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WIRELESS WEEKLY

Vol. 9. No. 12.

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

Friday, Jan. 14, 1927.



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Does Lightning Endanger
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(See Page 3)



The "Elstreflex Two" does
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(See Page 15)

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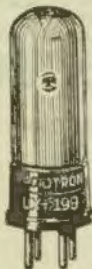
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A new power valve similar to the familiar UV201A, but several times as powerful. Designed for use as last valve in accumulator operated sets, when it will deliver far more energy than the average loud speaker requires. Two of these valves will give exceptional results. Filament voltage 5. Current 5 amps.

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Radiotron



The CAT'S WHISKER

The ELSTREFLEX TWO Receiver, described on page 15 of this week's issue of "Wireless Weekly" is the finest Crystal and two-valve Reflex you have ever heard. Build it. This set was built by the Technical Editor of "Wireless Weekly," who attributes much of its success to the—

Harlle

SUPER-SENSITIVE
DETECTOR

Complete with Crystal 7/6



THERE IS NO SUBSTITUTE.

No crystal or reflex circuit is complete without a "HARLIE."

If your dealer cannot supply, write us enclosing P.O. for 7/6.

If you are not delighted with it your money will be refunded without question.

Officially adopted for use on Lifeboats & in the Mercantile Marine

THE CAT'S WHISKER is still the best method of receiving wireless signals with purity—but the nerve-racking business of "crystal tickling" is quite out of date.

THE HARLIE-DETECTOR is the modern method. It has the most sensitive crystal yet produced, and also provides a continuous contact that is perfect in every detail. No delicate adjustment is needed—just a turn of the knob. It can be done as easily in the dark as in the light.

Vibration—even hard knocks—cannot disturb the contact, which is always at the exact delicate tension required for perfect reception.

The actual set built by "Wireless Weekly" is now on view in our shop window, 386 GEORGE ST., SYDNEY.

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Harringtons Ltd

WIRELESS WEEKLY

Vol. 9. No. 12.

FRIDAY, JANUARY 14, 1927.

Does the Farmer Want Radio?



SURVEY of the license figures compiled by the P.M.G.'s Department, discloses that 88.9 per cent. of the license-

holders in N.S.W. live within 50 miles of the Sydney G.P.O. The approximate population of this State is two million people and approximately 1,250,000 of these live within 20 miles of Sydney. Roughly, then, the broadcast listeners' licenses taken out up to the present date for the whole of the State are 46,000, so that the percentages referred to above would in rough figures represent 40,500 and 5,500, respectively.

These figures will come as a shock to those readers who believe that radio is an indispensable part of the countryman's life. Nor must they reckon that there are at least 5,500 farmers with radio sets, for that would be forgetting cities and towns like Newcastle, Broken Hill, Dubbo, Wagga, Bathurst, and Albury, where there are several set

owners, who may be classed as city people.

While it is a good thing to see the growing appreciation of broadcasting in the metropolitan area, it would be better for the State if the

usefulness and attraction of "listening-in" were to be realised by country citizens. Broadcasting is intended for and is more useful to people living remote from the cities than by city dwellers. The city family has easy and inexpensive access to the theatres and picture shows, and the newspapers are obtained much earlier. The facilities for entertainment, amusement and other mental relaxation readily obtainable by the city man

and his family are often denied to the farmer and other country families. Broadcasting is the means of removing these disadvantages.

The service provided for listeners by stations like 2FC, 2BL, 3LO, 4QG and 5CL includes matter that is prepared and broadcasted for country people.

NEXT WEEK

LOOK for "Wireless Weekly's" new blue cover on the bookstalls next week. There will be many changes in the size and appearance of our coming issue as a result of an increased circulation and the subsequent demand for advertising space.



Between You and Me and the Microphone

Conducted by
R. E. CORDER



RADIO IS in a flourishing condition in Germany. There are 1,265,880 licenses in operation, and in Berlin alone there are well over half a million listeners. Hamburg is "runner-up" with 155,214.

THE GREAT RADIO EXHIBITION held at Olympia, London, has inspired the radio trade in N.S.W. to keen competition, both among themselves and in joint comparison with the exhibitions held in other great cities. Competent judges consider the exhibitions held in other great cities the finest in the world, but in several respects the exhibition to take place at the Town Hall, from February 23 to March 5 next, will be superior.

ON THIS occasion both the main hall and vestibule will be occupied, whereas the previous show was held in the basement. The individual exhibitors at last exhibition, moreover, were not permitted to demonstrate their loud speakers for fear of interfering with each other, but for this occasion a scheme has been worked out that will allow every exhibitor to show his sets in action.

EVERY MAIL brings fresh evidence of the reception of Australian broadcasting stations in North America. According to M. H. Thoreau, of Vancouver, British Columbia, hundreds in Vancouver, alone, stay up all night to hear 2BL. Mr. Thoreau suggests that the announcer at 2BL give the name of the station more frequently, also its location; and he asks also that the announcer speak more slowly.

HERE IS a typical letter received by 2BL, from Win. Fels, Petersburg, Alaska—"I had the great pleasure of bringing in your station on the loud speaker at 1.15 a.m. to 1.30, and heard Stanley Cutlett sing a tenor solo, 'I Hope,' and the 'Serenata.' They came in clear and distinct, and I also had a violin solo with piano, but the announcements came too fast that I couldn't remember it all—then I heard the chime and the clock struck 9 p.m. your time when it was exactly 2 a.m. our time."

STARTING AS an experiment only three years ago, the radio newspaper has so grown in favour that now there are over 100 liners on the trans-Atlantic route alone that publish daily papers, on their trips across the ocean.

A feature of the enlarged "Wireless Weekly" appearing in a new blue cover next week, will be a page devoted to correspondents. Under the heading of "The Safety Valve," readers are invited to air their grievances or offer suggestions regarding the programmes. Letters must be brief and to the point; they should be endorsed "Safety Valve," and addressed to the Editor, "Wireless Weekly," 51 Castlereagh St., Sydney.

A RADIO CLUB has been formed in connection with the School of Arts at Inverell, and listeners are charged 6d. for an evening's programme. Special interest attaches to this idea, as this seems to be the first School of Arts which has been progressive enough to spread education and entertainment by means of radio.

THE CATHART SCHOOL OF Arts, 10 miles from Bombala, is also considering the possibility of installing wireless, thus bringing this spot into close touch with Melbourne and Sydney. It seems likely that a number of country schools of arts will take similar action.

THE PRIZES IN a new 3LO competition to be announced shortly will be three Exhibitions, each giving three years' tuition at the Melbourne University Conservatorium for the full course necessary to gain the Diploma or the Degree of Music. These exhibitions, which will be for singing, piano and stringed instrument, will be competed for in February.

ELIGIBLE CANDIDATES will be required to have passed the examination conducted by the Australian Music Examination Board in any combination of theory and practice taken from either Grade I, II, or III, in either, providing that both divisions (theory and practice) have been taken at the one examination, and that if both theory and practice be of Grade III, standard honours have been obtained in one division. Successful competitors will be required to broadcast from the studio four times yearly.

THE RUSSIAN GOVERNMENT, according to a "New York Times" correspondent, has animated a radio war between that country and Roumania by broadcasting revolutionary propaganda on wavelengths assigned to Roumanian stations. By this policy, the Soviet government is demonstrating its total unwillingness to regulate radio and, by inference, anything else.

IN RECOGNITION of their services during the past year, the Marriekville and District Radio Club presented a suitably engraved oak and silver tea tray to Mr. and Mrs. W. L. Hamilton, on January 1.

A CONTEMPORARY states that a loud speaker can be made from an ordinary trumpet. Listeners will be able to borrow one of these from their local M.L.A. when he isn't using it.

A LISTENER COMPLAINS that he is bored when 2FC sends out quotations from the share market. Perhaps quotations from the vocabulary of disappointed investors would interest him.

Does Your Aerial Attract

LIGHTNING?

Did you know that a lightning arrestor is not enough to protect a building from lightning; neither does it stop lightning from discharging through an aerial? The requirements of the insurance companies are listed in this article, which gives a simple explanation of lightning.

WHY do many people still persist in refusing to allow outdoor aerials to be installed because of their fear of lightning? Do they not realize that if there were any danger from a wire above the house tops the telephone companies and the electric-light companies would never put up the high poles for carrying the lines. Radio aerials do not attract lightning any more readily than do metal gutters, rain spouts, and wire clothes-lines and yet very few people consider such objects as sources of danger in a lightning storm. We are all familiar with lightning rods of various shapes. Farm buildings have a half dozen or so scattered over the roofs. Insurance companies recognize their protection. Available statistics show a reduction of as much as 95 per cent. in the losses by fire from lightning, as compared with losses in unrodded buildings. Most of the damage done to protected buildings is traced to defective rods. In order to understand how the rod protects and why the antenna is not as dangerous as is popularly believed we will consider how lightning is formed and why we must have an approved arrestor on our antennae.

A flow of electric current is always accompanied by an electromagnetic field. The intensity of this field is determined by the current causing it. If this field cuts any conductor another current is induced in this con-

ductor. This secondary current produces its own field, which opposes the primary field. In this manner the direction of the induced current relative to the primary current is determined. A lightning flash is really a flow of current. Dr. Steinmetz estimated the current value to be about 10,000 amperes. All conductors which are cut by the field of this current have currents induced in them. The stronger this field becomes the

larger is the induced current. One can readily see that this current may reach a dangerously high value unless some means of dissipating it is provided. Long transmission lines, telephone lines and radio antennae are subject to these induced currents. The presence of these currents may be readily detected by listening in when a storm is approaching. At every flash of lightning a noise is heard in the receiver.



A remarkable photograph of a lightning flash which by a stroke of luck missed the aerial must seen in the reproduction.

Lightning affects overhead lines in still another manner. Instead of induced currents there are electric charges induced by a passing charged cloud. If the cloud is charged + a negative charge is induced on the upper surface of the wire and also on the earth beneath the wire. The under surface of the wire is +, hence a difference of potential exists between the earth and the clouds and between the earth and the wire. If this difference of potential is sufficiently large a flash over will occur. This effect may be seen by inserting a series air condenser in the aerial circuit. When a certain potential is reached, small sparks jump between the condenser plates.

Charges may also gradually accumulate on the aerial from rain or dust, and other charge-carrying particles. When a sufficient potential has been built up a flash-over will occur. This is a gradual process, and is much less dangerous than when sud-

den potentials are built up. There are generally high resistance leaks to antenna construction, so that the charges leak off as fast as they are formed.

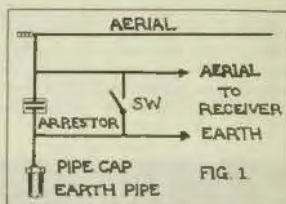
The most violent and, fortunately, the rarest form of lightning disturbance, is the direct-stroke. When lightning strikes an object it is often completely demolished. Since the current is so large and the time of discharge so brief (about two millionths of a second), no aerial would stand the strain. Moreover, an arrester would be of little value because of its small dimensions. The lightning rod is really used to receive the direct strokes, and that is why such large conductors are used. In order to spread the discharge over as great a number of conductors as possible, several parallel rods are erected and the current path is not limited to one rod.

Obviously, a lightning arrester does not protect a building from lightning. Neither does it stop lightning from discharging through an aerial. Its primary function is to protect the apparatus connected to the aerial. This is true of an arrester wherever it may be used—telephone lines, transmission lines, or electric-light-power lines.

Fig. 1 shows how an arrester should be connected to a radio installation to protect the apparatus. Every arrester consists of two electrodes, so placed that a spark will jump between them when the potential difference reaches a certain predetermined value. It is then evident that the arrester is really a shunt across the receiving apparatus to by-pass excessive energy, which may flow in the aerial circuit. Naturally the best protection to apparatus is a shunting switch, as shown in Fig. 1. However, the switch depends on the human factor for its operation, whereas the arrester is automatic and is always on the job. It is used for this reason only. As we have stated before, the best protection is afforded by a direct metallic path to ground at all times. However, this is obviously unsuited to a radio antenna, because the energy received would be shunted to the earth and lost. It is then necessary to have an arrester which will by-pass heavy charges, but which will not dis-

sipate the signal energy received. The arrester electrodes should then be located so as to minimize a chance short circuit. It should be protected from dust particles and conducting particles always present in the air. Furthermore, in case a discharge does occur the metallic particles following the arc should not remain as a conducting path between the electrodes.

The Underwriters' Association are primarily interested in the mechanical construction of lightning arresters and in the voltage at which a discharge takes place between the electrodes. We publish below a list of their requirements, so that the reader will know exactly what is required of approved arresters.



A simple diagram showing how an arrester should be connected to a radio set to protect the apparatus.

In setting up Radio Equipment, all wiring pertaining thereto must conform to the Association's "General Rules for Wiring for the Utilisation of Electrical Energy," and the following additional rules:—

AERIAL.—(a) Aerials outside of buildings shall not cross over or under electric light or power wires, nor shall they be so located that a failure of either aerial or of the above-mentioned electric light or power wires can result in contact between the aerial and such electric light or power wires. Aerials shall be constructed and installed in a strong and durable manner, and shall be so located as to prevent accidental contact with light and power wires by sagging or swinging. Splices and joints in the antenna span, unless made with approved clamps or splicing devices, shall be soldered. Aerials installed inside of buildings are not covered by the above rules.

Note: Outdoor aerials should be of rugged construction, held securely in place and kept well away from electric light and power wires. It is advisable for the amateur not to make any connections to poles carrying light or power wires. Those unfamiliar with electric wiring will do well to have aerials and other apparatus installed by competent electricians.

The size of the antenna will depend upon the span; for the ordinary receiving aerial about 100ft. long, No. 16 gauge soft drawn copper wire may be used, or other wire of equivalent strength. Where the span is long, or where the aerial crosses other wires, it should be larger.

LEAD-IN WIRES.—(b) Lead-in wires shall be of copper, approved copper-clad steel, or other approved metal, which will not corrode excessively, and in no case shall they be smaller than No. 16 S.W.G., except that approved copper-clad steel not less than No. 18 (0.044) S.W.G. may be used.

Lead-in wires on the outside of buildings shall not come nearer than twelve (12) inches to electric light and power wires unless separated therefrom by a continuous and firmly fixed non-conductor that will maintain permanent separation. The non-conductor shall be in addition to any insulation on the wire.

Lead-in wires shall enter building through a non-combustible, non-absorptive insulating bushing.

Note: Although desirable from a signalling viewpoint to prevent partial grounding in wet weather, these rules do not require the insulating of lead-in wires, except where they pass through the building wall, where a bushing is specified. This is to protect against possible contact with wires, pipes, or other grounded metal, which may be concealed in walls.

PROTECTIVE DEVICE.—(c) Each lead-in wire shall be provided with an approved protective device properly connected and located (inside or outside the building) as near as practicable to the point where the wire enters the building. The protector shall not be placed in the immediate vicinity of easily ignitable stuff, or

(Continued on Page 41.)

New Electric Phonograph may Rival Radio

Remarkably faithful reproduction, hitherto unequalled in broadcast receiver or gramophone, is obtained in the new electric phonographs. It is feared that they may out-rival the radio set.

A GREAT advance has been made in the design of the phonograph. From the intensive research into the physics of sound and the reproduction of sound wave forms in broadcasting, particularly in relation to the loud speakers, a great deal has been learned, and this knowledge has been utilized not only in perfecting radio receivers, but also in improving phonographs.

The improvement in the phonographs is such that it will make the broadcasting industry look to its laurels. The reproduction of music specially recorded by methods learnt or borrowed from the radio field has already resulted in the improvement of the quality of the music. And it is the tonal quality of music that requires most improvement in broadcasting.

The tests by which the success of broadcasting as a musical entertainment can be gauged are mainly—the volume that can be picked up, its freedom from distorting or interfering noises, the ability to pick up various stations readily in the exclusion of the unwanted stations and the tonal quality of the music.

The volume and the selectivity problems have been solved, or are nearing solution in the refinements of the sound collecting equipment, the transmitting apparatus, and of the receivers. The majority of listeners can now get sufficient volume and operate their sets with reasonable selectivity, if they are prepared to obtain average good receivers; and the activity of the trade shows that people are abandoning the obsolete types and purchasing or assembling one or other of the several reliable sets that are now available. Presumably there will be a large percentage of listeners for some time to come who will



The Brunswick Panatone, among the first of the new phonographs to reach Australia. It sells at the same price as the better class superheterodyne.

be content to rely on their old sets; and the desire to obtain more satisfaction from the service will not make itself felt. It will be as in the motor car or the phonograph industry; financial or other demands will compel people to stick to what they have got and postpone indefinitely the purchase of the better car or gramophone. But there are many discriminating listeners to whom the novelty of broadcasting does not appeal; they want their money's worth in faithful reproduction of music. The volume will not interest them as much as the quality of the sounds of music emitted by the loud speaker.

The selectivity problems are more or less settled; there are many types of sets available with sufficient selectivity for the most fastidious, so long as due attention is paid to the aerial earth system. But thoughtful listeners will not be content with a set that cuts out all stations except the one desired; that station's transmission, or, rather, the receiver's version of it, must be pleasing.

Now this desirable tonal quality is not yet available to the average li-

stener, even if he uses the average good receiver. There is nearly always evident some defect, some distortion of music, particularly band or orchestra music. This distortion is due almost entirely to the receivers, although some of it is caused by transmitter variations. The loud speakers, with the exception of the better models of cone speakers, are fruitful causes of unpleasant reproduction, no matter how excellent may be the transmission or the receiver tuner. The type of valve used in the audio stages and the method of audio amplification also bring in distortion or exaggeration.

If the phonographs are improved, as they are being improved in tonal quality, people will go back to their phonographs for music. It was expected that radio would displace the phonograph, but a recent investigation in America showed that 80 per cent. of the listeners had phonographs, and used them. If, then, the phonograph gives first-class music, faithful and undistorted, while the radio is a true reproducer only on occasions, it is not difficult to see

(Continued on Page 43.)

Coming Features in the Broadcasting Programmes

THE GENERAL APPRECIATION with which Mr. E. J. Van de Velde's first edition of "Who's Who at the Zoo," was received, has prompted 2FC to give another of these instructive talks. On January 13, 2FC will broadcast the second series by this versatile lecturer. During his recent trip to Victoria by aeroplane, Mr. Van de Velde secured many fine photographs from the Zoo in Melbourne. These will be published simultaneously with the lecture, in order to help listeners to visualize the animals. The talk will deal with their habits and characteristics.

The photographs on this page is an index of the preparation given to this lecture.

INCLUDED IN 3LO's programmes this year will be a series of organ recitals by Dr. Floyd from St. Paul's Cathedral. Dr. Loftus Hills and Capt. Peters will both continue their "talks" on "Popular Science" and "Books wise and otherwise," respectively. These lectures are now timed at 7.45, instead of 8 p.m., as has been the usual custom.

ONE OF THE MOST POPULAR ITEMS broadcast from Sydney during the past year was the band carnival at the Agricultural Show Ground, Sydney, last January, when the Leichhardt Band, by a narrow margin, beat the Ipswich (Q.) Band for previous position. The Band Association of New South Wales has again arranged with 2FC for the broadcasting of the 1927 carnival. This begins on Saturday, January 22, with "C" Grade Contests, and on the afternoon of Sunday, January 23, the quick-step display is given. On Monday, January 24, the "B" Grade Bands will play, and Tuesday and Wednesday, January 25 and 26, are reserved for the "A" Grade Bands. A large number of entries has been received, and the fact that more Interstate bands than ever have entered, shows how keen the contest is to be. Further interest this year will be added by virtue of the fact that there will be no repetition of the same items, but each band will play a different number. This is a special concession to radio listeners.

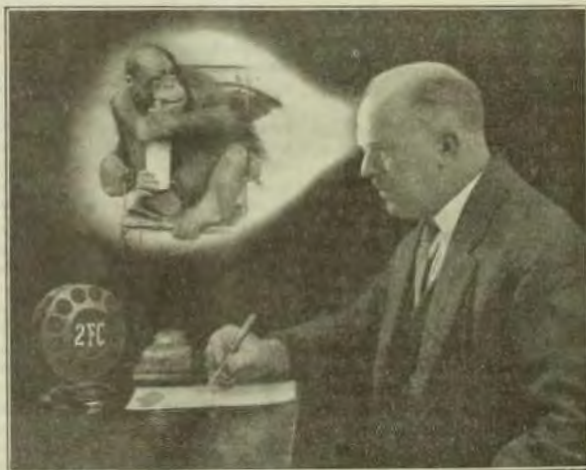


Miss Gwendolyn Evans, heard regularly from 2GB.

MRS. MAURICE DUDLEY, the wife of the popular 3LO announcer, will be heard in a series of "playlets." The plays have been specially written with a view to the requirements of a broadcasting audience, and, as they range from grave to gay, something among the series will be found to suit every age, and all tastes. Mrs. Dudley will have the co-operation of Mr. Chas. Dyson.

AT LAST the 3LO Girl Competition has drawn to a close—last minute photographs have been sent in, telegram and telephone messages have been answered; in fact, everything has been done to assist competitors. The judges are now considering which shall be awarded the prize.

3LO HAS STRUCK something new in radio programmes in the Australian pianist, William James, and his "Pied Pipers," who are giving some delightful musical fragments at the studio. Chief among these may be mentioned the adaptation of familiar "semi-classical airs, such as the popular "Barcarolle" from "Hoffman," to which have been set the words of well known hymns.



An example of the photographic art of Mr. E. J. Van de Velde, illustrating the second edition of his series, "Who's Who in the Zoo."

The Responsibility of Broadcasting

A thoughtful article by HERMES, in which he discusses the influence broadcasting will have on the intellect of the nation.

WHEN the cinema first became popular, thoughtful people interested in social questions expected great changes in the habits of the democracy from this immense cheapening of popular entertainment. The great changes have come about though they are difficult to define.

The film can convey rapid incident, and high-powered emotion. But as yet it cannot think. The cinematograph has not as yet made any contribution worth considering to the problem which everyone has to decide consciously or not—what are the things in life worth having. The art of the camera has been superbly developed, but the cinema plot is still more or less crude, and stereotyped in subject matter.

Broadcasting is a further stage in the cheapening and expansion of popular methods of entertainment. A license and a decent set cost only a fraction of what an average family spend yearly on the film, and though it is difficult to compare the appeal to the eye with the appeal to the ear, the artistic range of broadcasting is obviously greater. The studio walls echo uncomplainingly the strains of "Paddlin' Madeline Home." They tremble to an organ fugue of Bach. They carry to the bushman, a little weary even of his beloved wide plains and grey-blue eucalyptus, the thrill and suspense of a wrestling match or boutrance. The man who has long since forgotten he had a soul is awakened to the thrill of feeling it alive as he listens to the challenge and stimulus of a fine sermon; or is strangely stirred by a scientist's simple story of the descent of mankind.

The most outstanding feature of present day thinking is a widespread intellectual curiosity. The greatest scientists, philosophers, and literary men of our time find it worth while to leave their lofty homes and secluded lecture theatres, and pour forth their

knowledge in cheap little books and encyclopaedias for popular consumption. Publishers find it worth while producing these in immense quantities. There is spreading very rapidly everywhere the sense that knowledge is power, and not only power, but adventure, excitement, a joy in itself. No publisher doubts that the sale of little books stimulates and opens up the sale of big ones. Once curiosity is fired by a lecture or little book the enquirer follows up his interest, and learns the strenuous delight of really knowing some subject thoroughly. With broadcasting, the talk is often, to the intellectually hungry, the opening up of a new and splendid field of interest.

A writer in the "English Review" for October (Lieut.-Col. Lockwood Marsh), tells how the tabloid biographies of great men, so popular among the B.B.C. listeners in England, frequently sends him to their standard two or three volume biographies. So, of course, with other interests. Once a person is awakened to observing the notes or plumage of birds for example, he will follow up his interest, and become in a new sphere an educated man, which means that he has discovered a whole new region of life to conquer and enjoy. Colonel Marsh stoutly denies that the broadcasting of good music reduces the appetite or injures the market for good music. The recital, especially if it be accompanied with a few guiding and explanatory words, reveals to thousands of people a power in themselves which they never before suspected, the power of appreciating the higher levels of this art. It creates an appetite which grows by what it feeds on.

Colonel Marsh declares that in this age of wireless, gramophones, and player pianos, better music and more of it is being written to-day than at any time for the last three hundred

years. Even in the case of a popular song, which in the nature of things has a short life, it may be true that broadcasting shortens its life, but it makes it a much more intense one. The music publisher gets a more rapid sale for his ballad. It passes through its normal course more quickly, but becomes far more widely known. Sales are increased, and the way is cleared for the music publisher's next winner. If the song has "staying power" it makes its popular reception safer. Interest stimulates demand. Intelligent people in the churches never believed that broadcasting would keep people away from church, for instance. They saw that many people kept away by lazy prejudices which they had never over-hauled, would be interested, and want more of a good thing. The young musician, scientist, politician, or preacher, with something to say, finds in broadcasting a valuable and legitimate advertisement.

The person who is without intellectual curiosity or mental energy cannot understand the existence of that large and growing class of people who want to know. Even some members of this class find it difficult to understand and be patient of one another. The man with a passion for history finds that person a nuisance who wants lectures on the plumage of birds. That is the special problem of the broadcasting manager, and in the nature of the case it can never be solved. If being solved means pleasing everybody.

Broadcasting, unlike the cinema, has been regarded from its birth as a public responsibility, and the government as public trustee exercise rightly a supervision over the quality of programmes. In other states, this government power has been used. Healthy amusement is a public necessity and jazz plays its rightful part in the scheme of things.

Studio Architect Studies a Sound Problem

WHEN 3LO built its first broadcasting studio in Melbourne some years ago, the architect, Mr. R. M. King, of Royal Bank Chambers, Melbourne, was faced with many problems new to architects at that time. A knowledge of theatrical acoustics was but little guide in tackling problems which presented new features at every turn, and most of them had to be met and solved one by one, by a process of combined theory, trial, and error.

That he met with success was shown by the improvement effected in the second studio, designed in Cambridge Buildings, in Collins Street, which marked a 100 per cent. increase in efficiency over the maiden effort. His latest and undoubtedly best effort in studio design is now in course of construction in Melbourne Place, off Russell Street, the new home of 3LO, and will undoubtedly give Melbourne the most luxurious, and most efficient broadcasting studio in Australia.

The main problems confronting the

architect essaying to provide a broadcasting studio with a maximum of appearance, comfort, and luxury, are those of sound. On the one hand, sound elimination, and on the other sound retention. All outer sounds must be rigidly excluded from the studio, and all sounds from inside the studio, which are to be broadcast must be used to the fullest advantage.

In the first respect the situation of the new offices and studio is ideal. A quiet backwater off Russell Street, free from traffic noises, clanging of tram bells, hooters of cars and other distracting sounds; and this quiet situation has rendered unnecessary any elaborate sound proofing precaution, such as dead lining the exterior windows. The only exterior noises to be contended with, therefore, were those which may be termed inter-building noises, that is the noise of traffic, and general life in the building, sounds from the equipment room, and inter-studio noises. The first have been overcome by a careful



Mr. R. M. King, the architect engaged to build the new 3LO studios.

plugging of the floors; that is, packing between the joists with shavings, and the inter-studio sounds have been eliminated by a system of double doors, which have to be opened independently.

