

WIRELESS WEEKLY

Broadcast Programmes a Week in Advance

VOLUME 11

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

NUMBER 1



*Raymond Ellis
& Rene Maxwell
2 FC ARTISTS
"The Lilac Domino"*

Friday, October 28, 1927.

Price Threepence



Daylight Reception

Interstate Stations

Attractive Terms Arranged. Small Deposit—Balance over Twelve Months

PRICES : from £32 up

Including Complete Sets of Accessories, and Loud Speaker.

United Distributors Limited

72 Clarence Street and 28a Martin Place, SYDNEY.

Sole Australian Distributors of "RAY-O-VAC" BATTERIES.

343 Queen St.,	27 Chesser St.,	26 Queen St.,	Cr. Jervois Quay & Harris St.,	66 Charles St.,
BRISBANE.	ADELAIDE.	PERTH.	WELLINGTON, N.Z.	LAUNCESTON,
664 Bourke St.,	MELBOURNE.		109 Collins St.,	HOBART
				Tas.

A Dry Cell Audio Stage Valve

With the Output of a Storage Battery Valve
RADIOTRON UX 120



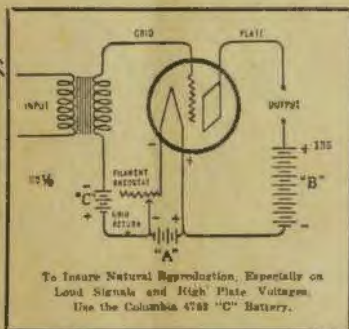
Characteristics:—

Filament Terminal Volts	3
Filament Consumption	125 amps
Plate Voltage	135

The new dry cell Radiotron UX120 is for use exclusively in the last stage of audio-amplification.

The Radiotron UX120 was designed to give greater Loudspeaker clarity and volume without distortion.

Obtainable
at
all Radio
Dealers



To obtain the full advantage of power valves, a higher plate voltage than is customary should be employed. This in turn calls for greater grid or "C" battery voltage for the correct operation of the valves. It is essential that a grid or "C" battery be used with power valves, as otherwise their consumption of plate current is so great as to exhaust the high tension battery rapidly.

Columbia 22½ Volt. Bias
Battery
No. 4768



This battery can be used as a "C" battery, or as a "B" battery in portable sets. It is especially designed for Bias work in conjunction with power valves UX-120, UX-171, and others. Provided with four screw terminals, giving negative voltage of 4½, 14½, and 22½. Of horizontal dimension, it measures 4-1/8 inches long by 2-9/16 inches wide and 2¾ inches high. Weight, 1-lb. Box.

PRICE 12/6 each



No. 4768

Write To-day for FREE
Illustrated Booklet
"Choosing and Using the
Right RADIO Batteries"

Messrs. Amalgamated Wireless (A'sia) Ltd.
47 York Street, Sydney

Please forward me your Free Illustrated
Booklet "Choosing and Using the Right
Radio Batteries."

Name _____

Address _____

NO

The Trade Now GETS What It Always— WANTED!



Harringtons New Premises. This modern building, which is conveniently situated at 213 Clarence Street, Sydney, comprises six floors, and is to be used exclusively to administer the wholesale business.

Up to the present time wholesale buyers of Radio supplies have had to complete their stocks by going from one warehouse to another.

But now Harringtons Ltd. have specially equipped a modern six storey warehouse at 213 Clarence Street. Here you can obtain absolutely EVERYTHING in Radio.

Have your whole order attended to by the one house. You will save money because of lesser freight charges and Harringtons liberal discounts. You will save worry by making one house responsible for the immediate despatch of your order. You will have the convenience of running only one account.

**Goodwill built on
Public Confidence
Since 1889**

Harringtons LTD

Head Office: 386 George St., Sydney

**Wholesale Warehouse:
213 Clarence Street, Sydney**

**Also at: Katoomba, Newcastle, Melbourne, Brisbane,
Adelaide, Wellington (N.Z.), Auckland (N.Z.)**

WIRELESS WEEKLY

VOL. 11, No. 1.

FRIDAY, 29th OCTOBER, 1927.

Sectional Broadcasting.

THE political fight in New South Wales could not be complete without radio. Broadcasting was brought to the aid of the parties. One station broadcasted a speech from each of the leaders, and left it at that, but two other class B stations gave their listeners quite a surfeit of political addresses.

That arrangement of things was quite satisfactory. The class A station gave only one speech from each party leader, and thus not only did not over do it, but also gave each party an equal chance to get its views on the air. The class B stations, on the other hand, are not under the same obligation to listeners generally. No revenue from listeners' licence fees is paid to that class of station, and, consequently, the general body of listeners have no real complaint.

If we must have programmes for a section or sections of the general public, then the station to provide the programme should not be a class A station. The second class of stations apparently was legislated for so as to enable that kind of publicity, propaganda or advertisement to be given. The policy of a class A station, so it appears to the writer, should be to provide a comprehensive service of general utility. No broadcaster can hope to please everybody, but a reasonable attempt can be made, as is being made now by stations like 3LO, Melbourne.

In this connection, it is interesting to note the American idea of broadcasting service, as set out by the National Broadcasting Company. In a recent announcement the freedom of broadcasting was defined as follows:—

(1) Public interest must determine the availability of every feature put on the air by the National Broadcasting Company. This must be reflected in the quality of the sponsored programmes in the character of the speakers, and in the subject of their remarks.

(2) No political, racial, or religious lines must be drawn in allotting the facilities of the National Broadcasting Company.

(3) In order to maintain broadcasting upon the highest possible plane, and to protect the interests of listeners, the National Broadcasting Company must retain the right at all times to select the programme features broadcast by its originating stations.

(4) While maintaining the principle of free speech by radio, the duty devolves upon the National Broadcasting Company of obeying the laws of the United States.

The conditions of control and financing in the United States are, of course, different from ours, but the principle quoted above is of special interest.

Catching Up with the Wireless World.

By R. E. CORDER.



"IS YOUR STATION WORKING?" is the familiar question to the switch-board operator of any large station, and on being told that the station is on the air, the reply comes, "Oh, it must be my set then; thanks!"

THE LATEST MEMBER OF THE 7ZL Birthday League is Mr. J. R. Worsley, of Margate, Tasmania, who qualified by maintaining the Mothercraft Home for a period of half-an-hour on his 80th birthday—Wednesday, October 12th, 1927.

AT THE KING'S HALL, Hunter Street, on Wednesday, November 2, at 8 p.m., two motion pictures on wireless, accompanied by a lecture, will be given by the Listeners' League of New South Wales.

The first of the two films will trace the development of communication from the fire blanket signalling of the American Indian to the intricacies of modern radio, and the latter half will show the hidden points of a radio set in a simple manner. In the second film to be presented, will be shown the construction of a modern dry cell radio battery in all its phases.

There will be a small charge made for admission.

THE NIGHT OF SATURDAY, THE 1st October, marked the first severe thunderstorm of the season in Brisbane.

Listeners who were tuned in to 4QG on this night would perhaps wonder at the station closing down so suddenly and without intimation. This action was taken to ensure the safety of the very delicate, and also costly part of the apparatus, from any damage which may have been occasioned by the discharge of static electricity (which accumulates in the aerial during such severe storms), through the transmitting apparatus to earth.

With the coming of the summer months, many repetitions of Saturday Night's conditions may be expected.

TIT FOR TAT.

The amateurs have one thing on us "listeners-in," they can talk back to the fellow to whom they are listening. Oh, well—it's just as well—just as well!

***** SAY IT WITH—

New Suburbanite: "Two packages of flower seeds."

Clerk: "Anything else, madam?"

New Suburbanite: "Perhaps you better give me a couple of radio bulbs; George always raves about them."

***** POUNDS OR AMPS?

Radio Fan: "What is the charge for this battery?"

Battery Expert: "One and a half volts."

Radio Fan: "How much is that in Australian money?"

ODE TO S.L.O.

The following Ode on S.L.O.'s Third Birthday was read by the Announcer, Mr. Dudley, on October 13th, 1927, at 8.45 p.m., and will be read with interest by all those to whom the larger outlook has an appeal—

Shout round the world, thrice happy babe,

Strangling the serpents of mischance,
And with aerial astrology

Lead on the stars in joyous dance,
Three times have now the ralling years
Confirmed thee on thy spacious throne,

The music of the Jocond spheres,
Is mingled daily with thine own,
And which is human, which divine,
The earthlier and the heavenlier parts,

Have crossed alike the ethereal line
That once divided human hearts.

There's none so poor nor distant now
In outer darkness needs to grope,
Thrice happy S.L.O. for thou

Canst make the whole wide world
Thy scope.

Shout round the world, thou happy voice,
For thus Australia shall advance,
And through the station of her choice
Shall pipe while all the nations dance.

E.F.

THERE are 4,403 free wireless licences granted to blind persons in Great Britain. Apart from this number a total of 2,234,988 broadcast receiving licences were issued in Great Britain up to June 30 last.

UNCLE RADIO AND KING ELECTRON (well known as bedtime story tellers at 5CL) are travelling through South Australia visiting country schools. During their trip they are making notes on the possibilities of broadcasting and television for educational purposes.

A LICENCE has been issued to a company known as the British East African Broadcasting Company for the purpose of wireless broadcasting in Kenya and the erection of a short wave station at Nairobi. The company is also using the Empiradio service for a direct commercial telegraphic service to London.

A WET EARTH.—It has to be done. One must have an efficient earth. So two bottles of perfectly good beer were poured into the ground on the top of a sun-baked hill on a scorching day.

It happened this way.

In order to establish communication between the starting and finishing points in the Hill Climb, a sub-event in the recent R.A.C.Q. Reliability Contest, and to enable a special electric timing arrangement to function, a good earth connection was necessary.

A piece of pipe was driven into the ground, but this did not prove satisfactory, as the ground was so dry. The 4QG representative who travelled with the party asked for some water to pour on the ground, but as none was forthcoming, he suggested pouring some of the refreshments down the pipe.

On the sunbaked hill, under a clear sky and amidst clouds of dust, it was hard to do it, but after two bottles of beer had been ceremoniously poured on the surface of the earth, the telephone and electric control worked perfectly.

A Great New Short Wave Field Opening in U.S.A.

(By Carl H. Butman)

By Courtesy of Burgess Battery Co.

ENTERPRISING amateur receiving-set builders and some few who have purchased short-wave sets, are finding new fields for their other explorations. There is a lot of entertainment on the air that many of us have been missing. It is very much worth while, for the stations which transmit programmes on the short waves, below the broadcast band, are unaffected by other programmes not being interfered with as are the regular broadcasting stations in the congested band lying between 300 and 545 metres or 550 and 1600 kilocycles.

There are at least 36 broadcasting stations offering short-wave programmes to-day under experimental licenses. Some of them are well-known like WJZ, which uses its regularly instead of 2XAE, its experimental designation, also WGY, which operates under eight experimental calls commencing with the figure 2 indicative of the second radio district; WBZ, the Springfield, Mass. Station, using the experimenting call of which is 1XAE and KDKA, which has two short-wave transmitters 2XX and 2XP.

Most of these stations are offering the short-wave fans the same programmes put out on their regular broadcast transmitters, a simultaneous broadcast being effected for relay purposes, but others are producing special programmes for listeners here and abroad. The chief reason for such transmission is to experiment with new broadcast possibilities and to increase the range of the stations, it having been found that such transmission travels to far greater distances, yet is received quite as clearly and with less interference than the programmes on the regular broadcast channels. If listeners can pick up our programmes in England, France, Belgium, Germany, Africa, South America and even New Zealand, and Australia, it seems that most of us are neglecting our opportunities, when all that is required is a new receiver. Commercial built short-wave sets covering 10 to 200 metres are available in modern radio supply stores and so also are the parts for assembling receivers to cover the short waves which carry radiophone entertainment.

Unfortunately the specific channels used by each station for these broad-

cast programmes are not known to the Department of Commerce, for they are licensed to carry on radiophone experiments on one of several channels running from 25.3 to 109 metres. Most of the well-known stations are understood to be operating on the five relay broadcast bands as follows: 26.3 to 27.3 metres; 30 to 33.1 metres; 52.6 to 54.5 metres; 60 to 66.3 metres and 105 to 109 metres.

Thirty-six broadcasting stations known to be offering programmes on the short-waves or high-frequencies are listed below. A new official list is now being prepared by the Department of Commerce Radio Section for early publication. These stations are listed as experimental stations, used chiefly for relay broadcasting on channels between 26.3 and 109 metres or 11,400 and 2750 kcs. They are designated by the initial letters X and located to districts by the figure which precedes the letters.

Nine stations have portable transmitters which are used for picking up programmes outside the stations and broadcasting for rebroadcasting on the main transmitters on their normal channels.

KDKA, 2XX and 2XP, Westinghouse Electric and Mfg. Co., Pittsburgh, Pa.

WGY, (eight calls), 2XAC, D, E, F, G, H, K and W, General Elec. Co., Schenectady, New York.

WBZ, 1XAE, Westinghouse Co., Springfield, Mass.

WHAM, 2XAC, Stromberg Carlson Tel. Mfg. Co., Rochester, N.Y.

WABC, 2XE, Atlantic Broadcasting Co., Richmond Hill, N.Y.

WEEI, 1XAG and 1XAF, Edison Electric Illuminating Co., Boston, Mass.

WJZ, Radio Corporation of America, Bound Brook, N.J.

WRAH, 1XY, Booth Radio Labs., Tilton, N.H.

WRNY, 2XAL, Experimenter Pub. Co., Coatesville, N.J.

WOR 2XAQ, Bamberger Co., Newark, N.J.

WRMU, 2XAO, Yacht "Mu 1," Grebe Co., of New York.

WAAM, 2XBA, WAAM Inc., Newark, N.J.

KJBS, 6XAR, J. Brunton and Sons Co., San Francisco, Calif.

KFWB, 6XBR, Warner Bros. Motion Picture Studios Portable, Los Angeles, Calif.

KNX, 6XA, Los Angeles Express, Los Angeles, Calif.

KFSG, 6XBA, Air Fan Radio Corp., Los Angeles, Calif.

KHJ, 6XAU, Times-Mirror Co., Los Angeles, Calif.

KFVII, 6XAK, F. W. Morse, Chicago, Calif.

KFQZ, 6XAL, L. E. Taft, Hollywood, Calif., Portable.

KFVJ, 6XBV, McWhinnie Elec. Co., Venice, Calif.

KNRC, 6XAF, Clarence B. Junau, Portable.

KGGM, 6XAI, Los Angeles Radio Club, Los Angeles, Calif.

KFQU, 6XBH, W. E. Riker, Holy City, Calif., Portable.

WRAH, 1 XAA, Stanley N. Reed, Portable, Providence, R.I.

KFBC, 6XBE, W. K. Azbill, San Diego, Calif.

KRLO, 6XAN, Freeman Lan, Los Angeles, Calif.

KJR, 7XC, 7XO, Northwest Radio Service, Seattle, Wash., Portable.

KWJJ, 7XAO, Wilbur Jermain, Inc., Portland, Oregon.

KFPY, 7XAB, Symons Investment Co., Spokane, Wash., Portable.

WBAO, 8XJ, Ohio State Univ., Columbus, Ohio.

WLW, 8XAL, Crosley Radio Corp., Harrison, Ohio.

WHK, 8XF, The Radio Air Service Corp., Cleveland, Ohio, Portable.

WNAL, 9XAB, R. J. Boswell, Omaha, Nebraska, Portable.

KOIL, 9XU, Mona Motor Oil Co., Council Bluffs, Iowa.

3XK is the experimental call of the C. Francis Jenkins radio laboratories at Washington, D.C.

3XN is the Bell Telephone Laboratory call at Whippany, N.J.

(We would appreciate advice from anyone hearing any of these stations.

—Editor.)



The Safety Valve

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

HIGH CHARGES.

Dear Sir,—I have read "Dealers" letter ("W.W.," 14/10/27) expressing better wireless conditions, and I think more correspondence on this subject is needed, and needed badly, for, I think, it reads with every person interested in wireless to assist in this direction. It is ridiculous to think that in such a progressive country as this that such high fees are charged for wireless dealing and listening-in, for wireless is an established necessity, as our telegraph and postal system. Going back in history we find that high charges were made for delivery of letters, and people found various means of avoiding payment, and still get the desired message, much the same as the wireless "pirates" of the present day. When the penny postage was introduced the result was an instant success, and history has proved itself in other directions. To encourage wireless is to eliminate or reduce the high charges for wireless dealing and listening in, for the loss sustained in one direction would be a gain in another, as thousands more would be interested in wireless, and pirates would be fewer.

INTERESTED READER.
Fyrmount.

RELIABLE.

Dear Sir,—Some time ago, if you remember, you sent me a "Wireless Weekly" dated October 20, 1926, with the circuit of the Old Reliable in to build in answer to a letter I sent you. With the aid of the above mentioned circuit and a little alteration I built the set and am able to tune in the following stations, 4QG, 2FC, 2BL, 2GB, 2UE, 3LO, 3AB, 5CL, 5DN, 1YA, 2YA, 3YA, 7ZL, JOAK, the two latter 'phones only. Is this remarkable for a three valve receiver or is it just an ordinary performance? There is a station I can faintly hear on the 'phones, but cannot get his call number; the time I get this station is between 1.30 a.m. and 2 a.m. Could you tell me what the station is, my dial reading 85?

Maryborough. E. A. BOULTER.

U.S.S.R. SOLVED.

Dear Sir,—The mysterious letters announced in English from Russian station, and heard by Mr. H. Kelsiek, of Cessnock ("W.W.," 14/10/27) can be explained in a few words.

U.S.S.R. stands for "United Socialist Soviet Republics," the official designation of modern Russia. Many people are under the impression that the letters represent United States of Soviet Russia, but this is not the case.

Should Mr. Kelsiek, or any other amateur, listen-in to PCJJ, Holland, on Wednesday or Friday mornings between 5 and 7 o'clock (local time), will they kindly inform me if the international language, Esperanto, is used from that station. I desire the information for record purposes, and would appreciate any advice.

Yours, etc.,
F. T. EIMON.

Randwick.

SHORT WAVE WORK.

Dear Sir,—I have built the short wave receiver that was published in the "Wireless Weekly" some time ago, and have been getting good results from it. I can get many long distance stations on it, including PCJJ (Holland) at good speaker strength, and also a station in Essex, England. The latter was not too clear, and I could not quite catch what he was saying, only Hello, Hello, station, Essex 2GU. New Zealand came in at good strength, as did 5DB Adelaide, and 7KY Tasmania. The two latter stations I could not quite hear the call signs, but it sounded like 5DB and 7KY.

I am using one detector and two audio valves. The coils are 22 g. enamelled wire on a 2 1/2 in. former. Aerial Coil 3. Primary 4 or 5. Secondary 6 turns. These coils give me the best results. I am using 0005 Var. condenser, var. dial, Philips A409 detector and one audio and B406 last audio valves.

2YU could be heard plainly all over the house, and it was a treat to hear it, as the static was fairly bad on the ordinary wave band. Am using Amp-lion speaker, type AR114.

For the ordinary wave band I use 45 Pra. and a 85 turn see coils and get splendid reception. I take 3 turn coil off and switch the aerial on to a .00025 Var. condenser, then on to the Pri. coil. This way I get better reception than on the three coils. Tuning it with the .0005 condenser.

On the speaker, Sydney, Melbourne and Brisbane stations can be heard clearly 300 yards off, which, I think, is very good.

Yours, etc.,
A. T. WEBB, JR.
North Lismore.

MORSE AGAIN.

Dear Sir,—In reply to I. Samsson ("W.W.," 7/10/27), re the Morse interference complained of by Mr. S. B. Lloyd, I live about a quarter of a mile from an amateur station in Bellevue Hill, and for this last three or four weeks I have been annoyed by his Morse signals. He seems to make a practice of starting his code just when the A class stations start their evening sessions. Two weeks ago it was so bad that it was almost impossible to get either 2BL or 2FC clearly. His code was on top, jamming it all; in fact, I had to give it up, trying to listen in. I have a friend living close by with a five valve set, and only last Saturday he complained of the same thing.

I might mention that this station was complained about some time ago.

Yours, etc.,
A.K.
Double Bay.

MYSTERY STATION.

Dear Sir,—Might I ask through your valuable paper if any reader can tell me what station I picked up to-night (Sunday, October 9).

The wave length is somewhere about 40 metres and announcements in a foreign language. The items included a long speech (also foreign), male and female vocal items, also stringed instruments, all of which came in at full loud speaker strength with three valves (clearer and lower than 2AQ).

Yours, etc.,
Queensland. E. N. PREAVES.



Joe Aronson's famous symphonists at 3LO busy working out effects for new dance numbers.

Running Description of Cup by 3LO and 2FC

RACING IN THE AIR.

THE Cup—a signal for enjoyment for so many thousands (including bookmakers)—is a season of weep and lamentation to broadcasting companies. There is so much to see in, so many chances of slipping, so many extra thousands listening in and judging the pleasures of a wireless set on the way the descriptions of the classic races come over the air, that a station sees the end of a Spring Meeting with relief. This year, 2FC is going to re-broadcast 3LO's description of the Melbourne Cup, with some more of the most important races. This re-broadcasting by an Inter-State station is an excellent thing. Some few weeks ago, I urged greater co-operation in this respect. It is pleasant to see that it is being done, and in a reciprocal way. Three nights recently 2FC picked up the band of the 3LO studio, and Sydney people danced to music over 500 air miles distant.

Co-operation along these lines will save a good deal of money, for many ways of utilising items in common will suggest themselves as time goes on. Broadcasting need not be made a cut-throat business.

RADIO PLAYS.

NOW that the competition for radio plays has been decided, there should be at least a score of clever, interesting plays available for transmission in the near future.

The competition was widely taken up and among the three prize-winners, and those whose plays were very highly commended were a New South Wales woman, Tasmanian and West Australian, proving how widely spread was the interest in the contest.

The prizes have been awarded to the following:—

First: Mrs. May Murphy, David-street, Northcote (Victoria).

Second: Miss Helen Armstrong, Clear Hills, Dunning (N.S.W.).

Third: Mr. Jack Curlett, Railway Avenue, East Caulfield (Victoria).

Over a dozen received warm commendation from the judges, a proof that the winning trio should be worth listening to. It will be interesting to hear how far the winners have developed a new technique, or if they have followed the old stage conventions.

ARMISTICE DAY FIXTURES.

WE are approaching one of the most solemn ceremonials of the year. No day is quite like Armistice Day, not even Anzac Day itself, for the greater includes the less, and the Armistice Day exercises are Empire-wide in their significance. Broadcasting has come to widen the scope of the ceremonies, so that hundreds of thousands may take part in them by listening to the metropolitan ceremonies. This year, in addition to the usual services on Parliament House steps, Melbourne, is to have two ceremonials of great importance. One of these is the laying of the foundation stone of the great projected War Memorial in the Domain. This great building destined to become our most significant temple has been long in materialising. The stone to be laid on Armistice Day will signalise its commencement.

The other service is that to mark the laying of the Foundation Stone of the War Memorial of the Melbourne Grammar School. This will be done in the afternoon, after the bigger event.

There are no rivals to the Philco.

What is Trickle Charging?

By C. M. WYNNE, Director of Exports, Fansteel Products Inc.

This method of charging storage batteries is not only confined to radio—it has been adopted in other fields.

TRICKLE charging means the system in which a battery is kept on continuous (trickle) charge from a charger that is connected in turn to an AC power line. To put it another way, in trickle charging, power is supplied to the apparatus to be operated through a battery from an alternating current source. The charger is permanently connected to this AC line on the one hand and to a storage battery on the other. The charger rectifies the alternating current into direct current and charges the battery at a low rate. The rectified direct current is stored in a battery and is used to operate the apparatus. Since the charger is always turned on, it automatically replaces any current used by the battery in operation and keeps the battery always at full charge. Trickle charging, then, simply takes alternating current, converts it into direct current by means of the charger, and stores and holds in reserve this direct current by means of the battery.

As a source of economy and unflinching, uniform power, trickle charging "A" storage batteries for radio reception has become almost universal practice, wherever electric alternating current is available.

Trickle charging undoubtedly lengthens the life of storage batteries compared with the heavy duty charging so prevalent in the past. However, for an occasional emergency that may arise, or for the charging of car batteries, trickle chargers are now so constructed that by detaching and reattaching one wire they may be converted into heavy duty chargers by the novice.

The many types of chargers on the market give more or less satisfaction, therefore the deciding factor in the selection of a charger should be its cost of operation and upkeep. The majority of chargers utilize cartridges or tubes as the rectifying element; these elements are guaranteed for approximately 1,000 hours, when they have to be replaced, making them nearly as expensive as the old style dry cell batteries. There are chargers on the market, however, that utilize a mineral element as a rectifier, such as "tantalum." As this mineral is practically indestructible, these chargers last indefinitely and the cost of upkeep is consequently very low.

The man who buys his first set of three to five tubes also buys a storage

battery, and to him the cost of battery charging is of paramount interest, but it is not long before he exchanges his old set for one of more power and then enters the question of eliminators or power supply units that combine within themselves an "A" or an "A" and "B" supply without extra chargers.

Again comes the question of permanency and operating costs. The "A" eliminator, a self-contained unit, eliminating "A" battery charger, and wet or dry "B" batteries is unquestionably the most economical for any receiver of five or more tubes.

However, the mineral rectifier is given preference for its economy, absence of all noise or hum, its uniform operation, and lasting qualities; there are not tubes or cartridges to replace. The addition of water four or five times a year is all that is required.

Radio set manufacturers have gradually reduced the number of controls on receivers from four and three to the present one and two. As this re-

duction was made in response to public demand it seems inconsistent for eliminator manufacturers to place one or two controls on their units.

While it is true that the many different sets require filament current ranging from 45 to 250 volt, the desirable eliminator is that which automatically supplies the exact voltage required without regulation. It is folly to take controls off the receiver and place them on the eliminator; nothing is gained by such a move.

Most people know of trickle charging only in radio, the demand for which has increased to an extent that is little short of phenomenal. Over 200,000 trickle chargers of one make alone were sold for radio operation the first season they were put on the market. Yet trickle charging is rapidly becoming standard in many industries. The same advantages of economy and reliability that has made trickle charging such a success in radio makes it necessary in other fields.

Loop Aerial Will Eliminate Interference

IN some locations it is almost impossible to separate stations with a sufficient degree of selectivity so that the programme from one may be enjoyed without having another one in the background. As conditions have changed considerably within the last year, many sets which functioned perfectly a few years ago now lack the selectivity to separate stations working on wave lengths of only a few meters difference.

There are several things we can do to the old set to correct this condition. If only one station is causing interference the addition of a low loss wave-trap will minimise its broadness. If a number of stations overlap, then the use of a combination of wave traps or a loop will be necessary. A combination of wave traps would require the use of a coil windings are separated then the loop connection should be made to the other end of the secondary.

By throwing the switch to the proper side the antenna or loop may be used. The switch may be mounted within the cabinet or on the back.

Loops Require Many Valves.

Low powered sets of only a few tubes will not work well with a loop, and due to their insensitivity will require an antenna for best results. Multistage sets of three tuned or untuned stages will work well on a loop. Of course, we will not get the pickup of an antenna, but we will certainly get greater selectivity. By using the new 300A type detector tube some of the decreased pickup of the loop will be compensated for by the added efficiency of this sensitive tube. Due to its directional properties, the loop will aid in reducing interference, not only from overlapping stations, but also from static, much of which originates in the south and will be at a minimum when the loop is pointed east and west.

If the set still tunes broad after the loop is connected, it is probably due to induction between it and the antenna, and the antenna should then be grounded. When the antenna is used for receiving, it should be in its normal position, that is, connected to the set instead of grounded.

It's All in the Air

Coming Features in the
Broadcasting Programs

THE MELBOURNE CUP and other events will be described by "Newbury" and broadcast by 3LO, Melbourne, on Tuesday, November 1st.

THREE DAYS Ballarat Festa broadcasting by 3LO, Melbourne: Grand concert, November 9th. Grand ball, November 10th. Annual show, November 10th. Community singing, November 11th.

"THE TWO VAGABONDS": David Hurt and Carlton Fay are back in Sydney, and 2FC listeners will welcome their old favorites. They will add to the enjoyment of the programme on Saturday night, 29th October.

"CASTLES IN THE AIR": How many did Rowena Ronald build, we wonder, and contrary to the usual fate of these structures, how well hers have materialised. 2FC will take excerpts from this attractive musical comedy on Friday evening, 28th October.

CHRISTIAN HELLEMANN has been appointed organist at Christ Church, St. Laurence. Mr. Hellemann is a regular 2FC artist, and his recitals will be broadcast by that station. The first of the new series will be held between 3 and 4 on the afternoon of Thursday, 27th October.

THE PRESIDENT, National Rose Society, Mr. T. A. Stewart, will broadcast a talk on roses from the studio of 3LO, Melbourne, and on Wednesday, October 26th, at 3 p.m. The opening by the Lord Mayor, Sir Stephen Morrell, speech of the Annual Rose Show will be broadcast from the Masonic Hall.

"AND THE MORE WE ARE TOGETHER": What does that remind you of? Why "Radio Revellers," of course: it's their anthem. The Chief Reveller, Laurence Halbert, is busy rehearsing his party for their appearance at 2FC Studio on the evening of Saturday, 29th October. All the old hands will be on deck—Shirley Cooke, Charles Lawrence, Harrison White, and Wally Baynes, and to give an extra sip to the evening's entertainment Rus Carling will give a running description of some of the events at the Speedway Royal.

ON THURSDAY, October 27th, at 3 p.m., his Excellency the Governor-General, Lord Stonehaven, will open the new Presbyterian Girls' College at Geelong. The speeches will be broadcast by 3LO, Melbourne.

LINDLEY EVANS is back again, after conducting examinations at Wollongong. He assured us this is the very last of his wanderings for some time, and we are very glad, for there is no more popular artist at 2FC. He will be in the Studio on 30th October.

THE SPEECHES at the reception to his Excellency the Governor, Lord Somers, at Shepparton, at 11 a.m. on Wednesday, 26th October, to be followed by the opening by his Excellency of the Shepparton Show, will be broadcast by 3LO.

THE RIGHT HONORABLE L. C. AMERY, Secretary of State for the Dominion, who is visiting Australia, will broadcast from the studio of 3LO on Sunday evening, October 29, and on Monday evening October 31, the speeches at the State dinner at Parliament House will be broadcast.

"HIS LITTLE BAT AND BALL": How to wield the willow, and the noble art of leather hunting—this valuable instruction will be offered to 2FC listeners, on Friday (28th) afternoon, when a running description of the big match to be held at the Sydney Cricket Ground—N.S.W. v. New Zealand—will be given.

BEETHOVEN'S DELIGHTFUL opera "Fidelio" will be produced by the Malba Conservatorium Opera Society, Bartleman's Male Choir, and the Melbourne Symphony Orchestra, under the direction of Mr. Fritz Hart, and broadcast by 3LO, Melbourne, on Wednesday evening, October 26th.

RENE BIRKETT will give a recital in the King's Hall on Wednesday, 20th October. This clever young artist is from the studio of St. Vost Jansson, noted violinist, and proud possessor of some of the finest old fiddles in the world. Listeners to 2FC will have an opportunity of hearing selected items from the recital.

DESCRIPTIONS of the events at the Associated Public Schools combined sports by Mr. Wallace Sharland will be broadcast by 3LO, Melbourne, from the Melbourne Cricket Ground, on Friday, October 28th.

ON THURSDAY, OCTOBER 27th, at 7.45 p.m., a talk by Marie Burke will be broadcast from her dressing-room at the Theatre Royal, where "The Whole Town's Talking" is now being produced by J. C. Williamson, Ltd.

THE FOUNDATION STONE of the Memorial Chapel, Xavier College, Kew, will be laid by his Grace The Most Reverend Dr. Mannix, on Sunday, October 30th, at 3 p.m., and the speeches at the ceremony will be broadcast by 3LO, Melbourne.



Senya Shorokov "The White Army Tenor of the Dan Cossacks" who is singing at the Studio of 3LO.

Buy a Burgess and Cut Battery Cost.

"MUSIC WEEK," shortly to be held in Brisbane, will, no doubt, have a far-reaching and educative effect on the minds of the broadcast listening public, as well as those who attend the recitals, as arrangements have been made for the broadcasting by 4QG of some part each evening of the big musical rally.

ST. LUKE'S HOSPITAL, DARLINGHURST: The opening of St. Luke's Hospital on Friday afternoon last, 21st inst., by His Honor, Justice Street, Chief Justice of N.S.W., was broadcast by 2FC. Mr. A. M. Hemmley, Chairman of the Board of Directors, opened the proceedings and presented the key to Justice Street. His Honor then addressed the large gathering, and declared the Hospital open. The dedication service was conducted by the Right Reverend Gerard Addington D'Arcy Irvine, Bishop Coadjutor of N.S.W.

"MIKE-ROPHONE": We have been asked to publish to-day what is perhaps the most unusual wedding announcement ever encountered. We have not received the information on unimpeachable authority, and frankly we are inclined to suspect one of two jealous "Mikes" at 2FC who are in league against "Old Bill." In short, we are asked to advise our readers that "The Wedding of Mike" is to be solemnised in the 2FC Studio to-night, 26th October. We feel we want to offer him our congratulations and good wishes, but we cannot wholly reconcile ourselves to this drastic change. So readers, listen to 2FC on "Mike's" wedding night, and let us know if he really did get married, will you?

FRESH FROM THEIR triumphs at South Street Competitions, Ballarat, comes the Malvern Symphony Orchestra, to Studio 3LO Melbourne, and listeners will be glad to hear that this clever body of musicians not only carried all before them, but they earned a special word or two of praise from the adjudicator, Mr. Fritz Hart. When it is realised that the standard set by South Street for all classes of entries, orchestral items in particular, is very high, the success of the Malvern Symphony Orchestra is all the more praiseworthy. A feature of their programme from Studio 3LO Melbourne, will be the best pieces which carried them on to honour and glory at Ballarat, also some special selections from little known works, that have not been broadcast previously.

THE NUMBER of licensed wireless listeners in Germany increased during March by 51,664 to 1,635,728. This figure is, of course, still considerably behind that of Great Britain.

THE LIGHT FANTASTIC: Merry devotees of the most graceful and diverting exercise in the world have been well pleased with the dance bands which have been heard from 2FC Studios lately. A different band has appeared each night, under the direction of such capable men as Cyril Coy, Hal Vane, Cec Morrison, Ken Stubbs and F. Perry. To this attractive list will be added the Ambassadors Orchestra, which gave its first performance through 2FC on Saturday last, 22nd October. In future this orchestra will be heard three nights each week—Tuesday, Thursday and Saturday.

AS MAY BE READILY imagined, the mail bag of Mr. Maurice Dudley, the popular Announcer from Studio 3LO Melbourne, is always very full, but he confesses to a particular weakness for extreme youth and old age, and his most welcome correspondents are the kiddies that write to him telling him about their pets, and the old people who write, especially after an old time night has been staged from the Studio, lamenting the departure of the "dear old days." One very youthful admirer wrote, "I was going to send you some poppies, but I fell in the nettles as I was trying to pick them, but I'll send you a piece of my birthday cake instead!"

THE SPECIAL attention of Listeners is drawn to the fact that on October 30th, at 8.0 p.m., an exceedingly interesting concert will be broadcast from the Capitol Theatre by Studio 3LO Melbourne. The concert, which is to aid the Lord Mayor's Fund, will be one of the finest ever presented in Melbourne, and, on the orchestral side, The Melbourne Symphony Orchestra, Capitol Theatre Orchestra, and Collingwood Citizens' Band, will combine in such well known Overtures as "1812" and "William Tell."

MELBOURNE CUP: Nirvana of the aristocrats of the turf, takes on, if possible, added interest this year, by virtue of the fact that not only will Australians on their native soil hear the description of the famous race, but those far from the land, also, who will benefit by the dual transmission which 2FC have arranged. The broadcast will be carried out on a low wave length, as well as the usual 442 metres. Overseas listeners will, therefore, have an equal sporting chance of favorable reception.

SPECIAL STAFF FOR COUNTRY.

A special staff is employed by 3LO to carry out these country broadcasts. Recently at Geelong, no less than three different events had to be put on the air during one afternoon. This necessitated the use of 3 sets of apparatus, and required the attendance of three Engineers, and four expert describers. Often it happens that relays are broadcast on several consecutive days from the same provincial city.

ARTHUR APPLEBY BENEFIT

CONCERT: It is to be held at the Conservatorium Hall on the evening of Monday, 31st October. Items from this Testimonial concert to be tendered to Mr. Appleby, well known Sydney teacher of singing, who is unfortunately incapacitated for further professional work, will be broadcast by Station 2FC, to whom exclusive broadcasting rights have been given.

EMPIRE BROADCAST: Cable advices from London state that one of the outstanding features of the 2FC Empire broadcast programme, was the clarity with which the message delivered to Australian artists in England by Mr. Alfred O'Shea was received in the British Isles. Mr. O'Shea sent short messages of greeting to each of the following:—Peter Dawson, Harold Williams, Roy Agnew, Fred Collier, Florence Austral, Essie Ackland, Reginald Morphew, Malcolm McEachern, Harold Stevens, Arthur Beniamin, Brown Mummery, Ross Alba, Ethel Osborne, John Amadio, Elsy Treweek. The same cable stated that Mr. O'Shea's subsequent song—"Aria from La Boheme"—was perfectly received on the other side.

The following is an extract from a letter received from J. C. Williams, Kottayam, Travancore, S. India, in connection with the first Empire programme broadcast by 2FC on the 4th and 5th September:—

"I must congratulate you on your Perth and Sydney stations' Empire broadcast on 32.5 metres on the 3rd and 4th of this month. I received both these stations and was especially pleased with 2FC's announcer. He has, in my opinion, a most wonderful voice, and I dubbed him on his announcement on Sunday, the 4th September, as "the man with a silver voice." Messrs. Farmer and Co. are also to be congratulated as the prime movers. The striking of the Sydney Town Clock of 4 a.m. was equally as loud and clear as that of the Ceylon Colombo Town Clock. Regarding 2FC, I shall be ever so grateful if you will please drop me a post-card on receipt of this letter informing me of the days and time (your Sydney time) of 2FC's short wave transmission."

Do You Observe Battery Etiquette?

IN connection with the forming of wood insulated batteries in particular, constant potential charging methods are impractical. This method of charging is also impractical for the general run of radio batteries that are being returned by the customer for recharge.

Radio batteries are discharged at low rates over long periods of time and, as a result, gradually accumulate sulphate, deep in the pores of the plates. The customer very seldom charges his battery completely, with the result that this deep seated sulphate is accumulated to the point where eventually just the bare surface of the plate is in action.

A battery in this condition may be placed on the line for a short time, as the customer is in the habit of doing, and the voltage will rise to two volts a cell, or thereabouts, which the customer considers sufficient and the battery is then taken off charge and placed in service, with the result that almost immediately there is a noticeable drop in voltage and in a day or two at the most the battery is inoperative.

Charge at Low Rate.

This battery requires a reforming charge, which must be given at a low rate over a long period of time. It is evident, then, that if a battery in this condition should be placed on the constant potential system, very serious damage would immediately result. The plates, in fact, might be totally ruined in a very few hours.

In place of constant potential, some series line such as a Tungar or Colmo set should be available for charging. This charging should, of course, be done at not more than the rates indicated on the instruction card accompanying the battery.

The customer should be carefully sold on the idea that the long period of time necessary on the line is made necessary because of the periodical undercharging that has been given to the battery.

The charging rate of any particular battery is fixed, but it is capable of resisting the pressure of voltage delivered by the generator or other charger.

This is, of course, dependent on the degree to which the battery is discharged, its age, internal condition and its temperature when put on charge.

Then the voltage of the generator must be regulated to take care of any battery in an operative condition. An inoperative battery would show up immediately by taking an excessive amount of current on con-

A few simple rules that will help to prolong battery life

stant potential and should be removed from this and placed on the series line at once. This is assuming, of course, that all batteries are immediately placed on constant potential when received by the service station.

Much the better practice would be to make it a rule that all radio batteries should go immediately to the series line and under no circumstances should be placed on the constant potential.

The reason for this is that, as outlined above, the average radio battery has deep seated sulphate, which necessitates a very slow rate of charge to prevent serious damage.

This slow charging at a low rate cannot be accomplished on constant potential and for this reason, if for no other, the battery should go directly to the series line.

A radio battery that has been out in service must be treated as though it were an unfilled wood battery being given the initial charge.

Radio batteries should be placed on charge at the specified normal rate or less and this rate continued until the voltage and gravity show no perceptible rise over two periods of five hours each. Do not depend on memory—write down the readings at each period.

Temperature Important.

Naturally, during this period, the temperature should be frequently checked and the charge interrupted if at any time the temperature should exceed 110 degrees Fahrenheit.

Further precaution should be taken with any battery in which the gravity rises much above 1.300. Such a battery should immediately be taken off the line and emptied of all solution. It should then be refilled with a very dilute electrolyte in the value of about 1.150 to 1.200 by 1.200 specific gravity.

The charge should then be resumed and continued until, as noted above, the gravity and voltage stop rising over two five-hour periods.

The battery should again be emptied of all solution and refilled with fresh electrolyte of approximately 1.2290 specific gravity.

This will give a uniform reading throughout the battery. The excessive acid will have been removed from the plates and any impurities that may have been introduced into

the battery will also have been removed in the changing of electrolyte.

This practice is to be recommended where a customer has had a B battery that may have been charged frequently, but shows a tendency to drop in voltage very rapidly with very little drop in gravity.

A battery in this condition might best be dumped immediately and refilled with low gravity electrolyte and then treated as above outlined.

Should a battery be charged over a long period of time with a gravity much above 1.300, there is a strong probability that antimony will be deposited on the surface of the negative plate, with the result that self-discharge will be set up in the battery and its performance will be very unsatisfactory.

This again is a reason why the above outlined method is advisable when treating radio batteries.

Although all of these points deal particularly with B batteries, the practice should also be followed in the case of A batteries, where necessary.

A batteries, however, seldom get into quite so serious a condition as the B batteries, due to the fact that they are more frequently charged and are charged at higher rates. Then, too, they are worked harder and all in all, they keep in a much more active condition.

Batteries that have been filled with excessive gravities of electrolyte and batteries that have not had the proper forming will most certainly give unsatisfactory performance in the hands of the customer with the result that much dissatisfaction will be shown and considerable service will be necessary which otherwise a service station will not be called upon to render.

RUSO AND BRADFORD: Having but recently returned from their tour of India and the Far East, Signor Ubaldo Ruso and Miss Lynda Bradford are shortly to broadcast from Studio 3LO, where their operatic duets and solos are sure to be greatly enjoyed.

