p.m.—Musical and vocal items, closing down at 1.45 p.m.

**CHILDREN'S HOUR.**

6.30 p.m.—The Storyteller, Mr. Thompson. **EVENING SESSION.**  
 7.30 p.m.—Tune-in to the ticking of the clock.  
 7.35 p.m.—Latest news items.  
 7.45 p.m.—Economic notes of the week, Mr. J. Ryan (Directive Labor Research and Information Bureau).  
 8.00 p.m.—Pianoforte solos, Miss Mary Dean.  
 8.10 p.m.—Burlesone solos, Mr. R. Webster.  
 8.18 p.m.—Tenor solos, Mr. Alf. Shaw.  
 8.25 p.m.—Mezzo Soprano solos, Miss Helen Cameron.  
 8.35 p.m.—Musical Interlude, Glaeserium Dance Orchestra, Billy Romaine, Leader. (By kind permission of G. Irving).  
 9.00 p.m.—Banjo solos, Mr. Murrell.  
 9.10 p.m.—Soprano solos, Miss Frances Wright.  
 9.18 p.m.—Glaeserium Dance Orchestra.  
 9.35 p.m.—Theatre talk.  
 9.45 p.m.—Recital of latest release of Lincoln Records.  
 10.0 p.m.—Closing announcements.

**3.LO, MELBOURNE****MID-DAY SESSION.**

**THE STUDIO ORCHESTRA:**  
 MILES HASTINGS, Elocutionist.  
 NORMAN BRADSHAW, tenor.  
 MAGGIE FOSTER, violin.  
 JESSIE BATCHELOR, contralto.  
 WALTER SMITH, cornet.  
 Accompanist ..... AGNES FORTUNE  
 Announcer ..... MAURICE DUDLEY  
 "MELODIOUS HOUR".  
 12 noon—Time Signal, British Official Wireless News from Rugby, Reuter's and Australian Press Association Cables: "Argus" and "Herald" news services.—  
 12.15 p.m.—Stock Exchange information.  
 12.30 p.m.—STUDIO ORCHESTRA:  
     Overture: "Tina" (Mozart).  
 12.30 p.m.—MILES HASTINGS, Elocutionist:  
     "The Kid" (Dennis).  
 12.45 p.m.—NORMAN BRADSHAW, tenor:  
     "The Little Song" (M. V. White).  
 1.00 p.m.—MAGGIE FOSTER, violin:  
     Popular Chorus.  
 12.50 p.m.—STUDIO ORCHESTRA:  
     Selection, "Madame Butterfly," Part I. (Puccini).  
 1 p.m.—JESSIE BATCHELOR, contralto:  
     " Hindoo Song."  
     "Swing low Sweet Chariot."  
 1.7 p.m.—WALTER SMITH, cornet:  
     "The Alpine Rose" (Rimmer).  
 1.18 p.m.—Meteorological information. Weather reports for Victoria, Tasmania, South Australia and New South Wales. Reports of Rivers.  
 1.28 p.m.—STUDIO ORCHESTRA:  
     "Kashmir (Moszkowisch).  
 1.33 p.m.—NORMAN BRADSHAW, tenor:  
     "Love's Old Sweet Song."  
     "Be Botic."  
 1.40 p.m.—MILES HASTINGS, Elocutionist:  
     "The Stroll 'at Coot" (Dennis).  
 1.47 p.m.—STUDIO ORCHESTRA:  
     "La Bella Valencia" (Kempfert).  
 2 p.m.—Close down.

**AFTERNOON SESSION.**

Speakers:  
 "AU FAIT," MATRON MORELAND.  
 DREW AND ROMAINE.  
 PRESSY PRESTON, Comedienne.  
 JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS.

Announcer ..... AGNES FORTUNE  
 Accompanist ..... ALFRED ANDREW  
 "FOR YOUNG AND OLD." .  
 7.15 p.m.—Under the auspices of the Town Planning Association, Mr. A. N. KEMSLEY, Secretary:  
 "A Water Gate to Melbourne."

**SYMPHONISTS.**

Announcer ..... MAURICE DUDLEY  
 Accompanist ..... AGNES FORTUNE  
 "POPULAR SONGS AND DANCES."  
 3 p.m.—JOE ARONSON AND HIS Syncopating SYMPHONISTS:  
 "Are You Wasting my Time on You?"  
 "Just a Bird's Eye View of my Old Kentucky Home."  
 3.10 p.m.—"AU FAIT," of Messrs. Buckley and Nonn, Ltd.:  
 "Fashion Talk."  
 3.25 p.m.—JOE ARONSON AND HIS Syncopating SYMPHONISTS:  
 "Beside a Garden Wall."  
 "Schubert is Back Again with His Boom Boom."  
 3.35 p.m.—DREW AND ROMAINE, Two Boys and a Piano:  
 "Geling in Caroline."  
 "Old Indiana Melodies."  
 3.45 p.m.—JOE ARONSON AND HIS Syncopating SYMPHONISTS:  
 "Don't be Angry with Me."  
 "There's a Boatman on the Volga."  
 3.55 p.m.—PRESSY PRESTON, Comedienne:  
 "If You Talk in Your Sleep."  
 "Dirty Face."  
 4.2 p.m.—JOE ARONSON AND HIS Syncopating SYMPHONISTS:  
 "I don't care about nobody but you."  
 "A Cup of Coffee & a Sandwich and You."  
 4.10 p.m.—DREW AND ROMAINE, Two Boys and a Piano:  
 "Hark to My Home Town."  
 "The Digger's Medley."  
 4.22 p.m.—JOE ARONSON AND HIS Syncopating SYMPHONISTS:  
 "Until To-morrow."  
 "Somebody's Lonely."  
 4.25 p.m.—MATRON MORELAND:  
 Infant Welfare.  
 4.35 p.m.—"Heads" news service. Stock Exchange information.  
 5 p.m.—Close down.

**EVENING SESSION.**

5.45 p.m.—CHILDREN'S HOUR. Answers to letters and birthday greetings.  
 5.55 p.m.—STUDIO ORCHESTRA:  
 "Children's Corner" (Debussy).  
 6.55 p.m.—"MARY GUMBLEAF" Poems:  
 "Winning the Day."  
 "Pull Together."  
 Story for the littlest ones, "A Wattle Day Story".  
 6.55 p.m.—STUDIO ORCHESTRA:  
 "Children's Corner," Part 2.  
 6.55 p.m.—"MARY GUMBLEAF":  
 Story for Boys: "The Snow Hill."  
 Story for Girls: "The Fish Monster."  
 6.55 p.m.—"Argus" and "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.  
 6.55 p.m.—River reports.  
 6.58 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd. Dairy Products, Potatoes and Onions, Haymarket sheep sales; Poultry, Grain, Straw, Hay and Jade.  
 7.0 p.m.—Market prices of Oranges and Lemons by the Victorian Central Citrus Association.

**NIGHT SESSION.**

Speakers: Mr. A. N. KEMSLEY, Mr. J. R. LYALL, Mr. MACGREGOR KNOX,  
 Mr. HUBERT OPPERMANN,  
 BRUNSWICK CITY BAND.  
 Conductor: Mr. Harry Nixon.  
 SOUTHERN CHORAL SOCIETY,  
 Conductor, Mr. Graham Burgess.  
 PUPILS OF MISS FREDA NORTHCOATE,  
 MONA THOMAS, soprano,  
 MAGGIE FOSTER, violin,  
 DREW AND ROMAINE,  
 JOE ARONSON AND HIS Syncopating SYMPHONISTS.  
 Accompanist ..... AGNES FORTUNE  
 Announcer ..... ALFRED ANDREW  
 "FOR YOUNG AND OLD." .  
 7.15 p.m.—Under the auspices of the Town Planning Association, Mr. A. N. KEMSLEY, Secretary:  
 "A Water Gate to Melbourne."

Radiokes acknowledged  
as the World's Best



£2/2/- at all Dealers.

The Browning-Drake is holding most of the world's records—Radiokes is the only genuine Browning-Drake coil kit on the market.

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CAN ONLY BE HEARD ON  
THE SUPERTONE.

Call and See Our Special 2-Voice  
Model at 4113/18/- complete.  
The Famous "BLUE SPOT" PHONES,  
the lightest ever made, 35/- pair.  
Special Accumulators, 50 Amps Actual,  
22/- per Volt cell, 40 Amps Actual  
18/- per Volt cell.  
Large Stock of Hellium's B. Batteries.  
Lead or Wire 1d. yard.  
20ft. Speaker Cords, 4/4 each.  
Sets rewired in any circuit.



£2/10/- Deposit and 9/6 per week  
buys for you

### The "D.J. Standard 4"



£25 less 2/- in the £ for Cash

makes the cash price £22/10/- absolutely complete

This powerful and highly selective Set is simplified to the greatest possible extent, there are no moving coils to change or get out of order—only two dials, so simple that anyone can regulate the tuning. Once tuned in the "D.J. Standard 4" remains stable. There is no difficulty in picking up which ever station you want—and £22/10/- is the first and last cost while the Sale is on.

*Here is what you get for your £25*

4B406 Mullard PM3 4-volt, 33-amp Peto-Radford Accumulator, 2 large capacity Winchester "B" Batteries, 1 Trimm Entertainer Speaker, 1 pair Trimm Dependable 'Phones, 2 Phone Plugs, 100 feet of Aerial Wire, 30 feet of Insulated Lead-in Wire, 4 Insulators, 6 feet Flex Wire for connecting Batteries, 1 Lightning Arrester. The whole encased in handsome cabinet of polished maple.