The acoustical problem of the interior was next to be met. Here again the building proved itself to be almost ideal, in that the roof was supported by a series of wooden trusses. These have been retained in their open state, and give a broken air space above the studio, essential in preventing the echo and the reflection of sound waves invariably following if a flat ceiling is employed. The size of the studio is such that echoes, the greatest source of annoyance in a small studio, are entirely absent and large reflecting wall surfaces have been carefully broken by a judicious and handsome arrangement of panelling.

The early and unsightly methods of killing echoes, wires stretched across the ceiling, heavy dust collecting draperies on the walls, and other artifices are conspicuous by their absence. To all appearances, the first impression gained of the studio is that of a large and tastefully decorated ballroom. Mr. King has thoughtfully provided an excellent dancing floor, of which full use will no doubt be made by visitors.

New Year Wishes, 1927

From 3LO, a new year wish to
all

For happiness; may twenty-seven see

All hopeful effort crowned with
due reward

And even higher hopes for
days to be.

Like wanderers, who gain the
happy crest,

We gaze behind us at the
uphill way

That we have come, then glad at
heart we face

Our still upstanding path—the
future day.

So too WE gaze before and con-
template

With joy the task assigned to
3LO.

For ours it is to brighten and
adorn

The uphill path by which the
many go.

So, merrily along, and live and
love.

Prepared to labour on and right
the wrong:

For, ne'er forget, the very air is
charged

By 3LO with happiness and
song.

To this, our country, fair Aus-
tralia.

We wish a year of all pros-
perity

Along the pathway to her golden
dreams.

May She press boldly in the
year to be!

From 3LO, a new year wish to
all

For happiness; may twenty-seven see

All hopeful effort crowned with
due reward—

And even higher hopes for days
to be. C.E.

2KY Proposes a Radio Labor College

At a meeting of trade union delegates called by the wireless committee of the Sydney Trades Hall broadcasting station 2KY, a proposal was contained on the agenda recommending the establishment of a wireless labor college, operating over 2KY. The proposal has not yet come to fruition, but in an editorial article the "Labor Daily" says it is thoroughly practicable, and would be a great advance over the old labor college, and also over the promiscuous instruction which is now being sent out through 2KY.

It would not be a difficult matter, says this journal, to replace the occasional educational lectures with a regular course of lectures on specified educational subjects, and also to grant certificates, if need be, for proficiency in the main subjects of working class education. All the great countries of the world are busily engaged in adapting the growing technique of radio to the educational needs of their respective peoples. All the main stations and all the relay stations

throughout Great Britain broadcast daily lessons for the schools.

During the evening the same stations broadcast progressive courses in languages, the arts, science, and in various technical subjects pertaining to industry. The use of radio for technical instruction in the United States has also been referred to. Of particular interest are the plans of the U.S. Government to establish ten high-power broadcasting stations for the express purpose of broadcasting agricultural courses for the benefit of the farmers throughout the country.

In Germany, Russia and Austria, radio has already been adopted for purposes of public instruction, and the latest news to hand indicates that Paris is now establishing a radio university. The University Council of Paris has under construction a radio telephony school. Through this school will be broadcast lectures by eminent professors, such lectures being designed for those students who are studying for the usual university courses.

It is contemplated that those who listen-in to this course of lectures, and who apply themselves to the lines of study laid down, will be permitted to sit for a special examination, and will be awarded certificates and degrees in the usual way.

HUMOUR BROADCAST.

COMEDIAN'S HARD LOT.

2FC authorities declare that humour is the hardest thing to put on the air. The ordinary comedian is helpless without an audience to laugh at his gags and spur him on to better efforts. The difficulties of broadcasting humour are gradually being overcome, however, they state, and the entertainers and comedians at the various stations seem to be developing an extra sense, which enables them to get through the "mike" better than they did in the early days.

One of the greatest criticisms levelled against wireless is that it is very hard to get a laugh on the air. 2FC, in company with other stations, has suffered from a dearth of suitable comedians, but during the last few months they seem to have improved this side of their programme to a considerable extent, with the result that quite a number of comedians are so popular that listeners are asking for more. One of the most appreciated artists is Jack Lumsdaine, whose song and story at the piano is particularly suitable for broadcasting. He has adopted that confidential air made so popular by the whispering baritone, with the result that his entertaining gets right home to listeners.

Then there is Charles Laurence, who can always be depended upon for a good song and a better story, with his fine big voice and cheery style. Other comedians to present various forms of humour are Reg. Greenwood, Joe Cahill and his "Mr. Dooley" sketches, Wally Baynes with his broad humor, and Ad. Cree, Scottish humourist.



The Auditorium, Melbourne, was filled to standing when 3LO held its annual children's party last month.

Meanderings

By H. ELLO

I HAVE been following with considerable interest the efforts of the 3LO staff to "plait out" the deaf spots of this State where transmission or reception is faulty. Most of all have I been struck with the keenness of the technical "sharps" on their work, as though their own jobs depended on the solution of the problem.

A few days ago, I happened to be at Yallourn, where the worst of the "fading" seems to be taking place, behind the screen of what are known as the Haunted Hills. The effect of the fault, if that word can be properly used to describe a freak of Nature, could be seen in the scarcity of wireless aerials. Up the main Gippsland line, and in some of the loneliest stretches of the great forests that clothe the Gippsland valleys, I had seen everywhere indications of the hold radio had on the community, and settlers had told me of the pleasure they had got from 3LO, their main station. In Yallourn there was deep disappointment, and I could not help but feel how much pleasure the solving of the difficulty would give.

It is with pleasure, therefore, that I heard of the proposal of 3LO to erect relay stations, such as they have in England. This will be a great expense, but, although 3LO could, I suppose, proceed on the assumption that the folks in these isolated spots were in hard luck in not getting good results, still it was no fault of the station transmission, they have elected to take the larger view—that it is their job to bring to every citizen who wishes to subscribe the service the cities have. If it costs money to do this, 3LO are willing to spend that money.

CHRISTMAS BROADCASTING.

I HAVE been a hardened cynic in regard to Christmas, I admit it. I could not get the Christmas spirit so many of my friends talk about, and to me the "festive season," as they have nicknamed it with some

humour, was something to be got over with a minimum of fuss and feathers. In other words, I had adopted the less likeable qualities of Ebenezer Scrooge.

The other night, while these sentiments were at their worst after an orgy of reckless Christmas shopping, I was persuaded to listen to "A Christmas Carol," as broadcasted from 3LO. It was an excellent piece of work, and as I listened something came to me from the air, besides the "concord of sweet sounds." It was the spirit of Christmas. There was something queer about the old story, read hundreds of times, coming through the ether. It was easy to imagine that Dickens himself, with his enthusiasm for feasts and anniversaries, was reading his own creation. There was a reality about it that sensibly affected me, and before I knew where I was I had become as sentimental as old Bob Cratchitt. I thought of the Christmases I had known as a boy, when we youngsters at last got the things we had looked forward to for months. I savoured again the tremendous relief of that last day of school, when custom allowed us to laugh and be merry, and even pull the master's leg, because even masters felt the relief of "breaking-up" with us. All sorts of memories came crowding back, long forgotten, or at least laid away in the dust of the past. Then I did a thing I would not have thought possible. I went through all the elaborate ritual of Father Christmas, a thing I have not done for years—and I enjoyed it. It was not the magic of the Dickens tale that did this for me; I believe it was the magic of the air, the almost mystic feeling that some children have over radio—that God is talking. Anyway, I have come to the conclusion that it is a good thing to keep up old customs, however absurd. I realise that many hard-boiled citizens, besides myself, must have been touched by 3LO's Christmas programmes. The least I



Miss Jean Griffiths, mezzo soprano, who has been engaged by 3LO.

can do is to give them thus much thanks.

THE CONVERT.

SOME time ago, I was speaking to an elderly lady on the virtues of radio. She would have none of it. Hated these new-fangled things. If she wanted to hear music, she could go to a concert. She loathed being lectured to, and she thought radio humour was always in bad taste.

A travelled woman, she had heard the best, read the best, met the best in many parts of the world, and it was her conviction that all these modern improvements were taking the beautiful simplicity out of life. And so on—you have all heard the sort of arguments she used.

Last night I dined with her, and on the party reaching the drawing-room after dinner, what was my surprise to see a huge 6-valve set, with indoor aerial complete, standing proudly on a table.

"Oh, wireless!" exclaimed one of the guests, and hastened to "tune-in."

"Yes," said my radio-hating hostess. "I read in one of the papers that 'The Messiah' was to be broadcast. I was not well enough to go and hear it at the Exhibition, and as I am passionately fond of oratorio, I bought that contraption. And, I'm bound to admit, it was wonderful. I had no

idea they had improved the wretched things so much."

She spoke flippantly, with a great pretence of indifference, but by this time the music from 3LO was flooding the room, and it was excellent music, so we were thoroughly entertained in that rather dull half-hour that follows the bright talk over the dining-table. I could see that radio had made a convert, and one of the guests, who knew the technical points of the game promised to come in and show her how to fool round with the various gadgets so as to get the best out of it.

3LO'S SANTA CLAUS.

THE visit of Santa Claus to 3LO on Xmas Eve, when he clambered down the loud speaker straight into the hearts of 100,000 listeners, was a great delight to the children who heard him talk. Now that we are well on into the New Year, it is giving away no close secrets when we confess that Santa Claus, who is no scholar, entrusted the composition of this speech to Mr. Charles Hosking, who came down the chimney just at the very moment when 3LO wanted him, and the sleigh bell effect and all were due to his kindly appreciation of what children enjoy.

MISS JEAN GRIFFITHS.

ONE of the most recent additions to "sign on" at 3LO is Miss Jean Griffiths, a mezzo soprano, who is about to begin a series of engagements. Though no stranger to the microphone, this is the first occasion that Miss Griffiths will be heard from 3LO, and her delightfully artistic rendering of well-known ballads will be a welcome addition to many of the programmes. Born in Australia, Miss Griffiths has taken the study of singing seriously, for several years she has done a great deal of concert work, and is at present continuing her studies with a view to branching out in wider fields, operatic, and otherwise.

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1 Ajax 30 ohm Rheostat	0 2 1
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2 High Grade Audio Transformers, 13/6	1 7 0
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The "Elstreflex Two"

Possessing extraordinary range and power, this set is among the best of modern reflex receivers. It is quite selective and free from buzzing noises.

ABOUT three years ago that well-known British Radio Engineer, Mr. John Scott-Taggart, produced a Reflex receiver employing two valves and a crystal which gave the output of approximately four valves, and named it the ST. 100. It was received in Britain by a wave of enthusiasm and enjoyed such popularity there that its fame spread throughout the world. Considering that only two valves were used, the volume was wonderful, and the fact of a crystal being used for rectification purposes gave rise to exceedingly clear quality reproduction. Thousands upon thousands were built, and even in this country it enjoyed a most immense popularity.

But it had its drawbacks. Its selective qualities were very poor. Heavy damping due to the crystal causes this poor selectivity and range. Quite a number of people living close to high powered A.C. mains experienced considerable "hum" from this source, and others again found that, due to high frequency reaction, a decided annoying buzzing spoilt reception.

With the aid of a very capable staff at the Radio Press Laboratories in Elstree, in England, Mr. Scott Taggart set out to produce a stable two valve Reflex receiver which would combine powerful results with selectivity and range. Here it is, and let

us assure you that it is worth while building.

The coils used in this excellent receiver may seem somewhat strange. That they are efficient there is no doubt, and Mr. J. H. Reyner, the Editor of "Modern Wireless," is responsible for their inception. For many months this worthy gentleman experimented with different types of coils, and finally produced the type of coil used in this circuit. Other types wound differently but constructed sim-

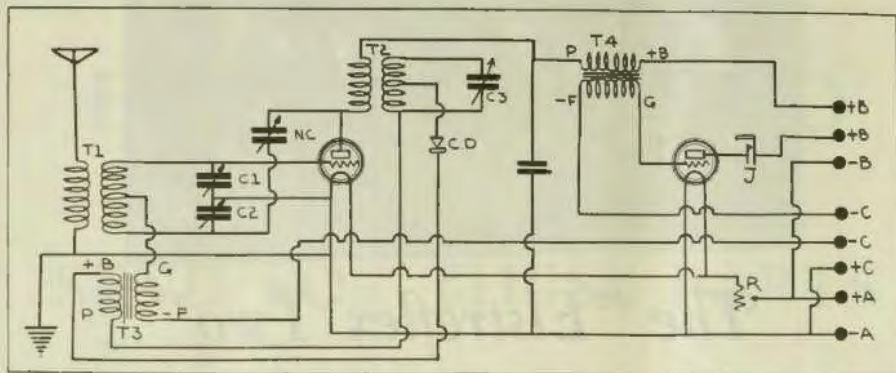
ilarly he made, and they have been used in many of the popular English receivers of to-day. To obtain maximum efficiency, and to eliminate what is known as direct pickup, he shielded these coils, but for the purpose of the "Elstreflex Two" shielding is not at all necessary. In next week's "Wireless Weekly" there will be an article on coil shielding, or screening as it is more widely known, so for the present we will confine ourselves to the "Elstreflex Two."

This receiver, while retaining all the advantages of the ST. 100, overcomes all the difficulties to which this latter receiver was subject. No parasite noises whatever mar reception, instead good pure music and speech is the result. Selectivity, so much desired to-day, is present to a very high order, and crystal troubles are dispensed with entirely. Reaction is very simply controlled, and is most effective, and stabilization is assured and is produced by means of a neutralizing condenser. We have pointed out over and over again that it is along the lines of neutralized radio frequency that much of the future research in radio will take place.

The photographs of this receiver will indicate neatness of layout. The front panel view should suit the taste of the most aesthetic constructor, and the plan view showing the layout of baseboard parts will meet with the

Here is a list of the parts you will need:—

- 1 Panel, 18ins. x 7ins. x 3/16in.
- 3 0005 S.T.B. Condensers.
- 3 Universer Diats.
- 1 30 ohms. Rheostat.
- 1 Marco Super Vernier Condenser.
- 1 Harlio Crystal Detector.
- 1 Emmeo S.C. Jack.
- 2 Benjamin Valve Sockets.
- 2 Jefferson 41 Transformers.
- 1 502 Fixed Condenser.
- 2 Gridan tubes, 3 1/2in. long by 2ins. in diameter.
- 2 Gridan Tubes, 3ins. long by 1 1/2in. in diameter.
- 1 Terminal Board with 8 terminals.
- 1 Terminal Board, with 2 terminals.
- 1 Baseboard, 16ins. x 9ins. x 1/2in.
- 4 Ozs. No. 30 D.S.C. Wire.
- 12 Sticks of Busbar.



The circuit diagram of the "Elstree Two."

approval of most. The new style coil, or the secondary of this new style coil, rather, is clearly seen in the back of panel view. Unlike many other receivers, separate "B" battery tappings are taken for feeding the plates of each valve, and consequently provision is made for separate "C" battery potentials for each grid. This accounts for the eight terminals on the terminal board. Again, in this receiver we have placed the aerial and earth terminals at the back of the set.

The list of materials used for this set is published in the article, and while we do not wish to confine constructors to the actual brand of material mentioned therein, at the same time the values are most important. Still, if the constructor desires to make an exact copy of the "Elstreflex Two" as photographed, he will find that the advertisers in this paper will cater for his requirements. Do not attempt, under any circumstances, to use other size condensers to those specified, or the results will be greatly impaired.

Originally in the "Elstreflex Two" we were desirous of using a .0005 double condenser, but at the time the components were procured this type of condenser was not available, although now it will be found in many radio shops. If the constructor is desirous of employing one of these double or dual condensers, he may do so, and it will take the place of the

first two condensers marked C1 and C2.

The Grodan tubes are of specially treated cardboard, and we understand that they will be available in this form by the time this issue appears.

Construction.

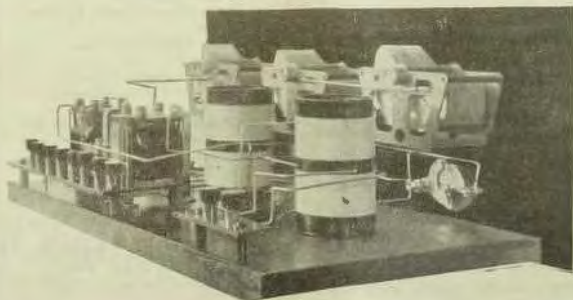
If the constructor follows out our layout, he will be well advised to mark out and drill his panel in accordance with the panel layout drawing published in this article. The usual rules applicable to panel marking and drilling should be followed here. If the constructor is doubtful of his ability to use a square and rule in marking out his panel, a means of overcoming this would be to make a full size template on brown paper, following out the measurements given in the front of panel diagram. All that is

necessary, then, is to place this on the panel, and with a centre punch mark out the different positions and drill accordingly.

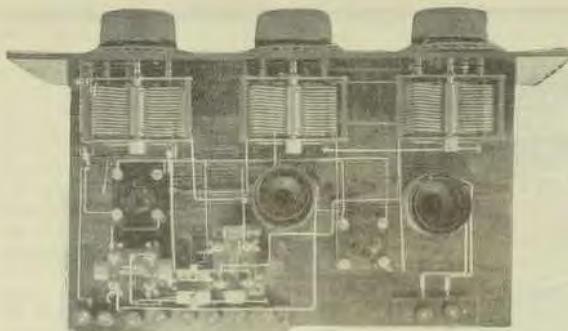
Now, fix in position the neutralizing condenser, the Harlie detector, and the Rheostat. Then the three heavy variable condensers. Don't forget to provide a fixing hole for the vernier dial.

Coils.

As previously mentioned in the article, an entirely new style of coils is used in this receiver. These coils consist of a primary and a secondary, the primary being permanently fixed inside the secondary. The secondary coil is of two inches in diameter, and is wound with 130 turns of No. 30 D.S.C. wire. This winding is in two separate portions of 65 turns each,



A side view of the completed set, showing the position of component parts.



The baseboard layout is clearly seen in this picture.

the windings being 1in. apart. Begin winding the secondary by piercing two holes at — inches from one end, and thread the wire through these holes to hold it securely. Then wind each turn close to its neighbour, 65 turns of wire, and finish off by securing the wire to two of the holes. A quarter of an inch from the end of this winding start the second portion of the secondary, which ought to consist of 65 turns of the same wire wound in the same direction. The complete secondary should look like those photographs in the back of panel view.

The primary consists of 20 turns of the same gauge wire, wound in the same direction on the 1 1/2 in. tubing, and should be wound in such a position that the completed winding, when fitted inside the secondary, should come right opposite that vacant space of a quarter of an inch. To make certain of this, plug the bottom of the secondary tubing with a circular piece of wood half an inch thick. When the primary is fitted inside the secondary this will take up the overlap of half an inch of the secondary tubing.

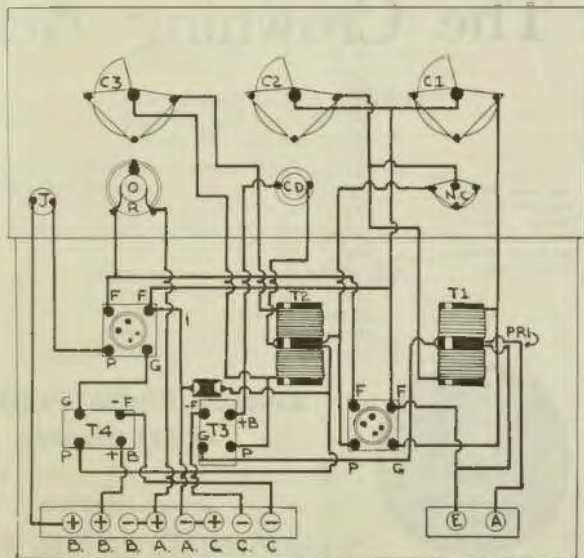
Pierce two holes in the middle vacant part of the secondary tubing, and thread the beginning and the end of the primary coil from the inside through to the outside of this tubing. Arrange this in such a way that the primary wires come out through the secondary tubing on the opposite side to the connections of the second

ary coil. Scrape the insulation from the two ends of the secondary coil in the middle, and twist these wires together and solder. Be very gentle in this action otherwise you are liable to break the wire, which would mean rewinding the coil altogether. Don't be alarmed at our advice, but remember that forewarned is forearmed. Treat the secondary of the second coil

in a similar manner, and you are now ready to layout the baseboard.

An excellent method of keeping this primary coil firmly in place is to fashion a round wood disc the exact size of the inside of the primary tube, and mount this on top of the disc, which fits inside the secondary tube in such a manner that an equal distance is left all around the edge. The primary coil should fit snugly on the top of this disc, and the whole unit can be mounted on the baseboard by means of a long screw, about one and a half inches long.

The positions for the components on the baseboard can be gathered from the plan view or from the back of panel wiring diagram. Note carefully that the audio transformers are mounted at right angles to one another and are one and a quarter inches apart. It will be gathered that we have used in this set two audio transformers of the same ratio, but if the constructor desires to employ the usual 5 to 1 and 3 1/2 to 1 ratio transformers, it must be understood that the 5 to 1 transformer should be placed in the first stage of audio



The wiring diagram.



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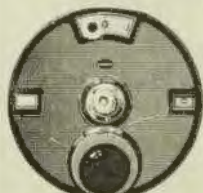
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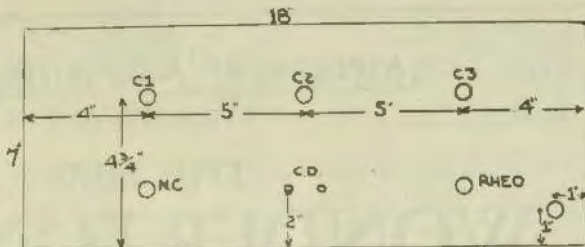
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Price .. 11/6.

with the $3\frac{1}{2}$ to 1 ratio in the second stage.

No grid leak and condenser is necessary, as the detector in this receiver is the crystal, hence the absence of the usual .00025 condenser. Mount the terminal board immediately behind the audio transformers, and use a short length of fibre tubing or the insulating portion of the Grodan Ecs as pillars. To save a lot of trouble in making connections to these terminals it is a wise plan to fix a small soldering lug under each terminal and allow it to protrude about three-sixteenths of an inch over the edge of the dielect. When wiring, solder to these lugs, which is a quick method and will prove most effective.

Wiring.

Having laid everything out to your satisfaction, the wiring may be proceeded with. To guide you in this direction, there is a description of the wiring of the "Elstruflex Two" in another part of this article; and besides there is the usual back of panel



The drilling template for the panel.

wiring diagram, as well as the circuit diagram, all of which should be checked with one another. In the actual set photographed we used round busbar, which is very nice and easy to handle. Of course, if desired, Fortis wire or straight point to point connections with varnished cambric spaghetti and No. 20 gauge wire may be used, but this is a matter on which you will have to decide for yourself. Always remember in wiring this or any other receiver to keep

the wiring as low as is possible. We ourselves for the sake of clearness in wiring have raised one or two of the wires, in order that they should stand out in the photograph. Solder neatly and cleanly. Don't just simply stick the joints together, and always wipe off any residue of flux or resin which may remain on the wires after soldering. Start off wiring the receiver with the connections itemized on the wiring instructions, following this throughout in the order given, and no difficulty will be experienced.

Testing.

When all the wiring has been checked off and found correct, insert the valves in their sockets, and connect up the batteries to their respective terminals. Starting off with the "B" batteries, join the short to the two "B" plus terminals with a small piece of wire, and connect up 90 volts as a "B" battery. Also short the two "C" negative terminals and connect up the required grid bias value for the valves used. For Radiotron UX 201A valves 44 volts will be found quite ample, but with several of the different Philips' valves more may be required. Now join up the "A" battery to suit the valves used. Link the aerial and earth to their respective terminals and plug the earphones into the jack. On lighting up the filaments of the valves by means of the rheostat and turning condensers C1 and C2 at the same time around the scale, keeping both readings the same all the way, the local station should be heard. Gradually bring around condenser C3 and the volume will be greatly increased. If the set tends to oscillate in any way,

(Continued on Page 37)

Wiring Instructions

Link filament negative terminals of valve sockets together, also filament positive terminals of valve sockets link together.

Join filament positive wire to one side of rheostat.

Join remaining side of rheostat to A positive.

Connect A positive terminal to B negative terminal, also C positive terminal to A negative terminal.

Join P of audio valve socket to one side of jack.

Connect other side of jack to nearest B positive terminal.

Join remaining B positive terminal to B battery terminal of transformer.

Join filament minus wire to A minus terminal.

Connect one side of crystal detector to centre tapping of secondary of T2.

Join remaining side of crystal detector to B battery terminal of transformer T3.

Connect fixed plates of condenser C2 to moving plates of neutralizing condenser and thence to bottom of secondary of transformer T1.

Connect fixed plates of condenser C1 to top of secondary of transformer T1, thence to grid of valve V1.

Join P of Valve V1 to bottom of primary of transformer T2, thence to fixed plates of neutralizing condenser.

Link together moving plates of condenser C1 and C2, and then join to bottom of primary of transformer T1, thence to earth terminal.

Run a wire from earth terminal to A minus terminal.

Connect aerial terminal to top of primary of transformer T1.

Join centre tapping of secondary of transformer T1 to G terminal of transformer T3.

Join P terminal of T3 to moving plates of C3 and thence down to bottom of secondary of transformer T2.

Join fixed plates of condenser C3 to top of secondary of transformer T2.

Join P minus of transformer T3 to one C minus terminal.

Join remaining C minus terminal to F of transformer T4.

Join G of transformer T4 to G of valve V2.

Join P of transformer T4 to top of primary of T2.

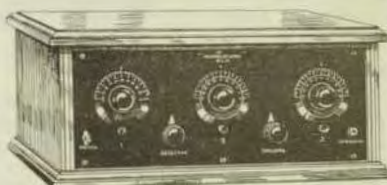
Connect one side of fixed condenser to this last mentioned wire and the other side to A minus.

A PLEASURE AND A TREASURE
 IN BUILDING
 THE NEW
WONDERTONE IV.
 HOME CONSTRUCTION RECEIVER

No Technical Knowledge is required. Our new and unique building instructions are so simple and clear that a Boy can build it. Furthermore, the Circuit employed is especially designed for the combination of simplicity of Control—Distance—Volume—Clarity—and Selectivity.

No jamming of Stations with the New "Wondertone" H.C. IV. and no special tools are required, only a Screwdriver and Pliers. The connecting wires are all cut and prepared to the required lengths, and by following the instructions it is impossible to make a mistake.

Easy
to
Build



Easy
to
Use

Illustration of a completed "Wondertone" H.C. IV Receiver

"Wondertone" H.C. IV. parts, ready to assemble, with 60 Ampere Hour Accumulator	£19 17 6
"Wondertone" H.C. IV. parts ready to assemble, with Dry Cell "A" Battery 17 12 6
"Manhattan" Loud Speaker, suitable for "Wondertone" IV. 1 12 6

The Components include everything necessary for a complete receiver, such as Stained Maple Cabinet, Bakelite Panel drilled and engraved, heavy duty "B" Battery, Accumulator or Dry "A" Battery, "C" Battery, "B" Battery Voltmeter, Hydrometer (for accumulator), Headphones, Battery Connecting Cable, and Aerial Equipment.