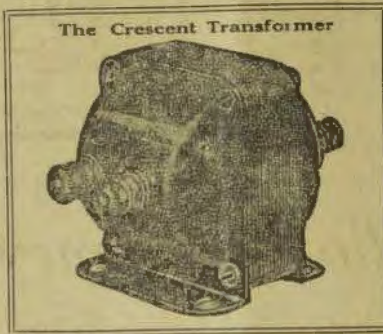
Both the Signor and Miss Bradford express themselves delighted at the reception they are getting from vaudeville patrons, and say they consider it a wonderful tribute to the Old Music, and the real appreciation of the average person for this type of melody, for they have altered their programme very little to that given during their tour of India—but have kept it to the same high standard.

This Time—Be Sure USE AN AUDIO TRANSFORMER THAT WILL NOT BURN OUT

THE Crescent

will improve any Radio Set

Ratios 6 to 1 for 1st stages; 3½ to 1 for 2nd stages. They reproduce pure music and clear speech.



Guarantee

THE CRESCENT Audio Transformer is guaranteed by us against burn-out for one year.

BUY A PAIR NOW:

13/6

EACH

BUILD YOUR AMPLIFIER FROM PARTS

which are guaranteed to give satisfaction.

AUDIO TRANSFORMERS.

Econotran, Ratio 3½ to 1	8/6
Karas Harmonik, 4 to 1	34/9
Jefferson 31, 3½ to 1	15/-
Emmeo, 31 or 5 to 1	17/8
Advance, 31 or 5 to 1	17/6
F.M.C., 31 or 5 to 1	13/6
Crescent, 31 or 6 to 1	13/6
A.W.A., 31 or 5 to 1	18/-
Ferno, 31 or 5 to 1	16/-

JACKS.

Double Circuit, 2/2; Single	1/7
-----------------------------------	-----

VARIABLE CONDENSERS.

Naald 3-Gang Drum Control, .0005 ...	£3/17/6
Igranik 3-Gang for Solodyne, .0005 ...	£6/12/6
Ripaults Lateral Action, with Vern. Dial, £1/3/3	
Continental S.L.F., .0005	9/6
Certified Improved S.L.F., .00035 or .0005 ...	9/9
Eco Hollow Spindle Condensers, .0005 ...	10/-
Advance S.L.F., .00025, 9/6; .00035, 10/-; .0005	10/6
Advance Centralign, .00025, .00035, 12/-; .0005	12/6
Emmeo Stratelyne, .00025, .00035, 12/-; .0005	12/6
Fixed Condensers, .001, .002, .0001	1/6
Fixed Condensers, .00025, with Clips	1/9

THE HIGHEST GRADE VARIABLE CONDENSER MADE THE KARAS ORTHOMETRIC .00037 **33/6** THE IDEAL NEUTRODYNE CONDENSER

Resistance Coupling, 201A Valves	11/3
--	------

VERNIER DIALS.

The Emmeo Metal	6/6
The Emmeo Bakelite	7/6
The Pilot Art	7/6
Pilot Klorrad	6/9
The B.M.S. Ornamental Dial	7/9

HEADPHONES.

The Cannonball, 4000 ohms	12/6
Emmeo, 4000 ohms	21/-
Claritone, 4000 ohms	21/-

Resistance Coupling Kits (3 stage)	24/-
Precision Voltmeters Read A, B, or C. ...	12/6
Solodyne Kits, Radiokes	£3/15/-
Solodyne Kits, Grodan	£3/7/6
Neutrodyne Kits, Wetless	£1/7/6

NEUTRALISING CONDENSERS.

Advance	4/6
Philmore	4/3
Grodan	3/9
R.C.C.	3/-
Reinartz Coils	12/6

COUNTRY CLIENTS: We pay carriage on all orders of 10/- and over, except on Speakers, Cabinets, Batteries and Value Payable Post Parcels.

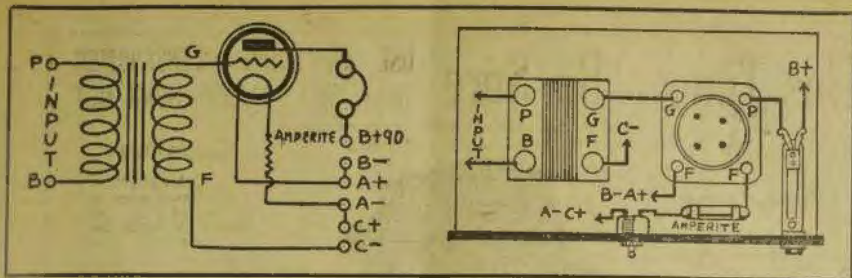
For QUICK SERVICE address Mail Orders to ECONOMIC RADIO STORES, 492 George St., Sydney
"YOURS FOR LOWER PRICES."

THE ECONOMIC RADIO STORES

PARRAMATTA:
Cor. Macquarie and Church Sts.
Phone: UW 9601.

SYDNEY:
25 NEW ROYAL ARCADE,
Phone: M 3049.

NEWCASTLE:
569 Hunter St. West.
Phone: New. 1622.



Adding Audio Frequency Amplification to Your Present Receiver

A CONSIDERABLE number of readers have written us recently requesting information on how to add 1, 2, and 3 stages of audio frequency amplification to the existing set. There are many different means open to the radio constructor of to-day, and it is the object of this article to discuss these different means in their entirety.

The purpose of audio frequency amplification hardly need be discussed here, but for the benefit of the absolute beginner a brief note may be made. Over and over again have many people desired a little more volume from their sets, and to do this it is necessary to add audio frequency amplification, or as it is known in Great Britain, note magnification. This system increases the volume of signal strength after it is rectified by the detector and should not be confused with radio frequency amplification, which is used for the purpose of building up the strength of incoming energy before it is detected.

That there are certain sounds in existence which cannot be heard by the human ear is a known fact, and these sounds are known as being of a high frequency, so high that the human ear cannot respond to them. For the sake of this explanation, let it be understood that sound is generated by means of vibration. These sounds are conveyed through the atmosphere to the ear, by means of what are known as sound waves. They differ entirely in most respects from radio waves, their characteristics being altogether

dissimilar. It is not our wish to go into a deep technical discussion on this subject, but suffice it for the moment to say that any energy of a frequency above approx. 10,000 cycles per second cannot be heard by the human ear unless some form of step down or rectification takes place.

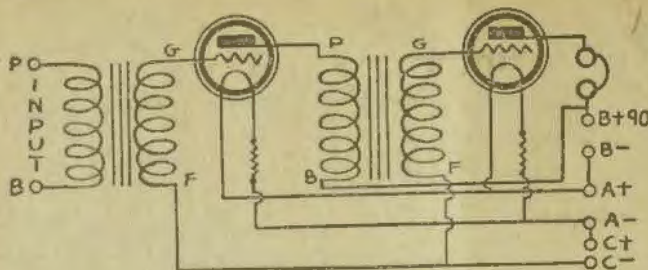
The purpose of the detector in any set is to rectify the radio or high frequency energy to such limits that the ear can respond to the vibrations by virtue of the headphones or the loud speaker. Now the average one valve receiver is not sufficiently strong enough to work a loud speaker, the exception being, of course, some form of reflex receiver where, although only one valve is used, the output of more than one valve is gained. This brings us to the point of realising that it requires generally more than one valve to produce loud speaker strength, so it is necessary that an additional valve or valves should be used. Now these valves must be added after the detector valve which renders signals audible to the human ear, hence the term audio frequency amplification.

There are 3 popular forms of this amplification, namely, transformer coupled, resistance coupled and impedance coupled. The first mentioned method is the most popular of all, and is, therefore, more common and better known to the average person than either of the other two methods.

Some people claim that transformer coupled audio frequency amplification, while it gives good volume loss

greatly in purity of signal strength; in fact, it causes a certain amount of distortion. This may or may not be true, but where it is found that distortion is present there is usually a reason for it. To-day now that there are such a number of special purpose valves available to the home constructor, distortion should be a thing of the past. The claims made for resistance couplings are known to most sections of this method proclaim that there is nothing to equal it for purity.

Resistance coupling, or as it is frequently known, resistance-capacity coupling, is a method of connecting valves of a resistance amplifier in cascade by means of resistances. A high resistance of the same order as the internal impedance of the valve is connected between the positive terminal of the B battery, and the plate of each valve. The signal oscillations which have been amplified by any one valve flow through the plate resistance of that valve, and in consequence an oscillating potential is set up across the resistance. This potential is applied to the grid of the next valve in the series, through the medium of a grid condenser, which allows the oscillations to pass, but prevents the B battery voltage from reaching the grid. A grid leak is connected between the grid and the negative end of the filament in order that the grid shall not accumulate too large a negative charge, and render the valve inoperative. This gives equal amplification for all audio frequencies and is thus conducive to distortionless amplification.



Like most other things in radio, quite a lot depends on the quality of apparatus used. Not only does this apply to the resistances, but also does it apply to the transformers used. The manufacturers the world over are today producing a well constructed, high quality audio transformer, the use of which in the average receiver in conjunction with the correct valves, B and C battery voltages, insures good quality reception.

Now, just how many audio stages can be added, is a question which crops up in the minds of most people, sooner or later. In answer to this, let it be known that it is not wise to use more than two stages of transformer coupled amplification, as it will be found in practice that a third stage of this form produces howls and screams, rendering its function inoperative. But not so with resistance amplification. Here it is always advisable to use three stages, in order that good volume is produced. On the average, three stages of resistance coupling yield much the same output as two stages of transformer coupling, the same applying to impedance coupling.

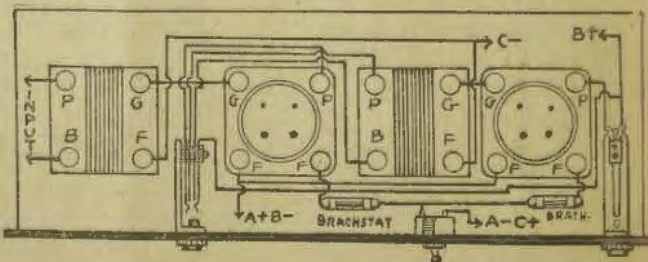
Now the choice of correct voltages and valves is of considerable importance, there are special valves to-day, for resistance amplification, and also for audio amplification, whether impedance or transformer coupled. Resistance coupled valves should be of the order of 20,000 to 35,000 ohms impedance, and it is necessary that a high plate voltage be used, anything from 120 to 200 volts is advisable as the plate voltage in this instance, and most manufacturers produce a valve with suitable characteristics, notable amongst these valves being the Radiotron UX240, the Cossor Point One, R.C. Valve, and the Osram DEEB Valve. The Philips A630 and A425 are two other well-known valves, which will render satisfactory service in a resistance amplifier.

In transformer coupled amplification there is a wide choice of valves. Almost everyone knows the standard Radiotron UX201A, which is a very good general purpose valve, and is eminently suited for this method. So also will be found similar valves in the Osram, Cossor, Mullard and Philips range, all of these manufacturers also making a last stage valve known as a power valve. There is quite considerable misconception with regard to power valves. A goodly number of folks think that if they put a power valve in the last stage of audio, louder, sweeter and better volume should result. So it should, provided other factors are considered. The other factors are correct value of B and C battery, and this is generally overlooked so that there are some disappointed people owning power valves wondering why they laid out the money for such an article.

This brings us to a most important point. In every valve packet will be found a slip, giving particulars of the valve it contains. On this slip is such information as the correct battery voltages for best results, and it must be borne in mind that the maker knows what he is talking about, and it is, therefore, necessary that the user should follow on his instructions. Taking a Radiotron UX120, which is a last stage power valve, it

will be found that the B battery required is 135 volts and the grid battery 22 volts. It, therefore, follows that to get the best from this valve, these voltages must be applied, and in actual practice it will be found useless to apply any smaller voltages. The Radiotron UX171 is another valve designed to operate loud speaker of low impedance at considerable volume, with a minimum of distortion, that is to say, it is intended for use in the last audio stage only. In this instance the plate voltage varies from 90 to 180 volts and the negative grid base bias from 16.5 to 40.5 volts. These two valves are instanced as examples in order that the reader should understand that a power valve should be fed properly and not starved, and should be used only for the purpose for which it has been designed. One cannot touch on the subject of audio amplification without referring to the latest type of power valve and their characteristics. Incidentally, it may be worth while mentioning here, that should any reader have mislaid instruction slip for his present valve a note to this effect to the agent for the valves in this country will bring him a booklet giving him all information that is required.

Now coming to the question of how many stages of audio amplification are required to produce loud speaker work, the answer to this depends on just what form of receiver the audio stages have to be used in conjunction with. If a well designed one valve receiver is giving splendid earphone reception, then one good stage of transformer coupled audio amplification will give moderately good loud speaker strength, provided, of course, the location of the receiver is not too far from the broadcasting station. Anywhere within 25 miles of broadcasting stations fairly good loud speaker results will be had on one stage of audio following the detector valve, but for the sake of reserve and in order to have plenty of volume, two stages are always advisable.



certainly effective for stabilising the whole system. The parts for a two stage resistance coupled amplifier are as follows:—

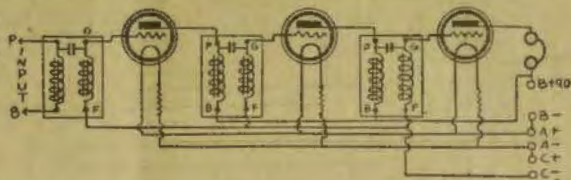
- 2 100,000 ohms. fixed resistors.
- 2 2 megohm fixed resistors.
- 2 .006 fixed condensers.
- 2 sets of double clips on basis.
- 2 valve sockets.
- 2 Amperites or Brachstata.

Usual baseboard, battery switch, etc., etc.

The method of layout is clearly seen in the drawings and the means of connecting to the existing sets is certainly very easy. If desired varying plate voltages may be added, further particulars of this type of amplifier may be had from "Wireless Weekly" of the 12th August, 1927. For those who desire, there will be found different kits of resistance coupled units all complete ready to be assembled, or even it is possible to obtain completely assembled three stage resistance amplifier.

It is possible to combine transformer and resistance coupled methods of amplification to suit the constructor's own requirements. Some people prefer to use this system by placing the transformer stage first with the resistance stage afterwards. Again many would rather have the resistance stage first, all about a transformer stage. It is really a matter of choice, but reproduced here will be found diagrams showing the construction of one transformer and one resistance coupled stage. Some few years ago this system was popularised in this country by "Insulator," who described a unit similar to this and named it "Dukis." Early readers will remember it.

Lastly, we come to the subject of impedance coupled amplifiers. The most effective system of this, is the double impedance type, and here again it is necessary to employ three stages of this idea to get the output of two stages of transformer coupled, and also will it be found necessary to use a high value of B battery. There is



no question whatever that double impedance is very close to the ideal from the point of view of purity and of the reproduction of all under tones and over tones. The writer recently constructed three stages of this method and found it certainly very satisfactory. The kit used was a well-known F.M.C. double impedance kit and the natural tone was so charming that it was always a pleasure to listen in.

These are the three systems very much in evidence to day. Without wishing to draw comparison on their utility, it is felt that there is sufficient data for the constructor to build his own unit to suit his own purpose. Granted the unit is satisfactorily built and that the owner possesses a reasonably good loud speaker and that he pays attention to the correct valves and batteries, much pleasure can be had with loud speaker reception. And do not forget that the loud speaker itself plays a most important part, so choose one which is good and which will last.

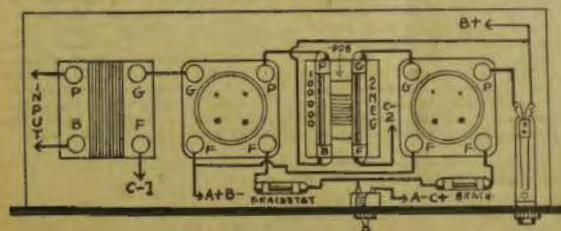
Lastly, an excellent volume control may be had by connecting a Centralab potentiometer of, say, 500,000 ohms, resistance across the secondary of the first audio transformer, or if preferred, Macurcan Tone Purifier may be shunted across the secondary of the last audio transformer. Both these systems are good, the Macurcan Tone Purifier acting not so much as a volume control, as its name implies, but as a tone purifier, eliminating all vacuous noises which may be generated in the set.

Safeguarding the Valve.

Dr. Fixit's Radio Talk for 5CL

THE base of a vacuum tube fits the corresponding socket in just one way—the correct way. Nevertheless, there is an ever-present danger of connecting batteries or wiring in such manner that "B" battery current will be applied to tube filaments, with expensive consequences. Even a slipping screwdriver or pliers may inadvertently divert "B" battery current through tube filaments, rendering the tubes useless. Hence the exercise of due caution. Always disconnect the batteries when working on the radio receiver. In connecting batteries to the radio receiver, turn the "A" battery first. Then connect the rheostats or operate the switch, and note if the filaments light. If they do, the connections are correct, and the other batteries may be connected. If not, check up on the wiring. This procedure prevents placing the "B" batteries when they do not belong, and also detects fault set wiring before expensive damage can be done.

In the home-made radio receiver or the receiver being remodelled or repaired, it is well to take no chances with burnt-out tubes. To this end, a 40 watt, 110-volt lamp should be placed in the "B" lead. The resistance of the lamp will prevent excessive amperage from passing through the filaments of the vacuum tubes if the "B" battery should be incorrectly connected. Furthermore, it will detect a short-circuit in the wiring, since the lamp will light up. However, because of its resistance, the lamp should be removed or shorted for normal operation. A still better plan is to place a radiotron LV-877 in the "B" lead. This radiotron is a protective lamp designed as a safety valve to prevent damage to vacuum tubes or transformers in the event of incorrect connections or short circuits. It introduces protective high resistance only while abnormal conditions exist, so it may be left in circuit.

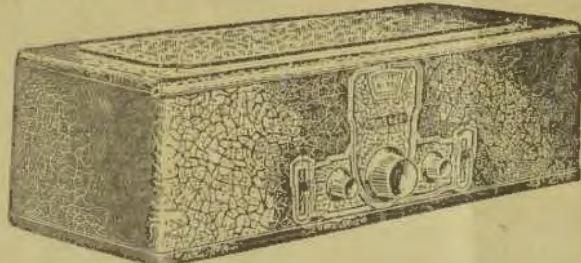


A Section for the Trade

5,000 SETS A DAY.

Five thousand Radio Receivers complete every day is a very tall order, but this is the average number of sets which are being produced daily by the Crosley Radio Corporation, which is claimed to be the world's largest manufacturer of Radio re-

ceivers. The Crosley Corporation of the "Die Casting" process for the mass production of the variable condensers incorporated in their receivers is an example. For this purpose a battery of ten machines has been installed in the modern six-storey addition to the Crosley plant. A novel machine



The Crosley Bondbox Receiver.

ceivers. In addition to sets, this Company manufactures Power Supply Units, Loud Speakers, and many other parts which are well-known throughout the world. The whole process of manufacture is based upon mass production methods, and the man responsible for the growth of this colossal organisation is Powell Crosley, Junr., founder and president of the Crosley Radio Corporation.

The Crosley Corporation has specialised for years in the perfecting of suitable machinery and the training of skilled personnel to reach their ideal of turning out receivers which are at once highly efficient, extremely attractive, yet with rugged strength and extremely reasonable price. Many people are under the impression that because an article sells for a reasonable price it is necessarily cheap or inferior, but in the case of the Crosley Radios, Power Units, and Speakers, it is the policy of the Corporation to put only the very best material and engineering ability into its products, the moderate marketing price being made possible through high efficiency in producing them in large quantities. Vast sums of money have had to be expended to install the special equipment required, not to mention personnel, for the proper functioning of such a detailed mass production system calls for an extremely skilled group of executives and intermediate subordinates to properly direct the activities of the several thousands of workers engaged. Many of the machines in use for the production of the various parts are the result of study and solution of intricate problems. The utilisation by

employed is an automatic tempering or hardening furnace heated by electricity and used for hardening the steel magnet segments in the Crosley Musicone Loud Speaker. There are many other novel machines for speeding production of the parts required to make up complete radio receivers, etc. After all of the required parts are complete they enter the conveyor belt assembly and wiring line where they are in continuous process until the finished product in the shape of a Radio receiver or other article, emerges from the final inspection and test booths for packing and shipping to the distributor.

Cincinnati, the pioneer centre of Radio Broadcasting, may well be proud to number such a modern plant among her numerous industries. The Crosley Corporation also operates Station WLW, which recently broadcast the Dempsey-Tunney fight, and is frequently heard in Australia on 50 metres. International Radio Co., Ltd., are local agents for Crosley products.

ONE NIGHT recently, a well-known local listener to 4QG wished to know if all were well with the transmitter. He complained of a certain amount of distortion which he called "fuzziness." As everything was quite normal at the station, this distortion was explained to him as being no doubt occasioned by the discharges of static electricity (which was collecting in his aerial due to the heavy thunderstorm then prevailing) through his receiver to earth, thereby spoiling his usually clear reception.

NEW SETS.

A new entrant in the field of radio set manufacturers, is New System Telephones Pty., Ltd., who are now engaged in the manufacture of De Luxe New System 5, 6, 7, and 8 Valve Models, the five valve model selling for £49/10/-, complete with Earpiece "B" and Philco "A" batteries, loud speaker and all other accessories. There are no dials on the receivers, and the dual drum control makes the tuning infinitely simple. To one side of the drum control are the dial markings, together with the call signs of the various stations, and on the other appear the wavelengths in their natural order.

The set is constructed on a cast aluminium chassis, having absolute rigidity, and eliminating the possibility of the displacement of parts. We demonstrated a five valve model on local broadcasting, to our entire satisfaction, and have no hesitation in endorsing this new receiver.

There are certain territories still open for agents, who are advised to write to New System Telephones Pty., Ltd., for further particulars.

EMMCO RADIO HANDBOOK.

The 1927 edition of the "Emmco Radio Handbook" far surpasses the handbook which was produced by that Company last year. It contains 32 pages, together with an art cover printed in two colors, and with most attractive designs, front and back. There is a full detailed list of Australian and New Zealand Radio call signs, including Broadcasting Stations A and B class, Amateur Transmitters, special call signs, etc. There also appears a world list of short wave stations in addition to a chart showing the comparative differences in time of various points in different parts of the world. There are circuits of Reinartz Receivers, Brown-Drakes, Short Waves, Neutrodyne, Super Heterodyne, etc., besides a number of circuits illustrating the method of hooking up A.B.C. eliminators to them. The rest of the book is devoted mainly to a description of the many Emmco parts, including several new lines which are just now appearing on the market. There is also an illustration of the new Emmco factory, which is just nearing completion, and which will have a total plant and equipment to the value of over £200,000. The book throughout is excellently printed, and distinctly informative, so much so, that we recommend all Radio enthusiasts to procure a copy. It is supplied free to users of Emmco products.

NEW A. AND B. CHARGER.

The Repligon, a new type of A. and B. Charger, has now made its appearance on the market. The Radio enthusiast will certainly be strongly impressed with the simplicity of this latest type of charger, which, besides having no moving parts, comprises a considerably reduced number of parts. It is a charger of the bulb type, which means that there are no moving or vibrating contacts, no acids or other chemicals. There is no danger in case of a failure of the power supply, the batteries cannot discharge, and, as soon as the line voltage is restored, the charger will automatically resume



operation. It is essentially an economical job, because of its low first cost and practical elimination of upkeep expense. The bulb is the only part requiring renewal, and its life is exceptionally long and uniform. The charger is started by simply turning on a snap switch and adjusting the dial switch to obtain the proper current for the number of batteries being charged. It is contained in a case of sheet steel finished in glossy mureon—an attractive and hard wearing apparatus. Manufactured by the Westinghouse Electric International Company and every phase of its performance is therefore guaranteed by Westinghouse experience. Weighs approximately 15½ pounds. Measures 6½ in. x 5½ in. x 8 inches high. Distributors, Amalgamated Wireless A/ia, Ltd.

EMMCO, CLYDE.

Mr. H. J. Haggood, managing director of Manufacturers' Products Pty., Ltd., left for Melbourne last week, and is at present busily engaged in furthering the interests of Emmco, Clyde, and other lines that his company represents. He reports very good business in the southern State, and many new licenses. On returning to Sydney he is leaving almost immediately for New Zealand, in which country he will make an extensive tour for the purpose of pushing sales.

More DX With Proper Grid Bias.

IT is not too much to say that ease and smoothness of regeneration control in a receiver consisting of a valve detector, especially when followed by audio amplification, may account for the difference between being able to receive a distant station at good strength and not being able to hear its signals at all. Such devices as geared dials, or even the use of capacity controlled regenerative circuits, may help a great deal in this respect, but unless the operating characteristics of the valve itself are such as to permit a gradual approach to the oscillation point the full sensitivity possible cannot be obtained. This condition may best be brought about by careful adjustment of the values of the applied B battery voltages, and particularly by choosing a suitable leak and working potential for the grid, as well as by using a regenerative coil of correct inductance.

It is usual to connect the lower end of the grid leak to the positive side of the A battery, in order that a positive voltage equal to that of the battery may be applied with respect to the negative end of the filament. It is quite possible that this may be excessive, and, in the case of a tube where the grid current starts early (i.e., before the grid becomes appreciably positive), it may be preferable, from the point of view of smoothness of regeneration control, to keep its potential at zero, or, at any rate, only slightly positive, without seriously impairing its rectifying properties.

The effect of connecting the lower end of the leak to various points of the filament circuit should be tried. Provided that the controlling rheostat is in the positive filament, we have the choice of negative filament, positive filament and positive battery.

If a finer control of grid potential is desired, a separate biasing battery of dry cells may be used, or, better, a potentiometer connected across the filament or A battery leads. The latter arrangement is to be preferred, and the general idea should be to work with the least amount of positive voltage consistent with good detection and smooth regeneration control, remembering also that an excessively positive grid will cause an unnecessary drain on the plate battery.

A NEW WIRELESS set that dispenses with batteries and accumulators has been perfected.

How about one that dispenses with programmes?

3LO Melbourne and Research.

I HAVE just been reading an interesting pamphlet by Mr. Cherry, the Research Physicist at the Melbourne University, on "Signal Strength Measurements of 3LO."

Few people who put on their headphones, or turn on the loud speaker, realise that to give them the pleasure of a programme, a tremendous deal of research and experiment are necessary.

3LO Melbourne maintains a staff of radio experts, whose care are problems of "fading" and the like, which must be solved to make broadcasting 100 per cent. efficient.

Special Grant.

To obtain the best advice on the matter, 3LO Melbourne gives the sum of £500 to the University for Radio Research annually. In the University are two renowned physicists, Professor Libby and Mr. Cherry, and these two men have been doing important work on measuring the signal strength of 3LO Melbourne. The practical value of the work lay in getting knowledge through which "fading" could be located and attacked.

For their work they used a measuring set so constructed that it could be dismantled and transported from place to place on the carrier of a motor-cycle, to be set up afresh at different places in the field. The scientists point out that it will soon become necessary to give signals of a specified intensity. A very high signal strength has two disadvantages. The first is high cost; the second is its interference with signals from other, and particularly remote stations.

On the other hand, a weak signal will not be audible above the "noise level." This phrase is used to indicate the mean field intensity of natural and artificial electrical disturbances which interfere with reception. The audibility of a signal depends on the ratio of its intensity to that of the noise. No measurements of this "noise level" in Melbourne have been made. Day and night measurements of this were made for a year in England and America before the establishment of trans-Atlantic telephony, in order to determine the signal intensity.

There is a ratio between high frequencies and "noise level," and the study of this will have important bearing on broadcasting. It appears, so far, that in Australia, a short wave will have a higher ratio of signal to noise than a long wave, assuming signal strength in each is equal.

The experiments in signal measurement by these two scientists will continue at greater distances.

LOUD SPEAKERS OF MERIT

Instal a Loud Speaker on your Set, and let all the family hear the programme. We have the finest assortment of Loud Speakers at prices ranging from 23/6 to £21/-

ALL SPEAKERS CARRY OUR USUAL GUARANTEE OF SATISFACTION OR MONEY REFUNDED.



Brown H1	...	£6/15/-
" H2	...	£2/18/6
" H3	...	£4/2/6
" H4	...	£2/-
" Cabinet Model	...	£6/10/-
" HQ	...	£7/15/-
" Q	...	£21/-



"Tefag" the new Cone Speaker
£6/10/-



Amplion AR 19.

Amplion AR19	...	£6/10/-
" AR102	...	£1/5/-
" AR38	...	£3/-
" AR111	...	£3/10/-
" AR114	...	£3/15/-
" AR65	...	£4/15/-
" Cone	...	£7/15/-

and £8/8/-



AR 114 £3/15/-



Manhattan
Speaker,
23/6



Musicone Speaker £3/3/-

CASH OR EASY TERMS

WILES WONDERFUL WIRELESS—AND ELECTRICAL STORES

BRANCH:
23 Pitt Street,
Near Circular Quay.

PITT & GOULBURN STS., SYDNEY
Mail Order Department:
60 GOULBURN STREET.

BRANCH:
384 Pitt Street,
(opp. A. Hardern & Sons)

BROADCASTING PROGRAMMES

For the COMING WEEK

Friday, Oct. 28
2FC, SYDNEY.

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

EARLY MORNING SESSION.—7 to 5 a.m.

MORNING SESSION.

- 7.0 a.m.—"Big Ben" and announcements.
7.4 a.m.—Studio music.
7.55 a.m.—"Sydney Morning Herald" news service.
8.30 a.m.—Studio music.
8.35 a.m.—A Reading.
8.45 a.m.—Studio music.
9.15 a.m.—"Big Ben."
Marching music for school children.
9.15 a.m.—A.P.A. and Reuter's Cable Services.
9.18 a.m.—Studio music.
9.18 a.m.—A talk on Home Cooking and Recipes, by Miss Ruth Frost.
9.30 a.m.—Cricket Despatches.
NOTE: At approx. 11.30 a.m.—from the Sydney Cricket Ground—a full description of the Cricket Match, N.S.W. versus N.Z. XI, which team has just returned from its successful tour of the "Old Country."

MIDDAY SESSION.

- 10 noon—"Big Ben" and announcements.
12.2 p.m.—Stock Exchange, first call.
12.3 p.m.—Official weather forecast, rainfall.
12.4 p.m.—Studio music.
12.10 p.m.—Summary of "Sydney Morning Herald" news service.
Eighty wireless news.
12.25 p.m.—Studio music.
12.35 p.m.—Marching music for school children.
12.40 p.m.—Margot Lonani, soprano:
"Obstination" (Copper).
12.45 p.m.—The Oak Hall Instrumental Trio.
12.55 p.m.—Studio music.
1.0 p.m.—"Big Ben" Weather intelligence.
1.05 p.m.—"Sydney News" midday news service.
Producers' Distributing Society's Report.
1.20 p.m.—The Oak Hall Instrumental Trio.
1.25 p.m.—Stock Exchange, second call.
1.30 p.m.—Marching music for school children.
1.40 p.m.—Margot Lonani, soprano:
"I Love the Moon" (Ribens).
1.45 p.m.—Studio music.
1.50 p.m.—The Oak Hall Instrumental Trio.
2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 2 p.m.—"Big Ben" and announcements.
2.0 p.m.—From the Sydney Cricket Ground: A complete description of the Cricket Match: N.S.W. versus the New Zealand "Eleven," which has just returned from its successful tour of the "Old Country."
During cricket intervals the following musical items will be given:
2.20 p.m.—Marching music for the school children.
2.40 p.m.—From Farmer's Tea Rooms: Frank Bokhan, baritone:
"Tommy Lad" (Marston).
"Paul Barysax" (Randerius).

- From Farmer's Tea Rooms at 4 p.m. and 4.40 p.m.:
Percy Hunter, soprano:
(a) "Ten Miles" (Russett).
(b) "Piper Tune" (Cares).
During cricket intervals—From the Studio—the following musical items:
Netta Mulvany, mezzo:
(a) "An' Maria" (Casper).
(b) "Rose in the Bud" (Foster).
Will Rogers, humor:
(a) "Knowledge" (Hill).
(b) "Leaving home of Easter King" (Gussard).

- 2.45 p.m.—Stock Exchange, third call.
2.47 p.m.—Studio music, interspersed with cricket results.
3 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 3.40 p.m.—The Chimes of St. Paul.
3.45 p.m.—The "Holly Men" talks to the children.
3.50 p.m.—Story time for the young folk.
3.55 p.m.—Studio music.
3.58 p.m.—Late evening news.
7 p.m.—"Big Ben."
Dairy's market reports (wheat, wheat and stock).
7.9 p.m.—Fruit and vegetable markets.
7.10 p.m.—Weather and shipping news.
7.16 p.m.—"Evening News" late news service.

NIGHT SESSION.

- 7.30 p.m.—Programme announcements.
7.35 p.m.—Cecil Monk, violinist.
7.45 p.m.—Ad. Urio, Scotch comedian:
"Scotch Burlesque" (Longstaffe).
7.51 p.m.—Blaise Bachelier, soprano:
(a) "Abercrombie" (Cove).
(b) "One Spring Morning" (Nevin).
8 p.m.—"Big Ben."
A Theatrical Transmission.
8 p.m.—"Big Ben."
Cecil Monk, violinist.

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

- 2FC—Farmer's Broadcasting Station, Ltd., Sydney, wavelength 442 metres, power 1000 watts.
2BL—Broadcasters' Ltd., Sydney, wavelength 253 metres, power 5000 watts.
2GB—Theosophical Broadcasting Station, Ltd., Sydney, wavelength 315 metres, power 2000 watts.
2KY—Trades and Labor Council, Sydney, wavelength 290 metres, power 1000 watts.
2UW—Otto Sandel, Sydney, wavelength 267 metres, power 100 watts.
2MX—Mackler Bros., Balhurst, wavelength 275 metres, power 250 watts.
2U—Electrical Utilities Supply Co., Sydney, wavelength 223 metres, power 250 watts.
2BE—Burgin Electric Co., Sydney, wavelength 318 metres, 100 watts.
2BD—H. A. Douglas, Newcastle, wavelength 258 metres, 180 watts.

- 9.10 p.m.—Blaise Bachelier, soprano:
(a) "Fay Ave."
(b) "How the Moon and the Sun Dance Song."
9.17 p.m.—Ad. Urio, Scotch comedian:
(a) "Wife in my Life" (Lough).
(b) "Vance Drum Ball" (Blair).
9.21 a.m.—From the Conservatorium Hall, Sydney:
Items from the "Cello Recital, arranged by Mr. Catherine Bell."
"Slow Movement from Concerto in D" (Haydn).
Mr. Cedric Ashton.
9.29 p.m.—"Prelude in D Minor" (Bach).
12 "Offen in Upson with the Flute accompaniment."
9.45 p.m.—From the Studio:
Wm. and Windie, English entertainers.
9.55 p.m.—Frank McEachern, baritone.
10.2 p.m.—Harmon White, piano solo.
10.4 p.m.—Wm. and Windie, English entertainers.
10.15 p.m.—Frank McEachern, baritone.
10.23 p.m.—Harmon White, piano solo.
10.30 p.m.—Wm. and Windie, English entertainers.
10.35 p.m.—Frank McEachern, baritone.
10.40 p.m.—Wm. and Windie, English entertainers.
10.45 p.m.—"Big Ben." Dance music.
10.50 p.m.—National Anthem.
Close down.

2BL, SYDNEY.

Broadcaster's Ltd.
Wave Length, 253 Metres.

Friday

EARLY MORNING SESSION.
7 a.m. to 9 a.m.

MORNING SESSION.

- 10.50 a.m.—G.P.O. clock and chimes.
Musical programme from the Studio.
11.40 a.m.—News from the "Daily Telegraph Editorial."
11.50 a.m.—Musical programme from the Studio.
12 a.m.—G.P.O. clock and chimes.
Announcements.
11.55 a.m.—Musical programme from the Studio.
12.15 a.m.—Talk on "Cricket," by Miss Gwen Varley, Broadcasters' women's sports authority.
Social notes. Replies to correspondents by Mrs. Jordan.
Talk on "Sweet Making" by Priscilla.
12 noon.—G.P.O. clock and chimes.
Special news forecast and weather report.
12.3 p.m.—Ivanoffsky Panatropes Musical Report.
12.35 p.m.—Information. Mail, shipping and port directory.
12.45 p.m.—Hints in call by wireless.
12.50 p.m.—Fruit market report.
12.52 p.m.—Vegetable market report.
12.54 p.m.—London metal market report.
12.58 p.m.—Dairy and farm produce market report.

12.30 p.m.—G.P.O. clock and chimes.
Foreign market report.
12.32 p.m.—Fibb market report.
12.34 p.m.—Rabbit market report.
12.36 p.m.—Stock Exchange report.
12.38 p.m.—News from the "Sun."
12.45 p.m.—Miller's Instrumental Quartet—
Direction, Carl Gauding.
1.27 p.m.—Stock Exchange report.
1.39 p.m.—G.P.O. clock and chimes.
Talk to children and special entertainment
for children in hospital.
2 p.m.—G.P.O. clock and chimes.
Close down.

AFTERNOON SESSION.

Racing information broadcast immediately
after each race, by courtesy of the "Sun."
3 p.m.—G.P.O. clock and chimes.
News from the "Sun."
3.15 p.m.—Civil Service Stores Trio, direction,
Miss de Coursey Bremer.
3.30 p.m.—G.P.O. clock and chimes.
News from the "Sun."
3.40 p.m.—Country women's session—Its ob-
jects, by Miss Wilkinson.
3.50 p.m.—News from the "Sun."
4 p.m.—G.P.O. clock and chimes.
Civil Service Stores Trio.
4.15 p.m.—Serial story.
4.45 p.m.—Musical programme from the
Studio.
4.50 p.m.—News from the "Sun."
4.55 p.m.—Resume of night's programme.
4.57 p.m.—Racing resume.
4.59 p.m.—Special ocean forecast.
5 p.m.—G.P.O. clock and chimes.
Close down.

EARLY EVENING SESSION.

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

SPECIAL COUNTRY SESSION.

7 p.m.—G.P.O. clock and chimes.
Australian Mercantile, Land and Finance
Co.'s report.
Weather report and forecast by courtesy of
Government Meteorologist.
Producers' Distributing Society's fruit and
vegetable market report.
Stock Exchange reports.
Grain and fodder report ("Sun").
Dairy produce report ("Sun").
7.15 p.m.—Country news from the "Sun."
7.29 p.m.—Talk by Mr. Gregory, of the
N.R.M.A.
7.30 p.m.—Talk on "Gardening Science," by
Mr. Cooper, Park Superintendent, City
Council.
8 p.m.—G.P.O. clock and chimes.
Broadcasters' Topical Chorus.
8.1 p.m.—Broadcasters' Trio.
8.13 p.m.—Me. Sydney Hollister, comedian.
8.29 p.m.—Miss Phyllis Atkinson, memo-
rabilia.
8.27 p.m.—Broadcasters' All Sports Expert
will talk on cricket.
8.42 p.m.—Al. Jack's Crackerjacks broadcast
from the ballroom of the Bondi Casino.
8.52 p.m.—Mr. Frank Ryan, entertainer.
9 p.m.—G.P.O. clock and chimes.
9.1 p.m.—Weather report and forecast by
courtesy of Mr. C. J. Barnes, Government
Meteorologist.
9.2 p.m.—Broadcasters' Trio.
9.12 p.m.—Al. Jack's Crackerjacks, comedian.
9.19 p.m.—Al. Jack's Crackerjacks, broadcast
from the ballroom of the Bondi Casino.
9.23 p.m.—Mr. Sydney Hollister.
9.26 p.m.—The sporting editor of the "Sun"
will talk on the prospects of Saturday's
racing.
9.58 p.m.—Miss Phyllis Atkinson.
10.3 p.m.—Al. Jack's Crackerjacks broadcast
from the ballroom of the Bondi Casino.
10.13 p.m.—Mr. Frank Ryan.
10.20 p.m.—Broadcasters' Trio.
10.30 p.m.—Mr. Bobby Watson.

10.37 p.m.—Al. Jack's Crackerjacks broadcast
from the ballroom of the Bondi Casino.
10.47 p.m.—Resume of following day's pro-
gramme.
10.50 p.m.—Al. Jack's Crackerjacks broadcast
from the ballroom of the Bondi Casino.
11 p.m.—G.P.O. clock and chimes.
National Anthem.

2GB, SYDNEY

Theosophical Broadcasting Service.
Wave Length, 315 Metres.

Friday.

MORNING SESSION.

9 a.m.—Music.
9.5 a.m.—Cherico Talk.
9.15 a.m.—Music.
9.25 a.m.—Psychological Class.
9.40 a.m.—Music.
9.48 a.m.—Health and Diet Talk.
10 a.m.—Close down.

AFTERNOON SESSION.

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

EVENING SESSION.

7 p.m.—Music.
7.5 p.m.—Address.
7.55 p.m.—Address.
7.58 p.m.—Music.
7.58 p.m.—Address.
7.59 p.m.—Announcements.
7.57 p.m.—Songs by Miss Gladys Blake
1. "Red Rose of England" (Oliver).
2. "Tid me discourse" (Bishop).

NIGHT SESSION.

8.5 p.m.—Address.
8.20 p.m.—Songs by Miss Eva Craft.
1. "The Swallow" (Brahms).
2. "Gracie Song" (Mendelssohn).
8.25 p.m.—Talk on British Composers, illus-
trated by their music. Arranged by Phyllis
Campbell.

9 p.m.—Address by Mr. J. K. Powell.
9.15 p.m.—Songs by Gladys Blake.
1. "Down gentle forest" (Bennett).
2. "They Say" (Warwick Evans).
9.23 p.m.—Instrumental Trio, Monica Horditt,
Murielle Ling, Ada Brook.
9.40 p.m.—Songs by Miss Eva Craft.
1. "The Nightingale" (Kjerulf).
2. "Autumn."
9.50 p.m.—Talk.
10 p.m.—Close down.

2 UW, SYDNEY

Sandel Radio, Ltd.
Wave Length, 267 Metres.

Friday.

MORNING SESSION.

9 a.m.—News, shipping, mails, studio items.
9.15 a.m.—Women's Session.
9.30 a.m.—Resume of forward programme.
10 a.m.—Close down.
12.15 p.m.—Special Employees' Luncheon
Session.
12.45 p.m.—Close down.

AFTERNOON SESSION.

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

EVENING SESSION.

5 p.m.—Dance and Instrumental Items from
Studio.
5.55 p.m.—Resume of forward programme.
6 p.m.—Close down.

NIGHT SESSION.

7 p.m.—Where to Go.
7.10 p.m.—Studio Items.
8.30 p.m.—George F. Manuel, tenor:
"I Know of Two Bright Eyes."
8.35 p.m.—Pianoforte Solo, Miss Janet Pat-
terson (Selected).
8.44 p.m.—Miss Jeanette Patterson, Piane-
forte solo:
(a) Selected. (b) Selected.
8.52 p.m.—George F. Manuel, tenor:
(a) "In an Old Fashioned Town."
(b) "Maire my Girl."
9 p.m.—"Sonata" selections.
9.4 p.m.—George F. Manuel, tenor:
"I'll Sing Three Songs of Araby."
9.9 p.m.—Miss Jeanette Patterson, Piane-
forte solo: Selected.
9.14 p.m.—Studio items.
9.28 p.m.—Resume of forward programme.
9.30 p.m.—Close down.