*Buy it on Deferred Payments*

You can now have the pleasure of securing the "D.J. Standard 4" delivered into your own home on the deposit of £2/10/-; balance to be paid at the rate of 9/6 per week, to be completed within 12 months.

### DAVID JONES' SALE

Less 2/- in the £ for Cash.



**Guard against Radio Trouble. Use Only Guaranteed Radio Equipment.**



One of the easiest ways of getting into trouble with your radio set is to use accessories that are faulty or of poor quality. To guard against this, we urge all radio fans to buy accessories of known quality—products of world renowned manufacturers. We stock only the latter kind, and for this reason we guarantee them.

### Easy Terms

A small deposit secures immediate possession of the following goods and the comfortable weekly payments will suit your pocket. Call or write for full details.

"PRILCO" 90 volt. wet "B" Battery	£8 15 0
"AMPLION" Loud Speakers, all sizes from "A" to "E"	3 0 0
"VALVE" 6 volt. 40 amp. Accumulator	4 15 0
"Tungs" Battery Charger	0 15 0
"PHILLIPS" "B" BATTERY	
ELIMINATOR — Eliminates all "B" Battery troubles	9 15 0



— And we invite you to call and hear the new "KEOGH" T-VALVE "SUPER," the most efficient Set ever offered to the Australian public. This Super Set was designed by our Technical Adviser, Mr. C. W. Stale, Australia's Leading Radio Engineer. It is simple to operate, tunes in all Australasian Stations with natural tone and volume, requires no aerial or earth wires, completely eliminates Interference and reduces static 75 per cent.

COUNTRY CUSTOMERS ARE ASKED TO WRITE FOR FULL DETAILS.

**Keogh Radio Supplies**  
40a PARK STREET, SYDNEY.  
Phone City 870.

# A Radio Bargain

**3 Valve Set** in handsome cabinet, complete in every detail, including—

Loud Speaker  
Exide Accumulator  
84 Volt B Battery  
4½ Volt C Battery  
Large Valves (the best)  
Aerial Gear

**A guarantee with every Set**

### Two Prices:

Price - £16 17 6	Price - £19 17 6
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Weekly - 5 9	Weekly - 6 9

We charge no interest for these easy terms.

The easy terms also apply to country customers.

**Take one home to-night!**

**Radio-W'Less Mfg. Co. Ltd.**

317 George Street :: SYDNEY

Telephone: B 5747

7.25 a.m.—Investment market, mining share market, metal quotations.  
 7.35 a.m.—Wool sales; breadstuffs market, interstate markets, produce markets.  
 7.45 a.m.—"Sydney Morning Herald" news service.  
 8 a.m.—"Big Ben," Studio music.  
 8.45 a.m.—Close down.

## MORNING SESSION.

8.30 a.m.—Marching music for school children.  
 9.40 a.m.—Some popular records.  
 10 a.m.—"Big Ben" and announcements.  
 10.45 a.m.—Late "Sydney Morning Herald" news service.  
 11 a.m.—"Big Ben," Australian Press Association and Reuter's Cable Services.  
 11.10 a.m.—Studio music.  
 11.15 a.m.—A talk on home cooking and recipes by Miss Ruth Furst.  
 11.30 a.m.—Marching music for school children.  
 11.45 a.m.—Close down.

## MIDDAY SESSION.

12 noon—"Big Ben" and announcements.  
 12.35 p.m.—Stock Exchange, first call.  
 12.45 p.m.—FROM FARMER'S OAK HALL. Instrumental item by the Oak Hall Trio.  
 12.50 p.m.—Radio wireless news.  
 12.55 p.m.—Miss Sybil Athelwood, mezzo.  
 1 p.m.—"Big Ben," Weather intelligence.  
 1.15 p.m.—"Evening News" news service. Producers' Distributing Society's report.  
 1.20 p.m.—FROM FARMER'S OAK HALL. The Oak Hall Trio.  
 1.25 p.m.—Stock Exchange, second call.  
 1.30 p.m.—Marching music for school children.  
 1.40 p.m.—Miss Sybil Athelwood, mezzo.  
 1.45 p.m.—Studio music.  
 1.50 p.m.—FROM FARMER'S OAK HALL. The Oak Hall Trio.  
 2 p.m.—"Big Ben." Close down.

## AFTERNOON SESSION.

2.30 p.m.—The chimes of 2PC and announcements.  
 2.35 p.m.—A Pianoforte Recital by the pupils of Mr. Lindley Evans.  
 2.50 p.m.—Celebrity records.  
 3 p.m.—Pianoforte Solos arranged by Mr. Lindley Evans.  
 3.30 p.m.—FROM THE WENTWORTH CAFE, SYDNEY.—The New Wentworth Symphonic Dance Orchestra, conducted by Mr. Sydney Simpson.  
 4.00 p.m.—FROM FARMER'S TEA ROOMS. Miss Thelma Lansdowne, mezzo.  
 "Come to the Fair" (Martin).  
 4.45 p.m.—The Oak Hall Trio (leader, Mr. Horace Keats).  
 5.00 p.m.—Studio music.  
 4 p.m.—"Big Ben." From FARMER'S TEA ROOMS! Miss Cecily Auldhurst, soprano.  
 4.45 p.m.—The Oak Hall Trio.  
 4.15 p.m.—Studio music.  
 4.20 p.m.—FROM FARMER'S TEA ROOMS. Miss Thelma Lansdowne, mezzo.  
 "Bird songs at Eventide" (Coates).  
 4.25 p.m.—The Oak Hall Trio.  
 4.35 p.m.—Studio music.  
 4.40 p.m.—FROM FARMER'S TEA ROOMS. Miss Sybil Athelwood, mezzo.  
 4.45 p.m.—Stock Exchange, third call. Close down.

## EARLY EVENING SESSION.

5.45 p.m.—The chimes of 2PC.  
 5.50 p.m.—The "Hello Man" talks to the children.  
 6.30 p.m.—A story for the older ones.  
 6.40 p.m.—Dinner music.  
 7 p.m.—"Big Ben." Late sporting news.  
 7.10 p.m.—Dalgler's market reports—wool, wheat, and stock.  
 7.18 p.m.—Fruit and vegetable markets.  
 7.29 p.m.—Weather and shipping intelligence. Stock Exchange information.  
 7.26 p.m.—Late "Evening News" service.

## NIGHT SESSION.

7.45 p.m.—Announcements and resume of programme.  
 7.45 p.m.—The 2PC Studio Dance Band, conducted by Mr. Eric Pearce.  
 8 p.m.—"Big Ben." FROM THE LYRIC WINTER GARDEN THEATRE. Items by the Orchestra, under the baton of Mr. Alfred Moulton.  
 8.15 p.m.—FROM THE STUDIO—Miss Dorothy Ewbank, soprano.  
 8.30 p.m.—Mr. Arthur Ash, saxophone solo.  
 8.33 p.m.—Some O'Henry humor.  
 8.35 p.m.—The 2PC Studio Dance Band, with Mr. Len Maurice, popular baritone.  
 8.38 p.m.—Mr. Herbert Walton, well known comedian (by permission of J. C. Williamson, Ltd.) in a few merry moments.  
 8.45 p.m.—FROM THE LYRIC WINTER GARDEN THEATRE. Items by the Orchestra.  
 9 p.m.—"Big Ben." FROM THE STUDIO. Miss Dorothy Ewbank, soprano.  
 9.45 p.m.—The 2PC Studio Dance Band.  
 9.50 p.m.—Mr. Arthur Aldridge, tenor.  
 9.52 p.m.—Mr. E. P. Kerr, cornet solo: "Trolli" (Cobie).  
 9.58 p.m.—Mr. Herbert Walton, comedian.  
 9.30 p.m.—The 2PC Studio Dance Band, with Mr. Len Maurice, popular baritone.  
 9.33 p.m.—Miss Dorothy Ewbank, soprano.  
 9.38 p.m.—Mr. Purcell Spouse, Australian Mouth Organ Champion, in selections.  
 9.45 p.m.—Mr. Arthur Aldridge, tenor.  
 9.50 p.m.—The 2PC Studio Dance Band, conductor: Mr. Eric Pearce.  
 9.55 p.m.—FROM THE LYRIC WINTER GARDEN THEATRE. Orchestral items.  
 10.10 p.m.—FROM THE STUDIO. Mr. Arthur Aldridge, tenor.  
 10.14 p.m.—Mr. E. P. Kerr, cornet solo: "Caprice Brillante" (Clarke).  
 10.20 p.m.—Late news and announcements.  
 10.23 p.m.—Mr. Arthur Aldridge, tenor.  
 10.25 p.m.—Mr. Purcell Spouse, mouth organ selection.  
 10.35 p.m.—FROM THE WENTWORTH CAFE, THE New Wentworth Symphonic Dance Orchestra, conducted by Mr. Sydney Simpson.  
 11.10 p.m.—"Big Ben" and announcements.  
 11.15 p.m.—The Wentworth Symphonic Dance Orchestra will play until midnight.  
 12 midnight—"Big Ben." National Anthem. Close down.

## 2GB, SYDNEY

## MORNING SESSION.

CHEERIO HOUR CONDUCTED BY THE CHEERIO MAN.

9.30 a.m.—Music.  
 9.35 a.m.—Giggles chat.  
 9.50 a.m.—Music.  
 10 a.m.—Home Betterment Topics.  
 10.15 a.m.—Music.  
 10.20 a.m.—Five minutes with the children at Home.  
 10.25 a.m.—Announcements. Close down.