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NEW ACCESSORY PRICE LIST R7 NOW AVAILABLE. POSTED FREE
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Your own set rewired by Experts—Prices on application.

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Broadcasting Programmes for the Coming Week



Friday, Jan. 14

2FC

EARLY MORNING SESSION.

- 7.—"Big Ben" and Announcements.
- 7.30—Music from the Studio.
- 7.16—Official Weather Forecast; Rainfall; Temperatures; Astronomical Memoranda; Shipping Intelligence; Commercial News; Mail Services.
- 7.25—Investment Market, Mining Share Markets, Metal quotations.
- 7.35—Wool Sales, Ironstuffs Markets, Intermediate Markets, Produce Markets.
- 7.45—"Sydney Morning Herald" News Service.
- 8.—A "Cherie" Talk by Mr. J. K. Powell.
- 8.15—Close down.

MORNING SESSION.

- 8.15—The Chimes of 2FC and Announcements.
- 8.20—Music from the Studio.
- 8.30—"Big Ben" and Announcements.
- 10.5—Late "Sydney Morning Herald" News Service.
- 10.15—Music from the Studio.
- 10.45—A Morning Reading.
- 11.—The Chimes of "Big Ben," Australian Press Association and Reuter's Cable service.
- 11.10—Music from the Studio.
- 11.15—A talk on Home Cooking by Miss Ruth First.
- 11.30—Close down.

MIDDAY SESSION.

- 12—"Big Ben" and Announcements.
- 12.5—Stock Exchange, First Call.
- 12.10—Music from the Studio.
- 12.45—From Farmer's Oak Hall: Instrumental items by the Oak Hall Trio.
- 12.50—Rugby Wireless News.
- 12.55—Miss Alice Kent, mezzo.
- 1.—"Big Ben"; Weather information.
- 1.5—"Evening News" midday news service. Producers' Distributing Report.
- 1.25—From Farmer's Tea Rooms; The Oak Hall Trio.
- 1.28—Stock Exchange—Second Call.
- 1.30—Music from the Studio.
- 1.40—Miss Alice Kent, mezzo.
- 1.45—Music from the Studio.
- 2.—The Chimes of "Big Ben." Close down.

AFTERNOON SESSION.

- 2.30—The Chimes of 2FC.
- 2.35—A Recital on the "Behning" Player Piano.
- 3.—A Studio Reading.
- 3.15—Some New Records.
- 3.45—From Farmer's Tea Rooms: Miss Cecily Audibert, soprano, "Just for a While" (Greig).
- 3.46—From Farmer's Tea Rooms: The Oak Hall Trio.
- 3.55—Music from the Studio.

- 4.—From Farmer's Tea Rooms: Miss Margaret Grimshaw, contralto.
- 4.6—The Oak Hall Trio.
- 4.15—Studio Music.
- 4.25—From Farmer's Tea Rooms: Miss Cecily Audibert, soprano, "Bout Song" (Ware).
- 4.25—From Farmer's Oak Hall: The Oak Hall Trio.
- 4.25—Music from the Studio.
- 4.40—Miss Margaret Grimshaw, contralto.
- 4.45—Stock Exchange, Third Call.
- 4.45—Close down.

EARLY EVENING SESSION.

- 5.40—The Chimes of 2FC.
- 5.50—Chimes of 2FC, The "Hello Man" talks to the children.
- 6.30—A serial story for the older ones.
- 6.45—Dinner Music.

- Farmer's Service, Sydney, call sign 2FC, wave length 442 metres.
- Broadcasters Ltd., Sydney, call sign 2BL, wave length 553 metres.
- Trades Hall Broadcasting Station, call sign, 2KY, wavelength, 290 metres.
- Theosophical Broadcasting Service, call sign, 2GB, wavelength, 316 metres.
- Burgin Electric Coy. Ltd., Sydney, call sign, 2BE, wavelength, 316 metres.
- Broadcasting Co. of Australia, Melbourne, call sign 3LO, wave length 371 metres.
- Associated Radio Co., Melbourne, call sign 2AR, wave length 384 metres.
- Queensland Radio Service, Brisbane, call sign 4QG, wave length 386 metres.
- Central Broadcasters Ltd., Adelaide, call sign 3CL, wave length 395 metres.
- Radio Broadcasting Co. of N.Z., Auckland, call sign 3YA, wave length 420 metres.
- Westralian Farmer's, Perth, call sign 3WF, wave length 1250 metres.
- Tasmanian Broadcasting Pty. Ltd., Hobart, call sign 7ZL, wave length, 468 metres.

- 7.50—"Evening News" late news arrives; Weather information.
- 7.50—Dalacy's Market Reports (wool, wheat, stock), fruit and vegetable markets.
- 7.40—Close down.

NIGHT SESSION.

- 7.55—Announcements.
- 8.—"Big Ben." Broadcast from the Lyceum Theatre, items by the orchestra under the baton of Mr. Emanuel Axton.
- 8.40—From the Studio: Mr. Bryson Taylor, "It was a lover and his Lass" (Quiller).
- 8.42—Madame Vera Tasma, soprano.
- 8.45—Mr. Norman Janson, baritone, "I love you More" (Durothy Lee).
- 8.52—Mr. Ewart Chapple in pianoforte solos "Solopercutio" (Bach), "Waltz" (Chopin).
- 8.58—Mr. Bryson Taylor, tenor (a) "The Barque of Dreams" (Clarke) (b) "She is far from the land" (Lambert).
- 9.5—Madame Vera Tasma, soprano.
- 9.10—From the Lyceum Theatre: Vocal Act.

- 9.20—From the Studio: Mr. Norman Janson, baritone: (a) "The Bells of the Sea" (Soloman); (b) "Swing High" (Casper).
- 9.25—Madame Vera Tasma, soprano.
- 9.35—Mr. Ewart Chapple, piano solos (a) "Etude in A Minor" (Chopin); (b) "Etude in G Flat" (Chopin).
- 9.40—Mr. Norman Janson, baritone "Song of the Volk Boatman" (Keeneman).
- 9.44—From the Lyceum Theatre, items by the orchestra under the baton of Mr. Emanuel Axton.
- 9.58—From Her Majesty's Theatre, the 2nd act of "Rose Marie" (by permission of Messrs. J. C. Williamson Ltd.). Musical numbers: (1st) "Only a Kiss," Herman, Lady Jane, and Madone; Sceltitz, "Finlotta"; Rose Marie, Jim, Hawley, Emile Ethel, and Wanda; Emire, March and Grotto; and dance, "Minuet of the Minuet"; Rose Marie and Herman; Dance, "Wanda Waltz"; Wanda; Bridal Procession Song, "Inn of my Dreams"; Rose Marie and Chorus; Bridal Finale; Finale.
- 11—"Big Ben."
- 11.5—From the Wentworth Hotel, dance items by the Wentworth News Symphonic Orchestra, under the direction of Mr. Sydney Simpson, until midnight.
- 12—"Big Ben" National Anthem; close down.

2BL

EARLY MORNING SESSION.

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

MORNING SESSION.

- 10—G.P.O. Clock and Chimes.
- 10.1—Weather Report.
- 10.3—Musical programme from the studio.
- 10.20—News Service from the "Daily Telegraph."
- 10.35—Music from the Studio.
- 10.40—Serial Story.
- 11.—G.P.O. Clock and Chimes.
- 11.1—News from the "Daily Telegraph."
- 11.15—Rabbit Market Report.
- 11.17—Fish Market Report.
- 11.18—Vegetable Market Report.
- 11.21—Fruit Market Report.
- 11.24—London Dairy Produce and Egg Market Report.
- 11.30—Ships in call by wireless.
- 11.32—Information to Interstate and overseas Mails.
- 11.35—Shipping information—arrivals and departures.
- 11.35—Sporting Talk.
- 11.40—Women's Session, conducted by Mrs. Jordan: Social Notes.
- 11.50—Mrs. Jordan replies to correspondents.
- 12.—G.P.O. Clock and Chimes.
- 12.1—Talk Mrs. Jordan.
- 12.20—News from the Sun.
- 12.30—G.P.O. Clock and Chimes.
- 12.31—Sydney Stock Exchange calls.
- 12.35—Sun Newspapers News Service.
- 12.40—"Lambert" Instrumental Quartet.
- 1.00—G.P.O. Clock and Chimes.
- 1.01—Weather Report.
- 1.20—Stock Exchange Calls.

- 1.45—Music from the studio.
2—G.P.O. Clock and Chimes. Close down.

AFTERNOON SESSION.

- Racing information broadcast by courtesy of the "Sun."
3—G.P.O. Clock and Chimes.
3.1—Weather Report and Forecast by courtesy of Govt. Meteorologist.
3.5—Social Notes from the "Sun."
3.16—"Sun" Newspapers' News Service.
3.15—Civil Service Stores' Trio.
3.39—G.P.O. Clock and Chimes.
3.3—"Sun" Newspapers' News Service.
3.45—Musical Programme from the Studio.
4—G.P.O. Clock and Chimes.
4.1—Civil Service Stores' Trio.
4.15—Serial Story.
4.30—G.P.O. Clock and Chimes.
4.31—Music from the Studio.
4.45—Producers' Distributing Society's Fruit and Vegetable Report.
4.60—Shipping information when available.
4.52—Day's racing resume on race days.
4.55—News from the "Sun."
4.58—Resume of night's programme.
5—G.P.O. Clock and Chimes; close down.

EARLY EVENING SESSION.

- 5.45—G.P.O. Clock and Chimes.
5.46—Uncle George and the Kiddies.
5.8—The pupils of Miss Monica Sealy will entertain the kiddies.
5.40—Music from the Studio.
Special Greeting Section.
7—G.P.O. Clock and Chimes.
7.1—Australian Meccanite Land & Finance Co's Report.
7.5—Weather Report and Forecast by courtesy of Govt. Meteorologist.
7.8—Stock Exchange reports.
7.14—Producers' Distributing Society's Vegetable and Fruit Market Report.
7.18—Fruit and Vegetable Market Report ("Sun").
7.22—Grain and Poultry Report ("Sun").
7.24—Dairy Produce Report ("Sun").
7.30—Country News from the "Sun."

NIGHT SESSION.

- 8—G.P.O. Clock and Chimes; Broadcasters' Topical Chorus.
8.3—Miss Hilda Walker, soprano.
8.10—Mr. Roger Jones, baritone.
8.17—Elementals.
8.24—Contralto solo.
8.31—The Senior Sporting Expert of the Sun will talk on the prospects of Saturday's racing.
8.47—Miss Emily Dalgleish, soloist.
8.51—Resume of following day's programme; Weather report and Forecast by courtesy of Mr. C. J. Mares, Govt. Meteorologist.
9—G.P.O. Clock and Chimes.
9.1—Broadcasters' Trio.
9.11—Mr. Douglas Graham, Scottish comedian.
9.18—Miss Hilda Walker.
9.25—Interval.
9.29—Broadcasters' Trio.
9.40—Elementals.
9.47—Mr. Douglas Graham.
9.54—Mr. Roger Jones.
10.1—Contralto solo.
10.8—Miss Emily Dalgleish.
10.15—Al Hammett and the Ambassadors Dance Band broadcast from the Ballroom of the Ambassadors. During the intervals between dances news reports by courtesy of the Sun Newspapers will be broadcast.
10.45—G.P.O. Clock and Chimes; close down. National Anthem.

2 GB

- 6.40—Talks to children, by Uncle Joe.
7.15—Talks to Women.
7.30—Music from Studio.
7.48—Announcements.
7.55—Songs by Miss Gladys Edwards.
8.3—Address by J. J. Van der Leeuw.

- 8.20—Instrumental Trio.
8.35—Vocal solo by Muriel Lang.
8.43—Piano Solos by Ada Brook.
8.55—Talk on Radio.
9.5—Instrumental Trio.
9.15—Songs by Miss Gladys Edwards.
9.29—Vocal Solos by Maudie Harder.
9.30—Selections from Opera with short talks.
10—"Great Thoughts from Great Minds." God Save the King.

2 KY

MORNING SESSION.

- 12.15—Tune in to the ticking of the clock.
12.18—Hawaiian Steel Guitars.
12.25—Fox Trols.
12.40—News.
1—Vocal items.
1.2—Pianoforte Solos.
1.35—Union news and meetings.
1.40—Tenor Solo.
1.45—Close down.
CHILDREN'S SESSION.
6.30—The Storyman, Mr. Thompson.

EVENING SESSION:

- 7.15—Sporting Features, Mr. A. E. Powell.
"How they should run to-morrow."
7.45—Industrial topics of the Week, Mr. J. Ryan.
8—Motor Cycle Racing, Mr. J. S. Hoskins.
8.15—Pianoforte solos, Miss Monica Larcombe.
8.20—Soprano solos, Miss Edith Welch.
8.30—Monologue, Mr. David Edeleter.
8.40—Dance Music, the Glarncrim Dance.
9.10—Synopsis description of the main event from McRugh's Leichhardt Stadium.
9.45—Dance Music, the Glarncrim Dance Band.
9.55—Result of fight.
10—Closing announcements.

3 LO

MIDDAY SESSION.

- 12—Time Signal, British Official Wireless News from Rugby, Reuters's and the Australian Press Association cables, "Argus" and "Herald" news services.
12.30—Studio Orchestra.
1.25—Dr. Bartolini, baritone.
1.47—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales. Ocean Forecast; Stock Exchange information.
1—Pietro Sarcoli, violin.
1.10—Jane Blackmore, contralto.
1.17—Studio Orchestra.
1.27—Dr. Bartolini, baritone.
1.36—Pietro Sarcoli, violin.
1.46—Jane Blackmore, contralto.
1.53—Studio Orchestra.
2—Close down.

AFTERNOON SESSION:

- 3—Studio Orchestra.
3.10—The Royal Scots.
3.20—Mauna Loo Duo.
3.34—Studio Orchestra.
3.27—Wendling and Molloy, melody duo.
3.41—Mrs. M. Callaway Mahood, "Have you seen Melbourne?"
4—The Royal Scots.
4.10—Dorothea Roxburgh, viola.
4.16—Wendling and Molloy, melody duo.
4.23—Studio Orchestra.
4.30—"Ae Pats" of Messrs. Buckley and Nunn Ltd. will give a fashion talk.
4.45—"Herald" News Service; Stock Exchange information; M.O. Girl Competition.
5—Close down.

EVENING SESSION.

- 5.40—Children's Hour: Answers to letters and birthday greetings, by "Billy Bunny."
5.5—Frances Lea, soprano.
6.2—Harold Collier, mouthorgan selections.
6.5—"Billy Bunny" has a story for toy tots.
7.15—Frances Lea.
6.25—Story for the bigger ones, by "Billy Bunny."
6.35—"Argus" and "Herald" news services.

- Weather synopsis. Shipping movements.
6.47—Stock Exchange information.
6.53—Fish Market reports by Messrs. J. R. Borzell Ltd.
6.55—River reports.
6.58—Market Reports by the Victorian Producers Co-operative Co. Ltd.; Haymarket Sheep Sales; poultry, straw, chaff, hay, straw, juice, dairy produce, potatoes and onions.
7.10—Market prices of oranges, and lemons, supplied by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION.

- 7.15—Mr. Charles Nuttall, "The Battlefields of Belgium."
7.30—Under the auspices of the Department of Agriculture, Mr. R. J. deC. Talbot, Veterinary Officer, "Care of Horses' Feet."
7.45—Miss Fiore Allan, now playing in "The Cousin from Nowhere," at His Majesty's Theatre, will speak to you from her dressing-room, by permission of J. C. Williamson Ltd.
8—Collingwood Citizens' Band.
8.10—The Royal Scots.
8.20—Mauna Loo Duo.
8.28—Dr. Bartolini, baritone.
8.36—Pietro Sarcoli, violin.
8.45—Wendling and Molloy, melody duo.
8.53—Collingwood Band.
9.2—"Cardigan" (Mr. H. A. Wolfe, sporting editor of the "Argus" and "Australasian") will speak on Saturday's races.
9.17—Bob Molyneux, baritone.
9.27—Mr. H. K. Love, in a technical talk.
9.32—Pietro Sarcoli, violin.
9.40—Dr. Bartolini, baritone.
9.45—Collingwood Band.
9.57—British Official Wireless News from Rugby; announcements.
10.5—The Royal Scots.
10.12—Mauna Loo Duo.
10.20—Wendling and Molloy, melody duo.
10.27—Collingwood Band.
10.37—Bob Molyneux, baritone.
10.45—Collingwood Band.
10.52—"Argus" news service; weather forecast; announcements.
11—Our Great Thought: "Education alone can conduct us to that enjoyment which is at once best in quality and infinite in quantity."
11.30—M.O. Melody Masters.
11.40—God Save the King.

3 AR

MORNING SESSION.

- 11.30—British Official Wireless News received from Rugby Super Wireless Station, England, by 3AR's Operator, Express Train information, "Age" News Bulletin, exclusive to 3AR.
12—Time Signal Chime from G.P.O. Studio Barometer Readings, 1st Weather Forecast, Events of the day.
12.5—Musical selections from the Studio.
12.30—Stock Exchange news, Market reports.
12.40—Musical Selections.
12.55—Shipping Movements, Mail Notices.
1—Close down.

AFTERNOON SESSION.

- 2.30—Musical Selections from the Studio; The Ron. Bwearley Quartette.
4—Time Signal Chime from G.P.O. The Ron. Bwearley Quartette.
4.30—Mr. R. Stanley Haines, gardening chat to children.
4.55—Evening Amusement Guide.
5—Time Signal Chime, Studio Barometer Readings. Close down.

EARLY EVENING SESSION.

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

EVENING SESSION.

- 7.45—British Official Wireless News, Studio Barometer Readings, Racing Anticipations and Sporting Events reviewed, by "Field Glasses."

- Miss Ruby Stevenson, violin.
- 6.25—Miss Addie Meuleman, soprano.
- 6.35—Miss Stella Guerrero.
- 6.45—Mr. Wilton Cove, baritone.
- 6.50—Mr. R. Stanley Haines, weekly gardening chat.
- 6.55—Mr. Xavier Rosenblatt, flautist.
- 6.52—Miss Addie Meuleman, soprano.
- 6.59—Mr. Phil Joseph, humorist.
- 6.56—Miss Ruby Stevenson, violinist.
- 7.15—Miss Stella Guerrero.
- 7.20—Mr. Phillip Dracy.
- 7.30—Mr. Wilton Cove, baritone.
- 7.37—Mr. Xavier Rosenblatt, flautist.
- 7.44—Mr. Phil Joseph, humorist.
- 7.50—Miss Hazel Ralph, soprano.
- 7.55—Time Signal from G.P.O. Studio Barometer readings. "Age" News.
- 7.57—Leggert's Ballroom Orchestra, relayed from Grenville Hall, under the leadership of Mr. Harry Nangle.
- 7.58—Time Signal Chime. Close down.

4QG

MIDDAY SESSION.

- 12.55—Tune in.
- 1.24—Time Signal.
- 1—Market reports; weather information; "The Daily Mail" news; "The Daily Standard" news.
- 1.20—From Hotel Carlton: Lunch music from the lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.
- 2—Close down.

AFTERNOON SESSION.

- 3.30—From Hotel Carlton: Afternoon music from the lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.
- 4.15—From the Studio: "The Telegraph" news.
- 4.30—Close down.

EARLY EVENING SESSION.

- 6—"Daily Standard" News. Weather information; Announcements.
- 6.30—"The Children's Session"—Stories by "The Sandman."
- 7—From the Council of the Agricultural Studio: Market Reports; lecture, "Agriculture in Germany—a Queenslanders' Impression," by Mr. J. F. F. Reid, Editor "Queensland Agricultural Journal."
- 7.50—From the Studio: Stock Reports; Announcements.

NIGHT SESSION.

- 7.45—A talk arranged by the Workers' Educational Association.
- 8—Studio Concert.
- 10—"The Daily Mail" news; weather news; announcements; close down.

5CL

MORNING SESSION.

- 11.30—G.P.O. Chimes.
- 11.51—Stock Dup Art.
- 11.40—"Advertiser" News Service.
- 11.55—Vocalion number.
- 12—G.P.O. Chimes.
- 12.1—"Advertiser" news service.
- 12.16—Studio Orchestra.
- 1.25 (approx.)—Ward & Co's. Stock Exchange Intelligence. Weather Reports and Station Announcements.
- 2—G.P.O. Chimes.

AFTERNOON SESSION.

- 6—G.P.O. Chimes.
- 6.1—Relay from "Maple Leaf" Cafe—Orchestral numbers.
- 6.40—From Studio: Talk by Mrs. Coghill.
- 4—G.P.O. Chimes.
- 6.1—Relay from "Azcedia" Cafe—Orchestral numbers.
- 6.55—Stock Exchange reports, general information, and station announcements.
- 8—G. O. Chimes.

EVENING SESSION.

- 6.20—G.P.O. Chimes.
- 6.31—Stock Dup Art number.
- 6.30—Bedtime stories.
- 7.30—Market Reports.
- 7.55—Sporting results.
- 8—G.P.O. Chimes.
- 8.1—Relay from, Malcolm Reid and Co. Orchestra.
- 8.15—Sonzar, Mr. Chris Baggott.
- 8.2—Malcolm Reid and Co's. Orchestra.
- 8.30—Song: Miss Hilda Wheeler.
- 8.34—Malcolm Reid and Co's. Orchestra.
- 8.45—Song, Mr. Harold Durdin.
- 8.48—Malcolm Reid and Co's. Orchestra.
- 9—G.P.O. Chimes.
- 9.1—Weather reports.
- 9.2—Dalgety's wheat report.
- 9.5—Murraykings Orchestra.
- 9.14—Saxophone, Mr. Les. Mitchell.

6WF

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

Wireless Broadcasting Programmes for week ending January 20th.

(Programmes are subject to any alterations that may be necessary owing to unforeseen circumstances.)

MORNING SESSION.

- 12.30—Tune-in.
- 12.35—Market, news and cables.
- 1—Time signal from Perth Observatory.
- 1.1—Weather notes.
- 1.2—Studio Instrumental Quartette.
- 2—Close down.

AFTERNOON SESSION.

- 3.30—Tune-in.
- 3.35—Musical programme.
- 4.30—Close down.

EVENING SESSION.

- 7—Tune-in.
- 7.5—Musical evening for the kiddies, by Auntie Evelyn, with Upeles Henry, Leslie, Perry and Dolly.
- 7.55—Stock and Share intelligence. Market reports. Cables, news by courtesy of "The Daily News" Newspaper Coy.
- 8—Time signal from the Perth Observatory.
- 8.1—Weather notes, supplied by the Meteorological Bureau of Western Australia.
- 8.2—Studio Concert.
- 8.45—"Health" talk, by Mr. H. S. Hatton, of the Hatton School of Physical Culture.
- 10—Second News Bulletin, supplied by courtesy of "The Daily News" Newspaper Coy.
- 10.30—Close down.

7ZL

MORNING SESSION.

- 11—G.P.O. Clock Chimes. "The Mercury" stock market, shipping, commercial intelligence, weather information.
- 12—G.P.O. Clock Chimes. Close down.

AFTERNOON SESSION.

- 3—G.P.O. Clock Chimes. Musical items from the Studio.
- 3.10—Robart, Stock Exchange quotations.
- 3.25—Weather information.
- 4—G.P.O. Clock Chimes. Close down.

EVENING SESSION.

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

NIGHT SESSION.

- 8—G.P.O. Clock Chimes. "The Mercury" special Tasmanian news service. Railway station produce sales. Weather information.
- 8.5—Hobart Stock Exchange quotations.
- 8.10—Weekly Gardening chat, by Mr. George Nation.
- 8.30—Concert from the Studio.
- 8.15—Produce reports from Roberts & Co.,

- Ltd. Murray Street, Hobart, Tasmanian District Weather reports.
- 8.50—"The Mercury" special interstate news service. Weather synopsis. Station announcements; Week-end Travellers' Information; National Anthem.

Saturday, Jan. 15

2FC

EARLY MORNING SESSION.

- 7—"Big Ben" and announcements.
- 7.5—Studio music.
- 7.10—Official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, commercial news, mail services.
- 7.25—Investment markets, mining share markets, metal quotations.
- 7.35—Wool sales, breadstuffs markets, interstate markets, produce markets.
- 7.45—"Sydney Morning Herald" news service.
- 8—"Big Ben." "Chorus" Talk, by Mr. J. K. Powell.
- 8.25—Close down.

MORNING SESSION.

- 8.15—The Chimes of 2FC.
- Programme announcements.
- 8.20—Studio Music.
- 9.45—Last minute sporting information, by the 2FC Racing Commentator.
- 10—Chimes of "Big Ben" Announcements.
- 10.5—Late "Sydney Morning Herald" news service.
- 10.15—Studio music.
- 10.45—Gardening talk, by Mr. J. G. Lockley, "Red Gum."
- 11—Close down.

MIDDAY SESSION.

- 12.55—Chimes of 2FC. Announcements.
- 1—"Time Signals." "Evening News" midday news service and weather information, music from the Studio.
- Note—Hansen Reshill will be described in the routine by 2FC Racing Commentator. Results from Randwick A.J.C. Meeting will be transmitted as received. The usual sporting results during the afternoon.

AFTERNOON SESSION.

- 2.55—The Chimes of 2FC and Announcements.
- 3—"Big Ben." During the intervals of Sporting Events, musical items will be given from the Studio.
- 4.30—Complete Resume of the afternoon's sporting events.
- 5—Close down.

EARLY EVENING SESSION.

- 7.55—Chimes of 2FC. Announcements.
- 8—Broadcast from Sydney Town Hall; Organ recital, by Mr. Ernest Truman, City Organist.
- 8—From the Studio: First appearance of the "Radio Revellers"—a party of entertainers, under the direction of Mr. Laurence Halbert, consisting of Miss Nona Hallett, Miss Gwendy Elmister, soprano, Mr. Wally Baynes, comedian, Mr. David Green, baritone, Mr. Russ Garing, ventriloquist, Mr. Tom Lawrence, tenor.

- 9—Mr. Laurence Halbert introduces the Company.
- 9.5—The party will entertain until 11 p.m.
- 11—2FC Dance Band, conducted by Mr. Eric Pearce, will play dance music until midnight.
- 12—National Anthem. Close down.

2BL

EARLY MORNING SESSION.

- 7.15—G.P.O. Clock and Chimes.
- 7.16—Musical Programme from Studio.
- 7.15—Physical Training and Health Exercises.
- 7.25—Health Hints.
- 7.30—Physical Training and Health Exercises.
- 7.45—G.P.O. Clock and Chimes.
- 7.46—Weather Report.

7.45—Sporting Information.
7.50—Broadcasters' Special News Service.
8—G.P.O. Clock and Chimes. Close down.

MORNING SESSION.