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

- 3LO.—Broadcasting Company of Aus-
tralia, Ltd., Melbourne, wavelengths
371 metres, power 5000 watts.
- 3AR.—Associated Radio Co. Ltd., Mel-
bourne, wavelength 315 metres, power
5000 watts.
- 4QL.—Queensland Radio Service, Bris-
bane, wavelength 325 metres, power
5000 watts.
- 4CL.—Central Broadcasters' Ltd.,
Adelaide, wavelength 350 metres,
power 5000 watts.
- 4WF.—Westrallian Farmers, Ltd., Perth,
wavelength 1200 metres, power 6000
watts.
- 7ZL.—Tasmanian Broadcasters, Ltd.,
Hobart, wavelength 510 metres, 3000
watts.
- 3DB.—The IDB Broadcasting Co. Pty.,
Ltd., Capital House, Melbourne,
wavelength 295 metres, power 500
watts.
- 3UZ.—O. J. Nilson & Co., Melbourne,
wavelength 319 metres, power 100
watts.
- 4GR.—Cold Radin Electric Service, Tas-
manian, Queensland, wavelength 334
metres, power 100 watts.
- 4KA.—Sport Radio Broadcasting
Station, Adelaide, wavelength 320
metres, power 1000 watts.
- 4DN.—ADN Pty., Ltd., Adelaide, wave-
length 313 metres, 500 watts.

3LO, MELBOURNE

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

Friday.

MIDDAY SESSION.

12 noon—Melbourne Observatory Time Signal.
Metal prices received by the Australian
Mining and Metals Association from the
London Stock Exchange this day. British
Official Wireless news from Rugby Reuter's
and The Australian Press Association
cables. "Arms" news service.
12.20 p.m.—REGENT GRAND CONCERT
ORCHESTRA. Conductor, Ernest Mitchell.
By permission, Hoyts Theatres, Ltd.—
March, "El Capitán" (Rosa).
Overture, "Lustspiel" (Strauss).
12.32 p.m.—WARDE MOBAN, tenor:
"In Town."
"Britann."
12.59 p.m.—Stock Exchange information.

12.42 p.m.—REGENT GRAND CONCERT

ORCHESTRA:
 "An Autumn Song" (Wood).
 "Berce" (Mitzel).
 Selection, "Madame Butterfly" (Puccini).

1.10 p.m.—RADIOPHONE SOLO, "Shallam" (Nichols).
 (Soloist, Jack Harney.)

1 p.m.—MELBOURNE OBSERVATORY
TIME SIGNAL. Time fine. Why worketh thou mischief in the wilderness, unless thou wouldst return to make amends?

1.1 p.m.—FRYD WALKER, Baritone:
 "All Love led a Day" (H. Gilberts).
 "I Dreamed by Year Window" (K. Hahn).

1.5 p.m.—METEOROLOGICAL INFORMATION.
 Weather synopsis for Victoria, Tasmania, South Australia and New South Wales. Despatch forecasts. River reports for Victoria, Tasmania, South Australia and New South Wales.

1.10 p.m.—REGENT GRAND CONCERT

ORCHESTRA:
 Federal, "Happy Day" (Elet).
1.20 p.m.—MARIE LAWTON, the girl with the voice and the hair:

"Chère, You Know the Story" (Massarani).
 "Waltz Song from 'Tom Jones'" (German).

1.27 p.m.—REGENT GRAND CONCERT

ORCHESTRA:
 Finesse solo, Miss C. Colford.

1.30 p.m.—WARDE MORLAN, Tenor:
 Selections from Rossini's, Teneze.

1.45 p.m.—DESCRIPTION OF ASSOCIATED PUBLIC SCHOOLS COMBINED SPORTS MEETING, by Mr. Walker Shirland, from the S.E.C.

MRS. M. CALLAWAY MAHOOD will speak on "The Art of Decoration."

1.45 p.m.—Presentation of CUP by HIS EXCELLENCY, LORD SOMERS, Governor of Victoria.

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

EVENING SESSION.

7.20 p.m.—Answers to Letters and Birthday Greetings by "BILLY BUNNY."

8 p.m.—STUDIO QUARTETTE:
 "Children's Suite—First Part 1" (Debussy).

8.15 p.m.—MISS M. SHEPHERD has some strange stories to tell the audience.

8.25 p.m.—STUDIO QUARTETTE:
 "Children's Suite—Part 2" (Debussy).

8.30 p.m.—"BILLY BUNNY" will tell the Children about the Adventures of the Treasure Seekers.

8.40 p.m.—"Herald" news service. Weather synopsis. Shipping movements.

8.45 p.m.—Stock Exchange information.

8.52 p.m.—Fish Market reports by J. R. Eccroft, Ltd. Rabbit prices.

8.55 p.m.—River reports.

8.58 p.m.—Newmarket Sheep sales by the Associated Stock and Station Agents, Bourke Street, Melbourne. Market reports by the Victorian Producers' Co-operative Co. Ltd. Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.

7.12 p.m.—Market reports of Fruit. Retail and Wholesale prices.

NIGHT SESSION.

7.10 p.m.—Under the auspices of the Department of Agriculture, MR. C. FRENCH, Entomologist, will speak on "Treatment of Wood Borers in Timber."

7.20 p.m.—COLLINGWOOD CITIZENS' BAND:
 March, "The Lord Mayor."
 Cornet Solo, "Australia." Soloist J. Robertson.

7.45 p.m.—FRED WALKER, Baritone:
 "A Taste Amuse" from "Favorita" (Donizetti).
 "Ohn" (W. Sanderson).
7.55 p.m.—MR. H. E. R. LOVE will speak on—"Types of Receivers for the Country."
8.27 p.m.—Under the auspices of the Health Association of Australia, the HEALTH MESSAGE for today is—
 "Walk a mile for—well."
8.58 p.m.—COLLINGWOOD CITIZENS' BAND:
 Waltz, "Chérie d'Amour."
 Fox-trot, "Ain't She Sweet?"

8.8 p.m.—GLADYS LAMPE, Contralto:
 "Cupid's Dream" (Berthelmann).
 "Swamp" (Irishman).

8.15 p.m.—MR. C. J. WILLIAMS will speak on "tomorrow's Stadium event."

8.25 p.m.—COLLINGWOOD CITIZENS' BAND:
 Selection, "Scenes of Beauty."
8.35 p.m.—MARIE LAWTON, the girl with the voice and the hair:

"Ave Maria Intermzzo" (Mammigi).
 "Spring's Awakening" (Endermann).

8.42 p.m.—FRENCH BROS., Soloists:
 "Sam the Assedon Man."
 "Swallow Morlan."

8.50 p.m.—WARDE MORLAN, Tenor (by permission of J. C. Williamson Ltd.).
 Selection.

8.55 p.m.—Announcements. THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE for To-day is for EVERYBODY—
 "Nearly all accidents are common accidents—the kind that happen time after time. If nearly all accidents are common, the reasons for them are common."
9 p.m.—COLLINGWOOD CITIZENS' BAND:
 March, "Heroes of the Flag."
 Overture, "Victorian Treas."

9.7 p.m.—RUSSO AND BRADFORD, Operatic Vocalists:
 Duet, "What is done"—Lilac Domino (Charles Caullery).

Linda Bradford, "Presence" (Gerald Carter).
 Duet, "Carmela"—Neapolitan Melody (G. B. De Curtis).

9.17 p.m.—MARIE LAWTON:
 "Ye Bards and Druids."
 "Argus Manofield."

9.24 p.m.—"CADDIGAN" (Mr. H. A. Wells, sporting editor of the "Argus" and "Australasian"), will speak on tomorrow's races.

9.30 p.m.—COLLINGWOOD CITIZENS' BAND:
 March, "How'd Awakes."

9.40 p.m.—FRED WALKER, Baritone:
 "Briquette" (W. Sanderson).
 "Fleur-de" (D. McLoach).

9.47 p.m.—FRENCH BROS., Soloists:
 "Lindy Lou."

9.54 p.m.—GLADYS LAMPE, Contralto:
 "The Elf Man" (Wells).
 "My Ship" (Barrett).

10 p.m.—COLLINGWOOD CITIZENS' BAND:
 Intermzzo, "The Dream Girl."
 "A Japanese Dance."

10.10 p.m.—"Argus" news service. Road notes supplied by the Royal Automobile Club of Victoria. Meteorological information.

NEW ZEALAND STATIONS:
 (Corrected List.)

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

Power 500 Watts; Wave-length, 333 Metres. Silent Night, Monday.

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

Power 2000 Watts; Wave-length, 420 Metres.

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

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

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

Power 750 Watts; Wave-length, 463 Metres.

10.20 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS:
 "I Wonder Who's Who's Who" (Diana).
 "This is June" (Leonard).
 "What Does a Matter" (Hornin).

10.20 p.m.—WARDE MORGAN, Tenor Soloist.
10.27 p.m.—COLLINGWOOD CITIZENS' BAND:
 "Prelude and Mazurka from Copella."
 "16 and 16—Announcements."

10.40 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS:
 "The Prisoner's Bride" (Blahnik).
 "Everything is Made for Love" (Johnson).
 "I Don't Know" (Wells).

11 p.m.—OUR GREAT THOUGHT:
 "Better build submarines for the boys than shells and bombs for the man."

11.1 p.m.—JOE ARONSON AND HIS SYMPHONIZING SYMPHONISTS:
 "Upright and Grand"—Piano Solo (Bloom).
 "Muddy Water" (De Rose).
 "Where the Love Bird Leaves the Nest" (Wells).

"By the Old Red Mill" (David).
 "I'm on My Way Home" (Berlin).
 "Looking for a Boy" (Gershwin).
 "That Certain Feeling" (Gershwin).
 "I Want to Love You Tonight" (Gilbert).
 "Fading" (Jenny).
 "Chinese Moon" (Nashbaum).
 "The Don't Wanna" (Yellow).
 "Because I Love You" (Berlin).
 "For My Sweetheart" (Dress).
 "Barbara" (Silver).
 "One Night in Love in Spain."
 "Brown Eyes in Your Dream" (Tarenty).
 "Hello, Goodbye" (Fried).
 "I've Got Somebody Now" (Williams).
 "You Know I Love You" (Nerva).

11.45 p.m.—GOD SAVE THE KING.

4QG, BRISBANE

Queensland Radio Service
 Wave Length, 385 Metres.

Friday, MIDDAY SESSION.

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

PROM HOTEL CARLTON:
 1.20 p.m.—Lunch hour music played by Hotel Carlton Symphony Orchestra.

FROM THE OBSERVATORY:
 1.55 p.m.—Standard time signal.
 2 p.m.—Clock down.

AFTERNOON SESSION.

2.20 p.m.—A programme of music from the "Standard."
4.20 p.m.—Clock down.

EARLY EVENING SESSION.

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

6.15 p.m.—Lectures:
6.30 p.m.—Business stories by "The Standard."
6.40 p.m.—Market reports; Stock reports.

6.50 p.m.—Weather reports; announcements; "Daily Standard" news.
7.20 p.m.—Standard time signal.

7.40 p.m.—Lectures: "A Talk on Poultry," by Mr. F. Bonshel (Poultry Institute).

NIGHT SESSION.

PART I.

ONE-ACT PLAY—"HUSBANDS KNOW YOUR WIVES."

(Written and Produced by Miss Thelma Channing.)
 Musical Numbers by the Studio Orchestra, Mechanical Effects by Mr. B. D. Giblin.
 "Husbands Know Your Wives" is a one-act play in which the characters of four husbands and four wives who decide to enjoy separate bedrooms are related.

PART II.

DANCE MUSIC.

9.30 p.m.—FROM THE PROGRESS HALL, NEWMARKET—
Dance Music.
10 p.m.—FROM THE STUDIO—
Week-end road information for motorists, officially supplied by the Royal Automobile Club of Queensland.
Sporting News.
The Daily Mail News.
Weather News.
Close down.

5CL, ADELAIDE

Central Broadcasters, Ltd.

Wave Length, 395 Metres.

Friday

MORNING SESSION.

12 noon.—G.P.O. Chimes.
12.1 p.m.—General information and "Advertiser" news service.
12.20 p.m.—Musical selections on the studio reproducer.
12.30 p.m.—S. C. Ward and Co's, Stock Exchange report.
12.47 p.m.—Weather synopsis.
1 p.m.—Musical selections on the Studio reproducer. Fox trot numbers.
1.15 p.m.—"Advertiser" Interstate News service.
1.30 p.m.—Musical selections on the Studio Reproducer. Va at numbers.
1.35 p.m.—Weather synopsis.
2 p.m.—G.P.O. chimes and close down.

AFTERNOON SESSION.

3 p.m.—Chimes.
3.1 p.m.—Orchestral selections from the Maple Leaf Cafe as under.
"Edeniana" (Strauss).
Fox trot, "Sweetie O Mine" (O'Hagan).
Suite, "Mignonette" (Giboulau).
Violin solo, "Hungarian Dance" (Lichner).
Meditation, "Sanctuary of the Heart" (Schubert).
3.45 p.m.—Musical items from the studio.
4 p.m.—Chimes.
4.1 p.m.—Orchestral selections from the Arcadia Cafe as under.
Overture, "The midnight dream" (Schubert).
Fox trot, "Pearl of Malabar" (Nicolini).
Melodie, "Moszkowski" (Avignone).
Pianoforte solo, "Nails" (Debussy).
Selection, "Phi Phi" (Christine).
"The Elephant Parade" (Beaque).
Finale, "The Maupile and the parrot" (Bendrix).
Vocalist—Meta Keidel (contralto).
4.55 p.m.—Station announcements.
5 p.m.—Chimes and close down.

EVENING SESSION.

6 p.m.—Chimes.
6.1 p.m.—Dinner music by Covent Garden Orchestra as under.
Selection, "Molly's songs" (Arr. Baynes).
Fox trot, "You don't like it" (Cohn).
A Lament, "The Spring Rose" (Meredon).
"A Chinese Lantern Dance" (Blome).
"Seriata from Lucia De Lammermoor" (Donizetti).
6.30 p.m.—Bedtime stories.
7.10 p.m.—Mr. A. L. Welford, Chairman of "Boy Week" will talk on "Boys as Nation Builders".
7.25 p.m.—Messrs. S. C. Ward and Co's, Stock Exchange Intelligence, Market reports by Messrs. A. W. Sandford and Co., A. E. Hall and Co., Dalgety and Co., S. A. Farmers Co-operative Union Taylor Bros., Retail Grocer's Association, J. H. Young's report on the tomato market Interstate Fruit and Produce Market, Company Ltd. Daw's Fish Market reports.
7.35 p.m.—Windbag's sporting service.
7.40 p.m.—"Willow" will talk on Cricket.
8 p.m.—Chimes.
8.1 p.m.—Studio Orchestra, Overture.

8.10 p.m.—Haydn Male Quartette.
8.15 p.m.—Studio Orchestra, Selection.
8.25 p.m.—Haydn Male Quartette.
8.32 p.m.—Lilette Foglia, violin solo.
8.37 p.m.—Arthur Bartle, lute solo.
8.42 p.m.—Studio Orchestra, Selection.
8.50 p.m.—Gwen Collett, contralto.
8.55 p.m.—Yera Rogers, cornet solo.
9 p.m.—Time announcement.
9.1 p.m.—Weather synopsis.
9.1 p.m.—Dalgety's wheat report.
9.5 p.m.—Studio Orchestra, Selection.
9.15 p.m.—Arthur Bartle, bass solo.
9.20 p.m.—Studio Orchestra, Selection.
9.30 p.m.—Mr. C. F. Anderson (Manager of the Bradford Poultry Station) will talk on "The marketing of eggs".
9.40 p.m.—Gwen Collett, contralto.
9.45 p.m.—Studio Orchestra, Selection.
9.55 p.m.—Arthur Bartle, bass solo.
10 p.m.—Time announcement.
10.1 p.m.—"Advertiser" news service.
10.10 p.m.—Windbag's sporting service.
10.15 p.m.—Shipping list.
10.20 p.m.—Selection, Studio Orchestra.
10.30 p.m.—Station announcements.
10.35 p.m.—Relay from Glenelg, the Mazon Dance Band.
11.10 p.m.—Saturday's programme, Station announcement.
11.15 p.m.—National Anthem, and close down.

7.45 p.m.—Racing talk by the Sporting Editor of "Truth" Newspaper Coy.
8 p.m.—Time signal from Perth Observatory.
8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
8.3 p.m.—POPULAR NIGHT:
Musical programme, including vocal and instrumental artists.
9 p.m.—Talk, "Gardening Notes," by Mr. E. A. Hughes, Representing Messrs. Dawson and Harrison Limited.
10 p.m.—Late news items by courtesy of "The Daily News" Newspaper.
Ships within range announcement.
Weather report and forecast.
10.30 p.m.—Close down.

100 METRE TRANSMISSION.

Simultaneous Broadcast on 100 Metres of Musical programme given on 1200 Metres, commencing at 8 p.m.

7ZL, HOBART

Tasmanian Broadcasters, Ltd.

Wave Length, 510 Metres.

Friday

MORNING SESSION.

11 a.m. to 12 noon

AFTERNOON SESSION.

3 p.m.—G.P.O. Clock chimes.
3.1 p.m.—Tune in selection.
3.5 p.m.—Hobart Stock Exchange Quotations, Weather information.
Items of interest—announcements.
3.15 p.m.—Orchestral selections by 7ZL studio Trio.
4.15 p.m.—Educational Talk.
4.30 p.m.—Close down.

EARLY EVENING SESSION

6.30 p.m.—Children's Corner with the "Radio Lady".
7 p.m.—Young Folks gardening chat by Mr. George Nation.
NIGHT SESSION.
7.30 p.m.—Fruit, Poultry and produce reports through the courtesy of Roberts and Co. Hobart.
7.35 p.m.—Gardening talk by Mr. George Nation, Glen Nurseries, Cascades.
7.50 p.m.—"Mercury" special Tasmanian news service. Railway auction produce sale. Weather forecasts. Hobart Stock Exchange quotations.
8 p.m.—G.P.O. Clock chimes.

8.1 p.m.—Sports Budget supplied by Mr. H. W. Newton, Hobart.
8.5 p.m.—Studio concert:
Miss Mona McGuffie, (soprano). (Miss Ruby Fleete (pianist). Miss Norah Freney (soprano). Miss Dulce Gale (solicitationist). Mr. P. Fegan (baritone). Mr. Victor Fitzroth (banjo solo). Mr. George Hook (comedian). Mr. Harry Bates (tenor).
8.40 p.m.—Cricket chat by "Mid-off".
8.50 p.m.—British Official Wireless news.
9.00 p.m.—"Mercury" special interstate news service. Ships within wireless range. Tasmanian District Weather reports. 9 a.m. Weather forecasts. Travellers week-end information.
National Anthem.

FOREIGN BROADCASTERS.

JOCK—Nagasaki Radio Broadcasting Co., Nagasaki, JAPAN; 340 metres, 1000 watts. (Announcement in English and Japanese).

JOBK—Osaka Central Broadcasting Co., Osaka, JAPAN; 352 metres, 1000 watts. (Announcement in English and Japanese).

JOAK—Tokyo Broadcasting Co., Tokyo, JAPAN, 375 metres, 1000 watts. (Announcement in English and Japanese).

JFC—Havayische Radio Vereinigung, BATAVIA, 226 metres, 48 watts.

KZRM—Manila, PHILIPPINE ISLANDS; 413 metres, 1000 watts. (Announcement in English and Philippine).

KGU—"Honolulu Advertiser," Honolulu, HAWAII, 278 metres, 500 watts.

KGO—Oakland, CALIFORNIA; 361.2 metres, 5000 watts.

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

KOA—Denver, COLORADO; 222.4 metres, 5000 watts.

Saturday, Oct. 29
2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m.—"Big Ben" and programme announcements.
10.5 a.m.—Studio music.

10.55 a.m.—"Sydney Morning Herald" news service.
 10.58 a.m.—Studio music.
 10.58 a.m.—A talk by the 2FC racing commentator.
 10.58 a.m.—Studio music.
 11 a.m.—"Big Ben." Studio music.
 11.5 a.m.—A.P.A. and Heuser's cable services.
 11.10 a.m.—Studio music.
 11.15 a.m.—A talk on Gardening, by Mr. G. J. Lockley ("Dogmim").
 11.30 a.m.—Close down.

MIDDAY AND AFTERNOON SESSIONS.

12 noon—"Big Ben" and programme announcements.
 Note.—From the Sydney Cricket Ground: A full description of the cricket match, New Zealand versus N.S.W.
 12.15 p.m.—Stock Exchange, Gral call.
 12.30 a.m.—Studio music.
 12.35 p.m.—"Sydney Morning Herald" news service.
 12.42 p.m.—Ragby wireless news.
 12.50 p.m.—Studio music.

12.55 p.m.—During the afternoon, by courtesy of N.L.O. Melbourne, station 2FC will relay a description of the V.R.C. Derby in the turning.
 1 p.m.—"Big Ben." Weather intelligence.
 1.10 p.m.—"Evening News" midday news service.
 1.20 p.m.—Studio music.

Note.—Race results from Moorefield will be given as received.
 During cricket and race intervals, musical items will be given from the studio, including Tim Fogarty, novelty pianist.
 4.50 p.m.—A complete review of the day's sporting events.
 6 p.m.—"Big Ben."
 Close down.

EARLY EVENING SESSION.

6.40 p.m.—The child of 2FC.
 6.45 p.m.—"Hilda Man" talks to the children.
 6.50 p.m.—Story time for the young folk.
 6.55 p.m.—Studio music.
 7.00 p.m.—"Big Ben." Weather intelligence.
 7.10 p.m.—"Evening News" late news service.
 Close down.

NIGHT SESSION.

7.50 p.m.—Programme announcements.
 7.55 p.m.—Wally Haynes, comedian.
 8.00 p.m.—Studio items.
 7.58 p.m.—Elain Feebles, soprano: "Beauty Sleep" (Arditi).
 "The Flutes of Arcady" (James).
 8.05 p.m.—"Big Ben." From the Crystal Palace Theatre, Ragby: Orchestral music and programme "The Seventh Heaven." Conductor, Mr. Harry Blose.
 8.30 p.m.—Descriptions from the Speedway Royal.
 8.50 p.m.—From the Studio: St. Quintin Downey, pianoforte solo: "First Movement Sonata Pathétique" (Beethoven). (By special request).
 8.45 p.m.—Elain Feebles, soprano: "The Nibbingale's Trill" (Grazzi).
 "Bird songs at Ewendale" (Coates).
 8.53 p.m.—Charles Lawrence, entertainer: "Thosetta".
 9 p.m.—"Big Ben." Late weather forecast.
 8.45 p.m.—St. Quintin Downey, pianoforte solo: "Tango" (Albeniz).
 "O, Star of Eve" ("Tannhäuser") (Wagner).
 8.10 p.m.—The Radio "Bevellers," introduced by Mr. Lawrence Halbert.
 Opening Chorus.
 8.15 p.m.—A sketch.
 8.20 p.m.—Ethelby Cooke and Harry Whyte in piano and vocal novelties.
 8.25 p.m.—Charles Lawrence, entertainer: "Public Conversations."
 8.35 p.m.—From the Speedway Royal: Further descriptions and results.
 8.42 p.m.—From the Studio: Laurence Halbert, baritone.

9.45 p.m.—A Revel and final chorus.
 9.50 p.m.—Ethelby Cooke, baritone.
 9.54 p.m.—From the Speedway Royal: Further descriptions of the racing.
 10 p.m.—"Big Ben." From the Studio: Wally Haynes, comedian.
 10.5 p.m.—Len Mauries, popular baritone.
 10.12 p.m.—Harry Whyte, novelty pianist.
 10.16 p.m.—Final results from the Speedway Royal.
 10.20 p.m.—From the Crystal Palace Theatre, Sydney: Orchestral items.
 10.28 p.m.—From the Studio: Wally Haynes, comedian.
 10.32 p.m.—Len Mauries, popular baritone.
 10.34 p.m.—The 2FC Studio Dance Band.
 10.44 p.m.—Len Mauries, baritone.
 10.54 p.m.—The 2FC Dance Band.
 10.58 p.m.—Late news and announcements.
 11 p.m.—"Big Ben." The 2FC Dance Band will play until 11.45 p.m.
 11.45 p.m.—National Anthem.
 Close down.

2BL, SYDNEY

Saturday.

EARLY MORNING SESSION.

7.9 a.m. to 8.5 a.m.

MORNING SESSION.

11.0 a.m.—G.P.O. Clock and Chimes, Musical Programme from the Studio.
 11.18 a.m.—Social Notes by Mrs. Jordan: Talk on "Nimble Nodding by Children," by Mrs. Jordan.

AFTERNOON SESSION.

Racing Information Broadcast immediately after Each Race, by Courtesy of the 2FC.
 12.0 noon.—G.P.O. Clock and Chimes; Special Ocean Forecast and Weather Report.
 12.5 p.m.—Brunswick Panatone Musical Festival.
 12.55 p.m.—News from the "Sun."
 12.58 p.m.—Sporting and Athletic Features.
 12.59 p.m.—"What's on at the Picture and Theatres."
 12.58 p.m.—Musical Programme from the Studio.
 12.50 p.m.—News from the "Sun."
 12.55 p.m.—Racing Results.
 12.55 p.m.—Musical Programme from the Studio.
 1.0 p.m.—G.P.O. Clock and Chimes; Musical Programme from the Studio.

Short Wave Broadcasters

Schedules and Wavelengths Subject to Change.

RG-2NM, Gerald Marcone, Caterham, England, 21 and 22 metres (I.B.C. Programme).

KN-PCJJ, Philips' Experimental Station, Eindhoven, Holland, 30.2 metres (I.B.C. Programme).

NU-2XAF, General Electric Co., Schenectady, New York State, U.S.A., 22.77 metres (W.G.Y. Programme).

NU-2XAG, General Electric Co., Schenectady, New York State 14, 26 and 32 metres (W.G.Y. Programme).

NU-KDEA, Westinghouse Electric Co., Pittsburgh, Penn., U.S.A., 33.5 and 14 metres.

NU-WLV, Crowley Radio Corporation, Cincinnati, Ohio, U.S.A., 32 metres.

NU-2XAL, "Radio News," New York City, U.S.A., 30.91 metres (WRNY Programme).

FC-JR, Johannesburg Broadcasting Company, South Africa, 29 and 25 metres.

1.10 a.m.—Sporting Talk and Athletic Features for the Day.
 1.20 p.m.—Musical Programme from the Studio.
 1.30 p.m.—G.P.O. Clock and Chimes. Talk to Children and Special Entertainment for Children in Hospital.
 2.5 p.m.—G.P.O. Clock and Chimes: Serial Story.
 2.34 p.m.—Musical Programme from the Studio.
 2.55 p.m.—Racing Results.
 3.00 p.m.—G.P.O. Clock and Chimes: News from the "Sun."
 During the afternoon, Sporting Information will be broadcast by courtesy of the "Sun," interspersed with Musical Items from the Studio.
 5.0 p.m.—G.P.O. Clock and Chimes: Racing Results, Close Down.

EARLY EVENING SESSION.

6.00 p.m.—G.P.O. Clock and Chimes: Children's Session.
 6.30 p.m.—Musical Programme from the Studio.
 7.15 p.m.—Results of the Day's Sporting.
 7.40 p.m.—Country News from the "Sun."
 8.0 p.m.—G.P.O. Clock and Chimes: Broadcasters' Tenth Chorus.
 8.3 p.m.—Broadcasters' Light Orchestra, under the Direction of Mr. J. Knight Darnott.
 8.13 p.m.—Miss Millie Hughes (Soprano).
 8.20 p.m.—Al. Jack's Crackerjack Broadcast from the Ballroom of the Bondi Casino.
 8.30 p.m.—Broadcasters' Mindful Show, under the Direction of Mr. Bartley Croft.
 8.30 p.m.—Broadcasters' Light Orchestra.
 8.40 p.m.—Miss Millie Hughes.
 8.45 p.m.—Al. Jack's Crackerjack Broadcast from the Ballroom of the Bondi Casino.
 8.57 p.m.—Results of Following Day's Programme.
 10.0 p.m.—G.P.O. Clock and Chimes.
 10.0 p.m.—Broadcasters' Light Orchestra.
 10.11 p.m.—The Ambassadors' Dance Band Broadcast from the Ballroom of the Ambassadors. During Interval between Dances, "Sunday News" will be broadcast.
 12.0 midnight.—G.P.O. Clock and Chimes.

2UW, SYDNEY

Saturday.

EVENING SESSION.

7.30 p.m.—Where to Go.
 7.40 p.m.—Studio items.
 7.45 p.m.—Organ solo, Professor G. Szelesi "Prelude" (Rever).
 7.51 p.m.—Miss Jean Edwards, soprano: "Oblivion" (Fountaine).
 7.55 p.m.—Vocal solos, Victor Galley, 1st Soloist, 1st Soloist.
 8.00 p.m.—Alfred O'Connell, organ: Songs at the Piano.
 8.05 p.m.—Miss Fay O'Brien, soprano: Soloist.
 8.06 p.m.—Organ solo, Professor G. Szelesi "Reverie" (Goussier).
 8.10 p.m.—Harry Afflick, Jazz interlude.
 8.15 p.m.—Jean Edwards, soprano: "Who is Sylvia."
 8.20 p.m.—Guitar soloist.
 8.20 p.m.—Victor Galley, Victor Galley, 1st Soloist.
 8.24 p.m.—Alfred O'Connell, organ: Songs at the Piano.
 8.30 p.m.—Harry Afflick, Jazz interlude.
 8.42 p.m.—Amy Wilson, soprano: "S. S. Sestina" (Tosti).
 8.50 p.m.—Soprano soloist.
 9 p.m.—Amy Wilson, soprano: "Said as the Bird" (Robert).
 8.4 p.m.—Harry Afflick, Jazz interlude.
 8.15 p.m.—Dance Soloist from Studio.
 9.21 p.m.—Results of following programme.
 9.30 p.m.—Close down.

3LO, MELBOURNE.

Saturday.

MORNING SESSION.

- 11 a.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"The Top Town Parade" (Marek).
"Just Once Again" (Ash).
"Early Down to the Rio" (Riag).
11.15 a.m.—**GLADYS LAMPE, contralto:**
"Silly Marrying" (Frell).
"Up-ton" (Molly Carey).
11.17 a.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"When Lights Are Low in Cairo" (Merka).
"Serenade Venetian Skies" (Lewla).
"Tch Gonna Be Home To-night" (Dubin).
11.23 a.m.—**FRED WALKER, baritone:**
"Hilar Nup" (A. MacLaydon).
"Vale" (G. Rowald).
11.25 a.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"I'm Telling the Birds, Telling the Bees" (Drews).
"The Spell of the Moon" (Kahn).
"Ho-Lo-Tu" (Kahn).
11.27 a.m.—**MARIE LAWTON, the girl with the voice and the kary:**
"Oh, Lovely Night."
"Madley of Madara Succumb." (Drews).
11.28 a.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"The Hanging Gardens of Babylon" (Carlo).
"Solista" (Kahn).
"Diamond Moon" (Lawrence).
11.30 a.m.—**MELBOURNE OBSERVATORY TIME SIGNAL:** Metal prices received by the Australian Mines and Metals Association, from the London Stock Exchange this day. British official wireless news from Rugby. Reuters and the Australian Press Association cables. Ayrns News service.
11.30 p.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"Hydrum is the Thing" (Kahn).
"Golden Gate" (Lewla).
"My Aunt" piano solo (Bleens).
11.30 p.m.—**RUSSO AND BRADFORD, Operatic vocalists:**
Soprano: "Calf of Gold" from Faust (Broun).
Duet: "Home to Our Mountains" from Il Trovatore (Verdi).
Duet: "I Want You Beside Me" (Ameale).
11.35 p.m.—Stock Exchange information.
11.40 p.m.—**TASMA TIRGIAN, 'cello:**
"Oriental" (Gut).
11.45 p.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"Who-oo? You-oo, That's Who" (Olger).
"Stepping in Society" (Akaki).
"She's Got It" (Davia).
11.45 p.m.—**MELBOURNE OBSERVATORY TIME SIGNAL:** One of the Clock. What have you forgotten—what left undone? That promise made—has duty to perform—DO IT NOW.
11.50 p.m.—Description of Maiden Place, one mile, V.R.C. Flemington, by "Musket" of The Sporting Globe.
11.55 p.m.—**GLADYS LAMPE, contralto:**
"So Sunny Best" (Schumann).
"Hedge Rees" (Schumann).
11.58 p.m.—Meteorological information. Shipping information. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports. Rainfall for Victoria, Tasmania, South Australia, and New South Wales.
12.00 p.m.—**STUDIO QUARTET:**
Selection: "Little Tunes."
12.05 p.m.—**FRED WALKER, baritone:**
"In an Old Fashioned Town" (W. H. Sauter).
"Will Awaik, The" (E. C. Jackson).
12.10 p.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"Lava is Just a Little Bit of Heaven" (Bryen).
"There's a Trick in Pickin'" Chick, Chick, Chicken" (Tobias).
"Crazy Words, Crazy Tunes" (Yellen).
12.15 p.m.—Description of Masterton Place, 5 mi., V.R.C. Flemington, by "Musket" of The Sporting Globe.
12.25 p.m.—**MARIE LAWTON:**
"It's Only a Tiny Garden" (Wood).
"For You Alone" (Geeh).

- 1.22 p.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"Ani's She Awok" (Yellan).
"Rosa Lee" (Ash).
"Hawn of Ygnarow" (Green).
2 p.m.—Close down.
2.15 p.m.—Description by Mr. Rod McGregor of cricket match between South Melbourne and Northcote, at South Melbourne.
2.15 p.m.—Close down.
2.40 p.m.—Description of Melbourne Stakes, 1 1/4 miles, V.R.C. Flemington, by "Musket" of The Sporting Globe.
2.45 p.m.—Close down.

AFTERNOON SESSION.

- 3 p.m.—**MELBOURNE OBSERVATORY TIME SIGNAL:** Nothing "against Time" as the can make defense. Save breed, to brave him when he takes those honors.
3.15 p.m.—**HARRY SHUGG'S STUDIO BAND:**
Selection: "Garden" (Hend).
Waltz: "Sons D'Autonne."
March: "St. Kilda."
3.30 p.m.—Description by Mr. Rod McGregor of cricket match between South Melbourne and Northcote at South Melbourne.
3.30 p.m.—Description of Victoria Derby, 1 1/4 miles, V.R.C. Flemington, by "Musket" of The Sporting Globe.
3.35 p.m.—**HARRY SHUGG'S STUDIO BAND:**
Fantasia: "In Sunny Lands" (Laurent).
Ballad: "My Sunny Maid" (Rimmer).
3.38 p.m.—Description by Mr. Rod McGregor of cricket match between South Melbourne and Northcote at South Melbourne.
3.40 p.m.—**HARRY SHUGG'S STUDIO BAND:**
March: "The Middy" (Alford).
4.15 p.m.—Description by Mr. Rod McGregor of cricket match between South Melbourne and Northcote at South Melbourne.
4.25 p.m.—Description of Cantata Sables, one mile, V.R.C. Flemington, by "Musket" of The Sporting Globe.
4.30 p.m.—**HARRY SHUGG'S STUDIO BAND:**
Selected.
4.45 p.m.—Description by Mr. Rod McGregor of cricket match between South Melbourne and Northcote at South Melbourne.
4.50 p.m.—**HARRY SHUGG'S STUDIO BAND:**
Selected.
5 p.m.—Description of Rotham Handicap, 1 1/4 miles, V.R.C. Flemington, by "Musket" of The Sporting Globe.
5.5 p.m.—Close down.

EVENING SESSION.

- 5.30 p.m.—Sporting results.
5.40 p.m.—Answer to letters and "birthday greetings" by "LITTLE MISS KOOKABURRA."
5.45 p.m.—**STUDIO QUARTET:**
"Parade of the Tin Soldiers."
5.50 p.m.—**LITTLE MISS KOOKABURRA—Sings for the Tiny Tots:**
"The Gollywog."
And for the older ones there is a new aerial gollywog:
"The Flusky Patrol." Today you shall hear "The Call of the Camp."
5.55 p.m.—**STUDIO QUARTET:**
"Oh, Spry Lasses."
6.00 p.m.—Harold news service. Weather reports. Shipping movements.
6.02 p.m.—Stock Exchange information.
6.07 p.m.—Market reports.
6.50 p.m.—River reports.
6.52 p.m.—Newmarket sheep sales by the Associated Stock and Station Agents, Bourke-st. Markets reports by the Victorian Producers Co. Ltd., poultry, grain, straw, rice, dairy produce, potatoes and onions.
7.10 p.m.—Market reports of fruit by the Victorian Fruitsters' Association; Retail prices. Wholesale prices.
7.15 p.m.—Under the auspices of the ROYAL LIFE SAVING SOCIETY, Victoria, Head Clerk, MR. A. C. NEWBY will speak on "Swimming as a Preparation for Life Saving."

NIGHT SESSION.

- 7.30 p.m.—**MR. F. CHAPMAN, National M.P.,**
"Pine of the Coral Reef."
7.45 p.m.—**MR. R. F. LAMPE, The History of Timekeepers.**
"The Time Cuckles, The Great Clock of Rome."

- 8 p.m.—**THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE** for today in the "GLOBE."
"Mental safeguards are often foolproof, but mental safeguards have them beaten to a frazzle."
8.10 p.m.—**KENSINGTON DISTRICT BAND, Madrigal, "The Silver Swan"**
Intermission: "White Lies" (Orkholm).
8.10 p.m.—**RUSSO AND BRADFORD, operatic vocalists:**
Duet: "Garden of Happiness."
Lynda Bradford, "Softly Awakes My Heart," from Samson and Delilah (Saint Saens).
Duet: "Dite Alla Gioiava," from La Traviata (Verdi).
8.20 p.m.—**KENSINGTON DISTRICT BAND, March, "Majesty" (Greenwood).**
8.27 p.m.—**MELBOURNE CHORAL UNION, Madrigal, "Come to the Fair" (Martin).**
8.28 p.m.—**KENSINGTON DISTRICT BAND, March, "The Old Regiment" (G. Thomas).**
8.40 p.m.—**MELBOURNE CHORAL UNION, Madrigal, "You Stole My Love" (Chorus, "Tally-Ho").**
8.45 p.m.—A special programme has been arranged.
10.15 p.m.—**KENSINGTON DISTRICT BAND, Fantasia, "Golden Valley" (Hawkins).**
Under the auspices of the Health Association of Australia, the HEALTH MESSAGE for today is:
"That nation with the best human stock and largest store of health will win the world's prizes."
10.30 p.m.—**GLADYS LAMPE, contralto:**
Ballad: "New What Not I wish for?" (Hesh).
"Gina Mai Toi" (Haddad).
10.37 p.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"When Will We Meet Again" (Florida).
"Jack in the Box" (Nichol).
"Skallin'" (Nichol).
10.45 p.m.—Late sporting results.
11 p.m.—**OUR GREAT THOUGHT:**
"A man's best things are nearest him, the things about his feet." (Lord Haughton).
11.1 p.m.—**JOE ARONSON AND HIS SYNCO-SYMPHONISTS:**
"Marie in the East" (Nichol).
"Just a Rose in Old Killarney" (Swan).
"Julius, You Wonderful Boy" (Mayer).
"I'm Going to Dance with the Guy Who Brings Me the News."
"If Ain't Got Nobody and Nobody Care for Me" (Graham).
"The Little White House in Honeycomb Lane" (Dowling).
"I Love the College Girl" (Jaffe).
"Classicans" (Lange).
"That Waltz of Yesterday" (Curtis).
"Take Your Finger Out of Your Mouth" (Yellen).
"Hercules Song Bird" (Lewla).
"She Knows Her Onions" (Cockow).
11.40 p.m.—**GOD SAVE THE KING.**

4QG, BRISBANE.

Saturday.

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

- 1.30 p.m.—A Matinee for Little Sisters, by "Miss Wariak."
4.35 p.m.—Close down.

EARLY EVENING SESSION.

- 6.30 p.m.—Bedtime stories by "Erica Ben."
7.15 p.m.—Sporting results.
7.30 p.m.—Sailing Notes by Mr. Fred Smith.

NIGHT SESSION.

- ST. DAVID'S SOCIETY ELIZABETH LODGE.
The final portion of the programme will comprise the broadcasting of part of the 6th session of St. David's Society's Annual Eisteddfod.

- 8 p.m.—**FROM ALL SAINTS HALL—St. David's Society's Eisteddfod.**

SPEEDWAY.

- 9 p.m.—**FROM DAVIES PARK SPEEDWAY—Motor Cycle Races.**
10 p.m.—**FROM LENNON'S BALLROOM—Dance Music.**
10.30 p.m.—**FROM THE STUDIO—The Daily Mail News.**
Weather News.
Close down.

There's the right Burgess for every set.

SCL, ADELAIDE.

Saturday.

MORNING SESSION.

- 11 a.m.—Chimes.
 11.1 a.m.—"Advertiser" news service and general information.
 11.30 a.m.—Musical items on the Studio Record.
 12 noon.—Obitimes and close down.

AFTERNOON SESSION.

- 3 p.m.—Chimes.
 3.1 p.m.—Results of Madina and Wallaroo Race meetings, also Interstate results, interspersed with musical items.
 5 p.m.—(Approx.) Close down.

EVENING SESSION.

- 6 p.m.—Chimes.
 6.1 p.m.—Dinner music from the Covent Garden Restaurant as under:
 Overture, "Halleaux in Algeria" (Reinold).
 Fox trot, "When do we dance" (Gershwins).
 Love Sonnet, "To you dear" (Edwards).
 Mazurka, "La Carolina."
 Finale, "Blue Skies."
 6.30 p.m.—Bedtime Stories by Uncle Jack.
 7 p.m.—Mr. F. L. Stratton, A.E.S.C., Director of Music, Education Department, Talk on "Harmony."
 7.25 p.m.—Messrs. S. C. Ward and Co's. Stock Exchange Intelligence. Market reports by Messrs. A. W. Sandford and Co., A. E. Hall and Co., Delaney and Co., S. A. Farmers Co-operative Union, Taylor Bros. Retail Grocers Association, J. H. Young's Special report on the tomato market. Interstate Fruit and Produce Market Company Ltd.
 7.45 p.m.—Sporting results.
 8 p.m.—Chimes.
 8.1 p.m.—Mr. E. G. Gunter, bass solo.
 8.5 p.m.—Mr. E. J. Ganner will talk on "Radio-Vision."
 8.20 p.m.—H. L. Macary, violin solo.
 8.25 p.m.—Mr. E. G. Gunter, bass solo.
 8.30 p.m.—Helen Magary, violin solo.
 8.35 p.m.—Kodak Clarke, tenor solo.
 8.45 p.m.—By kind permission of the management a description of the wedding will be broadcast from the Exhibition Building.
 10 p.m.—(Approx.) Sporting results.
 9 p.m.—Relay from Glenelg—The Mason Dances Band.
 11.10 p.m.—Sunday's programme, station announcements.
 11.15 p.m.—National Anthem, and close down.