## WOMEN'S NEWS SESSION.

3.30 p.m.—Music.  
 3.40 p.m.—Humanitarian Movements in Series.  
 3.55 p.m.—Music.  
 4.5 p.m.—News from everywhere for Women.  
 4.30 p.m.—Close down.  
 4.45 p.m.—The Children's Session, conducted by the CHEERIO MAN.  
 7.30 p.m.—Music from the Studio.  
 7.35 p.m.—Instrumental Trios. Dan Scully, Jack Post, Ada Brook.  
 8.3 p.m.—Address by PROF. E. WOOD.  
 8.15 p.m.—Violin Solo by Dan Scully.  
 8.21 p.m.—2GB Vocal Quartette.  
 1. "Jenny is the Soldier's Life."  
 2. "Nature Queen."  
 3. "Merry Bella."  
 ETHEL JONES, SIBYL BEVAN, THOMAS HALL, CLEMENT HOSKING.

8.33 p.m.—Piano Solos by Ada Brook.  
 8.40 p.m.—Address by J. K. POWELL.  
 8.50 p.m.—Duets for two violins by Dan Scully, Monica Horder.  
 8.55 p.m.—Announcements.  
 9.10 p.m.—Songs by CLEMENT HOSKING:  
 1. "My Girl and I" (Contingsby Clarke).  
 2. "Crabbed Age and Youth" (White).  
 9.15 p.m.—Instrumental Quartette: Dan Scully, Monica Horder, Jack Post and Ada Brook.  
 9.20 p.m.—Talk on Radio.  
 9.45 p.m.—20B Vocal Quartette.  
 1. "The Harp That Once Thro' Tara's Hall."  
 2. "Land of My Fathers."  
 3. "Auld Lang Syne."  
 ETHEL JONES, SIBYL BEVAN, THOS. HALL, CLEMENT HOSKING.  
 9.50 p.m.—"Cheerin' Talk."  
 10.0 p.m.—"Great Thoughts."

## 3LO, MELBOURNE

## MID-DAY SESSION.

JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS.  
 MONA THOMAS, soprano.  
 DREW AND ROMAINE.  
 NORMAN BRADSHAW, tenor.  
 Accompanist ..... AGNES FORTUNE  
 Announcer ..... MAURICE DUDLEY  
 "DANCE AND BE MERRY"  
 12 noon Time Signal. British Wireless news from Rugby, Reuters' and the Australian Press Association Cables.  
 12.30 p.m.—Stock Exchange information.  
 12.30 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
 "Ho, Ho the Merrie."  
 "You Need Someone to Love."  
 12.30 p.m.—MONA THOMAS, soprano:  
 "Why do I Always Remember."  
 "Show a Little Tame."  
 12.37 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
 "Boss."  
 "I Want a Pardon for Daddy."  
 12.47 p.m.—DREW AND ROMAINE, TWO Boys and a Piano:  
 "The Girl I Love."  
 "Dooler's Farm."  
 12.57 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
 "Sidewalk Blues."  
 "Sad."  
 1.30 p.m.—NORMAN BRADSHAW, tenor:  
 "She Beloved by the Broken Brook."  
 "Calderon Taylor."  
 "She is far from the Land" (Lambert).  
 1.44 p.m.—Meteorological information. Stock exchange information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales.  
 1.54 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
 "Eskimo Shivers."  
 "Some other Bird Whistled a Tune."  
 1.58 p.m.—MONA THOMAS, soprano:  
 "Rouge."  
 "Sunshine."  
 1.40 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
 "That's Why I Love You."  
 "On the Kirks."  
 1.51 p.m.—NORMAN BRADSHAW, tenor:  
 "I'm Hopin' You Remember" (Clarke).  
 "When Dews are Shining" (Rubenstein).  
 2 p.m.—Description of KALKALLA HURDLING, Moonee Valley Races, by "Musket," of the Sporting Globe.  
 2.30 p.m.—Description of Merinda Handicap—Moonee Valley Racecourse, by "Musket" of the Sporting Globe.

## AFTERNOON SESSION.

THE STUDIO ORCHESTRA:  
 ADELE INMAN, soprano.  
 CERTHIDE ARMSTRONG, The Girl frae Glasgo.  
 THE KENTUCKY THREE.  
 MILES HASTINGS, Educationalist.  
 DREW AND ROMAINE.  
 Accompanist ..... AGNES FORTUNE  
 Announcer ..... MAURICE DUDLEY

## ANNUAL Stocktaking

### SALE

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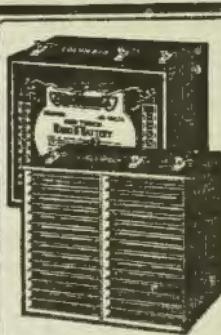
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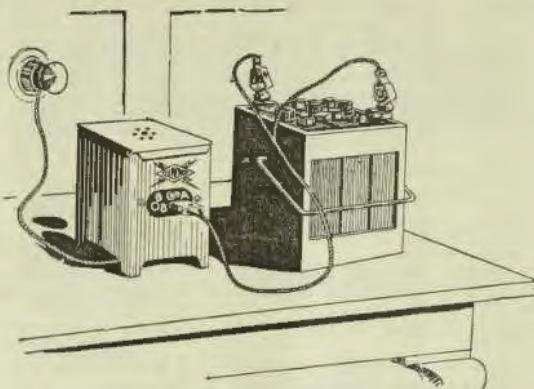
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A. and B. Battery Charger .....	£5/5/-

Special Price until 15th February Only.

**Colville Moore Wireless Supplies Ltd.  
10 Rowe Street (Next Hotel Australia) Sydney**

'Phone: B 2261.

1.55 p.m.—Ward and Co.'s Stock Exchange reports, official weather synopses and station announcements.

2 p.m.—G.P.O. chimes and close down.

#### AFTERNOON SESSION.

3 p.m.—G.P.O. chimes. O

3.1 p.m.—Relay from Maple Leaf Cafe—Orchestral numbers.

3.15 p.m.—From the Studio—Stock Dex Art numbers.

4 p.m.—G.P.O. chimes.

4.1 p.m.—Relay from Arcadia Cafe—Orchestral numbers.

4.65 p.m.—Stock Exchange reports, general information and station announcements.

5 p.m.—G.P.O. chimes and close down.

#### EVENING SESSION.

6.30 p.m.—G.P.O. chimes.

6.31 p.m.—Stock Dex Art number.

6.35 p.m.—Fiction stories by "Aunty Peggy."

7.30 p.m.—Reports.

7.40 p.m.—Boy Scouts' corner.

7.50 p.m.—Faulding's scientific talk.

8 p.m.—G.P.O. chimes.

8.1 p.m.—Concert arranged by Miss Ruby Wright.

9 p.m.—G.P.O. chimes.

9.1 p.m.—Weather report.

9.2 p.m.—Dalgety's wheat report.

9.3 p.m.—Miss R. Wright's concert continued.

10 p.m.—G.P.O. chimes.

10.1 p.m.—"Advertiser" news service.

10.15 p.m.—Concert continued.

11 p.m.—G.P.O. chimes, National Anthem, and close down.

## 6WF, PERTH

12.30 p.m.—Tune in.

12.35 p.m.—First local news bulletin.

Market reports.

Cables.

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

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

1.2 p.m.—STUDIO SEPTETTE.

2 p.m.—Close down.

3.30 p.m.—Tune in.

3.35 p.m.—Musical programme.

4 p.m.—STUDIO TRIO.

4.30 p.m.—Close down.

7 p.m.—Tune in.

7.5 p.m.—"Sleeping Beauty," a playlet for the Kiddies, by Uncle Duffy, with Aunties Kate and Evelyn and Uncles Harry, Leslie, Perry and Duffy.

7.55 p.m.—Stock and share intelligence.

Market reports.

Cables. News supplied by courtesy of "The West Australian" Newspaper Co.

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

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

8.2 p.m.—WITH THE TRIO.

Items by The Studio String Trio:

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

Mr. H. G. Basham, cello.

Mr. H. T. Newton, violin.

8.50 p.m.—Second news bulletin supplied by courtesy of "The Daily News" Newspaper Co.

8.55 p.m.—Close down.

## Thur., February 17

## 2FC, SYDNEY

#### EARLY MORNING SESSION.

7 a.m.—"Big Ben" and announcements.

7.3 a.m.—Staple music.

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The radio public desire, above all else, that their batteries shall combine long and efficient service with absolute reliability.

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Large size, type XP, 42 volt	21/-
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Extra large size, type Super Service, 42 volt	26/-
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#### THE "STANDARD" DRY CELL RADIO BATTERY.

Price ..... 9/-  
The Ever-Ready Radio "Standard" Dry Cell, as illustrated, is fitted with two screw terminals, and since its introduction has met with great success, users recognising its immeasurable superiority over any imported cell. Size, 2½ x 6½. Weight, 2 lbs. Also for bells, telephones, signalling and electro-medical apparatus, &c.



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Price ..... 9/-  
The Ever-Ready "Standard" "A" Battery (3 cell), 4.5 volt, specially designed for economical operation of 1, 2 or 3 valves, taking .06 amperes at 3 volts. For sets with four or more valves, the most economical service is obtained by using two "Standard" "A" batteries connected in parallel.

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In Beautiful Cabinet, finished in Maple, Oak, or Mahogany, as required, with built-in Speaker, complete in every detail. Satisfaction guaranteed.

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Super Heterodyne, 7 and 8 Valves—Prices on application.