Racing information, broadcast by courtesy of the "Sun."
11—G.P.O. Clock and Chimes.
11.1—Weather Report and Forecast.
11.3—Sydney Daily Telegraph News Service
11.35—Social Notes from the Sun.
11.40—Mrs. Jordan replies to correspondents
11.40—Talk by Mrs. Jordan.
11.5—Studio Music.
12.30—Sun Newspaper News Service.
12.30—G.P.O. Clock and Chimes.
12.31—London Metal Quotations
12.40—Talk by Mrs. Jordan.
12.5—Studio Music.
12.30—Sun Newspaper News Service.
12.30—G.P.O. Clock and Chimes.
12.31—London Metal Quotations
12.35—Boats in call by wireless.
12.38—Weather report and forecast.
12.40—Shipping information—arrivals and departures.
12.43—Information to Interstate and Deceased Mails.
12.45—News from the Sun Cable Edition.
1—G.P.O. Clock and Chimes.
1.1—Music from the Studio.
1.15—News from the Sun.
1.30—G.P.O. Clock and Chimes.
1.31—Music from the Studio.
1.45—Sporting talk.
Racing resume will be broadcast every half-hour. Music from the studio during the afternoon.
5—G.P.O. Clock and Chimes; close down.

EARLY EVENING SESSION.

5.45—G.P.O. Clock and Chimes.
5.46—Uncle George and the Kiddies.
6.00—Music from the Studio.
7.15—Sporting results.
7.20—Country news from "Sun."
Results of all sporting and athletic features
NIGHT SESSION.
8—G.P.O. Clock and Chimes; Broadcasters' Tantalus Chorus.
8.3—Ambassadors' Instrumental Salon Quartet.
8.39—Mr. Peter Sutherland, basso.
8.47—Miss Jean Whitmore, soprano.
8.41—Mr. Will Cherry, imitation of birds and animals.
8.51—Resume of following day's programme.
Weather Report and forecast.
9—G.P.O. Clock and Chimes.
9.1—Miss Amy Ostinga, contralto.
9.3—Mr. Frank Ryan, comedian.
9.15—Mr. Lance Jeffrey, tenor.
9.22—Bringa will talk on the Aborigines.
9.27—Duet, Miss Ostinga and Mr. Sutherland
9.41—Interval.
9.45—Miss Jean Whitmore.
9.53—Mr. Frank Ryan.
10—G.P.O. Clock and Chimes.
10.3—Mr. Peter Sutherland.
10.5—Miss Amy Ostinga.
10.9—Mr. Lance Jeffrey.
10.16—Al. Hammett and Ambassadors Dance Band until midnight. "Sun" News Reports during intervals between dances.
12—G.P.O. Clock and Chimes; National Anthem.

2 KY

EVENING SESSION.

7.15—Sporting feature, by Mr. A. E. Powell. "How they ran today."
7.55—News Items.
8.5—Pianoforte solos by Miss Doris Malne.
8.10—Sketch: Mr. R. Corbin and Miss Vandekow.
8.30—Musical Interlude: The Glaciarium Dance Band.
9.15—Labour Legislation Series: Mr. J. C. Eldridge.
9.30—Sporting feature from the track of the Speedway Royal.
9.45—Humorous Odds and Ends: Hebert Beaver.
9.50—From the Speedway Royal.
10—Dance music and closing announcements.

3 LO

MORNING SESSION.

11—Studio Orchestra.
11.10—Dr. Bartolini, baritone.

11.17—Pietro Sarcoll, violin.
11.27—Victoria Wilson, soprano.
11.34—Studio Orchestra.
11.44—Dr. Bartolini, baritone.
11.51—Pietro Sarcoll, violin.
12—Time signal. British Official Wireless news from Rugby. Reuter's and the Australian Press Association cables. "Argus" and "Herald" news service. Shipping.
12.10—Studio Orchestra.
12.40—The Royal Scots.
12.50—Meteorological information and Stock Exchange information.
1.5—Maecost Ralston, popular songs.
1.12—Studio Orchestra.
1.22—The Royal Scots.
1.32—Walter Smith, cornet.
1.57—Maecost Ralston.
1.42—Studio Orchestra.
2—Close down. Description of the Hawthorn Hurdle, Caulfield Races, will be given by "Musket" of the "Sporting Globe," at 1.30 p.m.
2.30—Description of Holiday Stakes, by "Musket" of the "Sporting Globe."

AFTERNOON SESSION.

3—3LO Melody Masters.
3.5—Description of Anniversary Handicap, by "Musket" of the "Sporting Globe."
4.10—3LO Melody Masters.
4.40—Description of Rowena Steeple, by "Musket" of the "Sporting Globe."
4.45—3LO Melody Masters.
4.15—Description of Kookaburra Trial, by "Musket" of the "Sporting Globe."
4.20—3LO Melody Masters.
4.40—"Herald" news service. Stock Exchange information.
4.50—Description of Taroona Handicap, by "Musket" of the "Sporting Globe."
5—Close down.

EVENING SESSION.

5.30—Sporting results.
5.40—Children's Hour: Answers to letters and birthday greetings, by "Bobby Blugum."
5.55—A Musical Programme for Children, arranged by Dr. Floyd and his choristers.
6.35—"Argus" and "Herald" news services. Weather information. Aerial Mail information, by the Australian Aerial Services Ltd.
6.47—Stock Exchange information. Overseas Shipping.
6.52—Fish Market reports by Messrs. J. R. Barrett Ltd.
6.55—River reports.
6.55—Market reports by the Victorian Producers Co-operative Co. Ltd. grain, chaff, hay, straw, lime, dairy produce, potatoes, and onions.
7.10—Market price of Oranges and Lemons, by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION.

7.30—Mr. E. E. Prescott, "National Flowers and Christmas Trees" (Australian).
7.40—Dr. Leach.
8—"The Cousin from Nowhere" First Act, transmitted from His Majesty's Theatre, by permission of Messrs. J. C. Williamson Ltd.
8.15—Newport Workshops Brass Band.
8.25—Mr. H. McCann will talk on "Kilmaree."
8.35—Frances Lea, soprano.
9.42—Pietro Sarcoll, violin.
9.52—British Official Wireless news from Rugby. Announcements.
10.2—Dr. Bartolini, baritone.
10.25—Newport Workshops Brass Band.
10.22—Frances Lea, soprano.
10.30—Pietro Sarcoll, violin.
10.40—Dr. Bartolini, baritone.
10.47—Newport Workshops Brass Band.
10.51—"Argus" news service. Meteorological information.
11—Our Great Thought, "Discretion and hard work are the twins of honour."—Beaumont and Fletcher.
11.1—3LO Melody Masters.
11.40—God Save the King.

3 AR

MORNING SESSION.

11.30—The British Official Wireless Press, received by 3AR's operator from Rugby Wireless Station, England. Express train information. "Age" news bulletin.
12—Time Signal Chime from the G.P.O. First Weather Forecast; Studio Barometer Readings; Events of the Day.
12.5—Musical selections from the Studio.
12.30—Stock Exchange News. Foreign Exchange of the world, supplied by the courtesy of Messrs. Thos. Cook & Son; Market Reports.
12.50—Musical Selections.
12.55—Mail Notices. Shipping Movements.
1—Close down.

AFTERNOON SESSION.

V.A.T.C. Caulfield.
1.30—Description of Hawthorn Hurdle, 2m. 60y.
2.30—Description Holiday Stakes, 51y.
2.30—Musical selections from the Studio Trio.
2.5—Description of Anniversary Handicap, 1m. 3f. Studio Trio, violin solo.
3—Description of Rowena Steeple, 2m. Studio Trio, cello solo.
4—Time Signal Chime G.P.O. 2nd Weather Forecast. Studio Trio.
4.20—Description Kookaburra Trial, 1m. Studio Trio.
4.45—Description Taroona Handicap, 7f. Amusement guide for evening. Studio Barometer and Outdoor Thermometer readings.
5—Time Signal Chime. Close down.

EARLY EVENING SESSION.

6.45—Children's Corner, Uncle Mac.

EVENING SESSION.

8—Time Signal Chime from G.P.O. Studio Barometer and Outdoor Thermometer Readings. British Official Wireless Press. Final sporting and racing results. Local news.
8.15—Dance night. The Rhythmic Dance Orchestra, relayed from the Maison-de-Luxe, Elwood.
8.30—Week-end travellers' information, supplied by courtesy of Victorian Railways Department and Metropolitan Tramways Board.
8.50—The Maison-de-Luxe Rhythmic Dance Orchestra.
10—Time Signal Chime. Studio Barometer and Outdoor Thermometer Readings.
10.5—The Maison-de-Luxe Rhythmic Dance Orchestra.
11—Time Signal Chime. Close down.

4 QG

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

8.25—Tune-in.
8.30—A Matinee for Little Listeners by "Miss Warmah."
4.30—Close down.

EARLY EVENING SESSION.

8.25—Tune-in.
8.40—The Children's Evening; Bedtime stories by "Uncle Ben" and "Uncle Jim."
7.15—Sporting News.

NIGHT SESSION.

7.45—From the National Speedway: The Grand Parade and the first race.
8—From Gaiety Theatre, Toowong—Orchestral Music.
8.30—From the Speedway: Motor Cycle Races.
8.35—From Lennon's Ballroom: Dance Music.
10—"The Daily Mail" news. Weather news. Announcements. Close down.

5 CL

MORNING SESSION.

10.30—G.P.O. Chime.
10.31—Studio Orchestra, selection.

AFTERNOON SESSION.

From the Studio; Stock Exchange numbers and Vocalion records, interspersed with sporting results and cricket results.

EVENING SESSION.

- 6.30—G.P.O. Chimes.
- 6.41—Stock Exchange Art Number.
- 6.46—Bedtime Stories.
- 7.30—Messrs. S. C. Ward & Co. Stock Exchange Report.
- 7.45—Sporting results.
- 8—G.P.O. Chimes.
- 8.1—Mr. Harold Tideman, song.
- 8.4—Mandolin-guitar solo, Mr. Jack Lenthall.
- 8.7—Miss E. Rouchetti, song.
- 8.10—Miss Katie Yeager, violin.
- 8.14—Miss Sylvia Thomas, song.
- 8.17—Mr. J. Lenthall, instrumental number.
- 8.20—Mr. Harold Tideman, song.
- 8.24—Relay from the Floating Palms.
- 8.40—Mr. Jas. Barrett, song.
- 8.43—Miss Katie Yeager, violin.
- 8.47—Relay from the Floating Palms.
- 9—G.P.O. Chimes.
- 9.1—Dulcetti's Wheat Report.
- 9.3—Miss Sylvia Thomas, song.
- 9.5—Mr. James Barrett, song.
- 9.10—Relay from the Floating Palms.
- 9.20—Miss E. Rouchetti, song.
- 9.23—Instrumental number, Mr. J. Lenthall.
- 9.27—Relay from the Floating Palms.
- 9.37—Mr. James Barrett, song.
- 9.40—Miss Katie Yeager, violin solo.
- 9.45—Miss Sylvia Thomas, song.
- 9.47—Relay from the Floating Palms.
- 9.57—Mr. Harold Tideman, song.
- 10—G.P.O. Chimes.
- 10.1—Miss E. Rouchetti, song.
- 10.9—Mr. J. Lenthall, instrumental number.
- 10.6—Relay from the Floating Palms.
- 10.10—Sporting results.

7 Z L

MORNING SESSION.

- 11—G.P.O. Clock Chimes. "The Mercury" News; Shipping; Commercial Intelligence; Weather information and sporting anticipations. Ships within wireless range.
- 11.45—Robert Stock Exchange quotations.
- 11.55—Boat Express information.
- 12—G.P.O. Clock Chimes. Close down.

EVENING SESSION.

- 7—Children's Corner. "Big Brother's" chats to his pals.
- NIGHT SESSION.**
- 8—G.P.O. Clock Chimes. The "Mercury" special Tasmanian news service. Railway auction and sporting sales; weather information and sporting results.
- 6.5—Robert Stock Exchange quotations.
- 9.45—British Official Wireless News, copied direct from Rugby by our own operator. Weather synopsis. Station Announcements. Ships within wireless range. National Anthem.

Sunday, Jan. 16

7 F C

MORNING SESSION.

- 10.55—Chimes and Announcements.
- 11—Morning service will be taken from the Petrosaham Congregational Church, conducted by the Rev. A. P. Doran.
- 12.15—From the Studio; News Samlun.
- 12.45—Close down.

AFTERNOON SESSION.

- 3.25—Chimes of 2FC and Announcements.
- 3.30—Broadcast from the Lyceum Hall, a Pleasant Sunday Afternoon Service, arranged by the Central Methodist Mission.
- 4.30—From the Studio; Captain Fred Aarons will talk on "Education and Every Day Life."
- 4.50—Close down.

NIGHT SESSION.

- 4—Chimes of 2FC and Announcements.
- 9.5—From the Studio; A programme of historical music, arranged by Mr. Bennett-North. Introductory remarks by Mr. Bennett-North. Vocal quartette, "In England, Merry England," The Company. Song, "Death of Nelson," Mr. Arthur Ley. Song "Anne Boleyn," Jessie Hutchinson. Vocal duet, "Flow, Gently, Flow," Arthur Ley and Frank Botham. Songs (a), "Mary Queen of Scots"; (b), "A Farewell," by Aileen Haywood. Songs (a) "Border Ballad," (b) "King Charles," by Frank Botham. Quartette, "Here's a Health unto His Majesty," The Company.
- 6.50—The Evening Service from the Lyceum Central Methodist Mission Hall, conducted by the Rev. F. H. Foreman.
- 8.30—From the Randwick Military Hospital. A concert arranged by the 2FC Hospital Concert Party, under the direction of Mr. Ewart Chaplin. Artists will include: The Instrumental Trio, consisting of Mr. Lionel Lawson, Mr. Lindley Evans, and Mr. Gladstone Bell, violin, piano, and 'cello respectively; Miss Mabel Batchelor, soprano; Miss Virginia Bassetti, contralto. Mr. Montgomery Stuart, clarinetist; and Mr. Ewart Chaplin, accompanist. Signor Alberto Marini, tenor.
- 8.35—The Sydney Instrumental Trio.
- 8.45—Miss Mabel Batchelor, soprano.
- 8.48—Mr. Gladstone Bell, in 'cello solo.
- 8.52—Miss Virginia Bassetti, contralto.
- 8.56—Mr. Lionel Lawson, violinist.
- 9.2—Signor Alberto Marini, tenor.
- 9.10—Mr. Lindley Evans, piano solo.
- 9.15—Mr. Montgomery Stuart, clarinetist.
- 9.20—Miss Mabel Batchelor, soprano.
- 9.25—Mr. Lionel Lawson, violin solo.
- 9.30—Signor Alberto Marini, tenor.
- 9.35—Mr. Gladstone Bell, 'cello solo.
- 9.40—Miss Virginia Bassetti, contralto.
- 9.45—Mr. Lindley Evans, pianist.
- 9.50—Mr. Montgomery Stuart, clarinetist.
- 9.55—The Sydney Instrumental Trio.
- 10.5—National Anthem. Close down.

2 B L

MORNING SESSION.

- 10.45—News Service.
- 11—Service broadcast from Newtown Congregational Church.

AFTERNOON SESSION.

- 3.30—Bible Class conducted by Mr. W. Cairn Bradley.
- 4—Organ Recital.
- 3—Close down.
- 6.45—Children's service conducted by Uncle George.

EVENING SESSION.

- T—Service broadcast from Newtown Congregational Church.
- 8.00—Sacred Concert (Methodist Church, William Street), broadcast from King's Cross Theatre.
- 9.30—From the Studio; Broadcasters' Trio.
- 9.40—Mr. David Smith, baritone.
- 9.47—Madame Phyllis Howe, soprano.
- 9.54—Broadcasters' Trio.
- 10.15—Mr. David Smith.
- 10.11—Madame Phyllis Howe.
- 10.18—Close down.

3 L O

- 10.30—Transmission of the bells from St. Paul's Cathedral.
- 10.55—Express Train Information.
- 11—Service from Collins Street, Independent Church. Rev. J. Ernest James, B.D., preacher.
- 12.15—British Official Wireless News from Rugby.
- 12.20—Close down.

AFTERNOON SESSION.

- 4—Pleasant Sunday Afternoon Service, from Wesley Church, Leasdale Street, Chairman, Rev. J. B. Gair.
- 4.30—Close down.

EARLY EVENING SESSION.

- 5.40—Children's Hour; Hymns by the "Pied Piper."
- 5.50—"Billy Bunny" will continue the story of the "Christmas Carol."
- 6—Musical items by the "Pied Piper."
- 6.15—Answers to letters and birthday greetings.
- 6.40—Story of "David Livingstone" will be continued by "Billy Bunny."
- 8.45—Close down.

NIGHT SESSION.

- 7—Service from Welsh Church, Latrobe Street, Melbourne. Rev. D. Ezra Jones, preacher.
- 8.50—From the Studio; Collingwood Citizens' Band. Mr. F. C. Johnston, conductor.
- 8.40—Sally, Armar, soprano.
- 8.47—Pietro Sarcoti, violin.
- 8.57—Wesley Church Choir, under the direction of Mr. William James.
- 9.1—Collingwood Citizens' Band.
- 9.14—Sally Armar, soprano.
- 9.21—Pietro Sarcoti, violin.
- 9.26—Wesley Church Choir.
- 9.49—"Arcus" news service. Announcements.
- 9.55—Our Great Thought for Tonight is: "Sweetest melodies are those that are by distance made more sweet."—Wordsworth.
- 10—God Save the King.

3 A R

MORNING SESSION.

- 10.50—Bells from St. James Old Cathedral.
- 11—Morning Service from Cairns Memorial Church, East Melbourne.

AFTERNOON SESSION.

- 3—Miss Elma Armstrong, soprano.
- 3.10—Mr. Fred Roberts, baritone.
- 3.14—Miss Nina MacFarlane, contralto.
- 3.22—Mr. Arthur Arncliffe, baritone.
- 3.29—Mr. Fred P. Shaw, clarinetist.
- 3.41—Miss Florrie Macke, pianiste.
- 3.51—Miss Elma Armstrong, soprano.
- 3.58—Mr. Fred Roberts, baritone.
- 4.5—Miss Nina MacFarlane, contralto.
- 4.13—Mr. Arthur Arncliffe, baritone.
- 4.20—Close down.

EARLY EVENING SESSION.

- 6—Children's entertainment by Ladybird.

EVENING SESSION.

- 6.40—St. James Old Cathedral Bells.
- 7—Evening Service from West Melbourne Baptist Church, West Melbourne. Rev. Dr. S. Haskany.
- 8.30—Miss Mary Redmond, soprano.
- 8.37—Mr. Percy Brindell, tenor.
- 8.44—Miss Eileen Parker, soprano.
- 8.51—Mr. Frank Thomas, baritone.
- 8.58—Mr. Herbert Julliffe, talk on "Mind, Static and Dynamic."
- 9.15—Miss A. M. Kuring, pianiste.
- 9.20—Miss Mary Redmond, soprano.
- 9.27—Mr. Percy Brindell, tenor.
- 9.35—Miss Eileen Parker, soprano.
- 9.42—Mr. Frank Thomas, baritone.
- 9.50—"Age" News Bulletin, exclusive to 3AR.
- 9.55—Close down.

4 Q G

MORNING SESSION.

- 11—Morning service, the complete morning service, relayed from Albert Street Methodist Church.
- 12.30—Close down.

AFTERNOON SESSION.

- 3.15—Brisbane Excelsior Band will be relayed from the Botanic Gardens.
- 4.30—Close down.

NIGHT SESSION.

- The complete evening service will be relayed from Albert Street Methodist Church.
- 8.30—Conclusion.
- 8.30—Concert by the Greater Brisbane Municipal Band will be relayed from Wickham Park.
- 9.30—Close down.

5 CL

MORNING SESSION.

11—Relay from the Blank Forest Baptist Church, Rev. Keith Steward.

EVENING SESSION.

- 9.30—G.P.O. Chimes.
 9.31—Stock Bisc Art numbers.
 9.32—Sunday Stories for Children.
 7—Relay from the First Street Methodist Church, Rev. Jenkins preacher.
 9.10—Relay from the S.A.R. Institute, S.A.R. Band, instrumental numbers and vocal numbers by Mr. Chas. Fitzgerald (tenor), Miss Linda Wald (soprano), Mr. Walter Hurst (pianist).
 9—Mr. P. H. Nicholls will talk on "I'll God Unjust."
 9.18—Instrumental and vocal concert, continued, by the S.A.R. Band, and the above artists.
 10—G.P.O. Chimes National Anthem, Close down.

6 WF

- 10.45—Tune-in.
 11—Morning service relayed from the Baptist Church, Perth.
 11.30—Concert relayed from the Zoological Gardens, South Perth.
 8—Close down.
 7—Tune-in.
 5.5—Children's Bedtime Stories, by Mr. Robert Edmondson.
 7.30—Evening Service, relayed from Wesley Church, Perth.

Monday, Jan. 17

2 FC

EARLY MORNING SESSION.

- 7—"Big Ben" and announcements.
 7.5—Music from the Studio.
 7.10—Official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, commercial news, mail services.
 7.25—Investment market, mining share market, metal quotations.
 7.40—Wool sales, breadstuffs markets, interstate markets, produce markets.
 7.45—"Sydney Morning Herald" news services.
 8—"Big Ben"; Cheerful Talk by Mr. J. K. Powell.

MORNING SESSION.

- 8.15—The Chimes of 2FC.
 9.25—Music from the Studio.
 10—"Big Ben" and Announcements.
 10.5—Late "Sydney Morning Herald" news services.
 10.15—Music from the Studio.
 10.30—2FC Racing Commissioner will give sporting information.
 10.45—A morning resulting.
 11—"Big Ben"; Australian Press Association and Reuter's Cable Service.
 11.10—Music from the studio.
 11.30—Close down.

MIDDAY SESSION.

- 12—The Chimes of "Big Ben" and Announcements.
 12.5—Stock Exchange, First Call.
 12.10—Music from the Studio.
 12.45—From Farmer's Oak Hall: The Oak Hall Trio.
 1—"Big Ben"—Weather Intelligence.
 1.3—"Evening News" Midday News Service, Producers' Distributing Society's report.
 1.45—From Farmer's Oak Hall: The Oak Hall Trio.
 1.28—Stock Exchange, Second Call.
 1.30—Music from the Studio.
 1.50—The Oak Hall Trio.
 2—"Big Ben". Close down.

AFTERNOON SESSION.

- 2.30—The Chimes of 2FC.
 2.50—Studio Music.

- 3.30—From Farmer's Oak Hall: Instrumental items by the Oak Hall Trio.
 3.40—Studio Music.
 3.45—From Farmer's Oak Hall: Miss Alice Pomroy, soprano.
 3.55—Instrumental items by the Oak Hall Trio.
 3.55—Studio Music.
 4—From Farmer's Tea Rooms: Miss Thekla Lansdowne, mezzo, "Break a Day" (Sanderson).
 4.15—Studio Music.
 4.20—From Farmer's Tea Rooms: Miss Alice Pomroy, soprano.
 4.25—The Oak Hall Trio.
 4.35—Studio Music.
 4.45—From Farmer's Tea Rooms: Miss Thekla Lansdowne, mezzo, "Love's old Sweet Song" (Bohly).
 4.45—Stock Exchange—third call.
 4.45—Close down.

EARLY EVENING SESSION.

- 5.45—The Chimes of 2FC.
 5.50—The "Hello Mum" talks to the children.
 5.55—A serial story for the older children.
 6.45—Dinner Music.
 7.10—"Evening News" late news service: Weather Information.
 7.20—Daily's Market Reports (wool, wheat, stock), fruit and Vegetable Markets.
 7.40—A Talk by Mr. F. L. Brumstamcher on "How Cool came to Newcastle".
 Close down.

EVENING SESSION.

- 7.55—The Chimes of 2FC and Announcements.
 8—"Big Ben"; Broadcast from the Haymarket Theatre, items by the orchestra under the baton of Mr. Stanley Porter.
 8.30—From the Studio: Miss Ida Turnbull, soprano (a) "Was it a Dream" (Sebilius); (b) "Sweet Lady Mail" (Phillips).
 8.35—The Davies Male Quartette (a) "Soldiers' Chorus" (Gounod); (b) "Hey Diddle Diddle" (Geibel).
 8.45—Miss Gaudie Beave will talk to Miss Stella Wilson, leading soprano, the Gilbert and Sullivan Opera Company.
 9—Miss Ida Turnbull, soprano.
 9.8—The Davies Male Quartette, duet, "Soldiers and Comrades", Messrs. A. and T. Davies.
 9.15—Broadcast from the Haymarket Theatre, the Vocal Art.
 9.25—From the Studio: Cornet solo by Mr. Sticks Wilson, leading soloist, the Gilbert and Sullivan Opera Company.
 9.32—The Davies Male Quartette, baritone solo, "Three for Jack" (Squire).
 "For You Alone" (Geibel).
 9.40—The Davies Male Quartette, "Old Folks at Home" (Foster); "Genevieve" (Tucker).
 9.50—Mr. Reg. Greenwood, comedian (a) "In the land where there are no Girls" (B) "Waiting".
 10—The Davies Male Quartette, solo, "Hail, Caladain" (Stroud); Mr. J. Gibb.
 10.6—The Davies Male Quartette, quartette, "A Catastrophe" (Sprague); "The Rose Tree" (Novin).
 10.10—From the Haymarket Theatre, items by the Operatic Orchestra, under the baton of Mr. Stanley Porter.
 10.35—Mr. Reg. Greenwood, comedian (a) "Dear old Nancy"; (b) "The Demosya Rag".
 10.40—2FC Dance Band in dance items. Mr. Eric Pearce, conductor, with Mr. Len Maurice, baritone, in popular numbers.
 11—"Big Ben" and announcements.
 11.5—2FC Dance Band in dance numbers until midnight, National Anthem, Close down.

2 BL

EARLY MORNING SESSION.

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

MORNING SESSION.

- Racing information broadcast by courtesy of the "Sun."

- 10—G.P.O. Clock and Chimes.
 10.1—Weather Report.
 10.3—Music from the Studio.
 10.20—News from the Daily Telegraph.
 10.35—Music from the Studio.
 11—G.P.O. Clock and Chimes.
 11.1—News from the Telegraph.
 11.15—Rabbit Market Report.
 11.17—Fish Market Report.
 11.19—Vegetable Market Report.
 11.21—Fruit Market Report.
 11.25—London Dairy Produce and Egg Market Report.
 11.29—London Metal Quotations.
 11.31—Ships in call by wireless.
 11.33—Information re Interstate and overseas mails.
 11.35—Shipping information—arrivals and departures.
 11.37—Weather report.
 11.40—Women's Session, conducted by Mrs. Jordan; social notes.
 11.50—Mrs. Jordan replies to correspondents.
 12—G.P.O. Clock and Chimes.
 12.1—Talk by Mrs. Jordan.
 12.25—News from the Sun.
 12.30—G.P.O. Clock and Chimes.
 12.31—Sydney Stock Exchange calls.
 12.33—Sun news service.
 12.45—Billiers' Instrumental Quartet.
 1.30—G.P.O. Clock and Chimes.
 1.31—Weather Report.
 1.35—Stock Exchange Calls.
 1.36—News from the Sun.
 1.45—Music from the Studio.
 2—G.P.O. Clock and Chimes; close down.