6WF, PERTH.

Saturday.

- 12 noon.—Tune in.
 12.5 p.m.—Musical programme including pianoforte selections by Miss Evelyn Willis, A.R.C.M.
 12.47 p.m.—Markets, news and cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 1.2 p.m.—Close down.
 1.30 p.m.—Tune in.
 SPORTING SESSION.
 Racine results.
 5.30 p.m.—Close down.
 6.45 p.m.—Tune in.
 6.50 p.m.—Birthday greetings for the Kiddies by Uncle Rag.
 7.10 p.m.—Sporting results.
 7.20 p.m.—Markets, news, and cables.
 7.45 p.m.—Talk.
 8 p.m.—Time Signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 8.5 p.m.—MUSIC AND SONGS:
 Orchestral music played by Hoyts Orchestra, conducted by Mr. Harold Partington, relayed from Hoyts Regent Theatre, William Street.
 Musical programme from the Studio, including vocal and instrumental artists.
 Old time dance music relayed from the Unity Hall, Beaufort Street.

- 10 p.m.—Late news items by courtesy of "The Daily News" Newspaper Co.
 News within range announcement.
 Weather report and forecast.
 Sports results.
 10.40 p.m.—Close down.

7ZL, HOBART

Saturday

MORNING SESSION.

- 11.0 a.m.—G.P.O. Clock Chimes.
 11.1 a.m.—Tune in Selection.
 11.8 a.m.—British Official Wireless News.
 11.10 a.m.—"Mercury" News Service.
 11.30 a.m.—Shipping Information; Ships Within Wireless Range.
 11.35 a.m.—Mail Notices; Commercial News; Foreign Exchange Market; Housewives' Guide.
 11.45 a.m.—Hobart Stock Exchange Quotations.
 11.50 a.m.—Sporting Anticipations.
 11.55 a.m.—Tasmanian Stations; 9 a.m. Weather Report.
 12 noon.—G.P.O. Clock Chimes; Close Down.

AFTERNOON SESSION.

- 3.0 p.m.—Broadcast by Direct Wire from North Hobart Oval. Description of Newton v. North West Crickets Match, by "Mild O'". Progress, Rising and Sporting Results, announced during Session.
 Close Down.

EARLY EVENING SESSION.

- 6.30 p.m.—"Uncle Hector" Talks to the Children.
 7.0 p.m.—"Uncle Peter's" Half Hour.

NIGHT SESSION.

- 7.30 p.m.—Musical Selection.
 7.5 p.m.—Talk by Mr. G. R. Davis, subject, "Tasmania's Tourist Season."
 7.50 p.m.—"Mercury" Special Tasmania News Service; Sporting Results; Weather Forecast; Hobart Stock Exchange Quotations.
 8.0 p.m.—G.P.O. Clock Chimes.
 8.15 p.m.—Broadcast by Direct Wire from Imperial Hotel, Hobart; Dance Numbers by Mrs. Sheppard's Trio.
 9.0 p.m.—Nature's Lesson Book, opened by Mr. F. G. Roberts, Tasmania's "Naturalist."
 10.20 p.m.—British Official Wireless News; Ships Within Wireless Range; Weather Information; Station Announcements; National Anthem.

Sunday, Oct. 30

2FC, SYDNEY

MORNING SESSION.

- 10.55 a.m.—Programme announcements.
 11 a.m.—"Big Ben."
 11.15 a.m.—From the Grand Opera House, Sydney:
 The Morning Service.
 Preacher, Rev. Hugh Eaton.
 12.15 p.m.—From the Studio:
 News session.
 12.30 p.m.—Close down.

AFTERNOON SESSION

- 3 p.m.—"Big Ben" and announcements.
 3.5 p.m.—From the Grand Opera House, Sydney:
 A Christian Science Lecture, by Dr. John Tutt.
 4 p.m.—From the Band Rotunda, Manly Beach.
 A Band Concert programme, by the Manly Municipal Band, Conductor, James Pheloung.
 5 p.m.—"Big Ben." Close down.

NIGHT SESSION.

- 6.15 p.m.—Programme announcements.
 6.30 p.m.—From the Congregational Church, Petersham:
 An Organ Recital, arranged by Mr. A. P. Gibbs, L.L.C.M.:
 Organ, "Psal on Cathedral Chimes, with hymn "Abide with Me."
 6.51 p.m.—Solo, "Youth" (Allison), Herbert Hinton, vocalist.
 6.58 p.m.—Organ, "Prayer et Mercere" (Gulmann).
 6.52 p.m.—Solo, Jennie Macle, contralto.
 6.56 p.m.—Organ, "Ave Maria" (Gounod).
 6.49 p.m.—Solo, "Give" (Backer), Herbert Hinton, vocalist.
 6.44 p.m.—O-rgan, "Marche Militaire" (Gounod).
 6.49 p.m.—Organ, "Elegy in G" (Lemare).
 6.53 p.m.—Solo, Jessie Davis, contralto.
 6.58 p.m.—Organ, "Ballet Egyptian" (Lutchny).
 7.8 p.m.—Organ, "Even Song" (Martin).
 7.15 p.m.—From the Congregational Church, Petersham:
 The Evening Service, conducted by the Rev. A. P. Burns.
 Invocation and Lord's Prayer.
 Hymn, "O God of Bethel."
 Psalm 104.
 Anthem, "Lead, Kindly Light" (Evans).
 Lesson.
 Hymn, "Eternal Father."
 Prayer.
 Anthem, "Heaven unto Me" (Sullivan).
 Hymn, "Art Thou Wary?"
 Sermon, Rev. A. P. Burns.
 Hymn, "Jesus Lover of My Soul."
 Benediction.
 8.30 p.m.—From the Band Rotunda, Manly Beach:
 A Programme by the Manly Municipal Band, conducted by James Pheloung.
 8.40 p.m.—From the Studio:
 Madame Emily Marks, soprano:
 (a) "A Birthday" (Woodman).
 (b) "Ave Maria" (Wagn).
 9.35 p.m.—Lindsay Evans, pianoforte solo:
 (a) "Gigue" (Girard).
 (b) "The Harmonious Blacksmith" (Handel).
 9.45 p.m.—William Dallison, tenor.
 9.46 p.m.—Madame Emily Marks, soprano:
 (a) "Within my heart a Song I Found" (Bauer).
 (b) "The Lass with the Lullaby Air" (Horne) (by request).
 10.4 p.m.—William Dallison, tenor.
 10.12 p.m.—Lindsay Evans, pianoforte solo:
 (a) "Walk" (Steinbach).
 (b) "Prelude" (Methuen).
 (c) "Study" (Feldman).
 10.20 p.m.—National Anthem.
 Close down.

2BL, SYDNEY

Sunday.

MORNING SESSION.

- 10.45 a.m.—Special News Service.
 11.0 a.m.—Service Broadcast from Randwick Presbyterian Church.

AFTERNOON SESSION.

- 2.0 p.m.—G.P.O. Clock and Chimes.
 2.1 p.m.—Children's Session.
 2.15 p.m.—Recital by H.M.V. Gramophone Company.
 2.45 p.m.—Information Service.
 2.0 p.m.—G.P.O. Clock and Chimes; Close Down.
 3.50 p.m.—G.P.O. Clock and Chimes.
 3.31 p.m.—Broadcasters' Trio.
 3.41 p.m.—Mr. W. E. Lewis (Barrabool).
 3.48 p.m.—Miss Dorrie Ward (Sopranos).
 3.55 p.m.—Broadcasters' Trio.
 4.5 p.m.—Mr. W. E. Lewis.
 4.12 p.m.—Miss Dorrie Ward.
 4.19 p.m.—Broadcasters' Trio.
 4.30 p.m.—Bible Class, Conducted by Mr. W. "Calvo" Bradley.

8.15 p.m.—G.P.O. Clock and Chimes; Close Down.
 8.45 p.m.—Children's Service.
 7.0 p.m.—Service Broadcast from Handwick Presbyterian Church.
 8.30 p.m.—Band Rental by the North Sydney Township Band, Broadcast from Manresa Hall, North Sydney.
 9.15 p.m.—From the Studio: Weather Report and Forecast by Courtesy of Mr. G. J. Hares, Government Meteorologist.
 9.15 p.m.—Mr. Gordon Rodda (Herald).
 9.30 p.m.—Broadcasters' Trio.
 9.38 p.m.—Miss Elsie Findlay (Soprano).
 9.40 p.m.—Mr. Gordon Rodda.
 9.47 p.m.—Broadcasters' Trio.
 9.51 p.m.—Resume of Following Day's Programme.
 10.0 p.m.—G.P.O. Clock and Chimes.
 10.1 p.m.—Miss Elsie Findlay.
 10.3 p.m.—Broadcasters' Trio.
 10.15 p.m.—National Anthem.

2GB, SYDNEY

Sunday.

MORNING SESSION.

10.15 a.m.—Music from St. Albans Liberal Catholic Church.
 10.40 a.m.—Celebration of Most Holy Eucharist.
 12 noon.—Close down.

EVENING SESSION.

8.45 p.m.—Music from Studio.
 7 p.m.—Lecture from Avonac Hall.
 8 p.m.—Duet for two violins with piano accompaniment:
 DAN SCULLY, MONICA HOEDER, ADA BROOK.
 8.5 p.m.—Piano solos, ADA BROOK:
 1. "To the Spring" (Greig).
 2. "Papillon" (Lavello).
 8.25 p.m.—Violin Solos, DAN SCULLY:
 1. "Mazurka" (Chopin).
 2. "Minuet" (Mozart).
 8.30 p.m.—Duet for two violins, with piano accompaniment:
 DAN SCULLY, LLOYD DAVIS, ADA BROOK.
 8.40 p.m.—Talk.
 9 p.m.—Close down.

2 UW, SYDNEY

Sunday

MORNING SESSION.

10.30 a.m.—Band Selections:
 "Havanna" (Neil Spang).
 10.55 a.m.—Tenor solo:
 "If with your Hearts" - "Ellek" (Mendelssohn).
 10.40 a.m.—Duo solo:
 "Arise Red Sun" (Russian Folk Song).
 10.45 a.m.—Violin solo:
 "Allegretto" (Hoehring-Kretzler).
 10.50 a.m.—Selection from Liturgical Time.
 10.55 a.m.—Soprano solo:
 "Mignon" (Thomas), "Comma-tu il pais", with viola obbligato.
 11.0 a.m.—Bass solo:
 "Now let us depart" - Church Hymn (Strokin).
 11.5 a.m.—Grand Organ solo:
 "Hallelujah Chorus" - "Messiah" (Handel).
 11.15 a.m.—Bkral Selection:
 "Liberty Bell March" (Souza).
 11.25 a.m.—Soprano solo:
 "Mighty Lak a Rose" (Neslin).
 11.45 a.m.—Soprano selections.
 11.55 a.m.—Violin solo:
 "Largo" - "Berce" (Handel).
 11.58 a.m.—Tenor solo:
 "Then shall the Ruthless Shine Forth" - "Ellek" (Mendelssohn).
 11.45 a.m.—Soprano selections.
 11.55 a.m.—Grand Organ solo:
 "Offertoire in E Flat" (Wely).
 11.50 a.m.—Studio selections.
 12.25 p.m.—Resume of forward programme.
 12.30 p.m.—Close down.

EVENING SESSION.

7 p.m.—Studio selections.
 8 p.m.—Col. Paris and His Orchestra.
 8.30 p.m.—Caldon Duo, Steel Guitars:
 (a) "Honolulu Moon" (Waltz).
 (b) "Dream of Dreams."
 8.35 p.m.—Soprano Selection.
 8.40 p.m.—Caldon Duo, Steel Guitars:
 "The Roary."
 8.45 p.m.—Col. Paris and His Orchestra.
 9 p.m.—Caldon Duo, Steel Guitars:
 (a) "Tale of Golden Dreams."
 (b) "Alcha Luni."
 9.15 p.m.—Studio selections.
 9.25 p.m.—Resume of forward programme.
 9.30 p.m.—Close down.

3LO, MELBOURNE.

Sunday.

MORNING SESSION.

10.30 a.m.—Bells from ST. PAUL'S CATHEDRAL.
 10.45 a.m.—Express train information.
 British official wireless news from Rugby.
 Service from WESLEY CHURCH CENTRAL MISSION, LONSDALE STREET, MELBOURNE. Conducted by REV. J. H. GAIN.
 11 a.m.—Invocation.
 Hymn, "Holy, holy, holy, Lord God Almighty."
 Prayer.
 Hymn, "Sometimes a Light surprises."
 Solo, Miss R. HOESMUEHL.
 Scripture reading; "Exodus," 14th Chapter.
 Anthem.
 Prayers and Offering.
 Children's Hymn, "Gentle Jesus, meek and mild."
 Sermon: "BITTER WATERS MADE SWEET."
 Hymn, "God moves in a mysterious way."
 Benediction.
 12.15 p.m.—Close down.

AFTERNOON SESSION.

3 p.m.—Laying of the foundation stone of the MEMORIAL CHAPEL, XAVIER COLLEGE, by His Grace the Most Reverend DOCTOR MANNIX.
 Welcome to the Archbishop by Doctor A. L. Kennedy, First President of the Old Xaverians' Association.
 Address by the Rector of Xavier College.
 Address by Mr. J. E. Cooke, president, Old Xaverians' Association.
 A short address by the hon. secretary of the Memorial Appeal.
 Address by Most Reverend DOCTOR MANNIX.
 PLEASANT SUNDAY AFTERNOON SERVICE, WESLEY CENTRAL MISSION, Melbourne. REV. DR. S. J. HOBAN.
 4.45 p.m.—Hymn, "As hail the power of Jesus' Name."
 Prayer, Rev. J. H. GAIN.
 Orchestral selection, Conductor, Mr. G. M. WILLIAMS.
 Hymn, "There's not a Friend like the lowly Jesus."
 Duet, Mr. and Mrs. Beery Thomas.
 Orchestral selection.
 Duet, Mr. and Mrs. Henry Thomas.
 Notice.
 Offering.
 Orchestra.
 ADDRESS: REV. T. C. CARNE, B.A., "Times" as they are in India."
 National anthem, Benedicitea.
 4.50 p.m.—Close down.

EVENING SESSION.

8.30 p.m.—Answers to Letters and Birthday Greetings by "BILLY BUNNY."
 6 p.m.—"THE PICK PIPERS" will give a programme of hymns and other musical items.
 Hymn, "Welcome the Sabbath."
 Chorus, "The Spring."
 Solo, "The Song at Even."
 Hymn, "Gospel bells."

Chorus, "A Bird's Question."
 Solo.
 Quartette: "Let us loved the World."
 Chorus, "Golden Shimmers."
 8.30 p.m.—"BROTHER BILL" will speak about "Greatness in Little things."
 8.45 p.m.—Bells from ST. PAUL'S CATHEDRAL.

NIGHT SESSION.

EVENING SERVICE FROM ST. PAUL'S CATHEDRAL.

7 p.m.—Evensong (Chorus).
 Hymn 35 (L. & M.), "Elect Creator of Light."
 Sentence.
 General confession.
 The Absolution.
 "The Lord's Prayer."
 Versicles and Responses.
 Psalms—124 to 137.
 First Lesson.
 Magnificat.
 Second Lesson.
 Nunc Dimittite.
 The Apostle's Creed.
 The Collects.
 Anthem, "O come let us worship (Mendelssohn)."
 Prayers.
 Hymn 255, "Lead, kindly light."
 SERMON: THE BISHOP OF GIPPLELAND.
 Hymn 51, "The day is past and over."
 The Benediction.
 From the Studio.
 8.30 p.m.—Mr. L. C. Amery, Secretary of State for the Dominions, will speak.
 8.44 p.m.—HORACE WEBER at the Warlike Grand Organ:
 "Tantum Ergo" (Schumann).
 Introduction theme and finale on Haydn's Hymn (Chipp).
 Note: The rapid moving bass of the finale is played entirely by the feet, whilst the hymn is given out on full organ by stateste chorist.
 8.49 p.m.—THE CAPITOL THEATRE ORCHESTRA, in conjunction with the UNIVERSITY SYMPHONY ORCHESTRA, rendering:
 Entrance to Third Act of "Lohengrin."
 Interval.
 8.5 p.m.—Schubert's "Unfinished Symphony, first movement"—CAPITOL ORCHESTRA and UNIVERSITY SYMPHONY ORCHESTRA in association.
 9.14 p.m.—MR. JOHN SULLIVAN, Tenor:
 Selected numbers.
 9.20 p.m.—RAYMOND LAMBERT, Solo Pianist:
 "Polonaise in A Flat" (Chopin).
 9.25 p.m.—MADAME ELISA DAVIS, Soprano:
 "Truillid's Battle Cry" (Wagner).
 9.34 p.m.—EDOUARD LAMBERT, Solo Violinist, Capital Theatre:
 "L'Inferno" (Gassate).
 9.40 p.m.—Selected numbers from Lucia Di Lammermoor (Bonizetti).
 Madame Eliza Davis, Ina Lillierspp, John Sullivan, Malcolm Temple, J. Alexander Brown and Thomas George.
 Finale, Tchaikowsky's "1812 Overture."
 This famous Overture, to be rendered by the CAPITOL OPERATIC ORCHESTRA, UNIVERSITY SYMPHONY ORCHESTRA in association with the COLLINGWOOD CITIZENS' BAND, a total of over 100 performers.
 Professor BERNARD HEINZE and E. R. WHITE, Conductors in association.
 GOD SAVE THE KING.

4QG, BRISBANE.

Sunday.

MORNING SESSION.

ST. JOHN'S CATHEDRAL.
 The complete morning service to be relayed from St. John's Anglican Cathedral, FROM ST. JOHN'S CATHEDRAL—
 11 a.m.—Morning Service.
 12.50 p.m.—Close down.

Your Choice of Articles

WHAT DO YOU KNOW about broadcasting? Has it struck you that there are a thousand and one things going on in the broadcasting world, of which you are not aware until somebody tells you about them, weeks after they have happened? For instance, do you understand how vital is the question of Empire Broadcasting? Do you know what is being done about it, when it is likely to occur, and whether you will be able to listen-in to London? Do you know what the broadcasters are doing to give us better broadcasting, or whether it is possible to effect improvements in the existing scheme of broadcasting?

THESE ARE SUBJECTS which are of direct importance to every broadcast listener, and it is as well to know what well-known authorities have to say upon them.

THE OCTOBER ISSUE of "RADIO" deals with these matters, and with dozens of other subjects, each one of which presents some new angle of broadcasting or set building.

Here are some of the articles appearing in the October "RADIO":—

MAJOR W. T. CONDER, Director of 3LO, contributes an article on **PROGRAMMES**, in which he supplies a complete answer to the critics who complain about broadcasting. Major Conder is an authority, and anyone reading this article will gain an entirely new impression of broadcasting.

SUPER POWER, RELAY STATIONS, OR BOTH? J. Garrick Eisenberg, an official of the Radio Corporation of America and formerly of the General Electric Company and United States Navy, is an impartial critic of the Australian Broadcasting situation. As an engineer of note, he discusses the technical advantages of certain suggestions. As a practical commercial man he sums up the possible results of his proposals. As an enthusiastic Radio fan he writes directly to the broadcast listener, and places before him a concrete article that everyone can understand and appreciate.

WHAT IS MIKE FRIGHT? Is it an acute attack of nervousness when first facing the Microphone, or is it a particular disability affecting those of a temperamental nature? Such well-known people as Scott Alexander, Alfred Cunningham, George Gee, etc., give you their impressions upon this absorbing subject.

EMPIRE BROADCASTING. J. E. Graham, an Australian in London, visits Gerald Marcuse, the famous English amateur, who is carrying out preliminary experiments in Empire Broadcasting, and tells us just what manner of man is Marcuse, and what he is doing.

FOR THE HOME SET Constructor there is a variety of articles which cannot fail to appeal.

THE SOLODYNE. Full constructional details of this famous long distance receiver, which has already proved so popular in Australia. This article presents some entirely new and advanced features.

THE SIMPLICITY ONE VALVE RECEIVER.

THE CHAMPION SIX. The combination of sensitivity, selectivity and purity is the feature of this Receiver. Transformer plus resistance coupled audio frequency gives purity. A separate regenerator valve supplies the reaction energy—an interesting departure from the ordinary. Full constructional details.

THE DESIGN AND CONSTRUCTION OF SMALL POWER TRANSFORMERS AND FILTER CHOKES, by J. G. Reed.

CRYSTAL CONTROL AND ZEPP AERIALS, by W. E. Coxon. In addition to being the Technical Director of 6WF, Mr. Coxon is an enthusiastic experimenter of high repute, and his article covers the question of this type of aerial thoroughly.

THE THREE VALVE REINARTZ RECEIVER. An inexpensive short wave receiver, etc., etc.

ALL IN OCTOBER "RADIO."

1/- **RADIO** 1/-
IN AUSTRALIA
& NEW ZEALAND
Incorporating "Sea, Land and Air"

ON SALE NOW EVERYWHERE

SEND 1/- FOR A SPECIMEN COPY.

Wireless Newspapers Ltd., 51 Castlereagh Street, Sydney

AFTERNOON SESSION.

EXCELSIOR BAND.

The concert by the Brisbane Excelsior Band will be relayed from the Botanic Gardens.
FROM THE BOTANIC GARDENS—
 7.30 p.m.—Band Concert.
 8.30 p.m.—Close down.

NIGHT SESSION.

ST. JOHN'S CATHEDRAL.

The complete evening service will be relayed from St. John's Anglican Cathedral.
 8.35 p.m.—Cathedral Chimes.
 9 p.m.—Children's Service.
 9.30 p.m.—Evening Service.

BRISBANE MUNICIPAL CONCERT BAND.

At the conclusion of the church service the concert by the Brisbane Municipal Concert Band will be relayed from Wickham Park. The programme will include:
 Overture—"Tancredi" (Bessini).
 Selection—"Souvenir de Meyerbeer" (Tubani).
 "Rondino Sketches" (White).
 9.30 p.m.—Close down.

6WF, PERTH.

Sunday.

10.45 a.m.—Tune in.
 11 a.m.—Morning service relayed from St. George's Cathedral, Cathedral Avenue, Perth.
 12.15 p.m.—Close down.
 3.30 p.m.—Tune in.
 3.35 p.m.—**FROM THE STUDIO:**
 Musical programme, including social and instrumental articles.
 4.30 p.m.—Close down.
 7 p.m.—Tune in.
 7.5 p.m.—Children's bedtime stories by Miss Johnston.
 7.30 p.m.—Evening service relayed from St. Andrew's Presbyterian Church, St. George's Terrace, Perth.
 9.45 p.m.—**BAND NIGHT.**
 Items by the Perth City Band, conducted by Mr. L. M. Frize, and vocal assisting artistes.
 10.5 p.m.—Close down.

7ZL, HOBART

Sunday.

MORNING SESSION.

13 a.m.—Service from Memorial Congregational Church, Hobart. Preacher Rev. Arthur C. Nelson.
 Close down.

AFTERNOON SESSION.

2.30 p.m.—Pleasant Sunday afternoon concert from the studio.
 4.30 p.m.—Close down.

EARLY EVENING SESSION.

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

NIGHT SESSION.

7 p.m.—Divine service from St. David's Cathedral, Hobart. Psalms 127, Hymns 295, 292, 249, Poacher Archbishop Richard; Organ Music, "Fugue" in G Minor (Bach). At conclusion of Church service, either Band Concert from St. David's Park or studio concert.
 9.45 p.m.—"Mercury" special Interstate news service, British Official Wireless News. Ships within wireless range. 9 a.m. Weather forecasts. Station announcement, National Anthem.

Monday, Oct. 31
2FC, SYDNEY.

EARLY MORNING SESSION—7 to 8 a.m.

MORNING SESSION.

7 a.m.—"Big Ben" and programme announcements.
 10.5 a.m.—Studio music.
 10.15 a.m.—"Sydney Morning Herald" news service.
 10.30 a.m.—Studio music.
 10.35 a.m.—Last minute Racing Information by the 2FC Commissioner.
 10.45 a.m.—Studio music.
 11 a.m.—"Big Ben."
 Marching music for school children.
 11.5 a.m.—A.P.A. and Reuter's Cable Service.
 11.55 a.m.—A reading.
 11.30 a.m.—From the Sydney Cricket Ground. Full description of the Cricket Match: New Zealand versus New South Wales.

MIDDAY SESSION.

12 noon—"Big Ben" and announcements.
 12.3 p.m.—Stock Exchange, first call.
 12.5 p.m.—Weather forecast, rainfall.
 12.5 p.m.—Studio music.
 Cricket results.
 12.10 p.m.—Summary of "Sydney Morning Herald" news service.
 12.25 p.m.—Rugby wireless news.
 12.30 p.m.—Marching music for school children.
 12.40 p.m.—Anne Luciano, mezzo.
 12.45 p.m.—From the Sydney Cricket Ground: Cricket descriptions of the match: New Zealand versus N.S.W.
 1 p.m.—"Big Ben." Weather intelligence.
 1.3 p.m.—"Evening News" midday news service.
 "Producer" Distributing Society's Report.
 1.20 p.m.—The Oak Hall Instrumental Trio.
 1.25 p.m.—Stock Exchange, second call.
 1.30 p.m.—Marching music for school children.
 1.40 p.m.—Anne Luciano, mezzo.
 1.45 p.m.—Studio music.
 1.50 p.m.—The Oak Hall Instrumental Trio.
 2 p.m.—"Big Ben."
 From the Sydney Cricket Ground: Descriptions of the Match: New Zealand versus N.S.W.

AFTERNOON SESSION.

2.5 p.m.—"Big Ben" and announcements.
 3.5 p.m.—Studio music.
 3.10 p.m.—Cricket descriptions and results.
 3.15 p.m.—Annie Payne, mezzo:
 (a) "Hessini" (Del Rio).
 (b) "Blacksmith" (Hessini).
 3.18 p.m.—Cricket results.
 3.25 p.m.—Gladys Reynolds, contralto.
 3.30 p.m.—Marching music for school children.
 3.40 p.m.—From Farmer's Tea Rooms:
 Irene Duncan, soprano.
 3.45 p.m.—From the Sydney Cricket Ground: Descriptions and results.
 4 p.m.—From Farmer's Tea Rooms:
 Jeanette Rooney, contralto.
 4.1 p.m.—The Oak Hall Instrumental Trio.
 Leader, Mr. Horace Kenta).
 4.15 p.m.—Cricket results.
 4.20 p.m.—From Farmer's Tea Rooms:
 Irene Duncan, soprano.
 4.25 p.m.—The Oak Hall Instrumental Trio.
 4.32 p.m.—Cricket results.
 4.35 p.m.—Annie Payne, mezzo:
 "The Princess" (Hegley).
 4.40 p.m.—Jeanette Rooney, contralto, from Farmer's Tea Rooms.
 4.45 p.m.—Stock Exchange, third call.
 4.47 p.m.—Studio music.
 Gladys Reynolds, contralto.
 4.52 p.m.—Cricket results.
 5 p.m.—"Big Ben."
 Cricket descriptions, interspersed with news from the Studio until stumps drawn, at 5 p.m.

EARLY EVENING SESSION.

6 p.m.—"Big Ben" and Chimes.
 6.2 p.m.—The "Hellie Man" talks to the children.
 6.30 p.m.—Story time for the young folk.
 6.40 p.m.—Studio music.
 6.45 p.m.—Late Sporting News, and Cricket Results.
 7 p.m.—"Big Ben."
 Dalgety's Market Reports (Wool, Wheat and Stock).
 7.5 p.m.—Fruit and Vegetable Markets.
 7.10 p.m.—Weather and Shipping News.
 7.15 p.m.—Late "Evening News" service.

NIGHT SESSION.

7.30 p.m.—Programme announcements.
 7.35 p.m.—Studio music.
 7.45 p.m.—Direct from Melbourne: The 2FC Racing Commissioner will speak and give his anticipations for the Melbourne Cup.
 8 a.m.—"Big Ben."
 From the Sydney Studio:
 A short talk on "World Unity" in connection with the International Celebration this day.
 8.10 p.m.—From the Conservatorium Hall, Sydney:
 Items from the Testimonial Concert, tendered to the well-known Sydney Professional Teacher of Singing, Mr. Arthur Anspieky, who is, unfortunately, incapacitated for further professional work. A programme, submitted by the leading artists in Sydney, will be broadcast, and the artist whose right to do this has been given to Station 2FC, which has been pleased to make a donation to the fund.
 The Royal Sydney Yacht Club.
 2.17 p.m.—From the Studio:
 Details will be given of the time of the transmission of the speech by the Dominion Secretary, Mr. Amery, who is being tendered a Parliamentary Dinner in Melbourne. His speech will be relayed by trunk line, through the courtesy of N.O.
 8.25 p.m.—From the Conservatorium Hall, Sydney: Continuation of the Testimonial Concert, tendered to Mr. Arthur Anspieky-Cyrl Kent, violinist.
 8.32 p.m.—Alfred O'Shea, Australia's foremost tenor.
 8.40 p.m.—The Conservatorium String Quartet:
 Gerald Walters, viola.
 Lionel Lawson, violin.
 Alfred Hill, piano.
 Gladstone Bell, cello.
 8.50 p.m.—Gwen Selva, soprano.
 9 p.m.—Peter Gavathorne (J. C. Williamson Theatre Ltd.).
 9.7 p.m.—Dagmar Thomson, violinist.
 9.14 p.m.—Charles Smythe, basso.
 9.20 p.m.—L. Godfrey Smith, pianist.
 9.27 p.m.—Short interval at the Conservatorium, during which a musical item will be given from the Studio.
 Late weather forecast.
 9.32 p.m.—From the Conservatorium Hall:
 The Steel String Quartet (Henri Stahl, Mowat Carter, W. J. Grieco, Bruce Carter).
 9.40 p.m.—W. Leghinda, Good, basso.
 9.48 p.m.—Harrison Allen, elocutionist.
 9.55 p.m.—Irene Maxwell, soprano.
 10.3 p.m.—Winifred Buxton, pianist.
 10.10 p.m.—Arthur Greenaway (J. C. W.) (Henson Theatres Ltd.).
 10.25 p.m.—Alfred Cunningham, baritone.
 10.22 p.m.—Moore MacMahon, violinist.
 10.27 p.m.—Virginia Bassett, contralto.
 10.30 p.m.—Frank Hutches and Lindley Evans, pianists.
 Accompanists: Margaret Chalmers, Kathale Rosemary, Christian Helemann, William Fletcher, Walter Thurman, William Caspers.
 10.40 p.m.—From the Studio:
 The 2FC Studio Dance Band in popular numbers.
 10.50 p.m.—Len Maurice, baritone.
 10.57 p.m.—Late news and announcements.
 11 p.m.—"Big Ben."
 The 2FC Studio Dance Band, interspersed with vocal numbers by Len Maurice.
 11.30 p.m.—National Anthem.
 Close down.

ASTOUNDING BUSINESS

built up through the Radio Public's appreciation of our effort to produce the best in Radio Frequency Components.

REMARKABLE GOOD WILL created by **RADIOKES** honest trading, quality manufacture, and famous guarantee.



RADIOKES famous shielded units for your SOLODYNE and all popular circuits.

Price 25/- per unit.



RADIOKES New and Improved R. F. Chokes, absolutely out-class all rivals—Small, efficient and semi-shielded.

Price 8/6 each.



RADIOKES CIRCLOIDS considered the finest R. F. Transformers obtainable on any market.

High energy transfer on top of broadcast band, efficient, selective and beautifully finished.

45/- per kit of three



AMPERITE is the only fully automatic filament control—refuse to accept any lower priced imitations.

Price 6/9 each.

Metropolitan Electric Co. Ltd., 27-29 King St., Sydney
And at Melbourne, Brisbane, Auckland, Hobart and Launceston.

All High-class Dealers Stock Radiokes.



Radio Experts Agree!

The consensus of opinion of radio research men, the world over, is that the safest, most uniform, most reliable source of "B" voltage is the dry battery.

BRIGHT STAR RADIO BATTERIES

represent present-day battery perfection: "Bag Type" cell construction—an original Bright Star feature—gives silent operation, unusual power, quick recuperation and long life.



For clear, full-toned reception at lowest possible cost per hour of enjoyment, get Bright Star Batteries—at your dealers today!

**BRIGHT STAR
BATTERY CO.**

Hoboken, N. J.

SEVENTEEN YEARS BUILDING QUALITY BATTERIES

SEND FOR OUR FREE CATALOGUE

INTERNATIONAL RADIO CO. LTD.

229 CASTLEREAGH ST. :: :: SYDNEY

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

When the Melbourne Cup is run on Nov. 1st
you're there with a Crosley.



£25/10/-

"THE BANDBOX"

A Phenomenal Crosley Radio Receiver for the Complete
Enjoyment of the 1927-28 Radio Season.

Here are the seven big things which represent Radio's greatest advancement, brought together by Crosley and combined with the experience, mass production method and leadership of the Crosley organization. No wonder a wireless radio world proclaims the "Bandbox" as the unprecedented price of £25/10/-. Crosley's paramount achievement.

THE BANDBOX IS SHIELDED.

Radio coils are surrounded by magnetic fields similar in every respect to the magnetic field around the earth that moves the needle of a compass, but around radio coils these fields make nuisances of themselves by feeding back on each other. Heretofore, it has been customary to make inefficient coils with inefficient fields to prevent such feeding back. The Crosley Bandbox incorporates copper shields around each coil to prevent such feeding back. The coils consequently can be made, and are very much more efficient. The amplification of the receiver, is, therefore, much higher—the sensitivity is greatly increased. Condensers are also completely shielded from each other in separate metal compartments. Electrostatically very high-grade sets have enjoyed this super-radio advantage.

THERE IS NO OSCILLATION.

The Bandbox employs completely balanced or neutralized stages to prevent oscillation, instead of the common form of loose method. Coily to be sure, but extremely necessary in achieving such results as are obtained by this marvel of radio reception, THE BANDBOX.

FOR SHARPNESS—THE ACUMINATORS.

"Bandbox" acuminators enable "Fishers" for distant stations to bring them in loud and clear. As powerful telescopes magnify distant scenes, acuminators increase the volume of far-away signals so they seem like local programmes.

VOLUME CONTROL.

This is another big "Bandbox" feature, which permits full brain hand power for those who want their music notes strong and loud. For others, it sets volume down to a soft and gentle murmur, without distortion.

ILLUMINATED DIAL.

A Master Sliding Selector has an illuminated dial for easy reading in shadowy corners. A sturdy knob permits full tuning for ordinary reception of local, near-by and super-powered stations.

INSTALLATIONS SIMPLIFIED.

A woven cable, containing varnished, rubber-covered leads, makes installation and hookup easy for the wisest novice. No waiting for the radio service man should the batteries be changed.

EASILY ADAPTED TO CONSOLES.

Simply remove screws in backset and in base of set. Lift off metal case. Chassis now stands ready for installation in Concrete Cabinet. Operating in Omega Cabinet permits metal shafts in prototype. Reinstall screws in place, and presto! On console radio is complete.

RADIO DEALERS

We have a Special Proposition for you—WRITE NOW.

International Radio Co. Ltd.

229 Castlereagh Street, SYDNEY

Factory Representatives.

SEND FOR OUR FREE CATALOGUE.

2BL, SYDNEY

Monday.

EARLY MORNING SESSION.

7 to 8 a.m.

MORNING SESSION.

- 10.30 a.m.—G.P.O. Clock and chimes, Musical item from the Studio.
 10.40 a.m.—News from the "Daily Telegraph" Editorial.
 10.50 a.m.—Musical programme from the Studio.
 11 a.m.—G.P.O. Clock and chimes, Announcements.
 11.5 a.m.—Musical programme from the Studio.
 11.15 a.m.—Talk on "Fencing," by Miss Varley, Broadcasters' Women's Sports Authority. Social Notes—Replies to correspondents by Mrs. Jordan. Talk on "Breakfast Dishes," by Mrs. Jordan.
 12 noon.—G.P.O. Clock and chimes.
 12.5 p.m.—Special ocean forecast and weather report.
 12.5 p.m.—Musical programme from the Studio.
 12.15 p.m.—Information, Mails, Shipping and port directory.
 12.18 p.m.—Boats in call by wireless.
 12.20 p.m.—Fruit market report.
 12.22 p.m.—Vegetable market report.
 12.24 p.m.—London metal market report.
 12.26 p.m.—Dairy and Farm Produce market report.
 12.30 p.m.—G.P.O. Clock and chimes, Forage market report.
 12.32 p.m.—Fish market report.
 12.34 p.m.—Rabbit market report.
 12.36 p.m.—Stock Exchange report.
 12.38 p.m.—News from the "Sun."
 12.46 p.m.—Hilliers' Instrumental Quartet—direction—Caryl Castling.
 1.27 p.m.—Stock Exchange report.
 1.30 p.m.—G.P.O. Clock and chimes.
 Talk to children and special entertainment for Children in Hospital.
 2 p.m.—G.P.O. Clock and chimes.
 Close down.

AFTERNOON SESSION.

- Having information broadcast immediately after each race by courtesy of the "Sun."
 2 p.m.—G.P.O. Clock and chimes.
 Musical programme from the Studio.
 2.10 p.m.—News from the "Sun."
 2.20 p.m.—Musical programme from the Studio.
 2.30 p.m.—News from the "Sun."
 2.40 p.m.—G.P.O. Clock and chimes.
 News from the "Sun."
 4.15 p.m.—Serial Story.
 4.30 p.m.—Dungowan Dance Band.
 4.50 p.m.—News from the "Sun."
 4.55 p.m.—Resume of night's programme.
 4.57 p.m.—Racing resume.
 4.59 p.m.—Special ocean forecast.
 5 p.m.—G.P.O. Clock and chimes.
 Close down.

EARLY EVENING SESSION.

- 8.45 p.m.—G.P.O. Clock and chimes, Children's Session.
 9.20 p.m.—Musical programme from the Studio.

SPECIAL COUNTRY SESSION.

- 7 p.m.—G.P.O. Clock and chimes, Australian Mercantile Land and Finance Co's report.
 Weather report and forecast by courtesy of Government Meteorologist.
 Producers Distributing Society's Fruit and Vegetable market report.
 Stock Exchange reports.
 Grain and Fodder reports ("Sun").
 Dairy produce report ("Sun").
 7.15 p.m.—Country news from the "Sun."
 7.30 p.m.—Talk on "The Motor Car," by Mr. Martin.

EVENING SESSION.

- 8 p.m.—G.P.O. Clock and chimes, Broadcasters' Topical Chorus.
 8.3 p.m.—An Hour's programme presented by Lindeman's Wines.
 Mr. Douglas Graham (Scottish Comedian).
 8.10 p.m.—Miss Dainty Stairs (Scottish Contralto).
 8.17 p.m.—Selection of Scottish Melodie melodies played on the violin by Mr. Henri De Liane.
 8.24 p.m.—Mr. Stanley R. Catlett (Tenor).
 8.31 p.m.—Mr. Tommy Clyde (Scottish Comedian).
 8.38 p.m.—A duet by Miss Dainty Stairs and Mr. Douglas Graham.
 8.45 p.m.—Selection by the Newtown Band.
 9.3 p.m.—Weather report and forecast by courtesy of Mr. C. J. Macrae, Government Meteorologist.
 9.4 p.m.—Cyril Kaye and his symphonic dance orchestra.
 Transmitting from the Hotel Wentworth.
 9.14 p.m.—Broadcasters all sports expert will talk on general sporting.
 9.29 p.m.—The Newtown Band.
 9.49 p.m.—Mr. Douglas Graham.
 9.54 p.m.—Resume of following day's programme.
 10 p.m.—G.P.O. Clock and chimes.
 10.1 p.m.—Cyril Kaye and his symphonic dance orchestra, transmitting from the Hotel Wentworth.
 10.11 p.m.—Miss Bimby Stuart.
 10.18 p.m.—Mr. Henri De Liane.
 10.25 p.m.—Cyril Kaye and his symphonic dance orchestra, transmitting from the Hotel Wentworth.
 10.35 p.m.—Mr. Stanley R. Catlett.
 10.43 p.m.—Mr. Tommy Clyde.
 10.49 p.m.—Cyril Kaye and his symphonic dance orchestra, transmitting from the Hotel Wentworth.
 11 p.m.—G.P.O. Clock and chimes, National Anthem.

2GB, SYDNEY

Monday.

MORNING SESSION.

- 9 a.m.—Music.
 9.5 a.m.—Cheerful Talk.
 9.15 a.m.—Music.
 9.20 a.m.—Psychological Class.
 9.40 a.m.—Music.
 9.45 a.m.—Health and Diet.
 10 a.m.—Close down.

AFTERNOON SESSION.

- 2.50 p.m.—Music.
 3.27 p.m.—Address, Professor E. Wood.
 3.45 p.m.—Music.
 4 p.m.—Address.
 4.23 p.m.—Music.
 4.50 p.m.—Close down.

EVENING SESSION.

- 7 p.m.—Music.
 7.15 p.m.—Address, E. Warner.
 7.25 p.m.—Music.
 7.29 p.m.—Address, Mr. J. K. Powell.
 7.50 p.m.—Music, "Scottish scene from Twelfth Night" (Shakespeare), Mr. Heath Burdick.
 7.55 p.m.—Address.
 7.59 p.m.—Announcements.
 7.59 p.m.—Instrumental Trio, DAN SCULLY, MURELLE LANG, ADA BROOK.
 8.5 p.m.—Address by Professor Ernest Wood.
 8.30 p.m.—Songs by Madam Chabert.
 8.25 p.m.—Cello Solo, MURELLE LANG.
 1. "Hungarian Rhapsodie" (Paganini).
 8.58 p.m.—Instrumental Quartet: DAN SCULLY, MONICA HORDER, MURELLE LANG, ADA BROOK.
 9 p.m.—Rev. R. B. S. Hammond, "Mending Broken Men."
 9.15 p.m.—Violin Solo, MONICA HORDER: 1. "Deep River."
 2. "Cradle Song" (Arr. by Mascha Khaman).
 9.27 p.m.—Songs by Madam Chabert.
 9.32 p.m.—Instrumental Quartet: DAN SCULLY, MONICA HORDER, MURELLE LANG, ADA BROOK.
 9.50 p.m.—Fugal Talk.
 10 p.m.—Close down.

2 UW, SYDNEY

Monday.

MORNING SESSION.

- 6 a.m.—News, shipping, mails, studio items.
 6.45 a.m.—Women's Session.
 6.55 a.m.—Resume of forward programme.
 10 a.m.—Close down.
 12.15 p.m.—Special Employees' Luncheon Session.
 12.45 p.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—Studio items.
 2.45 p.m.—Resume of forward programme.
 2 p.m.—Close down.

EVENING SESSION.

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

NIGHT SESSION.

