

Ray Allsop and Don. B. Knock — Technical Editors

Wireless Weekly

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INCORPORATING "RADIO IN AUSTRALIA & NEW ZEALAND"

VOL. 13, NO. 2

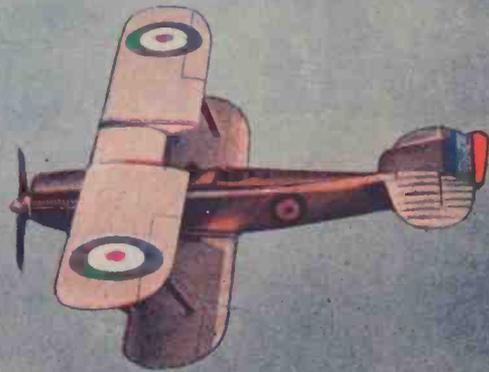
FRIDAY, JANUARY 4, 1929

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

Director of 4QG
on
Church
Broadcasts

Silhouette
Competition
Pictures

Long Distance
Land-Line Broadcasts
By Ray Allsop



The
Air Scout

A SIMPLY CONSTRUCTED ALL-ELECTRIC S

See
Page
15



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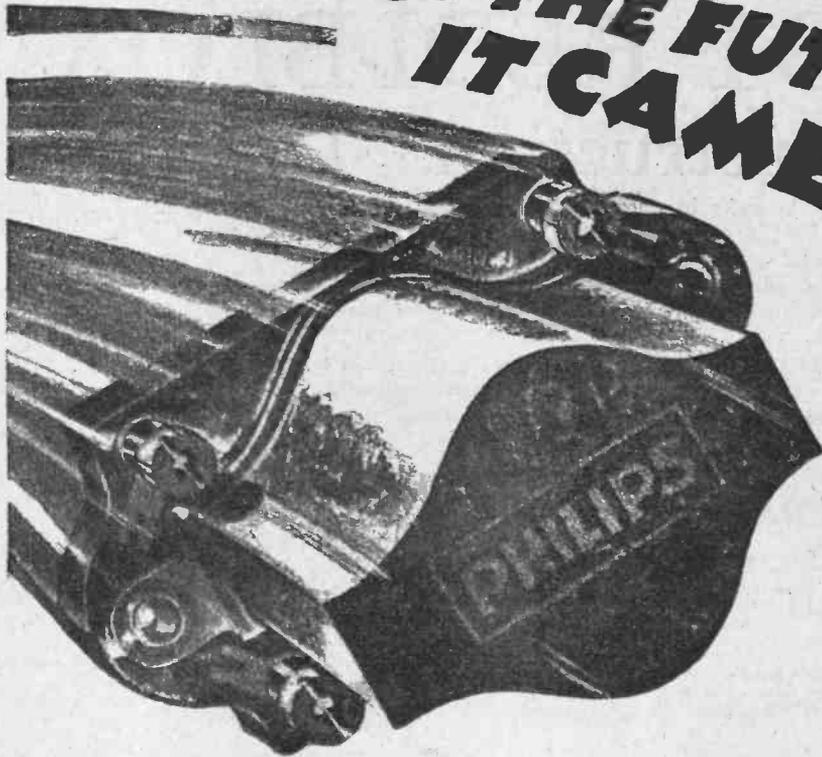
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27/6

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It is easy to make handsome sets of ALL TYPES by using Redi-Blox Units. They present a neat and orderly appearance, which cannot be equalled by using separate parts.

Redi-Blox eliminate practically all drilling and mounting problems, assure perfect insulation, and protect the vital parts from dust and dampness.

Five Redi-Blox Units replace 18 separate parts, and do away with over 26 of the connections that are required ordinarily.

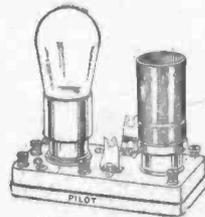
Redi-Blox are actually no more expensive to use than the many separate parts which they replace.

Build the PILOT 5-valve A.C. Electric AIR SCOUT

(Described in This Issue)

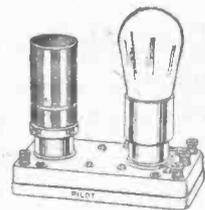
Read what the Technical Editor has to say about this truly magnificent set in this issue. It is easy to build, too—the Redi-Blox Units ensure that, and also we will gladly give you any assistance you may require. The following is the list of parts required—

1 Pilot No. 388 A.C. Filament Transformer	£2 12 6
2 No. 305 Pilot R.F. Redi-Blox, at 16/6 each	1 13 0
1 No. 176 Set of 3 Coils	1 5 6
1 No. 306 Pilot UY-227 Detector Redi-Blox	0 16 6
2 No. 302 Pilot A.C. Redi-Blox, with Transformers, at 46/ each	4 12 0
3 Pilot No. 1617 Vag. Condensers, .00035 MF, at 13/6 each	2 0 6
1 Pilot No. J7 Midget Condenser, .00025 MF	0 5 6
1 Pilot No. 350 Resistograd	0 8 6
1 Audio Choke Emmco or A.W.A.	0 17 6
1 Imperia By Pass 2 MF Condenser	0 5 6
2 Imperia By Pass 1 MF Condenser, at 4/ each	0 8 0
1 Pilot No. 959 A.C. Resistor C bias	0 5 9
1 Pilot No. 951 UX 171 Resistor C bias	0 5 9
1 Emmco 400 ohm Potentiometer	0 4 6
1 Pilot No. 68 .0005 MF Fixed Condenser	0 2 9
12 Terminals at 3d each	0 3 0
1 Pilot 2 meg Gridleaks	0 1 6
1 Pkt. Celatsite Hook-up Wire	0 2 9
3 UX-226 Radiotron A.C. Tubes, at 17/6 each	2 12 6
1 UY-227 Radiotron A.C. Detector Tube	1 10 0
1 UX-171 Radiotron Power Tube	0 19 0



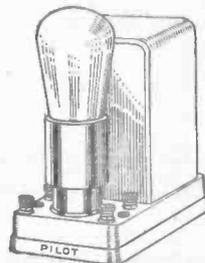
Universal R. F. Redi-Blox, No. 305

All kinds of R.F. Circuits can be used with this No. 305 R.F. Unit, employing any battery or A.C. valves. Redi-Blox can be mounted side by side, with coils spaced 4 to 5 inches apart, centre to centre, without inter-stage coupling. All connections are made with bus bars, permanently soldered. C Bias can be supplied for A.C. valves. Plug-in Coil tuned by a .00035 mfd Condenser. Molded Bakelite base protects the wiring from dust and moisture.



UY-227 Detector, No. 306

Whatever kind of circuit it is, Redi-Blox will fit in. The No. 306 Unit has a 5-prong socket, and special wiring, in accordance with R.C.A. specifications for the UY-227 Detector, operating on A.C. for the filament. These Units are specially desirable in A.C. sets, because, by simplifying the wiring, coupling effects are reduced to such an extent that perfect operation, free from hum, can be obtained.



Transformer Redi-Blox, No. 302

Here is the finest A.F. Transformer that experience and skill can reproduce, built into a Redi-Blox Unit. Any Battery or A.C. Valves can be used, for the wiring is designed to take care of all types.

NOTE.—Any kind of a radio circuit can be made up and wired with Redi-Blox in less than half the time required when separate parts are assembled. Moreover, the Redi-Blox method is so simple that mistakes in wiring and poor connections are almost impossible. Full diagrams are supplied with each Redi-Blox Unit.

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Wireless Weekly

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Address:
51 Castle-
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DID YOU KNOW THEM BY THEIR SILHOUETTES?



A—Miss Dulcie Blair.



B—Mr. Vincent Aspey.



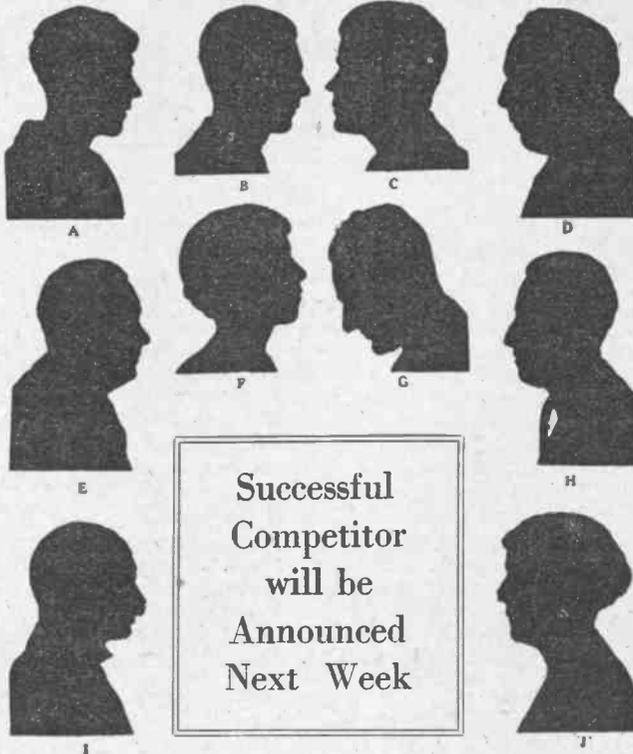
C—Mr. John Mitchell.



D—Mr. Charles Lawrence.



E—Mr. Horace Keats.



F—Miss Peggy Dunbar.



G—Mr. Len Maurice.



H—Mr. Ewart Chapple.

Successful
Competitor
will be
Announced
Next Week



I—Mr. Bryce Carter.



J—Miss Mabel Batchelor.

A LREADY hundreds of entries in the Silhouette competition have been received, and many more are expected before the publication of this page.

Automatically with the appearance of the pictures above, the competition closes, and entries will be opened. We hope to be able to announce the name of the successful competitor in the next issue.

The novelty of the competition has aroused a great deal of interest and curiosity among listeners. The characteristic profiles of the artists broadcasting afford subtle clues to identification. We hope to be able to conduct similar competitions at a future date.

All photographs and silhouettes on this page by Howard Harris Studios, King Street.

BETWEEN YOU AND ME AND THE MICROPHONE

Farewell, But Not--

RFN. MOSCOW, signs off with "Dosveedanya," which is nothing more sinister than good-bye in English.

Japs Learn

THE Tokio broadcasting station devotes 25 per cent. of its time to economies, 40 per cent. to educational subjects, and 35 per cent. to entertainment. And the average Japanese listener likes the arrangement.

Even the Announcers!

UNCLE BAS returned from a surfing holiday to receive the congratulations of his friends on the wonderful fish he had caught. Of course, Uncle Peter had done the damage during the children's session. The bream—it was seven feet long by two feet wide by three feet deep. At any rate, we hope it was Uncle Peter's fancy, because from Mr. Basil Kirke's burnt-up appearance we are almost tempted to believe that he visited the incendiary place whence most fishermen derive their yarns.



The Eternal Rivers

THERE was an argument at 2FC about the suitability of women's voices for broadcasting. "Men's voices," said an expert, "are best for broadcasting. Their words come out more sharply. Now, a woman's voice is continuous." For some reason or other Mr. Chapple laughed. The expert frowned. "What I mean is that a woman's voice FLOWS!" he said, to make his meaning quite plain. "FLOWS!" exclaimed Mr. Keats. "Good heavens, women's voices don't flow—they cataract!"

Back to School

CHARLES YOUNGSON, of the 2BL control room, invited the staff to Christmas cake. Which was beyond all praise. Uncle Peter was called away to conduct the children's session, and went, slice of cake in hand. Soon the staff, drinking "ginger" beer, heard Uncle Peter's voice giving the birthday calls. "Now all little boys and girls of 2BL have just had SUCH a wonderful Christmas party. They have been eating Christmas cake. So now I will give them a call." Then he went through the names, ending up with "and little Ray! Oh, I'm so delighted to give little Ray a call.

Have a good time, Ray." Little Ray brought his size seven and a half shoes to the floor, and looked murderous. "When does Uncle Peter come off the air?" he inquired. "Half-past six," they told him. "I'll wait," said Mr. Alsop. CURTAIN.



La Bon Bonn

THE widow of Heinrich Hertz, the German pioneer in air wave research, is a radio fan. Her home is in Bonn.

A HAPPY NEW YEAR

*We wish for you,
With never a care
To make you blue,
May Good Fortune take
Your hand and say,
"I'm sending the best
Around your way."*

*May nobody come
To make a din,
When quiet you sit
And LISTEN-IN.
Let 3LO help
To make you bright;
There's something to hear
On every night.*

*So tune in the set;
For all folk know
There's plenty to hear
From 3LO.
And this is the wish
We gaily call,
A HAPPY NEW YEAR
To one and all.*

—Sonia Hardie.

Nothing to Say

MISS STEPHANIE DESTÉ, who was heard from 3LO in a recital of readings from the Scriptures and classical poets on Sunday, December 30, tells of one occasion where she was afraid she would lose her power of speech from want of exercise. It was when she was playing at Dayton, Ohio (where the rubber tyres come from), and which is a city of deaf-mutes. About 25,000 are employed in the rubber works, and, whilst they are excellent workers, they take a little getting used to. "I well remember my first visit to a restaurant," said Miss Deste, "and the dead silence, only relieved by the chink of cutlery. I began to get terrified and to think that my own tongue would get out of order through lack of exercise; so, taking all things into consideration, I was really glad to leave."

Letting Mother Know

AS he was coming in to take the Sunday morning session at 2BL Captain A. C. Stevens alighted from the tram in Elizabeth Street, and, as he did so, noticed two little boys of about five and six years of age also get down from the same tram and run to the pavement where each of them threw up in the air a carrier pigeon. The announcer was intrigued, and stopped to have a chat with the youngsters, who told him that they lived in the Eastern Suburbs and always attended Sunday School in the city. Their mother was very anxious always about their going into town alone, and for this reason they always brought with them these pet carrier pigeons and released them on arrival in the city, to "let mother know all was well."

Fie, Sir Knight!

ONE morning not long ago a charming voice asked for Mr. Knight Barnett on a 2BL 'phone. He was there in a second. "Hello!" said the voice, "is that Knight?" "Beloved," replied the wicked one, "it is Morn."

A.B.C.

THE Turkish Government is using loud speakers to teach the public the new alphabet, which incorporates Latin instead of Arabic letters. The Government operates Radio Stamboul, the only station in Europe transmitting Turkish and other Oriental music.



Here is a bit of wide-eyed verse from the other side of the world:—

When I think of the wireless wave,
Of its flight through the great concave,
I marvel how New Zealand hears
The buzz of a bee in Algiers!

Fine Tuning

WRITING from Nouméa M. Pierre Vernier thanked 2BL for the "pleasure you gave us by re-broadcasting Radio-Paris. You easily realise how my friends and myself were happy to hear this voice talking in our own language from the motherland." Strangely enough, M. Vernier, in describing his receiver, does not mention the type of tuning dial he employs.

How's That?

DID Julius Caesar play cricket? To this question nine hundred and ninety-nine



people out of a thousand would answer positively in the negative. Well, they would be quite wrong. It may sound strange; but, nevertheless, it is a fact that Julius Caesar did play cricket; and, further, he actually played in Australia. This assertion will, no doubt, conjure up a vision of Cassius, behind stumps, taking a sly shot at Caesar's balls,

and Mark Antony, standing by, exclaiming: "Ah, Cassius, it is not meet That you should try to trick our Caesar so. When he did have one toe within his crease; Alas, my countryman, it is not cricket."

But, no, 'twas not the Julius Caesar of Ancient Rome who donned the pads and gloves, but a professional Surrey cricketer of the last century, who came to Australia with George Parr's second English team, which visited Australia in the year 1864. This interesting record has just been disclosed by Mr. R. H. Campbell, who has become famous for his talks on cricket, and his remarkable cricket statistics broadcast from 3LO.

RELIGIOUS BROADCASTING

The Director of the Queensland Radio Service (4QG) in this article outlines the various methods of rendering religious programmes adopted throughout the world

By J. W. ROBINSON



Mr. J. W. Robinson

IN view of the discussion which arose in New South Wales recently regarding a reported, and probably unfounded, suggestion that the stations should arrange their own services and broadcast them from their studios, it is of interest to note the different systems adopted in various parts of the world in regard to the broadcasting of religious services.

In some parts of America where the stations are owned by companies and where no license fees are paid by listeners it is a common practice for various religious organisations to hire certain stations for periods and to broadcast their services, mainly for propaganda purposes.

One of the most notable religious broadcasts of this description was carried out a few months ago by the International Bible Students' Association, which took over for one night the whole chain of stations owned and operated by the National Broadcasting Company and linked them together by means of land lines, so that a simultaneous broadcast of a service might be effected. The president of the association (Judge Rutherford) preached the sermon, and the I.B.S.A. claimed that their arrangements were responsible for the greatest simultaneous broadcast in history. The association did not only link up something like forty-seven big stations throughout America, but it also hired several powerful short-wave stations and cabled details regarding wave lengths and times of transmission to its representatives in various parts of the world. The representatives of the International Bible Students' Association in Australia received this detailed information and passed it on to the Australian broadcasting stations with the request that an attempt be made to relay the service.

The scheme was undoubtedly an ambitious one, and, according to reports received by mail from America, successful. It excited a good deal of comment in some church circles in Australia at the time, and there were many people who asked why, if an association in America could arrange such a broadcast, was not somebody in authority in the Church of England wide awake enough to make arrangements for an Empire relay of a sermon by the Archbishop of Canterbury.

All religious services broadcast in America are not, however, arranged by the churches or movements which hire the stations. A number of churches are linked up by land line with broadcasting stations in the ordinary way, and their services relayed.

THE RADIO VICAR.

THERE is, however, a system in vogue in some parts of the United States which is of considerable interest. It comprises the appointment by some large station of a clergyman who is termed a "Radio Vicar." This gentleman arranges all the religious broadcasts for the particular station he serves, and, of course, conducts most of those services. Naturally the broadcasting station, being the direct employer of this clergyman, takes particular pains to see that his qualifications are of a very high or-

der, and that he is, both mentally and by voice, a suitable person to conduct broadcast services. This system, however, while very interesting, is not one which gives a great deal of variety to listeners. Some of the larger stations which have appointed a "Radio Vicar" have, however, taken very great pains to see that the type of service he broadcasts is one which will suit all tastes. No particular creed or denomination is catered for, but the services broadcast are simple Christian devotions without any creed or dogma being mixed with them. It is interesting to note that there are many people in America who strongly advocate this type of religious broadcast. Many thinking religious leaders have expressed the opinion that such a system has enabled radio to do in two or three years what the various sections of the Church have been unable to do in many centuries—bind all the people of the nation together in simple Christian worship.

METHODS IN ENGLAND.

IN England methods adopted for broadcasting vary. The British Broadcasting Corporation relays from different churches, but its officers seem to be guided in the choice of their churches for the ability of different ministers to cater for a radio audience. The official organ of the British Broadcasting Corporation has not contained any definite statement of policy in regard to religious broadcasting lately, but a study of the programmes set out in it indicates that while variety of service is given, preference is also given to ministers who give the best types of services. One of the largest broadcasting stations operated by the British Broadcasting Corporation broadcasts practically each Sunday from one large church, and the minister in charge of that church is referred to as a "Radio Vicar." It is significant, however, that all references to him in the British Broadcasting Corporation's official organ placed his title in inverted commas, apparently an indication that his title is an American adoption rather than a definite title bestowed by the British Broadcasting Corporation.

WHAT AUSTRALIA DOES.

IN Australia, as in other parts of the world, various systems have been adopted since broadcasting first commenced. With a limited number of "A" class stations, none of which is available for hiring purposes, there has not, of course, been any letting-out of the stations to any particular section for the broadcasting of services purely for propaganda purposes. Numerous "B" class stations operate within the Commonwealth, however, and some of these have been utilised by religious organisations. One of them was, in fact, erected and operated by a religious body, but even in this case the majority of the transmissions were of general rather than of a religious nature.

Most of the "A" grade stations have broadcast the best church services available, and have shown the strictest impartiality in their choice.

Australian stations are (with the exception of 4QG) owned by companies, which, of course, direct their own affairs, and have therefore broadcast churches the services of which meet with their approval.

It should be clearly understood that this does not mean that stations have broadcast churches the creeds of which meet with their approval, but the services of which were of a high enough standard, and were conducted in such a manner as to result in the stations being able to please their listeners. A glance through a file of any wireless magazine in Australia is sufficient to show that the actions of the managements of all stations during the past few years have been such as to give the public a wide range of variety in church services, and also that a very fair apportionment of services has been given to various churches.

QUEENSLAND SYSTEM.

IN Queensland a system for the allotment of church services has been in force for two or three years, and is very rigidly adhered to. The census figures for the State are taken, and from the section dealing with religion the percentages of the various denominations are carefully worked out. These figures show that the religions of Queensland are made up as follows:—Church of England, 41 per cent.; Roman Catholic, 24 per cent.; Presbyterian, 13 per cent.; Methodist, 11 per cent.; Congregational, 1 per cent.; Baptist, 2 per cent.; others, 8 per cent.

Church service broadcasts are arranged strictly in terms of these percentages. A church service schedule is planned out once per year, and services are allotted various denominations in quantity according to the percentages shown in the census figures. This means that for every fifty Sundays the Church of England receives twenty-one (21) morning and evening broadcasts, the Roman Catholic Church twelve (12) broadcasts, and so on. One Roman Catholic Church is linked up with 4QG, and the authorities of that Church, knowing when their services will be broadcast, make their own special arrangements and their choice of preachers. Four Churches of England and the main Cathedral are joined by land line. One Presbyterian Church—the largest in the city—is wired up, and the dates for Presbyterian broadcasting are given to that church. The Presbyterian Church of Queensland then

makes its own arrangements for the provision of broadcasting services. One Methodist church is linked up, and the Methodist Church is advised of the dates on which the station will broadcast.

The station does not, of course, act arbitrarily in the allotment of dates. The schedule is prepared well ahead, and allotments are made, as far as possible, to suit the convenience of the ministers concerned.

The effect of such an arrangement is obvious. All sections are catered for in true proportion, according to their religious beliefs, and the churches themselves have the opportunity of broadcasting placed in their own hands to make the most of.

Take, for instance, the Presbyterian Church. St. Andrew's, in Creek Street, Brisbane, is linked by land line, the whole cost of which is borne by 4QG. The Presbyterian Church of Queensland is then allotted 13 per cent. of the broadcasting dates for a year (this figure being the percentage of Presbyterians in Queensland), and makes its own arrangements for the provision of services. It knows a year ahead when it will be broadcast, and if special visits of prominent Presbyterian ministers are considered, they may be planned so as to take place at a time when a broadcasting date for Presbyterianism falls due.

The only drawback to such a scheme is that some people claim that, from a listener's point of view, a simple, non-episcopalian service makes better broadcasting than a Church of England service, and that on a percentage basis the former services are smaller in number than the latter. This, however, is purely a matter of opinion, and the fact remains that the system is one which gives an absolutely fair allotment of services and which gives the various Churches a golden opportunity to provide of their very best for the sake of the vast unseen congregation.

WHAT OF THE CHURCHES?