AFTERNOON SESSION.

- Racing information broadcast by courtesy of the "Sun".
 2.45—G.P.O. Clock and Chimes.
 3.1—Weather Report and Forecast.
 3.5—Social Notes from the Sun.
 3.10—News from the Sun.
 3.15—Music from the Studio.
 3.20—G.P.O. Clock and Chimes.
 3.31—News from the Sun.
 3.45—Music from the Studio.
 4—G.P.O. Clock and Chimes.
 4.1—Music from the Studio.
 4.15—Serial Story.
 4.30—G.P.O. Clock and Chimes.
 4.31—Music from the Studio.
 4.35—Producers' Distributing Society's Fruit and Vegetable report.
 4.50—Shipping information when available.
 4.55—Day's racing resume on race days.
 4.58—News from the Sun.
 4.58—Resume of night's programme.
 5—G.P.O. Clock and Chimes; close down.

EARLY EVENING SESSION.

- 5.45—G.P.O. Clock and Chimes.
 5.48—Uncle George and the kiddies.
 6.40—Music from the Studio.
 Special Country Session.
 7—G.P.O. Clock and Chimes.
 7.1—Australian Mercantile Land & Finance Co.'s report.
 7.5—Weather Report and Forecast.
 7.9—Stock Exchange Reports.
 7.16—Producers' Distributing Society's Fruit and Vegetable report.
 7.19—Fruit and Vegetable Report (Sun).
 7.25—Grain and Fodder Report (Sun).
 7.26—Dairy Produce Report (Sun).
 7.28—Primary Producers' newspaper report on the London Butter market.
 7.30—Country news from the Sun.

NIGHT SESSION.

- 8—G.P.O. Clock and Chimes; Broadcasters' Topical Chorus.
 8.5—Newtown Band broadcast from Industrial Hall, Newtown.
 8.25—Miss Edna Lister, contralto.
 8.30—Mr. Stan Footenham, jazz pianist.
 8.40—Miss Ella Goodman, soprano.
 8.47—Mr. Douglas Graham, Scotch comedian.
 8.55—Resume of following day's programme: Weather Report and Forecast.
 9—G.P.O. Clock and Chimes.
 9.1—John and Nellie Sheen, instrumentalists.
 9.21—Miss Edna Lister.
 9.25—Newtown Band.
 9.45—Miss May Nancarrow and Mr. W. Collins in humorous sketch.

- 10.1—Miss Ella Goodman.
- 10.10—Mr. Douglas Graham.
- 10.17—Al. Hammett and the Ambassadors' Dance Band, broadcast from the ballroom of the Ambassadors. During the intervals between dances, news reports, by courtesy of "The Sun," will be broadcast.
- 12—G.P.O. Clock and Chimes; National Anthem.

3 LO

MIDDAY SESSION.

- 12 noon—Time Signal; British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Argus" and "Herald" News Services.
- 12.30—Studio Orchestra.
- 12.40—Wendling and Melloy, melody duo.
- 12.50—Meteorological information, Stock Exchange information, Shipping Intelligence. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean Forecast. River reports.
- 1—Studio Orchestra.
- 1.10—Dr. Arnaldo Bartolini, baritone.
- 1.17—Tasma Tiersma.
- 1.24—Wendling and Melloy, melody duo.
- 1.31—Studio Orchestra.
- 1.41—Dr. Arnaldo Bartolini, baritone.
- 1.48—Studio Orchestra.
- 2—Close down.

AFTERNOON SESSION.

- 3—Studio Orchestra.
- 3.10—Mrs. Dorothy Silk, "Homecrafts."
- 3.20—The Royal Scots.
- 3.32—C. Richard Chung, flute.
- 3.38—Studio Orchestra.
- 3.50—Jane Blackmore, contralto.
- 3.57—Dorothy Robertson, viola.
- 4—Studio Orchestra.
- 4.14—The Royal Scots.
- 4.20—Studio Orchestra.
- 4.30—Miss Flora Fell, supervisor Domestic Arts, Education Department, "Domestic Economy."
- 4.45—"Herald" news service, Stock Exchange information, Racing results.
- 5—Close down.

EVENING SESSION.

- 5.45—Children's Hour: Answers to letters and Birthday Greetings.
- 5.50—The Premier Hour.
- 6.3—Story for the tiny tots by "Miss Kookaburra."
- 6.12—The Premier Hour.
- 6.19—Story for the boys and girls by "Miss Kookaburra."
- 6.35—"Argus" and "Herald" news service. Weather and Aerial Mail information, by the Australian Aerial Services Ltd.
- 6.43—Stock Exchange information. Overseas shipping.
- 6.45—Fish market reports, by J. R. Borrett Ltd.
- 6.51—River reports.
- 6.54—Market reports by the Victorian Producers Co-operative Co. Ltd. Haymarket Sheep Sales; Poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.
- 7.3—Market prices of oranges and lemons, by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION.

- 7.15—Under the auspices of the Develop Australia League, Lt.-Col. F. E. Forrest, "Adding up the Score."
- 7.40—Rev. H. H. Williams, director of the Young People's Department, Methodist Tennis Association of Victoria and Tasmania, "Activities of the Methodist Lawn Tennis Association of Victoria."
- 7.45—Under the auspices of the Department of Agriculture, Dr. S. S. Cameron, Director of Agriculture, "The Outlook for 1927."
- 8—Royal Irish Pipers.
- 8.7—Tom Whidburn, baritone.
- 8.14—Studio Orchestra.
- 8.20—Royal Irish Pipers.
- 8.27—Tom Whidburn.
- 8.34—Studio Quartet.
- 8.44—Roma Driver, contralto.
- 8.51—Bessie Gausson, violin.

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- 8.56—Dr. Arnaldo Bartolini, baritone.
 9.2—String Orchestra.
 9.13—Alice Kelleway and Estelle Rose, the singing tower and the character impressionist.
 9.23—William King, mirasymphonone.
 9.42—Mancotte Kuleston, soprante.
 9.59—Studio Orchestra.
 9.49—Tom Whidburn, baritone.
 9.56—JLU Melody Masters.
 10.6—British Official Wireless News from Rugby. Announcements.
 10.16—Mancotte Kuleston, soprante.
 10.33—Ilona Driver, contralto.
 10.25—Studio Orchestra.
 10.40—William King, mirasymphonone.
 10.47—Agneta's News Service; Weather forecast. Announcements.
 11—Our Irish Thought: "When the power of imparting joy is equal to the will, the human soul requires no other heaven."—Shelley.
 11.43—JLU Melody Masters.
 11.49—God Save the King.

3AR

MORNING SESSION.

- 11.30—British Official Wireless Press, received from Rugby Super Wireless Station, England; Express Train Information; "Age" News Bulletin, exclusive to 3AR.
 12—Time Signal Chime. Studio Barometer Readings. 1st Weather Forecast. Sporting Pictures. Events of the day, the will, the human soul requires no other heaven.
 12.15—Musical Selections from the Studio.
 12.20—Stock Exchange News. Market reports.
 12.40—Musical selections.
 12.55—Shipping Movements. Mail Notices.
 1—Close down.

AFTERNOON SESSION.

- 2.30—Mr. Bert Peltner, violin.
 2.37—The Melbourne Piano Trio.
 2.53—Miss Rita Gibson, soprano.
 3—Mr. Ronald Brewster, cellist.
 3.17—Melbourne Piano Trio.
 3.23—Miss Rita Gibson, soprano.
 3.30—Melbourne Piano Trio.
 4—Time Signal Chime; 2nd Weather Report; Selections by the Melbourne Piano Trio.
 4.56—Evening Amusement Guide.
 5—Time Signal Chime; 2nd Weather Forecast; Close down.

EARLY EVENING SESSION.

- 6.45—Children's corner, by Uncle Rad.
 EVENING SESSION.
 7.45—British Official Wireless Press; Studio Barometer Readings.
 8—Miss Nell Wyatt, contralto.
 8.7—Miss Jean Chaplin, violinist.
 8.14—Mr. Theo. Gardner, Scotch comedian.
 8.22—The Harmony Instrumental Trio.
 8.35—Mr. A. J. Sullivan, travestie Australia and New Zealand.
 8.47—Mr. James Henderson, baritone.
 8.54—Mr. H. F. Loft, banjo soloist.
 9.1—Mr. Edwin Alexander, clarinetist.
 9.9—Miss Elizabeth Lester, cellist.
 9.16—Mr. Theo. Gardner, Scotch comedian.
 9.24—Miss Jean Chaplin, violinist.
 9.31—Mr. James Henderson, baritone.
 9.38—Mr. H. F. Loft, banjo soloist.
 9.45—Mr. Edwin Alexander, travestie, "The Ballad of the Bush Ghost Road."
 9.52—Miss Joan Thorne, soprano.
 10—Time Signal Chime. Studio Barometer Readings. "Age" news bulletin.
 10.17—Loretta's Ballroom Orchestra.
 11—Time Signal Chime. Close down.

4QG

MIDDAY SESSION.

- 12.25—Tune-in.
 12.58—Time Signal.
 1—Market Reports, supplied by the Council of Articulate. Weather information, supplied by Commonwealth Weather Bureau. News, supplied by "The Daily Mail." News Service, supplied by "The Daily Standard."
 1.20—From Hotel Carlton: Lunch Music from the Lounge, Hotel Carlton, played by Hotel Carlton Symphony Orchestra.
 2—Close down.

AFTERNOON SESSION.

- 5.30—From Hotel Carlton: Afternoon Tea Music, played by Hotel Carlton Symphony Orchestra.
 4.15—From the Studio: News Service, supplied by "The Telegraph."
 4.30—Close down.
 EARLY EVENING SESSION.
 6—News Service, supplied by the "Daily Standard."
 6.50—Children's Session: Stories by "The Sandman."
 7—The Farmers' Session—Market Reports. Lectures: "The Three Little Pigs"—songs and girls' talk, by Mr. E. J. Shelton, instructor in Pig Raising.
 7.30—From the Studio of 4QG, Stock Reports; Announcements; Weather News.

NIGHT SESSION.

- 7.45—Lecture Session—"Town Planning for the Home Owner" by R. Martin Wilson, M.E., architect, given under the auspices of the Town Planning Association of Queensland.
 8—Gaiety Orchestra—Anglo Male Quartette.
 10—"The Daily Mail" news. Weather news. Close down.

5CL

MORNING SESSION.

- 11.30—G.P.O. Chimes.
 11.41—Stock Dup Art number.
 11.42—"Advertiser" news service.
 11.50—Vocalion number.
 12—G.P.O. Chimes.
 12.1—"Advertiser" news service.
 12.16—Stock Dup Art number.
 12.24—JLU Studio Orchestra in concert.
 1.54—Ward & Co's. Stock Exchange Intelligence, official weather synopsis, and station announcements.
 2—G.P.O. Chimes.

AFTERNOON SESSION.

- 3—G.P.O. Chimes.
 3.15—Play from "Maple Leaf Cafe—Orchestral numbers."
 3.21—4.45—From the Studio—Vocalion and Stock Dup Art Numbers.
 4—G.P.O. Chimes.
 4.45—Delay from "Arcadia" Cafe—Orchestral numbers.
 4.45—Station Announcements.
 5—G.P.O. Chimes. Close down.
 EVENING SESSION.

- 6.30—G.P.O. Chimes.
 6.43—Stock Dup Art.
 6.56—Bedtime Stories.
 7.20—Market reports.
 7.46—Mr. Frederickson, automotive engineer, Vacuum Oil Company.
 8—G.P.O. Chimes.
 8.1—Hume Smith's Palais Royal Orchestra, overture.
 8.15—Mr. Eric Stephenson, song.
 8.21—Madame Ada Thornber, song.
 8.23—Classical selection by Hume Smith's Palais Royal Band.
 8.23—Miss Marjorie Walsh, song.
 8.33—Mr. E. Wickens, song.
 8.36—Selection by Hume Smith's Band.
 8.44—Madame Ada Thornber and Mr. Eric Wickens, duet.
 8.50—Madame Violet Callow, song.
 8.53—Selection by Hume Smith's Band.
 9—G.P.O. chimes.
 9.1—Weather reports.
 9.3—Dulcety's wheat report.
 9.6—Mr. E. Stephenson, song.
 9.8—Hume Smiths Band, with classical selections.
 9.18—Madame Ada Thornber, song.
 9.21—Mr. E. Wickens, song.
 9.3—Hume Smith's Band, with classical selection.
 9.24—Miss Marjorie Walsh, song.
 9.37—Mr. E. Wickens, song.
 9.40—15 minutes of jazz numbers by Hume Smith's Band.
 9.52—Madame Ada Thornber, song.
 9.55—Station announcements.
 10—G.P.O. Chimes.
 10.1—Mr. Eric Stephenson, song.

- 10.5—Hume Smith's Band.
 10.15—"Advertiser" News Service.

6WF

- 12.30—Tune-in.
 12.45—First Local News Bulletin. Market Reports. Cables.
 1—Time signal from the Perth Observatory.
 1.1—Weather Notes.
 1.2—Studio Quartette: Conducted by Mr. Val Smith.
 2—Close down.
 3.30—Tune-in.
 3.35—in the Studio.
 4.30—Close down.

EVENING SESSION.

- 7—Tune in.
 7.5—Bedtime stories, by Uncle Duffy.
 7.55—Stock, Markets, News.
 8—Time signal from the Perth Observatory.
 8.1—Weather notes.
 8.2—Mr. Walshaw, under the auspices of the Bookkeepers' Association, on "Bloss."
 10—Second News Bulletin supplied by courtesy of "The Daily News" Newspaper Coy.
 10.30—Close down.

7ZL

MORNING SESSION.

- 11—G.P.O. Clock Chimes. The "Mercury" news, Stock Market, Shipping, Commercial Intelligence. Weather information. Ships within wireless range.
 12—G.P.O. Clock Chimes. Close down.

AFTERNOON SESSION.

- 3—G.P.O. Clock and Chimes; Musical Items from the Studio.
 3.30—Hobart Stock Exchange quotations.
 3.55—Weather information.
 4—G.P.O. Clock Chimes; close down.

EVENING SESSION.

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

NIGHT SESSION.

- 8—G.P.O. Clock Chimes. The "Mercury" special Tasmanian news service. Railway auction produce sales. Weather information.
 8.5—Hobart Stock Exchange quotations.
 8.30—Concert from the Studio.
 9.16—Tasmanian District Weather Reports.
 9.50—The "Mercury" special interstate news service. Weather synopsis. Station announcements. National Anthem.

2KY

LUNCH HOUR SESSION.

- 12.15—Tune in to the ticking of the clock.
 12.18—Piano-forte solos.
 12.40—News items.
 12.45—Popular Fox Trot.
 13—Vocal items.
 1.15—Hawating Steel Guitars.
 1.25—Union News and Meetings.
 1.35—Where to go To-night.
 1.40—Tenor solos.
 1.43—Close down.

EVENING SESSION:

- 7.15—Tune in.
 7.18—News items.
 7.40—Industrial and political topics, Mr. J. S. Garden.
 8—Mezzo-soprano solos, Miss Nellie Graves.
 8.10—Monologue, Miss Amy Ruwald.
 8.20—Tenor solos, Mr. R. Hamilton.
 8.30—Contralto solo, Miss Amy Ruwald.
 8.38—Musical interlude, Dance music, the Glaciarium Dance Band.
 9.10—Dance, Hare and Jena.
 9.25—Tenor solos, Mr. R. Hamilton.
 9.35—The Glaciarium Dance Band.
 9.50—Theatre Critique.
 10—Closing announcements.

Tuesday, Jan. 18

2FC

EARLY MORNING SESSION.

- 7.—"Big Ben" and announcements.
- 7.5—Music from the Studio.
- 7.10—Official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, commercial news, mail services.
- 7.25—Investment market, mining share market, metal quotations.
- 7.35—Wool sales, breadstuffs markets, inter-state markets, produce markets.
- 7.45—"Sydney Morning Herald" news services.
- 8—"Big Ben," Cherieo Talk, by Mr. J. K. Powell.

MORNING SESSION.

- 8.15—The Chimes of 2FC.
- 9.20—Music from the Studio.
- 9.45—Racing talk, by 2FC Racing Commissioner.
- 10—"Big Ben" and announcements.
- 10.5—Late "Sydney Morning Herald" News Service.
- 10.15—Music from the Studio.
- 10.45—A Morning Reading.
- 11—"Big Ben"; Australian Press Association and Reuter's Cables.
- 11.10—Music from the Studio.
- 11.15—Talk on Home Cooking and Recipes, by Miss Ruth Furt.
- 11.30—Close down.

MIDDAY SESSION.

- 12—The Chimes of Big Ben; and Announcements.
- 12.5—Stock Exchange, First Call.
- 12.10—Music from the Studio.
- 12.45—Music from the Oak Hall: The Oak Hall Trio.
- 1—"Big Ben"; Weather Intelligence.
- 1.3—"Evening News" midday news service. Producers' Distributing Society's reports.
- 1.20—Oak Hall Trio.

- 1.25—Stock Exchange—Second Call.
- 1.40—Music from the Studio.
- 1.50—The Oak Hall Trio.
- 2—"Big Ben." Close down.

AFTERNOON SESSION.

- 2.40—The Chimes of 2FC and announcements.
- 2.45—Studio Music.
- 3.20—From Farmer's Tea Rooms: Instrumental items by the Oak Hall Trio.
- 3.35—Studio Music.
- 3.40—From Farmer's Tea Rooms: Miss Diana Dooly, soprano, "Poor Wandering One" (Sullivan).
- 4—"Big Ben," From Farmer's Tea Rooms: Miss Dulcie Williams, contralto, "Slave Song" (Del Reigo).
- 4.15—Studio Music.
- 4.15—Instrumental items from the Oak Hall Trio.
- 4.20—From Farmer's Oak Hall: Miss Diana Dooly, soprano, "Villanelle" (Eva De'Accun).
- 4.25—The Oak Hall Trio.
- 4.35—Studio Music.
- 4.40—From Farmer's Tea Rooms: Miss Dulcie Williams, contralto, "Annie Laurie" (Lady Scott).
- 4.45—Stock Exchange—Third call.
- 4.45—Close down.

EARLY EVENING SESSION.

- 5.45—The Chimes of 2FC.
- 5.50—"Hello Man" talks to the children.
- 6.30—A story for the older children.
- 6.40—Dinner Music.
- 7.10—"Evening News" late news service and weather information.
- 7.20—Dulcety's Market Report (wool, wheat, stocks), fruit and vegetable markets.
- 7.40—Close down.

NIGHT SESSION.

- 7.55—The Chimes of 2FC and Announcements.
- 8—"Big Ben." Broadcast from the Royal Naval House, items by the N.S.W. State Military Band.
- 8.15—Mlle Marie Segur, soprano.
- 8.24—From the Royal Naval House, further items from the Band.

- 8.35—From the Studio: Mr. Frances Hall, bass soloist.
- 8.45—Mr. Lionel Lawson, violinist.
- 8.55—Further items by the State Military Band from the Royal Naval House.
- 9.5—Mlle, Marie Segur, soprano.
- 9.10—A French talk by M. Maurice Byrn.
- 9.20—Mr. Henri Penn, French pianist.
- 9.30—From the Royal Naval House, — the N.S.W. State Military Band.
- 9.40—A character sketch by Miss Annie Hughes.
- 9.50—Mr. Frances Hall, bass.
- 9.55—Mr. Henri Penn, pianist.
- 10.05—Items by the State Military Band.
- 10.15—A character sketch by Miss Annie Hughes.
- 10.20—Mr. Lionel Lawson, violinist.
- 10.30—From the Wentworth Hotel, Sydney, items by the New Wentworth Symphonic Dance Orchestra, under the direction of Mr. Sydney Simpson.
- 11—"Big Ben" and Announcements.
- 11.5—Dance music from the Wentworth Hotel until midnight.
- 12—National Anthem; close down.

2BL

EARLY MORNING SESSION.

- 7.15—G.P.O. Clock and Chimes.
- 7.15—Musical Programme from the Studio.
- 7.15—Physical Training and Health Exercises.
- 7.25—Health Hints.
- 7.30—Physical Training and Health Exercises.
- 7.45—G.P.O. Clock and Chimes; weather forecast.
- 7.45—Sporting Information.
- 7.55—Broadcasters' Special News Service.
- 8—G.P.O. Clock and Chimes; Close down.

MORNING SESSION.

- 10—G.P.O. Clock and Chimes.
- 10.1—Weather Report.
- 10.5—Music from the Studio.
- 10.20—Daily Telegraph News.
- 10.35—Music from the Studio.

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29 HUNTER STREET, NEWCASTLE

and all States

- 11—G.P.O. Clock and Chimes.
 11.1—News from the Daily Telegraph.
 11.15—Rabbit Market Report.
 11.17—Fish Market Report.
 11.18—Vegetable Market Report.
 11.21—Fruit Market Report.
 11.23—London Dairy Produce and Egg Market Report.
 11.25—London Metal Quotations.
 11.31—SBUs in call by wireless.
 11.33—Information re Interstate and Overseas Mails.
 11.35—Shipping information—arrivals and departures.
 11.37—Weather report.
 11.45—Women's Session conducted by Mrs Jordan, special notes.
 11.50—Mrs. Jordan replies to correspondents.
 12—G.P.O. Clock and Chimes.
 12.1—Talk by Mrs. Jordan.
 12.25—News from the Sun.
 12.30—G.P.O. Clock and Chimes.
 12.31—Sphynx Stock Exchange Calls.
 12.33—Sun Newswriters News Service.
 12.45—Hillier's Instrumental Quartet.
 1.00—G.P.O. Clock and Chimes.
 1.01—Weather Report.
 1.03—Sydney Stock Exchange calls.
 1.05—News from the Sun.
 1.05—Music from the Studio.
 2—G.P.O. Clock and Chimes; close down.

AFTERNOON SESSION.

- Racing information broadcast by courtesy of the Sun.
 3—G.P.O. Clock and Chimes.
 3.1—Weather Report and Forecast by courtesy of Govt. Meteorologist.
 3.2—Social Notes from the Sun.
 3.18—Sun Newspaper's News Service.
 3.19—Civil Service Stores Trio.
 3.20—G.P.O. Clock and Chimes.
 3.31—News from the Sun.
 3.45—Music from the Studio.
 4—G.P.O. Clock and Chimes.
 4.1—Civil Service Stores Trio.
 4.15—Social Story.
 4.30—G.P.O. Clock and Chimes.
 4.31—Studio Music.
 4.45—Producers' Distributing Society's Vegetable and Fruit Markets.
 4.51—Shipping Information when available.
 4.52—Day's Racing Resume on Race Days.
 4.55—News from the Sun.
 4.58—Resume of Night's Programmes.
 5—G.P.O. Clock and Chimes.

EARLY EVENING SESSION.

- 5.45—G.P.O. Clock and Chimes.
 5.46—Uncle George and the Kiddies.
 5.49—Music from the Studio.
 Special Country Session.
 7—G.P.O. Clock and Chimes.
 7.1—Australian Mercantile Land and Finance Co's. Report.
 7.5—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.
 7.9—Stock Exchange Reports.
 7.15—Producers' Distributing Society's Fruit and Vegetable Report.
 7.18—Fruit and Vegetable Report (Sun).
 7.22—Grain and Fodder Report (Sun).
 7.26—Dairy Produce Report (Sun).
 7.30—A talk on "The Motor Car," by Mr. Martin.

NIGHT SESSION.

- 8—G.P.O. Clock and Chimes. Broadcasters' Tonal Chorus.
 8.5—Miss Alice Frowse, contralto.
 8.16—Mr. Norman Wright, tenor.
 8.17—Broadcasters' Miniature Orchestra.
 8.27—Miss Gladys Vercoe, soprano.
 8.47—Mr. Herman Trevisay, bass.
 8.54—Resume of following day's programme; Weather Report and Forecast.
 9—G.P.O. Clock and Chimes.
 9.1—Nell Crane and Alf Lawrence.
 9.21—Broadcasters' Miniature Orchestra.
 9.31—Interval.
 9.36—Mr. J. Crosby Browne, clarinet.
 9.43—Miss Alice Frowse.
 9.50—Broadcasters' Orchestra.

- 10—G.P.O. Clock and Chimes.
 10.1—Mr. Norman Wright.
 10.8—Mr. Herman Trevisay.
 10.15—Al. Hammett and the Ambassadors' Dance Band, broadcast from the ballroom of the Ambassadors. During the interval between dances, News Reports by courtesy of the Sun will be broadcast.
 12—G.P.O. Clock and Chimes; National Anthem; Close down.

2 KY

MORNING SESSION.

- 12.15—Tune in to the ticking of the clock.
 12.16—Popular Fox Trots.
 12.25—Pianoforte.
 1.00—News.
 1.15—Hawaiian Steel Guitars.
 1.45—Songs.
 1.45—Close down.
 CHILDREN'S SESSION.
 4.30—The Storyman, Mr. Thompson.
 EVENING SESSION.
 7.30—Tune in to the clock.
 7.33—News.
 7.40—The New Guinea Gold Fields, Mr. J. S. Hawkins.
 8—Pianoforte solos, Miss Mary Deun.
 8.10—Violin solos, Mr. Reub. Fletcher.
 8.25—Soprano solos, Miss Cameron.
 8.35—Music Interlude, the Glaciarium Dance Band.
 9.15—New Lincoln Records.
 9.30—Richard Beaver will amuse.
 9.45—Tenor solos, Alf James.
 9.55—Announcements.
 10—Close down.

MORNING SESSION.

- 12.15—Tune in to the ticking of the clock.
 12.16—Pianoforte solos.
 12.20—Fox Trots.
 12.40—News items.
 1—Vocal items.
 1.15—Hawaiian Steel Guitars.
 1.30—Dance music, closing at 1.45.

CHILDREN'S SESSION.

EVENING SESSION.

- 7.15—Sporting feature, Mr. A. E. Powell, "How they ran today."
 7.40—Union News, Mr. Oscar Brent.
 7.45—Lecturette.
 8—Pianoforte solos, Miss Karen Fletcher.
 8.10—Violin solos, Mr. F. Corrose.
 8.25—Dance Music, the Glaciarium Dance Band.
 8.45—Baritone solos.
 9—Dance, Harp and Jaws.
 9.15—The Glaciarium Dance Band.
 9.35—Announcements.
 10—Close down.

3 LO

MIDDAY SESSION.

- 12 noon—Time Signal; British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Argus" and "Herald" News Services.
 12.30—Studio Orchestra.
 12.40—The Premier Four.
 12.47—Meteorological information, Stock Exchange information, Shipping Intelligence, Weather forecast for Victoria, Tasmania, South Australia, and New South Wales, Ocean Forecast, River reports.
 1—Studio Orchestra.
 1.10—Tasma Tiran, cello.
 1.17—Alice Kellaway and Estelle Ross, The Singing Rover and the Character Impressionist.
 1.30—Studio Orchestra.
 1.37—The Premier Four.
 1.44—Studio Orchestra.
 2—Close down.