- 7 p.m.—Where to Go.
 7.10 p.m.—Miss Helea Markendale: "Health Talk."
 7.15 p.m.—Organ solo, Professor G. Sauer: Selected.
 7.20 p.m.—From Savings Bank of N.S.W.: "Thrift," in conjunction with "International Thrift Institute"—Milan.
 7.30 p.m.—Miss Vera Turner, mezzo-soprano: "Trees" (Ravakchi).
 7.35 p.m.—Miss Ruth Bardon, contralto: "My Ain Follie" (Laura Lennox).
 7.43 p.m.—Professor G. Sauer: Organ solo: Selected.
 7.49 p.m.—Miss Vera Turner, mezzo-soprano: (a) "You Lovely Thing."
 (b) "To a Minister"—(Brabe).
 7.55 p.m.—Miss Ruth Bardon, contralto: "My Treasure" (Trevalla).
 8 p.m.—Hallowe'en Concert for the Scouts.
 (a) Concertina Solo by Mr. Wallace Gardner: "Selections of Scottish Airs."
 (b) At intervals selections from "Old Scottish Dances" and "Country Dances," including "Eightaine Beel," "Petronella," "Country Dance," "Haymaker Jig," etc.
 (c) Messrs. David Brown, Piano and Wallace Gardner, Concertina, with the following airs: (a) "My Love She's but a Lassie Yet."
 (b) "The White Cockade."
 (c) "Duncan Gray."
 (d) "Lass of Gowrie."
 (e) "Oor Kailyard."
 (f) "Bothwell Castle."
 (g) Piper Sergeant Whyte Menach, with Duettes: (a) March, "Bonnie Highlanders."
 (b) Reel and Duet, "The Strathferry," "Maggie Cameron."
 (c) Selections and airs from "Home, Sweet Home," "Robin Adair," "Scottish," "Green Hills of Tyrale," Irish.
 (d) Scottish Humour by Mr. Stuart Peters.
 9.15 p.m.—Studio selections.
 9.25 p.m.—Resume of forward programme.
 9.30 p.m.—Close down.

3LO, MELBOURNE.

Monday

MIDDAY SESSION.

- 12 noon—Melbourne Observatory time signal.
 British Official Wireless news from Rugby.
 Reuters and The Australian Press Association cables. "Ararat" news service.
 12.20 p.m.—JOB ARBORN AND HIS SYNCOPHONISTS: "Sonny Boy" (Stamper).
 "Swinging Along" (Has).
 "The Love Waltz" (Gaspard).
 12.30 p.m.—ANITA SHAW, soubrette: "Sing Me a Baby Song."
 "Columbia."

Standard Throughout the Radio World

NOW ONLY

£3/10/-


NOW ONLY

£3/10/-

Trickle Charging began with Balkite and Balkite still leads in popularity, service and number in use

Trickle charging, now the most convenient and most popular of all means of charging your radio "A" battery, was not possible until the development of the Balkite Trickle Charger. For Balkite was the first charger that could be connected permanently to your "A" battery and the light socket. It was the first charger that kept the battery always fully charged. And Balkite was the first charger that converted your battery into a complete power unit supplying "A" current from the light socket.

To-day there are over 400,000 Balkite Trickle Chargers in use. Just as it was first in making trickle charging possible, Balkite has always been first in popularity and number in use. Balkite is the standard trickle charger, tried and proved by use in the hands of its thousands of owners.

Like all Balkite Radio Power Units, this charger is a permanent

piece of equipment. It has no tubes and nothing to replace or renew. It is noiseless in operation and can usually be used during reception. It is very compact and small, and its current consumption is very low.

The Balkite Trickle Charger can be used as a trickle charger with any 6-volt radio "A" battery. Thus used it keeps your battery always at full power and in effect converts it into a light socket "A" power supply. With 4-volt batteries it can be used as an intermittent charger of the usual type. Or as a trickle charger if a resistance is added. Charging rate is approximately 1 ampere.

Add a Balkite Trickle Charger to your "A" battery. Know the convenience of permanent silent "A" power from the light socket always.

Balkite Trickle Charger. Over 250,000 in use. Charging Rate, about 1/2 ampere. As a Trickle Charger automatically keeps your "A" Battery fully charged. £3/10/-

Balkite "B" eliminates "B" Batteries entirely, and supplies silent permanent "B" Current from the light socket. Over 100,000 in use.

MODEL W for up to 5 valves .. £11/10/-

MODEL X for large sets .. £16/15/-

The right to the use of Tantalum in Batteries is the exclusive property of the Faraday Products Company Ltd, under their Australian Patent No. 12888/24.

The Famous **Balkite B** Eliminator

Absolutely in a Class by Itself.

Model W up to 5 Valves **£11/10/-** Model X for large Sets **£16/15/-**

OBTAINABLE ALL DEALERS

(Wholesale Only) O. H. O'BRIEN (Sydney), 39 Pitt St., Sydney; 516 Collins Street, Melbourne.
W. E. PETERMAN, 160 Edward St., Brisbane.

- 12.37 p.m.—Stock Exchange Information.
 12.40 p.m.—JOE ARONSON AND HIS
 SYNCO-SYMPHONISTS:
 "Lonely Acres in the West" (Robinson),
 "Cherona" (Verness Waits (Bibo),
 "Honey" (Ramsford).
 12.50 p.m.—JACK O'HAGAN AND BOB
 MOLYNEUX:
 "Sing Me a Baby Song,"
 "There's a Trick in Picking the Chick, Chick,
 Chicken,"
 "Baby Your Mother Like She Buby'd You."
 1 p.m.—MELBOURNE OBSERVATORY
 TIME SIGNAL. "Those that dare lose a day,
 are dangerously prejudicial. Those that dare
 instead it, despatch." To the right time
 NGW.
 1.1 p.m.—JOE ARONSON AND HIS
 SYNCO-SYMPHONISTS:
 "Two Little Bluebirds" (Kern),
 "Who" (Kern),
 "My Tumbler Down Cottage of Dreams"
 (Leslie).
 1.10 p.m.—Meteorological information. Weather
 forecast for Victoria, Tasmania, South Abstra-
 lia and New South Wales, Ocean forecast.
 River reports. Rainfall for Victoria, South
 Australia, Tasmania, and New South Wales.
 1.15 p.m.—MICHAEL CONNOLLY, baritone.
 "Classonette d'Annette" (H. Cullingsby
 Clarke).
 "Pearl of Sweet Caylan."
 1.24 p.m.—JOE ARONSON AND HIS
 SYNCO-SYMPHONISTS:
 "Wottle You Have With Me" (Miller),
 "Whipped Cream" (Piano Solo, (Lange),
 "Take in the Sun" (Iwondo),
 1.34 p.m.—ANITA SHAWLE, soprante:
 "You Don't Like It—Not Much."
 "Second Hand Rose."
 1.41 p.m.—JOE ARONSON AND HIS
 SYNCO-SYMPHONISTS:
 "Nina" (Denain),
 "Cherise Rorie Bee from Sunny Italy"
 (Lernu),
 "Up Down" (Roco).
 1.51 p.m.—ELLA RIDDELL, contralto:
 "Country Girl" (May Brahe),
 "To a Minstrel" (May Brahe).
 1.57 p.m.—JOE ARONSON AND HIS
 SYNCO-SYMPHONISTS:
 "Oh What a Pal was Whoois" (Kahn),
 "Swedish O'Ming" (O'Hagan),
 "The Wind Blew Through His Whiskers Just
 the Same" (Conradi).
 2 p.m.—Close down.
 Results of the Richmond Trials will be given
 as they come to hand.
 AFTERNOON SESSION.
 2 p.m.—Melbourne Observatory Time Signal.
 REGENT GRAND CONCERT ORCHESTRA:
 March, "Regimental March of the Army Ser-
 vice Corps" (Woodhouse).
 Overture, "Morning, Noon and Night"
 (Stuppe).
 2.10 p.m.—MRS. DOROTHY SILK:
 "Homecoming."
 2.25 p.m.—REGENT GRAND CONCERT OR-
 CHESTRA: Two pieces for strings.
 "The call of the Angelina" (Waltos),
 "Sinfietta" (Von Bion).
 2.32 p.m.—ELLA RIDDELL, contralto:
 "Have you seen just a white lily grow?" (O'M
 English).
 "Homing" (Del Riego).
 2.40 p.m.—REGENT GRAND CONCERT OR-
 CHESTRA:
 Selection, "The Chocolate Soldier" (Strauss),
 2.50 p.m.—E. MARION WOOD, baritone:
 "Back to Ireland,"
 "Molly Brannigan."
 2.57 p.m.—REGENT GRAND CONCERT OR-
 CHESTRA: Two rhythmic paraphrases:
 "Lulling Lucia" (Black).
 "Paat Frolivolta."
 3 p.m.—ELLA RIDDELL, contralto:
 "The Lament of Jule" (Bostock).
 "Summer in the Country" (Loeb).
 3.12 p.m.—MISS FLORA PELL, Inspector of
 Schools:
 Domestic Science.
 3.27 p.m.—E. MARION WOOD, baritone:
 "Golden Vanity" (Traditional).
 "Mignon."
 3.34 p.m.—REGENT GRAND CONCERT OR-
 CHESTRA:
 Selection, "Carmen" (Bizet).
 3.45 p.m.—Herald News Service. Stock Ex-
 change Information.
 3 p.m.—Close down.

EVENING SESSION.

- 5.30 p.m.—Acceptances for Tuesday's races at
 Flemington.
 5.35 p.m.—Answers to letters and birthday
 greetings by "LITTLE MISS KOOKA-
 BURRA."
 6 p.m.—STUDIO QUARTET:
 "All Souls' Day" Op. 16. No. 8 (Strauss).
 6.10 p.m.—"LITTLE MISS KOOKA-BURRA"
 will tell the children something about
 "Halloween."
 6.25 p.m.—Halloween songs for the children,
 by Kirby Lumu, John Harrison.
 6.32 p.m.—STUDIO QUARTET:
 "Halloween Epitaph"—Soprano.
 6.40 p.m.—Weekly report of New-Strawmarket
 stock sales, by Associated Stocks and Station
 Agents, Bourke street, Melbourne—number
 of sheep and cattle drawn for week's sales.
 6.45 p.m.—Herald News Service. Weather
 synopsis. Shipping movements.
 6.52 p.m.—Stock Exchange information.
 6.57 p.m.—River reports.
 6.59 p.m.—Fish market reports by J. B. Bor-
 rett Ltd. Rabbit prices.
 7.2 p.m.—Market reports by the Victorian
 Producers' Co-operative Co. Ltd., Poultry,
 Grain, Hay, Straw, Juice, Dairy Produce,
 Potatoes and Onions. Market reports of fruit
 by the Victorian Fruit-growers Association. Re-
 tail prices. Wholesale prices by the Whole-
 sale Fruit Merchants' Association.

NIGHT SESSION.

- 7.15 p.m.—Under the auspices of the Boy
 Scouts Association, DEPUTY CHIEF COM-
 MISSIONER, Dr. G. G. McADAM, will speak on
 "Inter District Scout Neah Shield," and
 "Scout Immigration."
 7.30 p.m.—Mr. E. C. H. TAYLOR:
 "School Life and School Sport."
 7.45 p.m.—Under the auspices of the Depart-
 ment of Agriculture, Mr. P. RYAN, In-
 spector of Agriculture, will speak on
 "Growing Crops for Enslage."

AFFAIRS OF STATE.

- 8 p.m.—Dinner at FEDERAL PARLIAMENT
 HOUSE, tendered to Mr. L. C. AMERY,
 Secretary of State for the Dominions, by
 the Federal Government. Speakers:—
 "The Hon. the Premier, Mr. Hogan, proposes
 "Our Guest, Mr. Amery."
 Supported by: The Hon. the President Legis-
 lative Council—Sir Frank Clarke.
 The Hon. the Speaker: Mr. O. E. Snowball,
 M.L.A., the leader of the Opposition, the
 Hon. Sir William McPherson, M.L.A.
 Reply by Mr. Amery.
 8.30 p.m.—SOUTH MELBOURNE CITY
 BAND:
 Selection: "Enigma Errant" (Frossell).
 9.48 p.m.—"CARDIGAN," Mr. H. A. Wolfe,
 Sporting Editor of the Argus and Aus-
 tralian.
 THE MELBOURNE CUP.
 9.47 p.m.—Announcements. Under the auspices
 of the Health Association of Australia, the
 HEALTH MESSAGE for today is:
 "It is better to be inspected when suspected
 than to be dissected when infected."
 9.51 p.m.—STUDIO QUARTET:
 "Behetian Guy" (Hale).
 THE ROYAL AUTOMOBILE CLUB OF
 VICTORIA'S SAFETY MESSAGE for today is
 for CHILDREN: "Unless your head is
 solid home do not put it out of a train
 window."
 10 p.m.—MICHAEL CONNOLLY, baritone:
 "A request" (Woodfordy Finden). "Believe
 me if all those endearing young charms"
 (Toot Moore).
 10.7 p.m.—Argus News Service. Meteorological
 information.
 British official wireless news. Island steamer
 movements.
 10.15 p.m.—SOUTH MELBOURNE CITY
 BAND:
 March: "North Star" (Rimmer).
 10.22 p.m.—ANITA SHAWLE, soprante:
 "Prend."
 "We've got a servant."
 10.23 p.m.—STUDIO QUARTET.
 "To Mission San Francisco" (Strickland).

- 10.30 p.m.—MICHAEL CONNOLLY, baritone:
 "King Charles" (Maud White).
 "The Last Watch" (Pinsell).
 10.43 p.m.—SOUTH MELBOURNE CITY
 BAND:
 Selection: "Rings of Penance" (Sullivan).
 Waits: "The last term of his natural life"
 (Hayes).
 11 p.m.—"OUR GREAT THOUGHT:
 "His is the happiest man who least under-
 stands his misfortune, for he is of all men
 most fully aware that it is only the lofty
 idea, the stately, courageous human idea
 that liberates gladders from sorrow."
 (Maeterlinck).
 11.1 p.m.—HAM JOHNSTONE'S MONTE
 CARLO QUARTETTE:
 "You're the one for me."
 "Blue Skies."
 "What does it matter" waits.
 "I wonder how I look when I'm asleep."
 "Slow River."
 "For My Sweetheart."
 "Roughly Moon" waits.
 "Mister Linnick."
 "Sweet Marie."
 "Brown Sugar."
 11.40 p.m.—God Save the King.

4QG, BRISBANE

Monday.

MIDDAY SESSION.

- 1 p.m.—Market reports, weather information
 supplied by the Commonwealth Weather
 Bureau, news services supplied by "The
 Daily Mail" and "The Daily Standard."
 1.30 p.m.—Lunch hour music played by Hosi-
 Carion Trio.
 1.58 p.m.—Standard time signal.
 2 p.m.—Close down.

AFTERNOON SESSION.

- 2.30 p.m.—Afternoon tea music, played by
 Hosi Carion Trio.
 4.15 p.m.—News service, supplied by "The
 Telegraph."
 4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 6 p.m.—News service, supplied by "The Daily
 Standard."
 6.15 p.m.—Lecturette: A World Call Talk:
 "Africa," by the Rev. Canon H. P. Robin.
 6.30 p.m.—"The Chiffra's Sessions"
 "Sirius" by "The Sandman."
 7 p.m.—Market reports; stock reports.
 7.30 p.m.—Weather news; "Daily Standard"
 news.
 7.43 p.m.—Standard time signals.
 7.45 p.m.—Lecturette: "The Experiences of a
 Fig Raiser," by Mr. W. J. Shelton (Instruc-
 tor in Fig Raising).

NIGHT SESSION.

- The first portion of the programme will
 include numbers by the Ipswich Vice-Royal
 Band Quartette Party.
 8 p.m.—From the Studio:
 8 p.m.—Quartette, "Town and Country"
 (Rowell).
 The Ipswich Vice-Royal Band Party.
 (Messrs. J. W. Burgemeister, N. Harold,
 D. Jordan, A. Clark).
 Soprano solo, "The Wren" (Lehman).
 Miss Jill Manners.
 Concert duet, "Norma" (Bellini).
 Messrs. J. W. Burgemeister and N.
 Harold.
 Male Quartettes:
 (a) "The Bold Gendarmes" (Offenbach).
 (b) "Drink to Me Only" (Carwen).
 The Lyric Male Quartette.
 Ten Minutes with Henry Lawson:
 "The Last Review."
 Mr. Claude Walker.
 Contralto solo, "The Glory of the Sea" (San-
 dermon).
 Miss Ivy Rogers.

Perfect Reception Every Day Possible with Philco.



**THE
FOUR**

**STEPS
TO
PERFECT
RADIO**

RECEPTION

"YES, SIR!"

Four Philips Products, efficient in each and every detail. See them—hear them—for they are vital to your Radio Enjoyment. As they march down the page we will review them. Firstly—The "PC11" Loud Speaker unexcelled both in beauty of line, color and production. Next—the Philips Battery Charger and with it the end of accumulator troubles. Thirdly—the "B" Battery Eliminator—solution of the Dry Battery Expense problem. And lastly, "Miniwatt" Valves—economical—efficient—and world-famous. Philips Loud Speaker .. C/10/- Philips Battery Charger .. C/9/- Philips "B" Eliminator .. C/11/- **SOLD EVERYWHERE**

**PHILIPS
RADIO**

Brass Quartette, "Hymn to Music" (Code).
 Ipswich Band Party.
 A. Thought for To-night, "Where is Truth?"
 Will H. Lister.
 Soprano solo, "Down Vauxhall Way"
 (Oliver).
 Miss Pearl Watson.
 Euphonium solo, "Haste Thee" (Donizetti).
 Mr. A. Clark.
 Male Quartette, "Eye Law" (Franz).
 The Lyric Male Quartette.
 Soprano solo, "Fori Amor" (Mozart).
 Miss Jill Manners.
 Tenor Horn solo, "Libiamo Me Lieti Cullian"
 (Verdi).
 Mr. D. Jordan.
 Contralto solo, "A. Thomas" (Woodford-Pin-
 den).
 Miss Ivy Rogers.
 Brass quartette, "The Village Church"
 (Round).
 Vice-Royal Band Party.
 9 p.m.—Metropolitan weather forecast.

STUDIO RECITAL.

9.1 p.m.—A Recital by Miss Lena Hammond
 (contralto) and Miss Gladys Frost (pianist).
 10 p.m.—"The Daily Mail" news: weather
 news. Close down.

6WF, PERTH.

Monday.

12.30 p.m.—Tune in.
 12.35 p.m.—Market, news, and cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—weather notes supplied by the
 Meteorological Bureau of Western Australia.
 1.15 p.m.—Studio Quintette, conducted by Mr.
 Val Smith.
 2 p.m.—Close down.
 3.40 p.m.—Tune in.
 3.25 p.m.—Afternoon Tea concert relayed from
 the Carlton Cafe, Hay Street.
 Vocal and instrumental interludes from the
 Studio.
 4.40 p.m.—Close down.
 6.45 p.m.—Tune in.
 6.50 p.m.—Stories for the Kiddies by Uncle
 Henry and Duff.
 7.20 p.m.—Stocks, markets, news.
 7.45 p.m.—Talk, "The Acclimatization of
 Animals in Australia," by Lieut. Col. Lo
 Soper, Director of the Zoological Gardens,
 South Perth.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the
 Meteorological Bureau of Western Australia.
 8.3 p.m.—CONCERT NIGHT.
 "All Nations Evening," relayed from the
 Billy Edwards Music Warehouse, Murray
 Street.
 Items by the Specialty Four.
 Vocal numbers by assisting artists.
 10 p.m.—Late news items by courtesy of "The
 Daily News" Newspaper Coy.
 Signs within range announcement.
 Weather report and forecast.
 10.30 p.m.—Close down.

100 METRE TRANSMISSION.

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

7ZL, HOBART

Monday.

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

3 p.m.—G.P.O. clock chimes.
 3.1 p.m.—Tune in selection.
 3.5 p.m.—Hobart Stock Exchange quotations.
 Weather information.
 Items of interest.
 Announcements.

EARLY EVENING SESSION.

6.50 p.m.—Children's corner.
 "Uncle Peter's" ball, book.
 7 p.m.—"Uncle Hector" talks to the children.

NIGHT SESSION.

7.30 p.m.—Musical selection.
 7.53 p.m.—Physical Culture talk by Lieuten-
 ant-Highland Macleod, C.B., S.S.
 7.58 p.m.—"Mercury" special Tasmanian news
 service. Railway auction produce sale.
 Weather forecasts. Hobart Stock Exchange
 quotations.
 8 p.m.—G.P.O. clock chimes.
 8.1 p.m.—Vocal and instrumental numbers
 from Findlay's music showroom, Elizabeth-
 street, Hobart.
 9 p.m.—Talk by Mr. E. T. Emmett on Tas-
 mania's beauty spots. "Mole Creek Caves
 and Ditchet".
 9.40 p.m.—British official wireless news.
 9.55 p.m.—"Mercury" special intermediate news
 service. Tasmanian district weather re-
 ports. 9 a.m. weather forecasts. Station
 announcements.
 National Anthem.

Tuesday, Nov. 1
 2FC, SYDNEY.

EARLY MORNING SESSION.—1 to a.m.

MORNING SESSION.

10 a.m.—"Big Ben" and programs announce-
 ments.
 10.5 a.m.—Studio music.
 10.45 a.m.—"Sydney Morning Herald" news
 service.
 10.30 a.m.—Studio music.
 10.35 a.m.—Late spotting news by the 2FC
 Racing Commissioner.
 10.45 a.m.—Studio music.
 11 a.m.—"Big Ben."
 Marching music for school children.
 11.5 a.m.—A.P.A. and Hunter's Cables.
 11.10 a.m.—Studio music.
 11.18 a.m.—A talk on Home Cooking and Re-
 cipes, by Miss Ruth Frost.
 11.30 a.m.—From the Sydney Cricket Ground:
 Complete description of the Cricket Match:
 New Zealand versus New South Wales.

MIDDAY SESSION.

12 noon—"Big Ben" and announcements.
 12.3 p.m.—Stock Exchange first call.
 12.7 p.m.—Official weather forecast, rainfall.
 12.5 p.m.—Studio music.
 12.10 p.m.—Summary of "Sydney Morning
 Herald" news service.
 12.30 p.m.—Studio music.
 12.35 p.m.—Marching music for school chil-
 dren.
 12.49 p.m.—Kathleen Stollery, mezzo.
 12.45 p.m.—The Oak Hall Instrumental Trio.
 12.55 p.m.—Studio music.
 Progress cricket results.
 1 p.m.—"Big Ben." Weather intelligence.
 1.5 p.m.—"Evening News" midday news ser-
 vice.
 Producers' Distributing Society's Report.
 1.15 p.m.—From the Sydney Town Hall:
 Dr. John Reid will deliver a lecture on
 Christian Science.
 2 p.m.—"Big Ben."
 Stock Exchange, second call.
 2.2 p.m.—Kathleen Stollery, mezzo.
 2.4 p.m.—Cricket Descriptions and Results
 direct from the Sydney Cricket Grounds.

AFTERNOON SESSION.

3 p.m.—"Big Ben" and announcements.
 3.3 p.m.—Studio music.
 Olive Cameron, soprano.
 3.7 p.m.—Cricket results.
 3.15 p.m.—From the Studios.
 Jack Dunlop, baritone:
 "No Sail" (Lindley).
 SPECIAL NOTE: From the J.R.C. Meeting
 at Pennington: A description of the Mel-
 bourne Cup in the running by the SFC
 Racing Commissioner. This description will
 be broadcast on day's wave lengths 22.5 for
 broadcast overseas and 42 metres for Aus-
 tralian reception.
 3.18 p.m.—From the Sydney Cricket Grounds:
 Results and descriptions of the Match: New
 Zealand versus N.S.W.
 3.20 p.m.—Marching music for school children.
 3.40 p.m.—Muriel Watt, contralto.
 3.45 p.m.—The Oak Hall Instrumental Trio.
 3.50 p.m.—Cricket results.
 3.58 p.m.—From the Studios.
 Jack Dunlop, baritone:
 "Milkmaid" (Pomeroy).
 4 p.m.—From Farmer's Tea Rooms.
 Eileen Moreau, soprano.
 4.3 p.m.—From the Sydney Cricket Grounds:
 Description of the Play.
 4.30 p.m.—From Farmer's Tea Rooms:
 Muriel Watt, contralto.
 4.25 p.m.—The Oak Hall Instrumental Trio.
 4.30 p.m.—Progress Cricket Results and De-
 scriptions.
 4.40 p.m.—From Farmer's Tea Rooms:
 Eileen Moreau, soprano.
 4.45 p.m.—Stock Exchange third call.
 4.47 p.m.—Cricket descriptions and results.
 5 p.m.—"Big Ben."
 Olive Cameron, soprano.
 5.4 p.m.—Cricket results and description of
 the play direct from the Sydney Cricket
 Ground until stumps drawn at 4 p.m.

EARLY EVENING SESSION.

5 p.m.—"Big Ben" and announcements.
 5.3 p.m.—The "Hello Man" talks to the chil-
 dren.
 5.30 p.m.—Story time for the young folk.
 6.40 p.m.—Studio music.
 6.50 p.m.—Late sporting news.
 7 a.m.—"Big Ben."
 Dalrymple's market reports (wheat, wheat and
 stock).
 7.8 p.m.—Fruit and vegetable markets.
 7.10 p.m.—Weather and shipping news.
 7.18 p.m.—Late "Evening News" news ser-
 vice.

NIGHT SESSION.

7.30 p.m.—Programme announcements.
 7.35 p.m.—Louise Homfray, lady baritone:
 (a) "Gardening" (Lyster).
 (b) "Take your Finger out of Your Mouth"
 (Yellman).
 7.45 p.m.—Alexander Szwedzky, pianoforte
 solos:
 (a) "Searing" (Schumann).
 (b) "Why" (Schumann).
 (c) "Spring Night" (Schumann-Liszt).
 7.52 p.m.—Win and Windle, English enter-
 tainers.
 8 p.m.—"Big Ben."
 From the Haymarket Theatre, George Street,
 Sydney: The Haymarket Operatic Orchestra,
 under the baton of Stanley Porter.
 8.20 p.m.—From the Studios:
 Margaret James, soprano:
 "I've Been Hoaming" (Horn).
 8.25 p.m.—From the Royal Naval House, Syd-
 ney:
 The N.S.W. STATE MILITARY BAND:
 (a) March "Au Secours" (Vanderell).
 (b) Overture "Tancredi" (Rossini).
 8.35 p.m.—From the Studios:
 Louise Homfray, lady baritone:
 "There's a Trick in Pizani's a Chicken"
 (Robinson).
 8.44 p.m.—From the Royal Naval House, Syd-
 ney:
 The N.S.W. State Military Band:
 (a) Waltz, "Brodianska" (Waldteufel).
 (b) A Musical Switzer (Alford).
 Late weather forecast.



A Revolution in Reception

CLARITONE LOUDSPEAKER

Until you've actually heard the true to nature rendition of the Claritone you've never heard just how well your set can perform. A Claritone Loud Speaker will revolutionise your reception . . . bring the broadcasters more vividly near . . . true to nature! The Claritone range of models is moderately priced, and may be seen at most leading radio supply stores, or at the

**WELDON
ELECTRIC SUPPLY CO., LTD.,**

*Suppliers of everything in Radio and
Electrical equipment.*

352 KENT STREET ~ SYDNEY



2 UW, SYDNEY

- 9.5 p.m.—From the Haymarket Theatre, Sydney:
 - A Vocal Act.
- 9.20 p.m.—From the Studio:
 - Alexander Sverenzky, pianist:
 - (a) "Dream of Love" (Liszt).
 - (b) "Sesquillas" (Albeniz).
- 9.25 p.m.—Margaret James, soprano:
 - "A Night Idle" (Loughborough).
- 9.34 p.m.—Win and Windie, English entertainers.
- 8.42 p.m.—From the Royal Naval House, Sydney:
 - The N.S.W. State Military Band:
 - Selection, "The Chocolate Soldier" (Strauss).
- 9.36 p.m.—From the Studio:
 - Charles O'Mara, Irish comedian:
 - (a) "The Rake McCoy" (O'Mara).
 - (b) "Beautiful Eileen" (Nona).
- 10.5 p.m.—Margaret James, soprano:
 - (a) "Heigh Ho" (Old English).
 - (b) "Daffodil Time" (Grieg).
- 10.10 p.m.—Win and Windie, English entertainers.
- 10.18 p.m.—From the Haymarket Theatre, Sydney:
 - The Haymarket Operatic Orchestra, under the baton of Mr. Stanley Forster.
- 10.30 p.m.—Charles O'Mara, Irish comedian:
 - (a) "The Ballmoney Conversazioni" (Jackson).
 - (b) "Mollodoo's Ball" (Weston and Lee).
 - (c) 10.34 p.m.—The 2FC Studio Dance Band.
- 10.57 p.m.—Late news and announcements.
- 11 p.m.—"Big Ben."
- The 2FC Studio Dance Band.
- 11.30 p.m.—National Anthem.
- Close down.

2BL, SYDNEY.

Tuesday.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

- 10.30 a.m.—G.P.O. clock and chimes.
- Musical programme from the Studio.
- 10.40 a.m.—News from the "Daily Telegraph Pictorial."
- 10.50 a.m.—Musical programme from the Studio.
- 11 a.m.—G.P.O. clock and chimes.
- Announcements.
- 11.5 a.m.—Musical programme from the Studio.
- 11.16 a.m.—Social notes. Replies to correspondents by Mr. Jordan.
- Talk on "Diet and Health," by Mr. Adams, A.M.A.
- 11 noon—G.P.O. clock and chimes.
- Special ocean forecast and weather report.
- 12.3 p.m.—Brunswick Panstrophe Musical Recital.
- 12.15 p.m.—Information. Mails, shipping and post directory.
- 12.18 p.m.—Boats in call by wireless.
- 12.20 p.m.—Fruit market report.
- 12.22 p.m.—Vegetable market report.
- 12.24 p.m.—London metal market report.
- 12.26 p.m.—Dairy and farm produce market report.
- 12.30 p.m.—G.P.O. clock and chimes.
- Forage market report.
- 12.32 p.m.—Fish market report.
- 12.34 p.m.—Rabbit market report.
- 12.36 p.m.—Stock Exchange report.
- 12.38 p.m.—News from the "Sun."
- 12.45 p.m.—Hillier's Instrumental Quartet.—Direction, Ceryll Castling.
- 1.27 p.m.—Stock Exchange report.
- 1.30 p.m.—G.P.O. clock and chimes.
- Talk to children and special entertainment for children in hospital.
- 2 p.m.—G.P.O. clock and chimes.
- Close down.

AFTERNOON SESSION.

- Description of each race at the English Triple, broadcast direct from the course, by Mr. Basil Kirke.
- 3 p.m.—G.P.O. clock and chimes.
- News from the "Sun."
- 3.15 p.m.—Civil Service Stores Trio.—Direction, Miss de Courcy Bremer.
- 3.30 p.m.—G.P.O. clock and chimes.
- News from the "Sun."
- 3.40 p.m.—Musical programme from the Studio.
- 3.50 p.m.—News from the "Sun."
- 4 p.m.—G.P.O. clock and chimes.
- Civil Service Stores Trio.
- 4.10 p.m.—Serial story.
- 4.35 p.m.—Musical programme from the Studio.
- 4.55 p.m.—News from the "Sun."
- 4.55 p.m.—Resume of night's programme.
- 4.57 p.m.—Racing results.
- 4.59 p.m.—Special ocean forecast.
- 5 p.m.—G.P.O. clock and chimes.
- Close down.

EARLY EVENING SESSION.

- 5.45 p.m.—G.P.O. clock and chimes.
- Children's assembly.
- 6.20 p.m.—Musical programme from the Studio.

SPECIAL COUNTRY SESSION.

- 7 p.m.—G.P.O. clock and chimes.
- Australian Mercantile, Land and Finance Co's report.
- Weather report and forecast by courtesy of Government Meteorologist.
- Producers' Distribution Society's fruit and vegetable market report.
- Stock Exchange reports.
- Grain and fodder report ("Sun").
- Dairy produce report ("Sun").
- N.R.M.A. talk.
- 7.35 p.m.—Country news from the "Sun."
- 7.50 a.m.—Talk by a member of the Listeners' League.
- 7.50 p.m.—Talk by a member of the St. John Ambulance Association.
- 8 p.m.—G.P.O. clock and chimes.
- Broadcasters' Topical Chorus.
- 8.3 p.m.—Broadcasters' Light Orchestra, under the direction of Mr. J. Knight Burnett.
- 8.41 p.m.—Mr. Peter Sutherland, basso.
- 8.45 p.m.—Miss Helena Stewart, dramatic soprano.
- 8.49 p.m.—A humorous sketch by Miss Edna Fenner.
- 8.57 p.m.—Miss Amy Ostina, contralto.
- 8.51 p.m.—Cello solos by Mr. Bryes Carter.
- 8.58 p.m.—Mr. Lance Jeffree, tenor.
- 8.55 p.m.—Broadcasters' Light Orchestra.
- 8.55 p.m.—Weather report and forecast by courtesy of Mr. C. J. Maree, Government Meteorologist.
- 8.58 p.m.—Resume of following day's programme.
- 9 p.m.—G.P.O. clock and chimes.
- 9.1 p.m.—A repetition of the song cycle, "Flora's Holiday," composed by H. Lane Wilton.
- Soprano, Helena Stewart.
- Contralto, Amy Ostina.
- Tenor, Lance Jeffree.
- Bass, Peter Sutherland.
- Presented under the direction of Mr. G. Vera Burnett.
- 9.20 p.m.—Broadcasters' Light Orchestra.
- 9.26 p.m.—Another humorous sketch by Miss Edna Fenner.
- 9.48 p.m.—Broadcasters' Light Orchestra.
- 10 p.m.—G.P.O. clock and chimes.
- 10.1 p.m.—The Ambassadors' Dance Band broadcast from the ballroom of the Ambassadors. During intervals between dances, "Sun" news will be broadcast.
- 12 midnight—G.P.O. clock and chimes.

Tuesday.

MORNING SESSION.

- 9 a.m.—News, shipping, mails, studio items.
- 9.45 a.m.—Women's Session.
- 9.50 a.m.—Resume of forward programme.
- 10 a.m.—Close down.
- 10.15 p.m.—Special Employees' Luncheon Session.
- 12.45 p.m.—Close down.

AFTERNOON SESSION.

- 3 p.m.—Pianoforte solo, Mr. Palmer Keefe. Selected.
- 3.4 p.m.—Professor C. Sauer, Violin Solo: Selected.
- 3.15 p.m.—Studio items.
- 5.10 p.m.—Studio items.
- 5.45 p.m.—Resume of forward items.
- 6 p.m.—Close down.

NIGHT SESSION.

- 7 p.m.—Where to Go.
- 1.10 p.m.—Studio Selections.
- 7.35 p.m.—Organ Solo, Professor C. Sauer: Selection.
- 7.50 p.m.—Special Musical programme by Pupils of Mr. Raymond Petticoch, assisted by Professor Sauer.
- 7.50 p.m.—Studio Selections.
- 7.48 p.m.—Special musical programme by pupils of Mr. Raymond Petticoch, assisted by Professor Sauer.
- 8 p.m.—Gems of the Opera, No. 12, "Madama Butterfly"—Puccini, by George F. Manouel.
- 9 p.m.—Studio items.
- 9.28 p.m.—Resume of forward programme.
- 9.50 p.m.—Close down.

3LO, MELBOURNE.

Tuesday.

CUT DAY AND HALLOWEEN.

- 11.45 a.m.—Description of Cricket Match—Essendon v. Fitzroy, at Essendon, by Mr. Rod McGregor.
- 12.0 noon—Melbourne Observatory Time Signal; Metal Prices received by the Australian Mines and Metals Association from the London Stock Exchange this day; British Official Wireless News from Rugby; Reuter's and the Australian Press Association Cables; "Argus" News Service.
- 12.20 p.m.—STUDIO QUARTETTE: Overture, "Freischütz" (Weber).
- 12.30 p.m.—ELLA RIDDELL, Contralto: "Hime O'Mine" (McKenney Murdoch). "Down the Burn" (Old Scotch).
- 12.35 p.m.—Stock Exchange Information.
- 12.40 p.m.—STATION QUARTETTE: Selection, "Tom Jones."
- 12.50 p.m.—Description of Cricket Match—Essendon v. Fitzroy, at Essendon, by Mr. Rod McGregor.
- 1.0 p.m.—Melbourne Observatory Time Signal.
- 1.3 p.m.—Description of Cup Hurdle, V.R.C. Flemington, 2 miles, by "Newbury," of the "Argus."
- 1.5 p.m.—ELLA RIDDELL, Contralto: "The Road to the Isles" (Kennedy Fraser). "The Erickey Love Lull" (Kennedy Fraser).
- 1.13 p.m.—Meteorological Information: Weather Forecast for Victoria, Tasmania, South Australia and New South Wales; Ocean Forecast; River Reports; Rainfall for Victoria, Tasmania, South Australia and New South Wales.
- 1.28 p.m.—STUDIO QUARTETTE: "A Hunt in the Black Forest."
- 1.30 p.m.—REGINALD BRADLEY, Violin: "Times frae the Hameland," arr. (George Walker).
- 1.45 p.m.—Description of Railway Handicap, 6 furlongs, V.R.C. Flemington, by "Newbury," of the "Argus."



*but no distortion
of Tonal Quality*

That, after all, is what you really seek from your set. The "Advance" Audio Frequency Transformer has been specially designed to give you pure-toned volume—to increase the clarity and strength of your reception. The name "Advance" is a guarantee of its electrical and mechanical perfection. Made in ratios of 2-1, 3-1, and 5-1.

Wholesale Distributors:
**FOX & MACGILLYCUDDY
LTD.**

Daily Telegraph Bldgs., Sydney

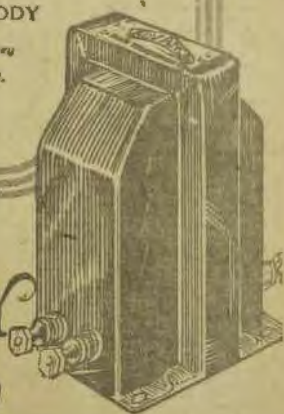
HARRINGTONS LTD.

George St., Sydney



ADVANCE

**AUDIO FREQUENCY
TRANSFORMER**



17/6

- 1.44 p.m.—ANITA SHAWE, Sourette:
"Crying for the Moon."
—Keep on Smiling.
- 1.45 p.m.—STUDIO QUARTETTE:
March, "On the Hunt" (Doldans).
"Hunting Song" (Mendelssohn).
- 2.0 p.m.—Description of Cricket Match—Essexdon v. Fitzroy, at Essendon, by Mr. Rod McGregor.
- 2.10 p.m.—Close Down.
- 2.40 p.m.—Description of November Nursery, 4½ Fortuna, V.R.C., Flemington, by "Newbury" of the "Argus."
- 2.45 p.m.—Close Down.

AFTERNOON SESSION.

- 2.45 p.m.—Melbourne Observatory Time Signal.
- 3.0 p.m.—TO THE MELBOURNE CUP, with JOE ARONSON AND HIS SYMPOGATING SYMPHONISTS:
"The Toy Town Parade" (Morelle).
"Just Once Again" (Asb).
"Rolling Down to Rio" (Rising).
- 3.20 p.m.—Description of MELBOURNE CUP, 2 miles, V.R.C., Flemington, by "Newbury" of the "Argus."
- 3.15 p.m.—ELLA RIDDELL, Contralto:
"Turn 99 to me" (Wilson).
"Keep on Hopin'" (Maxwell).
- 3.41 p.m.—Description of the Frocks on the Lawn at Flemington Racecourse, during the Melbourne Cup, by DOBOTHY DUNCKLEY.
- 3.52 p.m.—E. MASON WOOD, Baritone:
"Border Ballad" (Coven).
"You Alone o' Me" (Coven).
- 4.0 p.m.—JOE ARONSON AND HIS SYMPOGATING SYMPHONISTS:
"When Lights are Low in Cairo."
"Beneath Venetian Skies" (Lewis).
"Kah Lonna Be Home To-night."
- 4.10 p.m.—ELLA RIDDELL, Contralto:
"My France" (Bey).
"Caller HERRIN" (Old Scotch).
- 4.17 p.m.—JOE ARONSON AND HIS SYMPOGATING SYMPHONISTS:
"I'm Telling the Birds, Telling the Dew" (Brown).
- 4.20 p.m.—Description of Cop Steals, 2 miles ½ fortuna, V.R.C., Flemington, by "Newbury" of the "Argus."
- 4.25 p.m.—E. MASON WOOD, Baritone:
"Tally Ho" (Lorrie).
"Maire My Girl."
- 4.31 p.m.—Description of Cricket Match—Essexdon v. Fitzroy, at Essendon, by Mr. Rod McGregor.
- 4.45 p.m.—"Herald" News Service; Stock Exchange Information.
- 5.0 p.m.—Description of Van Year Station, 1 mile, V.R.C., Flemington, by "Newbury" of the "Argus."
- 5.5 p.m.—Close Down.

EVENING SESSION.

- 5.30 p.m.—Answers to letters and birthday greetings by "MARY GUMLEAF."
- 5.6 p.m.—STUDIO QUARTETTE:
Galop, "Tally Ho" (Herrstein).
- 5.10 p.m.—MISS M. SHEPHERD will tell children some strange stories about "The Horse."
- 5.25 p.m.—STUDIO QUARTETTE:
Furoret, "With Whip and Spur" (Jensenman).
5.32 p.m.—"MARY GUMLEAF":
"The Story of Hiawatha" (Introduction).
5.40 p.m.—Official Report of Newmarket Stock Sales, by the Associated Stock and Station Agents, Bourke Street, Melbourne; Number of Sheep drawn for Week's Sales.
- 5.45 p.m.—"Herald" News Service; Weather Synopsis; Shipping News.
- 5.52 p.m.—Stock Exchange Information.
- 5.57 p.m.—River Reports.
- 5.59 p.m.—Fish Markets Reports by J. R. Borrett, Ltd., Fishery Prices.
- 7.2 p.m.—Market Reports by the Victorian Producers' Co-operative Co., Ltd., Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions; Market Reports of Fruit by the Victorian Fruitgrowers' Association; retail Prices; Fruit Market Report, wholesale prices, by the Wholesale Fruit Merchants' Association; Ballarat Stock Market Reports.

NIGHT SESSION.