E.M.M.C.O. Super Heterodyne Kits ..... £7/7/-

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Grogan, Braking Brake ..... £2/2/-

Grogan, Loop Aerial ..... £1/19/6

Grogan, Loop Aerial ..... £3/10/-

De Jur Telephone Plugs ..... 2/9

De Jur 10 and 30 ohms Rhos ..... 3/9

De Jur Pot 400 ohms ..... 4/6

Hooseck Sockets ... 2/3 Benjamin Sockets ... 5/-

7.10 a.m.—Official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, mail services, commercial news.

7.15 a.m.—Investment market, mining share market, metal quotations.

7.35 a.m.—World news, Australasia markets, Interstate markets, produce markets.

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

8 a.m.—"Big Ben" Biggle music.

8.15 a.m.—Close down.

### MORNING SESSION.

9.30 a.m.—Marching music.

9.45 a.m.—Some popular records.

10 a.m.—Australasian sporting information by the ABC Racing Commissioner.

10.15 a.m.—"Big Ben" and announcements.

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

10.45 a.m.—Studio music.

11 a.m.—A racing reading.

11.15 a.m.—"Big Ben," Australian Press Association and Bureau of the Services.

11.30 a.m.—Studio music.

11.45 a.m.—Marching music for school children.

11.55 a.m.—Close down.

### MIDDAY SESSION.

12 noon—"Big Ben" and announcements.

12.15 p.m.—Stock Exchange, first call.

12.45 p.m.—From Farmer's Oak Hall—Instrumental items by the Oak Hall Trio.

12.55 p.m.—Rugby wireless news.

1.15 p.m.—Miss Edna Hudson, soprano—"All I Want Is You" (Barbershop).

1.30 p.m.—"Big Ben" Weather intelligence.

1.35 p.m.—Evening News midday news service. "Proudfoot's Distributing Society's Report."

1.45 p.m.—From Farmer's Oak Hall—The Oak Hall Trio.

1.55 p.m.—Stock Exchange, second call.

1.58 p.m.—Marching music for school children.

1.59 p.m.—Miss Edna Hudson, soprano—"Over the Water Blue Yonder" (Clarke).

1.59 p.m.—Studio music.

1.59 p.m.—From Farmer's Oak Hall—The Oak Hall Trio.

1.59 p.m.—Racing talk by the ABC Commissioner.

2.10 p.m.—"Big Ben." Close down.

### AFTERNOON SESSION.

2.30 p.m.—The chimes of TFC and announcements.

2.35 p.m.—A vocal recital by the pupils of Mr. Hector Fleming.

2.45 p.m.—"Big Ben," Pianoforte solos.

2.45 p.m.—Vocal items by the pupils of Mr. Hector Fleming.

3.00 p.m.—From the Windmill Cafe—The New Wentworth Symphonic Dance Orchestra conducted by Mr. Sydney Simpson.

3.15 p.m.—From Farmer's Tea Rooms—Miss Mabel Stevenson, soprano—"Wondering Why" (Clarke).

3.45 p.m.—The Oak Hall Trio.

3.55 p.m.—Studio music.

4 p.m.—"Big Ben," From Farmer's Tea Rooms—Miss Dorothy Bowden, contralto.

4.15 p.m.—The Oak Hall Trio.

4.20 p.m.—Studio music.

4.30 p.m.—From Farmer's Tea Rooms—Miss Mabel Stevenson, soprano—"By the Waters of Minnetonka" (Leopold).

4.35 p.m.—The Oak Hall Trio.

4.35 p.m.—Studio music.

4.40 p.m.—From Farmer's Tea Rooms—Miss Dorothy Bowden, contralto.

4.45 p.m.—Stock Exchange, third call.

4.45 p.m.—Close down.

### EARLY EVENING SESSION.

5.15 p.m.—The chimes of TFC and announcements.

5.30 p.m.—The "Hello Man" Talks to the children.

5.45 p.m.—Uncle Jim and "Jolly" will entertain the children.

6.40 p.m.—Dinner music.

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(Factory Representatives)

7 p.m.—"Big Ben," Late sporting news.  
7.10 p.m.—"Baldy's" Market Report, wool,  
wheat and stock.  
7.15 p.m.—Fruit and vegetable market.  
7.20 p.m.—Weather and shipping intelligence.  
Stock Exchange.  
7.20 p.m.—Late "Evening News" news service.

### NIGHT SESSION.

7.45 p.m.—Announcements from the Studio.  
7.45 p.m.—From the Sydney Town Hall (by special arrangement) Items from the Reception and Concert tendered to the Citizens of London, the Right Hon. and Right Rev. Dr. Whinlinton, Ingram, E.C.V.O., Items by Combined Choirs and Leading Artists.  
Note.—It is expected that the Bishop will speak at about 8.45 p.m.  
8.15 p.m.—From the Entertainment Ward of the Royal North Shore Hospital. Items by the E.P.C. Hospital Chorus Party. Mr. Rus Goring, conductor of the company.  
8.15 p.m.—Miss Lurline Hammond, soprano—  
"Sweet Bird" (Gershwin).  
8.20 p.m.—Mr. Ad. Cross, Scotch comedian.  
8.25 p.m.—Mr. Alfred Cunningham, baritone—  
"The Roar" (Nevin).  
8.28 p.m.—Miss Kitty Elliott, comedienne—  
"The Boys and the Apples."  
8.32 p.m.—Mr. Norman Francis, tenor.  
8.36 p.m.—Mr. Rus Goring and "Jerry" in ventriloquial patter.  
8.47 p.m.—Miss Lurline Hammond, soprano—  
"On the day I get to heaven" (Lehmann).  
8.48 p.m.—Mr. Ad. Cross, Scotch comedian.  
8.50 p.m.—Miss Kitty Elliott, comedienne—  
"I've just been away down yon" (Brown).  
8.54 p.m.—Mr. Norman Francis, tenor.  
8.58 p.m.—Miss Lurline Hammond, soprano—  
"The Sunshine" (Brahms).  
9.2 p.m.—Mr. Alfred Cunningham, baritone—  
(a) "My Fairer Child" (Lindley); (b) "Come  
to the Fair" (Martin).  
9.5 p.m.—Miss Kitty Elliott, comedienne—  
"Out in the new moon hay" (Dougherty).  
10.15 p.m.—Mr. Norman Francis, tenor.  
10.20 p.m.—From the Sydney Town Hall—Further items from the Reception to the Citizens of London.  
10.35 p.m.—From the Studio—Mr. Lindley Evans, violinist.  
10.45 p.m.—Miss Freda Gilder, contralto.  
10.50 p.m.—"Big Ben," Mr. Harrison White, banjo soloist.  
10.50 p.m.—Miss Freda Gilder, contralto.  
10.54 p.m.—Mr. Lindley Evans, piano forte solo.  
10.55 p.m.—From the Wentworth Cafe, Sydney—The New Wentworth Symphonie Dames Orchestra, conducted by Mr. Sydney Simpson.  
10.58 p.m.—From the Studio—Miss Freda Gilder, contralto.  
10.58 p.m.—Mr. Harrison White, banjo soloist.  
10.58 p.m.—From the Wentworth Cafe—Items by the Orchestra.  
10.58 p.m.—Collecting records from the Studio.  
11.00 p.m.—"Big Ben" and announcements.  
11.15 p.m.—The New Wentworth Symphonie Dames Orchestra, under the baton of Mr. Sydney Simpson, will play until midnight.  
12 midnight.—"Big Ben," National Anthem.

## 3LO, MELBOURNE

### MIDDAY SESSION.

12 noon—Time signal. British Official Wireless News from Rugby, Reuters and the Australian Press Association Cables. "Argus" and "Baird" news service.  
12.15 p.m.—Stock Exchange information.  
THE STUDIO ORCHESTRA:  
MONA THOMAS, soprano.  
NORMAN BRAIDSMITH, piano.  
DREW AND ROMAINE.  
Accompanists—AGNES FORTUNE, Accompanist; MAURICE DUDLEY, Selection, "Merry Widow."  
12.30 p.m.—MONA THOMAS, soprano.  
"A Birthday,"  
"Fat ill fitter."  
12.45 p.m.—MAGGIE FOSTER, violin.  
"Berengaria," (Schubert).  
"Carmen."

12.44 p.m.—NORMAN BRADSHAW, tenor.  
"Red Devon by the Sea," (Clarke).  
"Ichabod," (Tschitschinsky).  
12.51 p.m.—STUDIO ORCHESTRA:  
"Sanctuary of the Heart," (Kettry).  
2.01 p.m.—DREW AND ROMAINE, will entertain you on the piano.  
1.10 p.m.—MUNA THOMAS, soprano.  
"The Market."

"I'm in love with you!"  
1.17 p.m.—Meteorological information. Stock Exchange information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales.  
1.21 p.m.—STUDIO ORCHESTRA:  
"Danse Orientale" (Lubomirsky).  
1.27 p.m.—NORMAN BRADSHAW, tenor.  
"Song of Sleep," (Susservi).  
"The Sea Gypsy," (Williby).  
1.46 p.m.—STUDIO ORCHESTRA:  
"Tropical Rain," (Bennett).  
2 p.m.—Close down.  
Results of Lancefield Races, will be given as they come to hand.