AFTERNOON SESSION.

- 3—Will Page and his Popular Players.
 3.10—Wendling and Molloy, song.
 3.14—Will Page and his Popular Players.
 3.24—Masocette Raiston, subretic.
 3.25—Will Page and his Popular Players.

- 3.38—Wendling and Molloy, Melody Duo.
 3.42—"Au Fait" of Messrs. Buckley and Nunn, Ltd., will give a Fashion Talk.
 3.57—Will Page and his Popular Players.
 4.7—Masocette Raiston, subretic.
 4.12—Will Page and his Popular Players.
 4.22—Wendling and Molloy, selected.
 4.27—Will Page and his Popular Players.
 4.35—Maestro Morland, "Infant Warfare."
 4.45—"Herald" News Service; Stock Exchange information.
 5—Close down.

EVENING SESSION.

- 5.46—Children's Hour: Answers to letters and Birthday Greetings by "Mary Gumleaf."
 5.55—Wendling and Molloy.
 6.3—Poems for the littlest ones by "Mary Gumleaf"; "The Bootmaker"; "My Little Garden"; Story, "A little talk about lions."
 6.12—Wendling and Molloy, Melody Duo.
 6.16—Story for the boys and girls, by "Mary Gumleaf," "The wreck of the Elizabeth."
 6.35—"Argus" and "Herald" news services.
 Weather information, Aerial mail information by the Australian Aerial Services Ltd.
 6.47—Stock Exchange information, Overseas Shipping.
 6.52—Fish market reports, by J. R. Borrett, Ltd.
 6.56—River reports.
 6.58—Market reports by the Victorian Producers' Co-operative Co. Ltd.; Haymarket Sheep Sales; Poultry, grain, chaff, hay, straw, tallow, dairy produce, potatoes and onions.
 7.10—Market price of Oranges and Lemons by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION.

- 7.15—Miss Frances Fraser, travelogue.
 7.30—Under the auspices of the University Extension Board.
 7.45—Dr. Loftus Hills, "Popular Science."
 8—Brunswick Quartet Party.
 8.5—The Royal Scots.
 8.17—The Sunshine Harvester Works Pipes.
 8.24—Brunswick Quartet Party.
 8.30—The Royal Scots.
 8.40—The Sunshine Harvester Works Pipes.
 8.47—Dr. Arnold Barzolini.
 8.54—Pietro Scrocci, violin.
 9.9—Alice Kellaway and Estelle Rose, the Singing Rover and the Character Impressionist.
 9.25—Len, Gibson's Neapolitan Sextette.
 9.30—Jane Blackmore, contralto.
 9.37—Brunswick Quartet Party.
 9.44—Masocette Raiston, subretic.
 9.55—British Official Wireless News from Rugby, Announcements.
 10—The Champion Japanese Swimmers, Takahashi and Saitoh, will both speak to you. One of them you will understand, but what of the other? He will speak for the benefit of his fellow countrymen in Japan, who will be listening for him.
 10.15—Len, Gibson's Neapolitan Sextette will entertain you for a few minutes.
 10.22—Dr. Arnold Barzolini, baritone.
 10.36—Sporting notes by "Olympus."
 10.40—Jane Blackmore, contralto.
 10.47—Brunswick Quartet Party.
 10.54—"Argus" news service, Weather Information, Announcements.
 11—Our Great Thought: "Music is the universal language of mankind"—Longfellow.
 11.1—3LO Melody Masters.
 11.40—God Save the King.

3 AR

MORNING SESSION.

- 11.30—British Official Wireless Press, received from Rugby Super Wireless Station, England; Express Train Information; "Age" News Bulletin.
 12—Time Signal Chime from G.P.O. Studio Barometer Readings, 1st Weather Forecast; Events of the day.
 12.5—Musical Selections.
 12.30—Stock Exchange News; Market reports.
 12.40—Musical Selections.

12.15—Shipping Movements. Mail Notices.
1—Close down.

AFTERNOON SESSION.

2.30—Miss Olive Birtles, mezzo.
2.37—Mr. John Stoneham, baritone.
2.45—Miss Cammie Barton will sing you some popular hits and accompany herself on the ukulele.
2.53—Miss Olive Birtles, mezzo.
2.57—Mr. Herbert Sutcliffe, baritone.
3.7—Mr. John Stoneham, baritone.
3.15—Miss Cammie Barton will entertain you again with song and ukulele.
3.23—Mr. Herbert Sutcliffe, baritone.
3.30—Selections by the Studio Trio.
3.36—Evening Amusement Guide.
6—Time Signal Chime. Studio Barometer Readings. Close down.

EARLY EVENING SESSION.

4.45—Children's Corner, by Uncle Mac.
EVENING SESSION.
7.40—Mr. A. E. Higgins, talk, "The Period Furniture that is worth while."
8—Mr. Noel Hunter, baritone.
8.7—Miss Marion de Saxe.
8.15—Mr. Gordon Wilson, tenor.
8.23—Mr. Trevor Wilton, talk.
8.37—Miss Bertha Brettell, lyric soprano.
8.45—Mr. Frank Pearson.
8.52—Miss Vera Thomson, soprano.
9—Mr. Noel Hunter, baritone.
9.8—Mr. Reginald Stoneham will give you another interesting chat on popular song-writing, with illustrations.
9.23—Miss Vera Thomson, soprano.
9.30—Miss Marion de Saxe.
9.38—Miss Bertha Brettell, lyric soprano.
9.45—Mr. Gordon Wilson, tenor.
9.53—Mr. Frank Pearson, entertainer.
10—Time Signal Chime from G.P.O. Studio Barometer Readings; "Age" News Bulletin.
10.10—Lengelt's Ballroom Orchestra.
11—Time Signal. Close down.

4 QG

MIDDAY SESSION.

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

AFTERNOON SESSION.

1.30—A programme of Music from the Studio.
4.15—"The Telegraph" news.
4.50—Close down.

EARLY EVENING SESSION.

6—"Daily Standard" news, Announcements.
6.20—The Children's Session: Stories by "Uncle Ben" and "Uncle Jim."
7—From the Council of Agriculture Studio: Market Reports, Lectures; "A Talk on Raising" by Mr. C. McGrath, Supervisor for Dairying.
7.30—From the Studio: Stock Reports; Announcements. Weather news.

NIGHT SESSION.

7.15—Lecture Session: "Wireless," by Mr. J. W. Robinson.
8—The Federal Band, Mr. W. H. Davis, conductor.
9—Metropolitan Weather Forecast, Musical Items.
9.10—From the Centennial Hall: Dance Music.
10—From the Studio: "The Daily Mail" News; Weather News. Close down.

5 CL

MORNING SESSION.

11.30—G.P.O. Chimes.
11.31—Featuring a Steak Duo Art number.
11.45—"Advertiser" news service.
11.55—Vocalion number.

12—G.P.O. Chimes.

12.1—"Advertiser" news service.
12.16—Featuring a Steak Duo Art number.
12.30—ECL Studio Orchestra.
1.55—Ward & Co.'s Stock Exchange Intelligence, official weather synopsis, and station announcements.
2—G.P.O. Chimes.

AFTERNOON SESSION.

6—G.P.O. Chimes.
6.1—Relay from the "Maple Leaf" Cafe—Orchestral numbers.
6.45—From the Studio: Talk by Mrs. Corhill.
6—G.P.O. Chimes.
6.1—Relay from the "Arcadia" Cafe—Orchestral numbers.
6—G.P.O. Chimes.
6.55—Stock Exchange Reports; General Information and Station Announcements.
7—G.P.O. Chimes. Close down.

EVENING SESSION.

8.30—G.P.O. Chimes.
8.31—Stock Duo Art.
8.36—Bedtime Stories.
7.50—Market reports.
7.40—Milling talk, by Mr. Jarkett.
8—G.P.O. Chimes.
8.1—Comic Opera Evening: "The Merry Widow."
10.15—"Advertiser" News Service.
10.30—Studio Concert.
11—G.P.O. Chimes; Close down.

6 WF

MIDDAY SESSION.

12.30—Tune-in.
12.55—First Local News Bulletin. Market Reports; Cables.

1—Time Signal from the Perth Observatory.
1.1—Weather Notes by Harry Tate.
1.5—Studio Quartette, conducted by Mr. Val Smith.
1.30—Close down.

AFTERNOON SESSION.

2.50—Tune-in.
2.55—Musical programme, including piano-forte selections by Miss Evelyn Willis, A.R.C.M.
4.30—Close down.

EVENING SESSION.

7—Tune-in.
7.5—Talk to the kiddies by Uncle Henry.
7.25—Story for Tiny Tots, by Auntie Kate.
7.35—Stock and Share Intelligence, Market Reports, Cables, news by courtesy of "The Daily News" Newspaper Co.
8—Time signal from the Perth Observatory.
8.1—Weather notes, supplied by the Meteorological Bureau of Western Australia.
8.3—Concert by Perth City Band.
9—Talk.
10—Second Local News Bulletin supplied by courtesy of "The Daily News" Newspaper Co.
10.30—Close down.

7 ZL

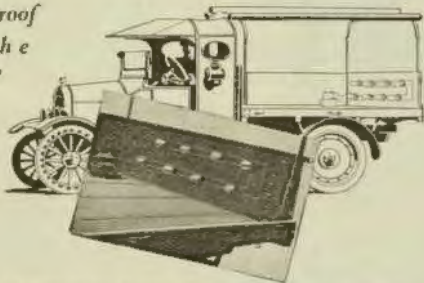
MORNING SESSION.

11—G.P.O. Clock Chimes.
11.12—"The Mercury" News; Stock Market; Shipping; Commercial Intelligence; Weather information. Ships with wireless range.
11.30—Boat Express Information.
12—G.P.O. Clock Chimes; Close down.

AFTERNOON SESSION.

3—G.P.O. Clock and Chimes; musical items from the Studio.

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3.30—Hobart Stock Exchange Quotations.
 3.35—Weather Information.
 4.—G.P.O. Clock Chimes; Close Down.
EVENING SESSION.
 7—Children's Corner, "Big Brother" chats to his pals.
 7.15—The Adventures of George, the Book-shelf Cat, by "Aunt Stella."
 8.—G.P.O. Clock Chimes; the "Mercury" Special Tasmanian News Service; Railway Auction Produce Sales; Weather Information.
 8.5—Hobart Stock Exchange Quotations.
 8.10—Literary Lapses and Literary Lists, by Mr. W. E. Fuller.
 8.30—Musical Items from the Studio; Special Request numbers.
 8.15—Tasmanian District Weather Reports.
 8.50—The "Mercury" Special Interstate News Service; Weather Synopsis; Station Announcements. Ships within wireless range.
 National Anthem.

4.20—From Farmer's Tea Rooms: Miss Katherine Beverley, soprano, "Rose in the Bud" (Forster).
 4.25—The Oak Hall Trio.
 4.35—Music from the Studio.
 4.40—From Farmer's Tea Rooms: Miss Sybil Atholwood, mezzo.
 4.45—Stock Exchange, Third Call.
 4.46—Close down.

EARLY EVENING SESSION.

5.46—Chimes of 2FC.
 5.50—The "Hello Man" talks to the other children.
 6.45—Dinner Music.
 7.10—From the Studio: "Evening News" late News Service. Weather Information.
 7.30—Dalgety's Market Reports (Wool, Wheat, Stock, Fruit, and Vegetable Markets).
 7.40—Close down.

NIGHT SESSION.

7.55—The Chimes of 2FC and Announcements.
 8.—"Big Ben" Broadcaster from the Lyric Wintergarden Theatre, items by the Operatic orchestra, under the baton of Mr. Alfred Moulton.
 8.30—From the Studio: Miss Nora Hill, Irish soprano.
 8.38—Mr. Charles Lawrence, entertainer (a) "Broadcasting" (Songs); (b) "Our finished flat" (a) "Coffee Cup's Race" (Newman).
 8.45—Mr. Walter Hunt and Miss Eva Warhurst in a com. act play.
 9.3—Mr. R. A. Bartlesman, baritone.
 9.13—"Imito" (Corporal Phillips) will give imitations of requested bird calls.
 9.23—Miss Nora Hill, Irish soprano.
 9.30—Mr. Charles Lawrence, entertainer (a) "Fading" (Foster and Lawrence); (b) "When the road's up" (Lomestaff).
 9.38—Mr. R. A. Bartlesman, baritone.
 9.45—Broadcast from the Lyric Wintergarden Theatre, items by the orchestra under the baton of Mr. Alfred Moulton.
 10.10—Mr. Walter Hunt and Miss Eva Warhurst in a com. act play.
 10.30—Mrs. Leo Maudsley, baritone, in popular songs, accompanied by 2FC Dance Band, under the direction of Mr. Eric Pearce.
 11—"Big Ben" and announcements.
 11.5—2FC Dance Band in dance items until midnight.
 12—National Anthem; close down.

1.20—G.P.O. Clock and Chimes.
 1.31—Weather report.
 1.33—News from the Sun.
 1.45—Music from the Studio.

AFTERNOON SESSION.

2.—G.P.O. Clock and Chimes.
 2.1—Racing resume.
 2.5—News from the Sun.
 2.20—Music from the Studio.
 2.40—Weather report and forecast.
 2.43—Serial notes from the Sun.
 2.46—News from the Sun.
 3.1—Music from the Studio.
 3.—G.P.O. Clock and Chimes.
 3.20—News from the Sun.
 3.35—Racing resume.
 3.40—News from the Studio.
 4.—G.P.O. Clock and Chimes
 4.1—Racing Results.
 4.5—News from "The Sun"
 4.15—Serial Story.
 4.30—G.P.O. Clock and Chimes.
 4.31—Producers' Distributing Society's Fruit and Vegetable Report.
 4.35—Racing resume.
 4.39—Musical Programme from Studio.
 4.51—Shipping news, when available.
 5.—Race Results.
 5.55—Resume of night's programme.
 6.—G.P.O. Clock and Chimes.
 6.1—Resume of Day's Racing.
 6.5—Close down.

EARLY EVENING SESSION.

5.45—G.P.O. Clock and Chimes.
 5.46—Uncle George and the Kiddies.
 5.40—Music from the Studio.
 Special Country Session.
 7.—G.P.O. Clock and Chimes.
 7.1—Australian Mercantile Land and Finance Co's Report.
 7.5—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Govt. Meteorologist.
 7.9—Stock Exchange Reports.
 7.15—Producers' Distributing Society's Fruit and Vegetable Report.
 7.19—Fruit and Vegetable Report (Sun).
 7.22—Crabs and Fodder Report (Sun).
 7.35—Dairy Produce Report (Sun).
 7.38—Talk on "Books wise and otherwise."
 7.45—Talk on Tennis, by Dr. McElhone.

NIGHT SESSION.

8.—G.P.O. Clock and Chimes; Broadcasters' Topical Clurion.
 8.3—Broadcasters' Trio.
 8.13—Miss Phyllis Atkinson, mezzo soprano.
 8.20—Mr. Howard Leighton, pianist.
 8.30—Mr. S. Critchden will talk on building a true low fuzzer.
 8.50—The Harlequin Duo (steel guitars).
 9.—G.P.O. Clock and Chimes.
 Weather Report and Forecast.
 Resume of following day's programme.
 9.5—Miss Nora Mack, soprano.
 9.12—Professor Randall Woodhouse, tenor.
 9.19—Broadcasters' Trio.
 9.23—Interval.
 9.51—Marinelli Duo.
 9.54—Miss Phyllis Atkinson.
 9.51—Professor Randall Woodhouse.
 9.55—Broadcasters' Trio.
 9.58—Miss Nora Mack.
 10.15—Al. Hawnes and the Ambassadors' Dance Band, broadcast from the Ballroom of the Ambassadors. During the intervals between dances News Reports by courtesy of the "Sun" will be broadcast.
 12.—G.P.O. Clock and Chimes; National Anthem.

**Wednesday, Jan. 19
 2FC**

EARLY MORNING SESSION.

7—"Big Ben" and Announcements.
 7.5—Music from the Studio.
 7.10—Official Weather Forecast; Rainfall; Temperatures; Astronomical Memoranda; Shipping Intelligence; Commercial News; Mail Services.
 7.25—Investment Market; Mining Share Market; Metal Quotations.
 7.35—Wool Sales; Broadstuffs Markets; Interstate Markets; Produce Markets.
 7.45—"Sydney Morning Herald" News Service.
 8—"Big Ben"; "Cherito" Talk by Mr. J. K. Powell.

MORNING SESSION.

8.15—The Chimes of 2FC.
 9.20—Music from the Studio.
 10—"Big Ben" and Announcements.
 10.5—Late "Sydney Morning Herald" News Service.
 10.15—Music from the Studio.
 10.45—A Morning Reading.
 11—"Big Ben"; Australian Press Association and Benter's Cable.
 11.10—Music from the Studio.
 11.15—Talk on Home Cooking and Recipes, by Miss Ruth Furst.
 11.35—Close down.

MIDDAY SESSION.

12—The Chimes of Big Ben; and Announcements.
 12.5—Stock Exchange, First Call.
 12.10—Music from the Studio.
 12.45—From Farmer's Oak Hall—The Oak Hall Trio.
 1.—The Chimes of Big Ben; Weather Intelligence.
 1.3—"Evening News" Mid-day Service; Producers' Distributing Society's Report.
 1.20—The Oak Hall Trio.
 1.25—From the Studio—Stock Exchange, Second Call.
 1.40—Music from the Studio.
 1.50—The Oak Hall Trio.
 2—"Big Ben"; Close Down.

AFTERNOON SESSION.

2.30—The Chimes of 2FC and Announcements.
 2.35—Studio Music.
 3.30—From Farmer's Oak Hall, items by the Instrumental Trio.
 3.35—Studio Music.
 3.40—From Farmer's Tea Rooms: Miss Katherine Beverley, soprano, "Love Lily" (Thomson).
 3.45—The Oak Hall Instrumental Trio.
 3.50—Studio Music.
 4.—From Farmer's Tea Rooms: Miss Sybil Atholwood, mezzo.
 4.5—The Oak Hall Trio.
 4.15—Studio Music.

2BL

EARLY MORNING SESSION.

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

MORNING SESSION.

Reception information broadcast by courtesy of the Sun.
 11.—G.P.O. Clock and Chimes.
 11.1—Weather Report.
 11.5—Musical Programme from the Studio.
 11.17—Early Telegraph News Service.
 11.25—Sporting Talk.
 11.30—Women's Session, conducted by Mrs. Jordan; Social Notes.
 11.40—Mrs. Jordan replies to correspondents.
 11.50—Talk by Dr. Morris.
 11.55—Rabbit Market Report.
 11.57—Fish Market Report.
 12.14—Vegetable Market Report.
 12.21—Fruit Market Report.
 12.23—London Dairy Produce and Egg Market Report.
 12.27—London Metal Quotations.
 12.30—G.P.O. Clock and Chimes.
 12.31—Boats in call by wireless.
 12.35—Weather Report and forecast.
 12.5—Shipping information.
 12.39—Information re Interstate and Overseas Mails.
 12.41—Sun News Service.
 12.45—Hillier's Instrumental Quartet.

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3LO

MID-DAY SESSION.

- 12—Time Signal; Butler's and the Australian Press Association Cables; "Argus" and "Herald" News Services; Shipping Intelligence.
- 12.30—3LO Melody Masters.
- 12.40—Mascoffe Ralston, soprnette.
- 12.47—Meteorological Information. Weather forecast for Victoria, Tasmania, South Australia and New South Wales; Ocean forecast River Reports. Stock Exchange Information.
- 1—3LO Melody Masters.
- 1.10—The Premier Four.
- 1.17—3LO Melody Masters.
- 1.27—Mascoffe Ralston, soprnette.
- 1.34—3LO Melody Masters.
- 1.44—The Premier Four.
- 1.50—3LO Melody Masters.
- 2—Close down.

Note.—Descriptions of the various Weekend Races will be given, the times of which will be announced beforehand.

AFTERNOON SESSION.

- 3—Studio Orchestra.
- 3.10—Miss Frances Fraser, travclogne, "Young Life in Shakespeare's Day."
- 3.25—Wendling and Molloy, Melody Duo.
- 3.32—Studio Orchestra.
- 3.42—Reginald Bradley, viola.
- 3.50—Alec Kellaway and Estelle Rose.
- 4—Studio Orchestra.
- 4.8—Tasma Thernau, cello.
- 4.12—Wendling and Molloy.
- 4.20—Studio Orchestra.
- 4.30—The Royal Scots.
- 4.45—"Herald" news service. Stock Exchange Information.
- 5—Close down.

EVENING SESSION.

- 5.40—Children's Hour: Answers to letters and Birthday Greetings.
- 5.55—Story for the wee ones, by "Mary Mary quite Contrary." "The Girl who was as clever."
- 6.5—Alec Kellaway and Estelle Rose.
- 6.17—Story for the bigger children by "Mary Mary." "The Pied Piper of Hamelin."
- 6.35—"Argus" and "Herald" News Services; Routes and the Australian Press Association Cables; Shipping Movements; Overseas Shipping; Weather Synopsis.
- 6.47—Stock Exchange Information.
- 6.52—Fish Market Reports by J. R. Borrett Ltd.
- 6.55—River Reports.
- 6.58—Market Reports by the Victorian Producers' Co-operative Co. Ltd.: Haymarket Sheep Sales; Poultry, Grain, CbaF, Hay, straw, Jute, dairy produce, potatoes and onions. Market prices oranges and lemons, by the Victorian Central Citrus Association.

NIGHT SESSION.

- 7.15—Under the auspices of the Department of Agriculture, Mr. R. Crowe, Export Superintendent, "Market Comments."
- 7.30—"Gargyle" Your Cat. A talk to motorists, especially to those who have purchased a new car.
- 7.45—CAPL Peters, "Books, Wise and Otherwise."
- 8—Len Gibson's Neapolitan Sextette.
- 8.7—Jane Blackmore, contralto.
- 8.15—Pietro Sarcoll, violin.
- 8.27—The Royal Scots.
- 8.37—Len Gibson's Neapolitan Sextette.
- 8.45—Alec Kellaway and Estelle Rose.
- 8.57—William King, xylophone.
- 9—The Premier Four.
- 9.15—Description of Australian Swimming Championship, Buck Strake, by Mr. Norman McCance, transmitted from the City Baths.
- 9.20—Len Gibson's Neapolitan Sextette.
- 9.27—Jane Blackmore, contralto.
- 9.34—Pietro Sarcoll, violin.
- 9.45—Description of Australian Swimming Championship, 100 yards, Free Style by Mr.

- Norman McCance, transmitted from the City Baths.
- 9.60—The Royal Scots.
- 9.60—"Argus" news service. Announcements, etc.
- 10.10—William King, xylophone.
- 10.20—Mascoffe Ralston, soprnette.
- 10.27—British Official Wireless news from Rugby. Weather forecast.
- 10.37—The Premier Four.
- 10.44—3LO Melody Masters.
- 11—Our Great Thought: "The way to cheerfulness is to keep our bodies in exercise and our minds at ease."—Steale.
- 11.1—3LO Melody Masters.
- 11.40—God Save the King.

3AR

MORNING SESSION.

- 11.30—British Official Wireless Press, received from Rugby Super Wireless Station, England, by 3AR's Operator; Events of the Day; Express Train Information; "Age" News Bulletin, exclusive to 3AR.
- 12—Time Signal Chime from G.P.O.; Studio Barometer and Outdoor Thermometer Readings; First Weather Forecast; Sporting News; Events of the Day.
- 12.5—Musical selections from the Studio.
- 12.30—Stock Exchange news; market reports.
- 12.40—Musical Selections.
- 12.50—Shipping Movements; Mail Notices.
- 1—Close Down.

AFTERNOON SESSION.

- Results after each race and at half-hourly intervals.
- 2.30—Miss Arnela Clancy, violinist.
- 2.37—The Classic Trio.
- 2.38—Miss Lured Keira, soprano.
- 3—Mr. Stafford Byrne, cellist.
- 3.7—The Classic Trio.
- 3.23—Miss Lured Keira, soprano.
- 3.30—The Studio Trio.
- 4—Time Signal Chimes; 2nd Weather Forecast; Studio Trio.
- 4.55—Evening Amusements.
- 5—Time Signal Chimes; Studio Barometer Readings; Close Down.

4QG

EARLY MORNING SESSION.

- 6.30—Physical Culture Session.
- 7—Close Down.
- MIDDAY SESSION.
- 12.55—Time in.
- 12.58—Time Signal.

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

AFTERNOON SESSION.

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

EARLY EVENING SESSION.

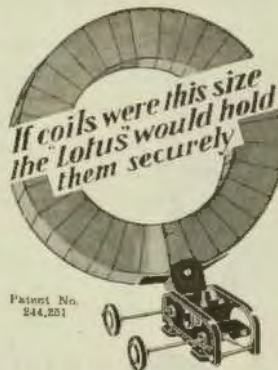
- 6—News Service supplied by the "Daily Standard"; Weather information, supplied by the Commonwealth Weather Bureau; Announcements.
- 6.30—"The Children's Session: Stories by "Little Miss Brisbane."
- 7—From the Council of Agriculture—Market Reports; Lecturette, "Farmers' Sheep in Queensland—Sheep Breeding Experiments," Mr. A. Carow.
- 7.30—From the Studio: Stock Reports; Announcements; Weather Information.

NIGHT SESSION.

- 7.45—Lecture Session: A French talk—the first of a series by Comte de Tournour.
- 8—Studio Concert.

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, 11/2", and three-way, 10/2".
6 inch handle, two-way, 12/2", and three-way, 19/2".

LOTUS
VERNIER
COIL HOLDERS

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

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

John Arnold, P.O. Box 371,
Degraives Buildings, Degraives
Street, Melbourne.

- 9—Metropolitan Weather Forecast; Concert continued.
- 10—From the Studio: "The Daily Mail" News; Weather News; Close down.

5CL

MORNING SESSION.

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

AFTERNOON SESSION.

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

EVENING SESSION.

- 5.30—G.P.O. Chimes.
- 5.31—Bestiary Stories.
- 7.15—Expository Lectures by Professor Urieux.
- 7.30—Market Reports.
- 7.40—Buy Scouts' Corner.
- 8—G.P.O. Chimes.
- 8.1—By kind permission of the committee, the Mount Barker Hospital Charities Concert will be relayed.
- 10.15—"Advertiser" News Service.
- 10.30—Concert Continued.
- 11—G.P.O. Chimes; Station Announcements; National Anthem; close down.

6WF

MIDDAY SESSION.

- 12.30—Tune-In
- 12.35—First Local News Bulletin. Market Reports. Cables.

AFTERNOON SESSION.

- 1—Time signal from the Perth Observatory.
- 1.1—Weather Notes.
- 1.2—Studio Septette.
- 2—Close down.
- 3.30—Tune-In.
- 3.35—Musical programme, including vocal artists.
- 4—Studio Trio.
- 4.30—Close down.

EVENING SESSION.