SO much, however, of the attitude of the broadcasting stations to the Churches. What now of the attitude and actions of the Churches in regard to broadcasting? One of the main reasons quoted in support of the alleged desirability of a new system in New South Wales was that complaints were received from listeners in regard to the standard of church services placed on the air, and that in order to ensure that listeners receive of the best, it was considered better for the broadcasting station to take the absolute control of the arranging of services.

Those who have listened carefully over a period of a few years must, unfortunately, realise that there is a great amount of truth in this contention. It is quite true that a large number of clergymen and ministers have failed to realise that the presence of a microphone in their churches has presented them with an opportunity for reaching and influencing for the Glory of God a far greater number of people in one night than they could hope to reach ordinarily in a lifetime.

It is true that many ministers have realised this to be a fact, and have striven to make their broadcast services something more than an ordinary devotion—have tried to make them specially suitable for broadcasting. Listeners in all parts of Australia have learned to look forward to some services (even though they are not from churches in which they profess belief) purely because the ministers concerned have attempted to arrange their services and sermons specially for radio. These ministers have realised the value of the movement to the Church, and have grasped the wonderful opportunity which broadcasting has placed in their hands. They have reaped the benefit and the reward in the pleasure they have given listeners of all creeds.

Others, while being anxious to broadcast, have, however, neglected to realise the fact that once a microphone is placed in their

church during a service the walls of the building no longer act as its boundaries, but that the utmost ends of the earth are the points which mark the extent of worshippers.

It is not so very long ago since, at a synod meeting held in Australia, one minister attempted to have a resolution moved to the effect that the most solemn devotional portion of Church of England services be deleted from the broadcast stations. Fortunately for those who regard the Sunday church service broadcasts as an important spiritual episode of the week, his resolution met with the fate it deserved. The gentleman concerned was doubtless quite sincere in his beliefs but he neglected the fact that there are thousands of people who, by sickness, old age, and distance are unable to be present at divine service on Sundays, and to whom broadcasting has come as a direct blessing from God. The deletion of the most sacred portion of a service from these people would have ruined the whole effect of broadcasting them.

There are numbers of churches the ministers of which regard broadcasting as most important, and co-operate very closely with their organists and choirmasters so as to provide special music on broadcasting days, but there are others who do not consider broadcasting important enough to acquaint their musical directors of the dates, and so attempt to give their hearers something special in the way of music.

Recently one large church in a capital city was not ready for broadcasting a service, and its minister advised an engineer who inquired that the matter had been overlooked. This in spite of the fact that he had had in his possession a regularly set out schedule

months before, and had written to the station concerned accepting the dates allotted and stating that he was quite prepared to broadcast.

In the face of instances such as these, it is a matter for little wonderment that those controlling broadcasting stations are inclined to give very serious consideration to the institution of some scheme which will give their listeners a better sort of religious service.

It may be argued that those controlling broadcasting could make a more careful selection and refuse to broadcast churches which did not make a special effort on behalf of the unseen congregation. Such a contention is to a certain extent correct, but has the objection that it might lead to favoritism. Besides, the selection of one or two best ministers and the granting to them of all broadcasting is not very much different from the American system of each station appointing its "Radio Vicar."

Broadcasting stations are never free from criticism regarding the quality of their programmes, but this is a case in which the remedy (unless it be in the form of a studio-given service) does not entirely lie in the hands of the broadcasting officials.

A large number of ministers have done much to make the broadcast service a great success, but a correspondingly large number seem to have failed to realise its value and usefulness, and seem to have failed to make the most of their opportunities. Surely the radio movement is so world-wide nowadays that these men should take more notice of their radio work and do a little better for the public.

Aero Club 'Planes Test Radio in Flight

SINCE the installation of short wave transmitting and receiving equipment in the New South Wales Aero Club pilot members are showing increasing interest in the apparatus and its possibilities. Mr. S. V. Colville, the engineer responsible, has left no stone unturned, and his inter-plane telephony tests have been highly successful. The ground station VK2FA has been able to maintain two-way telephony conversations with the Avro Avian VK2FB. This is probably the first use of wireless telephony as applied to aviation in Australia. A test which will be of great interest to Australian experimenters was tried on Friday, December 28. A flight of machines left Mascot aerodrome at 6 a.m. They passed over and landed at Newcastle, Coffs Harbor, and Ballina, arriving at Ballina at 5.30 p.m. Telephony was attempted with some success between two of the machines throughout the flight, using a wave length of 35 metres.

A POTENTIOMETER may be cheaply and easily constructed from a carpenter's lead pencil, by taking out the lead and clamping it on to a suitable mounting, with a brass strip across each end. Mount a slider above the lead on two small brackets, and the job is complete.

IN WIRING up a valve receiver take care that the wire from the grid of the valve does not run parallel with the plate lead, as otherwise interaction will occur.

IT IS POSSIBLE to use a valve receiver using the drop of potential of the "A" in place of the "B" battery with excellent results. In other words, no "B" battery of any description is required. Such a receiver is known as the Unidyne

MAKE A NEW YEAR resolution to always keep the connections on your receiver clean and free from dust. Terminals not nickled are apt to get dirty and rusty. They should be cleaned frequently.

THE USE of a potentiometer across the "A" battery when using a soft gas-filled valve greatly increases the efficiency of the receiver.

WHEN YOU HAVE found an extraordinarily good spot on your crystal, carefully drop a little beeswax or paraffin wax around the catswhisker where it makes contact with the crystal. In practice this has kept a good spot for months at a time.

NEVER SWITCH OFF the filament battery until you have dulled the filaments by means of the rheostat. Such practice considerably shortens the life of your valves.

Gilbert and Sullivan Favorite

MISS VIOLET JACKSON, the possessor of a pure soprano voice of great charm, and who sings with excellent intonation, expression, and enunciation, will be heard from 2AR on January 10. Miss Jackson has been connected with the Gilbert and Sullivan Opera Company for three years, and appeared in the whole repertoire with James Hay.

POPPY PLANT AND PEG PAGE are providing very acceptable vocal duets at 2BL. "Poppy Plant" hides the identity of an artist very well known to radio fans, who has made an exhaustive study of the microphone, with the result her voice broadcasts excellently, and she is training her partner to acquire the same microphone "sense"—a very necessary adjunct to successful air work. Their songs are in lighter vein, and strike a harmonious note in the nightly programme

Famous Land-line Broadcasts

The vast amount of detail behind the long-distance land-line transmission is seldom realised by the listener. In this article Mr. Allsop, who has been responsible for many famous broadcasts of this nature, tells of the extraordinary amount of forethought required.

By RAY ALLSOP (Associate Technical Editor)

FEW listeners, I am sure, realise the organisation behind a broadcasting station and the amount of detail required to put a programme successfully on the air. Not only is there the programme organisation, but there is also the technical arrangements, with which I will deal exclusively in this article.

On Melbourne Cup day you switch on your set, then hear a clear description of the event directly from the course. Very simple, isn't it? But do you ever try to imagine how it is all being done?

CUP DAY BROADCAST.

Let me take the case of the last Melbourne Cup. Every "A" class station in Australia, and I think New Zealand, was linked up for this national event. First of all, a microphone was installed at the Flemington course, and connected by land line to 3LO's 371 metre and 3ME's 32 metre control room. From there it was split to 3AR, and a special land line provided by the P.M.G.'s Department carried the broadcast to 5CL, Adelaide, and 2FC, 2ME, 28.5 metres, and 2BL. At the Sydney terminal the line carrying the broadcast was again split to feed 4QG, Brisbane. 6WF, Perth, received and relayed the broadcast from the now famous Sydney short wave station, 2ME, while 7ZL, Hobart, relayed 3ME, Melbourne, short wave.

From these details you will obtain some idea of the organisation and the efficiency of the P.M.G. telephone engineers in providing good lines that have not been especially built for broadcasting work.

PENRITH SPEEDWAY.

The first long land broadcast in Australia was carried out on Eight-hour Day in 1924, when 2BL put over a description of the events at the Penrith Speedway, the distance from Sydney being approximately 38 miles. The first all-station link, when Mr. Collins, representing the Commonwealth Government, made a speech in connection with the launching of the Commonwealth loan in 1925

JENOLAN CAVES.

Now for some technical details on a few of 2BL's long land line transmissions. The first was Jenolan Caves, from where a complete programme was transmitted. At the Caves House a power amplifier was installed to transmit the speech and music over the land line of 170 miles to 2BL's control room. Wires were run from the power amplifier in the Caves House to the underground caverns, where a network of connections were installed so that an amplifier and microphone could be connected to the various points in the caves, from which Mr. Wiburd, the Caves caretaker, was to give a description of the various formations.

Bedtime stories were told from the bottom of the Devil's Coachhouse—a huge cavern that is actually big enough to take the G.P.O. inside it. Later, a concert was transmitted from a cave named the Music Hall—a cave noted for its peculiar resonance.

KOSCIUSKO BROADCAST.

Another long land-line transmission was

carried out from Kosciusko, a distance of 350 miles from Sydney. In this transmission the power amplifier was located in the hotel, and connected to the Sydney line, and the input side to a line which was run up the mountain, about two miles to the snow line at Dainers Gap.

Here another small amplifier and microphone were set up on the snow, and at this point under electric spot lights Mr. Lambie, director of the Tourist Bureau, and Mr. Speet, house manager, gave a description of the surrounding mountains and a little instruction on the snow sports—old "Mike" nearly froze up that time.

COAL MINE.

Technically, a very interesting transmission was carried out from a coal mine at Katoomba. A description was given from the skip while it was actually descending the 1700 feet, and a concert given by the Welsh miners half a mile underground, a description of wall hewing by the mine manager, and a charge of dynamite fired. From the amplifier in the mine office, which was connected by line to 2BL, a pair of wires were led to a pair of spring contacts, which, in turn, waved against a pair of brass rings fitted to the side of a reel, containing 1700 feet of wire.

The inside end of the wire was connected to the pair of rings, and the outer end to a miniature amplifier in the skip. As the skip descended it drew the wire off the reel, elec-

trical contact being kept through the spring contacts against the moving brass ring, thence to the amplifier at the mine head, the amplifier in the skip being provided to lift the tiny microphone currents over the 1700 feet of wire to the power amplifier.

The descent complete, the operator in the skip connected the two wires to another pair that ran half a mile into the mine tunnel, where a "mike" had been previously installed. There the complete circuit from the microphone, half a mile under the ground, 1700 feet up the shaft to the line, 68 miles to Sydney, 2BL's control room, five miles line to the transmitter at Coogee, and then your loud speaker or head phones wherever you were.

G.P.S. REGATTAS.

Successful descriptions of the G.P.S. regattas have been accomplished by using a small transmitter on the official boat following the races, picked up by a receiving set at Gladsville, and then fed to the control room of 2BL.

This brief description may give you a little idea of the details behind—let us say, the loud speaker—not the scenes.

The tasks of the programme department, who try very hard to meet the public demand, and the announcers who, when due to some electrical failure of an outside concert, have to keep the programme running smoothly in some way, in my opinion, are far more arduous than all the electrical problems.

THE PROGRESS OF RADIO

1st Week: "Oh, yes! We got the set the other day. It's a Wungly Gooyla, with six valves and a wonderful dial. Best set on the market. We're having some trouble just now with the accumulator. It's a Seltzer—best British make—but we connected up the wrong wires and the valves blew out, or something. Anyhow, the mechanic's fixing it. He's from Wonk and Wonk—best wireless firm in Sydney, you know."

1st Month: "You should come out and hear our wireless. I tell you, there's nothing like it in Sydney. So clear and distinct. We got a new speaker. Floods the house. You see, after all, it's the speaker that counts. We got a new one that registers the high notes as well as the low notes with a wonderful clarity and fidelity, and a richness of tone hitherto thought impossible. 'Course, I know they say that about every loud-speaker, but ours is the goods, all right. Come over to-night. We're getting all the A stations—4QG, 5CL, 3LO, 2FC, 2BL, and on good nights we get right over to . . ."

1st Quarter: "I say, what do you think of the programmes they're running nowadays? Good heavens! I could do it better myself! Nothing but comedians and lowbrow music. What I say is: Comedians and jazz may be all right for SOME people, but they should consider how many people there are who really want something good. What they want to put over is something instructive—something that will be uplifting to people. . . . Well, sorry you've got to go, old man, but I've got a lot of work to do myself. Why not come over to-night? There won't be much on the wireless—some opera company, I think. But James Gag'll be on some time, and they're giving the boxing from the Stadium. Ought to be good. You'll come!"

1st Year: "No; I'm not taking much interest in wireless just now. Except when there's something good on. I like the news and the market reports and the fights and the cricket. And Jimmy Gag, when he's on—never seems to be on nowadays. There's too much talking, I think. Yes, young Jimmy tunes in now."

Oh, no—he doesn't like the Children's Session. The wife listens in to that. Jimmy likes the jazz pieces and the back-chat sketches. He hasn't any appreciation of the Higher Things. I don't know what these kids are coming to. When I was his age. . . ."

PROGRAMMATIC PERSONALITIES

A Shy Contralto

BEHOLD Miss Nance Marley, whose not-too-much-so contralto is becoming more and more familiar to 2FC and 2BL listeners-in.

Miss Marley came out from Newcastle-on-Tyne 17 years ago (when she was very, very young). She began to sing when she was seven years old, and has studied continuously since then. For the last three years the Bennett-Norths have supervised.

Things progressed quietly until the Goulburn, Kurri Kurri, and Ballarat Elsteddfods championed her. Aged adjudicators threw laurel wreaths; and paragraphs found their way into the newspapers. Miss Marley was a find. Miss Marley was one of those people of whom one would hear more. As the novelists originally remarks, "THEN SUCCESS!"

Which, of course, is very nice and very pleasant. We mean, if you were to have laurel wreaths thrust upon you, and enthusiastic paragraphs printed about you, you would naturally feel pleased, and you

wouldn't mind telling people about it, would you? Well, Miss Marley is shy. And perhaps a little nervous. At any rate, we managed to find out that her greatest relaxation is cooking. "But, of course, you can't put that in," she said. She likes the concert platform better than the lonely microphone, because "I like to see the expressions on people's faces." In the circumstances, this is rather a good indirect compliment to her singing. And Miss Marley can sing only operatic, concert, and serious music.

Yet still waters have a habit of running deep; and the shy people of this world generally have something to be shy about. So we believe that, as Mrs. Bennett-North told us, Miss Marley has intense dramatic instinct, and the power of putting personality into all her renderings.

Besides, Miss Marley has only just begun her career. We shall be able to judge much better later on.

Musical Comedy Tenor

HERBERT BROWNE, whose fine tenor voice is delighting hundreds of people nightly in the successful musical play, "The Desert Song," has renewed his acquaintance with Victorian listeners, and was heard from 3AR on December 30. Many people who enjoy his artistic work are not aware that he is a fully qualified engineer, and commenced life with the idea of devoting his energies to this profession; and it was not until he sang at a concert on the voyage from England to Australia that he considered the idea of taking up music seriously. Since that time he has made remarkable strides; he has been associated with Marle Burke in leading parts in various musical comedies.

Mr. O. J. O'Connor, well-known announcer at 3LO and 3AR, and popular children's story-teller, under the name of "Plain Peter."



Mr. Gerald Walenn, the well-known Conservatorium violinist. (See interview below.)

Gifted Pianist

CHARLOTTE ROBINSON, a gifted young pianist, who is again in Sydney, has spent five years abroad furthering her studies. She was at the Royal College of Music, London, where she secured her A.R.C.M. diploma. She fulfilled many concert engagements in London, and studied with Tobias Matthay. Later Miss Robinson went to Vienna, where she was a pupil of the great teacher, Smil Sauer, who himself was a pupil of Liszt. Before returning to Sydney she gave a recital in London, which was very favorably criticised by "The Times" and other important papers. Miss Robinson has broadcast through on 2FC on various occasions, and in the new year further studio appearances, it is hoped, will be arranged.

Thanks to Annie Laurie

HERE is Miss Peggy Dunbar, whose delicate contralto voice has been broadcast from 2FC for the past two and a half years with excellent results. "People I've never seen before have written to me, and given me engagements to sing," she said, "and I have had many outside engagements simply through broadcasting."

Miss Dunbar began broadcasting on the programme of "a tearoom over the road," and eventually was given an audition by Mr. Anderson.

"I sang 'Annie Laurie,'" she said, and chuckled. "Were you nervous?" we inquired. "Oh, no," she replied, "I was just thinking how much I have to thank 'Annie Laurie' for. A few years ago I wouldn't have thought it possible.

"Of course," she remarked, apropos of nothing in particular, "we are really Scotch; but we have been here many years." We cleared our throats, and said: "You must have been quite a child when you came out, Miss Dunbar." We flatter ourselves that we have the MANNER. She laughed. "Yes; I've spent a good deal of time here at school," she confessed. ("Confessed" is an admirable word.)

Miss Dunbar spends her spare time playing tennis and swimming. And as she is at home during the day she does a little housework, too. And she studies very hard, and practises regularly, and sings only classic songs, and wants to keep on singing them.

A pupil of Madame Emily Marks, Miss Dunbar has gained many successes at concerts, and with the Goulburn Choral and Operatic Society.

A Distinguished Violinist

WE managed to corner Gerald Walenn in the corridor outside 2BL's studio. "An interview?" he said. "Well, now; what can I tell you?" "Everything," we suggested. Mr. Walenn sat down on a rickety chair just outside the control room. His story ran thuswise:—

Gerald Walenn was born in London. He studied at the Royal Academy of Music under M. Sainton, and later under Emille Sauret, among the greatest masters of the violin of their time. He recalls with great pleasure a command to appear before Queen Victoria while he was in his teens. He was afterwards presented to Her Majesty, who mentioned in the course of her conversation that the Mendelssohn Concerto he had just played was one of her favorite pieces of music. Her Majesty recalled that Mendelssohn himself, with M. Sainton, had played it for her.

Mr. Walenn has toured considerably—many times through the British Isles, and through France and Germany. He made a prolonged tour of the United States and Canada, and was almost persuaded to stay there; but "I was too fond of the Old Country," he said.

For ten years he was leader of the famous Walenn String Quartet, which he organised with his brother Herbert, the well-known cellist. When the Great War began the quartet was disbanded. "Is that enough?" asked Mr. Walenn. "Why, you haven't arrived in Australia yet!" we exclaimed. "Very well," he said, "I'll tell you about that."

In 1917 he came out to the Elder Conservatorium, Adelaide, to be principal violin teacher on the staff, to lead the quartet, and to give periodical recitals. Some of his happiest memories of Adelaide are of his two appearances with Henri Verbrugghen's visiting New South Wales State Conservatorium Orchestra. Then in 1923 the director of the Sydney Conservatorium, Mr. (now Dr.) Arundel Orchard offered him an appointment to teach on the staff of the Conservatorium, and to organise and lead the string quartet. The invitation was accepted.

Mr. Walenn likes broadcasting. "There is a certain fascination about it," he says, "although I felt rather uncomfortable at first without an audience." Speaking of his work he said that he was fortunate in having many very talented Australian students. He thinks very highly of Mr. Vincent Aspey, who, by the way, won the violin championship at the Radio Elsteddfod.

"Mrs. Walenn and I have made many good friends in Sydney," he concluded, "and these, with your wonderful climate, make life in Australia very happy for us."

So we don't think he wants to go back.



MISS NANCE MARLEY

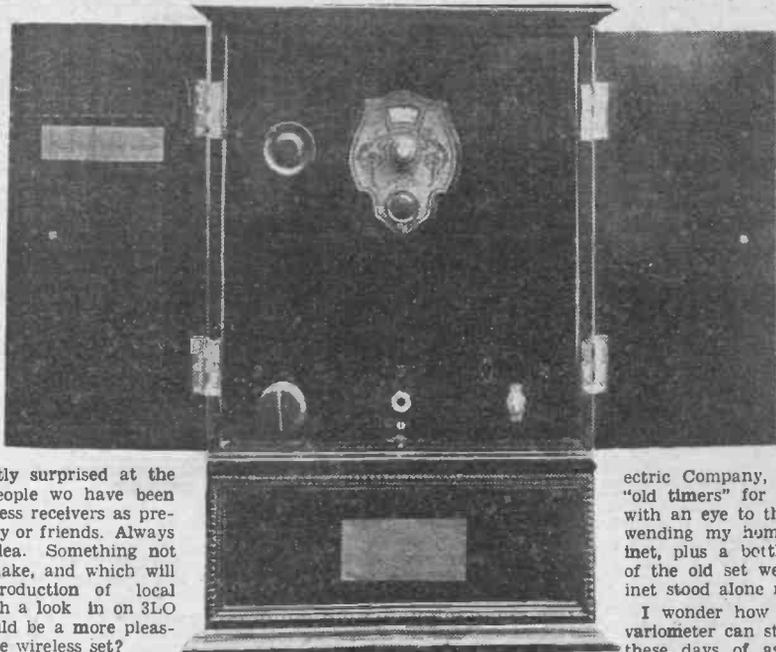


MISS PEGGY DUNBAR.

THE *New Year* GIFT THREE

It's never too late to make your friends a gift, even though the Christmas season is ended.

Here is an easily-built and inexpensive gift which you can make in a few hours.



Little or no trouble, and no expensive components involved in construction.

By
DON B. KNOCK
(Associate Technical Editor).

I HAVE been pleasantly surprised at the large number of people who have been contemplating wireless receivers as presents for their family or friends. Always it has been the same idea. Something not too expensive, easy to make, and which will give good quality reproduction of local broadcasting stations with a look in on 3LO occasionally. What could be a more pleasing gift than a neat little wireless set?

Almost every wireless enthusiast will have parts of all descriptions lying about in his sanctum, and with a little application, a few coils, transformers, etc., it is an easy matter to knock together a really efficient three-valve receiver. That is all right—the making of the set—but to make a set for a present, and to give it to the recipient minus a cabinet of some kind savors somewhat of disappointment. In this brief article you will see illustrated a neat little set which I have named THE NEW YEAR GIFT THREE.

It originated from the same idea which must be uppermost to-day in the minds of a great number of people—a seasonable present. The best way to go about the proposition is to obtain a cabinet first, then build the set. A look around the wireless dealers will bring to light sundry cabinets awaiting disposal at a ridiculously cheap price, compared to the prices originally asked for them in earlier days. They may be marked and scratched, with perhaps a little piece chipped off here and there, but what is the matter with the varnish brush and the French polish? In a couple of hours one can make a shabby-looking cabinet a glistening piece of furniture!

The cabinet housing the New Year Gift Three should be recognised by many. It once contained an old Geophone two-valve receiver. They did good work in the early days, but, in common with many other pioneer sets, have been superseded by more modern types. The cabinet is one of the most attractive in appearance one could possibly wish for. Recently the British General El-

ectric Company, Ltd., had a few of these "old timers" for disposal very cheaply and, with an eye to the future, I was to be seen wending my homeward way with this cabinet, plus a bottle of polish. The innards of the old set were removed until the cabinet stood alone ready for modernising.