## AFTERNOON SESSION:

Speaker: Miss FRANCES FRASER.  
JACK DUNNE, baritone.  
DREW AND ROMAINE.  
THE KENTUCKY THREE.  
Accompanist: AGNES FORTUNE.  
Announcer: MAURICE BUDLEY.  
8 p.m.—STUDIO ORCHESTRA:  
"Merry England" (German).  
12.15 p.m.—JACK DUNNE, baritone, by permission of J. C. W. (Nansen, Ltd.):  
"Sing Happy Birds" (Liddell).  
"Dear Little Garden I Love," (Tenement).  
1.17 p.m.—TRENTY PRESTON and BELINDA ALD WYKERA.  
A Sketch: "Parents."  
2.30 p.m.—STUDIO ORCHESTRA:  
"Spanish Dancer," (Fisher).  
3.45 p.m.—DREW AND ROMAINE:  
"Milestones."  
"Can't We have a Rag about Australia?"  
3.50 p.m.—THE KENTUCKY THREE:  
"Primrose."  
Selected.

4 p.m.—JACK DUNNE, baritone:  
"There are Maidens in Japan," (Finland).  
"Misaway," (Porter).

4.17 p.m.—STUDIO ORCHESTRA:  
"Gipsy Serenade," (Neil).  
"Air Louis XII," (Ghys).

4.18 p.m.—Miss FRANCES FRASER, Travelling:  
"A Week in Egypt."

4.30 p.m.—"Herald" news service. Stock Exchange information. Acceptances Caulfield Races.

4.45 p.m.—EVEN SONG—transmitted from St. Paul's Cathedral.

5.30 p.m.—Close down.

## EVENING SESSION:

8.40 p.m.—CHILDREN'S HOUR. Answers to letters and birthday greetings.  
8.55 p.m.—MARY GUMLEAF, female:  
"The Piano Fairies."  
"Remember the Cat."  
Story for the littler ones:  
"Betty Moon in Fairland."  
8.57 p.m.—THE KENTUCKY THREE will entertain the children with Piano, Violin and Banjo.  
8.17 p.m.—MARY GUMLEAF, Story for the Boys:  
"Little Tugs that Travel Far."  
Story for the Girls: "The Earth Elves."  
8.30 p.m.—"Arnis" and "Herald" news services. Weather synopses. Shipping movements.  
8.47 p.m.—Stock Exchange information.  
8.52 p.m.—Fish Market reports by J. R. Borrell, Ltd.  
8.55 p.m.—River reports.  
8.57 p.m.—Fruit reports by the Victorian Central Growers Association. Price Lists of Oranges and Lemons. Fruit Market reports by the Victorian Wholesale Growers' Association, compiled by the "Fruit World," exclusive to SLO.  
Market reports by the Victoria Producers' Co-operative Co., Ltd. Haymarket sheep Sales. Poultry, Grain, Straw, Hay, June, Dairy Produce, Potatoes and Onions.

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## NIGHT SESSION.

Speakers: MR. HERBERT ("OPPY") OPPENHEIMER,  
MR. A. W. JACKSON,  
MR. ALEXANDER ONSLOW,  
JOE ARONSON AND HIS SYNCOPATING  
SYMPHONISTS,  
LESLIE JEPHCOTT, tenor.  
JESSIE BATCHELOR, contralto.  
MILES HASTINGS, electrician.  
DREW AND ROMAINE, Two Boys and a  
Piano.  
Announcer ..... ALFRED ANDREW  
Accompanist ..... AGNES FORTUNE

7.15 p.m.—MR. HERBERT ("OPPY") OPPENHEIMER, Australia's All-round Champion.

## THE MOTOR PACE GAME."

7.30 p.m.—MR. A. W. JACKSON, "GOLF."  
7.45 p.m.—MR. ALEXANDER ONSLOW, now appearing with the "Helen Kelly Company," in "Mrs. Cheney," will speak to you from his dressing-room, by permission of J. C. Williamson, Ltd.

## "LE DANSANT."

8 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:  
"The Village Blacksmith Owns the Village Now."

"By the sign of a Rose" (Whiting).  
8.10 p.m.—LESLIE JEPHCOTT, tenor:  
"Lolita" (Hornung). (Buxton, Foster).

8.15 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"Am I wanting my time on you" (Biblo).  
"That's why I love you" (Donaldson).

8.24 p.m.—JESSIE BATCHELOR, contralto:  
"Still as the Night" (Bohm).

8.28 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"Just a bird's eye view" (Kahn).  
"Beside a garden wall" (Kahn).

8.32 p.m.—MILES HASTINGS, electrician:  
"Jimmy Sands."

8.42 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"Schultz is back again" (Penace).  
"Don't be angry with me" (Donaldson).

8.52 p.m.—DREW AND ROMAINE, Two Boys and a piano:  
"Going to Caroline."

8.55 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"The Blue Danube" (Grove).

"I don't want nobody but you" (Kahn).

9.6 p.m.—LESLIE JEPHCOTT, tenor:

"Mighty like a rose."

9.10 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"A cup of coffee, a sandwich and you" (Mayo).

"Until Tomorrow" (Astaire).

9.20 p.m.—JESSIE BATCHELOR, contralto:  
"A Sheafield Song" (London, Ronald).

9.24 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"Somebody's Lonely" (Davis).

"Hi Diddle, Diddle" (Cousin).

9.34 p.m.—MILES HASTINGS, electrician:  
"Two Sinners" (Elia Wheeler Wilcox).

9.39 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"Napoleon's Ninth Waltz" (Zemsenik).

"I'd climb the highest mountain" (Brown).

9.45 p.m.—DREW AND ROMAINE:

"The Farmer Rhymes."

9.54 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"Entänke" (Rutledge).

"Fire, Fire, Fire, turn the hose on me" (Whiting).

10.4 p.m.—British official wireless news from Rugby. Sporting notes by "Olympus." Announcements.

10.10 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:

"Picardy."

"Then I'll be happy" (Friend).

10.29 p.m.—LESLIE JEPHCOTT, tenor:

"Only the river running by."

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## 10.15 p.m.—JOE ARONSON AND HIS SYNC-SYMPHONISTS:

"Hi, Hi, the March" (Conrad);  
"You meet Sunshine in love" (Ogden).

## 10.45 p.m.—DREW AND ROMAINE:

"Isabel's Farm,"  
10.45 p.m.—JOE ARONSON AND HIS SYNC-SYMPHONISTS:  
"Now" (Batti);  
"I want a pardon for Daddy" (Ratty).

## 10 p.m.—OUR GREAT THOUGHT:

"He that will watch Providence, shall never want a Providence to watch" (Flavius).

## 11.15 p.m.—JOE ARONSON AND HIS SYNC-SYMPHONISTS:

"Bring Backbird" (Henderson);  
"Sidewalk Blues" (Morton);  
"Sad" (Powell);  
"Some other bird whistled" (Fisher);  
"On the Riviera" (Gibert);  
"Dot on the Plaza" (Sapiro);  
"Holdings" (West);  
"Good night song" (West).

## 11.45 p.m.—GOD SAVE THE KING.

## 4QG, BRISBANE

## MIDDAY SESSION.

12.55 p.m.—Tune In.

12.58 p.m.—Time Signal.

1.00 p.m.—Market Report; Weather information supplied by the Commonwealth Weather Bureau; News Service supplied by "The Daily Mail" and "The Daily Standard."

1.06 p.m.—From Hotel Carlton: Lunch Music from the Lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.

1.10 p.m.—From the Observatory: Standard Time Signal.

2.0 p.m.—Close Down.

## AFTERNOON SESSION.

3.30 p.m.—A PROGRAMME OF MUSIC FROM THE STUDIO: Duo Art selection, "Forest Scenes" (Schumann); Aerial Ventriloquism selection: (a) violin solo, "Selections from 'Leaves' in Damascus" (Findeisen); Miss Peggy Conacher: "The Road to Mandalay" (Hengood); Mr. Malcolm McEachern: Duo Art selection, "Deep in My Heart, Dear" (Romberg); Julian Vassallo selections: (a) fox-trot "Five Feet Two, Eyes of Blue" (Lewis); the Fleetwood Orchestra, (b) contralto solo, "I'm a Little Teapot" (Baker); Miss O'Alvares: Duo Art selection, "Autumn" (Chaminade); Arabian Ventriloquism selections: (a) band selection, "Rocking Horse Parade" (Ring); U.S.A. 7th Regiment Band, (b) piano solo, "The Little Player" (Allison); Mr. Malvino McEachern: Duo Art selection, "O So Sweet" (U.S. Imperial Guards); Vassallo, selected selections, "Kinky Kids Parade" (Kahn), Ben Seela and his Orchestra: baritone solo, "A Chip off the Old Block" (Sanderson); Mr. C. V. Woodland: Duo Art selection, "Evening" (Marshall).

4.30 p.m.—"The Telegraph" News Service.  
4.30 p.m.—Close Down.

## EARLY EVENING SESSION.

5.30 p.m.—"Daily Standard" News; Automobile news.

5.45 p.m.—The Children's Session: Stories by "The Sandman."

5.50 p.m.—Market Report; Lecture by "Mating Sheep in Queensland," No. 3 of a series, by Mr. W. G. Brown (Institution in Sheep and Wool).

5.50 p.m.—Shock Report; Weather News; Acronautics.

5.55 p.m.—Standard Time Signal.

## NIGHT SESSION.

7.15 p.m.—Lecture Session: "A Talk on Books" by Mr. W. A. Beilby (McLennan's Bookstore).

THE SILKSTONE APOLLO CLUB: The first portion of tonight's programme will be provided by the Silkstone Apollo Club (conductor, Mr. E. Westwood); Chorus, "Carmen"; Arcilla Club: songs, "I'm a Farmer"; Mr. A. Wilcox: chorus, "Rock Demolition, Rest"; Apollo Club: songs, selected; Mr. A. Little: chorus, "Care Killed a Cat" (by special request); Apollo Club: quartette, "In This Hour of Softened Splendor"; Morris, Westwood, Jones, Jenkins, and Morris; Chorus, "The Girl I Left Behind"; Apollo Club: quartette, "When You're a Man"; Chorus, "Apollo Club"; pianoforte solo, "Lister's Rhapsody No. 4"; Miss Nester.