- 7—Tune-In.
- 7.5—A playette for the kiddies, by Uncle Duffy, with Aunties Kate and Evelyn, and Uncles Henry, Leslie, Perry and Duffy.
- 7.55—Market, Stocks, News.
- 8—Time signal from the Perth Observatory.
- 8.1—Weather Notes, supplied by the Meteorological Bureau of Western Australia.
- 8.2—Variety, The Studio String Trio.
- 10—Second News Bulletin, supplied by courtesy of "The Daily News" Newspaper Coy.
- 10.30—Close down.

7ZL

MORNING SESSION.

- 11—G.P.O. Clock and Chimes; the "Mercury" News; Stock Market; Shipping; Commercial Intelligence; Weather Information, and Sporting Anticipations; Ships within wireless range; Salomaa selections.
- 12—G.P.O. Clock Chimes; Close Down.

AFTERNOON SESSION.

- 5—G.P.O. Clock Chimes; Musical Items from the Studio; Story from Illustrated Tasmanian Mail.
- 5.30—Hobart Stock Exchange Quotations.

- 8.55—Weather Information.
- 4—G.P.O. Clock Chimes; Close Down.

EVENING SESSION.

- 7—Children's Corner, "Big Brother" chats to his pals.
- 7.15—Story from Illustrated Tasmanian Mail.

NIGHT SESSION.

- 8—G.P.O. Clock Chimes; the "Mercury" Special Tasmanian News Service; Railway Auction Produce Sales; Weather Information and Sporting Results.
- 8.5—Hobart Stock Exchange Quotations.
- 8.10—Auction and Stock Market Reports from Roberts and Co. Ltd., Murray St., Hobart.
- 9.15—Physical Culture talk by Mr. George Collier.
- 9.30—Concert from the Studio.
- 9.45—Tasmanian District Weather Reports.
- 9.50—The "Mercury" Special Interstate News Service; Weather Synopsis; Station Announcements; Ships within wireless range. National Anthem.

Thursday, Jan. 20

2FC

EARLY MORNING SESSION.

- 7—"Big Ben" and Announcements.
- 7.5—Music from the Studio.
- 7.10—Official Weather Forecast; Rainfall; Temperatures; Astronomical Memoranda; Shipping Intelligence; Commercial News; Mail Services.
- 7.25—Investment Market; Mining Share Market; Metal Quotations.
- 7.35—Wool Sales; Breadstuffs Markets; Interstate Markets; Produce Markets.
- 7.45—"Sydney Morning Herald" News Service.
- 8—"Big Ben," "Choorie" Talk by Mr. J. K. Powell.

MORNING SESSION.

- 2.15—The Chimes of 2FC.

"The PINNACLE" PORTA " SELF CONTAINED RADIO SET

£ 39-10



AN IDEAL XMAS GIFT.

THE IMMEDIATE POPULARITY which the "PORTA" enjoyed after its introduction soon enticed others to copy the original design of this ingenious portable Radio Set, and in order to protect the public legal proceedings were at once instituted to prevent misrepresentation. The interim injunction which has been granted indicates that the Court at once gave the protection sought, and has ordered the discontinuance of others attempting to manufacture or pass off any machine the same as the "PORTA." WARNING!—Anyone seeking to make or sell Portable Radio Sets of the same design and exclusive features as the "PORTA" will at once be issued legal notice and proceedings taken without delay. Any information from the public of imitations will be appreciated.

ENTERTAINS EVERYWHERE.

The compact, convenient "PORTA" SET is simplicity itself. Simply open the lid and automatically the set will operate to perfection. It is absolutely self-contained, complete with all Accessories, including the Stereovox Speaker. No aerial, no earth. Terms arranged. Write for literature or call and hear the splendid "PORTA."

TAKE IT WITH YOU ON YOUR HOLIDAYS. MUSIC IN A MOMENT—JUST OPEN THE LID.

N.S.W. Representative:
 MR. H. J. RAPGOOD,
 Manufacturers' Products Sales Co.,
 Chaffin House : : : Sydney.

- 9.20—Music from the Studio.
- 9.45—Talk by ZFC Racing Commissioner.
- 10—"Big Ben" and Announcements.
- 10.5—Late "Sydney Morning Herald" News Service.
- 10.15—Music from the Studio.
- 10.45—A Morning Reading.
- 11—"Big Ben" Australian Press Association and Reuters' Cables.
- 11.10—Music from the Studio.
- 11.35—Close down.

MIDDAY SESSION.

- 12—The Chimes of Big Ben; and Announcements.
- 12.5—Stock Exchange—First Call.
- 12.10—Music from the Studio.
- 12.45—From Farmer's Oak Hall; The Oak Hall Trio.
- 1—"Big Ben" and weather Intelligence.
- 1.5—"Evening News" midday news service. Producers' Distributing Report.
- 1.20—The Oak Hall Trio.
- 1.25—Stock Exchange—Second Call.
- 1.40—Music from the Studio.
- 1.50—The Oak Hall Trio.
- 1.55—Talk by ZFC Racing Commissioner.
- 2—"Big Ben" close down.

AFTERNOON SESSION.

- 2.30—The Chimes of ZFC.
- 2.45—Studio Music.
- 3.10—From Farmer's Oak Hall; Instrumental music from the Oak Hall Trio.
- 3.35—Studio Music.
- 3.40—From Farmer's Tea Rooms; Miss Cecily Audibert, soprano.
- 3.45—Instrumental Music from the Oak Hall Trio.
- 3.55—Music from the Studio.
- 4—From Farmer's Tea Rooms; Miss Alison Bear, contralto.
- 4.5—The Oak Hall Trio.
- 4.15—Studio Music.
- 4.20—Miss Cecily Audibert, soprano.
- 4.25—The Oak Hall Trio.
- 4.35—Music from the Studio.
- 4.40—Miss Alison Bear, contralto.
- 4.45—Stock Exchange—Third Call.
- 4.45—Close down.

EARLY EVENING SESSION.

- 5.45—The Chimes of ZFC.
- 5.50—"The Hello Man" talks to the Children.
- 6.30—A Social Story for the older children.
- 6.45—Dinner Music.
- 7—From the Studio; "Evening News" late news service; weather information.
- 7.30—Dalgely's Market Report (wool, wheat, Stock), Fruit and Vegetable Markets.
- 7.40—A talk by the Technical Editor of "Wireless Weekly."

NIGHT SESSION.

- 7.55—Announcements.
- 8—"Big Ben," Broadcast from the Crystal Palace Theatre, items by the orchestra under the baton of Mr. Harry Stone.
- 8.30—From the Studio; Miss Elsie Peacock, soprano, "Regnava nel Silenzio" (Donizetti).
- 8.35—The Leichhardt District Band, under the baton of Mr. E. P. Kerry.
- 8.45—Mr. Harold Tollensmarcke, baritone, "The Moore of Devon" (Olivier).
- 8.50—Further items by the Leichhardt Band.
- 9—A talk by the Rev. F. B. Raward, on "Aids."
- 9.15—Miss Elsie Peacock, soprano (a) "Down in the Forest" (Ronald); (b) "To the Angels" (Zerbin).
- 9.25—The Leichhardt District Band.
- 9.35—Mr. Harold Tollensmarcke, baritone (a) "The Shady side of Bond Street" (Crawford); (b) "A Wanderer's Song" (Kvel).
- 9.45—Miss Kitty Elliott, entertainer.
- 9.50—The Leichhardt District Band.
- 10.20—Miss Elsie Peacock, soprano, "L'Incantatrice" (Aeold).
- 10.35—Mr. Harold Tollensmarcke, baritone, "The Gay Highway" (Drummond).
- 10.45—Miss Kitty Elliott, entertainer.
- 10.55—From the Wentworth Hotel, items by the New Wentworth Symphonic Orchestra, under the direction of Mr. Sydney Simpson.

Essential Battery Points

First, the battery should be fresh. Ever-Ready Radio Batteries are made in Australia, and are always fresh. Secondly, the battery should give good service until it runs right down. Ever-Ready Batteries are famed both for their long life and reliability. Thirdly, the correct battery should be chosen. Ask your radio dealer. He has an Ever-Ready for every requirement.



WANDA PLUG RADIO BATTERY. This illustrates the new radio high-tension "B" battery, which can be obtained 1 1/2, 42 or 55 volts—fitted with a Wanda plug, and 3 screw terminals.

Small size, type WF, 11.5 volt	9/4
Small size, type WF, 42 volt	12/8
Small size, type WF, 55 volt	15/-
Large size, type XP, 21.5 volt	16/-
Large size, type XP, 42 volt	21/-
Extra large size, type Super Service, 42 volt	25/6

THE "STANDARD" DRY CELL RADIO BATTERY.

Price 3/-
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 recognizing its immense superiority over any imported cell. Size, 2 1/2 x 5 1/2. Weight, 2 lbs. Also for bells, telephones, signalling and electro-medical apparatus, &c.



NEW EVER-READY No. 125 9R "A," "B," OR "C" BATTERY.

Price 2/9
One of a group of radio batteries. Useful in wireless, lighting, and amplification. Size, 5 1/2 x 4 1/2. Most useful for bells, telephones, burglar alarms, medical cells, etc. With three brass terminals. Voltages 1.5, 3 or 4.5 volts. Useful for all wireless purposes as well as general utility.



"STANDARD" "A" BATTERY.

Price 3/6
The Ever-Ready "Standard" "A" Battery (3 cell), 4.5 volt, specially designed for economical operation of 1, 2, or 3 valves, taking .05 amperes at 3 volt. For sets with four or more valves, the most economical service is obtained by using two "Standard" "A" batteries connected in parallel.

If unobtainable locally write for address of nearest source of supply to

The Ever-Ready Co. (Gt. Britain) Ltd.

163 Pitt Street

12

SYDNEY

- 11—"Big Ben" and Announcements.
11.5—Wentworth Dance Orchestra, until midnight.
12—National Anthem; close down.

2 BL

EARLY MORNING SESSION.

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

MORNING SESSION.

- 10—G.P.O. Clock and Chimes.
10.1—Weather Report.
10.3—Musical programme from the studio.
10.10—Daily Telegraph news.
10.35—Studio Music.
10.40—Ten minutes' talk supplied by the B.R.M.A.
11—G.P.O. Clock and Chimes.
11.1—News from the Daily Telegraph.
11.15—Rabbit Market Report.
11.17—Fish Market Report.
11.21—Fruit Market Report.
11.23—Vegetable Market Report.
11.25—London Daily Produce and Egg Market Report.
11.29—London Metal Quotations.
11.31—Ships in call by wireless.
11.33—Information re Interstate and Oversea Mails.
11.35—Shipping information—arrivals and departures.
11.37—Weather report.
11.40—Women's Session: Social Notes by Mrs. Jordan.
11.50—Mrs. Jordan replies to correspondents.
12—G.P.O. Clock and Chimes.
12.1—Talk by Mrs. Jordan.
12.25—News from the "Sun."
12.30—G.P.O. Clock and Chimes.
12.31—Sydney Stock Exchange Closes.
12.35—Son News Service.
12.45—Billier's Instrumental Quartette, direction Caryl Castling.
1.30—G.P.O. Clock and Chimes.
1.31—Weather Report.
1.33—Stock Exchange Closes.
1.38—News from the Sun.
1.45—Studio Music.
2—G.P.O. Clock and Chimes; Close down.

AFTERNOON SESSION.

- Racing Information, broadcast by courtesy of the Sun.
2—G.P.O. Clock and Chimes.
3.1—Weather Report and Forecast by courtesy of Govt. Meteorologist.
3.5—Social Notes from the "Sun."
3.10—News from the "Sun."
3.20—Music from the Studio.
3.30—G.P.O. Clock and Chimes.
3.31—Country Women's Session.
3.40—G.P.O. Clock and Chimes; music from the Studio.
4—G.P.O. Clock and Chimes.
4.1—News from the Sun.
4.5—Music from the Studio.
4.15—Serial Story.
4.30—G.P.O. Clock and Chimes.
4.51—Music from the Studio.
4.55—Producers' Distributing Society's Vegetable and Fruit Markets Report.
4.50—Shipping information when available.
4.52—Day's Racing Resume on Race Days.
4.55—News from "The Sun."
4.58—Resume of night's programme.
5—G.P.O. Clock and Chimes; Close down.

EARLY EVENING SESSION.

- 8.45—G.P.O. Clock and Chimes.
8.46—Uncle George and the Kiddies.

- 8.40—Music from the Studio.
Special Country Session.
7—G.P.O. Clock and Chimes.
7.1—Australian Mercantile Land and Finance Co's Report.
7.5—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.
7.9—Stock Exchange Reports.
7.14—Producers' Distributing Society's Fruit and Vegetable Report.
7.10—Fruit and Vegetable Report (Sun).
7.22—Fruit and Fodder Report (Sun).
7.26—Dairy Report (Sun).
7.30—Country News from the Sun.
7.45—Talk, "The Development of Motion Pictures within the Empire," Mr. J. O'Donoghue.

NIGHT SESSION.

- 6—G.P.O. Clock and Chimes; Broadcasters' Special Chorus.
6.13—Fashion and Social Notes broadcast from the Ballroom of the Ambassadors.
6.18—Miss Heather Kinnaird, contralto.
6.25—The Orpheum Amateur Orchestral Society.
6.35—Miss Duerie Ward, soprano.
6.42—Mr. Howard Leighton, novelty pianist.
6.52—Mr. Bobby Watson, comedian.
7—G.P.O. Clock and Chimes; resume of following day's programme; weather report and forecast.
9.5—Mr. W. E. Lewis, baritone.
9.12—Fashion and Social Notes from the Ballroom of the Ambassadors.
9.27—Interval.
9.37—The Lyric Male Quartet.
9.42—The Orpheum Amateur Orchestral Society.
9.45—Duet, Miss Duerie Ward and Mr. W. E. Lewis.
9.48—Miss Heather Kinnaird.
9.53—Mr. Bobby Watson.
10—G.P.O. Clock and Chimes.
10.1—Mr. W. E. Lewis.
10.3—Miss Duerie Ward.
10.13—Al. Hammett and the Ambassadors' Dance Band, broadcast from the Ballroom of the Ambassadors. During the intervals between dances, News Reports by courtesy of the Sun Newspapers will be broadcast.
12—G.P.O. Clock and Chimes; National Anthem.

2 KY

LUNCHEON HOUR SESSION.

- 12.15—Popular Fox Trot, Orpheus Gramophone.
12.40—News.
12.45—Pianoforte solos.
1.15—Vocal Items.
1.1—Fox Trot.
1.20—Hawaiian Steel Guitars.
1.40—Union Notes and News.
1.45—Close down.

CHILDREN'S HOUR.

- 6.30—The Animals of Taronga Park, Mr. Manuel.
7—The stories of the Opera series, Mr. Manuel.
7.30—Time in to the ticking of the clock.
7.45—News.
7.40—Sporting features, Mr. E. R. Voigt.
8—The immediate task of the Labour Party, Mr. R. Heffron.
8.10—The stories of the Opera series, Mr. Manuel.
9—Novelty Interlude, Ho Blake and his Mandolins.
9.10—The Glastonbury Dance Band.
9.15—Tenor solos.
9.55—Announcements.
10—Close down.

3 LO

MID-DAY SESSION.

- 12 noon—Time Signal; British Official Wireless News from Robby; Reuters and the Australian Press Association Cables; "Ar-

- gus" and "Herald" News Services; Shipping Intelligence.
12.30—Studio Orchestra.
12.40—Dr. Arnold Bartolini, baritone.
12.45—Meteorological information: weather forecast for Victoria, Tasmania, South Australia, and N.S.W.; Ocean forecast. River reports; Stock Exchange information.
1—The Royal Scots.
1.10—Studio Orchestra.
1.20—Walker Smith, cornet.
1.25—Dr. Arnold Bartolini, baritone.
1.32—Studio Orchestra.
1.42—The Royal Scots.
1.50—Studio Orchestra.
2—Close down.

AFTERNOON SESSION.

- 3—Studio Orchestra.
3.17—Station Trio.
3.16—Wedding and Molky, melody duo.
3.50—Dorothy Kerburgh, viola.
3.40—Studio Orchestra.
3.27—Alec Kellaway and Estelle Rose.
3.57—The Premier Four.
4—Studio Orchestra.
4.14—Wendling and Molloy.
4.20—"Mary Gumleaf".
4.48—"Herald" News Service; Stock Exchange Information.
4.45—Evensong, transmitted from St. Paul's Cathedral.
5.30—Close down.

EVENING SESSION.

- 5.40—Children's Hour: Answers to letters and birthday greetings.
5.55—The Premier Four.
6.2—"Mary Gumleaf" poems.
6.18—Story for the boys and girls by "Mary Gumleaf".
6.12—The Premier Four.
6.35—"Argus" and "Herald" News Services; Shipping Movements; Overseas Shipping; Weather Synopses.
6.47—Stock Exchange Information.
6.52—Fish Market Reports by J. R. Borrett Ltd.
6.55—Robby Reports.
7—Market Reports by the Victorian Producers' Co-operative Co. Ltd.; Haymarket Sheep Sales; Poultry, grain, cheese, hay, and straw; inter-day produce, pointies and onions; Market prices of oranges and lemons by the Victorian Central Citrus Association.
7.10—Market price of Oranges and Lemons by the Victorian Central Citrus Association Pty. Ltd.

NIGHT SESSION.

- 7.20—Mr. J. Howlett Ross, "Sic Gormaz Reid, Empire Builder."
7.45—Mr. A. W. Jackson, "Golf."
8—3LO Melody Masters.
8.10—The Premier Four.
8.14—3LO Melody Masters.
8.24—Mascotte Ralston.
8.28—3LO Melody Masters.
8.38—The Royal Scots.
8.42—3LO Melody Masters.
8.52—Alec Kellaway and Estelle Rose.
8.58—3LO Melody Masters.
9.8—The Premier Four.
9.15—3LO Melody Masters.
9.25—Mascotte Ralston.
9.26—3LO Melody Masters.
9.38—The Royal Scots.
9.40—3LO Melody Masters.
9.50—Alec Kellaway and Estelle Rose.
9.57—3LO Melody Masters.
10.7—British Official Wireless news from Robby; "Argus" news service; Meteorological information; announcements.
10.25—3LO Melody Masters.
10.42—Mascotte Ralston.
10.38—3LO Melody Masters.
10.48—The Premier Four.
10.52—3LO Melody Masters.
11—Our Great Thoughts: "Genius is not a single power, but a combination of great powers."—Whipple.
11.1—3LO Melody Masters.
11.40—God Save the King.

The "Elstreflex Two"

(Continued from Page 19)

a slight adjustment with the neutralizing condenser will overcome this difficulty. Do not go beyond that point of the neutralizing condenser at which oscillation ceases, otherwise you will be inclined to sacrifice signal strength, which, although it is of a most powerful volume considering only two valves are used, at the same time there is no necessity to throw any of it away. The Harle detector may require a slight adjustment, some spots always being better than others.

Seek the other stations now, always bearing in mind that condensers C1 and C2 should read the same. A very pleasant silent background is present and the quality of the music and speech was all that could be desired. At first a little difficulty may be experienced on account of sharpness of tuning, but this will be overcome as you familiarise yourself with the new receiver.

At present there are available quite a number of power valves, and these are ideal for this receiver, as both valves are amplifiers. If these valves are used, the "B" battery may be increased in value up to as high as 150 volts. The "C" battery, of course, will also require to be increased accordingly, the correct value of this battery being obtained from the pamphlet accompanying the power valves. If the receiver tends to oscillate very violently, lower the plate supply of the first valve to say 90 volts, and the grid bias for this valve correspondingly. Neutralizing on the local station will not make very much difference, but on the Interstate reception this small condenser will be found most invaluable. A very careful adjustment is necessary, otherwise the receiver will burst into oscillation and spoil not only your own reception but that of your neighbours.

Test Report.

As is usual with all "Wireless Weekly" receivers, the "Elstreflex Two" was subjected to a test at Marrickville. On account of the festive season, however, we have not been able to spend the same time in testing as we should like to, but still

Guaranteed Workmanship & Clarity of Reproduction



The 'D.J. STANDARD 4'

£25

Absolutely complete No extras to buy

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 whichever station you want—all inter-State Stations at Loud Speaker Strength (except Perth.)

Here is what you
get for your £25

4 B 406 Phillip Valves, 4-volt 33-amp. Peto-Radford Accumulator, 2 large capacity Volton "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 Lighting Arrester. The whole enclosed 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'

FERRANTI

INTERVALVE TRANSFORMER TYPE AF 3

BRITISH MADE

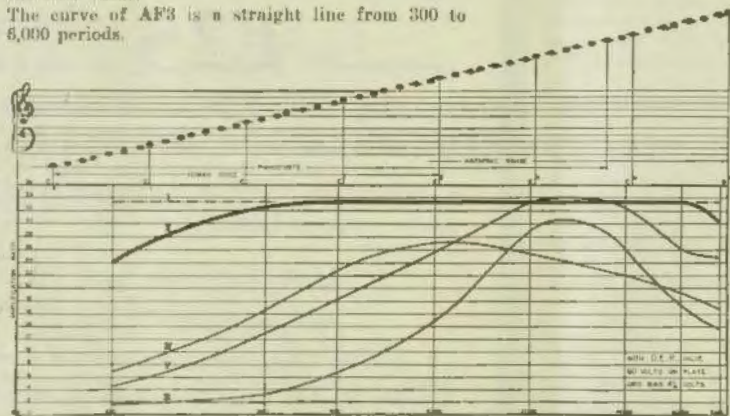
Transformer Amplification curves are of great interest to every Radio user.

The curves must be on the musical scale to give the true value.

The curve of AF3 is a straight line from 300 to 8,000 periods.



Price .. 42/6.



Curve I. PERFECTION.

Curve II. FERRANTI AF 3. VERY NEARLY PERFECT.

No BETTER Transformer is available at any Price

Curve III.

Curve IV.

Curve V.

} Other Transformers on the Market.

Obtainable at all Radio
Dealers in Australia.

Dealers please communicate with:—

A. BEAL PRITCHETT (Aust.) Ltd., Sydney and Melbourne.

WEDMA LIMITED, Adelaide.

EDGAR V. HUDSON, Brisbane.

the small period at our disposal proved that this receiver is a most remarkable one. On connecting up the batteries, etc., all the local stations were brought in comfortably on the speaker, and the enthusiasm displayed by the Speedway announcer of 4QG, Brisbane, was enjoyed throughout the whole house. A final word about the crystal detector will be welcome to most. At one stage the detector was removed, and the signals kept on as usual, which, to say the least, was most disconcerting. What actually happened was that the first valve acted as a detector, so we turned our attention to the adjustment of this valve.

It was found that the grid bias governing this valve required correct adjustment. When this was properly arrived at, all trouble disappeared. We set out to find the correct value of grid bias which made the signals as weak as possible when the detector was removed, and having arrived at this value and the detector reinserted the difference was most pronounced.

As the hour in which the test was carried out was somewhat late, we had not the opportunity of putting the "Elstreflex Two" to further tests, but will do so during this week and give the details in next week's issue. Suffice it to say, however, that one will go quite a long way before a two valve receiver will be found which will yield the same wonderful purity and remarkable volume as the "Elstreflex Two." We strongly recommend it.

2FC LISTENERS will welcome the return of Miss Goodie Reeve, after a protracted period of ill health. Miss Reeve will be heard in "Talks behind the Scenes." On January 3, she will chat with Miss Judith Anderson, who has returned to Australia to play in "The Cobra." On Monday, January 10, Miss Strella Wilson, of Gilbert and Sullivan fame, will tell Miss Reeve of her experiences, and further talks from the other side of the footlights are to be arranged.

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Reliable Radio Accessories

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Keenest Possible Values



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Trickle Charger

Priced at 87/6

The "Balkite" Trickle Charger, charging at 4 amps., prevents sulphating or buckling; maintenance practically nil. Price. 87/6.

The "BEEDE"
Pocket Type Voltmeter

The "Beede" Voltmeter, invaluable for testing "B" Batteries; saves many hours of worry and doubt. Price 4/9.



"Jefferson" Transformers

"Jefferson" 41 Transformers, universally used and praised. Now offered at reduced price 18/6.



"ALA" Hydrometers

The "ALA" Hydrometer accurately determines the general condition of the accumulator; gives longer life and better service. Price. 3/6.



"EMMCO" Vernier Dials

"Emmco" Vernier Dial, geared down 18-1, with absolutely no backlash; a very minute adjustment can be obtained. Price 9/6.

FARMER'S, SYDNEY

BOX 497 AA, G.P.O.

RADIO SUPPLIES, GROUND FLOOR



Valves with the Wonderful P.M. Filament

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

There is more than strength in the P.M. Filament. It has up to 3 times greater length and up to $5\frac{1}{2}$ times greater emission than an ordinary filament. This is where the P.M. Filament gives you real value.

Another big point, the P.M. Filament requires only one-tenth ampere, giving 7 times the life to each of your accumulator charges. For great economy, great life and great results secure the valves with

the WONDERFUL P.M. FILAMENT

OBTAINABLE FROM EVERY RADIO DEALER IN AUSTRALIA

Mullard

THE MASTER VALVE

(ARKS.7.)

For 4-volt accumulator or 3 dry cells

THE P.M.3 (General Purpose) 0.1 amp. 13/6

THE P.M.4 (Power) 0.1 amp. 13/6

For 6-volt accumulator or 4 dry cells

THE P.M.5 (General Purpose) 0.1 amp. 13/6

THE P.M.6 (Power) 0.1 amp. 13/6

For 2-volt accumulator

THE P.M.1 H.F. 0.1 amp. 13/6

THE P.M.1 L.F. 0.1 amp. 13/6

THE P.M.2 (Power) 0.15 amp. 13/6

All Mullard Valves are made at the Mullard Works, Baltham, London, England

Lightning

(Continued from Page 6.)

where exposed to inflammable gases or dust or flyings of combustible materials.

The protective device shall be an approved lightning arrester which will operate at a potential of five hundred (500) volts or less.

The use of an antenna grounding switch is desirable, but does not obviate the necessity for the approved protective device required in this section. The antenna grounding switch if installed shall, in its closed position, form a shunt around the protective device.

Note.—The protective device should be an approved lightning arrester; the use of cheap home-made devices should be discouraged. Fuses are not required, but if installed should be between the lead-in and the lightning arrester.

PROTECTIVE GROUND WIRE.—(d) The ground wire may be bare or insulated, and shall be of copper or approved copper-clad steel. If of copper the ground wire shall not be smaller than No. 16, S.W.G., and if of approved copper-clad steel it shall not be smaller than No. 18 (0.044) S.W.G. The ground wire shall be run in as straight a line as possible to a good permanent ground. Preference shall be given to water piping. Gas piping shall not be used for grounding protective devices. Other permissible grounds are artificial grounds such as driven pipes, plates, cones, etc.

The ground wire shall be protected against mechanical injury. An approved ground clamp shall be used wherever the ground wire is connected to pipes or piping.

Note.—The proper connection of the antenna to the ground minimises the lightning hazard. A satisfactory ground and properly run ground wire are of primary importance.

Wires Inside Buildings.—(e) Wires inside buildings shall be securely fastened in workmanlike manner, and shall not come nearer than two (2) inches to any electric light or power wire unless separated therefrom by some continuous and firmly fixed non-conductor making a permanent sep-



The Conservation of Energy

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

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

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

characteristics required, namely:

- 1—Low angle phase difference
- 2—Low dielectric constant
- 3—High resistivity
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Do not jeopardize the value of your receiving set by using inferior materials. Save time and energy in the making and loss of power in the operation of your set by always insisting upon genuine Radion Panels and parts. Look for the name stamped on every piece.