- 7.15 p.m.—MR. C. J. MILLER, Crequeat Champion of Victoria:
"Crocket of Yesterday."
- 7.30 p.m.—Under the auspices of the University of Melbourne Extension Board, ASSOCIATE PROFESSOR A. LOEWENSTAMM, M.A., Litt., D. Lecturer in German at the University:
"Logic in Language."
7.45 p.m.—MR. E. M. PASCOE:
"Bowls." DIVERSITY.
- 8.9 p.m.—Under the auspices of the Health Association of Australia the HEALTH MESSAGE for to-day is:
"The health of man requires the employment of at least six important factors, if one is to play the game well. These are: Outdoor air, wholesome food in proper amounts, intelligent care of the body, rest and sleep, thinking straight, exercise."
F. Williams.
- 8.1 p.m.—MALVERN TRAMWAYS BAND:
Comedy Overture, "La Coquette" (Larente).
- 8.3 p.m.—ELLA RIDDELL, Contralto:
"When All Was Young" (Tom Faut) (Gooned).
"The Island Hermit" (Kennedy Peaser).
- 8.15 p.m.—FRENCH BROS., Banjoists:
"Lucie Sambo."
"Kentucky Lullaby."
- 8.22 p.m.—MALVERN TRAMWAYS BAND:
Selection, "Lady of the Room" (Gibert).
- 8.37 p.m.—AGNES FORTUNE, Piano:
"Might in E Flat" (Beethoven).
- 8.47 p.m.—MALVERN TRAMWAYS BAND:
"Enacted."
- 9.0 p.m.—Announcements; Acceptance for V.I.C. for Thursday.
"ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE FOR TODAY IS FOR MOTORISTS."
"Gasoline develops horse-power—use horse sense in handling it."
- 9.4 p.m.—We have so much pleasure in announcing the ONE-ACT PLAY, "NERVES AND NOISES" by MAT MURPHY.
"This play won First Prize in the recent One Act Play Competition."
- 9.19 p.m.—ELLA RIDDELL, Contralto:
"Down at the End of the Garden" (May Trahe).
"Jack" (Bradford).
- 9.25 p.m.—FRENCH BROS., Banjoists:
"Honolulu Blues."
"Greenest Moon."
- 9.31 p.m.—MICHAEL CONNOLLY, Baritone:
"Obstinatoin" (Helo Fontenaille).
"When the Swallows Homeward Fly" (M. V. White).
- 9.40 p.m.—MALVERN TRAMWAYS BAND:
March, "The King's Choice" (Himmer).
Duet, "Charming Paris" (Vardi).
- 9.45 p.m.—ANITA SHAWE, Sourette:
"What Does It Matter?"
"There's a Trick in Pickin' a Chick, Chick, Chickin'."
- 9.52 p.m.—News Service; Meteorological Information; Sporting Notes by "Olympus"; British Official Wireless News from Rugby; Island Steamer Movements.
- 10.4 p.m.—MALVERN TRAMWAYS BAND:
"At Sundown" (Donaldson).
- 10.9 p.m.—MICHAEL CONNOLLY, Baritone:
"Molly Dawn" (S. Lever).
"Lorraine, Lorraine, Lorraine" (Spreng).
- 10.16 p.m.—ERN. SPRY'S ORCHESTRA:
"Who?" (Korn).
"Two Humbirds" (Kora).
"Faded in Love" (Dacia).
- 10.25 p.m.—ANITA SHAWE, Sourette:
"Forgotten."
"The Doll Dance."
- 10.34 p.m.—ERN. SPRY'S ORCHESTRA:
"Mama's Got You" (Waston).
"Forgotten" (O'Hagan).
"Slow River" (Gibault).
- 10.44 p.m.—FRENCH BROS., Banjoists:
"Hunchback Henry."
"Crown a Lullaby."
- 10.55 p.m.—ERN. SPRY'S ORCHESTRA:
"Song of Wanderer" (Morel).
"Because I Love You" (Berlin).
"Blue Skies" (Berlin).
- 11.0 p.m.—OUR GREAT THOUGHT:
"Never hunt trouble. However bad a man one may be, the gun he carries on such

- expeditions is sure to kick or go off half-cocked."—Artemus Ward.
- 11.1 p.m.—ERN. SPRY'S ORCHESTRA:
"Black Bottom" (Henderson).
"Tonight You Belong to Me" (David).
"Birth of the Blues" (Henderson).
"Spanish Town" (Banau).
"Meadow Lark" (Reidel).
"White We Dream" (Hanley).
"Sundown" (Donaldson).
"Honolulu Moon" (Lawrence).
"Ukulele Dream Girl" (Lew).
"Circles" (Goodman).
"Everything's Peaches" (Squire).
"Indian Love Call" (Friml).
"No Foolin'" (Hanley).
- 11.40 p.m.—GOD SAVE THE KING.

4QG, BRISBANE.

Tuesday.

MIDDAY SESSION.

- 1 p.m.—Market reports, weather information, "The Daily Mail" and "The Daily Standard" news.
- 1.30 p.m.—Lunch music played by Hotel Carlton Trio.
- 1.55 p.m.—Standard time signal.
- 2 p.m.—Close down.

AFTERNOON SESSION.

- 3.30 p.m.—A programme of music by the Studio Orchestra (conductor, Mr. A. H. Featherstone), including:
March, "The Caravan Club" (King).
Valse, "Visions of Paradise" (Brenet).
Characteristic, "Marceline" (Trinking).
Soprano solo, Selection.
Miss Ruth Portrate.
Reverie, "Gala at Twilight" (Huerter).
Violin solo, "Tebon Recarnin" (Kraibler).
Mr. T. Jones.
Valse caprice, "In the Gardens of Spain" (Czanneur).
Soprano solo, Selection.
Miss Ruth Portrate.
Melodia, "Nocturne" (Knight Logan).
March, "Fort Royal" (Huf).
4.16 p.m.—"The Telegraph" News.
4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 6 p.m.—"Daily Standard" news.
- 6.15 p.m.—A talk by the Queensland Radio Transmitters' League.
- 6.30 p.m.—"The Children's Socials":
Stories by "Uncle Jim."
- 7 p.m.—Special news service, market reports, stock exchange.
- 7.30 p.m.—Weather news; announcements.
- 7.43 p.m.—Standard time signal.
- 7.45 p.m.—Lecturette: "Photography," by Mr. F. L. South (Manager, Kodak, Ltd.).

NIGHT SESSION.

- The complete Concert by the Queensland State and Municipal Orchestra (conductor, Mr. Geo. Spangos) will be relayed from the Exhibition Hall.
- 8 p.m.—From the Exhibition Hall: State Orchestral Concert.
The programme will include:
Overture, "Patrie" (Bizet)—first time performed at State Concert.
"Symphony," by Caspar Franck.
Suite, "Hrainsburg Suite No. 8," for strings and piano (Bach)—first time performed at State Concert.
Orchestral suite, "Les Deux Pigeons" (Messiaen).
- 10 p.m.—"The Daily Mail" news.
Weather news.
Close down.



PERMANENT POWER

The EMMCO "B" BATTERY ELIMINATOR is not a substitute for "B" Batteries. It is vastly superior to batteries—far more dependable, far more efficient, far more economical. Requires no batteries of any character. Never discharged. Never runs down. Gives even, constant, unfailing current—without slightest noise. Always ready for constant and continued use. Not affected by disuse. Trouble-proof. On when "on" and off when "off." Induces full, clear-toned reception. Costs practically nothing to operate. Moderate in price. Quickly pays for itself by abolishing expense of periodical replacing dry batteries. Compact, convenient. The most satisfactory and scientific "B" current supply. Saves money, time, and trouble. Attractive in appearance. See one at your dealers.

Emmco Super Power Eliminator

Illustrated above.

Constructed particularly for supplying high tension current for multi-valve sets. It delivers 85 milliamperes at 180/200 volts, and is supplied with a Raytheon B.H. tube. It is especially adapted for the current and voltages of Australian Electric A.C. Lighting Mains and rectifies both halves of the A.C. Cycle. Adaptable for all valves. The Emmco Super Power "B" Eliminator has a special output control for varying A.C. voltages from 150/140 volts.

Enclosed in a neat metal case, with Bakelite top, the whole measuring 19 1/2 x 9 1/2 x 6 1/2, weight 23-lbs., and complete with cord and attachment plug, attractive aluminium base, Bakelite top and well insulated.

Price, £12/12/-

Kit of Transformer and Chokes, in separate aluminium frame 8/10/-



Emmco "B" Battery Eliminator *Illustrated at Right.*

Especially designed for supplying high tension current to sets employing any type or make of valves, up to a maximum of five. Like the Super Power Eliminator, it is especially designed for Australian Electric A.C. Lighting Mains, and rectifies both halves of the A.C. cycle. Several thousand of these Eliminators have been sold and are in successful operation throughout Australia and New Zealand. This Eliminator is supplied for both 230/240 and 300/230 volts.

A scientifically made job, sturdily built, in a neat metal case, with Bakelite top. Compact, 8 1/2-in. x 6-in. x 8 1/2-in., weight 14 1/2-lbs., and complete with cord and attachment plug. Handsomely finished case, Bakelite top, complete with cord and plug.

Price, £10/10/-

Kit, containing Transformer and Chokes, in one aluminium frame £4/10/-

BUY EMMCO RADIO PRODUCTS AT ALL DEALERS

6WF, PERTH.

Tuesday.

- 12.30 p.m.—Tune in.
- 12.35 p.m.—Market, news, and cables.
- 1 p.m.—Time signal, from Perth Observatory.
- 1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
- 1.2 p.m.—STUDIO INSTRUMENTAL TRIO.
- 1.30 p.m.—Close down.
- 3.30 p.m.—Tune in.
- 3.35 p.m.—Organ selections relayed from the Grand Theatre, Murray Street.
- Vocal and instrumental interludes from the Studio.
- 4.30 p.m.—Close down.
- 6.45 p.m.—Tune in.
- 6.50 p.m.—Stories for the Boys, by Uncle Duffy.
- 7.20 p.m.—Stocks, markets, news.
- 7.45 p.m.—Talk, "Wireless Troubles," by Dd. Fison.
- 8 p.m.—Time signal from Perth Observatory.
- 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
- 8.3 p.m.—BAND NIGHT.
- Concert by the R.S.L. Band, conducted by Mr. W. A. Halvarson.
- 10 p.m.—Late news items by courtesy of "The Daily News" Newspaper Co's.
- Shine within range announcement.
- Weather report and forecast.
- 10.30 p.m.—Close down.

100 METRE TRANSMISSION.

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

7ZL, HOBART

Tuesday.

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

2 p.m. to 4.30 p.m.

- 8 p.m.—G.P.O. Clock and chiming.
- 8.1 p.m.—Tune in selection.
- 8.5 p.m.—Hobart Stock Exchange quotations.
- Weather information, items of interest—announcements.
- 9.15 p.m.—Selections by 7ZL Studio Trio.
- 9.45 p.m.—Cooking talk by "Beggala."
- 9.50 p.m.—Close down.

EARLY EVENING SESSION.

6.30 p.m. to 7.30 p.m.

- 6.30 p.m.—"Uncle Hector" talks to the children.
- 7 p.m.—"Uncle Peters" half hour.

NIGHT SESSION.

7.30 p.m. to 10 p.m.

- 7.30 p.m.—Musical selection.
- 7.45 p.m.—Literary Lapses and Literary Lists by Mr. W. E. Fuller.
- 7.50 p.m.—"Mercury" special Tasmanian news service. Railway and produce sales. Weather forecasts. Hobart Stock Exchange quotations.
- 8 p.m.—G.P.O. Clock chiming.
- 8.1 p.m.—Broadcast by direct wire from Imperial Hotel, Hobart, dance numbers by Mrs. Sheppard's Trio, interspersed with items from the Studio. Miss A. Burgess, Miss E. Terry, Mr. O. Burrows, baritone.
- 8.40 p.m.—British Official Wireless news.
- 8.50 p.m.—"Mercury" Special Interstate news service. Show within wireless range. Tasmanian District Weather reports. 5 a.m. Weather forecasts. Station announcements. National Anthem.

Wednes., Nov. 2
2FC, SYDNEY

EARLY MORNING SESSION.—7 to 8 a.m.

MORNING SESSION.

- 10 a.m.—"Big Ben" and programme announcements.
- 10.5 a.m.—Studio music.
- 10.15 p.m.—"Sydney Morning Herald" news service.
- 10.30 a.m.—Studio music.
- 10.35 a.m.—A reading.
- 10.45 a.m.—Studio music.
- 11 a.m.—"Big Ben."
- Marching music for school children.
- 11.5 a.m.—A.P.A. and Reuters's Tables.
- 11.10 a.m.—Studio music.
- 11.15 a.m.—A talk on Home Cooking and Recipes, by Miss Ruth Ford.
- 11.30 a.m.—Close down.

MIDDAY SESSION.

- 12 noon—"Big Ben" and announcements.
- 12.2 p.m.—Stock Exchange, first call.
- 12.3 p.m.—Official weather forecast, rainfall.
- 12.5 p.m.—Studio music.
- 12.10 p.m.—Summary of "Sydney Morning Herald" news service.
- Rugby wireless news.
- 12.25 p.m.—Studio music.
- 12.30 p.m.—Marching music for school children.
- 12.40 p.m.—Lewin Herrick, baritone.
- 12.45 p.m.—The Oak Hall Instrumental Trio.
- 12.55 p.m.—Studio music.
- 1 p.m.—"Big Ben." Weather intelligence.
- 1.1 p.m.—"Evening News" mudday news service.
- "Producers" Distributing Society's Report.
- 1.20 p.m.—The Oak Hall Instrumental Trio.
- 1.28 p.m.—Stock Exchange, second call.
- 1.30 p.m.—Marching music for school children.
- 1.40 p.m.—Lewin Herrick, baritone.
- 1.45 p.m.—Studio music.
- 1.50 p.m.—The Oak Hall Instrumental Trio.
- 2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 2 p.m.—"Big Ben" and announcements.
- 2.3 p.m.—Studio music.
- 3.10 p.m.—Kitty Fosse, cabrette.
- 3.15 p.m.—A reading.
- 3.30 p.m.—Marching music for school children.
- 3.40 p.m.—From Farmer's Tea Rooms: Ethel Muller, contralto: "Morning" (Swedish).
- 3.45 p.m.—The Oak Hall Instrumental Trio.
- 3.55 p.m.—N. Rutterworth, contralto.
- 4 p.m.—"Big Ben."
- From Farmer's Tea Rooms: Angela Clancy, contralto: "Fish Lullaby" (Netherlands).
- 4.5 p.m.—The Oak Hall Instrumental Trio.
- 4.15 p.m.—Kitty Fosse, cabrette: "Oh, Don't Say That" (Waite).
- 4.20 p.m.—From Farmer's Tea Rooms: Ethel Muller, contralto: "O Flower Divine" (Woody).
- 4.25 p.m.—The Oak Hall Instrumental Trio.
- 4.35 p.m.—M. Butterworth, contralto.
- 4.40 p.m.—From Farmer's Tea Rooms: Angela Clancy, contralto: "Here is the Quiet Hills" (Curne).
- 4.45 p.m.—Stock Exchange, third call.
- 4.50 p.m.—Studio music.
- 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 5.40 p.m.—The Chimes of 2FC.
- 5.45 p.m.—"The Hello Man" talks to the children.
- 6.15 p.m.—Uncle Ben and "Jerry" entertain.
- 6.30 p.m.—Story time for the young folk.
- 6.40 p.m.—Studio music.
- 6.50 p.m.—Late evening news.
- 7 p.m.—"Big Ben."
- Dalgety's market reports (wheat, wheat and stock).
- 7.5 p.m.—Fruit and vegetable markets.
- 7.10 p.m.—Weather and shipping news.
- 7.15 p.m.—Late "Evening News" news service.

NIGHT SESSION.

- 7.30 p.m.—Programme announcements.
- 7.35 p.m.—Studio music.
- 7.45 p.m.—Bronson (Gibb and Ethel) Lang in a sketch, entitled "Relativity" (Tiberius).
- 8 p.m.—"Big Ben."
- Jack Lumsden's Songs at the Piano.
- 8.10 p.m.—Oliver King, baritone.
- 8.17 p.m.—Julia Van Der Klei, contralto: "Arlingden" (Popper).
- 8.21 p.m.—Rene Maxwell, soprano.
- 8.20 p.m.—Orchestral Relay from the Concertatorium, Sydney.
- 8 p.m.—"Big Ben." Late weather forecast.
- From the Studio: Brunton Gibb and Ethel Lang: A Musical Sketch: (a) "Candles in the Air" (Jordan), (b) "Granfather" (Rushcroft).
- 8.45 p.m.—Jack Lumsden's Songs at the piano.
- 8.18 p.m.—Julia Van Der Klei, contralto: "Sonata" (Rochermin).
- 8.30 p.m.—Oliver King, basso.
- 8.34 p.m.—Lena Maurice, baritone: "Dagrag" (Jansson).
- 8.44 p.m.—Julia Van Der Klei, contralto: "Lullaby" (Mozart).
- 8.47 p.m.—Rene Maxwell, soprano.
- 8.51 p.m.—Harry White, novelty pianist.
- 10.3 p.m.—Lena Maurice, baritone.
- 10.7 p.m.—The 2FC Studio Dance Band.
- 10.15 p.m.—Harry White, novelty pianist and Ethel Fosse, cabrette, in new numbers.
- 10.25 p.m.—The 2FC Dance Band.
- 10.35 p.m.—Harry White, novelty pianist.
- 10.40 p.m.—Ethel Fosse, cabrette.
- 10.45 p.m.—The 2FC Dance Band.
- 10.55 p.m.—Lena Maurice, baritone.
- 10.57 p.m.—Late news and announcements.
- 11 p.m.—"Big Ben."
- Lena Maurice, baritone and items by the 2FC Dance Band until 11.30 p.m.
- 11.30 p.m.—National Anthem.
- Close down.

2BL, SYDNEY.

Wednesday.

EARLY MORNING SESSION.

7.0 a.m. to 8.0 a.m.

MORNING SESSION.

- 11.0 a.m.—G.P.O. Clock and Chimes; Musical Programme from Studio.
- 11.15 a.m.—Talk on "Sport" by Miss Vester.
- Broadcasters' Replies to Sports Authority.
- Social Notes—Replies to correspondents by Mrs. Jordan. Talk on "Dental Hygiene," by a member of the Dental Board.

AFTERNOON SESSION.

- Early Information Broadcast immediately after each hour, by Courtesy of the "Sun."
- 12.0 noon.—G.P.O. Clock and Chimes; Special Ocean Forecast and Weather Report.
- 12.3 p.m.—Musical Programme from the Studio.
- 12.35 p.m.—Information: Mails, Shipping and Port Directory.
- 12.38 p.m.—Buys in Call by Wireless.
- 12.40 p.m.—Fruit Market Reports.
- 12.45 p.m.—Vegetable Market Report.
- 12.54 p.m.—London Metal Market Report.
- 12.55 p.m.—Dairy and Farm Produce Market Report.
- 12.59 p.m.—G.P.O. Clock and Chimes; Forage Market Report.
- 12.52 p.m.—Fish Market Report.
- 12.54 p.m.—Rabbit Market Report.
- 12.55 p.m.—Stock Exchange Report.
- 12.58 p.m.—News from the "Sun."
- 12.45 p.m.—London Instrumental Quartette. Direction, Carl Castling.
- 1.27 p.m.—Stock Exchange Report.
- 1.30 p.m.—G.P.O. Clock and Chimes. Talk to Children and Special Entertainment for Children in Hospital.
- 2.0 p.m.—G.P.O. Clock and Chimes; Musical Programme from the Studio.
- 2.10 p.m.—Racing Resume.
- 2.15 p.m.—News from the "Sun."

- 2.25 p.m.—Operatic Talk, "The Great Composers," by Mr. Saunders.
 2.6 p.m.—G.P.O. Clock and Chimes; Musical Programme from the Studio.
 2.16 p.m.—News from the "Sun."
 2.20 p.m.—Musical Programme from the Studio.
 2.30 p.m.—News from the "Sun."
 2.46 p.m.—Dungowan Jazz Band, broadcast from the Dungowan Cabaret.
 4.0 p.m.—G.P.O. Clock and Chimes; News from the "Sun."
 4.15 p.m.—Serial Story.
 4.30 p.m.—Dungowan Dance Band.
 4.40 p.m.—News from the "Sun."
 4.55 p.m.—Easome of Night's Programme.
 4.57 p.m.—Reading Room.
 4.58 p.m.—Special Ocean Forecast.
 4.3 p.m.—G.P.O. Clock and Chimes; Close Down.

EARLY EVENING SESSION.

- 4.45 p.m.—G.P.O. Clock and Chimes; Children's Session.
 6.38 p.m.—Musical Programme from the Studio.

SPECIAL COUNTRY SESSION.

- 7.6 p.m.—G.P.O. Clock and Chimes; Australian Memorial Land and Finance Co.'s Report; Weather Report and Forecast by Courtesy of Government Meteorologist; Producers' Distributing Society's Fruit and Vegetable Market Report; Stock Exchange Report; Grain and Fodder Reports ("Sun"); Dairy Produce Reports ("Sun"); N.R.M.A. Talk.
 7.16 p.m.—Country News from the "Sun."
 7.36 p.m.—Talk on "Tennis," by Dr. McElhenn.
 8.0 p.m.—G.P.O. Clock and Chimes; Broadcasters' Typical Chorus.
 8.2 p.m.—Organ Recital by Mr. Penn Hughes, Broadcast from the Congregational Church, Newtown.
 8.25 p.m.—Song Recital by Miss Gladys Verona (Soprano).
 8.48 p.m.—Selections by the Canterbury District Band (Bandmaster, Mr. Stan Nicholls).
 8.5 p.m.—Weather Report and Forecast by Courtesy of Mr. C. J. Mares, Government Meteorologist.
 9.4 p.m.—Broadcasters' All Sports Expert will talk on Golf, Boxing and General Sporting News.
 9.19 p.m.—Selections by the Canterbury District Band.
 9.30 p.m.—Jack Trent and May Kenneth present a Musical and Comedy Act.
 9.54 p.m.—Easome of Following Day's Programme.
 10.0 p.m.—G.P.O. Clock and Chimes.
 10.1 p.m.—Dance Music by Al Jack and His Crackerjacks, broadcast from the Ballroom of the Bondi Casino.
 11.0 p.m.—G.P.O. Clock and Chimes; National Anthem.

2GB, SYDNEY

Wednesday.

MORNING SESSION.

- 9 a.m.—Music.
 9.5 a.m.—Choir Talk.
 9.12 a.m.—Music.
 9.25 a.m.—Psychological Class.
 9.40 a.m.—Music.
 10 a.m.—Close down.

AFTERNOON SESSION.

- 2.20 p.m.—Music.
 2.52 p.m.—Music.
 4 p.m.—Address, Mrs. Crowther.
 4.22 p.m.—Music.

EVENING SESSION.

- 7 p.m.—Music.
 7.5 p.m.—Address.
 7.18 p.m.—Music.
 7.25 p.m.—Address, Mr. J. K. Powell.
 7.34 p.m.—Music.
 7.40 p.m.—Address, Mr. P. Houstons.
 7.55 p.m.—Violin duets with piano accompaniment.
 DAN SCULLY, ADA BROOK.



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 to knots and cannot be broken except by the very roughest handling—*resists safety against accident.*

There is more than strength in the P.M. Filament. It has up to 5 times greater length and up to 54 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.

MULLARD P.M. VALVES are British made. "Buy British."

For 1-volt accumulator.	
P.M.1 H.F.	0.1 amp. 12/4
P.M.1 L.F.	0.1 amp. 12/4
P.M.1 A. (Resist Cap.)	0.1 amp. 12/4
P.M.2 (Power)	0.1 amp. 12/5
For 4-volt accumulators or 3 dry cells.	
P.M.3 (General Purpose)	0.1 amp. 12/5
P.M.3 A. (Resist Cap.)	0.1 amp. 12/5
P.M.4 (Power)	0.1 amp. 12/4
For 6-volt accumulators or 4 dry cells.	
P.M.5 (General Purpose)	0.1 amp. 12/4
P.M.5 B. (Resist Cap.)	0.1 amp. 12/4
P.M.6 (Power)	0.1 amp. 12/5
Super power valves for last L.F. stage.	
P.M.254 (4 volts) 0.25 amp.	15/-
P.M.256 (6 volts) 0.25 amp.	15/-

All Mullard Valves are made at the Mullard Works, Hatfield, London, Eng.

Mullard

THE MASTER VALVE

ARKS 1
 Advertisement of THE MULLARD WIRELESS SERVICE CO. LTD., "MULLARD HOUSE," Denmark Street, London, W.C. 2, England.

Obtainable from every Radio Dealer in Australia.

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.



TWO TYPES:
 1-Way Coil Holder 15/6 each
 With 6in. Control Handle, 18/6 each
 3-Way Coil Holder 10/6 each
 With 6in. Control Handle, 11/6 each

LOTUS

VERNIER
COIL HOLDERS

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

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

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

- 8.5 p.m.—Address.
- 9.20 p.m.—Song Cycle, "A Pagoda of Flowers" (Woodford Kinlet).
- Classical Hokey Quartet.
- 9.30 p.m.—Vocal Solos.
- 9.40 p.m.—Recital by Mr. Heath Burdock.
- 10.15 p.m.—Songs by Frederick Turrell:
 1. "Goin' an Alarm" (Hendel).
 2. "How Beautiful They are" (Ruitland-Brighton).
- 10.25 p.m.—Vocal duets with piano accompaniment.
- DAN SCULLY, ADA BROOKE:
 - 2.45 p.m.—Vocal Solos, ADA BROOKE:
 1. "Sisters" (Chopin).
 2. "Waltz" (Chopin).
 - 0.43 p.m.—Songs by Miss Elsie Brown:
 1. "If you were in my garden" (Deacon).
 2. "A Summer Song" (Hartog).
 - 0.58 p.m.—Talk.
 - 10 p.m.—Close down.

2 UW, SYDNEY

Wednesday.

MORNING SESSION.

- 9 a.m.—News, shipping, mails, studio items.
- 9.30 a.m.—Women's Session.
- 9.59 a.m.—Resume of forward programme.
- 10 a.m.—Close down.
- 10.15 p.m.—Special Employees' Luncheon Session.
- 12.43 p.m.—Close down.

AFTERNOON SESSION.

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

EVENING SESSION.

- 6 p.m.—Studio items.
- 6.45 p.m.—Resume of forward programme.
- 6 p.m.—Close down.

NIGHT SESSION.

- 7 p.m.—Where to Go.
- 7.45 p.m.—Jazz interlude by Gordon James McDonald.
- 8 p.m.—Richard W. Gillespie, baritone: "Friend o' Mine."
- 8.5 p.m.—Pianoforte solo, Lionel Handley: Selected.
- 9.11 p.m.—Richard W. Gillespie, baritone:
 - (a) "A Sprig of Boronia."
 - (b) "Shipmates of Mine."
- 9.18 p.m.—Lionel Handley, Pianoforte solo:
 - (a) Selected.
 - (b) Selected.
- 9.24 p.m.—Richard W. Gillespie, baritone: "The Deathless Army."
- 9.29 p.m.—Lionel Handley, Pianoforte solo:
 - 8 p.m.—Dance items from Studio.
 - 9.25 p.m.—Resume of forward programme.
 - 9.30 p.m.—Close down.

3LO, MELBOURNE.

Wednesday.

MIDDAY SESSION.

- 12 noon.—Melbourne Observatory time signal. Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange this day. British official wireless news from Rugby. Reuter's and the Australian Press Association cables. "Argus" news service.
- 12.20 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "Sixty Seconds in Every Minute I'm in Love With You" (Davis).
- "Oh, You South" (Cesner).
- "Lo-Do-De-O" (Fain).
- 12.35 p.m.—ANITA SHAWE, soubrette: "Love is like a little bit of Heaven."
- "Blue Skies."
- 12.47 p.m.—Stock Exchange information.

- 12.49 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "Swinging Around" (Grove).
- "The Best of a Bad Job" (Carson).
- "Oh, How I Love Bulgarians" (Henderson).
- 12.56 p.m.—MILLIEA KIDDELL, contralto: "She is Far From The Land" (Tom Moore).
- "Mineral Boy" (Tom Moore).

- 12.57 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "Bassivink" (Jaffe).
- "You don't like it, not Much" (Miller).
- "Needing Time" (Alton).
- 1 p.m.—MELBOURNE OBSERVATORY: TIME SIGNAL.—Times five.
- Have up sail while breeze still last, bye and wind star to make's pressure—DO IT NOW.

- 1.1 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "If I don't know your husband, and you don't know my wife" (Gore).
- "The far away bells" (Di Capua).
- "Oh, Marie" (Gordon).

- 1.7 p.m.—Meteorological information: Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports. Rainfall for Victoria, South Australia and New South Wales.

- 1.15 p.m.—ANITA SHAWE, soubrette: "Mama's gone young and Papa's gone old." Selected.

- 1.22 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "Rocke St. Mine" (Hanson).
- "To-night you belong to me" (Rose).
- "What are we waiting for" (Cuslow).

- 1.32 p.m.—NORMAN FILL, comedian: "No, I don't like to do that."
- "Those Dreadful Novels."

- 1.43 p.m.—JOE ARONSON AND HIS SYNCOPIATING SYMPHONISTS: "The monkey doodle deo" (Grove).
- "Zig Zag"—Piano Solo (Blowin).
- 1.52 p.m.—MICHAEL DONNELLY, baritone: "He's the best word" (Kahn).
- "Wearing of the Green" (Tom Moore).
- "Irish Emigrant" (Barker).
- 2 p.m.—Close down.

- Results of the Assoc. £1000 race meeting will be given as they come by hand.

- 2 p.m.—Melbourne Observatory Time Signal. STUDIO QUARTET: "The Thistle Selection," Part I. (Myddleton).

- 3.10 p.m.—ELLA KIDDELL, contralto: "A Summer Night" (Goring Thomas).
- "Ship's that pass in the night" (Stephenson).

- 3.17 p.m.—REGINALD BRADLEY, violin: "Tambourin Chinois" (Kreutzer).
- "Ave Maria" (Schubert).

- 3.27 p.m.—PEGGY HUMBERT, soprano: "Vivande!" (Franco Leno).
- "Coolin' Day" (Falconer).

- 3.34 p.m.—STUDIO QUARTET: "The Thistle Selection," Part II. (Myddleton).

- 3.44 p.m.—TASMA TIERNAN, solo: "Dreams of Love" (Lloyd).

- 3.50 p.m.—ELLA KIDDELL, contralto: "My dear soul" (Sanderson).
- "I love you truly" (Jacobs Bond).

- 3.57 p.m.—STATION TRIO: "Wee bit of heart" (Bouch).

- 4.7 p.m.—AGNES FORTUNE, piano: "Night in May" (Falconer).
- "Narcissus" (Nerin).

- 4.15 p.m.—PEGGY HUMBERT, soprano: Selections from her repertoire.

- 4.22 p.m.—STUDIO QUARTET: "On the Down" (C. C. White).

- 4.30 p.m.—SIEVE LOCKHART: "Infant Welfare."
- 4.45 p.m.—"Herald" news service. Stock Exchange information.
- 8 p.m.—Close down.

EVENING SESSION.

- 5.36 p.m.—Acceptances for Williamstown races for Friday, November 3.
- 5.45 p.m.—Answers to letters and birthday greetings by "MARY MARY."

- 8 p.m.—STUDIO QUARTET.
"March of the Titans" (Schraeder).
"March from the Hussars" (George Whipp).
- 8.10 p.m.—MUSICAL PROGRAMME for children, arranged by MR. FRITZ JAHRE.
Some Shakespeare songs in Modern Set.
Sings:
- 1015.—TURNHILL, soprano:
"When Jinks Hang by the Wall" (Parry).
"A. Strauss Mine" (Quilter).
"Where the Bee Sucks" (Sullivan).
MURIEL CAMERON, violinist:
"Beverly de Sol" (Saint-Saëns).
"Chor d'Enfants" (Dupont).
- LDA BODDY, pianist:
"Mozart" (Mozart).
"His Name" (Edin Taylor).
"Half Holiday" (Yers Bowen).
ANDROMANIST, Miss Scott.
- 9.45 p.m.—ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE for children:
"Do not throw stones, caps, or anything else at motor cars, cycles or other vehicles."
"Road" news service. Weather reports. Shipping movements.
- 9.55 p.m.—Stock Exchange reports.
- 10 p.m.—Fish market reports from J. R. Sorrell, Ltd. Rabbit prices.
- 10.10 p.m.—River reports.
- 10.20 p.m.—Market reports. Official reports of Newmarket sheep sales by the Associated Stock and Station Agents, Bourke Street, Melbourne. Poultry, grain, hay, straw, oats, dairy produce, potatoes and onions. Fruit market reports by the Wholesale Fruit Merchants' Association. Wholesale prices.

NIGHT SESSION.

- 10.15 p.m.—Under the auspices of the Department of Agriculture, Mr. J. M. KERR, Chief Dairy Supervisor:
"Dairy Farm Buildings."
- 10.30 p.m.—MR. F. W. PEARCE:
"The National Value of Physical Culture."
- 10.40 p.m.—CAPTAIN C. H. PETERS:
"Books, wine and otherwise."
- 11 p.m.—MALVERN SYMPHONY ORCHESTRA:
"March Militaire" (Schubert).
- 11.2 p.m.—GRACE JACKSON, contralto:
"The Call of the Maritime" (Brazz).
"So Little Time" (Lohr).
- 11.4 p.m.—MALVERN SYMPHONY ORCHESTRA:
"Fradoulon" (Debussy).
- 11.55 p.m.—MR. AND MADAME GREGOR WOOD:
J. Gregor Wood, "Old Man Might Have Been" (Besley).
Madame Gregor Wood, "Slave Song" (Dol Huez).
- Duo: "BACCAROLLE" (Offenbach).
- 12.4 p.m.—MALVERN SYMPHONY ORCHESTRA:
"Song of the Volga Boatmen" (Verdi).
- 1.41 p.m.—SOUTHERN CHORAL UNION.
Conductor, GRAHAM BURGIN.
Mixed Choir:
"The Silver Swan" (Gibbons).
"Hallelujah" (Bachman).
- 1.48 p.m.—LES McDONALD, singer:
Winner of the BLO Whistling Competition in "Selections from his repertoire."
- 1.53 p.m.—MARRION LIGHTFOOT, steel guitar:
"Mama Wally"
"A Kentucky Barbecue"
- 2 p.m.—Announcements. ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE for today is for MOTORISTS: "It is better to lose a minute in avoiding a possible accident, than a month in nursing an injury."
- 2.1 p.m.—MALVERN SYMPHONY ORCHESTRA:
"Elysée Ballade" (Debussy).
- 2.15 p.m.—MR. AND MRS. GRAHAM BURGIN, duets:
"Passage Birds Farewell" (Mendelssohn).
"The Splend of the Wood" (Parker).

GUARANTEED 10 YEARS



Charge Your Own Batteries

90 Per Cent.

of Bad Reception is due to BATTERY TROUBLES.

90 Per Cent.

of Battery Troubles is due to FAULTY Charging or Neglect.

COLMOVOX, A. and B. CHARGER. CASH PRICE 25/5/-
Tube, 25/- extra.

Terms: 17/- Deposit, and 14 Weekly Payments of 9/-.

COLMOVOX A. CHARGER. CASH PRICE 24/10/-
Tube, 20/- extra.

Terms: 15/- Deposit, and 14 Weekly Payments of 7/6.

HELLISEN'S BATTERIES

The next time you want a battery, try the Hellisen. We guarantee absolute satisfaction and say that it will compare more than favorably with any other battery on the market. You do not pay more, but you get something just a little bit better.

45 Volt, tapped	13/0	Type 1000, torch battery .	1/3
40 Volt, tapped	12/6	60 Volt, tapped, large	
45 Volt, tapped, large cap.	25/-	capacity	25/-
1.5 A Battery	2/9	4.5 Volt, tapped, C. Battery, 2/	
1.5 A Battery, special	4/-	4.5 Volt, tapped, C. Battery, 2/9	
60 Volt, tapped	18/6	4.5 Tapped A Battery ...	12/-

Colville Moore Wireless Supplies Limited

10 ROWE ST., SYDNEY. (Next Hotel Australia)

Phone B 2261

MAXIMUM

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

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

STERLING

Straight Eight

8-Valve Receiver

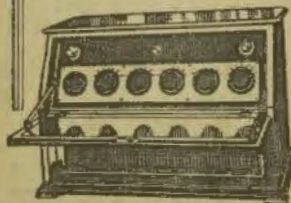
REPRESENTATIVE—

A. COLLINS

Room 12, 5th Floor

Daily Telegraph Bldgs.

SYDNEY, N.S.W.



Write for full particulars and prices of "Sterling" Radio Receivers, Loud Speakers and Components.



- 9.23 p.m.—AGNES FORTUNE, piano:
"Morning" (Greig).
"Maurica" (Goddard).
9.33 p.m.—SOUTHERN CHORAL UNION
(First Prize Female Chorus, Ballarat, 1927).
"Ten Ye Sew Cushions" (Bantock).
"The Swallow Leaves Her Nest" (Hoiat).
"Oh, Hush Ties" (Lullivan).
9.46 p.m.—"CARDIGAN"—Mr. H. A. Wolfe, sporting editor of the "Argus" and "Australasian," will speak on: "Tommarrow's races at Flemington."
9.47 p.m.—GRACE JACKSON, contralto:
"Lackaday" (Crompton).
"Little Miss Melody" (Monckton).
9.54 p.m.—MARION LIGHTFOOT, steel guitar:
"Serenade Petite."
"Hawaiian Hala."
10 p.m.—"Argus" news service. Meteorological information. British official wireless news.

Under the auspices of the Health Association of Australia, the Health Message for to-day is:

"Fresh air is one of your best friends. It is the enemy of tuberculosis and other diseases you want to escape."

Island Steamer Movement.

- 10.10 p.m.—SOUTHERN CHORAL UNION, Male Choir:
"Bushes and Bricks" (Williams).
Songs of the Northmen" (Mauder).
10.17 p.m.—MALVERN SYMPHONY ORCHESTRA:
"Prelude for Strings and Solo Violin" (Saint-Saens).

- 10.27 p.m.—LES McDONALD, siffice:
"Selected."
10.32 p.m.—MALVERN SYMPHONY ORCHESTRA:
March, "Trenhamer."
10.42 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS:
"No Wonder I'm Happy" (Akerl).
"When I Look at You" (Jones).
"Just the Same" (Densford).

- 11 p.m.—OUR GREAT THOUGHT:
"Il-gotten gains are never worth the price, and a good conscience never costs what it is worth."
11.1 p.m.—JOE ARONSON AND HIS SYNCOPATING SYMPHONISTS.

11.49 p.m.—God Save the King.
4QG, BRISBANE.

Wednesday.

EARLY MORNING SESSION.

- 8.30 a.m.—Physical culture session.
7 a.m.—Close down.

MIDDAY SESSION.

- 1 p.m.—Market reports; weather information; "The Daily Mail" and "The Daily Standard" news.
1.30 p.m.—Lunch hour music, played by Hotel Carlton Trio.
1.55 p.m.—Standard time signal.
2 p.m.—Close down.

AFTERNOON SESSION.

- 3.30 p.m.—Afternoon tea music from the lounge, played by Hotel Carlton Trio.
4.15 p.m.—"Telegraph" news.
4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 6 p.m.—"Daily Standard" news.
Announcements.
6.15 p.m.—Lecturette: Nil.
6.30 p.m.—The Children's Hour:
Stories by "Little Miss Brisbane."
7 p.m.—Special news service; market reports; stock reports.
7.30 p.m.—Weather news; announcements.
7.45 p.m.—Standard time signal.
7.45 p.m.—Lecturette arranged by the Queensland Agricultural High School and College.

NIGHT SESSION.

The first portion of to-night's programme will comprise three quarters of an hour's classical music by Mr. Archie Day and party.

5 p.m.—From the Studio:

PART I.

- Duet for Two Pianos: "Variations on an Original Theme" (Gounodville).
Mr. Archie Day and Mr. Jack Ellis.
Soprano solo:
(a) "Par Diocesi" (Lothi).
(b) "Night" (Mallinson).
Miss Beatrice Pugh.
Piano solo:
(a) "Prelude" (Debussy).
(b) "Shepherd's Hay" (Grainger).
Mr. Archie Day.

- Baritone solo:
(a) "The Sea Hath Its Pearls" (Maude V. White).
(b) "Crabbed Age and Youth" (Maude V. White).
Mr. Fred Homer.

- Duets for Two Pianos:
(a) "Romance" (Avenky).
(b) "Touhillan" (McLan-dermont).
Mr. Archie Day and Mr. Jack Ellis.
Duet, "La Cie Dorem Don Giovanni" (Mozart).

- (a) Miss Beatrice Pugh and Mr. Fred Homer.
Baritone solo:
(a) "So, We'll Go No More a'Roving" (Maude V. White).
(b) "Roadways" (Lohr).

- Mr. Fred Homer.
Piano study, "Concert Study" (York Bowen).
Mr. Jack Ellis.

- Soprano solo:
(a) "The Nightingale of Lincoln's Inn" (Oliver).
(b) "Fairy Rose" (Cotteridge Taylor).

- Miss Beatrice Pugh.
Duets for Two Pianos, "Polonaise" (Arensky).

Mr. Jack Ellis and Mr. Archie Day.

PART II.

- 8.45 p.m.—Bass solo, "Life" (Blumenthal).
By "Rab."

A Thought for To-night, "Time" (Will H. Lister).

- Monologue, "Moonrise" (Forrest).
Miss Beatrice Pugh.

Soprano solo, "Daffodils from My Garden" (Boanac).

Mrs. E. G. Allen.

Hawaiian Instrumentalists in selected numbers.

The Myrna Quartette.

Tenor solo, "An Erikslay Love Lull" (Laurer).

By "Tam."

Scotch comic, "Soaks McLean" (Lauder).

By "Jack."

Vocal duet, "The Motor Car."
By "Rab" and "Tam."

Contralto solo, "Come Cushion Your Head" (Clarke).

Miss Winnie Haslam.

Male quartette, "Viva."
The Lyric Male Quartette.

Bass solo, "The Border Ballad" (Coveen).
By "Rab."

Scotch comic, "Saturday Night" (Lauder).
By "Jack."

Hawaiian Instrumentalists in selected numbers.

The Myrna Quartette.

Soprano solo, "Roberto a tu che adoro" (Meyerbeer).

Mrs. E. G. Allen.

Male quartette, "John Peel" (Fletcher).
The Lyric Male Quartette.

Tenor solo, "When I am Dead, Darest" (Bradford).
By "Tam."

Male quartette, "Dear Little Shamrock" (Mrs. Robinson).

The Lyric Male Quartette.

Organ solo by "Tam," assisted by "Rab" and "Jack."

Hawaiian Instrumentalists in selected numbers.

The Myrna Quartette.

Group of Banjo Numbers, by Mr. M. Gould.

6WF, PERTH.

Wednesday.