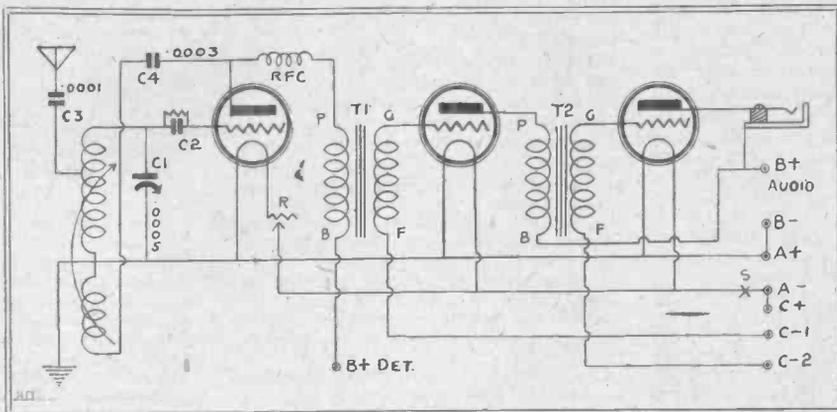
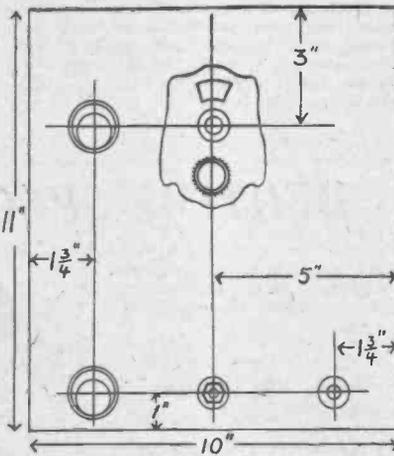
I wonder how many realise that an old variometer can still be made good use of in these days of astaticism in coils and the like?

It so happened that the old receiver had a variometer in the aerial circuit and it is a certainty that there must be a lot of these once proud components lying around in the wireless rooms of countless "fans." The first contemplation was the good old Reinartz, until I saw the variometer. Then I decided to let the variometer enter upon a new role by tuning the stator the same as any other coil with a .0005 mfd SLF variable condenser and letting the rotor do duty as a feedback "inducer."

The circuit diagram shows what happened to it. A tapping was made somewhere about the centre of the stator for an aerial connection, thus giving a fair degree of selectivity. The stator and rotor were left connected in series and the mid point between the two used for filament return, rotor of tuning condenser, and earth connection. The outer end of the rotor was connected through a .0003 fixed stopper condenser to the plate of the detector, and here was the nucleus of a perfectly good oscillator to cover the broadcast band of wave-lengths!

The height of the cabinet allowed the insertion of a baseboard high enough to enable the B and C batteries to slide underneath, making the final set very compact.

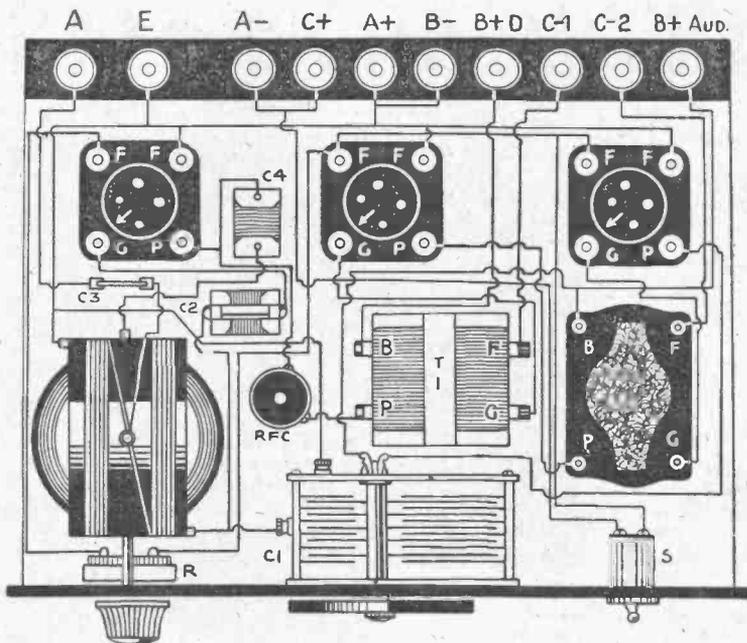
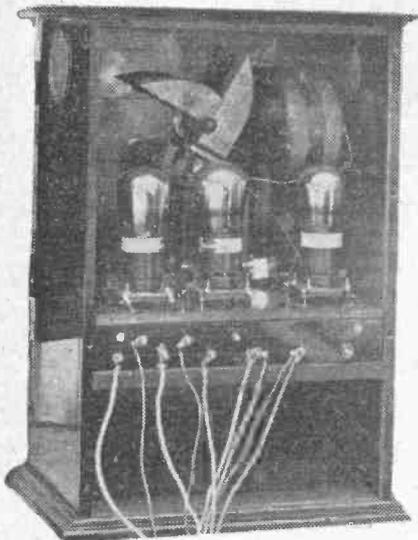
It was no use spoiling the ship for the tar, so good audio transformers were used. These were an A.W.A. Ideal in the first stage and a Philips in the second. A.W.A. anti-vibration valve sockets were used, and six-sixty valves throughout. Used in any Reinartz type receiver, one may always depend upon



the best of performance from these excellent British valves, with extreme economy in battery consumption. Those used in the New Year Gift Three are S.S. 6075 H.F. (detector), S.S. 610P. (1st audio), S.S. 610P. (2nd audio). These are all six-volt valves so the set is used with a six-volt accumulator.

A 20 ohm. rheostat controls the filament voltage on the detector. The negative bias on the first audio is 4½ volts and 9 on the second. Any good variable condenser may be used, the one in the original is an Igranipacient .0005 S.L.F., used with a Pilot Art dial.

I have given a drilling diagram with this article, but this will only be of use to those who may have one of the same cabinets available. The knob on the left of the tuning



dial controls the rotor of the variometer, and the knob below this, at the base of the panel, the 20 ohm. rheostat. Next in line are the single circuit jack for the output and the battery switch. A .0001 Wetless fixed condenser in series with the aerial lead will help the selectivity along considerably, although, by connecting the aerial directly to the centre tap of the grid coil (the old variometer stator) the selectivity is ample for normal use. The .0001 fixed condenser was found essential in testing the set in my own location, due to the fact that I can see 2BL'S aerial "over the fence." C2 in the circuit

diagram is the usual .00025 grid condenser and 2 megohm Mullard leak.

When testing the set, give the detector 50 volts on the plate and the audios 90 to 100 volts. Reaction is controlled by the rotating coil in exactly the same way you would tune a Reinartz with a variable condenser. All local stations will romp in at full loud-speaker volume, and 3LO and 3AR are often heard with good volume.

The New Year Gift Three is easy to make and use. It is the ideal little present, and, if you don't believe me, give her one like this and watch her smile in gratitude!

SOME BRISBANE BEDTIME PEOPLE

The Sandman and Percy

THE first bedtime stories told from 4QG were delivered by the director (Mr. J. W. Robinson) under the title of "The Sandman." One evening Mr. Robinson, in answering a letter from a little listener, said that if he could find anyone who could play a mouth organ he would provide a few minutes' music from that insignificant but extremely popular instrument. Listening in that night was Mr. James Tyson, who had played the mouth organ since he was five years old. At 9 o'clock next morning Mr. Tyson was in Mr. Robinson's office, and he was appointed as the new Sandman on October 21, 1925. Today the Sandman at 4QG is known by little listeners throughout Australia and New Zealand. He has introduced imaginary trips by radio and various musical instruments, and to-day he plays 25 different novelty instruments, and can imitate 32 different birds and animals.

Looking round for another novelty Mr. Tyson discovered he possessed powers of ventriloquism, and forthwith introduced "Percy," who now vies for first place with "Sandy" in the hearts of the kiddies and grown-ups alike. The Sandman and Percy up to October, 1928, received from radio admirers something between 5000 and 7000 letters. Mr. Tyson is only morning news announcer at

4QG, and official Speedway announcer at Davies Park during Saturday night broadcasts.

"Little Miss Brisbane," "Bebe," and "Bunty"

WITH a view to giving variety even in bedtime stories it was decided in the early days of 4QG's existence to allot certain evenings to different bedtime story tellers. The Sandman was given Mondays, Thursdays, and Fridays, and the next appointment was that of "Little Miss Brisbane," with her two associates, "Bebe" and "Bunty," on Wednesday nights. "Little Miss Brisbane" in private life is Miss Mavis McFarlane, secretary to the director of 4QG. "Bebe" is Mrs. Hilda Woolmer, official accompanist at 4QG; while "Bunty" is Miss Margaret (Peg.) McFarlane. "Little Miss Brisbane's" sister.

Striving always to provide a quiet and dignified half-hour on a Wednesday evening this combination seems to exert never-ending energy to display a drawing-room atmosphere throughout.

One of "Little Miss Brisbane's" accomplishments is short story writing, and it is



The Sandman and Percy.

"Bebe," "Little Miss Brisbane," and "Bunty."

worthy of note that almost without exception the stories told by her on Wednesday evenings are her own composition.

The Bedtime Band, consisting of "Bebe," piano; "Bunty," mandolin; and "Little Miss Brisbane," ukulele; renders many enjoyable selections, and often accompanies "Little Miss Brisbane's" sweet contralto voice.

IN THE AIR and ON THE AIR

2FC and 2BL

Of No Importance

ON Wednesday, January 16, the H. W. Varna Company will produce "The Woman of No Importance" at 2BL Studios. The series of plays Mr. Varna has reduced to tabloid form, so eminently suited to broadcasting, continue to find favor with listeners who enjoy "the spoken word" on the air.

Mystery Stories

CAPTAIN FRED AARONS has been conducting a series of talks through 2BL service, and to "round them off," as he expressed it, he has introduced an entirely new note, which is intriguing his many listeners. "Mystery" stories quicken the imagination, but the one he has chosen for the afternoon on January 14 — "The House Slide"—will, we trust, not prove as mentally devastating as its name. Quite a departure from the usual routine of talks, these yarns, with their "guess-what-it-is" ending, are holding the interest of a number of listeners, as the many letters the captain has received will vouch.



Capt. Fred. Aarons.

Cowley and Maxwell

EDITH COWLEY AND IAN MAXWELL are again in Sydney after an extensive and successful tour, and an appearance has been arranged for them on Thursday night, January 17, at 2BL. Light popular songs and brisk dialogue provide a pleasing act, which will be welcomed by listeners.

Second Classic Night

THE "CLASSIC NIGHT" SERIES at 2FC are proving the contention originally put forward that "old" and "new" music should not be permitted to intermingle—for most of the alleged music which comes under the comprehensive term "modern" cannot lay just claim to the title. The programme on Wednesday night, January 16, has been arranged by Horace Keats.

Bright Songs

"YE MERLE TRIO" is a new combination appearing at 2BL; bright songs, good novelty piano work, and violin solos of the popular type provide a diverting half-hour for listeners who prefer this type of entertainment, and the programme for Friday night, January 18, is full of sparkling numbers.

Manly Band

ON SUNDAY, JANUARY 13, the Manly Band will be on the air through 2BL between 3.30 and 5.0 in the afternoon, and between 8.30 and 9.30 in the evening. Despite the continual demand for something new and novel—which is not confined only to broadcasting in this restless phase in the world's existence—really good band music has lost none of its popularity, and the Manly Band, ranking, as it does, among the leading instrumental combinations of Sydney, provides a universally acceptable entertainment. Mr. J. Pheloung, the conductor, is an ardent radio enthusiast, and boasts a flattering following "on the air."

Pacific Problem

FROM THE LYCEUM on Sunday afternoon, January 13, Rev. J. W. Burton, M.A., will speak on "Australia's Native Problem in the Pacific." His address deals with missionary activities, and should prove of interest to many 2FC listeners. A musical programme will be provided by Eleanor Stanton, Lotys Lescaut, and the "Brunette Trio."

Hospital Concert

THE 2FC HOSPITAL CONCERT PARTY is going far afield on Saturday night, January 19. Nepean District Hospital is its destination, and listeners may anticipate a jolly programme. Charles Lawrence is, as usual, master of ceremonies, and he has with him Leslie Austin, Dorothy Dewar, R. A. Bartleman, Peggy Dunbar, and Carlton Fay. The concert will be broadcast between 8.0 and 9.30 p.m.

Y.M.C.A. Debate

THE Y.M.C.A. "A" DEBATING TEAM is coming to 2BL on Monday night, January 14, to indulge in constructive argument. The subject has not yet been definitely decided upon, but a matter of current interest will be chosen, and in the capable hands of Messrs. R. Kidson, A. Simpson, and George Snow (affirmative), and Messrs. R. Chapple, L. Starke, and D. McLeod (negative), the interest of listeners will be well-sustained.

Warde Morgan

ALTHOUGH he has many calls on his time Warde Morgan generally manages to sandwich in between his activities a little broadcasting, and on Sunday evening, January 13, he is collaborating with Daisy Richards in a unique song recital—unique, inasmuch as the numbers have never been done on the air before. Miss Richards is well known both to 2FC listeners and Sydney concert-goers, and the programme, which has resulted from much careful thought and planning, should offer lovers of artistic work a musical treat. Kathleen Roe, who is playing the accompaniments, will also include pianoforte solos.

3LO and 3AR

A "Century" at 3LO

MR. FREDERICK CHAPMAN, who has given several series of talks from 3LO,



Mr. F. Chapman.

will deliver his hundredth talk on January 12, 1929. He made his bow before the microphone on November 29, 1924, and since that day has covered a wide area, chiefly from a geological standpoint, discussing at length the formation of various rocks and fossils. The hundredth talks that have been given over the air are of particular interest to naturalists, and any listener desiring a repetition has merely to send in a request.

"Breaking the Ice"

LISTENERS who enjoy a bright and witty one-act play, crisp with repartee, should not fail to tune into 3LO on Monday, January 7, when Mrs. Maurice Dudley, assisted by Charles Dyson, will present "Breaking the Ice." The excellent work of these two favorite artists are well known.

Songs of the Air Force

THAT very fine baritone, J. Alexander Browne, will be heard from 3LO on January 10 in a recital of "Songs of the Air Force," a cycle by Eric Coates, two favorite numbers being "Billy" and "The Finest Job of All." Mr. Browne has been before the public for many years now, has toured Australia, New Zealand, and Tasmania many times, and whether in operatic selection, oratorio excerpt, or popular ballad, the same



Mr. J. A. Browne.

artistic finish marks his work, and gives great pleasure to his audiences.

Popular Baritone

JOHN D. FRASER, the popular young baritone, will be broadcasting from 3LO on January 12. As a member of the Essendon Operatic Society he has played leading parts in "The Arcadians" and "Our Miss Gibbs," and was successful in the Kyneton musical competitions held two years ago, when he carried off the first prize in both the tenor and baritone sections.

Canoeing Time

A SEASONABLE TALK will be given from 3AR on January 10 by Mr. E. A. Gollan, director of the Y.W.C.A. Canoe Club, who will speak on "Canoeing as a Sport and Recreation," and will give a description of many canoe trips up the Yarra.

New Zealand 'Cellist at 3LO

FRANK JOHNSTONE, the popular 'cellist of the Strad Trio, will be heard in Popper's "Hungarian Rhapsody" on Sunday, January 6, when his artistically rendered solos will add considerably to the enjoyment of a well-arranged programme. It will be remembered that Mr. Johnstone was one of the best-known musicians in New Zealand, and organised a unique orchestra composed of 25 'cellos, which gave many recitals in Wellington.

Record Broadcast

ON Sunday, January 6, a very fine programme of the world's best records will be broadcast from 3AR. The programme has been arranged to represent a grand concert. Orchestral selections will be given by Sir Hamilton Harty and his Halle Orchestra, Sir Henry Wood and the Queen's Hall Orchestra, and Felix Weingartner with the Royal Philharmonic Orchestra. Records of Ben Davies, the distinguished English vocalist, will be included in the programme, and the world-famous contralto, Dame Clara Butt, will sing two favorite melodies, "The Rosary" and "Down by the Riverside I Stray."

Wireless Weekly

Incorporating "Radio in Australia and New Zealand."

FRIDAY, JANUARY 4, 1929.

NEW LEAVES

THIS is the season of new leaves. The deciduation of last year's folios, worn and serried with the erasures of many broken resolutions, is complete. We mark the date neatly on the virgin sheet, and ponder over the early hopes of the new year.

Such meditation is no less pleasant because we know that this sheet, too, will in twelve months have borne many erasures. Indeed, it is this which lends fascination to this new year occupation of making resolutions; for it would be a very dull world if we pre-arranged our lives in this way. Thus our first resolution will be not to make a resolution which mayn't be broken.

But this does not prevent us from attempting to pre-arrange the lives of others—a secret busybody desire we share with the rest of the world. It affords a great satisfaction to write resolutions for other people of our acquaintance—although, unfortunately, we cannot see how they will be kept.

For instance, if we were Mr. Charles Lawrence, we would resolve, firmly and zealously, never to joke again about mothers-in-law.

Or if we were in the shoes of the 2BL Boxing Announcer we would inscribe our intention of increasing our vocabulary, and to take breathing exercises at the earliest opportunity.

If we were Uncle Bas we would resolve to take a small travelling crane with us next time we went fishing, in order to bring home the catch.

If we were any one of a number of reverend gentlemen who protested vigorously in the press against the supposed inauguration of the studio religious service, we would resolve always to make sure of our facts before venturing our opinion in public.

If our voice was that of a certain soprano we know, then we would resolve never to broadcast at all—or, if this was too drastic, then not more than once a year.

The same resolution could be made for a number of other "popular features" without seriously limiting programme talent.

Again, occupying the earthly figure (!) of Mr. H. P. Brown, our first resolution would be never to confuse radio with red tape.

But we cannot well refuse these people the right also to share our resolution never to make a resolution which mayn't be broken. We, therefore, expect each of those resolutions we have made for other people to be broken before 1930 appears.

Educational Programme Matter

AMONGST the useful purposes to which broadcasting is being put nothing is more valuable than that of education. Although the primary and, perhaps, main object in maintaining broadcasting services is to cater to the lighter demands of the mind, entertainment is not the only reason for providing programmes.

Someone has said that variety is the spice of Radio; that entertaining and diverting items constitute the backbone of broadcasting, and that all the other items are fill-ins to complete the programme. That is a bit over-drawn, no doubt; but it cannot be denied that people firstly seek to be entertained and amused by the radio programmes.

Many items even of entertainment can be instructive and educative; not all diversion is to satisfy a passing mood or to leave a transient impression on the mind of the listener. And, similarly, anything in the programmes that attracts and holds the listener's interest will leave an impression. So we note the efforts of the broadcasting directors to make the programmes attractive, and in addition to the major proportion of light music to include a sufficiently satisfying ingredient of more solid and useful matter. Not sufficient to produce mental dyspepsia, however. Too much highbrow matter will unbalance the programme, and upset the interest of the listener. And it must be remembered that educational or instructive matter will fail to satisfy if it is not interesting. As in public speaking the rendition must depend upon manner as well as matter. Many fine lectures, full of helpful and desirable points,

only partly succeed in inducing the desideratum aimed at simply because the lecturer did not consider the all-important item of attracting and holding the interest pleasingly.

Many of our stations have regularly included matter of educational value—lectures, talks, travelogues, etc.; that is indirectly educational, as distinct from the direct services for schools. Those indirect or suggestive instructions are of more value than the peculiarly appropriate lessons by radio for schools. The schools nowadays are so complete in curriculum and quality of teachers, as well as convenient in location for the vast majority of the population, that the aid of broadcasting is not important. At all events, it is not urgent. It is in the direction of adult and adolescent education that broadcasting has an urgent call to answer. The education authorities have not been over anxious to avail themselves of the opportunities of direct school services. Some three or four years ago 3LO, Melbourne, endeavoured to enlist the aid of the Education Department in establishing such a service, and offered the station for school lessons, but the offer was not accepted.

Hence it became necessary to concentrate on the indirect education items by lectures, talks, and dissemination of information of an instructive character. Any examination of the published programmes will show that ideal of service, in addition to the other phases of broadcasting has been constantly kept in mind, and many expressions of appreciation testify to the success of the service.

The Wireless Doctor's Prescriptions

A GOOD "B" battery fuse can be made from a torch bulb and socket. The bulb should be connected in series with the "B" negative lead.

THE ORDINARY receiving crystal has a resistance of approximately ten to forty thousand ohms, and can therefore be used in radio receivers as fixed resistances. The ohmage must first be found with a Wheatstone Bridge, particulars of which appeared in "Radio."

A NOVEL FRAME aerial may be made by inserting four pegs in each of the corners of a door, and winding the wire round these. As the door can be swung through an arc of about 180 degrees, this permits the proper directional adjustment of the frame aerial.

LEAVE YOUR RECEIVER alone when thunder is about. A ground switch and lightning arrester in your aerial circuit is well worth while. It may not only save your set, but also your house from destruction.

A VOID a gas-pipe earth. It is exceedingly dangerous. The fire underwriters include this rule.

INDUCTION from high-voltage power lines may be minimised by running a small aerial near to and parallel to the lines, and inductively coupling it to the set. The current induced in the circuit will oppose those from the main aerial. If correctly done, the loss in signal strength is negligible.

USE YOUR radio as a barometer. When crackling and hissing of static is prevalent, you may expect bad weather. This may be observed on crystal as well as valve sets.

THE OPERATION of all crystal detectors is based on uni-directional or one-way conductivity. If the contact wire be touching an appropriate spot on the surface of the crystal, currents will pass in one direction, far more easily than in the reverse direction. A buzzer is useful to find a good spot on the crystal.

WHEN ONE END of the aerial is connected to a tree, the strain in a high wind can be greatly reduced by inserting a spring about $\frac{1}{2}$ of an inch by 6 inches long in both ropes, before passing through the pulleys.

A CHEAP and fairly efficient insulator may be made from a large wooden spool or reel. First bake the spool in an oven to drive off all moisture, then soak in melted paraffin wax. Bake again, and finally give a good coat of shellac.

THE IMPEDANCE of an inter-valve coupling should be at least equal to the impedance of the valve itself.

A GOOD earth system is as necessary as a good aerial. The water pipe is not always satisfactory, especially if it travels far before reaching the earth. In such cases a good earth can be made by burying a large coil of fencing wire in spiral form—about six feet deep.

IF YOU have an "L" type aerial, and change to the "T" type, you will cut down the natural wave-length considerably.

A SLIDER for a tuning coil can easily be made by soldering a piece of brass to the base of a terminal to make contact with the coil. The rod may be a length of brass wire of such a size that the terminal slides freely. The terminal is clamped on by means of the terminal set screw.

The Safety Valve



Readers are urged to express their opinions 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.