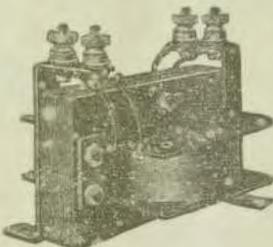
White song, "Gail"; Mr. D. Griffiths: duets, "Honnie Banks" (Loch Lomond); Apollo Club duet, "Love and War"; Messrs. Westwood and Morris.

9.0 p.m.—Metropolitan Weather Forecast; Chorus, "Long Day Gone," Apollo Club: pianoforte solo, selected; Miss Thelma May: "I'm a Farmer"; Apollo Club: vocal duet, "Hail, "Moses"; Wilcox and Miss Thelma Marsh, song, "Mona"; Mr. J. Westwood: quartette, "Meeting of the Waters"; Messrs. Wilcox and Jones: "Hungary and Wuthering" chorus; "The Lost Child"; Apollo Club: songs selected; Mr. Vic Morris: chorus, "Martin Heron" (by special request); Apollo Club.

7.30 p.m.—BAND CONCERT: From the Band Room: An impromptu programme of music by the Prelane Municipal Concert Band.

10.0 p.m.—From the Studio: The "Daily Mail" News; Close Down.

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 Radio Auction Bridge.

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Inter-Emery Broadcasting (Captain P. F. Kellerser).  
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 Now is the Time to Tune-in (G.W.).  
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 Beginner's Problems, in which a Variometer Control, Using Two Valves, is shown.  
 The September Bride (Cover).  
 An Easy Holiday (Ed.).

SEPTEMBER 17.

Is There Anything Else We Can Do? (Oswald Anderson).  
 Radio Speakers Must Appeal to Reason.  
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 Capt. F. Hurley (Cover).  
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Radio Educates Its Masses by Radio (A. P. Shattock, R.E.).  
 Jazz-Basic (Henry Santoy).  
 Are Radio Regulations Under Revision?  
 The Resonator Interference.  
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 Instability is Enemy of Good Reception (George Garden).  
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For the benefit of those readers who are having back copies of this journal bound and for general reference to articles published we print this index. It includes all numbers in the green covers, from July 23 to January 14.

OCTOBER 1.

Summer Static is Still an Unsolved Mystery. Theatres in Your Home (F. Berliner). A New Cause of Domestic Strife. Businessmen Don't Forget Their D.O.D.'s. Horwitz's Brake. To Trap Those Interfering Waves (Warrington). Ray Troswick (Cover). Fading Phenomena.

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Wire Music Mind Below God (Capt. Frank Hurley). Hearing the Air About Fading Phenomena (F. W. Beaman). Flat Brothers Reunited. What Wants a Scholastic Crystal Set. Scott Sanders (Cover). Rely Status Next (Ed.).

OCTOBER 15.

Uncle Jack says "Generally Speaking, We Amateurs are Generally Speaking." Grilling the Glits of the Hobby Stations. Radio Telephony for Remote Light Readers. Amateurs Should be Encouraged. Marine Radio—Two Valves. A Reimarz Receiver That is Simple. October Bride (Cover). An Aging System (Ed.).

OCTOBER 22.

Has Radio Any Value as an Educational Medium (J. Sangle). How Radio Descriptions are Reduced. Broadcast Controversies. The Neutralizer. The Extraordinary One Valve Receiver. Has Darling and Jerry (Cover). Educational or Instructional (Ed.).

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Radio Cinema Will Follow Talking Movies. Wireless Alters Fisherman's Luck. Exciting the Listener's Imagination (Will Lamber).

The Old Reliable (Three Valves).

A Vacuum Coupler for Selectivity. All the Oscillators. What's Research? (Ed.).

NOVEMBER 5.

With Imperial Wireless (O. T. Fisk). The Only Really Genuine Radio Bug (Martin Porter).

Uncle Jack for New Zealand.

Successful Broadcasting Needs Cooperation. The Marco Four Valve Receiver. Miss Rosinbush (Cover). Summer Bride (Ed.).

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Matthew Charlton Enters into a Discussion on Police Broadcasts. Men Who Made Radio (E. T. Fisk). Broadcasting, the Press, and the Broadcast Press. Broadcasting as an Influence in Family Life. Broadcast Stations Progressing Slowly. How to Build Your Own Loud Speaker. Party Grinper (Cover). Could You Credit It? (Ed.).

NOVEMBER 19.

Confessions of a Radio Announcer. The Romantic Story of Marcus (E. T. Fisk). The Architect Considers Radio (R. Beglin). Yet Another Hospital Installs Radio. An Easily Made Accumulator B. Battery. Broadcasting Costs Money. Miss Kitty Elliott (Cover). The Odds Are on Radio (Ed.).

NOVEMBER 26.

The Whistlers of Wireless (Madam Elsa Straka). Checking Up Our Time by Radio (James Sangster).

Don't Blame the Broadcasting Company (H. K. Lovell). Getting the Artists' Personality on the Air. "A Fellowman I Would Be," says Lawrence Hartshorn.

St. A. Cobham Broadcasts. How to Make a Neutralized Two-Valve Receiver. Elsa Heissler (Cover). Limitless Man (Ed.).

DECEMBER 3.

Radio is Striking Death Blow to Denominational Prejudice. All the World's a Stage. Japan's Outlook on Radio Broadcasting (Takeshi Kunitomo).

Radio's Greatest Enemy is Interference. Interesting Things Said Interestingly. How Long Before We Can Tune-in London? A Biggy Salt Panel Four Valve Receiver. V. J. Van de Velde (Cover). A Phonograph or a Radio? (Ed.).

DECEMBER 10.

The Hunt in the Void (H. Ellio). Looking Down on the World (E. J. Van de Velde). Latest Broadcasting Developments in U.S.A. A Split Secondary Two-Valve Receiver. Maxine Doolin (Cover). Why Do Lectures Fail? (Ed.).

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King Coal and Radio. The Voice of Tasmania. Christmas Programmes are Full of Good Cheer. Were you Caught?—EFO Radio Joke. Broadcasting Roundup Encyclopedia Name, Meetings and Activities. Your Voice Gun Control. Alfred Cunningham (Cover). The Undiscovered Gold in Radio (Ed.).

DECEMBER 24.

Australia's Biggest Assessment Bureau (W. T. Conder). Radio—The Blind Man's Best Friend. Avoid Bounding a Radio into Hog. The Viner-Minter Three Valve Receiver. EFO's Blind Musician (Cover). Alternatives to "The Weekly" (Ed.).

DECEMBER 31.

Bands in 1927 (E. T. Fisk). Sound Scenery (Ten Years Back). A Few Words About Batteries. S.P.C. Bookmaker Duped by Radio Race Results. Broadcasting Sporting Events. Mauldinings (Ed.). A Capacity Coupled One Valve Receiver. Latest Developments in Valve Construction. C. V. Woodland (Cover). The Truth About Radio (Ed.).

JANUARY 7.

How we Celebrated Christmas Eve (G. Anderson). On the Air.

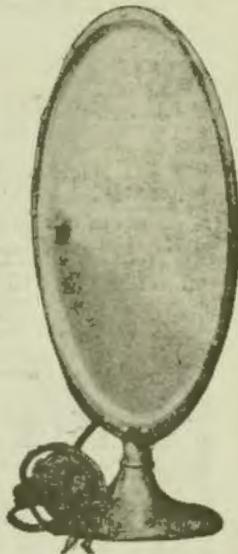
The Honour of Radio Interviewing. 2FO Long Distance Tests—Remarkable Crystal Results. 6WF Establishes World's Record Relay. Broadcast Progress. A Split Coil Single Valve Receiver. How to Add a Stage of Audio Frequency to Your Present Receiver. Microtite Radiator (Cover). Looking Ahead (Ed.).

JANUARY 14.

Does Your Acid Attract Lightning. New Electric Phonograph May Beat Radio. The Responsibility of Broadcasting. Studio Archivists Study a Sound Problem. SKY Proposes a Radio Labor College. Measurements (Ed.). The Electrelux Two-Valve Receiver. Leslie Elliott (Cover). Does the Farmer Want Radio? (Ed.).

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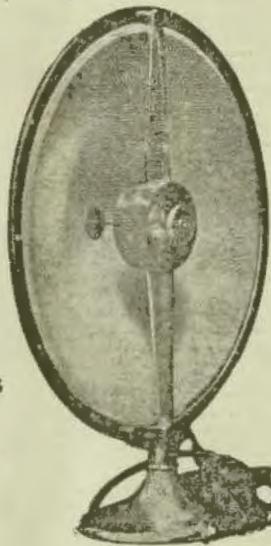
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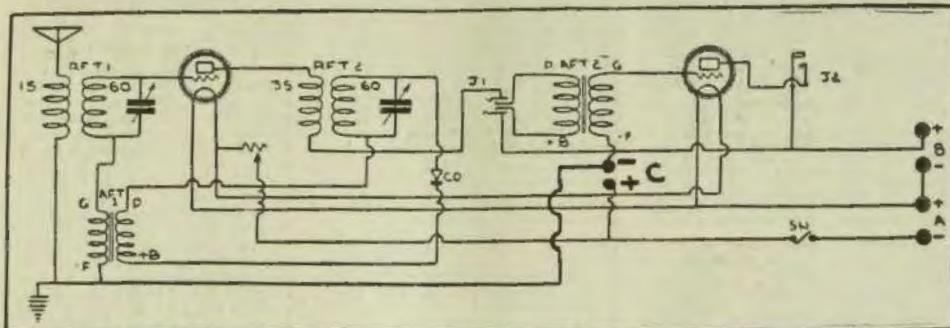
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As requested by many readers we publish the above diagram showing how to insert a C battery in the Harkness reflex.