- 11.30 p.m.—Tune in.
 11.35 p.m.—Markets, news, and cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 1.3 p.m.—A MALAYED CONCERT.
 Lunch-hour concert arranged by Messrs. Mangrove's Limited, raised from Lyric House Murray Street.
 1.50 p.m.—STUDIO QUINETTE;
 2 p.m.—Close down.
 2.10 p.m.—Tune in.
 2.25 p.m.—Orchestral music by Hoyt's Orchestra, relayed from Hoyt's Regent Theatre, Williams Street.
 Vocal and instrumental interludes from the Studio.
 4.25 p.m.—Close down.
 4.45 p.m.—Tune in.
 4.12 p.m.—Stories for the Tiny Tots by Aunty Jane.
 7.10 p.m.—Stocks, markets, news.
 7.45 p.m.—Talk.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 8.5 p.m.—VARIETY NIGHT.
 Musical programme, including vocal and instrumental articles.
 10 p.m.—Late news items by courtesy of "The Daily News" Newspaper Coy.
 Ships within range announcement.
 Weather report and forecast.
 10.30 p.m.—Close down.
 10.30 p.m.—100 METRE TRANSMISSION.
 Simultaneous broadcast on 100 Metres, of Musical programme given on 250 Metres, commencing at 8 p.m.

7ZL, HOBART

Wednesday.

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

- 8 p.m.—G.P.O. clock chimes.
 2.1 p.m.—Tune in selection.
 2.5 p.m.—Hobart Stock Exchange quotations.
 Weather information.
 Items of interest.
 Announcements.
 3.15 p.m.—Radio Auction Bridge, Game No. 17.
 4 p.m.—Social and Educational Calendar from "Illustrated Tasmanian Mail."
 4.15 p.m.—Story from "Mail."
 4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 7 p.m.—Children's corner, by "Uncle Benno."
 7 p.m.—"Uncle Peter" talks to the children.

NIGHT SESSION.

- 7.50 p.m.—Musical selection.
 7.55 p.m.—
 Securing Career: Talk by District Commissioner, Mr. L. R. Wagstaff, M.M., subject: "The King's Scout."
 7.55 p.m.—"Mercury" special Tasmanian news service. Railway sanction production sales.
 Weather forecasts. Hobart Stock Exchange quotations.
 8 p.m.—G.P.O. clock chimes.
 8.1 p.m.—Abitative and stock market reports through the courtesy of Roberts and Co., Hobart.
 8.4 p.m.—Musical selections by 7ZL Studio Trio, interspersed with items from the studio by the following: Miss Joan Hibbard (mezzo-soprano), Miss Kitty Cook (soprano), Mr. George Muir (tenor).
 9.40 p.m.—British official wireless news.
 9.50 p.m.—"Mercury" special interstate news service. Tasmanian district weather reports. 8 a.m. weather forecasts. Station announcements.
 National Anthem.

EVER-READY

The name to know in Radio Batteries.

The discriminating radio enthusiast has learnt to depend on Ever-Ready Radio Batteries, for in them he finds the extra power and reliability which justifies the slogan: "Ever-Ready for Service."

All radio dealers stock Ever-Ready Batteries, and will be pleased to help you in selecting the type most suited to your requirements.

The "Standard" Dry Radio Cell

Price, 3/6.



The Ever-Ready "Standard" Dry Radio 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, 2½ x 6½. Weight, 2½ lbs. Also for bells, telephones, signalling and electro-medical apparatus, &c.



"Wanda" Plug Radio Battery

This illustrates the new radio high-tension "B" Battery, which can be obtained 31½, 42 or 63 volts—fitted with a Wanda plug, and 2 screw terminals.

PRICE:

Small size, type WP, 31½ volt	9/6
Small size, type WP, 42 volt	12/6
Small size, type WP, 63 volt	18/-
Large size, type XP, 31½ volt	12/-
Large size, type XP, 42 volt	21/-
Extra large size, type Super Service, 42 volt	28/6

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

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

163 Pitt Street

SYDNEY



How to Win the Cup

The wild-eyed man whispered: "Between us we can win the Melbourne Cup! All I need is a small Burgess battery."

"Quite so!" said the manager of New System Telephones Pty., Ltd., as his hand stole nervously toward a heavy ruler. "Tell me all about it."

First, glancing around cautiously, the visitor explained:

"At the Gumflat meeting the winning horse had a small battery tacked lining him. Now I can borrow a mine called Radio and fit a Burgess battery to her. If an ordinary battery can win the Gumflat Shield, a Burgess should pick up the Melbourne Cup in a canter."

Reaching the ruler, the manager felt safer—"It wouldn't work! The Burgess is a dry cell battery, and there are too many dry cells already in the Cup!"

Angry Wild Eyes interrupted:

"But you know that a Burgess never fades away and has a Chrome finish. Well, that's the very goods for a Cup winner!"

"Besides, I tried it out when I was keeping a pub at Cootamundra. A chap asked me how to make his balky horse start. I gave him an old Burgess battery and told him to tie it on behind the horse's ears."

"Five minutes later the man with the balky horse reeled in and lay across the bar—"Fix a blanky battery behind my ears, matey. I've got to catch that horse!"

"If a Burgess battery can fly over the North Pole and hop across the Pacific, it ought—"

The door opened and a warder walked in and tapped the cup winner on the shoulder:

"Here, Sam, your radio set's sparking again. Come out and fix it!"

Thurs., Nov. 3 2FC, SYDNEY

EARLY MORNING SESSION—7 to 8 a.m.

MORNING SESSION

- 7.40 a.m.—Story from the young folk.
- 7.45 a.m.—Studio music.
- 7.50 p.m.—Late sporting news.
- 7.55 p.m.—"Big Ben," "Dulwich" market reports (wool, wheat and stocks).
- 8 p.m.—Fruit and vegetable markets.
- 8.10 p.m.—Late weather and shipping news.
- 8.15 p.m.—Late "Evening News" news service.
- 10 a.m.—"Big Ben" and announcements.
- 10.5 a.m.—Studio music.
- 10.15 a.m.—"Sydney Morning Herald" news service.
- 10.30 a.m.—Studio music.
- 10.35 a.m.—Late racing information by the 2FC Commissioner.
- 10.45 a.m.—Studio music.
- 11 a.m.—"Big Ben."
- 11.05 a.m.—Marching music for school children.
- 11.10 a.m.—A.P.A. and Bearer's Cabins.
- 11.15 a.m.—Studio music.
- 11.20 a.m.—A Talk on Home Cooking and Recipes, by Miss Ruth Furst.
- 11.30 a.m.—Close down.

MIDDAY SESSION

- 12 noon—"Big Ben" and announcements.
- 12.2 p.m.—Stock Exchange, first call.
- 12.3 p.m.—Official weather forecast, rainfall.
- 12.5 p.m.—Studio music.
- 12.10 p.m.—Summary of "Sydney Morning Herald" news service.
- 12.15 p.m.—Studio music.
- 12.20 p.m.—Marching music for school children.
- 12.25 p.m.—C. Fothergill, mezzo.
- 12.30 p.m.—The Oak Hall Instrumental Trio.
- 12.35 p.m.—Studio music.
- 1.3 p.m.—"Big Ben." Weather intelligence.
- 1.4 p.m.—"Evening News" midday news service.
- 1.45 p.m.—Producers' Distributing Company's Report.
- 1.50 p.m.—The Oak Hall Instrumental Trio.
- 1.55 p.m.—Stock Exchange, second call.
- 1.58 p.m.—Marching music for school children.
- 1.40 p.m.—C. Fothergill, mezzo.
- 1.45 p.m.—Studio music.
- 1.50 p.m.—The Oak Hall Instrumental Trio.
- 1.55 p.m.—Late sporting information by the 2FC Commissioner.
- 2 p.m.—Close down.

AFTERNOON SESSION

- 3 p.m.—"Big Ben" and announcements.
- 3.3 p.m.—From the Christ Church, St. Laurence, Sydney:
- An Organ Recital, by Mr. Christian Hellemann.
- 4.0 p.m.—From Farmer's Tea Rooms: Muriel Bosely, soprano: "The Piper of Love" (Caraw).
- 4.15 p.m.—The Oak Hall Instrumental Trio.
- NOTE: During the afternoon results of the V.R.C. Meeting at Flemington will be relayed from Melbourne.
- 4.50 p.m.—From the Christ Church, St. Laurence, Sydney: Items by the Organist, Mr. Christian Hellemann.
- 4 p.m.—From Farmer's Tea Rooms, May Craven, mezzo: "Bird songs as events" (Coates).
- 4.5 p.m.—From the Christ Church, St. Laurence, Sydney: Organ Recital by Mr. Christian Hellemann.
- 4.30 p.m.—From Farmer's Tea Rooms: Muriel Bosley, soprano: "Wall of the Way" (Sprague).
- 4.25 p.m.—From the Christ Church, St. Laurence, Sydney: Organ solos by Mr. Christian Hellemann.
- 4.10 p.m.—From Farmer's Tea Rooms, May Craven, mezzo: "Butterfly wings" (Montague Phillips).
- 4.45 p.m.—Stock Exchange, third call.
- 4.47 p.m.—Belle Simmons, mezzo.
- 4.50 p.m.—Sue Hewitt, mezzo.
- 4.53 p.m.—Belle Simmons, mezzo.
- 4.56 p.m.—Sue Hewitt, mezzo.
- 5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION

- 7.40 p.m.—The Chimes of 2FC.
- 7.45 p.m.—The "Hello Man" Talks to the Chimes.

RIGHT SESSION

- 7.35 p.m.—Programme announcements.
- 7.35 p.m.—Mr. N. H. Bowden will describe the Catacombs of Rome.
- 7.47 p.m.—Lindsay Evans, pianoforte solo.
- 7.53 p.m.—Win and Windie, English entertainers.
- 8 p.m.—"Big Ben." The Randwick Municipal Band.
- 8.20 p.m.—Alice Prowse, contralto: "Song of the Little Lark" (Coates).
- 8.21 p.m.—The Southwick Municipal Band.
- 8.31 p.m.—Alice Prowse, contralto: "Irish Folk Song" (Coates).
- 8.40 p.m.—Frazier Coe, baritone.
- 8.45 p.m.—Win and Windie, English entertainers.
- 8.53 p.m.—The Sydney Instrumental Trio: Lionel Lawson, violin, Gladstone Bell, 'cello, Lindsay Evans, piano: "First Movement—Trio in B Flat" (Schubert).
- 9 p.m.—"Big Ben."
- 9.10 p.m.—Late weather forecast.
- 9.15 p.m.—Alice Prowse, contralto: "Christina's Lament" (Bozal).
- "I know a lovely garden" (D'Harleyn).
- 9.5 p.m.—Ad. Cree, Scotch comedian: "Magreuer."
- 9.14 p.m.—The Randwick Municipal Band.
- 9.30 p.m.—Win and Windie, English entertainers.
- 9.35 p.m.—Gladstone Bell, 'cello solo.
- 9.42 p.m.—Ad. Cree, Scotch comedian: "The Lancers" (Cree).
- 9.49 p.m.—Frazier Coe, baritone.
- 9.58 p.m.—Lionel Lawson, violin solo.
- 10.3 p.m.—Frazier Coe, baritone.
- 10.10 p.m.—The Sydney Instrumental Trio: Lionel Lawson, violin, Gladstone Bell, 'cello, Lindsay Evans, piano: "Andante" (Reisiger), "Scherzo" (Balfé).
- 10.20 p.m.—Ad. Cree, Scotch comedian: "I'm a hundred years old" (West), (by request).
- 10.24 p.m.—Gladstone Bell, 'cello solo.
- 10.30 p.m.—The 2FC Dance Band.
- 10.27 p.m.—Late news and sport.
- 11 p.m.—"Big Ben." The 2FC Band: National Anthem.
- 11.30 p.m.—Close down.

2BL, SYDNEY.

Thursday.

EARLY MORNING SESSION

7 a.m. to 8 a.m.

MORNING SESSION

- 10.30 a.m.—Musical programme from the studio.
- 10.40 a.m.—News from the "Daily Telegraph" pictorial.
- 10.50 a.m.—Musical programme from the studio.
- 11 a.m.—G.P.O. Clock and chimes. Announcements.
- 11.5 a.m.—Musical programme from the studio.
- 11.15 a.m.—Social Notes—Replies to correspondence by Mrs. Jordan. Talk on "Architecture" by Mr. Hogan.
- 12 noon—G.P.O. Clock and chimes. Special Ocean Forecast and weather report.
- 12.3 p.m.—Musical programme from the studio.
- 12.15 p.m.—Information, mail, shipping and port directory.
- 12.15 p.m.—Boats in call by wireless.

- 12.30 p.m.—Fruit Market report.
- 12.35 p.m.—Vegetable Market report.
- 12.40 p.m.—London Metal Market report.
- 12.55 p.m.—Dairy and Farm Produce Market report.
- 12.59 p.m.—G.P.O. Clock and chiming. Storage Market report.
- 12.52 p.m.—Fish Market report.
- 12.54 p.m.—Rabbit Market report.
- 12.56 p.m.—Stock Exchange report.
- 12.58 p.m.—News from the "Sun."
- 12.55 p.m.—Hilliers Instrumental Quartet—direction—Lauri Castling.
- 1.27 p.m.—Stock Exchange report.
- 1.30 p.m.—G.P.O. Clock and chiming. Talk to children and special entertainment for Children in Hospital.
- 2 p.m.—G.P.O. Clock and chiming. Close down.

AFTERNOON SESSION.

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

EARLY EVENING SESSION.

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

SPECIAL COURAGE SESSION.

- 7 p.m.—G.P.O. Clock and chiming. Australian Mercantile Land and Finance Co.'s report.
- Weather report and forecast by courtesy of Government Meteorological Society's Fruit and Vegetable Market report.
- Stock Exchange reports.
- Grain and Fodder reports ("Sun.")
- Dairy Produce report ("Sun.")
- Weekly Traffic Bulletin.
- Talk about books.
- 7.15 p.m.—Country news from the "Sun."
- 7.20 p.m.—Helpful Hints to Litchburn by Mr. Harrow.
- 7.30 p.m.—Talk "Safety of Travel on Highways," by Mr. Marham, R.E.
- 7.45 p.m.—Talk on "The Care of the Eyes" by Mr. Patterson.
- 8 p.m.—G.P.O. Clock and chiming. Broadcasting Terminal Club.
- An hour's programme presented by Howe Reception Ltd.
- 8.5 p.m.—Dance music by the Salomea Dance Orchestra.
- 8.55 p.m.—Mr. Phil Mountain (light comedian).
- 9.11 p.m.—The Salomea Dance Orchestra.
- 9.27 p.m.—Miss Ivy Davis (soubrette).
- 9.34 p.m.—The Salomea Dance Orchestra.
- 9.44 p.m.—Humorousities by Mr. Courtney Ford.
- 9.51 p.m.—The Salomea Dance Orchestra.
- 9.51 p.m.—Weather report and forecast by courtesy of Mr. C. J. Marx, Govt. Meteorologist.
- 9.52 p.m.—Selections by the Marrickville Salvation Army Band (bandmaster, Mr. N. H. Knight).
- 9.52 p.m.—Children's stories by Mr. Compton Courts (comedian).
- 9.50 p.m.—Mr. Phil Mountain (light-comedian).
- 9.54 p.m.—Further selections by the Marrickville Salvation Army Band.
- 9.54 p.m.—A comedy and vocal act presented by Ivy Davis and Courtney Ford.
- 10.5 p.m.—Mr. Phil Mountain.
- 10.15 p.m.—Dance music by Al Hammett and his Band transmitted from the ballroom of the Ambassadors.
- 11 midnight.—G.P.O. Clock and chiming. National Anthem.



HEAR ALL STATIONS
distinctly & clearly—
 with a **Brown**
LOUD SPEAKER
 OR
HEADPHONES

ALL Brown Loud Speakers and Headphones are British made throughout. . . labour, material and capital. Every detail of their manufacture is subjected to the most rigorous scrutiny and all instruments not reaching the Brown predetermined standard of quality are ruthlessly discarded.

Every Brown Loud Speaker and Headphone is covered by a generous guarantee, and should any defect develop within the period indicated on the guarantee label, due to faults, material or workmanship, the fault will be rectified entirely without charge.

The prices for Brown Speakers and Headphones are keenly competitive despite the high standard of quality . . . and what is of still greater interest . . . prices in every instance have been lately reduced:—

112 Model	£2/18/6	113 Model	£4/3/6
111 Model	£4/15/-	Cabinet Model	£5/10/-
114 Model	£7/18/-	Q Model	£11/7/-
Crystalox	£7/15/-	A2 Type Headphones	£1/10/-
P. Type Headphones	£1/7/6	Duo Type	£16/18/-
114 Model	£27/7/-		



Every Brown Speaker measures up to Brown Standard of Excellence

Obtainable at All Radio Dealers and Electrical Houses

NOYES BROS.
 (SYDNEY) LTD.
 115 Clarence St. Sydney
 and Melbourne, Brisbane
 and Newcastle

Write For Pamphlet "W"



3LO, MELBOURNE

Thursday.

MIDDAY SESSION.

- 12 noon.—Melbourne Observatory time signal.
Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange this day. Reuters and The Australian Press Association cables. British official wireless news from Rugby. "Argus" news service.
- 12.15 p.m.—COMMUNITY SINGING, from the studio, conducted by Mr. G. J. MACKAY, assisted by the STUDIO QUARTETTE.
ELLA RIDDELL, Contralto:
"The Last Chord" (Sullivan).
"The Prairie of God" (Bethoven).
MOLLY MACKA:
"Steal Away" (negro spiritual).
"Charlie is My Darling."
- 1 p.m.—Melbourne Observatory time signal.
- 1.1 p.m.—Description of November Hurdle, 3 miles, V.R.C., Flemington, by "Newbury," of "The Argus."
- 1.6 p.m.—Meteorological information. Weather forecast for Victoria, Tasmania, South Australia and New South Wales. Ocean forecast. River reports. Rainfall for Victoria, South Australia, Tasmania, and New South Wales. Stock Exchange information.
- 1.15 p.m.—COMMUNITY SINGING from the STUDIO (continued).
- 1.45 p.m.—Description of Byron Moore Stakes, V.R.C., Flemington, by "Newbury," of "The Argus."
- 1.45 p.m.—COMMUNITY SINGING (continued).
- 2 p.m.—Close down.
- 2.45 p.m.—Description of Linniburg Stakes, 1 mile, V.R.C., Flemington, by "Newbury," of "The Argus."
- 2.45 p.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—Melbourne Observatory time signal.
- 2 p.m.—Rev. KENNETH HENDLESON:
"Topics of the Week."
- 2.15 p.m.—Dr. FLOYD will chat with students of music.
- 3.30 p.m.—Description of Carnival Handicap, 1½ miles, V.R.C., Flemington, by "Newbury," of "The Argus."
- 3.35 p.m.—Miss G. FLOES GREIG, B.A., LL.B.
"Bound the New Hebrides."
- 3.55 p.m.—STUDIO QUARTETTE:
Galop, "Tally Ho" (Bernstein).
Festiva, "With Whip and Spur" (Hensman).
- 4 p.m.—LADIES' DAY—Description of the frocking on the lawns at Flemington by Dorothy Dunchley.
- 4.7 p.m.—MICHAEL CONNOLLY, baritone:
"Son of Mine" (Willmar Wallace).
"Of in the Silly Night" (Tom Moore).
- 4.14 p.m.—DOROTHY ROXBURGH, Viola:
"Song without Words" (Hansen).
- 4.25 p.m.—Description of Oaks Stakes, 1½ miles, V.R.C., Flemington, by "Newbury," of "The Argus."
- 4.55 p.m.—ANITA SHAW, soubrette:
"Croon a Lullaby."
"Tea for Two."
- 4.50 p.m.—"Herald" news service. Stock Exchange information.
- 4.45 p.m.—EVENSING, transmitted from ST. PAUL'S CATHEDRAL.
- 5.30 p.m.—Result of Veteran Stakes, 1½ miles, V.R.C., Flemington, by "Newbury," of "The Argus."

EVENING SESSION.

- 8.35 p.m.—Answers to Letters and Birthday Greetings by "MARY GUMLEAF."
- 8.5 p.m.—MISS STEPHANIE LEAF:
"Flowers in Fairyland."
- 8.20 p.m.—ELSIE BRADSHAW:
"Songs at the Picnic."
- 8.25 p.m.—"MARY GUMLEAF":
Focine, "The Baby's Garden."
"Boys."
Story for Littlest Ones:
"Terry's New Pantaloon."
Story for Boys and Girls:
"Hiawatha."

- 8.40 p.m.—"Herald" news service. Weather reports. Shipping movements.
- 8.47 p.m.—Stock Exchange reports.
- 8.55 p.m.—Fruit market reports, by J. M. Borrett, Ltd. Rabbit prices.
- 8.58 p.m.—RIVER reports.
- 8.58 p.m.—Market reports. Official reports of Newmarket sheep sales, by the Associated Stock and Station Agents, Bourke-street, Melbourne.
- Poultry, grain, hay, straw, jute, dairy produce, potatoes and onions.
- 7.8 p.m.—Market reports of fruit, by the Victorian Fraterers' Association. Retail prices. Fruit market reports, wholesale prices by the Wholesale Fruit Merchants' Association. Ballarat pig market report by the Ballarat Stock and Station Agents.

NIGHT SESSION.

- 1.15 p.m.—Under the auspices of the HEALTH ASSOCIATION OF AUSTRALASIA, MR. F. A. GAUNSON will speak on:
"Oral Hygiene."
- 7.30 p.m.—The following Champion Cyclists will speak a few words—
HARRY MOODY, Champion Cyclist of N.S.W.
BOASE STANFORD, Cycling Champion of Tasmania.
CHARLIE WATSON, Cycling Champion of N.Z.
- PERT WHITE, Cycling Champion of S.A.
"The Interstate Dunlop Grand Prix."
- 7.45 p.m.—A Surprise Talk from the Trovit Theatre.
- 8 p.m.—MR. ROD MCGREGOR:
"Cricket."
- 8.15 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"My Blue Bird" (Wright).
"Sing me a Baby Song" (Kahn).
"Don't Sing Alike to Me" (Moret).
- 8.25 p.m.—ANITA SHAW, soubrette:
"From One Till Two."
- 8.29 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Back Bottom's Got 'Em" (Janes).
"It All Depends on You" (De Sylva).
"Just an Ivy Covered Shack" (Kupp).
- 8.39 p.m.—ELLA RIDDELL, contralto:
"Hail, Caledonia" (Stroud).
- 8.45 p.m.—JOE ARONSON:
Selected.
- 8.54 p.m.—EILEEN STARR, soprano:
"Saper Vorreste" (Verdi).
- 8.57 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Paradise in Mother's Eyes" (Shepard).
"For the Term of His Natural Life" (Hayes).
"Deed I Do" (Hirsch).
- 9.1 p.m.—NORMAN HILL, Humourist:
"To Cheer Him Up."
- 9.11 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"She's Got It" (Walker).
"Love is Just a Bit of Heaven" (Davis).
"A Song of Old Coast" (Walker).
- 9.21 p.m.—A few minutes' Chat on the National War Memorial.
- 9.25 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"For My Sweetheart" (Brown).
"Cock-a-Doodie, I'm Off My Nooodle" (Johnson).
"Slow River" (Schwab).
- 9.35 p.m.—ANITA SHAW, soubrette:
"The Doll Dance."
- 9.49 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Ukulele Dream Girl" (Low).
"I'm Telling the Birds" (Brown).
"Kentucky Lullaby" (Miller).
- 9.49 p.m.—ELLA RIDDELL, Contralto:
"I Will Await Thee" (Conningsby Clark).
- 9.53 p.m.—JOE ARONSON AND HIS SYM-COPATING SYMPHONISTS:
"Go, wash an Elephant if you Wanna do something big (Turkey).
"He's the Last Word" (Kahn).
"The Song of the Wanderer" (Moret).
- 10.3 p.m.—"Argus" news service. Meteorological information. Sporting notes by "Olympus." Island shipping information.
Under the auspices of the Health Association of Australasia the HEALTH MESSAGE for to-day is—



Your dealer stocks every type of Yale "A," "B" and "C" Battery. He will recommend the correct one for your set.

Your radio set may be likened to the human body. The battery equipment is its heart and its life blood, the current which the battery delivers. And no more than on anything else, the efficiency of your set depends on its heart.

Yale Batteries deliver an absolutely steady, smooth current. They actually re-charge during periods of rest, and so they are more durable, more efficient, and they cost less per radio hour.

If you have any difficulty in obtaining YALE Batteries, write to

Atkins Maclean, Ltd.
Equitable Building
350 George Street, Sydney

"There's a Yale Battery for every battery need."



- "Save the milk and spoil the muscle!"
THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S WEEKLY MESSAGE FOR TODAY IS: ON MOTORS!
 "How to avoid accidents in the fields to the motorist." Safety, rules and road conditions etc. etc. by Mr. J. C. Armstrong, for R. T. C. (Melbourne). Saturday, 28th inst.
- 10.15 p.m.—**JOE ARONSON AND HIS SYMPHONISTS:**
 "The Whole World is Laughing at Me" (Griegsen).
 "Mina" (Hanley).
 "Ride by Me" (Wood).
 10.22 p.m.—**KILLEN STARR soprano:**
 "Impatience" (Berry).
 10.23 p.m.—**JOE ARONSON AND HIS SYMPHONISTS:**
 "Heaven Heals a Sailor on a Night Like This" (Delius).
 "Spring Fever"—Piano Solo.
 "In a Japanese Garden" (Nanabush).
 10.27 p.m.—**MORNAV PILL, Humourist:**
 "I Put on My Coat and Went Home".
 10.28 p.m.—**JOE ARONSON AND HIS SYMPHONISTS:**
 "When do we Dream?" (Gershwin).
 "Sweet and Low Down" (Gershwin).
 "Mr. Mac Neighbour" (Coffin).
 10.34 p.m.—**ELLA RIDDELL, soprano:**
 "Lark, Lark, Sing" (JOE Scott).
 11 p.m.—**OUR GREAT THOUGHT:**
 "The best Doctors in the world are Doctor Diet, Doctor Quiet, and Doctor Merryman"—Swift.
- 11.1 p.m.—**JOE ARONSON AND HIS SYMPHONISTS:**
 "Her Have Went, Her Have Gone, Her Have Left I All Alone" (Smith).
 "Dare of Horses and Flowers" (Tobias).
 "There's a Trick in Pickin' a Chick, Chick, Chickin'" (Tobias).
 "Children's Patrol" (Berry).
 "I Always Knew I'd Find You" (Moros).
 "Ain't that a Grand and Glorious Feeling" (Tinker).
 "Baby Mine" (Rupp).
 "Where do you Watch, John" (Marke).
 "Forgive Me" (Yellow).
 "Furry Tune"—Piano Solo (Zimmer).
 "In My Gondola" (Warren).
 11.46 p.m.—**GOD SAVE THE KING.**



made to run the full race!



Any sprinter can start well, but it takes a stayer to win in a long run.

It's the same with batteries. The power to stick is the thing to look for—never-failing power over a long period of service. Millions buy Burgess

Chrome batteries for this reason. They keep going long after others flag and fail.

Chrome

Chrome—the great preservative used in finest leather, metals and paints, is also used and patented in Burgess batteries. It gives them unusual staying power.

BURGESS *Radio* BATTERIES

Sold by all high-class dealers.

NEW SYSTEM TELEPHONES
PTY. LTD.,

25 Queen's Bridge Street, Melbourne
280 Castlereagh Street, Sydney
Charles Street, Adelaide

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

4QG, BRISBANE

Thursday

MIDDAY SESSION.

- 1 p.m.—Market reports, weather information, "The Daily Mail" and "The Daily Standard" news.
 1.25 p.m.—A lunch hour address.
 1.45 p.m.—Standard time signal.
 2 p.m.—Close down.

AFTERNOON SESSION.

- 2.30 p.m.—A programme of music from the Studio.
 4 p.m.—A Cookery Talk, by "Betty Sharpson".
 4.15 p.m.—"The Telegraph" news.
 4.30 p.m.—Close down.

EARLY EVENING SESSION.

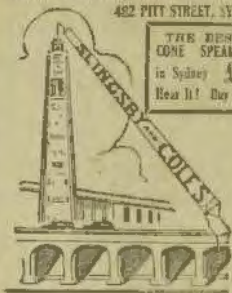
- 5 p.m.—"Daily Standard" news; announcements.
 6.30 p.m.—The Children's Session: Stories by "The Sandman".
 7 p.m.—Market reports; stock reports.
 7.30 p.m.—Weather news; announcements; "Daily Standard" news.
 7.45 p.m.—Standard time signal.
 7.45 p.m.—Lecturer: "Talk on Sheep and Wool," by Mr. J. Carey (Assistant Instructor in Sheep and Wool).

NIGHT SESSION.

The first portion of to-night's programme will comprise a Concert, relayed from Owen and Gove's "White House," Woolloomooloo.

SLINGSBY & COLES Ltd.

482 PITT STREET, SYDNEY



THE BEST COME SPEAKER in Sydney £2 Read It! Buy It!

Under Central Station. Easy Terms Arranged.

- Nickel-plated 15in. Box with mth. Price 8d. pair
 - D.P.D.T. Porcelain Switches 0/2 each
 - D.P.D.T. Marco Switches 2/6
 - S.P.D.T. Porcelain Switches 1/6
 - Marco Jack. (Female) 1/3
 - Marco Jack. (Double) 1/3
 - Marco Jack (Single) 1/6
 - Black Knobs, with pointers, 2d.
 - Solby Loud Crystals 6d.
 - Esselte Crystals 0/4
 - Crystal Caps 1d.
 - Slider Rods and Contact 3d.
 - Slider Rods and Contact (big) 6d.
 - Bin. Screws and Resistor Dials, 6d. ea.
- Speakers and Headphones Repaired and Rewound.

Ask for **Wetless Fixed Condensers**

They are built up to a high standard. Only the Best Mica is used as dielectric. They are guaranteed capacities, and will last for years.



HERE ARE THE PRICES:

A TYPE.	B TYPE.	
.0001	.00025	} 2/-
.00015	.0003	
.0002	.0004	
.00025	.0005	
.0003	.001	
.0004	.00125	
.0005	.0015	
.001	.002	
.0015	.0025	
.002	.003	
.0025	.0035	} 2/6
.003	.004	
.004	.005	
.005	.006	
.006	.0075	
.0075	.009	
.009	.011	
.011	.0125	
.0125	.015	
.015	.0175	

Obtainable from all Dealers.

MANUFACTURED BY **J. WETLESS, ROCKDALE**
28 KING ST., ROCKDALE
Phone: LW 1155.

- 8 p.m.—From "White House":
Gavetta, "Old Mother Hubbard" (Wheeler),
The Bohemians.
Tenor solo, "The Beauty for You" (Hall).
Mr. G. Williamson.
Duet, "Flies Gently Down" (Parry).
Messrs. Glynn and Cornwell.
Soprano solo, "Black-Ides-Day" (Drummond).
Miss Ruby Wetless.
Trio, "The Bluebeard, Tell Me."
Messrs. Williamson, Glynn and Gowin.
Recitation, "The Calman's Story" (Lubback).
Mr. T. Muller.
Quartet, "The Cornfield Melody" (Old Planation).
The Bohemians.
Tenor solo, "There's a Land."
Mr. D. McFarquhar.
Contralto solo, "The Poet's Song" (Egert).
Miss Peggy Vassar.
Duet, "Your Girl and My Girl."
Messrs. Bruce and Harper.
Baritone solo, "Marie, My Girl."
Mr. H. Wilton.
Quartet, "Faintest Fancies."
The Bohemians.

- STUDIO CONCERT.
- 9 p.m.—From the Studio:
Metropolitan Weather Forecast.
Quartette, "Queen of the Nile" (Alster).
The Studio Instrumental Quartette.
(Conductor, Mr. Fred C. Wood.)
Tenor solo, "That Old-fashioned Mother of Mine" (Nicholls).
Mr. S. P. Bacon.
A Thought for To-night: "The God in a Man."
Will H. Lister.
Contralto solo, "Songs of Picardy" (Wood).
Miss Dorothy Brown.
Waltzes:
(a) "Shalvah" (Nicholls).
(b) "Vision d'Amour" (Joyce).
The Studio Instrumental Quartette.
Tenor solo, "Basins of Ictomau" (Kettelby).
Mr. C. T. Birkbeck.
Champion solo, Selected.
Mr. J. Searle.
Contralto solo, "My Ships" (Barrett).
Miss Dorothy Brown.
Pianoforte solos:
(a) "Nocturne D Major" (Chopin).
(b) "Nuptial G Minor" (Baindon).
Miss Rae Phillips.
Tenor solo, "Little Brown Cottage" (Dickson).
Mr. S. P. Bacon.
Orchestral, "Ripple" (Hilbeck).
The Studio Instrumental Quartette.
Tenor solo, "The Sea Road" (Wood).
Mr. C. T. Birkbeck.
March, "The Ultimatum" (Allen).
The Studio Instrumental Quartette.
From the Studio:
10 p.m.—"The Daily Mail" news.
Weather news.
Close down.

7ZL, HOBART

- Thursday.
- MORNING SESSION.
- 11 a.m. to 12 noon.
- AFTERNOON SESSION.
- 2 p.m.—G.P.O. clock chimes.
- 2.1 p.m.—Time in selection.
- 2.3 p.m.—Hobart Stock Exchange quotations.
Weather information. Items of interest.
Announcements.
- 2.15 p.m.—Musical selections by 7ZL Studio Trio.
- 4.10 p.m.—Chat by Child Welfare Nurse.
- 4.30 p.m.—Close down.
- EARLY EVENING SESSION.
- 6.30 p.m.—Children's corner by "Uccio Heckler".
- 7 p.m.—"Uncle Peter's" half hour.

- NIGHT SESSION.
- 7.30 p.m.—Musical selection.
- 7.55 p.m.—The Photographic Curator: "Development" by Mr. C. H. Sims, manager, Kodak, Ltd., Hobart.
- 7.55 p.m.—"Mercury" special Tasmanian news service. Half-hour special produce sales.
Weather forecasts. Hobart Stock Exchange quotations.
- 8 p.m.—G.P.O. clock chimes.
- 8.1 p.m.—Band selections by Jones' L.I. Band (conductor, Mr. Chas. Goddard).
- 9.40 p.m.—British official wireless news.
- 9.50 p.m.—"Mercury" special interstate news service. Tasmanian district weather reports. 9 a.m. weather forecasts. Station announcements.
National Anthem.

**Friday, Nov. 4
2FC, SYDNEY.**

- EARLY MORNING SESSION—7 to 8 a.m.
- MORNING SESSION.
- 10 a.m.—"Big Ben" and programme announcements.
- 10.5 a.m.—Studio music.
- 10.15 a.m.—"Sydney Morning Herald" news service.
- 10.30 a.m.—Studio music.
- 10.35 a.m.—A reading.
- 10.45 a.m.—Studio music.
- 11 a.m.—"Big Ben."
- Marching music for school children.
- 11.1 a.m.—A.P.A. and Resters' Cable Service.
- 11.15 a.m.—Studio music.
- 11.25 a.m.—A talk on Home Cooking and Recipes, by Miss Ruth Farris.
- 11.30 a.m.—Close down.
- MIDDAY SESSION.
- 12 noon—"Big Ben" and announcements.
- 12.15 p.m.—Stock Exchange, first call.
- 12.3 p.m.—Official weather forecast, rainfall.
- 12.5 p.m.—Studio music.
- 12.10 p.m.—Summary of "Sydney Morning Herald" news service.
- Rugby wireless news.
- 12.25 p.m.—Studio music.
- 12.30 p.m.—Marching music for school children.
- 12.40 p.m.—Genevieve Eppel, soprano.
- 12.45 p.m.—The Oak Hall Instrumental Trio.
- 12.55 p.m.—Studio music.
- 12.55 p.m.—Studio music.
- 1.1 p.m.—"Big Ben." Weather intelligence.
- 1.1 p.m.—"Evening News" midday news service.
Producers' Distributing Society's Report.
- 1.20 p.m.—The Oak Hall Instrumental Trio.
- 1.25 p.m.—Stock Exchange, second call.
- 1.30 p.m.—Marching music for school children.
- 1.40 p.m.—Genevieve Eppel, soprano.
"The Swallows" (Frederick Cowen).
1.45 p.m.—Studio music.
- 1.50 p.m.—The Oak Hall Instrumental Trio.
- 2 p.m.—"Big Ben." Close down.
- AFTERNOON SESSION.
- 2 p.m.—"Big Ben" and programme announcements.
- 2.3 p.m.—A Pianoforte Recital by the pupils of Mr. Rex De Cairns Rego.
- 2.15 p.m.—Margaret Hunt, soprano.
"The Swallows" (Cowen).
- 2.30 p.m.—Pianoforte solos by pupils of Mr. Rex De Cairns Rego.
- 3.30 p.m.—Marching music for school children.
- 3.40 p.m.—From Farmer's Tea Rooms:
Florence Grant, soprano.
3.45 p.m.—The Oak Hall Instrumental Trio.
(Leader, Mr. Horace Kaata).
3.50 p.m.—Pianoforte solos by pupils of Mr. Rex De Cairns Rego.
- 4 p.m.—"Big Ben."
- Frank Robinson, baritone.
"Friend" (Novella Davies).
- 4.5 p.m.—The Oak Hall Instrumental Trio.

- 1.15 p.m.—Angela Clancy, contralto:
"Whatever is—Is best" (Lohé).
1.15 p.m.—Margaret Hunt, soprano:
"What's in the Air Today?" (Edna).
1.15 p.m.—From Farmer's Tea Rooms:
Florence Grant, soprano.
1.25 p.m.—The Oak Hall Instrumental Trio.
1.25 p.m.—Studio quartet.
1.30 p.m.—From Farmer's Tea Rooms:
Frank Boulton, baritone:
"Bonnie Woods" (Lully).
1.45 p.m.—Stock Exchange, third call.
1.47 p.m.—Angela Clancy, contralto:
"Softly awakes My Heart" (Saint-Saens).
1.50 p.m.—Studio music.
2 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 8.40 p.m.—The Chorus of JFC.
8.45 p.m.—The "Radio Man" talks to the children.
8.50 p.m.—Story time for the young folk.
8.45 p.m.—Studio music.
8.40 p.m.—Late sporting news.
9 p.m.—"Big Ben."
Daigery's market reports (wheat, wheat and meal).
9.5 p.m.—Fruit and vegetable markets.
9.10 p.m.—Weather and shipping news.
9.15 p.m.—"Evening News" late news service.

NIGHT SESSION.

- 9.30 p.m.—Programme announcements.
9.35 p.m.—Captain Adams: A talk on Outstanding Women in History:
"Joan of Arc."
9.47 p.m.—Scott Alexander, Radio Sketch.
9.50 p.m.—"Big Ben."
"The Two Vagabonds," instrumental numbers.
9.10 p.m.—Virginia Bassett, contralto.
9.14 p.m.—Scott Alexander, in a sketch specially written for broadcasting by Codrington Hall.
9.24 p.m.—A talk on Sport.
9.24 p.m.—"The Two Vagabonds," instrumental numbers.
9.40 p.m.—Scott Alexander, in a One-Act Play.
9.35 p.m.—Harrison White, banjo solo.
9.34 p.m.—Virginia Bassett, contralto.
Approx. 9 p.m.—Late weather forecast.
9.4 p.m.—Harrison White, banjo solo.
9.4 p.m.—Virginia Bassett, contralto.
9.15 p.m.—From Her Majesty's Theatre, Sydney (by arrangement with J. C. Williamson Ltd.): The Second Act of the new Musical Comedy, broadcast for the first time:
"CASTLES IN THE AIR."

Act Two.

- Produced by Frederick J. Blackman.
Scene—Act Two: "Court-yard of a Latvian Castle."
Musical numbers from Act 2 of "Castles in the Air":
Opening: The Chorus.
Latvian Dance, Leo Swanlyn, Chorus and Ballet.
Song: "Baby," Gus Binnet and Chorus.
Duet: "My Latvian," Roy Russell and full Chorus.
Duet: "Land of Romance," Rowena Ronald, Duet: "What a Wonderful Day," Rowena Ronald and Roy Russell.
The Latvian Chorus, Full Chorus.
Dance, Flossie Allen.
Finale, Principals and Ensemble.
10.20 p.m.—From the Studio:
Leo Maurice, baritone.
10.24 p.m.—Harrison White, banjo solo.
10.30 p.m.—Leo Maurice, baritone.
10.35 p.m.—Harrison White, banjo solo.
10.42 p.m.—The JFC Dance Band.
10.54 p.m.—Leo Maurice, baritone.
10.57 p.m.—Late news and announcements.
11 p.m.—"Big Ben."
The JFC Dance Band, intertempored with vocal items, by Leo Maurice, baritone.

- 11.30 p.m.—National Anthem.
Close down.

Distant Stations Made Clear!

Two things are necessary for long distance reception—a good receiver and the finest battery.

If your set is good for distance a Philco will back it to the farthest limit.

A Philco gives just that extra power—without ripple or noise—that doubles the volume of selective sets and brings in distant stations loud and clear.



Crystal-clear indicators show the exact position of discharge in a Philco "B" Battery.

Given an average usage of two hours per night, a recharge every three or four months keeps a Philco always fresh as new.

See the super-powerful 83X Philco at the nearest high-class dealer's.

New System Telephones Pty. Ltd.

280 CASTLEREAGH STREET " " SYDNEY
Melbourne Adelaide



3LO, MELBOURNE

Friday

MIDDAY SESSION.

- 12.3 noon.—Melbourne Observatory Time Signal; Metal Prices received by the Australian Mines and Metals' Association from the London Stock Exchange this day; British Official Wireless News from Rugby; Reuters' and the Australian Press Association Cables; "Argus" News Service.
- 12.30 p.m.—HOYTS GARDINER REGENT ORCHESTRA:
Selection, "Waltz Dream" (Strauss).
"To a Miniature" (May Brahe).
"The Hills of Donegal" (Wilfred Sanderson).
- 12.40 p.m.—Stock Exchange Information.
- 12.45 p.m.—HOYTS GARDINER REGENT ORCHESTRA:
"Rhapsody" (Wieniawski).
12.48 p.m.—ALICE MADIGAN, Piano Recital:
"Highland Memories."
1. "By the Burns" (Hannah McCanna).
2. "On the Loch."
3. "Harvest Dance."
- 1.0 p.m.—MELBOURNE OBSERVATORY TIME SIGNAL.
Our time are in His hands who saith, "A whole I planned. Youth abhors but half; trust God; see all, nor be afraid."
- 1.1 p.m.—HOYTS GARDINER REGENT ORCHESTRA:
Selection, "Tosca" (Puccini).
- 1.15 p.m.—Meteorological Information; Weather Synopsis for Victoria, South Australia, Tasmania, and New South Wales; Ocean Forecast; Road Reports for Victoria, Tasmania, South Australia, and New South Wales.
- 1.23 p.m.—GRACE JACKSON, Contralto:
"Jack a Weary! Fur You."
"I Love You Truly" (Roud).
- 1.30 p.m.—HOYTS GARDINER REGENT ORCHESTRA:
"Songs of Italy" (Lohr).
- 1.35 p.m.—MICHAEL CONNOLLY, Baritone:
"Father O'Flynn" (C. V. Stanford).
Selected.
- 1.40 p.m.—HOYTS GARDINER REGENT ORCHESTRA:
"Quartette from Nicolette" (Verdi).
1.53 p.m.—GRACE JACKSON, Contralto:
"Christina's Lament" (Dvorak).
"My Land" (Stewart Rudin).
- 2.0 p.m.—Description of Trial Hurdle, two miles, WILLIAMSTOWN RACES, by "Newbury," of the "Argus."
- 2.5 p.m.—Close Down.
- 2.40 p.m.—Description of Three-year-old Handicap, one mile, WILLIAMSTOWN RACES, by "Newbury," of the "Argus."
- 2.45 p.m.—Close Down.