Boxing Broadcasts

Dear Sir,—What has happened to Sydney boxing? I used to listen-in to the boxing broadcasts; and I generally found the announcer's descriptions perfectly plain and lucid. In fact, from what he said, I could follow the whole fight. But now the boxers seem to have gone mad. The poor announcer evidently can't follow them. His frenzied utterances make me pity him in his distress. Last Saturday night must have been extremely painful for him. He simply couldn't find one word to describe what was happening.

Of course, it may be the announcer himself who is at fault. Many among my friends have said so. But I cannot believe that the New South Wales Broadcasting Company Limited would allow an inefficient announcer to broadcast in their name.

Yours, etc.,
AN OLD PRIZEFIGHTER.

Wendouree.

At the present time, making due allowance for summer conditions, I consider this circuit as good as most, and better than some of the five-valvers I have handled, and they were no duffers.

I must thank you for placing the circuit, as well as others, before readers; and I would like to mention that as you specify a R.F. choke as being essential, that I have not yet noticed any marked benefit from same. I have put several sets together so far, and tried the effect of a Radiokes Choke first, and afterwards Honeycomb Coils of 150 to 250 turns, but I seemed to get quite good results without them. I am wondering why.

Yours, etc.,
WILLIAM COWEN.

Swansea.

Good Wishes

Dear Sir,—Permit me to thank you for the weekly copy of your esteemed publication, which reaches me so regularly every week. I have read the "Wireless Weekly" almost from its inception—needless to say, with great benefit to myself and others. I have watched with interest its development and continued improvement.

Let me congratulate you on the excellence of the "Wireless Weekly." I have found it most instructive and illuminating, though at times I have not been able to wholly agree with some views expressed in an occasional theoretical article. Wishing "Wireless Weekly" and "Radio" every success for the coming year.—Yours, etc.,

REV. P. J. BAKER.
Xavier College, Kew, Melbourne.

Many Thanks

Dear Sir,—Would you kindly publish my thanks and appreciation to your numerous readers for their generous offers, assistance and information rendered in response to my request through your valuable paper for the back numbers of "Radio," 15/8/27, and "Wireless Weekly," 19/11/26. I may add that I had replies from Queensland, the far west of New South Wales, and numerous closer centres, which only tends to show the generous spirit which prevails in those interested in the wireless world. I hope I will be able to reciprocate with my experience at a later date. The information was thankfully received and will be faithfully applied, and I wish them all the compliments of the season.

Yours, etc.,
W. H. AUSTIN.

West Ryde.

The Imperial Rheinartz

Dear Sir,—In the Information Service Department recently, I noticed that one of your readers seemed dissatisfied with the results he obtained from one of the circuits which appeared in your journal, and he apparently concluded that the said circuits were more for advertising purposes than otherwise. This has prompted me to write you regarding the splendid results I have had from time to time, and particularly with the Imperial Reinartz of "Wireless Weekly," August 10.

Previous to that I had (as I thought) some splendid results with five-valvers, and had not the slightest conception of what a good three-valver could do. To date I have tuned in at full speaker volume all the "A" class stations of the mainland, and also most of the "B" class, which I got with the five-valver. I have also received 1YA, 2YA, and 7ZL (though not so loud, of course). 3LO comes through at midday on the speaker with fair volume, and I have tuned in 2FC and 2BL repeatedly without aerial or earth, and on favorable nights 3LO and 4QG also.

Weather Reports

Dear Sir,—Practically all country listeners will agree with Mr. R. M. Russell's letter ("W.W." December 21) that the time for broadcasting weather and news items as at present, about 6.45 p.m., is useless to the farmers, who are perhaps more interested in these items than anyone else. The weather report is useful to us for obvious reasons, and as we cannot, like Mr. Suburbia, buy our evening paper to read on 'bus or ferry, the news is also very nice for us to have.

6.45 is too early, as even if we hurry up and finish our work by then, the average country set cannot receive on loud-speaker at that hour, as it is then still daylight. If 2FC (not 2BL, which seems generally weak) could give us the news and weather at about 7.45 p.m., it would be a very real boon to the farmer. That talk on cricket for New Zealanders has been great, and it is given at 8.50 p.m.

Yours, etc.,
A. E. WALKER.

Dorrigo.

Educational Subsidy

Dear Sir,—The time is come when, in the interests of the individual members of our great Commonwealth, and in the corporate interest of the Commonwealth itself, the A class broadcasting stations should give urgent and careful consideration to a broad scheme of national education.

Too long have our broadcasting facilities been doomed to the service of the lowest and most unworthy of our people's emotions; too long have we seen a power, which might do much for the uplifting of our national mentality, degraded to the purposes of amusement and transient pleasure; too long have we regarded as a pretty toy the instrument which can join the nations of the earth together, and as a pleasing gossip the Voice of Universality.

It is time that our Governments or our Education Departments should subsidise daily educational sessions, no more for the schools than for the people. It is done in England. In England all authorities have combined to form syllabuses of public education. But it is not being done here, although Australians are proud of the fact that their educational systems are above all others. Australians should be ashamed of the fact that, after broadcasting, technically, has become almost perfect, nothing has been done, even experimentally, to bring nearer the accomplishment of public instruction. We are lamentably behind the times.

I do not intend to make any suggestions here as to how an educational session may be commenced: I simply state the facts of the case, and trust that there may be others of your readers public-spirited enough to give some backing to my opinions.

Yours, etc.,
W. ADRIAN.

Carranderee.

Grin and Glum

Dear Sir,—Kindly allow me to reply to "Queenslander" ("W.W.," 14/12/28), on "4QG Blunders."

I listen to 4QG every morning, and I think the announcer possesses a really good broadcasting voice. It is a wholesome Australian one, and always comes through remarkably clearly and distinctly.

This, to my way of thinking, quite makes up for mistakes (if any) in pronunciation. The thing that matters is the news, and "Queenslander" must admit we get that, and get it well. What more do we want in the news session? It's not a lecture on English, and unless one is a professor, or at a grammar school, who cares a hang whether it's called "debbee" or "debbizz," so long as we understand?

Some people are for ever digging up and harping on technical irregularities, and in seeking the bad must allow much of the good and beautiful to pass them by, like "Grin and Glum" surveying the pot plants. Glum remarks, "What unsightly-looking pots?" Grin, not noticing the pots: "What beautiful flowers!" Is "Queenslander" a "Glum"? Anyhow, 4QG's announcer "peels the potatoes" good enough for,

Yours, etc.,
"KOBO,"
Tweed River.

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Constructional data for an All-Electric Receiver are given in the article below. Although some care and skill are required in the making, a great deal of experience is not required, as the parts are available in an easily-wired form.

I HAVE not given much publicity in technical constructional articles previously to what is aptly termed the "all-electric" receiver; the reason for my silence being that for those who are interested in total socket power operation there are many very excellent commercial productions available.

A wireless enthusiast may become very proficient in the matter of assembling, testing, and using the conventional type of receiver, with its valves deriving their filament supply from a harmless accumulator and plate voltage from B batteries, but when the construction of an all-electric set is contemplated, it is best to let well alone unless the would-be constructor is conversant with the ins and outs of power supply.

One may go to prominent companies in Sydney and buy complete and ready for action receivers, operated from the light socket or power-point in the home, with a minimum of fuss and trouble. Snap goes the switch, and the set comes to life, and plate and filament voltage worries are a thing of the past—unless the municipal electric supply breaks down, which is, fortunately, rare in these days.

The all-electric receiver only appeals to the city and suburban resident. In the country it is not to be considered, excepting in towns where alternating current supply is available. Yet Australia is in the process of continual development, and all the country towns, with reasonably large population, will, in due course, have their own electrical supply.

There is one trouble with many all-electric sets and that is, that they have a tendency to broad tuning, which may or may not be annoying when the set is used close to the transmitter of a local broadcasting station. This feature matters very little when the set is used away in the country, and the selectivity is good enough for anything. Even in the city, if a little interference is present on 3LO from 2BL, any such slight disadvantage is balanced up by the great utility of the all-electric set, and, as I have said before, there is nothing amiss with our own local programmes.

To start to build an all-electric receiver is not an easy proposition to those who are not really aware of what to expect, but when a complete kit of parts for such a receiver is placed on the market, with explicit instructions as to the assembly and the wiring, it is no more difficult to attempt successfully than the average Reinartz or Marco Four.

The Air Scout Five is an all-electric receiver, built from the complete kit of parts as obtainable from the well-known Pilot agents, Harringtons. Ltd., George Street, Sydney.

Recently the receiver operated entirely from the home-power supply has enjoyed a tremendous boom in America. This was only to be expected, as every little town has its alternating current supply. The

The AIR SCOUT

List of Parts for the Air Scout Five

- 1 panel, 24 x 8 x 3-16in.
- 1 sub-panel, 23 x 8 x 3-16in.
- 1 Pilot 1281 Double Drum.
- 1 Pilot No. 388 A.C. Filament Transformer.
- 3 Pilot .00035mfd. variable condensers.
- 2 No. 305 Pilot R.F. Rediblox.
- 1 No. 176 Set. of 3 coils.
- 1 No. 306 Pilot UY 227 Detector Rediblox.
- 2 No. 302 Pilot A.O. Rediblox with Transformers.
- 3 Pilot No. 1617 Var. Condensers, .00035 MF.
- 1 Pilot No. J7 Midget Condenser, .00025 MF.
- 1 Pilot No. 350 Resistograd.
- 1 Audio Choke Eumico or A.W.A.
- 1 Imperia by-pass 2 MF Condenser.
- 2 Imperia by-pass 1 MF Condenser.
- 1 Pilot No. 959 A.C. Resistor C bias.
- 1 Pilot No. 951 UX 171 Resistor C bias.
- 4 Pilot UY valve sockets.
- 1 Pilot UX valve socket.
- 1 3-circuit Jack.
- 1 Filament switch.

boom came with such a rush that radio manufacturers were faced with the problems of converting existing D.C. sets for power supply. Technical journals gave many instructions on how this may be accomplished in various ways. One was the use of special valves with what was termed an "A.C. Harness." These valves were simply placed in the sockets of the receiver, and by an external flex-

The cover picture shows the handsome aspect of the finished receiver. It equals most commercially-built receivers in appearance.

By DON B. KNOCK
(Associate Technical Editor)

ible combination of wire, the cathodes were heated from a transformer. Troubles then arose with neutralised R.F. amplifiers, and the like, and the application did not always prove successful.

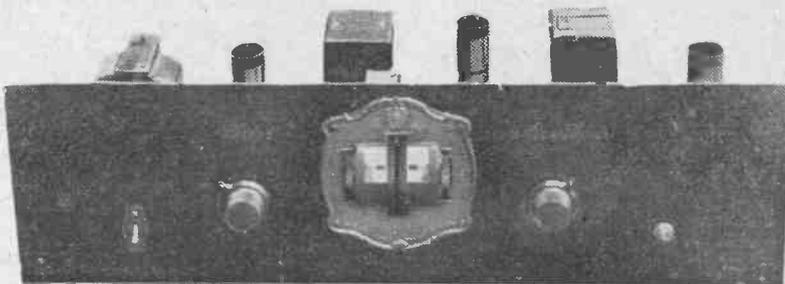
These conversions were satisfactory in their way, but were overshadowed by the introduction of the commercially-designed all-electric receivers, of which there are now many splendid examples in America. One of these is that for which we supply constructional details in this article. Realising the crave with the public for the satisfaction of watching things grow under their own hands, the material for the Air Scout Five was placed on the market in kit form, by the Pilot Company. The result is that those progressive constructors who may wish to build a receiver to operate entirely from their home electric supply now have this kit at their disposal in Sydney.

The photographs show what the assembled kit looks like in its operative form. The panel front is particularly attractive, with its drum control. The Pilot double-drum control drives a .00035 variable condenser on the left, tuning the aerial coupling unit. On the right the drive actuates two ganged variable condensers, also of .00035 m.f.d. capacity, tuning the second R.F. amplifier and detector circuits, respectively. This Pilot drum control is rather unique in its construction and action. It possesses all the convenience of quick adjustments by means of the large direct driving-wheel, and at the same time provides for an excellent vernier control, owing to the inclusion of the smaller driving reduction wheels on either side of the main drives.

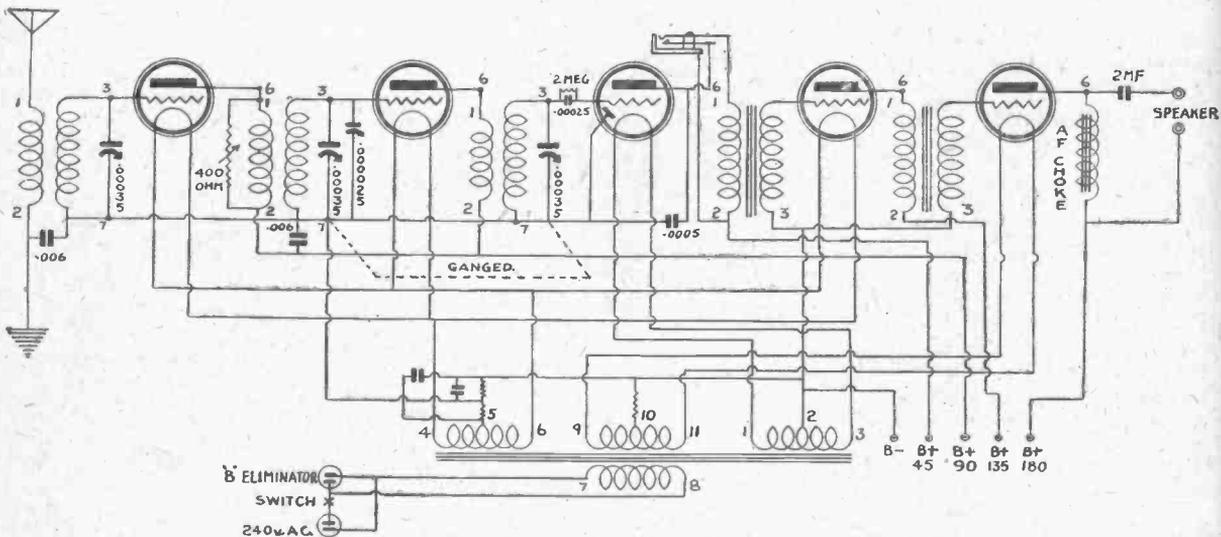
The left and right hand sections of the double drums are insulated from each other, but may be readily connected together if required, and it will be seen from the circuit diagram of the Air Scout Five that all the rotors are common. The vernier drive is particularly smooth in action, as it is taken up by a friction device, which is superior to any geared arrangement. It is generally found with a geared drive, that, unless it is a model of engineering perfection, it is not positive in action, and shows up what is termed "backlash," the most annoying of disadvantages where fine tune is concerned. Also the gears are apt to set up a combination of mechanical and electrical noise which becomes greatly magnified when using a receiver on the higher frequencies.

Owing to the smoothness of action of the friction drive, the Pilot drum would be ideal for short-wave tuning, which is not true of many drum controls. A few words of advice are necessary regarding the mounting of this

drum control. The drilling diagram shows where the panel controls are placed. The first step is to cut the necessary space in the panel. Lay the drilling template, supplied with the drum, over the panel, fixing it in position with a little seccotine. The centres for the holes are then marked through the template.



CIRCUIT PROVIDES FOR ELECTRICAL GRAMOPHONE REPRODUCTION



by means of light centre-punching. Drill the holes, and knock out the centre piece, countersinking the holes for the screws holding the drum frame. The condensers should be mounted on the drum before the whole is attached to the panel. Two little diagrams, Figs. 1 and 2, show the use of the slotted clamping brace for locking the condensers to the drums. The left-hand mounting shows how the brace is fastened for the condenser on that side, and the right-hand mounting, similarly, for the right-hand condenser. With the bracket fastened temporarily, the condenser spindle is put into the hole in the drum-shaft, and the brace is fastened to the short threaded bushing, on the dial end plate. If any doubt exists as to the method of assembly, the complete instructions accompany the drum unit. The utility of this particular drum-drive is that it allows for single or ganged condensers on both sides.

The only other controls on the panel front are a volume control (on the left of the dials), which consists of a 400 ohm resistance, a midget vernier compensating condenser across the second R.F. tuning control, a three-circuit jack, for gramophone pick-up use, and an "on-off" switch.

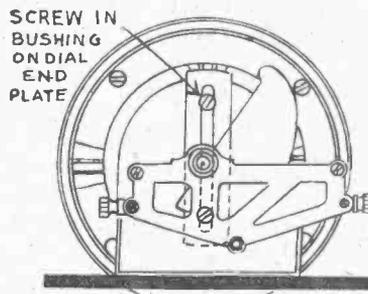
A very interesting feature of the Air Scout Five is the coil units. There are three— aerial coupling, second R.F., and detector circuits. They consist of a unique arrangement, known as the Pilot Redi-blox. Apart from this receiver, these units may be obtained separately, and built up in quick time for use in modern circuits. They should be invaluable to the experimenter in these days of quick progress. It becomes easy to make what would otherwise be complicated receivers. by the use of these Redi-blox

They are extremely compact, and eliminate many drilling and mounting problems, and are obtainable in a universal R.F. type, battery detector type, A.C. detector type, audio transformer type, and resistance audio coupling type.

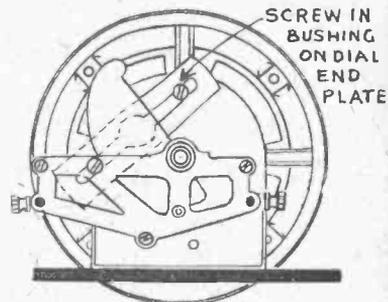
The coils for which these blocks are constructed are of the midget type, wound on special formers to plug into a standard U.X. valve socket. Coils wound on these formers

First, in the aerial circuit, we have the type 305 R.F. This is the same type in the second R.F. stage. The detector stage is the type 306 U.Y. 227 A.C. detector. This has the special 5-pin socket for the Radiotron U.Y. 227 A.C. detector valve.

Finally the two audio stages are both type 302 universal audio transformer. They may be readily identified by checking up the photographs with the wiring diagram. Look-



LEFT HAND MOUNTING



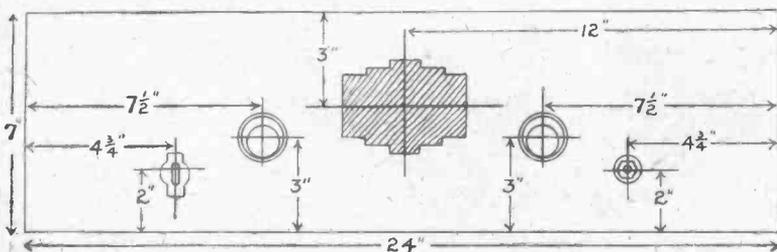
RIGHT HAND MOUNTING

would be ideal, for instance, in the Midget Screen Grid short-wave four I recently described. The coils as obtainable are made for the broadcast band, and cover a range from 190 to 550 metres, when tuned by a .00035 variable condenser. The back-of-panel views show how the Redi-blox are arranged in the Air Scout Five, and the wiring may be readily followed from the point-to-point diagram.

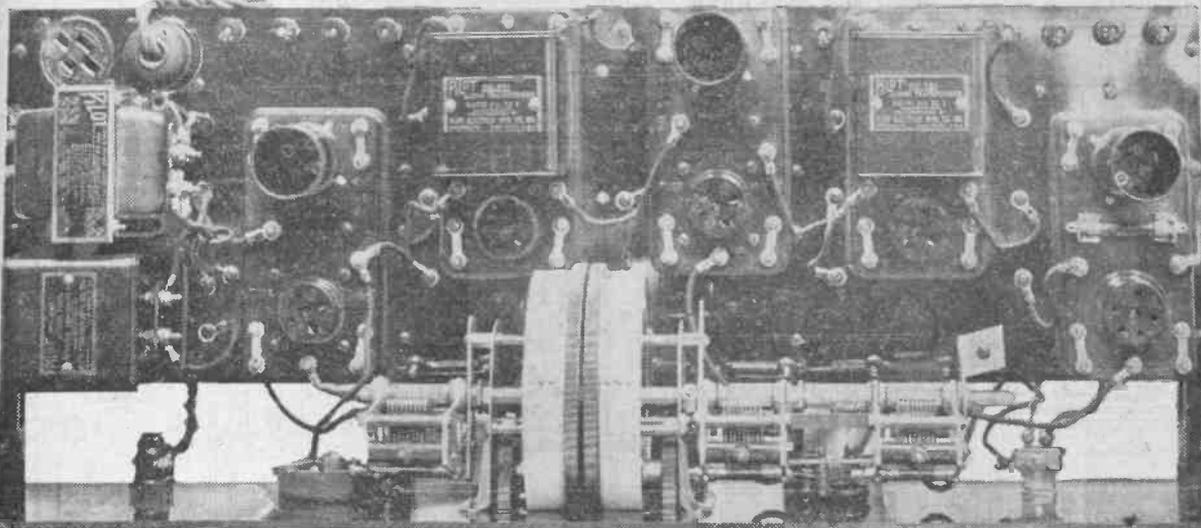
ing at the photograph plan of the set, and working from left to right, the components are in the following order. On the back of the sub-panel on the left may be seen two power plugs. The method of connecting these is apparent from the circuit diagram, showing that they are in parallel. The idea of this is to simplify the connection for the B eliminator.

By connecting one plug to the house power-point, the 240-volt A.C. supply is fed to the primary of the filament transformer for the valves, and by simply inserting the B eliminator plug in the second plug socket, which is connected in parallel, the high tension supply is taken from the receiver itself without the necessity for running a long flex lead from a separate power-point.

Immediately in front of these twin plugs is placed the filament transformer. This transformer is specially manufactured by the Pilot Company for A.C. receivers, and has many advantages to recommend it. The type

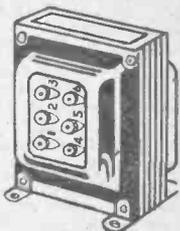


UNIQUE METHOD OF ASSEMBLY FACILITATES CONSTRUCTION



is No. 388 A.C. filament transformer. The secondary voltages obtainable are:— $1\frac{1}{2}$ volts, $2\frac{1}{2}$ volts, and 5 volts. It will be seen that these voltages are designed to operate 1 or 2 U.Y. 227 valves, 1 to 5 U.X. 226 valves, and 1 to 2 U.X. 171 valves.

There is no need to use centre tap balancing resistances across the secondary outputs, as each secondary is provided with a centre tap which is electrically correct. This transformer is designed to operate any kind of A.C. receiver up to an 8-valve superheterodyne.



In front of the filament transformer is the audio frequency choke, used in the output filter to the loud-speaker. Although in the original set this is a Pilot, any of the well-known chokes, such as Ferranti B.I., A.W.A., or Emmeo, will serve equally well for the purpose. The first of the Redi-blox is on the right of the components described. This is the first one in the order of the circuit diagram, type No. 305, for the aerial coupling, and uses a U.X. 226 A.C. valve. The next one, on the right (in the plan photograph), is the second audio amplifier, or output stage. This is type No. 302, and takes a U.X. 171 valve. The third block from the left is the second R.F. stage, also a type 305, used with a U.X. 226 A.C. valve. Next comes the first audio stage, type 302, used with a U.X. 226 A.C. valve, and, lastly, is the detector block, which has a special 5-pin socket, to take the U.Y. 227 valve. This is the type 306. The U.Y. 227 valve is of the independently heated cathode type. This should be apparent from the circuit diagram, where the grid return is shown connected to the cathode (a separate element), and the filament doing duty as a heater alone. The by-pass condensers used in the circuit are carried underneath the sub-panel, together with all the wiring.