## All Readers' Queries Answered Here

**Q.**: (2) Is it possible to receive inter-State stations on a one valve set?

**A.**: (3) Yes, but during summer it takes some handling. Tuning plays a most important part of course.

**L.A. (FIVE DOCK)**—**Q.**: (1) I propose using Cossor Point One Valves in the Harkness Reflex. Would Carboncoss be suitable and is a B battery current of 90 volts sufficient?

**A.**: Yes to both questions. Carboncoss are ideal, as they don't need re-charging every week or so.

**Q.**: (2) Would an Amplion AR38 be the correct size speaker to use with this set?

**A.**: Certainly, use any good make of speaker.

**J.F.W. (ASHFIELD)**—**Q.**: I constructed the 'Hamil Crystal Set' and am very pleased with it, but somehow I can't get any stations except 2BL and 2FC. My aerial is 95 feet long and 30 feet high. Is this too long?

**A.**: It is a bit on the long side. Have you tried reducing the size of the primary coil? Put a .00025 fixed condenser in series with the aerial.

**Q.**: (2) What length aerial was this set tested on?

**A.**: See description in W.W. 28/1/27. If your aerial was shortened it would not affect your present results. Lose the single slider altogether—throw it over the Gas.

**E.M.K. (ORANGE)**—**Q.**: Would the "Harkness Reflex" give loud speaker results here approximately 140 miles from 2FC?

**A.**: Yes, I should think so. Brisbane was received at Marrickville at loud speaker strength, and reports to hand point that the Harkness has covered many greater distances. I often wish I had time to tour the country trying these things. Perhaps some day!

**H.G.W. (HURSTVILLE)**—**Q.**: I am finding it difficult to make the first valve in the Harkness Reflex to confine its difficulties to H.F. and L.F. amplification. It insists on detecting. Sometimes it functions all right, then goes off, and oscillates by turning all the controls to zero and retuning everything goes well again, but generally it plays up as mentioned.

**A.**: Perhaps you are using too much A battery or not enough B battery. Try changing the valves about. The other matter will be dealt with shortly.

**A.E.K. (BUSHCUTTERS BAY)**—**Q.**: In building the "Extraordinary One Valve" published in W.W. 22/12/26, I have used a rheostat of 30 ohms and a UX valve socket. Being a beginner I am in a quandary as to which radiotron valve to use.

In conjunction with Farmer's Broadcasting Service the Technical Editor of "Wireless Weekly" broadcasts answers to all listeners' queries from 2FC each Thursday night. Replies will also appear in these columns.

**A.**: Either a UX100 or a UX201A. If the former 3 dry cells connected in series will suffice for an A battery but a 6 volt accumulator is advisable for the UX201A valve.

**A.D. (WOOLLAHRA)**—**Q.**: I have a three valve PI circuit with 2 stages of audio and find it difficult in picking up inter-State features. I received local stations with remarkable clarity and volume, and I am at a loss to understand why inter-State should not come in.

**A.**: If, as you say, you have a PI circuit you are doing very well to receive the local stations without interference. To receive inter-State stations it is necessary to have a more selective set altogether, preferable with a stage of radio frequency amplification. The Bayer, Browning, Drake, Neutrodyne or Maris Four would suit your requirements. And don't forget that a knowledge of tuning is of paramount importance.

**N.H.C. (GREENWICH)**—**Q.**: I have built the one control receiver (W.W. Dec. 17th) and find the set tends to oscillate. Would the addition of neutralising condensers placed similarly to the Neutrodyne be an advantage?

**A.**: This receiver should not oscillate. Perhaps you are applying too much B battery to the plates of the radio frequency valves. Try neutralising, however, and remove the present by-pass condensers. It may interest you to learn that the circuit employed is the All American Model R which is so famous in U.S.A.

**K.B.G. (GOULBURN)**—**Q.**: If there is a convenient test for transformers please inform me through the columns of your valuable paper, Wireless Weekly.

**A.**: Yes, read article entitled "Fault Finding" in this issue. It is most instructive.

**H.P. (MOSMAN)**—**Q.**: I propose taking my "6 valve Udisco" to Noumea this winter for my annual 4 months stay, and I should be very glad to know if you consider that it will reach Australia? The distance is 1055 miles and reception is good in winter. That would involve buying or building a superhet. I can get my accumulator charged myself. I have had no difficulty since May last in getting Inter-State and N.Z., i.e. until the wave length was altered, now N.Z. is finished, for me, a pity, as the music was good and organ recitals splendid. I can always get ELO and 4QG loud speaker, using a 30 foot aerial including lead-in without interference.

**A.**: I have got in touch with Mr. E. G. Beard, chief radio engineer to the United Distributors, and have been informed that there is at present an exactly similar set to yours in Noumea and yielding most satisfactory results. Yours will then be all right. Good luck!

**H.S.E. (ROCKDALE)**—**Q.**: Can you advise how to obtain 45 and 90 volt from Phillips "B" eliminator for use on Radio and Audio Valves respectively of 5 Valve Neutrodyne as mentioned in Wireless Weekly of 22nd October last?

**A.**: I understand that Phillips Glow Lamps Works, Kembla Buildings, Margaret Street, Sydney, have a pamphlet dealing with this matter, with them mentioning W.W.

**A.M. (LLETTON)**—**Q.**: Enclosed find circuit of 3 valve set employing 1 Foster, 1 H.F. and 1 L.F. stages of amplification. Could you please tell me if the wiring is correct?

**A.**: If not, could you tell me what is wrong and what wants altering, and is it suitable for receiving inter-state stations at loud speaker strength? If not, could you tell me a circuit to meet my requirements? Wishing your paper the best of luck and every prosperity.

**A.**: The wiring is wrong. The circuit is not suitable for your purpose. Build The Old Reliable in W.W. 29-10-26. It will suit your purpose better.

**E.M. (GOULBURN)**—**Q.**: At present I have a single valve PI circuit working, and I can receive all stations on good phone strength. The parts I have comprise AWA 9A valve, .001 variable condenser, 2 dry cells for A battery, 42 volt B battery, 30 ohm rheo., 5 meg grid leak, 2 coil holder and honeycomb coils. I am desirous of adding an antenna to this circuit, so as I could use a loud speaker on one end, the reception at present is all that could be desired in the phones. Would you mind advising me of a real good circuit so as I could add to my set to get good loud speaker results?

**A.**: This has already been dealt with. See W.W. 7/1/27.

J.A.P. (ROCKDALE)—Q. Can you give me any information in regard to "Wonderbox", where it is purchased, value, and do you consider it is good? I have been told that you can solder with a candle in that correct?

A. I personally have priced "Wonderbox" to be successful. It may be fitted with a candle and is obtainable from any advertiser in W.W.

M.B.H. (BRIGHAM-LE-SANDS) Q.—We have three valve sets and can tune in to P.Q., E.H.L., 4000, 3200, etc. We are finding the lead into the set and the earth 33-ft. One serial is higher at the end leading into the set, the parallel that end is 36-ft., the other end short. Could you tell me if our serial as right? Broadcasters carries right across which we might be able to tune in Melbourne.

A. Your serial is too long. Change it to about 35-ft. overall and transfer the positions of your leads. The leading end should be the lower end. A good knowledge of tuning is essential before one can pick up distant stations. You must practise, practise, practise. A detailed description of tuning will appear shortly.

B. BATTERY (GONDORHOLIN) — Q. Would you please enter in your Journal to the following question: "A set was struck by lightning fairly severely, blowing 1st valve and burning test coil, also 2nd neutrally melting 20.G. How will it affect H.batteries?"

A. I would say that the first harm comes to the H batteries. Perhaps in the burn-around process and remodelling something may have happened to cause a direct short. Again the batteries may have been ruined entirely, the process of disengagement taking up three or four days. Why not open the batteries and clean out the acid. If the acid is still there, I wouldn't think the old batteries could be worth much "after the storm" as internally they are at such potential in a receiver and would receive a good share of the shock. A lightning arrester installed would be a sound basis future contingencies. I hope you will live to see many more lightning strikes.

C. J. ALLAGANCE (BIRM.)—Q. I have a 4-valve U.S. receiver and my serial is 56. H. high and about 120ft. long overall, and is very wet weather, as at present. I do not want to do any great repair. I may state that the serial is right across the top of the receiver, and possibly I know the reason why it would make any difference, and would it be advisable to shorten serial and take it in a different position?

A. I beseeching the serial is poorly insulated, see the article in W.W. 28/1/27. An iron core should be switched. Keep away from it as far as possible. If possible, change the bearing of the serial to the distance between the roof and the serial. If possible move the serial to another position. But remember to keep the length below 100 feet overall if possible.

L.H.H. (GREENFIELD, TAS.)—Q. I possess a 4-valve receiver which is in the University of the A. and N.Z. Stations in the different States. I can name a forty-three plate condenser, and when this is turned round to about 90 to 100, a bad roar is experienced. When the coils (60, 84, 86, 96 and 72) are placed together the roaring will begin at 70 or 75. Any comments?