AFTERNOON SESSION.

- 3.0 p.m.—Melbourne Observatory Time Signal; STUDIO ORCHESTRA:
A Musical Cocktail: "Two in a Bar"—Tempo De Jazz (Copping).
Selections from "The Lily of Killarney," one and a quarter miles, WILLIAMSTOWN RACES, by "Newbury," of the "Argus."
- 3.50 p.m.—MISS FRANCES FRASER:
"Robert Brundage's Fight."
- 3.55 p.m.—REMYALD BRADLEY, Violin, and AGNES FORTUNE, Piano:
"The Raccource" (E. P. Caull).
- 4.0 p.m.—ANITA SHAW, Soprante:
"You Don't Like It—Not Much."
"Second Hand Rose."
- 4.07 p.m.—BERTHA JORGENSEN, Violin:
"Air From the Golsmark Concerto."
- 4.51 p.m.—MICHAEL CONNOLLY, Baritone:
"Loving Smile of Sister Kind" (Gounod).
"O Star of Eve" (Wagner).
- 4.6 p.m.—Description of Teitanina Handicap, five furlongs, WILLIAMSTOWN RACES, by "Newbury," of the "Argus."
- 4.5 p.m.—STUDIO QUARTETTE:
Suite Oriental, "Turkey in the Straw," from "India" (Potpourri).
- 4.15 p.m.—MICHAEL CONNOLLY, Baritone:
"Thou'rt Passing Hence" (Arthur Sullivan).
"For You All" (Giesli).

Manufacturers
Products Pty. Ltd.

IMPORTED SETS

Agents for all Styles of Radio
Products, including Clyde Batteries

ARMAX BATTERIES

Elec. Meter Mfg. Co. "Emmco"
Renzade Condensers, Leaks.

ASTOR SETS

G & R SETS

Airone Coils and Loops.

BALDWIN SPEAKERS

Neutron Crystals
Prompt shipments from Sydney.

Surplus Stocks sold Interstate.

H. J. HAPGOOD

Challis House, Marrin Place,

SYDNEY

Tel. BW 1128

Rechargeable
DRY!

Think what this means. Seven batteries for the price of one.



45 volts, Price 35/- ea.

The test made by Professor Laby, of Melbourne University, showed that the capacity of the TAB Battery is slightly greater on the fifth discharge than the first, and therefore does not deteriorate with the period of use for which the battery is needed.

AUSTRALIAN AGENTS:

Lafimers Wireless Supplies Ltd.

151 Castlereagh Street, Sydney.

*Phone: No. M284.

- 4.25 p.m.—TASMA TIERNAN, 'Cello:
"Sarabande" (Bach).
"Andante" (Gluck).
- 4.30 p.m.—MRS. M. CALLAWAY MAROOD, Personalities in Art.
"George Frederick Watts."
- 4.35 p.m.—Description of Jumpers' Flat, one and a half miles, WILLIAMSTOWN RACES, by "Newbury," of the "Argus."
- 4.40 p.m.—"Herald" News Service; Stock Exchange Information.
- 5.0 p.m.—Close Down.
- 5.10 p.m.—Description of Stoney William town Water, one mile, WILLIAMSTOWN RACES, by "Newbury," of the "Argus."
- 5.15 p.m.—Close Down.

EVENING SESSION.

- 5.30 p.m.—Answers to letters and holiday greetings by BILLY BUNNY.
- 6.0 p.m.—STUDIO QUARTETTE:
"March, "On the Hunt."
"Hunting Song" (Mendelssohn).
- 6.10 p.m.—BILLY BUNNY:
"Till Me Win" (Stories about Animals).
- 6.20 p.m.—STUDIO QUARTETTE:
"Second Sullivan Selection."
- 6.25 p.m.—"BILLY BUNNY" will tell the children about:
"The Adventures of the Treasure Seekers."
- 6.40 p.m.—"Herald" News Service; Weather Synopsis; Shipping Movements.
- 6.45 p.m.—Stock Exchange information.
- 6.52 p.m.—Fish Market Reports by J. H. Horvath Ltd., Rabbit Prices.
- 6.55 p.m.—River Reports.
- 6.58 p.m.—Newmarket Sheep Sales by the Associated Stock and Station Agents, Bourke Street, Melbourne; Market Reports by the Victorian Producers' Co-operative Co. Ltd., Poultry, Grain, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.
- 7.10 p.m.—Market Reports of Fruit by the Victorian Fruiteers' Association; Retail Prices; Fruit Market Reports—wholesale prices by Wholesale Fruit Merchants' Association; Railcart Pig Market Reports by the Railcart Stock and Station Agents.

NIGHT SESSION.

- 7.15 p.m.—Under the auspices of the DEPARTMENT OF AGRICULTURE, MR. W. J. HULL, Senior Dairy Supervisor, will speak on "Herd Testing."
- 7.30 p.m.—STUDIO QUARTET:
"Hut in the Black Forest."
- 7.37 p.m.—MR. H. K. LOVE:
"Technicalities."
Mr. Love will be glad to attend to your wireless difficulties, and we ask you to write to him for any advice that you may require.
- 7.47 p.m.—ANITA SHAW, soprante:
"Love is like a little bit of Heaven."
"Blue Skies."
- 7.54 p.m.—STUDIO QUARTET:
"Cleopatra"—Egyptian Suite.
- 8.1 p.m.—MR. C. J. WILLIAMS will comment upon:
"Tomorrow's Stadium Event."
- 8.16 p.m.—ELLAS KIDDELL, contralto:
"The Road to the Isles" (Kennedy Fraser).
"The Erikyk Love Lull" (Kennedy Fraser).
- 8.17 p.m.—Presentation of prizes by Councilor Felix Lloyd for 3LO, Melbourne's MOUTH ORGAN COMPETITION.
- 8.25 p.m.—STUDIO QUARTET:
"Japanese Suite" (Kneale Yamada).
- 8.30 p.m.—GEELOGONG COMMUNITY SINGING—
Transmitted from Central Hall, Geelong.
President, Mrs. Robert Strong.
Conductor, Mr. Will S. Sampson.
Accompanist, Mr. R. J. Dickson.
Secretary, Mrs. R. G. Ebbott.
His Worship the Mayor of Geelong (Councilor Julius Solomon) will preside.
Opening remarks by his Worship the Mayor.
Community Singers—
CHORUS "God Bless Australia."
"Mother Macaire."
"One man went to now."
"Welcome Chorus" led by Little Iona Meadows.

SOPRANO SOLO—Miss Elva Bayly.
CHORUS—"Kleen Aiswah."
 "Wah Wah, Gah Ebn."
 "Kudde's Tassah!"
HAWAIIAN QUARTET—
 Messrs. Lance Leock and E. Kiesel.
 Misses Winnie and Elma Taylor.
CHORUS, with Hawaiian accompaniment—
 "Aloha Oe."
 "Old Macdonald had a Farm."
 "Ten Little Nigger Boys."
CONTRALTO SOLO—
 Miss Ivy Potter.
CHORUS—
 "Sweet Genevieve."
 "All hail the Power."
 "Mr. Wing."

RECITAL—
 Miss Lois Dolley.
 10 p.m.—Under the auspices of the Health Association of Australia, the HEALTH MESSAGE for to-day is: "Let in all the sunshine you can. Sunshine and fresh air kill germs and thereby help to keep out sickness."

THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE for to-day is for
PEDESTRIANS—"There is many a slip 'twixt cup and lip, and there are many places where you may slip also. Safety First."

10.1 p.m.—"CARDIGAN" (Mr. R. A. Wolfe, sporting editor of the "Arrog" and "Australianian," will speak on to-morrow's race.

10.15 p.m.—MICHAEL CONNOLLY, baritone: Selections from his repertoire.

10.22 p.m.—REGINALD BRADLEY, violin: "Le Sile aux cheveux de lin" (Debussy), "Hungarian Dance No. 4" (Brahms).

10.30 p.m.—"Arrog" news service. Road notes supplied by the Royal Automobile Club of Victoria. Meteorological information.

10.37 p.m.—STUDIO QUARTET:

"Ravel singing quartet."
 10.47 p.m.—ELLA RIDDELL, contralto: "Good-bye" (Tooti).
 "Now Sleeps the Crimson Petal" (Roger Quilter).

10.47 p.m.—Announcements. British official wireless news from Rugby. Island steamer movements.

11 p.m.—OUR GREAT THOUGHT:
 "Everyone has his allotted time upon earth; a brief and irrevocable space is given to all; but it is virtue's work alone to stretch the narrow space by noble deeds."
 Virgil.

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

11.40 p.m.—GOD SAVE THE KING.

Saturday, Nov. 5 2FC, SYDNEY

EARLY MORNING SESSION.

- 7 a.m.—"Big Ben" and programme announcements.
 7.5 a.m.—Studio music.
 7.10 a.m.—Country Session: Official weather forecast, rainfall, temperature, astronomical memoranda, shipping intelligence, mail services.
 7.25 a.m.—Investment market, mining share market, metal quotations.
 7.35 a.m.—Wool sales, breeding's markets, interstate markets, produce markets.
 7.45 a.m.—"Sydney Morning Herald" summary.
 7.50 a.m.—Studio music.
 8 a.m.—"Big Ben." Close down.

MORNING SESSION.

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

Read what Mr. Maclurcan says about the

"D. J. SUPER-SIX"

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

Dear Sirs,

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

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

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

I am,

Yours faithfully,

Chas. Maclurcan
A.M.I.R.E.

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

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

DAVID JONES'

First and Last Cost

Remember! Quality components mean satisfaction with only one cost.

Cheap unreliable components mean dissatisfaction, with ultimate replacement and additional cost.

KEOGH RADIO SUPPLIES

THE HOUSE OF QUALITY AND STANDARD EQUIPMENT.

Emphasise this point to those who contemplate home construction or alteration to their present receiver.

ELECTRON AERIAL WIRE

Suitable for Aerial-Earth and lead in.

Instal this perfect aerial wire—flexible—light and well insulated. Good supply in Stock, per 100ft. 2/6

B. BATTERIES.

Ever-ready, dry, W.P., 40 V.	12/6
Ever-ready, dry, W.P., 40 V.	18/-
Wright Star, dry, large, 45 V.	18/-
Burgess, dry, large, 45 V.	20/-
Philon, Wet, 90 V.	28/15/-
Oldham, Wet, 40 V.	23/-
Oldham, Wet, 80 V.	25/-

BATTERY CABLES.

6 Card, A. & B., with spades . . .	3/3
7 Card, A. & B., with spades . . .	2/6

BIPASS CONDENSERS.

2 mf. Electro	5/-
2 mf. Mansbridge	8/-
1 mf. Mansbridge	6/8
.865 mf. Mansbridge	3/8
.994 mf. Renrade	2/-

CONDENSERS, VARIABLE.

80925 S.L.F.	5/6 to 12/6
30825 S.L.F.	10/- to 12/6
9095 S.L.F., 7/4, 9/8, 11/8, 12/6, 27/6	

Avail Yourself of Our Easy Payment System.

Accumulators, A. and B. Battery
Chargers, Eliminator.

Lead Speakers, Complete Sets,
Gramophones, etc.

Small Deposit. Small Weekly Payments.

Call and Interview Our Engineer, Chas. W. Slade, about your Super Heterodyne troubles.

We are Super Heterodyne Experts.

KEOGH RADIO SUPPLIES

40a PARK STREET

(Between Castlereagh and Pitt Streets)

Open till 9 p.m. Fridays

10.5 a.m.—Studio music.
10.15 a.m.—"Sydney Morning Herald" news service.
10.30 a.m.—Studio music.
10.35 a.m.—A talk by the EFC Racing Commissioner.

10.45 a.m.—Studio music.
11 a.m.—"Big Ben." Studio music.
11.5 a.m.—A.P.A. and Reuter's Cable Services.
11.55 a.m.—Studio music.
11.15 a.m.—A Talk on Gardening, by Mr. G. J. Lockley ("Regnum").
11.30 a.m.—Close down.

MIDDAY AND AFTERNOON SESSIONS.
12 noon—"Big Ben" and programme announcements.

12.1 p.m.—Stock Exchange, first call.
12.5 p.m.—Studio music.
12.25 p.m.—"Sydney Morning Herald" news service.
12.35 p.m.—Rushy wireless news.

12.45 p.m.—Studio music.
NOTE: Direct from the R-ehill Racecourse: Events in the running will be described by the EFC Racing Commissioner.
1 p.m.—"Big Ben." Weather intelligence.
1.5 p.m.—"Evening News" midday news service.

1.25 p.m.—Studio music.
NOTE: Direct from Melbourne: Results of the last day of the V.R.C. Meeting at Flemington will be relayed.

During the interval of racing descriptions and results, musical items will be given, including:

The Crystal Palace Theatre Orchestra, Sydney, and
From the Studio:

Harry White, novelty pianist.
Shirley Cooks, soloists.

4.30 p.m.—A complete resume of the day's sporting events.
5 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

5.40 p.m.—The Chimes of Big Ben.
5.45 p.m.—The "Hello Man" talks to the children.

6.30 p.m.—Sterr time for the young folk.
6.40 p.m.—Studio music.
7 p.m.—"Big Ben." Weather intelligence.
7.3 p.m.—"Evening News" late news service.

NIGHT SESSION.

7.30 p.m.—Programme announcements.
7.35 p.m.—Linn Smith, pianoforte and saxophone solo.
7.45 p.m.—Gwladys Fimister, soprano:
(a) "Rose Softly Blooming" (Spohr).
(b) "Four Ducks on a Pond" (Needham).

7.52 p.m.—The Congress Band:
(a) March, "Entr'acte" (Jakschay).
(b) Selection, "Songs of Happiness" (Kirk).

8 p.m.—"Big Ben."
Laurence Macaulay, baritone.

8.4 p.m.—The Congress Band:
(a) "Meditation" ("Angelus") (Bauer).
(b) Cornet solo, "Abide with Me" (Liddell) (with band accompaniment).

Soloist, Bandman T. Smith.
8.14 p.m.—Descriptions from the Speedway Royal.

8.20 p.m.—From the Studio:
Gwladys Fimister, soprano:
"O Ship of My Delight" (Phillips).

8.23 p.m.—The Congress Band:
(a) Selection, "English Melodies."
(b) March, "Boston" (Colet).

8.31 p.m.—NOTE: The Speeches will be broadcast from the Dinner tendered to Mr. Amery, Dominion Secretary, by the Government of New South Wales.

8.39 p.m.—From the Studio:
Laurence Macaulay, baritone.
Late weather forecast.

9.34 p.m.—The Congress Band:
(a) Selection, "Souls Awakening" (Dell).
(b) March, "Fire Away."

9.45 p.m.—Gwladys Fimister, soprano:
"A Song Remembrance" (Costas).

9.50 p.m.—Descriptions from the Speedway Royal.
9.55 p.m.—From the Studio:
Linn Smith, piano and saxophone solo.

- 18.4 p.m.—Descriptions from the *Speedway Royal*.
- 19.10 p.m.—From the *Studio*:
Laurence Mounslley, baritone.
- 19.18 p.m.—Dance Music interspersed with musical items from the *Studio*.
- 19.27 p.m.—Late news and announcements.
- 11 p.m.—"Big Ben."
- Dance music until 11.45, interspersed with musical numbers from the *Studio*.
- 11.45 p.m.—National Anthem.
- Close down.

3LO, MELBOURNE.

Saturday.

MORNING SESSION.

- 11 a.m.—JOHNSTON'S STUDIO BOYS:
March: "Sans Souci."
Overture: "Ben Hur."
- 11.10 a.m.—ANITA SHAW, soprano:
"Friend."
"We've Got a Screen."
- 11.17 a.m.—JOHNSTON'S STUDIO BOYS:
Waltz: "Vanity Fair."
- 11.23 a.m.—JACK O'HAGAN and BOB HOLLYBROOK:
"Harmony."
- 11.27 a.m.—JOHNSTON'S STUDIO BOYS:
Selections "11 Treasures."
- 11.47 a.m.—MICHAEL CONNOLLY, baritone:
"Teatle to the Fair" (D. St. Stafford).
"The Hills of Donegal" (Wiffred Sanderson)
- 11.54 a.m.—JOHNSTON'S STUDIO BOYS:
Festrot: "A Lure to Spain"
Hymn: "It is Well."
- 12 noon.—MELBOURNE OBSERVATORY
TIME SIGNAL. Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange this day. Herald official wireless news from Rugby, Reuters and The Australian Press Association cables. "Argus" news service.
- 12.05 p.m.—STUDIO QUARTETTE:
"Jaiet Suite" (Hansen-Motte).
- 12.30 p.m.—ELLA RIDDELL, contralto:
"Hail Columbia" (Stroud).
"Hans & Mine" (McKenzie Marloch).
- 12.37 p.m.—Stock Exchange information.
- 12.40 p.m.—JOHNSTON'S STUDIO BOYS:
Cornet Solo: "Australia."
Soloist, J. Robertson.
- 12.47 p.m.—AGNES FORTUNE, Piano Solo:
Selected.
- 12.55 p.m.—MICHAEL CONNOLLY, baritone:
"Waltz Pol" (Alfred Hill).
"Father O'Flynn" (G. V. Stafford).
- 1 p.m.—MELBOURNE OBSERVATORY
TIME SIGNAL.
- 1.1 p.m.—Description of Bateman Stakes, see note V.I.C., FLEMINGTON, by "Newbury" of the "Argus."
- 1.6 p.m.—STUDIO QUARTETTE:
"The Kingdom of the Flowers"
(Ringelen).
Vocalist: "A Morning Greeting" (Schmley).
- 1.12 p.m.—Meteorological information.
Shipping information, weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports for Victoria, Tasmania, South Australia, and New South Wales.
- 1.17 p.m.—JOHNSTON'S STUDIO BOYS:
Duet, Cornet and Soprano:
"The Tri-Larks."
- 1.23 p.m.—ELLA RIDDELL, contralto:
"I will await thee" (Conlupsey Clark).
"My Heart's Desire" (Cunningham Clark).
- 1.31 p.m.—TAMMA TIERNAN, Cello:
"Robin Adair."



for ALL reception

A Five Valve Receiver

Farmer's now offer a most handsome decorative model of the new 5 Valve Receiver, in genuine laminated figured American Walnut, inlaid with Burr Walnut. This exclusive model has a single dial control, and each stage is totally protected with aluminium shields. Supplied with high-grade accessories and loud speaker, and erected in any suburban area, free of charge £52/10/-

For Weak Batteries

Balkite Trickle Charger, at 4 amps., prevents sulphating and buckling and need never be disconnected, the accumulator being charged whilst operating receiver. The operating maintenance is practically nil. Price .. £3/10/-



"B" Battery Eliminator

Phillips "B" Battery Eliminator, does away with "B" batteries. For those desirous of an inexhaustible "B" battery supply, this instrument is invaluable. Has milliampere output of 65 milliamperes, with absolutely no hum. Price £8/15/-

FARMER'S

BOX 497AA, G.P.O.

Here is the popular
"PORTA"
 Self contained Radio Set



No Aerial

No Earth

MUSIC in a Moment—just open the lid! Ideal for Dancing, Motoring, Picnics, Entertaining and News. A Guaranteed Product of Australia's Largest Radio Distributors. Easy Terms!

CASH PRICE £37/10/-

Re the ASTOR FIVE
 Get a Catalogue.

Astor 5, Table, £26	Complete	£39-5-6
Astor 5, Console, £35	"	£48-5-6
Astor 5, All Electric Controlled, £50	"	£56-5-6
Console, " £59	"	£65-5-6

STAYING POWER! The FIRST essential for Radio Batteries is greatest in

ARMAX 25% Long Life Definitely Assured.

It is all in the construction; the wonderful seamless cells mean absolutely NO LEAKAGE.



It pays to use Heavy Duty Batteries.

ARMAX Dry Cells. Designed for heavy duty service (1.5 volts) 3-22½ Volt Heavy Duty, 13/6	45 Volt Heavy Duty Flid., 25/-
60 " " " 35/-	45 " " " Upright, 25/-

Manufacturers Products Pty. Ltd.
 Challis House, Martin Place :: Sydney
 Use Neutron Crystal. THE BEST 2/3

1.40 p.m.—Description of Flemington Stakes, 4 furlongs, V.R.C., FLEMINGTON, by "Newbury," of the "Argus."

1.45 p.m.—JOHNSTON'S STUDIO BOYS: Selection, "Scene of Beauty."

2 p.m.—Description of Cricket Match, Carlton v. St. Kilda, at Carlton, by Mr. Rod McGregor.

2.15 p.m.—Close down.

2.40 p.m.—Description of C. E. Fisher Plate, 1½ miles, V.R.C., FLEMINGTON, by "Newbury," of the "Argus."

2.45 p.m.—Close down.

AFTERNOON SESSION.

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

"In An Oriental Garden" (Hayes).
 "Meet Me in the Moonlight" (Davis).
 "So Blue" (De Sylva).

3.10 p.m.—Description of Cricket Match, Carlton v. St. Kilda, at Carlton, by Mr. Rod McGregor.

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

"Blue Skies" (Berlin).
 "Dawn of Tomorrow" (Green).
 "Boss Law" (Ash).

3.35 p.m.—Description of V.R.C. Handicap, 1½ miles, V.R.C., FLEMINGTON, by "Newbury," of the "Argus."

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

"Ain't She Sweet" (Yellen).
 "Crazy Words, Crazy Tune" (Yellen).
 "There's a Trick in Pickin' a Chick, Chick, Chickin'" (Tobias).

3.45 p.m.—Description of Cricket Match, Carlton v. St. Kilda, at Carlton, by Mr. Rod McGregor.

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

"Love is Just a Little Bit of Heaven" (Bryan).

"Ella's Got It" (Davis).
 "Stepping in Society" (Alst).
 "Who-oo! You-oo! That's Who."
 "Zig-Zag"—Piano Solo (Bloom).
 "Golden Gate" (Leslie).
 "Rhythm is the Thing" (Ratts).
 "Reminis Moon" (Lawrence).

4.20 p.m.—Description of Victoria Steeplechase, 3 miles 1 furlong, V.R.C., FLEMINGTON, by "Newbury," of the "Argus."

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

"Colette" (Kahn).
 "The Hanging Gardens of Babylon" (Carlo).
 "Sa-La-La" (Kahn).
 "The Spell of the Moon" (Kahn).

4.40 p.m.—Description of Cricket Match, Carlton v. St. Kilda, at Carlton, by Mr. Rod McGregor.

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

5 p.m.—Description of Final Handicap, 1½ miles, V.R.C., FLEMINGTON, by "Newbury," of the "Argus."

5.5 p.m.—Close down.

EVENING SESSION.

5.30 p.m.—Sporting results.

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

6.10 p.m.—STUDIO QUARTETTE:

"In the Clock Store" (Orth).

6.20 p.m.—"LITTLE MISS KOOKABURRA" will tell her Kookaburrites some more about "The Plucky Patrol"—"Phillips Looks on."

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

6.42 p.m.—Stock Exchange information.

5.47 p.m.—**WIRELESS NEWS.**
 5.50 p.m.—River reports.
 5.52 p.m.—**WOMAN'S CLUB** (solo) by the Associated Stock and Sheep Auctioneers, Bourke street, Melbourne. Market reports, by the Victorian Producers' Assn., Lids, Poultry, Grain, Straw, Jute, Dairy Produce, Extension, and Oils.
 5.55 p.m.—Market reports of Fruit, by the Victorian Fruitgrowers' Association. Retail prices. Wholesale prices of Fruit, by the Wholesale Fruit Merchants' Association.

NIGHT SESSION.

5.58 p.m.—**MR. H. E. F. LAMPE:**
 "The Cable Clock—The First Watch."
 5.59 p.m.—**MR. K. E. PESCOTT:**
 "Hudson Plants."
 5.55 p.m.—**MR. R. RAWSON:**
 "Euphrates."
THE ROYAL AUTOMOBILE CLUB OF VICTORIA'S SAFETY MESSAGE for Today is for

EVERYBODY: "We are working to prevent accidents; to be successful we must have your help."

Under the auspices of the H.M.S. Association of Australasia, the **HEALTH RESOURCES** for Today is:
 "Let your bath be a habit, not an event."
 5.59 p.m.—**PRAHRAN CITY BAND:**
 Selections, "Widged Sandarwood's Songs" (Harris).
 5.59 p.m.—**THE GWALIA PARTY** (Welsh male voice party):
 "Crosses in Arms" (Adolfus Adams).
 "In the Sweet Bye and Bye"—O.M. Welsh Setting.

5.57 p.m.—**PRAHRAN CITY BAND:**
 Overture, "The Barber of Seville" (Rossini).
 5.54 p.m.—**J. ALEXANDER BROWNE**, baritone.

5.59 p.m.—**PRAHRAN CITY BAND:**
 "Tomb Raider Song," "The Joy Wheel" (Guten).
 5.55 p.m.—**THE GWALIA PARTY** (Welsh male voice party):
 "The March of the Men of Harlech" (arranged for male voices by Dr. Harry).
 "Llew On" (The Ash Grove)—Welsh Melody.

5.52 p.m.—A Special Programme has been arranged.

5.55 p.m.—**PRAHRAN CITY BAND:**
 Grand March from "Tannhauser" (Wagner).
 March, "Docks of Darling" (Hummel).

5.55 p.m.—**PAT McLEAN**, Euphonium:
 "Selected."

5.52 p.m.—Late Sporting Results.

5.55 p.m.—**PAT McLEAN**, Euphonium:
 "Selected."

5.55 p.m.—**JOE ARONSON** and his SYMPHONISTS:
 "When will We Meet Again" (Piccini).
 "Jack in the Box" (Nicol).
 "Khalimas" (Nicol).

5.51 p.m.—**OUR GREAT THOUGHT:**
 "Life appears to me too short to be spent in nursing animosity or registering wrongs."
 —Charlotte Brontë.

5.51 p.m.—**JOE ARONSON** and his SYMPHONISTS.

5.49 p.m.—**GOD SAVE THE KING.**

YOU CAN HAVE "Wireless Weekly"

Delivered POST FREE for One Year for

13/-

SUBSCRIPTION FORM

To the Editor, "Wireless Weekly," 51 Castlereagh Street, Sydney.

Please forward "Wireless Weekly" for a period of

..... for which I enclose
 for
 (Add exchange to Country Cheques.)

Name

Address

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

IF YOU WANT THE NEW

RADIO

IN AUSTRALIA
 & NEW ZEALAND
 Incorporating "Sun, Land and Air."

DELIVERED POST FREE FOR ONE YEAR

Avoid delay or disappointment
 by forwarding the following

SUBSCRIPTION FORM

To the Editor "Radio," 51 Castlereagh Street, Sydney.

Please forward "Radio" for a period of

..... for which I enclose
 for
 (Add Exchange to Country Cheques.)

Name

Address

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

TRANSFORMERS

Built up to a specification and wound, laminated, iron cut to any size from stock. Prices and estimates on application.

SPONNELL, GRIFFIN & CO., LTD.
 43 Druitt Street, SYDNEY.
 Phones: C 4545 and 4546.

Just Arrived
ANOTHER SHIPMENT
OF
HEGRA
CONE SPEAKERS

Price:
£1/19/6



Price:
£1/19/6

The last three shipments of the HEGRA CONE SPEAKERS were sold out within a few days of their arrival

The HEGRA is a **BEST SELLER** because it's **GOOD!**

BUY NOW and don't be disappointed.

WHY?

BECAUSE—The HEGRA Cone Speaker incorporates an adjustable Loud Speaker unit which is superior to that supplied with many Loud Speakers costing two and three times as much.
BECAUSE—For great volume, clear tone, beautiful appearance, sound engineering construction, and low price, the HEGRA Cone Speaker is in

A CLASS BY ITSELF!

SOLE DISTRIBUTORS FOR N.S.W.

UNITED DISTRIBUTORS LIMITED 72 Clarence Street, and 28a Martin Place, SYDNEY

Sole Australian Distributors of "RAY-O-VAC" BATTERIES
 243 Queen St., 27 Chesser St., 26 Queen St., Cr. Jervis Quay & Harris St., 66 Charles St
 BRISBANE ADELAIDE PERTH WELLINGTON, N.Z. LAUNCESTON, Tas.
 664 Bourke Street, MELBOURNE 109 Collins Street, HOBART

Wireless in Schools.

By "Hermes."

THE peculiar contribution of radio to education has been recognised by no less a body than the National Association of Schoolmasters of Great Britain, which has just published officially a pamphlet report of the Birmingham Association of Schoolmasters, Lord Burnham, proprietor of the "Daily Telegraph," says in his foreword: "Combined with the proper agencies of personal influence, of book learning and of practical instruction, broadcasting will certainly enlarge the whole world of primary teaching and, perchance, give it a finer and more lasting quality."

The report, as Mr. Temple says in "The Journal of Education," does not set on the side of rashness. It admits that only actual experience can settle the question as to whether children can take in trust from the voice or the printed page, and which makes the most lasting impression. That is the issue always being argued at all universities, whether it is best to go to lectures or to stay at home and read. With children, radio talks, should, it is safe to say, be followed by questions, and possibly by written work, as with all other oral lessons.

The talks on "Current Topics," "Musical Appreciation" and other general subjects given from BLO on Thursday afternoons are so designed that they can be used as material for the teacher to work on by using the lines presented for essay work, and "fixing" them by question and comment.

Special attention is being paid by BLO, Melbourne, to these Educational talks. The directors of that station have always strongly advocated the adoption of wireless as an Educational help, especially in schools removed from the great centres of learning, and have voluntarily blazed the trail by providing these weekly sessions, which are conducted by an educationalist of undoubted standing and are now widely availed of throughout the country.

NATURAL DEVELOPMENT.

The Directors of BLO Melbourne do not look upon these decentralised transmissions as particularly novel or enterprising, but as a natural development of broadcasting, and the fulfilment of their obligations to provide listeners with the most comprehensive service possible. To provide this great country service, BLO relies mainly upon telephone land lines for relaying, but it happens sometimes that one is not available. This does not deter BLO Melbourne, whose engineers have constructed a portable transmitter, which can be erected at the location, whether it be on land or sea at a moment's notice.

Readers' Queries Answered Here.

QUERIES

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

T.M.C.A. (STRATHFIELD).—Q. 1: I have purchased two TAB 6 volt rechargeable B batteries, please tell me where they can be recharged.

A: Call on Latimers Wireless Supplies Ltd., 151 Dunderburgh Street, Sydney.

NEURODYNE (ENFIELD).—Q. 1: I am building the Neurodyne described in September "RADIO," and I am installing an eliminator that does not provide a separate R.F. tapping, could I join the R.F. and the A.F. valves to the one terminal on the eliminator? I desire to keep the eliminator in the battery cabinet, is this advisable?

A: You certainly can join the R.F. and A.F. valves to the one tap, or if preferred you can link the R.F. and the detector valves to the detector tapping. Try both ways. It is always wise to keep the eliminator too to those feet away from the receiver. Try for yourself.

W.W.M. (KOGARAH).—Q. 1: Will you please tell me how to wind the coils for the Kila Two Valve?

A: On a three-inch former wind ten turns as a primary, half-inch away start winding the secondary of 55 turns. The reaction consists of 35 turns commencing 1/2 in. away from the end of the secondary. The wire may be No. 24 gauge D.C.C.

Q. 2: Would 120 turns of 24 D.C.C. wire on the I.F. former make an efficient choke? A: Yes.

H.H.R. (WEST WYALONG).—Q. 3: I have built the Hazlewood Two Valve Buffer Receiver and got surprising results at this distance. Will it be possible to replace the last valve for a power valve? A: I should not advise this.

Q. 2: Would Concor or Mulard two-volt power valve be suitable? A: Yes, but use two of them.

K.P. (LAWRENCE).—Q. 1: Now that static is on us, may I suggest that you give us an article on conversion of ordinary four or five valve receivers from outside aerial arrangements to loop aerial.

You may have given an article on the matter before. However, this would be an opportune time for a repetition.

You have just told us something about making a loop, now how about telling us how to make it fit our ordinary receivers?

A: Yours is a very good suggestion and will be attended to in the near future. Many thanks.

C.S.F. (DOUBLE BAY).—Q. 1: Could you tell me if I can substitute hexamers coils for the transformers in the "Kila" 2-valve set, and if so, what number of turns must they contain? A: See reply to W.W.M. (Kogarah).

V.F.N. (RICHMOND RIVER).—Q. 1: Could frozen sound coils be used in the P1 2-valve circuit instead of ordinary coils outside on front of the panels?

A: Yes. Use a variometer which you can wind yourself. The aerial coil may consist of 50 turns of 24 gauge wire on the 3-in. former and the reaction coil 40 turns on the rotor. Frozen makes the striped variometer, and any advertiser in our journal can supply you with these parts.

NOLODYNE (HAY).—Q. 1: Will you describe how to connect a loop aerial to the neurodyne receiver?

A: Remove the G connection from the first screen, and also the F connections from this screen, and substitute the frame aerial across these two points.

J.W.M. (EAST KEMPEY).—Q: When I to add one stage of audio amplification to the two neurodyne, would it bring intermediate stations on a land receiver? A: Yes. It certainly should.

G.P.P. (ARTHUROVILLE).—Q: How many cells does it take to fully charge a 6 volt 50 ampere hour accumulator?

A: This all depends on the charger you use and how far run down the battery is, and is set on charge. It is impossible to answer this.

CHUM (YARRAMAN GREEN, Q.).—Q. 1: If I install a wave trap on my three valve receiver, would it cut out static?

A: No unfortunately, it would not. The purpose of a wave trap is to eliminate the interference from a broadcasting station which is operating close to the wave-length of the station which you desire to receive.

Q. 2: From a wave trap cut down volume? A: It frequently does, but you have no need for a wave trap in your vicinity.

Q. 3: If lightning struck my aerial, would it jump the gap of the lightning arrester, or would it travel through the set and burst the valves?

A: You are over-zealous. I am afraid that if lightning did strike your aerial there would only be a small bit of copper in the air, where the aerial wires had been. The purpose of a lightning arrester is to provide a path to earth for any static energy collected by the aerial. Do not be afraid of lightning striking your aerial, as it is very seldom such a thing has happened since aerials were first thought of.

A.J.G.B. (HIRRARRA).—This subject will be dealt with shortly.

B.E.Y. (GORDON).—You may have to install a wave-trap if the scheme suggested in the Rise Neurodyne is not effective. A five valve neurodyne is a very good all-round receiver.

R.G. (ARNCLIFFE).—We have completely sold out of this issue.

A.L.R.U. (GLEENE).—I would rather see you with your aerial about 75 feet overall. A408 valve throughout will still your purpose.

A.F. (BALMAIN).—Certainly make your scheme permanent. Have you tried reversing the connections on the 20 turns portion of the coil.

G.H.C. (LEICHHARTZ).—Raise or lower your aluminium until the best charging rate is obtained. You can find this out by immersing the output leads of the resistor in a glass of water, and when connected to the electric mains the negative lead will bubble much more than the positive lead. The position of the aluminium which gives the greatest bubbling is the correct charging rate.

E.W. (GLEN INNES).—The De Forest D.L. 7 valve is a power valve consuming 1/2 amp. at 6 volts. The D.L. 2 consumes .87 of an amp. at 3 volts.

M.P.G. (SEACLIFFE, S.A.).—Probably there is some open circuit in your receiver, to test the continuity, paying particular at-

All Readers' Queries Answered—continued.

tion to the contacts of the valve sockets, and incidentally note that the filament of the valves are not leading on the grid. It is evident that the detector circuit is at fault, so it behoves you to test carefully, not overlooking the grid leak, which may be faulty, again reverse the primary connections on one audio transformer, to eliminate the squeal you speak of. Probably again, the primary of the first audio transformer has broken down.

E.G.M. (DEXLEY).—This is not practicable.

H.A. (ENMORE).—I will deal with this matter in article form very shortly. See "RADIO," 19/10/27.

L.A.K.E. (DOOMARI, Q.).—Use A418 as detector and audio first stage. You will find an aircore or riddleless 3 coil tuner will suit you nicely.

A.W.S. (BENTLAND, Q.).—See "RADIO" of October for the particulars of these coils. You will find B in the Sydney article. The R.F. Choke may be dispensed with if a good quality audio transformer is used. If a persistent whistle is used, this is an indication that an R.F. choke is necessary.

H.B. (UNDERLIPPE).—See W. Harry Wise, Goulburn and Pitt Street, mentioning this paper.

Q. 2: Would unperites be to advantage using UX19 dry cell valves?
A: Yes, most decidedly.

E.G.W. (NEUTRAL BAY).—Q. 1: Re Rice Neutrodyne, could the coil mentioned as being wound on 2-inch diameter formers be wound on 2-in. diameter formers; if so, what gauge

of wire and how many turns do you suggest?

A: On a 2-in. diameter former wind 90 turns, using No. 30 gauge wire.

C.M. (MARRICKVILLE).—You will find the information you seek in this issue.

T.P.S. (BURWOOD).—See this week's paper.

F.G. (WENTWORTH FALLS).—See October "Radio."

A.M. (PEMPLE).—Leave your coils as they are, but pay attention to the correct handling of your rheostat. A wave trap would certainly help you.

W.J.C. (ARMIDALE).—You probably have a high resistance earth. Look carefully to the B battery supply in your detector valve and you may find it wise to substitute a 500 grid condenser of the present size. Use a 5 meg. leak. Regards.

L.R. (WARWICK).—Yes, by all means build the 3 valve Relcauts.

R.E. (BURWOOD).—Call at this office. I will be very happy to see you.

V.S. (COORAN).—Thanks. We have taken your advice.

J.P.R. (MORTDALE).—I have no record of any previous letter from you.

W.M.T. (WEST CROYDON, S.A.).—It is very difficult to diagnose a complaint of your type without seeing the set. Probably one of the components may have gone wrong. Test the continuity.

F.D. (MANLY).—Use D.E. 6 H.F. valves in the radio stage.

E.S.H. (BROKEN HILL).—Don't attempt to use a 3 coil holder in this receiver.

H.C. (WARWICK).—You would really be better off with two accumulators, although your own suggestion will suit for a few occasions.

J.D. (CASTLE HILL).—Install a wave-trap, and leave your condensers as they are. Transformer A.

H.L. (MANLY).—I have no idea who it was.

V.W.B. (NORTH SYDNEY).—Circuit O.K.

P.UZZLED (SUMMER HILLS).—Use a 50000 Condenser in series with your aerial.

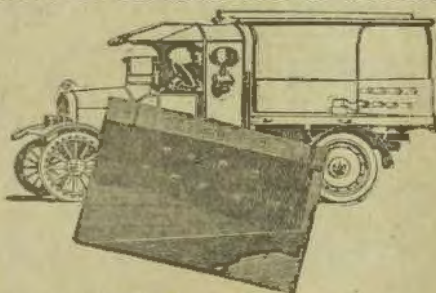
E.S.A. (CERRNOCK).—Install a MacLurean Tune Purifier. You are evidently overloading your rheostat.

R.D. (BRISBANE).—You are fixed up in this test.

L.S.H. (SHEFFIELD, T.).—It is very difficult to give an accurate table of capacities for a given number of plates with variable condensers to lay, as the makers of each brand have different cross section areas of plates and different dielectric constants.

G.W. (COORANEONG).—Many thanks for your suggestion, for I am afraid to be impracticable.

G.W.H. (KOGARAH).—200 turns No. 28 gauge enamel wire wound on 1-in. former will make a satisfactory R.F. Choke.



EIGHT "LOTUS" Valve Holders fitted with large power valves and fixed to tailboard of Ford Motor Lorry, driven over rough roads for 30 miles, survived the test.

At the finish, each spring was as it started—perfect. No damage or looseness at connection of leg socket and spring—no valve loose from the holder. Both were electrically perfect all the way.

Fit the "LOTUS" to your set, and protect your valves.

Lotus Valve Holder,	3/6	each.
Lotus Valve Holder,	with	Grid Leak, 6/3
	each.	
2 Lotus Valve Holder,	with	Terminals, 3/9
	each.	

John Arnold, P.O. Box 571, Degrares Street, Melbourne.

Garnett, Whiteley & Co. Ltd., Liverpool, Eng.

WIRELESS WEEKLY

Registered Trade Mark.

Published by Arthur William West of "Astoria," Kirribilli, for the Proprietors, Wireless Newspapers Limited, 51 Castlereagh Street, Sydney, and printed by Marchant & Co. Ltd., 321 Pitt Street, Sydney.

The Editor will be glad to consider Technical and Topical Articles of interest to Australian Readers. All Manuscripts and Illustrations are sent at the author's risk, and although the greatest care will be taken to return unsuitable matter (if accompanied by stamps), the Editor cannot accept responsibility for its safe return.

Subscription rates—Twelve months (12 issues), 18/- post free. Six months (6 issues), 6/6 post free. Single copies 2d. each, or post free. 4d. Subscriptions should be addressed to Wireless Newspapers Ltd., 51 Castlereagh Street, Sydney.

Advertising:—Our advertising representative keeps in close touch with advertisers, and he is ready at all times to supply information concerning advertising.

Agents in Great Britain:—The Colonial Technical Press Ltd., Dudley House, Southampton Street Strand, W.C.2.

"Wireless Weekly" is fully protected by copyright and nothing that appears in it may be reprinted, wholly or in part, without special permission. The use of our articles as quotations from them for any purpose whatsoever is never permitted without our written authority.

Progressive Radio Dealer



It's
an



Product

W. A. Servicing Set

A highly portable instrument, incorporating devices by means of which faults in sets may be simply and quickly located.

INCORPORATES:

A device for measuring the normal plate current of valves.

A device for checking the continuity of

sets for measuring the voltage of "A" batteries.

A variable oscillator to enable receivers to be tested without relying on the transmitting

Write To - day for FREE Illustrated Leaflet.

Messrs. Amalgamated Wireless (A sia) Ltd.
47 York Street, Sydney

Please forward me your Free Illustrated Leaflet giving full particulars of the A.W.A. Servicing Set.

Name _____

Address _____

or

Famous
AMPLION
users



Dr. J. A. Fleming, F.R.S., original inventor of the Thermionic Valve, writes, "You may be glad to know that with one of your AMPLION Loud Speakers I receive broadcast most splendidly."



The SENIOR DRAGON

with Oak Flare Type AR. 65·0

"British and Best"

The popular "Dragon" shape—at once graceful and efficient—with wooden flare of Jacobean oak finish. Improved appearance—pleasing mellow tone.

A full size, well designed, well balanced and exceedingly efficient Loud Speaker, with the Amplion Hall-mark, for five pounds, ten shillings.

£5.10.0 AMPLION

the most efficient Loud Speaker

Melbourne and Sydney