The sub-panel need not be 8 inches wide, but should allow a space between the panel and its front-edge. This will allow ample room for the "on-off" switch, the volume

control, compensating condenser, and the jack for the gramophone pick-up. No switching system is provided for this application of the gramophone for electrical reproduction.

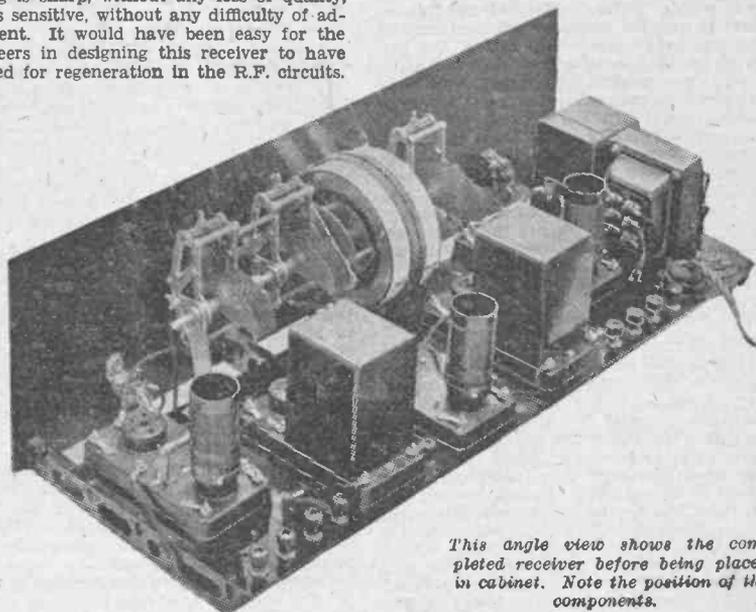
All that is necessary is to plug in a gramophone pick-up, and your loud-speaker, provided it is a good one, will reproduce records far better electrically than is possible with the gramophone itself.

The back-of-panel wiring diagram shows the lay-out of the receiver, with positions of all terminals, etc. The output for the loud-speaker is taken from two terminals on the sub-panel, as shown. Looking at the circuit diagram, it will be noticed that no regeneration is provided. By the working out of each detail with infinite care, research engineers have been able to bring the Air Scout Five to a high degree of efficiency, without recourse to regeneration. The result is that the tuning is sharp, without any loss of quality, and is sensitive, without any difficulty of adjustment. It would have been easy for the engineers in designing this receiver to have allowed for regeneration in the R.F. circuits.

but it was realised that in the hands of the average operator such circuits are liable to be critical and unsatisfactory. The Airscout Five is therefore a very desirable type of receiver for a number of reasons in its favor. It is operated entirely from the house power, it is easy to control, it gives a high degree of quality reproduction, and (very important) it does not cause interference with other listeners.

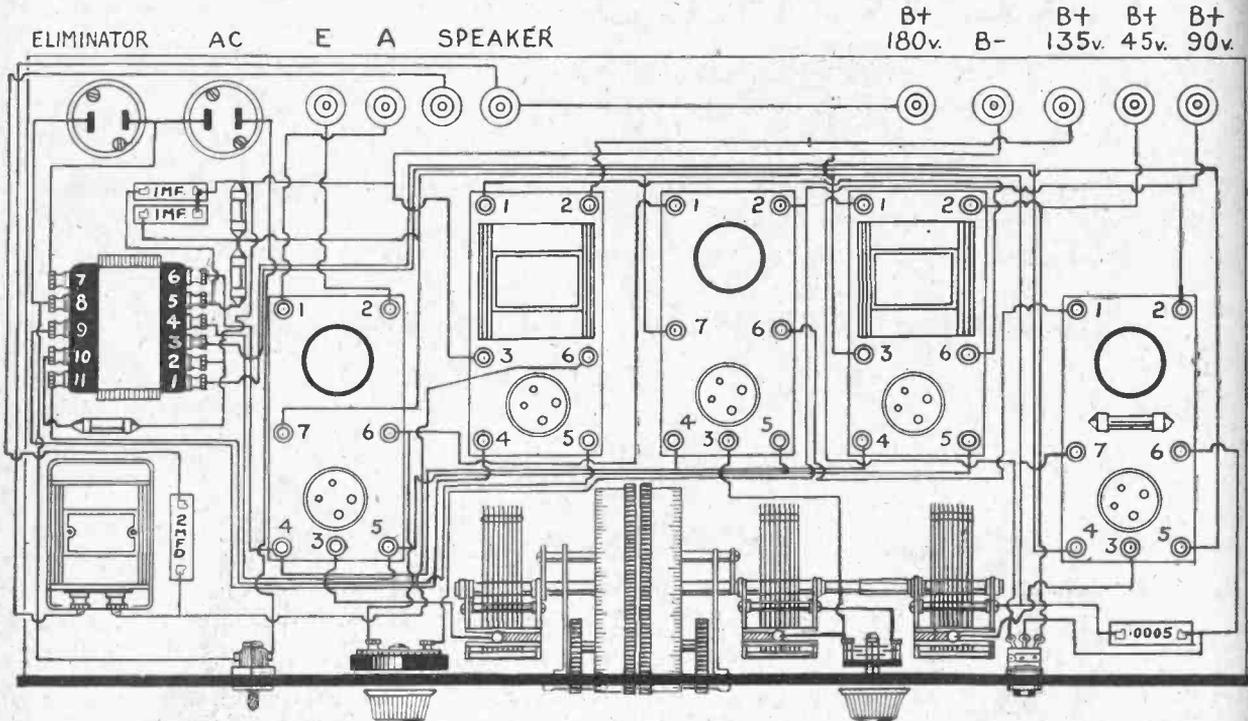
It becomes necessary from time to time to warn listeners about the excessive use of reaction. It often happens that many are not aware that their receivers are in an oscillating condition although the quality of their own reception is ruined in addition to their receivers being a source of annoyance to other listeners in the neighborhood.

The wiring up of the Airscout Five should be done with insulated flex wire such as Acme, and where leads go to valve sockets from the filament transformer they should consist of twisted flexible wire of the house



This angle view shows the completed receiver before being placed in cabinet. Note the position of the components.

NO BATTERIES : OPERATES STRAIGHT FROM POWER POINT



lighting kind. By using twisted flex. for these circuits a little capacity is included in the wiring, and has the effect of tending to filter out any alternating current hum. The wiring will be better followed from the point-to-point diagram than from verbal instructions. The set when completed is sufficiently sensitive to be used on quite a small indoor aerial for local stations, but it is necessary to use a suitably designed outside aerial for other stations.

You will find that the Redi-Blox forms one of the most convenient methods of assembling a receiver ever devised, and they are most convenient because of the elimination of so much wiring. The assembly kit for this receiver is supplied complete with instructions, and the panels are ready drilled and engraved, so that there is very little possibility of making a mistake. The best way to go about it is to mount the front panel components first and then deal with the sub-panel. For the usual outdoor aerial, this should have a length of no more than 70 feet over-all. Using this with a good earth connection local and inter-State stations will be well received, and with an indoor aerial about 40 feet long around the picture rail every local station will be at full volume. It is important to use a good loud speaker with this set, and the one used to carry out the tests was an Amplion AC9 Cone, which gave excellent reproduction free from any trace of hum.

There is one point to remember with the AC valves used. After switching on the set it is necessary to wait about 20 seconds for the valves to come into operation. This is due mostly to the UY227 detector, which requires this approximate period before the heat from the filament is transferred sufficiently to the cathode. Tuning is easy, and there are no adjustments of filament current or grid biasing, as these features form part of the design of the receiver. Set the volume control at about the mid position, and turn the two drums together. Use the compensating condenser for best adjustment, prefer-

ably on a distant station, and make final tuning adjustments with the vernier controls. For those who may wish to consider other makes and types of AC valves with this receiver, the enterprising company of Phillips Lamps, Ltd., have now placed on the market what is probably the largest range of AC valves manufactured by any company in the world. These include screen-grid AC valves, which open up very interesting possibilities in both broadcast and short-wave all-electric receivers.

Distributing Information by Wireless

There have already been many evidences of the various uses of wireless broadcasting: for entertainment, instruction, and for communicating news and information to the general public. It is a well-recognised responsibility of every broadcasting station manager to keep his listeners well informed of current happenings in politics, social affairs, sport, and commerce.

A striking demonstration of the usefulness of a station for keeping people in touch has been given by 3LO lately. The nightly appeal and prayers by the Anglican Archbishop of Melbourne, Dr. Harrington Lees, for the recovery of His Majesty the King, is at once a profound acknowledgment of the sympathetic interest taken in His Majesty's health, and a very convincing admission of the fact that broadcasting enters every home.

A more spectacular demonstration could scarcely be given: the Archbishop appealing for co-operation in prayers for the recovery of the Sovereign's health, knowing that there is no medium that could compare with the broadcasting station for addressing the largest practicable audience.

One can imagine loyal subjects of the King, in city mansion and village cottage, stand-

ing in sympathetic and respectful homage as the National Anthem is played, and the fervent Amens that were reverently muttered as the Archbishop concluded his prayers. And can we imagine any other means of exciting such interest and attention simultaneously! There certainly is nothing to compare with broadcasting as the modern means of promulgating a proclamation to the people or informing them on any subject of general interest.

We are becoming familiar with general broadcasts: addresses, announcements, etc., from one point for the information of the whole population. In Australia, perhaps, the most notable of these demonstrations was the ceremonies associated with the opening of the Federal Parliament at Canberra last year by the Duke of York. The broadcasts from most of the Australian stations were indeed an epochal transmission.

In England one would think the outstanding manifestation of broadcasts for all listeners was in connection with the general strike in 1926. The usual and older means whereby the people were able to learn of the changes in the stirring events—the press—was suddenly denied them. The press had been silenced by the strikers, but the broadcasting stations and the millions of listeners sets were still working, and could not so easily be put out of action. The Government promptly realised the opportunities open to it and practically took over the stations; at all events so far as the broadcasting of news was concerned. And in addition to informing the listeners throughout the United Kingdom of the daily position on the "strike front," very necessary instructions and information were conveyed to the general public.

Similar, but probably not so extraordinary, instances of general broadcasts could be cited in various countries: all of them would demonstrate the universal interest and attention that broadcasting produces.

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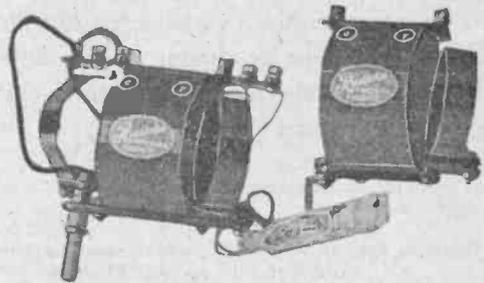
Covering wave-bands from 15 to 130 meters, and consisting of mounting base, variable antenna coil, and three interchangeable inductance units, and priced at 55/- per kit.

This Coil Kit is truly an excellent example of highly-finished, well-executed, and efficient Australian manufacture. Built and designed by Australians to suit Australian broadcasting conditions. Adopted as standard by all technical journals, radio editors, manufacturers, and experimenters who know—throughout the Commonwealth.

The Everyman's Screen Grid Four Receiver

in last issue of "Wireless Weekly" calls for

RADIOKES EVERYMAN'S FOUR S.G. KIT



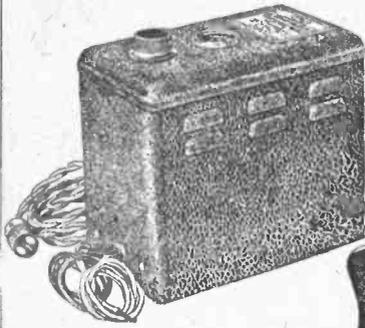
The Kit pictured above is a modified Bayer and sells for but £1/5/- per kit. May be used for any of the usual four tube receivers, as well as for screen grid work.

Well designed, beautifully finished and distinctive in appearance, this kit is particularly efficient, and one which commends itself to good attention.

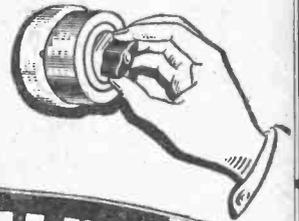
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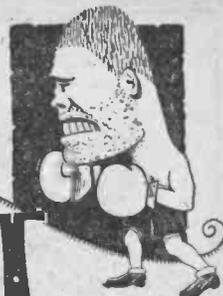
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HITTING BELOW the BROADCAST BELT



(Short-wave and Amateur Notes by VK2NO)

NOT only have we been pestered by a deluge of static on all wave-bands, but now we have to endure ruination of 5SW's international transmissions on the new wave of 25 metres by commercial telegraphy interference.

In recent days there has been a tendency immediately a telegraphy signal has arrived on top of a short-wave international transmission to lay the blame with the experimental transmitter. Perhaps on the 32-metre band previously used by the experimenter in this part of the world the complaint has at times been justified. The "old-timers," those who have been pounding a key in the experimental ranks for years, have always taken precaution to ensure that their transmitters have been tuned well clear of any telephony programme, but it must be remembered that not all are "old-timers." A large number of new-comers have arrived in the experimental transmitting ranks, and a new station starting up is apt to stray a little from the frequencies of virtue, until he is taken in hand by his more experienced colleagues. It should be obvious that the experimental transmitters' organisation forbids interference with commercial services, and the ignorant offender is speedily rounded up and informed of his "off wave" operation.

Now we have run up against a glaring case of commercial interference with international broadcast transmissions. 2BL and 2FC have attempted relays of 5SW during the past week, and listeners have been annoyed to hear the music and announcements chopped to pieces by high-speed Morse transmission. This Morse emanates from the Australian Beam station, at Ballan, in Victoria, but the beam station is not to blame for the interference. The trouble lies with 5SW. The beam stations were erected and put into operation long before international broadcasting was a regular feature, and to ask for a change of wave length in beam transmission means alteration of aerial design and a lengthy process generally.

5SW has changed from 24 to 25 metres, and, consequently, has placed itself very close to the frequencies used for beam communication. The only alternative seems to be for 5SW to find yet another frequency for its transmissions, and a cable notifying the B.B.C. of the existing interference has been sent this week. It remains to be seen what effect the cable has, for the B.B.C. is notoriously solid and slow to move. If the reception of the London programmes in the Antipodes is the main object of 5SW's existence the matter of another frequency change should be speedily dealt with, but if other parts of the world are considered first, the engineers responsible for the operation of 5SW may balk at the process of re-tuning.

Naturally this interference will exist on Radio Paris also, as this station is also near the same frequency, but, although Radio Paris started with a fine burst, it is only operating intermittently at present. 5SW's exact wave length is at present 25.53 metres.

7LO, Nairobi, was coming in with excellent strength in the early morning of December 19. His musical items were very clear, and this is the best I have yet heard

from this station. Officially the wave length of 7LO is 35 metres, but I find him a little below 33 metres according to my standard wave meter.

The well-known Philips Company have a sister station to PCJJ on the air. This is PCLL, which is to be heard occasionally on 33.8 and 18.4 metres.

ANE, Java, is to be heard with musical programmes on 15.9 metres every Wednesday from 12.30 to 13.30 G.M.T. (10.30 to 11.30 p.m., Sydney time). I do not hear much from 2XAF at present, although the other station, 2XAD, is often to be heard in the early mornings, but not too well.

Altogether international broadcasting is very spasmodic at present, but the good times will come when the relentless static and "fading" demons will take a rest. Nothing has been heard of our old friend, Gerald Marcuse, G2NM, but I suppose that, with the new regulations now in force and the advent of 5SW, he will have closed down. The transmitting fraternity will welcome him back to the key, nevertheless.

The Australian experimental transmitters have arrived on 42 metres in ones and twos. Contrary to expectations, they sound very hollow, compared to the 32-metre signals. It will take some little time to herd everyone into their ultimate place in the new frequency bands, and until this is done it requires little imagination to realise the futility of carrying on an uninterrupted two-way yarn with our American friends.

At the time of writing my own station is in operation with the 1929 tuned-plate-tuned-grid transmitter, still on 32 metres, but by the time these lines reach print a change will be made to 42 and 21 metres. My prediction is that the Australian transmitter will use the 42-metre band for local and inter-State workings, and will resort to the 21-metre band for his international work. We are in a peculiar position on the globe for 20-metre communication; but once the stations arrive there and persist in sticking to it for a while the same old thing will happen.

It is safe to say that at some time or other the owner of every experimental station in the world takes a look down on 20, and if he hears nothing but commercial signals back go his 40-metre coils in the receiver, and his transmitter stays set, without being tuned to 20. But if he suddenly hears an experimental transmitter at the other end of the earth calling CQ, there is a frantic rush to tune to 20 and answer him. By that time the calling station has given up the quest, and also gone back to 40.

My experience has been that consistent calling on 20 has eventually elicited a reply from somewhere. This band is definitely going to be our only hope for international work without interference.

Mr. Ray Carter, VK2HC, of Quirindi, N.S.W., whose station was recently wrecked by lightning, is ready to start up again. Short-wave broadcast listeners will often hear some very good telephony from Mr. Carter. Ten metres still attracts the attention of a band of enthusiasts down south, notably among them VK7DX and VK7CW.

This frequency is not actually a waste of time, but looking for signals there is like looking for the proverbial needle in the haystack.

Judging by the erratic behaviour of 10-metre signals, I do not think the Australian transmitter will, except in isolated cases, even pay any attention to the 5-metre band. For night communication up to distances 1000 miles or even 2000 miles away, the 160-metre band granted under the new regulations would be ideal. Unfortunately it is offset by the presence of countless broadcast station harmonics, heavy static, and the possibility of interference with nearby broadcast listeners. Nevertheless, it will be a very useful frequency in the winter-time, and broadcast listeners will do well to either build special receivers or take some turns off their grid coils, as there is sure to be quite a lot of experimental telephony there in the near future.

Some Japanese experimental stations have at last been licensed. Our colleagues of the Land of the Rising Sun have had a hard time of it trying to persuade their Government that they deserved a place "in the sun." Hitherto they have operated under cover, declared pirates, and of necessity had to keep their addresses secret.

Those licensed are:—J3OH, J3CF, J3CB, J3CC, J3CG, and J3CE.

Most of these are well-known men who have had countless communications with Australians and New Zealanders, and in case of trouble with their authorities I leave it to those who open up with them to find out their identity.

Notice is given here that from December 8, 1928, VK2NO will merge with VK2AW.

VK2AW has been in active operation during the last four months on the 32-metre band, and in this short space of time his signals from the master oscillator power amplifier used have been heard in all corners of the earth. VK2AW-2NO is at the moment in the process of reconstruction, and the result will be one of the most comprehensive, up-to-date, and complete experimental stations in the world.

Transmitters are being built for use on every frequency allotted to experimenters from January, 1929. The main 7000 and 14,000 K.C. transmitters will be crystal controlled, and there will be two stand-by self-excited transmitters of the T.P.T.G., 1929, type available at a moment's notice. Provision will be made for telephony transmission. The first operation from VK2AW-VK2NO will be for a while on the 14,000 K.C. band (21m.), by means of the main crystal control transmitter. It is hoped to start the ball rolling with our English friends on this frequency again.

Reports on transmissions may be addressed to the station, c/o Mr. A. W. Dye, Martin Road, Centennial Park, Sydney, or to Don B. Knock, Associate Technical Editor, "WIRELESS WEEKLY."

It is hoped to keep almost continuous watches, and in the matter of engineering the station Mr. Knock and Mr. Dye will be ably assisted by Mr. Ian Dye, who is a progressive junior operator.

AIRSCOUT FIVE

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Below is a list of parts suitable for building the receiver described in this issue.

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1 Panel 24 x 8 x 3-16 Bakelite	0	12	0	2 Pilot Rediblox, with trans.	4	12	0
1 Panel 23 x 8 x 3-16 Bakelite	0	11	8	2 Imperia 1 M.F. cond.	0	8	0
1 Pilot 1281, Double Drum Dial	1	19	6	1 Imperia 2 M.F. cond.	0	5	6
1 Pilot 388 A.C. FIL Transformer ..	2	12	6	1 Pilot 959 A.C. Resistor, C. Bias	0	12	6
3 Pilot .0005 Condensers	2	0	6	1 Pilot 951 U.X. 171, C. Bias	0	12	6
2 Pilot No. 300 R.F. Rediblox	1	13	0	4 Pilot U.Y. Valve Sockets	0	14	0
1 Pilot No. 301 U.Y. 227 Rediblox, det.	0	16	6	1 Pilot U.X. Valve Socket	0	3	3
1 Set of Coils (3) No. 176	1	5	6	1 Filament Switch	0	2	0
1 Pilot J.7 Midget Cond. .00025 ..	0	6	6	N.P. Bolts and Nuts, per dozen	0	1	0
1 Pilot Resistograd	0	8	6	Wood Screws, $\frac{1}{2}$ and $\frac{3}{4}$, per dozen	0	0	4
1 Emmco Audio Choke	0	17	6	Bus Bar Wire, per dozen	0	0	10

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Philips 3002 Eliminator	£9 15 0	Deposit, £1/4/6;	52 Weekly Payments, 3/8
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Emmco Super Eliminator	£12 15 0	Deposit, £1/11/6;	52 Weekly Payments, 4/8
R.C.A. Speaker, Model 100A	£10 10 0	Deposit, £1/6/3;	52 Weekly Payments, 3/11
Amplion, A.C.9	£9 9 0	Deposit, £1/5/;	52 Weekly Payments, 3/7

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PROVING RADIO!

No. 2. This article, the second of the series on elementary radio principles, deals with simple forms of electricity, how to create or harness it, and how to test its polarity. Nothing could be simpler than the experiments detailed below.

IN LAST ISSUE we discussed static electricity, and performed several interesting experiments, proving the presence of static electricity. We learnt that electricity generated by friction is called static, or frictional electricity.

Now we come to the electroscope, which is a simple little device for showing whether a body is electrified or not, and if it is, whether it is positively or negatively electrified.

To make an electroscope get a bottle with a wide mouth (such as a large pickle bottle), and fit a cork into it. Bend a piece of wire in the shape shown in Fig. 1, and round off both ends with a file. This done, push the straight end through the centre of the cork, and lay a strip of tissue paper 2-inch

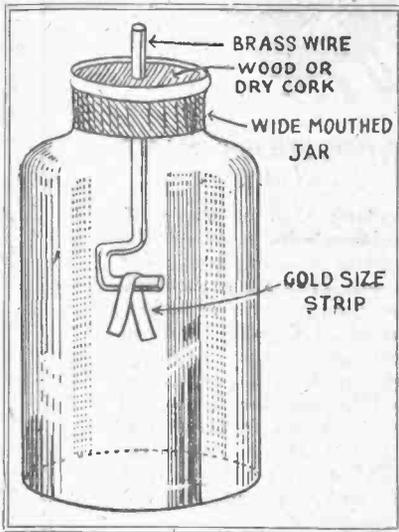


FIG 1.—THE ELECTROSCOPE.

wide and one inch long across the bent end. Push the cork into the neck of the bottle, and the electroscope is ready for use. By using gold tissue, or gold-leaf instead of tissue paper, the electroscope becomes a much more sensitive instrument.