A. Perhaps your valves are touching. Read the "Fault-finding" article in W.W. 4/2/27. W.E.B. (LANE COVE)—Q. I since reading your reply in W.W. a short time ago re tuning, I have now built the half-tuned Single Valve receiver, and would be grateful if I may be permitted to ask a few questions re this. If you will excuse me, I asked before this the best 2-valve receiver that would receive interstate stations on phones, and you recommended me to the above circuit with a stage of Auto Frequency added. I have received all local stations very well indeed, and have picked up SLO, 4000, and 3200, and I am not able to add more. The last being done in practice by trial. I was then given the 3000 condenser is at the position where SLO comes in and the middest condenser is brought round to a certain point the signals become stronger but not clear, and a whilst

is heard yet if I bring it round too far it breaks away altogether and SLO is heard. Sometimes Melbourne comes in quite plain but with a background of E.H.L. I was wondering if the 3200 VAR would be suitable for this set. I have had the varis as described and the circuit is wired correctly, the only difference being I used Endersch's coils in lieu of Roneomic coils, also I found that the 35 turns in the primary was not selective enough so I increased it to 40 turns in and have been able to pick up the same stations as mentioned above, but I do say the middest condenser does not seem to come round far enough to bring them in properly before it breaks away altogether and E.H.L. is heard again. I will be glad if you can help me, and whether the wave trap published some time ago would be suitable.

When you happen to have better results with another tuning, let me know only by practice, but to aid you, install a bridge-rectifier as a Yalkental in the detector valve receiver.

G.E.A. (CALIFORNIA) Q.—I am working on a 214, 220, 225, 226, 227, 228, 229, 230, 231 units with F.V. 4000, 3200, 2800, 2400, 2000, 1600, 1200, 800, 600, 400, 300, 200, 150, 100, 70, 50, 30, 20, 15, 10, 7, 5, 3, 2, 1, 0. Now I would like to add to it by putting one stage of high frequency on. Would this be possible without remodelling the whole set, say by putting a H.F. unit to be used when wanted or discarded when not required?

A. I am afraid your last plan would be to remodel the receiver. H.F. is too tricky to play with, so take no advice.

G.R. (PETHERSBROOK) Q.—Would you be kind enough to enlighten me on this matter? There are three wires coming from L1 and L2 in the "Marconi Four Valve". Are the two ends to be joined in the centre or is there a dead end on one?

A. The two ends are joined in the centre, that is the end of L1 is connected to the middle of L2 and the one end comes from this joint to the filament positive.

X. BARTON (HULL) — Q. Will you please advise me on the following? I made an amateurish 10' lattice in accordance with the directions in W.W. of November 1926, but it will not charge. A white deposit forms on the plates and runs to the bottom of the lattice. The charge is OK, as there can be something wrong with the battery. Can you advise the probable trouble?

A. Test for 80 of your Electrolytic should read 1300. If you have carefully followed all instructions w.r.t. s.a.-W.W.-will not satisfactory. See Wartington Ltd., Chorlton.

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## Book Review

We have just received a copy of the Emmeo Radio Handbook, a most instructive publication produced by Electricity Meter Manufacturing Company, Ltd. Containing 24 beautifully illustrated pages, the book is packed full of useful information for both amateurs and broadcast listeners.

A list of "A" and "B" class broadcasting stations in Australia and New Zealand, showing their wavelengths, is followed by an up-to-date list of Australian and New Zealand call signs, including amateurs', trawlers' and special licenses. A specially compiled list of high power American stations will be found handy by those persons anxious to go after D.X. reception.

Six pages are devoted to description of selective circuits suitable for use in Australia, including a Split Secondary Two-Valve Receiver, Three-Valve Three Coil Regenerative Receiver, Four-Valve Browning Drake, Five-Valve Neutrodyn and Seven-Valve Super-Heterodyne. In addition to the circuit, a back of panel wiring diagram of each receiver is shown.

The rest of the book is devoted to a description of the well known Emmeo parts. All told, the book is one that should be in the hands of every radio enthusiast. We are advised that a copy may be obtained by any user of Emmeo parts from radio dealers.

**RADIO REVELLERS:** This happy band of 2PC enthusiasts, headed by Mr. Laurence Halbert, made a great hit on their first appearance at the Studio a fortnight ago, and they are ready with more fun and foolishness on Saturday evening, February 5. The comedy side of the programme will be attended to by Mr. Ad. Cree, the well known Scotch comedian, and Mr. Wally Baynes. Mr. Halbert will be associated with Miss Gladys Minister and Mr. Ernest Archer, in sole numbers. There will be a radio sit-in and some more mock trials for aspiring vocalists. Mr. Harrison White, with his banjo, will be a welcome addition.

**THE NEW AIR ROUTE** to India and Egypt, which is being opened by Imperial Airways this year, is to have a chain of wireless aerodrome ground stations. The giant D.H. 66 multiple-engined aircraft that will fly on this route will be fitted with the latest aircraft wireless equipment, so that they are never out of touch when flying. Even in the unlikely event of a forced landing in the desert, wireless communication could easily be established with the nearest ground station.

## Something about Condensers

**S**OME receivers, which look just the same as others, will not tune in this station or that station. The stations which can be tuned in are often so close together on the dials that it is almost impossible to separate them.

Apart from the fact that a condenser is a straight line frequency, or a straight line wave length job, if the stations are very crowded, the condenser is too big. All receivers should be fitted with condensers which will just tune from the minimum wave length to the maximum required and no more. In other words, the condenser should be all out for the minimum wave length and all in for the maximum.

Many of the older built receivers which were made up to receive 3LO when the station was on long wave lengths used 43 plate condensers to tune the set. A condenser of this

size cannot do the fine tuning that is required to-day, as when the whole of the 21 moving plates came into mesh with the 22 fixed plates the capacity of the circuit goes up with a bump, and although the condenser is turned in ever so gently the increase of the capacity is so great that the carrier wave of a station can very easily be passed over.

The smaller the condenser used the nearer it becomes to a vernier action. In short, the increase in capacity is much less for a given amount of dial rotation. For example, if with a 43 plate condenser 2BL is tuned in on 20 degrees of the dial scale 3LO on 22 degrees and 4QG on 24 degrees, 3AR on 28 degrees the dial readings will be very careful. By reducing the number of plates to, say, 23 the readings will perhaps be 2BL 20 degrees, 3LO 20 degrees, 4QG 23 degrees and 3AR 27 degrees. This gives plenty of room for tuning. If an eleven plate condenser will cover the required tuning band, use one, as this will further spread the readings.

To get equal spacing of the stations round the dial straight line types of condensers are necessary, but the listener need not worry very much about this. In buying a condenser you will probably get a straight line variety. The main practical essential is to use the smallest condenser that will cover the range of wave lengths you are using.

To those who are handy with tools and do not desire to scrap existing big condensers, it is possible with most types to undo the moving plates and take out every second plate, and fill in the space with a metal washer of the same thickness as the discarded plate. In this way the capacity of the condenser can be very much reduced.

To turn a moment to fixed condensers when wiring up a receiver, don't put in an .001, because you have one. If the circuit specification tells you to use a .00025, always keep to the size specified. Just because the .001 happens to work in no reason for its use. The correct one is sure to give better results.

Fixed condensers of the best make procurable should always be used, as if the insulation between the plates is of inferior quality, a break down will frequently take place, and noise will result. Bad noises have often been traced to this cause, more particularly a leaky or broken down grid condenser. Many of you doubtless know all about condensers and their uses, but this talk is for those who don't.

AMATEUR WIRELESS experiments do not attract much attention nowadays, but remarkable progress is being made. Less than two years ago it was considered afeat to communicate with England and the United States. Nowadays the sought after stations are situated in the remote corners of the world as is indicated by the following extracts from a local amateur's log:-

Calls heard: Hong Kong, BXV; Java, AND; Philippines, P17BD; Porto Rico, PR4SA; Japan, JKZB; China, CFUP, BXV; Brazil, BZ IAO, IBI; Borneo, BNSK2; Uruguay, Y2AK; Madeira, P1PZ; Chile, CH2LD.

RADIO seems to appeal strongly to the Russ'ans. There are said to be now about 1,500,000 listeners—they are peasants for the greater part—and 300,000 amateurs, approximately one listener per hundred.

THE NEWEST Phrase in the American radio world is "air signatures." The directors of various broadcast features are looking about for some sound which they thought would identify them whenever heard, and have selected snatches of music and song which are always repeated in precisely the same manner at the beginning and end of their period "on the air." Many of these "signatures" have been copyrighted. There are few who fail to recognise them after hearing them a few times.

PROFESSOR ERNEST WOOD, 2GB's popular lecturer, who has been giving a series of lectures in New Zealand, will, during February, carry on his interesting addresses. Professor Wood has travelled extensively throughout India, England and America and his addresses have proved quite an attractive feature of 2GB.

ONE OF THE greatest singers in the world recently committed a profound error. When being broadcast for the first time, listeners could hear her breathing as well as the words of her song. She was aghast when informed of the fact. On the concert platform the little fault did not matter, no one in the audience could hear it, but after being in front of the sensitive microphone, she found she had developed a habit of breathing, the sound of which was borne on the other waves for hundreds of miles.

BROADCAST DESCRIPTIONS of all Randwick, Moorefield, and Canterbury Park races are transmitted by 2FC on 46 days of the year. More than 130 finishes have now been given without making a mistake. That great care needs to be exercised by the broadcasting companies when announcing the results of horse races was shown at Tattersall's Randwick meeting when Ascalon won the Nursery Handicap.

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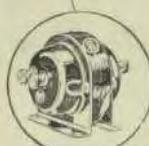
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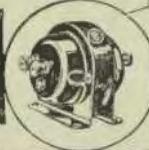
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