SEND FOR FREE BOOKLET

"Building Your Own Set"

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



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The Supreme Insulation

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Having decided to concentrate entirely on Radio Sets, we are selling off our Radio Parts at

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All the parts, including Headphones, Transformers, Valves, Sockets, Bakelite Rheostats, Potentiometers, are shown in the window of our No. 2 Branch, situated at

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Opp. Lyceum Theatre. Don't forget the name

RADIO DISTRIBUTORS

Opp. Lyceum Theatre

29 ROYAL ARCADE

aration. This non-conductor shall be in addition to any regular insulation on the wire. Porcelain tubing or approved flexible tubing may be used for encasing wires to comply with this rule.

RECEIVING EQUIPMENT GROUND WIRE.—(f) The ground conductor may be bare or insulated, and shall be of copper, approved copper-clad steel, or other approved metal which will not corrode excessively under existing conditions, and in no case shall the ground wire be less than No. 16, S.W.G., except that approved copper-clad steel not less than No. 18 (0.044) S.W.G., may be used.

The ground wire may be run inside or outside of building. When receiving equipment ground wire is run in full compliance with rules for Protective Ground Wire, in Section (d) it may be used as the ground conductor for the protective device.

Phonograph

(Continued from Page 7.)

a reaction against broadcasting. The radio would then be used only for speeches or special announcements and sports descriptions.

The reproduction of speech in broadcasting, even with inefficient receivers, is satisfactory; the technical problems involved in speech transmission and reception are not so serious as with music. Not that many of the receivers at present in use do not need improvements; they need scrapping, in fact. But if broadcasting is to remain primarily an entertainment service, and it looks as if it will, then the quality of music produced by many types of receivers and loud speakers will have to be improved very considerably. The novelty of broadcasting—the psychological factor—may hold listeners for a time, but not very long if better music can be obtained from a phonograph.

Strictly speaking, the Brunswick Panatrope, among the first of the new phonographs to reach Australia, is not an electric phonograph, but is rather a miniature broadcast transmitting and receiving station.

It plays any ordinary phonograph record. The sound waves are carried through the microphone to an audio amplifier, the necessary battery power being drawn from ordinary home A.C. mains.

Use Your Head

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

for the sake of your sanity and best results

Buy De Forest Valves

and have no regrets.

For Sale Everywhere



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

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

De Forest Valves

TYPE D.V.5—Takes 5 volts at 1 amp. on filament .. 12/- each
Plate Voltages, Detector, 18-22½ volts.

Plate Voltages, Amplifier, 60-150 volts.

TYPE D.V.3—Takes 3 volts at .08 of an amp. on filament. —13/6 each

Plate Voltage, 16-22½ volts, Detector.

Plate Voltage, 60-120 volts, used as an Amplifier.

Both Types fit Standard American Socket.

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Now is the time for
Toroidal Coils! Max-
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TOROID COILS



Range with .00035 Con-
denser 175 to 550 Metres.

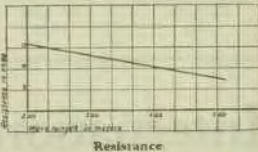
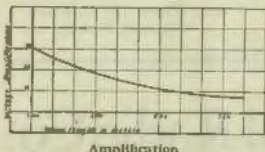
Type T1. Antenna/Cou-
pler Type T2. R.F.
Transformer

FOR GREATER EFFICIENCY.

In the past, the desire of the radio public to listen to distant stations has been responsible for the manufacture and use of many types of radio frequency transformers, which embody such features as lower losses by the elimination of dielectric material, or greater efficiency through the use of larger wire. These transformers, however, have the disadvantage that when used in an unshielded set, each unit acts as a miniature loop aerial, enabling the receiver to pick up strong signals from all local stations, and causing the set, when brought to point of sensitivity, to distort and squeal almost invariably. This is due to the unshielded magnetic field of these types of coils. It was not until the advent of the Toroidal Coil that an efficient

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

1. Elimination of unwanted signals because coils are not subject to outside induction.
2. Feed-back between stages eliminated because this type of coil possesses no external magnetic field.
3. More compact and efficient set construction made possible because of the above features.



KIT COMPLETE £3 19.

SOLE AUSTRALIAN DISTRIBUTOR—

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LATE O'BRIEN AND NICHOLL

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HUMAN NATURE.

We all pride ourselves on being a little sharper than the other fellow. I have often laughed at the poor fools who were taken in by the Rich Uncle from Fiji, the Mad Doctor who wants to lose money at cards, or the Changer of Banknotes while you wait!

Yet the other day a smiling salesman mesmerised me into buying a different wireless set to the one I wanted. I swallowed his "just as good" without suspicion—and it wasn't!

When I woke up to the unpleasant fact that I had been a "sucker"—excuse the Americanism—I began to question radio friends regarding their experiences. About one in every four had been caught in much the same way.

Personally, I must admit with pleasure that the average radio dealer is a fair and alert individual who keeps his stock up-to-date and takes a pride in his business. Also I am satisfied that in many cases an experienced salesman is able to advise a novice with benefit to both.

But while I lift my hat to the radio dealers as a whole, I am free to confess that the man who seeks a bigger commission by selling out-of-date stock, or has been too indifferent to keep up with wireless progress, deserves to lose his customers. As a rule you can pick him in one by the "just as good" argument.

The standard of radio knowledge is improving so fast, thanks to the "Wireless Weekly," that the average man is beginning to know exactly what he wants, and if he asks for a Burgess Battery or a Tungsar Charger or a Radiair, he means to have it. That in itself will soon help to kill the "just as good" argument.

My advice to the friends who read this column is to buy only advertised lines. Every good dealer stocks them and there is no reason whatever for accepting substitutes.

As a matter of fact there is "no such animal," as the just-as-good. It should be on the same shelf as the wealthy relative from Fiji!

The Pleasure of Summer Radio

(A Talk broadcasted from 3LO, Melbourne, by Mr. H. K. Love.)

MANY people class radio as a seasonal entertainment. Broadcasting should be just as popular now that it is well established in the summer time as it has been in the winter.

It has often been argued that static is much worse in the summer than in winter time. This may be true of occasional nights, but it only affects long distance reception. Bad patches of static are very frequently experienced during the winter period.

Radio has so many more uses during the summer time. It is at this period of the year that the vacation receiver comes into full use.

This type of set may be used in holiday camps in the mountains, country or at the seaside. It may also be installed in a country home for the period of a holiday, and will keep its owner in constant touch with the doings in the city. In isolated or out of the way spots, the music from, say, 3LO, Melbourne, may be used for an impromptu dance.

Small portable receivers may also be taken aboard yachts in the bay, or even on a canoe on the river. Nor does this exhaust the uses of the portable receiver. Hundreds of thousands of car owners take the advantage of fine week-ends to go for trips to all parts of the State. With very little trouble a receiver may be installed in a car, which will receive 3LO from almost any part of Victoria.

With the aid of this equipment and a bit of wire hitched to a tree, news and music may always be picked up during meals or other stops by the roadside. All the above are summer time uses of radio receivers, which, as a general rule, cannot be taken from the fireside during the winter. In the early days of the gramophone, very few people thought of talking such a machine to the seaside or with them on an extended tour. It was with the advent of these portable machines that the practice of taking a gramophone and a few records became the rule.

New Price -- 45/- Each



Brandes

The Table-Talker

makes a friend of the electrical impulse

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

Ask your Dealer for Brandes.

Now 45/- Each

FACTORY REPRESENTATIVES:

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

PHILIPS VALVE -- C 509

PHILIPS Research Engineers, after years of patient toil and care, have evolved a general purpose valve, C509, which will give results to suit the most critical amateur.

On account of its very large output it is specially suitable as a Power Amplifier for Loud Speaker work, yet its design makes it suitable for High Frequency stages. This Valve gives decidedly, a purity of tone with magnificent volume, while no trace of distortion is at any time apparent. Obtainable at all Radio Dealers. Sold with either Standard, English or American Caps, also the New UX Cap.

Price 13/6

Makers of the famous PHILIPS LAMPS.

C509 Characteristics :

Filament Voltage	4.5 - 5.3 volts
Filament Current	0.25 amp.
Plate Voltage	20-120 volts
Plate Current	10 m.A.

Let
your next
Valve be a



PHILIPS

MUCH LAUGHTER.

Many letters have reached the Sydney radio stations, asking that the laughing of the Kookaburras be broadcast. This would be easy enough if you could bring the birds to the station, count one—two—three and set them going. But old goburra flies round and comes and goes as he feels inclined, confident that everyone is his friend. Once or twice he has been placed on the air by radio, simply because he set up his call close enough to be picked up, but so far it has been found impossible to give him a set date and time on the programme.

However, it is expected that before the new year is very old, a microphone will be fixed in the trees of the Botanic Gardens or Taronga Park, especially to catch the notes of the wild birds. It is amusing to recall that recently, when "Uncle Monty," of 3LO, was in Sydney, he imitated a Kookaburra call from 2FC and a day or two after a lady wrote to say that when it came through the loud speaker her two tame jacksies who heard it joined in with Uncle Monty.

WELCOME to the ranks of 3LO artists is Miss Jane Blackmore, the popular contralto. Miss Blackmore's rich contralto was enjoyed by Melbourne audiences some time ago, before circumstances compelled her to relinquish her engagements and leave Melbourne. Now she is back again, her voice having considerably gained in strength and beauty by her prolonged holiday.

The following is the text of the very kindly Xmas and New Year Wishes broadcast by 3LO, and very faithfully represents the spirit of that broadcasting station:—"3LO, Melbourne, appreciates the many Xmas Greetings received from listeners-in all over Australia, and also the numerous expressions of appreciation of and congratulations upon the Xmas programmes. No pains were spared to make this a great radio Xmas, vibrating with seasonal joyousness and goodwill, and the many expressions of congratulation were greatly appreciated by all who took part in the efforts. We thank you one and all and wish you the Compliments of the Season."

Drydynamic!

What does it mean?

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

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

PHILCO

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

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

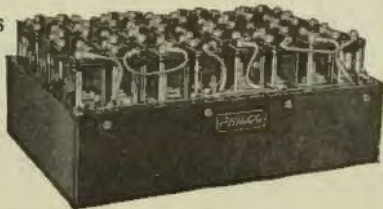
Obtainable from High-Class Dealers and Wholesale from

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Sydney.

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Melbourne.

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Adelaide.



See it—Hear it—and be convinced of the superlative qualities of this remarkably low-priced Receiver



The "Eclipse Super - Six"

Here is the most exclusive, the most powerful and selective of all Sets, a Super Six-valve, within reach of the man of moderate means.

at the unequalled price of £18/18/-
without accessories

or complete with first
quality accessories . £37/10/-

THE COMPLETE SET INCLUDES — Latest Magnavox Cone Speaker
Clyde Guaranteed Accumulator 6 201A Valves (Radiotron)
3 Large Capacity Winchester B Batteries Aerial Equipment.
Complete with cheaper quality accessories . . . £30

Cash or Terms

To those who are desirous of possessing a Set embodying only the most advanced attainments in Radio, the "ECLIPSE" can be bought with the absolute assurance that it will give the finest possible results in Broadcast receiving.

3 Salient Points of the "Eclipse"

1. The latest method of amplification used ensures the most wonderful tonal quality, as well as a maximum of volume.
2. Simplified tuning—Two dials only used.
3. Exclusive and distinctive cabinet design.

Hear the "ECLIPSE" demonstrated in our special Audition Room or in your own home.

2 SPECIAL XMAS OFFERS

MANHATTAN HEADPHONES.

The 'phones that ensure you perfect reproduction in speech, song or music. Regular Price 25/-

Special Price 15/-

THE "MANHATTAN JUNIOR ADJUSTABLE"

Height, 22 in., 10 in. Bell.
Usually priced at 75/-, a Special Big Purchase enables us to offer this efficient speaker at the astounding price of 32/6

(Post free anywhere in Australia).

Mick Simmons Ltd.

"The World's Greatest Sports Store"

Headquarters: 720 G HAY MARKET, SYDNEY
And at BRISBANE

All Readers' Queries Answered Here

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

J.L.J. (Newcastle).—Q. 1: I have built the Marco Four Valve Receiver and am able to faintly receive 2BL and 2FC on the speaker, and can get 2LO and 4QG on the phones. My middle condenser is of 0.01 capacity. Can you help me to better this?

A. 1: You do not advise me just what valves you are using. The secret of the Marco Receiver is to have the correct adjustment of coil L2. Condenser C2 must be in the circuit. Try hooking aerial on to top of L2 and earth up to the connection joining L2 to L4. This eliminates the ratio stage entirely. Next fit a 21 out of socket and connect aerial to top of L2 and earth to bottom of L2. Move this coil until maximum signal strength is obtained. Having understood this, then connect aerial in the orthodox manner, and readjust L2 to suit new conditions. But, for goodness sake, dispense with the 0.01 variable condenser and substitute one of the same size as the other two.

H.M.S. (Kingstree).—Q. 1: I have built the Reinartz Two-Valve Receiver, and am very pleased with it. I must say it is a great little set. But my trouble is that I can only get soft loud speaker strength, and I am wondering if the transformer being in line with the coil would magnetic coupling be accountable for this?

A. 1: Considering that you are 200 miles away from Sydney, I think you are doing very well. See last week's "Wireless Weekly" with instructions on how to add a valve to increase volume.

Q. 2: Could one or two stages of radio frequency be added to step-up the weak signals and ensure daylight reception? The stations listed on this set are as follows: On loud speaker, and in order of decreasing volume, 2BL, 4QG, 2FC, 2LO, 2GB, 2CL. On the phones, the above mentioned and 2AR, 2FY, but these are very weak, sometimes only just get the carrier.

A. 2: The extra stage of audio will increase the volume all round on all stations, but we very do not advise you to add radio frequency in any form, as daylight reception will be very difficult in any part of the country. I don't if even the Neutrodyne would yield satisfactory daylight reception at your distance. Many thanks for your very com. preliminary remarks.

R.E.A. (Hurstville).—Q. 1: I have built the Barkness Reflex, and it is without doubt all you claim for it. For the past fortnight it has been only able to get local stations at medium phone strength.

A. 1: It appears to me that either your batteries are run down or that the primary winding of one of the transformers is broken down. There are some spots on the crystal which will not respond satisfactorily in a Reflex set. Locate a suitable spot, and it will be found, when properly tuned, if the crystal detector is removed signal strength drops off considerably. I should impress upon you to watch your "B" batteries.

R.Q. (Pennhurst).—Q. 1: Would two Mullard valves P.M.2 or two Cosor W.8 be suitable for a Barkness Reflex, or would one Mullard P.M.1 (L.F.) and one Mullard P.M.2 or Cosor W.1 and W.8 be better?

A. 1: Any of these valves will be suitable. They are all good.

Q. 2: Would a large "B" battery voltage be necessary for the present valves or would 90 to 110 volts be sufficient?

A. 2: For maximum volume employ the highest plate voltage specified by the maker of the valves used.

Q. 3: Would both types of valves fit Standard UX 201A sockets?

A. B: Yes.

Q. 4: Is it possible to use this type of valve without causing distortion when compared with Radiotron UX 201A valve?

A. 4: I really can't see why distortion should be caused. My experience with them has been very pleasing indeed. With correct plate voltage, I have found the station to be equal to any other valve on the market.

J.T. (Darlington).—Q. 1: I am anxious to build a Neutrodyne receiver, but my panel is fairly long by 12ins. deep. I realize that the neutrodynes require to be spaced between 5 and 7 inches apart. Is there any means of making the Neutrodyne suitable for this panel?

A. 1: Your only chance would be to use Toroidal coils, which may be spaced within one inch of one another with satisfactory results. With both coils the condensers can be placed on the panel quite close to one another, and the results will be satisfactory. Lay out the board in this order: One Toroidal coil, first radio frequency valve socket, second Toroidal coil, second valve socket, third coil, then detector socket, and tunch the aerial in the remaining space. This is the best method of all to follow.

W.F.B. (Lane Cove).—Q. 1: Would you kindly let me know the best two-valve receiver to receive Interstate stations at reasonable phone strength. I have already built a receiver, but cannot get Interstate stations as claimed.

A. 1: Perhaps your main difficulty lies in coil tuning. This is an art which is not acquired in one night. Reading one of our sets we recently received a complimentary report on this set's distance getting qualities from one reader, whereas a second reader situated in the same street wrote asking us for advice on how to receive Interstate stations on a similarly designed receiver. We referred both people together, and both sets are now functioning satisfactorily. The "higger in the woodpile" lies in the art of tuning, so you are strongly advised to master this knowledge. Of course, mind you, the components used in your set must be of reasonably good quality and the layout and wiring given in our paper should be rigidly adhered to. Still, some form of Reinartz will suit you, and as there has been described two suitable one-valve Reinartz receivers we will leave it to you to choose one and add another audio valve.

H.W.J. (Hurlstone Park).—Q. 1: I have a crystal set, which, although it gives me Farmer's quite clearly, Broadcasters keep on coming in. I am unable to cut other station out. Can you tell me how to overcome the difficulty?

A. 1: Perhaps your crystal set is one of the earlier models, and it is now out of date. Build the Hamill Crystal Receiver described in "Wireless Weekly" of the 12th November, 1926.

Q. 2: I am desirous of building a four-valve set. Kindly let me know where to get a diagram?

A. 2: Look over the back numbers of "Wireless Weekly" and you will find three four-valve sets in the last few months.

H.W. (Bywood).—Q. 1: With the Extra-

ordinary One Valve Receiver I cannot get 2KY too clearly. Can you suggest something?

A. 1: Yes! shorten your aerial a few feet.

Q. 2: On New Year's morning at 1 a.m. I received a strange station very close to 2BL's wavelength. I could not get the announcement clearly, although it sounded like Yokohama. Can you tell me which station it was?

A. 2: Very probably it was JOAK, Yokohama, Japan.

Q. 3: What ratio of transformer was used in the two-valve Reinartz, recently described in "Wireless Weekly"?

A. 3: 5 to 1. When adding audio frequency you would require another 42 volt "B" battery coupled in series to give you the maximum strength.

J.R. (Summer Hill).—Q. 1: I have a five-valve Neutrodyne, which has been working very satisfactorily until lately. The festive season has evidently had some effect upon it, as it has somehow reversed itself. I get loud speaker strength when I plug in to phone jack and vice versa at loud speaker jack when listening to local stations, but I cannot get Interstate at all now. Can you please tell me what is the trouble?

A. 1: Look to the soldering of your jacks, or perhaps the primary of one of your transformers has broken down. This is very probable. Are you sure some of your friends have not been welding you a very happy Xmas. You know the plumber, water-pipe, and gas-pipe story.

Q. 2: Would a "C" battery improve my receiver?

A. 2: It generally does. Connect the "C" minus to the filament minus leads of both transformers and the "C" positive to the "A" minus terminal lead, instead of the orthodox connection. I have passed the other portion of your enquiry on to the writer for the article in question.

K.G.W. (Eastwood).—Q. 1: I want the circuit of a two-valve receiver giving complete selectivity, loud speaker strength on local stations, and to be capable of picking up Interstate stations on phones. I am three miles aerial from Pennant Hills.

A. 1: Add a stage of audio to the capacity coupled one valve receiver.

L.H. (Camperdown).—Q. 1: I have just bought a three-valve wireless set, and it has three coils on now 35-50-75. Would you give me a list of coils for the following stations: 2FC, 2BL, 2KY, 2HR, 2GB, 2LO, 2AR, 2UZ, 2CL, 2WF, 4QG, 2L, IYA, RGO.

A. 1: My word, you are somewhat sanguine. I should think you would be doing well if you got the local stations during the summer months. However, with the exception of 2WF, the coils you have will cover the wavelength ranges of all the other stations, but for goodness sake don't blame me if you can't get all the stations mentioned.

H.D.B. (Newfield).—Q. 1: I want to make a loud speaker set, and am not interested in getting Interstate stations, but tone and volume must be the keynote. What do you recommend?

A. 1: Either the Barkness Reflex of "Wireless Weekly," October 16, 1926, or the "Electric Two" in this issue.

J.C.H.W. (Parramatta).—Q. 1: Would you be good enough to send me a drawing of the five-valve Neutrodyne in "Wireless Weekly"

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S.B.

for Friday, October 22, 1926, as I am thinking of constructing this set.

A. 1: I would like to, but I am afraid it would take up too much time. Still, we are posting you a copy of "Radio" of the 5th instant, which has an interesting description of the details necessary in constructing a five-valve Neutrodyne receiver. The drawings are a bit bigger, and should be easily followed.

F.H. (Pelaw Main).—Q. 1: I have built a Neutrodyne, and the parts used are all good, but can only get earphone strength on different stations.

A. 1: Something serious is certainly wrong. Test all your components for continuity.

W.E. (Rose Bay).—Q. 1: I want a receiver able to give undistorted music with loud speaker strength on Sydney stations. Will the Harkness Reflex do the job, if so would two 17 plate condensers suit this receiver?

A. 1: Yes to both questions. Have a look at the "Elutroflex Two" in this issue.

T.W.K. (Smithfield).—Q. 1: I have constructed the three-valve receiver, and find that when I turn on my audio valve my detector valve flims considerably. When I plug in my detector valve and switch off my audio valve I can hear the local stations on the headphones. I am only using a 40 volt "B" battery, and I want to get fair success before I go to the expense of new batteries.

A. 2: Obviously, your fault lies in a worn or "A" battery. If you are using dry cells, recharge them, but if an accumulator is used have it recharged. But for goodness sake don't starve the receiver and expect to get results. You wouldn't expect a car to go without petrol, now would you?

W.H.B. (Wagga Wagga).—Q. 1: Could you supply me with the diagram of a "B" battery eliminator. Also the necessary parts for making same. I want it to deliver from 100 to 110 volts.

A. 1: The full constructional details for a "B" battery eliminator will shortly appear in "Wireless Weekly."

C.R. (Stroud).—Q. 1: I am forwarding you a sketch of the circuit of my five-valve receiver. With this, using 30 to 40 volts "B" battery, I can receive 25B, and 27C at first class loud speaker strength, but have no sign of any Interstate station. Some not even on headphones. Can you tell me what is the name of the circuit?

A. 1: The circuit you enclosed is two-stages transformer coupled radio frequency, detector and two stages of audio.

Q. 2: Could I greatly improve the set if I included a "C" battery, and provided a higher plate voltage for the audio valves?

A. 2: Oh, yes. You could even supply the plates of your radio frequency valves as well as your audio valves with 50 volts, and the strength of signals would be increased. The strength is slight, provided the coils are not too closely placed together. But why not build a Neutrodyne, or remodel your present set into a Neutrodyne?

R.P. (Eastwood).—Q. 1: I would like to know if the Marco Four would work satisfactorily as a three-valve set using the same material and specifications but cutting out the last audio valve on a double circuit jack.

A. 1: Yes.

Q. 2: Can I use Philips glow cell valves for this circuit. If so, what type of Philips do you advise for the one radio, one detector, and one audio?

A. 2: Write to Philips Glow Lamp Works, Margaret Street, Sydney, for their Handbook, and use those valves whose characteristics are similar to the characteristics of the 20A2. No alteration to the coils will, therefore, be necessary.

G.V. (Leichhardt).—Q. 1: I enclose three diagrams of different systems adopted to install a "C" battery in the Harkness Reflex. Which is correct?

A. 1: None. Forget all about a "C" battery.

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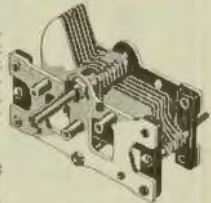


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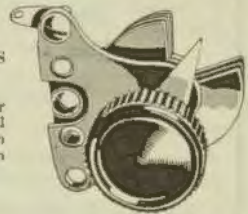
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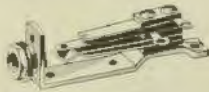
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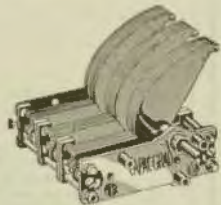
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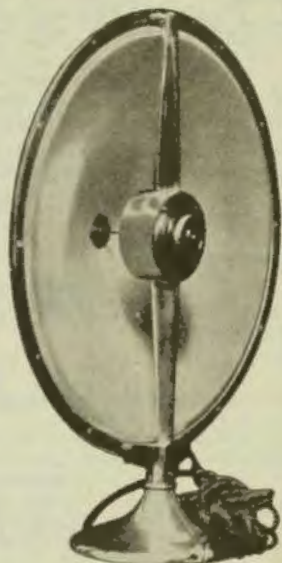
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Constructional details of this two stage audio amplifier will be given in an article in an early issue of "Wireless Weekly."

The doctor had two pretty children. One day a woman passing two small boys heard one say to the other: "Those pretty girls over there are the doctor's children." "Yes, I know," said the other. "He keeps the best for himself."

Husband: "My dear, a great physician says women require more sleep than men."

Wife: "Does he?"

Husband: "Yes, my dear—so—er—perhaps you'd better not wait up for me to-night!"

Bo: "Why does Jones keep staring at his plate all of the time?"

Hunk: "Doctor's orders."

Bo: "What!"

Hunk: "Yeah, the doctor told Jones to watch his diet."

"Ann, I hear you're sick."

"Yes, the doctor says I have the klepto mania."

"What do you do for it?"

"Oh, I take things for it."

"Here is a letter it would hardly do for us to publish," said the patent medicine quack. "A man writes: 'I have just taken a bottle of your medicine.'"

"Well?" said his partner.

"There it breaks off short, and is signed in another handwriting, 'Per Executor!'"

Patient: "Are you fond of lobster salad, doctor?"

Doctor: "No, I'm not fond of it, but I'm grateful to it."

A new dance is inspired by the movements of the forehead. There are dancers who are evidently inspired by the movements of the bull, judging by the way they shut their eyes and rush about bellowing if anybody gets in their way.

A Berkshire man has built and lives in a house up a tree. We understand that on the approach of a rate-collector he rises abruptly and accidentally knocks a gnarled old aspidiatra off the window-sill.

Barking Dogs Scare Burglar.

At a recent dog show the barking of the prize winning dogs was broadcast over the radio. Several opportunists left their machines switched on all night to scare burglars.

The dentist is the only one who can tell a woman when to open and shut her mouth, and get away with it.

At a recent motor-cycle gymkhana one competitor jumped his machine over four people reclining on the track. Motorists are sure they could accomplish this feat on the roads but pedestrians refuse to lie down until they have to.

If little motor cars get any smaller they'll have to hunt the pedestrians in packs.

Epitaph: "He had the right-of-way, but the other driver was a woman."

The Constitution isn't the only thing that follows the flag. So does the filling station.

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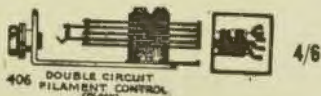
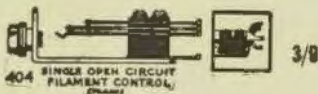
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