Any number of interesting experiments can be made with a gold-leaf electroscope, and here are a few examples:—

For our first experiment this week hold a piece of lump-sugar over the electroscope, and cut it in two with a back-saw. As the sugar dust falls on it the leaves will diverge. Next take a dry violin bow; resin it well; then draw it lightly over the electroscope, and the leaves will repel each other. After this break a stick of sealing wax, and hold the broken end of one of the pieces close to the wire of the electroscope, when it will show that electricity has been generated. Then electrify the electroscope with a glass rod that has been rubbed on silk. The leaves will fly apart. Now electrify a stick of sealing wax in the same manner, and bring it close to the wire, when the leaves will collapse. This is because the negative charge neutralises the positive charge. The crystals of many substances, such as tartaric acid, borate, and tommaline, when heated, generate

electricity, and this can be proved by holding them close to the rod of the electroscope.

Next, make a small stool (if you have a similar article it may be used) about one foot square, and support it on four sticks of sealing-wax, each of which is 5 or 6 inches long. Varnish the stool all over with shellac. Then have somebody stand on this stool with a finger touching the wire of the electroscope. Now, if you repeatedly strike his coat with a dry silk handkerchief the leaves will fly apart.

These are only a few of the experiments that can be performed with this simple piece of apparatus. You will find out many for yourself, but in the meantime we must pass on to some other interesting apparatus with which we shall be able to experiment.

Another interesting piece of apparatus is the electrophorus. Though simple in the extreme, the electrophorus has the capacity of generating a larger amount of static electricity than is possible by merely rubbing a rod, a cat, or a strip of paper. Volta devised the electrophorus (pronounced e-lek-tro-for-us), and this is another simple scientific piece of apparatus that can be made.

Get two large pie-pans, and fill one of them with a melted compound formed of equal parts of brown resin and shellac melted over a slow fire. While the wax is getting hard in the pan, heat the end of a stick of sealing-wax, and fasten it to the centre of the other pan to form a handle. Now get a piece of flannel about 1ft. square, and you are ready to experiment. See Fig. 2.

The pan containing the resin and shellac mixture is called the sole, and the remaining pan is the cover. To generate electricity all you have to do is to rub the mixture of the sole with the piece of flannel, which should first be warmed, and you will then have a negative charge on it. Next place the cover on the sole, but do not let the bottom of the first make contact with the rim of the second.

Since the sole is charged with negative electricity, the cover will be charged with a like amount of positive electricity by induction. As there are occasional points of contact between them, the cover also takes on a charge of negative electricity from the sole. Before the positive charge of the cover can be used, therefore, you must get rid of the negative charge that

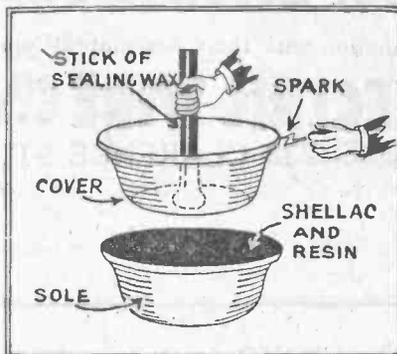


FIG. 2.—THE ELECTROPHORUS.

it has picked up, and this is done merely by touching the pan with your finger just before you lift it from the sole, when the negative charge will pass to earth through your body, and the cover will retain its positive charge. You have now only to lift the cover of the sole by the sealing-wax handle with one hand, and hold the knuckle of one of your fingers of the other hand within 1/4 in. of the edge of the cover, when you will get a spark of sufficient brightness that can be seen, and a shock strong enough to make you feel it. Now, place the cover on again; get rid of the negative charge by touching it with your finger as before; lift it up again; place your knuckle close to the rim, and you will get another spark. In fact, you can keep on getting them for quite a while before it will be necessary to electrify the mixture with the flannel again. To get more powerful shocks and sparks a Leyden jar can be used.

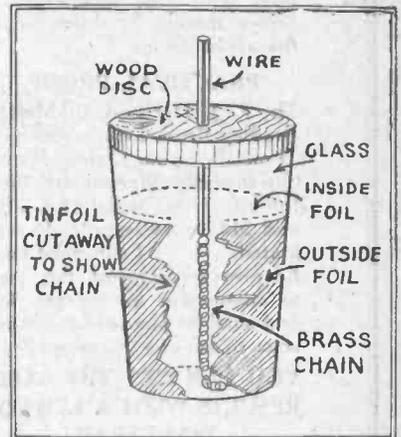


FIG. 3.—THE LEYDEN JAR.

To make a Leyden jar coat a small tumbler inside and out with tin-foil. Begin by drying the tumbler well and coating it inside and out with some of your shellac varnish; then let this dry. Cut two strips of tin-foil; then give the tumbler another coat of varnish, and before it dries apply the tin-foil so that it sticks. The tin-foil should be mounted inside and out, and there should be no air bubbles or rough surfaces. Make sure the inside tin-foil does not make contact with the tin-foil mounted outside the tumbler; otherwise a short-circuit will take place, and the charges will be neutralised.

Next cut out two discs of tin-foil and press one on the bottom inside, and one on the bottom outside of the tumbler. Fit a piece of wood or a flat cork in the mouth of the tumbler, and drill a 1/4 in. hole in the centre of it. Solder one end of a piece of brass chain about 3in. long to one end of a brass rod of the same length, and push the latter through the disc.

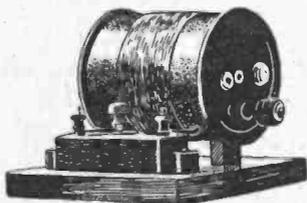
You have only to set the cork or wood disc in the tumbler mouth, and the Leyden jar is complete. See Fig. 3.

(Continued on Page 48.)

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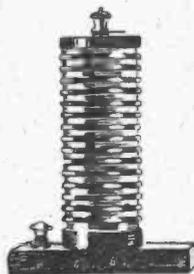
Operates effectively—cuts out interference instantly. Can be used with any broadcast receiver merely by inserting in the aerial circuit.

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Mr. F. J. Harrison, of Messrs Bradley Bros., Ltd., writes:— "I installed your Lewcos Wave trap in about three minutes, and the effect was wonderful. 2BL and 3LO were completely separated. . . . I can most confidently recommend this trap to anyone for use on any set and shall be pleased to demonstrate to anyone interested."

YOU CAN GET THE SAME RESULTS WITH A LEWCOS WAVETRAPP.

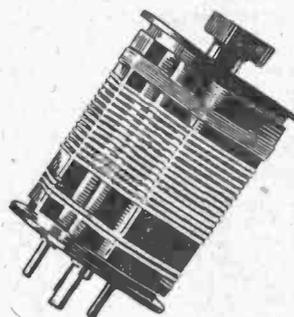
PRICE, 25/-.



LEWCOS HIGH FREQUENCY CHOKE

This prevents instability of the audio amplifier, stops howling, and clears up reception. The Lewcos H.F. choke is particularly recommended for use with screened grid receivers. May be fitted easily to your existing broadcast receiver.

PRICE, 12/6.



LEWCOS SHORT WAVE COILS

Experts are full of praise for these latest coils, which are designed for modern short wave receivers. They are particularly efficient, because the secondary is wound with silk insulated copper strip, thus reducing losses to a minimum. The ribbed construction of the former is essentially of low loss design. These coils are of especially robust build, and can be handled without fear of damaging.

PRICE, 15/-.
BASE, 3/6 extra.

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The Liverpool Electric Cable Co. Ltd.

In Conjunction with their Associated Company

LONDON ELECTRIC WIRE CO. & SMITHS LTD.

LEWCOS HOUSE, 233 CLARENCE ST., SYDNEY

Telephones { M 3821
MA 1966

Local Programmes, Friday, January 4

2FC SERVICE

EARLY MORNING SESSION.

Announcer: A. S. Cochrane.

- 7.0 a.m.: "Big Ben" and announcements.
- 7.2 a.m.: Official weather forecast, rainfall, river reports, temperatures astronomical memoranda.
- 7.7 a.m.: "Sydney Morning Herald" summary.
- 7.12 a.m.: Shipping intelligence, mail services.
- 7.15 a.m.: Studio music.
- 7.25 a.m.: Investment market, mining sharemarkets, metal quotations, wool sales, breadstuffs markets, inter-State markets, produce markets.
- 7.40 a.m.: Studio music.
- 8.0 a.m.: "Big Ben." Close down.

MORNING SESSION.

Announcer: A. S. Cochrane.

- 10.0 a.m.: "Big Ben" and announcements.
- 10.2 a.m.: Pianoforte reproduction.
- 10.10 a.m.: "Sydney Morning Herald" news service.
- 10.25 a.m.: Studio music.
- 10.45 a.m.: A talk on "Home Cooking and Recipes," by Miss Ruth Furst.
- 11.0 a.m.: "Big Ben." A.P.A. and Reuter's cable services.
- 11.5 a.m.: Close down.

MIDDAY SESSION.

Announcer: A. S. Cochrane.

- 12.0 noon: "Big Ben" and announcements.
- 12.1 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 news, "Sydney Morning Herald."
- 12.15 p.m.: Rugby wireless news.
- 12.18 p.m.: A reading.
- 12.30 p.m.: Studio music.
- 12.45 p.m.: Cricket scores, third Test match, England v. Australia, played at Melbourne.
- 12.47 p.m.: Studio music.
- 1.0 p.m.: "Big Ben." Weather intelligence.
- 1.3 p.m.: "Evening News" midday news service. Producers' Distributing Society's report.
- 1.20 p.m.: Studio music.
- 1.28 p.m.: Stock Exchange, second call.
- 1.30 p.m.: Popular studio music.
- 1.57 p.m.: Cricket scores.
- 2.0 p.m.: "Big Ben." Close down.

AFTERNOON SESSION.

Announcer: Laurence Halbert.

- 2.30 p.m.: Programme announcements.
- 2.32 p.m.: Recital of selected records of world-famous artists.
- 3.0 p.m.: "Big Ben." Pianoforte reproduction.
- 3.17 p.m.: Elsie Waller (contralto).
- 3.23 p.m.: Betty Armstrong (soprano).
- 3.30 p.m.: From the Wentworth.
The Wentworth Cafe Dance Orchestra, under the direction of Jimmy Elkins.
- 3.40 p.m.: From the studio.
William Krasnik (violinist).
- 3.45 p.m.: Cricket scores.
- 3.46 p.m.: A reading.
- 4.0 p.m.: "Big Ben." Betty Armstrong (soprano).
- 4.7 p.m.: William Krasnik (violinist).
- 4.14 p.m.: Elsie Waller (contralto).
- 4.21 p.m.: From the Wentworth.
The Wentworth Cafe Dance Orchestra, under the direction of Jimmy Elkins.
- 4.30 p.m.: From the studio. Cricket scores.
- 4.32 p.m.: Popular studio music.
- 4.45 p.m.: Third call, Stock Exchange.
- 4.47 p.m.: Studio music.
- 5.0 p.m.: "Big Ben." Close down.

EARLY EVENING SESSION.

Announcer: A. S. Cochrane.

- 5.40 p.m.: The chimes of 2FC.
- 5.45 p.m.: The children's session, conducted by the "Hello Man." Letters and stories. Music and entertainment.
- 6.30 p.m.: Daigety's market report (wheat, and stock).
- 6.40 p.m.: Fruit and vegetable markets.
- 6.43 p.m.: Stock Exchange information.
- 6.45 p.m.: Weather and shipping news.
- 6.48 p.m.: Rugby wireless news.
- 6.50 p.m.: Late sporting news, told by the 2FC Racing Commissioner.
- 7.0 p.m.: "Big Ben." Late news service.
- 7.10 p.m.: Special record recital.

EVENING SESSION

Announcer: Laurence Halbert.

- 7.40 p.m.: Programme announcements.
- 7.47 p.m.: Pianoforte reproduction.
- 7.52 p.m.: Cricket resume for country listeners, third Test match, England v. Australia, played at Melbourne.

rivals, departures, and sailings.

- 8.38 a.m.: News from the "Daily Telegraph Pictorial."
- 8.45 a.m.: G.P.O. clock and chimes. Studio music.
- 9.0 a.m.: G.P.O. clock and chimes. Studio music.
- 9.30 a.m.: Half an hour with silent friends.
- 10.0 a.m.: G.P.O. clock and chimes.

MID-DAY SESSION

Announcer: Basil Kirke.

- 11.0 a.m.: G.P.O. clock and chimes.
- 2BL Women's Sports Association session, conducted by Miss Gwen Varley.
- 11.30 a.m.: Advertising hints.
- 11.40 a.m.: Women's session, conducted by Mrs. Cranfield.
- 12.0 Noon: G.P.O. clock and chimes.
- 12.3 p.m.: Pianoforte reproduction.
- 12.30 p.m.: Shipping and mails.
- 12.35 p.m.: Market reports.
- 12.45 p.m.: Cricket scores, England v. Newcastle, played at Newcastle.
- 12.48 p.m.: "Sun" mid-day news service.
- 1.0 p.m.: Studio music.
- 1.30 p.m.: Talk to children, and special entertainment for children in hospital.
- 1.57 p.m.: Cricket scores.
- 2.0 p.m.: G.P.O. clock and chimes.
- From the New South Wales Lawn Tennis Ground, description of the international tennis, British Isles v. Australia. This will be continued throughout the afternoon, returning at intervals between play to the studio for popular music.

EARLY EVENING SESSION

Announcer: J. Knight Barnett.

- 5.40 p.m.: Children's session—Music and entertainment.
- 6.0 p.m.: Letters and stories.
- 6.30 p.m.: "Sun" news and late sporting.
- 6.40 p.m.: Special dinner music recital.
- 7.10 p.m.: Cricket scores.
- 7.12 p.m.: 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.
- Grain and fodder report ("Sun").
- Dairy produce report ("Sun").
- 7.25 p.m.: Mr. Pim and Miss Pam, in advertising talks and nonsense.
- 7.55 p.m.: Programme and other announcements.

EVENING SESSION.

Announcer: J. Knight Barnett.

Accompanist: G. Vern Barnett.

- 8.0 p.m.: G.P.O. clock and chimes.
- From the Lyric Wintergarden Theatre—The Lyric Wintergarden Theatre Orchestra, conducted by Horace Watts.
- 8.20 p.m.: From the Studio—"The Five Bright Spirits" live up to their reputation.
- 8.50 p.m.: The Savoyans Dance Band.
- 9.0 p.m.: G.P.O. clock and chimes.
- Norman Wright, tenor.
- 9.7 p.m.: C. R. Dexter will give last-minute racing information.
- 9.22 p.m.: The Five Bright Spirits, in music and mime.
- 9.52 p.m.: The Savoyans Dance Band.
- 10.2 p.m.: Norman Wright, tenor.
- 10.9 p.m.: From the Lyric Wintergarden Theatre—The Lyric Wintergarden Theatre Orchestra, conducted by Horace Watts.
- 10.20 p.m.: From the Studio—The Savoyans Dance Band.
- 10.30 p.m.: Late weather and announcements.
- 10.32 p.m.: The Savoyans Dance Band.
- 10.57 p.m.: Resume of following day's programme.
- 11.30 p.m.: National Anthem. Close down.

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lia, played at Melbourne.

- 7.54 p.m.: Popular music.
- 8.0 p.m.: "Big Ben." By courtesy of J. C. Williamson, Ltd., a transmission from one of Sydney's leading theatres will be arranged.
- 9.10 p.m.: From the studio, weather report.
- 9.11 p.m.: The Light Music Four.
- 9.25 p.m.: Len Maurice and Franc Rousel, the Melody."
- 9.30 p.m.: Cliff Arnold in "Fragments of Melody."
- 9.40 p.m.: The Light Music Four.
- 10.0 p.m.: "Big Ben." Len Maurice and Franc Rousel, the melodists.
- 10.5 p.m.: Cliff Arnold in "Fragments of Melody." ?
- 10.15 p.m.: Len Maurice and Franc Rousel, the melodists.
- 10.20 p.m.: To-morrow's programme.
- 10.30 p.m.: National Anthem. Close down.

2BL SERVICE

MORNING SESSION

Announcer: Basil Kirke.

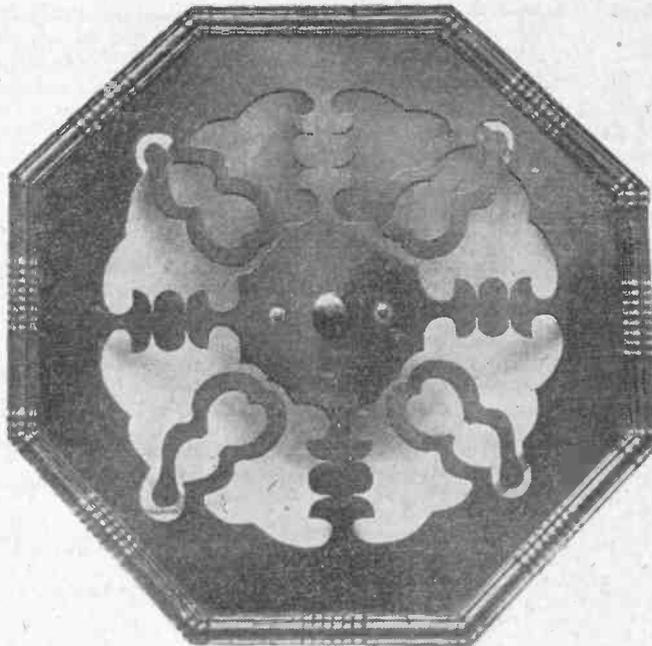
- 8.0 a.m.: G.P.O. clock and chimes.
- Metropolitan weather report.
- 8.1 a.m.: State weather report.
- 8.2 a.m.: Studio music.
- 8.15 a.m.: G.P.O. clock and chimes.
- News from the "Daily Telegraph Pictorial."
- 8.25 a.m.: Studio music.
- 8.30 a.m.: G.P.O. clock and chimes.
- Studio music.
- 8.35 a.m.: Information; mails; shipping, ar-

the Heart." "Bells Across the Meadow." 7.45 p.m.: Mr. F. H. Nicholls will speak on "Month with Shakespeare." Introduction. **NIGHT SESSION.**—8.0 p.m.: G.P.O. chimes. 8.1: Magill Vice-Regal Band, quickstep "Holyrood." Scotch overture "The Fair Maid of Perth." 8.13 p.m.: Diana Belmont, contralto, "The Ships of Araby." "Beloved." 8.20 p.m.: French Bros., banjoists, "Let a Smile Be Your Umbrella." "Just Like a Melody." 8.26 p.m.: George Horton, humorist, in comedy sketches. 8.32 p.m.: Magill Vice-Regal Band, selection, "A Day on the Farm." 8.42 p.m.: Gertrude Gray, mezzo, "The Heart Worships." "Pierrot." 8.48 p.m.: Magill Vice-Regal Band, "Take in the Sun, Hang Out the Moon." 8.54 p.m.: Eric Wickens, bass, selection from his repertoire. 9.0 p.m.: G.P.O. chimes. 9.1 p.m.: Meteorological information. 9.2 p.m.: Overseas grain report. 9.3 p.m.: Diana Belmont, contralto, "A Blackbird Singing." "Nocturne." 9.9 p.m.: Magill Vice-Regal Band, cornet duet, "Ida and Dot." 9.19 p.m.: George Horton, comedian, in comedy sketches. 9.25 p.m.: Magill Vice-Regal Band, "The Warblers' Serenade." 9.35 p.m.: Gertrude Gray, mezzo, "I Attempt from Love's Sickness" (Purcell). "Since First I Saw Your Face." 9.41 p.m.: French Bros., "Marcelle" (Stoneham). "Mellow Mersey Moon" (Stoneham). 9.45 p.m.: Eric Wickens, bass, selection from his repertoire. 9.51 p.m.: Magill Vice-Regal Band, waltz "Jeanine." "Dream of Lillie" (Tinsley). 10.0 p.m.: G.P.O. chimes. 10.1 p.m.: George Horton, humorist, in comedy sketches. 10.7 p.m.: Magill Vice-Regal Band, "Cavalry of the Clouds." 10.15 p.m.: The "Advertiser" general news service. 10.20 p.m.: 5CL's sporting service, by "Silvius." 10.30 p.m.: Meteorological information. 10.31 p.m.: Our good-night thought. 10.30 p.m.: By courtesy of 3L.O. Melbourne, modern dance numbers by the famous Radi-o-Aces. 11.10 p.m.: "God Save the King."

7ZL

MIDDAY SESSION.—(Announcer: Jack Broadbent.) 11.30 a.m.: Monsieur Sonora, musical selections. 11.34 a.m.: Weather information. 11.35 a.m.: Monsieur Sonora, musical selections. 11.55 a.m.: Tasmanian stations' 9 a.m. weather report. 12.0 noon: G.P.O. clock chimes the hour. 12.1 p.m.: Shipping information. Ships within wireless range. Mail notices. Housewives' guide. 12.8 p.m.: Monsieur Sonora, musical selections. 12.11 p.m.: British official wireless news. 12.20 p.m.: Monsieur Sonora, musical selections. 12.29 p.m.: Announcements. 12.33 p.m.: Monsieur Sonora, musical selections. 12.55 p.m.: "Mercury" news service. Produce sales held at Railway. 1.10 p.m.: Monsieur Sonora, musical selections. 1.30 p.m.: Close down. **AFTERNOON SESSION.**—(Announcer: Jack Broadbent.) 3.0 p.m.: G.P.O. clock chimes the hour. 3.1 p.m.: Monsieur Sonora, musical selections. 3.4 p.m.: Weather information. 3.5 p.m.: Monsieur Sonora, musical selections. 3.15 p.m.: A concert by the Master Musicians. Jacques Jacob's Ensemble "España" (Waldteufel), waltz, "I'Estudiantia" (Waldteufel); Muriel Brunskill, contralto, "O Lovely Night" (Tschemacher). "Kathleen Mavourneen" (Crawford); J. H. Squire Celeste, octet, piano concerto, "Memories of Tchaikowsky," "1812" overture, parts 1 and 2 (Arr Bear); Signor Lenghi-Cellini, tenor, "Marie, My Girl" (Aiken). "I hear you calling me" (Marshall); Eddie Thomas' Collegians, waltz, "Ohio" (Earl); Columbia Orchestra, march, "March of the Toys" (Herbert), duet, Dame Clara Butt and Ken-leyley Rumford, "The Keys of Heaven" (Traditional), "Friendship" (Sydney); handbells played by the Famous Barnardo Musical Boys. "The Legend of the Bells." "Chiming Bells of Long Ago" (Christobel); Joseph Sziget, violin solo, "Tambourin Chinois" (Kreisler); Silver Stars Band, "The Wedding March" (Mendelssohn). "Speak" (Nicholls). 4.30 p.m.: Close down. **EARLY EVENING SESSION.**—(Announcer: Jack Broadbent.) 6.45 p.m.: Answers to letters and birthday greetings by "Uncle David." 6.20 p.m.: Monsieur Sonora, musical selections. 6.30 p.m.: "The Storey Lady" will tell a story to the children. 6.40 p.m.: Mollie Horlock, pianist, will play to the children. "Slumber Song." 6.45 p.m.: Monsieur Sonora, musical selections. 7.0 p.m.: Request numbers for the children. **EVENING SESSION.**—(Accompanist: Lella Read. Announcer: Jack Broadbent.) 7.15 p.m.: A. M. O'Leary will speak on "Cricket." 7.30 p.m.: A studio concert by the Discus Ensemble and 7ZL artists—Ketyelby's Orchestra, "Bells Across the Meadows" (Ketyelby), orchestra. "In a Fairy Realm" suite (Ketyelby). 7.37 p.m.: Jean Hibbard, soprano, "The Dove" (Bond), "Longing" (Ronald). 7.42 p.m.: Lella Read, pianist, "Selected." 7.47: Jack Broadbent, baritone, "The Deathless Army," "Salome." 7.52 p.m.: Wilfred Kemp, violin solo, "Indian Love Lyrics." 8.3 p.m.: Jean Hibbard, soprano, "Butterfly Wings" (Phillips), "Tis June" (Ronald). 8.9 p.m.: S. Burbury, pianist, "Selected." 8.16 p.m.: Jack Broadbent, baritone, "Mother Machree" (Ball), "Vale" (Russell). 8.23 p.m.: Wilfred Kemp, violin solo, "Merchant of Venice." 8.33 p.m.: S. Burbury, pianist, "Selected." 8.38 p.m.: John Brownlee, baritone, "I'll Not Complain" (sung in German). 8.41 p.m.: Lella Read, pianist, "Selected." 8.46 p.m.: J. M. Counsel, "A Musical Hour with the Old Masters." "The History and Development of Music." 9.45 p.m.: The Royal Autocar Club of Tasmania safety message for to-day. 9.50: News session—British official wireless news. Readings from the "Weekly Courier." "Mercury" special Tasmanian news service. Railway auction produce sales held at Railway. Weather information. Hobart Stock Exchange quotations. Royal Autocar Club of Tasmania road guide for the week-end. Notes by the amateur athletic association. Cycling notes by the Hobart Cycling Association. Market reports from Messrs. Robbes and Co. and Messrs. Wise and Strling. 10.0: G.P.O. clock chimes the hour. 10.1: Our Tasmanian Good-night thought. 10.2: God Save the King; close down.

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DON'T BE PUT OFF

With anything else! There isn't another loud speaker anywhere near as good at anything like the price! Its volume and purity of tone are astonishing. Amazingly sensitive, it is handsomely designed, and will stand on the table or hang on the wall.

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Sole Australian Concessionaire—

CHAS. D. MACLURCAN

Pratten Building, 26 Jamieson Street, Sydney.

Local Programmes, Saturday, January 5

2FC

EARLY MORNING SESSION

Announcer: A. S. Cochrane.

- 7.0 a.m.: "Big Ben" and announcements.
- 7.2 a.m.: Official weather forecast; rainfall, river reports; temperatures; astronomical memoranda.
- 7.7 a.m.: "Sydney Morning Herald" summary.
- 7.12 a.m.: Shipping intelligence; mail services.
- 7.15 p.m.: Studio music.
- 8.0 a.m.: "Big Ben." Close down. markets; metal quotations; wool sales, breadstuffs markets; inter-State markets; produce markets.
- 7.40 a.m.: Studio music.
- 7.25 a.m.: Investment market; mining share

MORNING SESSION.

Announcer: Laurence Halbert.

- 10.0 a.m.: "Big Ben" and announcements
- 10.2 a.m.: Pianoforte reproduction.
- 10.10 a.m.: "Sydney Morning Herald" news service.
- 10.25 a.m.: Studio music.
- 10.30 a.m.: Last-minute sporting information by the 2FC Racing Commissioner.
- 10.40 a.m.: Studio music.
- 10.45 a.m.: A talk on "Gardening," by J. G. Lockley ("Redgum").
- 11.0 a.m.: "Big Ben."
- A.P.A. and Reuter's cable services.
- 11.5 a.m.: Close down.

MID-DAY AND AFTERNOON SESSIONS.

Announcer: Laurence Halbert.

- 12.0 Noon: "Big Ben" and announcements.
- 12.2 p.m.: Stock Exchange information.
- 12.4 p.m.: Studio music.
- 12.10 p.m.: "Sydney Morning Herald" news service.
- 12.15 p.m.: Rugby wireless news.
- 12.20 p.m.: Studio music.
- 12.45 p.m.: Cricket scores, third Test match. England v. Australia, played at Melbourne.
- 1.0 p.m.: "Big Ben." Weather intelligence.
- 1.3 p.m.: "Evening News" mid-day news service.
- 1.20 p.m.: Studio music.
- 1.45 p.m.: From the New South Wales Lawn Tennis Ground, Mushcutters' Bay, description of the international tennis, British Isles v. Australia. During intervals between play popular music from the Studio, and a novelty music act by Leo and Marie will be broadcast.
- 5.0 p.m.: "Big Ben." Close down.

EARLY EVENING SESSION.

Announcer: A. S. Cochrane.

- 5.40 p.m.: The chimes of 2FC.
- 5.45 p.m.: The children's session, conducted by the "Hello Man."
- Letters and stories.
- 6.30 p.m.: Music and entertainment.
- 6.40 p.m.: Weather intelligence, shipping, Stock Exchange.
- 6.45 p.m.: Rugby wireless news
- 6.50 p.m.: Sporting news, late news, and studio music.
- 7.10 p.m.: The 2FC Dinner Quartette, conducted by Horace Keats.
 - (a) "Pansies" (Nicholls).
 - (b) "I Love You" (Reubens).
 - (c) "Airs and Graces" (Monckton).
 - (d) "I'll Sing Thee Songs of Araby" (Clay).
 - (e) Foxtrot.
 - (f) "My Rosary for You" (Eail)

EVENING SESSIONS

- 7.40 p.m.: Programme announcements.
- 7.47 p.m.: Pianoforte reproduction.

- 7.54 p.m.: Popular music.
- 8.0 p.m.: "Big Ben." From Liverpool Stau Hospital. The 2FC hospital concert party, under the direction of Charles Lawrence will entertain the patients.
- 9.30 p.m.: From the studio. Weather report.
- 9.31 p.m.: Carlton and Shaw in a popular musical act.
- 9.38 p.m.: From the Wentworth. The Wentworth Cafe Dance Orchestra under the direction of Jimmy Elkins.
- 9.48 p.m.: From the studio. The Two Revellers.
- 9.58 p.m.: Carlton, and Shaw (musical entertainers).
- 10.5 p.m.: From the Speedway Royal, description of the races.
- 10.15 p.m.: From the studio. The Two Revellers.
- 10.25 p.m.: Carlton and Shaw (musical entertainers).
- 10.30 p.m.: Late weather and announcements.
- 10.32 p.m.: From the Wentworth. The Wentworth Cafe Dance Orchestra, under the direction of Jimmy Elkins.
- 10.57 p.m.: From the studio. To-morrow's programme.
- 10.59 p.m.: From the Wentworth. The Wentworth Cafe Dance Orchestra, under the direction of Jimmy Elkins.
- 11.30 p.m.: National Anthem. Close down.

2BL

MORNING SESSION

Announcer: Basil Kirke.

- 8.0 a.m.: G.P.O. clock and chimes. Metropolitan weather report.
- 8.1 a.m.: State weather report.
- 8.2 a.m.: Studio music.
- 8.15 a.m.: G.P.O. chimes. News from the "Daily Telegraph Pictorial"
- 8.25 a.m.: Studio music.
- 8.30 a.m.: G.P.O. chimes. Studio music.
- 8.35 a.m.: Information, mails, snipping, arrivals, departures, and sailings.
- 8.38 a.m.: News from the "Daily Telegraph Pictorial."
- 8.45 a.m.: G.P.O. chimes. Studio music.
- 9 a.m.: G.P.O. clock and chimes. Studio music.
- 9.30 a.m.: Half an hour with silent friends.
- 10.0 a.m.: G.P.O. clock and chimes. Close down.

MIDDAY AND AFTERNOON SESSIONS

Announcers: Basil Kirke and A. C. C. Stevens.

- 11.0 a.m.: G.P.O. clock and chimes.



Mr. J. Knight Barnett, who will be announcing to-night.

Women's session, conducted by Mrs. Cranfield.

What's on at the pictures and theatres. Novel suggestions to listeners. Week-end specials.

- 11.30 a.m.: Advertising hints.
- 12.0 noon: G.P.O. clock and chimes. Special ocean forecast and weather report.
- 12.3 p.m.: Studio music.
- 12.30 p.m.: "Sun" news service.

During the afternoon descriptions of the races in the running will be broadcast from the Warwick Farm meeting at Randwick. Items from the studio by Tom King, Frankle Stott, and Ivy Gayler

EARLY EVENING SESSION.

Announcers: Basil Kirke and J. Knight Barnett.

- 5.40 p.m.: Children's session. Music and entertainment.
- 6.0 p.m.: Letters and stories.
- 6.30 p.m.: "Sun" news service.
- 6.40 p.m.: 2BL Dinner Quartette.
 - (a) "Libellen" (Hesse).
 - (b) "Bird Songs at Eventide" (Coates).
 - (c) "The Vagabond King" (Friml).
 - (d) "Minuet Pastel" (Paradis).
 - (e) "In the Woodland" (Ockel-Alhi).
 - (f) "Foxtrot."
- 7.10 p.m.: Cricket scores.
- 7.12 p.m.: Complete sporting resume. Complete racing resume.
- 7.30 p.m.: Mr. Pim and Miss Pam in advertising talks and nonsense.
- 7.55 p.m.: Programme and other announcements.

EVENING SESSION.

Announcer: J. Knight Barnett. Accompanist: G. Vern Barnett.

- 8.0 p.m.: G.P.O. Clock and chimes. King's Mandolin Orchestra
- 8.10 p.m.: Laurel Streeter in popular melodies.
- 8.17 p.m.: G. R. Griffiths (concertina).
 - (a) "Cradle Song," op. 98 (with imit cello obbligato), (Schubert).
 - (b) "Adagio" (imitation pipe organ) (Schuman).
- 8.24 p.m.: King's Mandolin Orchestra.
- 8.30 p.m.: Popular studio programme.
- 9.44 p.m.: Weather forecast.
- 9.45 p.m.: Laurel Streeter in popular melodies.
- 9.52 p.m.: King's Mandolin Orchestra.
- 10.2 p.m.: Art. Leonard in the newest song hits.
- 10.9 p.m.: King's Mandolin Orchestra.
- 10.16 p.m.: From Romano's, Romano's Dance Orchestra, conducted by Benny Abrahams.
- 10.26 p.m.: From the studio. Art. Leonard in the newest song hits.
- 10.33 p.m.: From Romano's, Romano's Dance Orchestra, conducted by Benny Abrahams.
- 10.57 p.m.: From the studio. To-morrow's programme.
- 10.59 p.m.: From Romano's, Romano's Dance Orchestra, conducted by Benny Abrahams.
- 11.30 p.m.: Close down.

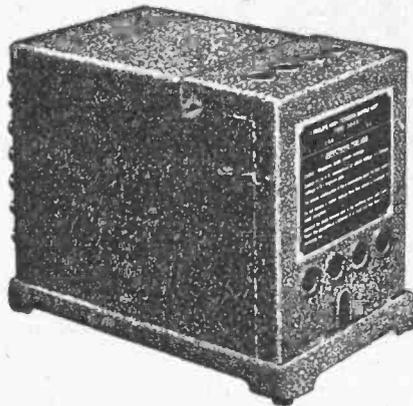
Note: During intervals the latest news will be broadcast by courtesy of "Sun" Newspapers.

2GB

- 5.30 p.m.: Children's session, by Uncle George.
- 7.15 p.m.: Music. 8.0 p.m.: Dance programme. 9.0 p.m.: Request evening. 10.0 p.m.: Grown-up bedtime stories. 10.30 p.m.: Close down.

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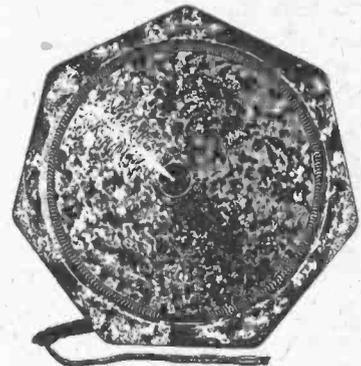


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Interstate Programmes, Saturday, January 5

3LO

EARLY MORNING SESSION.—7.15 p.m.: Morning melodies. 7.20 p.m.: Morning exercises to music. 7.30 p.m.: Stock reports, market reports. General news. Shipping and sporting information. 8.0 a.m.: Melbourne Observatory time signal. 8.1 a.m.: Morning melodies. 8.15 a.m.: Close down.

MORNING SESSION.—(Announcer John Stuart. Accompanist: Agnes Fortune.) 11.0 a.m.: Eric Welch will speak on to-day's races at Sandown Park. 11.10 a.m.: The Strad Trio. "Op. 32 in D Minor" (Arensky). Allegro Moderato. Scherzo. 11.24 a.m.: Senia Chostakoff (tenor). "Beautiful Eyes" (Gipsy Romance). Selected. 11.31 a.m.: Cecil Parkes and May Broderick (violin and piano) "Sonata for Violin and Piano in F Major" (Beethoven). Allegro con brlo. Adagio. Scherzo. 11.47 a.m.: Senia Chostakoff (tenor). Selections from his repertoire. 11.54 a.m.: Frank Johnstone (cello). "Andante and Gavotte" (Handel). 12.0 noon: Melbourne Observatory time signal. Express train information. 12.1 p.m.: 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. **MID-DAY MUSICAL SESSION.**—(Announcer John Stuart. Accompanist Agnes Fortune.) 12.20 p.m.: The station orchestra. Ballet music. "Faust" (Gounod). 12.30 p.m.: Syd. Hollister (comedian). "Smile a While. 12.37 p.m.: Stock Exchange information. 12.49 p.m.: The station orchestra. "Second Suite" Ballet Egyptian (Liszt). 12.50 p.m.: Keith Desmond (elocutionist) will give a short recital. 12.57 p.m.: John Barrille (flute) and A. Anderson (clarinet). "L'Encore." 1.4 p.m.: The station orchestra. Piano arrangements. "Serenata" (Toselli). "Romance" (Popper). 1.11 p.m.: Meteorological information. Weather forecast for Victoria, Tasmania, New South Wales, and South Australia. Ocean forecasts. River reports. Rainfall. 1.17 p.m.: Syd. Hollister (comedian). "Topicalities." 1.24 p.m.: The Station orchestra. "Serenade" (Saint-Saens). "March Miniature" (Jacobini). 1.34 p.m.: Keith Desmond (elocutionist) will give a short recital. 1.40 p.m.: The station orchestra. "Gems No. 2" (Piaf). 1.45 p.m.: Close down. **AFTERNOON SESSION.**—(Announcer: John Stuart.) 2.13 p.m.: Description of Two-year-old Handicap, 5 furlongs. Sandown Park Races, by Eric Welch. 2.20 p.m.: Description of pennant cricket match, Richmond v. Prahran, at Richmond, by Rod McGregor. 2.43 p.m.: Description of Trial Welter Handicap, 1 mile. Sandown Park Races. 2.50 p.m.: Description of pennant cricket match, Richmond v. Prahran, at Richmond. 3.13 p.m.: Description of Sandown Plate, 8 furlongs. Sandown Park Races. 3.20 p.m.: Description of pennant cricket match, Richmond v. Prahran, at Richmond. 3.43 p.m.: Description of Sandown Handicap, 1 mile. Sandown Park Races. 3.50 p.m.: Description of pennant cricket match, Richmond v. Prahran, at Richmond. 4.0 p.m.: Sonora recital of the world's most famous records. 4.13 p.m.: Description of Sandown Purse, 6 furlongs. Sandown Park Races. 4.20 p.m.: Description of pennant cricket match, Richmond v. Prahran, at Richmond. 4.43 p.m.: Description of Jumpers' Flat Race, 1 1/2 mile. Sandown Park Races. 4.50 p.m.: Description of pennant cricket match, Richmond v. Prahran, at Richmond. 5.0 p.m.: "Herald" news service. 5.10 p.m.: Description of pennant cricket match, Richmond v. Prahran, at Richmond. 5.30 p.m.: Close down. During the afternoon progress scores of the cricket match, England v. Geelong, will be broadcast as they come to hand. **EVENING SESSION.**—(Announcer: Frank Hatherley.) 5.50 p.m.: Sporting results. 6.0 p.m.: Answers to letters and birthday greetings by "Little Miss Kookaburra. 6.25 p.m.: Musical interlude, 6.30 p.m.: "Miss Kookaburra" will tell her Little Kookaburrettes "About The Kitycats' Holidays, and then some more about "Jack and Jill" and "Jolly Day's Secret." **NIGHT SESSION.**—(Announcer: C. J. O'Connor. Accompanist: Agnes Fortune.) 6.50 p.m.: Stock Exchange information. 7.0 p.m.: River reports. Market reports by the Victorian Produce and Co-operative Ltd. Poultry, grain, hay, straw, jute, dairy produce, potatoes and onions. Market reports of fruit by the Victorian Fruitgrowers' Association. Wholesale prices of fruit by the Wholesale Fruit Merchants' Association. Citrus fruits. 7.15 p.m.: News session. Stumps scores. Pennant cricket match, Richmond v. Prahran, at Richmond. 7.23 p.m.: Birthday greetings. 7.25 p.m.: Out of the East. 7.26 p.m.: "Jack and Jill" and "Jolly Day's Secret." 7.45 p.m.: Dr. J. A. Leach. "Shrike-Thrushes." 8.0 p.m.: A Maker of History. Programme announcements. Tasmanian letter to 3LO from the "Courier, Launceston." 8.5 p.m.: The station orchestra. "Fantasia" (Scherbert). 8.15 p.m.: Violet Jackson (soprano). "The First Violet" (Mendelssohn). "Persian Song of Spring" (M'Burney). 8.22 p.m.: The station quartette. "First Movement" Quartette." 8.32 p.m.: Senia Chostakoff (tenor). "A Legend" (Tschalkowsky). "Slumber Song" (Gretchaninoff). 8.39 p.m.: The station orchestra. Fantasia. "Himmelsgrube" (Haydn). 8.4 p.m.: Viva Holgate Clarke. "Pastorale and Capriccio" (Scherbert). "Preludes in G Major and G Minor" (Chopin). "Musical Box" (Lalduw). 9.0 p.m.: The Radio Melody-makers. Twenty minutes of melody. 9.20 p.m.: Eric Welch will describe to-night's events at the Stadium. 9.35 p.m.: The station orchestra.

"Polchinellet" (Rachmaninoff). 9.40 p.m.: Syd. Hollister (comedian). "A Little Nonsense." 9.50 p.m.: The station orchestra. Overture. "Leonore" (Beethoven). "At Dawning" (Cadmian). 10.0 p.m.: Eric Welch will describe to-night's events at the Stadium. 10.15 p.m.: The station orchestra. "Mock Morris" (Grainger). 10.20 p.m.: Syd. Hollister (comedian). "Saturday Night Stories." 10.27 p.m.: Percy Code (trumpet). "I Passed by Your Window." 10.32 p.m.: Keith Desmond (elocutionist). Selections from his repertoire. 10.39 p.m.: The station orchestra. "La Ingana" (Bohn). "Pas des Amphores" (Chaminade). 10.49 p.m.: Late sporting results. 10.55 p.m.: Our great thought for to-day. 10.56 p.m.: "The Radi-o-Aces." "Loneliness" (Polack). "Clarine" (Marmasdale) (Fergus). "Ramona" (Wayne). "Rain" (Rubly). "I Love to Dunk a Hunk of Sponge-cake" (Castill). "Because My Baby Don't Mean Maybe Now" (Donaldson). "Beloved" (Kahn). "Just Like a Melody" (Gardner). "The Radi-o-Aces." "Lily Feet" piano solo (Masman). "That's What You Mean to Me" (Davis). "Chloe" (Kahn). "Lenora" (Gilbert). "That Stolen Melody" (Fisher). "Adoree" (West). "Googly Goo" (Davis). "Goodnight Waltz" (Biblo). 11.40 p.m.: God Save the King.

3AR

"Grand Opera." 3.35 p.m.: Vocal variations. 3.45 p.m.: Johnson's Studio Boys. "Fox Trots." 4.0 p.m.: Vocal variations. 4.10 p.m.: Johnson's Studio Boys. "Waltzes." 4.25 p.m.: Vocal variations. 4.35 p.m.: Johnson's Studio Boys. "Marches." 4.42 p.m.: Announcements. 4.45 p.m.: Vocal variations. 4.50 p.m.: Johnson's Studio Boys. "Waltzes." 5.0 p.m.: Close down. **EVENING SESSION.**—6.0 p.m.: Sweet Solace from the Seraphim. **NIGHT SESSION.**—(Announcer: Frank Hatherley. Accompanist: Reg. Browne.) 8.0 p.m.: All sporting results, including results of cricket match, England v. Geelong, at Geelong. 8.30 p.m.: Coburg City Band Selection. "Musical Fragments. March. "Rubenstein" (Biddood). 8.45 p.m.: J. Alexander Browne. "If I Might Only Come to You" (Squire). "Free Lance" (Dix). 8.52 p.m.: Coburg City Band. "Waltz. "Will of the Wisp" (Bourne). 9.0 p.m.: Winifred Moverley. A Story. "The Storm Call" (Maurice). 9.7 p.m.: Honolulu Duo. "Hawaiian Waltz." "Isle of Golden Dreams." 9.14 p.m.: Jessie Batchelor (mezzo-soprano). "Hushen" (Needham). "When Love is Kind" (A.L.). 9.21 p.m.: Coburg City Band. Intermezzo. "Australia To-day" (Lithgow). March. "National Conclave." 9.31 p.m.: J. Alexander Browne. "Two Indian Love Lyrics" (Finde). 9.38 p.m.: Coburg City Band. "Waltz. "Ritornella." March "Winning Fight" (Holtzman). 9.48 p.m.: Winifred Moverley. A story. "Honey-moaners from the Country" (O'Brien). 9.55 p.m.: Honolulu Duo. "Forget Me Not" "Kalima Waltz." 10.2 p.m.: Jessie Batchelor (mezzo-soprano). "Vorrei" (Tosti). "You in a Gondola" (Clarke). 10.9 p.m.: Coburg City Band. Selection. "Opera Bouquet." 10.19 p.m.: "Age" news service, exclusive to 3AR. Weather forecast. Cricket results. 10.28 p.m.: Ch. Shakespearean to-night quotation. 10.30 p.m.: God Save the King.

4QG

EARLY MORNING SESSION.—(Announcer: J. Tyson.) 7.43 a.m.: Time signals. 7.45 a.m.: News service. 8.0 a.m.: Some electric records. 8.15 a.m.: News service. 8.30 a.m.: Close down. **AFTERNOON SESSION.**—From the racecourse—A description of the races. Items from the studio and the Tivoll Theatre will be relayed between races. 5.0 p.m.: Close down. **EARLY EVENING SESSION.**—6.0 p.m.: Local train running times. Special "Queenslander" bi-weekly news service for distant listeners. 6.30 p.m.: Bed-time stories, conducted by "Uncle Ben." 7.15 p.m.: To-day's race results in brief. 7.20 p.m.: General sporting notes. 7.30 p.m.: Sailing notes, by Mr. Fred Smith. **NIGHT SESSION.**—(Announcers: H. Humphreys and A. V. James.) 8.0 p.m.: From the Savoy Theatre, Claryfield—Orchestral music. 8.15 p.m.: A short song recital by Verna Moroon (soprano). "Secrecy" (Hugo Wolf). "Song to Spring" (Hugo Wolf). "Think Tenderly" (Sharp). "Shepherd, Thy Demeanour Vary" (Brown). "Adieu" (Schubert). "Thou Art My Rest" (Schubert). 8.45 p.m.: Orchestral music. 9.0 p.m.: Dance music. 9.15 p.m.: Motor cycle races. 9.45 p.m.: Dance music. 10.0 p.m.: "Sunday Mail" news: weather news. Close down.

5CL

MORNING SESSION.—(Announcer: J. L. Norris.) 11.0 a.m.: G.P.O. chimes. 11.1 a.m.: Late sporting selections for Sandown Park Races by Mr. Eric Welch. 3LO's Special Sporting Commissionaire. Popular Sonora recital. Parlophone recordings. Dorsey Brothers and their orchestra. "Come Back, Ohiquita." "Was It a Dream?" Arthur Nealy (vocalist). "Lonely Little Bluebird." Sidney Burhall (baritone). "Polly the Cat." "Naughty Eyes." "Goofus Five and orchestra." "All the Time." "Vaniteaser." 11.20 a.m.: 5CL's

sporting calendar. 11.22 a.m.: Sonora recital (continued). Parlophone recordings. Grand Symphony Orchestra. "Fra Diavolo" (Auber). Tossy Spivakosky (violinist). "Dervishes' Chorus" (Beethoven). Fred Hall and his Sugar Babies. "Darling." "On the Night We Did the Bom Bom by the Sea." Ernest Milliser (baritone). "For Old Time's Sake." Memories of France." 11.40 a.m.: Late sporting selections for Sandown Park by Mr. Eric Welch. 3LO's Special Sporting Commissionaire. 11.43 a.m.: "The Advertiser" general news service. 11.55 a.m.: British official wireless news. 12.0 noon: G.P.O. chimes and close down. **AFTERNOON SESSION.**—12.45 p.m.: From Morphettville Racecourse—Positions and riders for Novice Hurdles. B.A.C. meeting. 1.0 p.m.: Running description of Novice Hurdles by Mr. Arnold Treloar. 1.5 p.m.: From studio. Musical interlude on Sonora. Grand Symphony Orchestra. "Zampa" (Loverini). "Guppato" (Lorani) (violinist). "Danse Espagnole." 1.25 p.m.: From Morphettville Racecourse. Positions and riders for Helmsdale Welter. 1.30 p.m.: From studio. Dance music on the Sonora. Tajos Bela Orchestra. "Solo Meters." "Fiesta" (Tosti). "The Sphinx." "You Only You." 1.40 p.m.: From Morphettville Racecourse. Running description of the Helmsdale Welter by Mr. Arnold Treloar. 1.45 p.m.: From studio. Military band concert. Royal Guards Band. "Morning Noon and Night" (Suppe). "Poet and Peasant." National Military Band. "Washington Post." "The Wooden Soldiers." Prince's Grand Concert Band. "Carmen" (selection). "Hungarian Rhapsody." 2.0 p.m.: Sandown Park results. Two-year-old Handicap. 2.25 p.m.: From Morphettville Racecourse. Positions and riders for second division of Helmsdale Welter. 2.10 p.m.: From studio. Vocal interlude on Sonora. Vernon Paris (baritone). "Lily of Languish." "Can't Hear the Music." "The Music Ticker (contralto). "I Ain't Got Nobody." 2.20 p.m.: From Morphettville Racecourse. Running description of the Second Division of the Helmsdale Welter by Mr. Arnold Treloar. 2.24 p.m.: From studio. Sandown Park results. Trial Welter Handicap. 2.26 p.m.: Orchestral diversion. Major Bowes' Capitol Theatre Orchestra. "Pale Moon." "My Isle of Golden Dreams." Dalos Bela Orchestra. "The Flowers' Dream." "Whispering of the Flowers." Arnold Franck and his orchestra. "You're a Real Sweetheart." "How Could Anything so Good be Bad?" The Royal Music Makers. "Beloved." 2.45 p.m.: From Morphettville Racecourse. Positions and riders for Cowandilla Handicap. 2.50 p.m.: From studio. Instrumental and vocal solos. Victor Staub (pianist). "Goldwings' Cakewalk." "Minstrels." Ernest Miller (baritone solo). "Memories of France." 2.59 p.m.: Sandown Park results. Sandown Plate. 3.0 p.m.: From Morphettville Racecourse. Description of Cowandilla Handicap by Mr. Arnold Treloar. 3.5 p.m.: From Regent Theatre. Symphonic music by orchestra under the conductorship of Mr. W. R. Cade. 3.25 p.m.: From Morphettville Racecourse. Positions and riders for Seaclyde Handicap. 3.26 p.m.: From studio. Sandown Park results. Sandown Park Handicap. 3.30 p.m.: Inter-State and international cricket scores. 3.35 p.m.: Musical interlude on Sonora. Hardy Williamson and Robert (vocal duetists). "The Flowers that Bloom in the Spring." "Rising Early in the Morning." 3.40 p.m.: From Morphettville Racecourse. Description of the Seaclyde Handicap by Mr. Arnold Treloar. 3.45 p.m.: From studio. Belmont (contralto). "Unfading" (Lehmann). "Tune Lehmann." French Brothers (instrumentalists). "Danse Oriental" (French). "Chloe" (Singer). Gertrude Gray (mezzo). "When Thy Blue Eyes" (Lassen). "Prayer" (Hiller). Jean Pinlay (pianist). "London Bridge" (Gardiner). "April" (Bridgel). 4.4 p.m.: Sandown Park Races. Sandown Park results. 4.6 p.m.: From Morphettville Racecourse. Positions and riders for New Year's Gift. 4.10 p.m.: From studio. Diana Belmont (contralto). "Unfading" (Lehmann). "Tune Lehmann." French Brothers (instrumentalists). "Melancholy Baby" (Burnett). "Sentimental Baby" (Palmer). Gertrude Gray (mezzo). "The Arrow and the Song" (Balfie). "Big Lady Moon" (Taylor). 4.20 p.m.: From Morphettville Racecourse. Running description of New Year's Gift by Mr. Arnold Treloar. 4.24 p.m.: From studio. Sandown Park results. Jumpers' Flat Race. 4.25 p.m.: From Regent Theatre. Symphonic selections. 4.45 p.m.: From Morphettville Racecourse. Position and riders for last race. 4.50 p.m.: Resume of afternoon's sporting. 5.0 p.m.: From Morphettville Racecourse. Running description of Marino Handicap by Mr. Arnold Treloar. 5.10 p.m.: Close down. **EVENING SESSION.**—(Announcer: Athol Leach.) 8.0 p.m.: G.P.O. chimes. 8.1 p.m.: Summary of to-day's sporting. 6.10 p.m.: Children's Happy moments. Birthday greetings, correspondence, songs and stories by "The Watlie Lady." 8.40 p.m.: Musical interlude. Dinner music on Sonora. 7.0 p.m.: G.P.O. chimes. 7.1 p.m.: B. O. Ward and Co.'s Stock Exchange information. 7.8 p.m.: Cricket scores and station announcements. 7.10 p.m.: Rev. G. E. Hale, B.A. Talk on "Poetry and Science." 7.25 p.m.: "Wilder." "The Ripley." Talk on "Items of Interest." 7.47 p.m.: 5CL's sporting service. **NIGHT SESSION.**—8.1 p.m.: Solomon Sisters (instrumentalists). "Serenade" (Schubert). Prelude in G Major Minor. 8.14 p.m.: French Brothers (instrumentalists). "Zivelle" (Glinka). "After My Laughter" (Turk). "You're a Real Sweetheart." 8.20 p.m.: Signor Torre (bari-

tone). "Cartigliani" (Verdi). "Zitella" (Cattaneo). 8.26 p.m.: Solomon Sisters (instrumentalists). "Let Me Gaze" (GoGonod). Intermezzo from "Cavalleria Rusticana." 8.32 p.m.: Gertrude Gray (mezzo). "Now Sleeps the Crimson Petal." "Sylvan." 8.38 p.m.: George Whittle (humorist) in a humorous interlude. 8.44 p.m.: Solomon Sisters (Instrumentalists). "Three Miniatures" (Bridge). "Three Fours" (Taylor). "Melodie" (Moszkowski). 8.54 p.m.: Diana Belmont (contralto). "Summer Storms." "Roseleaves." 9.0 p.m.: G.P.O. chimes. 9.1 p.m.: A broadcast of outstanding interest. 9.12 p.m.: French Brothers (Instrumentalists). "Beneath a Tropic Moon." "Lolita" (Stoneham). 9.18 p.m.: Signor Torre (baritone). "Parted" (Tosti). "Il Libro Santo" (Pinsuti). 9.24 p.m.: Solomon Sisters (Instrumentalists). "Pinnale of Trio 1" (Haydn). "Romance" (Riessiger). "Simple Aveu" (Thome). "Entr'acte Gavotte" (Thomas). "Barcarolle" (Voltag). 10.5 p.m.: A broadcast of intense interest. 10.15 p.m.: 5CL's sporting service. 10.29 p.m.: Our Good-night Thought, "It is often wise to disclose what cannot be concealed." 10.30 p.m.: On with the dance. By courtesy of 3LO, Melbourne. Modern dance numbers by the Radi-o-Aces. 11.10 p.m.: God Save the King.

7ZL

MIDDAY SESSION.—(Announcer: Jack Broadhead.) 11.3 a.m.: Selections by the Melody Masters. 11.34 a.m.: Special Midlands weather forecast. 11.55 a.m.: Tasmanian stations' 9 a.m. weather report. 12 noon: G.P.O. clock chimes the hour. 12.1 p.m.: Shipping information. Ships within wireless range. Mail notices. Commercial news. Housewives' guide. 12.5 p.m.: Selections by the Melody Masters. 12.11 p.m.: British official wireless news. 12.20 p.m.: Selections by the Melody Masters. 12.29 p.m.: Announcements. 12.30 p.m.: Anticipations—3LO, Melbourne, sporting commissioner's last minute's selections for Melbourne races; also selections for Sydney races, by our special representative. 12.33 p.m.: Selections by the Melody Masters. 12.55 p.m.: "Mercury" news service. 1.10 p.m.: Selections by the Melody Masters. 1.30 p.m.: Close down. 2.15 p.m.: Running description of Two-year-old Handicap, 5 furlongs, run at Sandown Park Racecourse, Melbourne. 2.20 p.m.: Close down. 2.45 p.m.: Running description of Trial Welter Handicap, 1 mile, run at Sandown Park Racecourse, Sandown, Melbourne. 2.50 p.m.: Close down. **AFTERNOON SESSION.**—(Announcer: Jack Broadhead.) 3.0 p.m.: G.P.O. clock chimes the hour. 3.1 p.m.: Selections by the Melody Masters. 3.4 p.m.: Weather information. 3.5 p.m.: Transmission from the T.C.A. Ground, cricket match, North-west v. Sandy Bay, described by A. M. O'Leary. 3.15 p.m.: Running description of Sandown Plate, 6 furlongs, run at Sandown Park Racecourse, Sandown, Melbourne. 3.20 p.m.: Transmission from the T.C.A. Ground, cricket match, North-west v. Sandy Bay, described by A. M. O'Leary. 3.45 p.m.: Running description of Sandown Park Handicap, 1 mile, run at Sandown Park Racecourse, Sandown, Melbourne. 3.50 p.m.: Transmission from the T.C.A. Ground, cricket match, North-west v. Sandy Bay, described by A. M. O'Leary. 4.45 p.m.: Running description of Jumpers' Flat Race, 1 1/4 miles, run at Sandown Park Racecourse, Sandown, Melbourne. 4.50 p.m.: All sporting results to hand. 5.0 p.m.: Close down. During the afternoon a description will be given of the motor-paced contest, Hubert Opperman v. R. W. ("Fatty") Lamb, raced at T.O.A. Ground. **EARLY EVENING SESSION.**—6.0 p.m.: All sporting results to hand. 6.15 p.m.: Selections by the Melody Masters. 6.45 p.m.: "Uncle David" will entertain the wee folk. 7.0 p.m.: Answers to letters and birthday greetings by "Uncle David." 7.5 p.m.: Selections by the Melody Masters. 7.15 p.m.: News session. "Mercury" special information. Hobart Stock Exchange quotations. Today's golf, athletics, racing, cricket. "Mercury" late sporting news. Results of New Town Egg Laying competition, homing and bowling. **EVENING SESSION.**—7.30 p.m.: L. Norman, secretary Tasmanian Regatta Council, will speak on "First Regatta on Derwent, in 1927." 7.45 p.m.: Conclusion of the story of Old Jim Corbett, one-time world's champion boxer. "Dramatic Exit from the Ring." 8.0 p.m.: G.P.O. clock chimes the hour. 8.1 p.m.: Fifty years ago to-day. 8.6 p.m.: Selections by the Melody Masters. 8.30 p.m.: Transmission from the Continental, Macquarie Street, Hobart—Theo Pipkin and his Continental Orchestra: "The Man I Love" (Gershwin), "Sunshine" (Berlin), "Just Like a Melody" (Donaldson), "Wingin' Home" (Russell), "Beautiful" (Shay), "Dream House" (Cowman), "One Alone" (Rombert), "Someone in the Moonlight" (Baer), "Ocherie Beerie Re" (Wayne), "Jeannine" (Gilbert), "Is it Gonna Be Long?" (Cowman), "After My Laughter Come Tears" (Turk), "Riff Song" (Rombert), "My Angel" (Rapeel), "Sometimes I'm Happy" (Yoemans), "Let a Smile Be Your Umbrella" (Fain). 10.20 p.m.: From the studio—to-day's sporting news. "Mercury" special news service. Ships within wireless range. Tasmanian district weather report. Bowling, homing, cricket, and tennis. 10.50 p.m.: The Royal Autocar Club of Tasmania safety message for to-day. 10.51: "Our Tasmanian good-night thought. 10.52 p.m.: God Save the King; close down.

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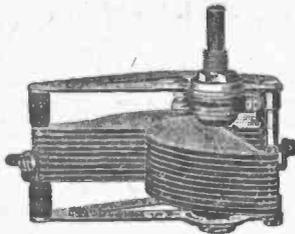
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2FC

MORNING SESSION

(Announcer: A. S. Cochrane.)

- 10 a.m.: "Big Ben" and announcements.
 10.2 a.m.: Studio music.
 10.15 a.m.: News service.
 10.30 a.m.: Studio music.
 11 a.m.: Morning service, broadcast from Methodist Church, Oxford Street. Minister: Rev. T. Jenkin.
 12.15 p.m. (Approx.): Close down.

AFTERNOON SESSION

(Announcer: John Holland.)

- 2.30 p.m.: Programme announcements.
 2.32 p.m.: Children's session, conducted by the "Hello Man;" letters and stories; music and entertainment.
 3 p.m.: Recital of specially selected records.
 3.30 p.m.: From the Band Rotunda, Manly Beach, the Manly Band.
 5 p.m.: From the Studio. Close down.

EVENING SESSION.

(Announcer: Ewart Chapple.)

- 6 p.m.: "Big Ben"; programme announcements.
 6.5 p.m.: The Empire Trio, in association with Miss le Brun Brown.
 "Trio in C Minor" (Mendelssohn).
 Songs: (a) "To You" (Forster).
 (b) "My Soul" (Jacobs-Bond).
 (c) "The Owl" (Barnes-Wells).
 Prelude, "Herodiade" (Massenet).
 Songs: (a) "Le Crepuscule" (Massenet).
 (b) "Elf and Fairy" (Densmore).
 "Trio in G" (Hurlstone).

- 7 p.m.: Evening service, broadcast from St. Stephen's.
 8.30 p.m.: From the Band Rotunda, Manly Beach, the Manly Band.
 9.30 p.m.: Leo Darnton, tenor.
 (a) "Take a Pair of Sparkling Eyes" (Sullivan).
 (b) "A Wandering Minstrel I" (Sullivan).
 (c) "Songs My Mother Taught Me" (Dvorak).
 9.37 p.m.: Lionel Lawson.
 9.44 p.m.: Leo Darnton, tenor.
 (a) "Parted" (Tosti).
 (b) "Sailor's Grave" (Sullivan).
 9.52 p.m.: Lionel Lawson.
 10 p.m.: "Big Ben"; recital of records of world-famous artists.
 10.30 p.m.: National Anthem; close down.

2BL

NEW SOUTH WALES BROADCASTING COMPANY, LIMITED.

MORNING SESSION.

Announcer: A. C. C. Stevens.

- 11 a.m.: G.P.O. clock and chimes. Service broadcast from St. Jude's, Randwick. Minister, Rev. Canon Cakebread.
 12.15 p.m. approx.: From the studio. "Sun" news service.
 12.30 p.m.: Studio music.
 2 p.m.: G.P.O. clock and chimes. Close down.

AFTERNOON SESSION

Announcer: Basil Kirke.

- 3 p.m.: G.P.O. clock and chimes. Pleasant Sunday afternoon from Haberfield Church. Minister, Rev. Richard Piper.
 4.30 p.m.: From the studio, studio music.
 5 p.m.: G.P.O. clock and chimes. Close down.

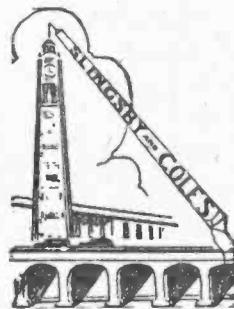
EVENING SESSION

Announcer: Basil Kirke.

- 6 p.m.: Children's session, conducted by Uncle Bas.
 6.20 p.m.: Letters and stories.
 7 p.m.: Evening service from the Dulwich Hill Salvation Army Temple, conducted by Colonel Bell.
 8.30 p.m.: From studio, Empire Trio in association with Miss le Brun Brown, assisted by Willa Fleeting, and Alfred Wilmore. Trio, No. 1, Op. 1.
 Songs: (a) Solveig's Cradle Song" (Grieg).
 (b) "Spring" (Grieg).
 Three pieces (Pache).
 Songs (a) "Before My Window" (Rachmaninoff).
 (b) "The Swan Bent Low to the Lily" (MacDowell).
 (c) "Grey Clouds" (Besly).
 Trio, Op. 50 (Tschaiakowsky).
 10 p.m.: G.P.O. clock and chimes. National Anthem.
 Close down.

2GB

- 10.15 a.m.: Organ music, from St. Alban's Church, Redfern. 10.30 a.m.: Morning service. 12 noon: Close down. 2.30 p.m.: Children's session. 7.0 p.m.: Lecture from Adyar Hall. 8.0 p.m.: Sacred concert from Adyar Hall. 8.15 p.m.: Songs by Mr. Victor Earle. 8.22 p.m.: Violin solos by Miss Doreen Douglas. 8.30 p.m.: Songs by Miss Dorothy Toppin. 8.37 p.m.: Songs by Mr. Cecil Houghton. 8.44 p.m.: Pianoforte solos by Miss Mollie Jones. 8.52 p.m.: Songs by Mr. Victor Earle. 9.0 p.m.: Violin solos by Miss Doreen Douglas. 9.8 p.m.: Songs by Miss Dorothy Toppin. 9.15 p.m.: Pianoforte solos by Miss Mollie Jones. 9.23 p.m.: Songs by Mr. Cecil Houghton. 9.30 p.m.: Close down.



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Interstate Programmes, Sun., Jan. 6

3LO

MORNING SESSION.—10.30 a.m.: Bells from St. Paul's Cathedral, Melbourne. 10.45 a.m.: Express train information. British official wireless news from Rugby. News from yesterday's papers. 11.0 a.m.: Morning service from the Toorak Presbyterian Church. Toorak. Preacher, Rev. John MacKenzie, M.A. Introt. Hymn 485, "Thou Gracious God." Scripture, Old Testament. Prayer. Thanksgiving and Confession. Prose Psalm 103. Scripture, New Testament. Prayer, Intercession. Metrical Psalm 100. Children's address. Lord's Prayer. Children's hymn 576, "Fair Waved the Golden Corn." Intimations. Anthem, "Praise His Awful Name." Sermon. Prayer. Hymn 477, "Our God Our Help." Benediction. 12.15 a.m.: Close down. **AFTERNOON SESSION.—(Announcer: Frank Hatherley.) 2.0:** Sonora recital of the world's most famous records. 3.0: Pleasant Sunday Afternoon Service, Wesley Church, Central Mission, Lonsdale Street, Melbourne. Hymn No. 1, "All Hail the Power of Jesus' Name." Prayer. Orchestral selection. Hymn No. 6, "Blessed Assurance, Jesus is Mine." Duet, Messrs. Godfrey Brothers. Orchestra. Duet, Messrs. Godfrey Brothers. Notices. Offering. Orchestra. Address. National Anthem. Benediction. 4.30 p.m.: Close down. **EVENING SESSION.—(Announcer: Frank Hatherley.) 5.45 p.m.:** Shipping information. 5.47 p.m.: Answers to letters and birthday greetings by "Bobby Bluegum." 6.25 p.m.: Captain Donald Maclean. "Let us do something MOST exciting to tell you all." 6.45 p.m.: Adult birthday greetings and programme announcements. **NIGHT SESSION.—(Announcer: Frank Hatherley.) 7.0 p.m.:** Evening service from St. Paul's Cathedral, Melbourne. Hymn 72 (A. and M.), "The Year is Gone Beyond Recall." Scripture. Exhortation. Absolution. The Lord's Prayer. Versicles and Responses. Psalms 96, 97, and 117. First Lesson. Magnificat. Second Lesson. Nunc Dimittis. The Apostles' Creed. Collects. Hymn 75, "Earth has Many a Noble City." Prayers. Hymn 178, "Jesus is Gone Beyond Recall." Scripture. Exhortation. Bishop. Hymn 79, "As with Gladness Men of Old." Benediction. 8.30 p.m.: The Strad Trio (Cecil Parkes, violin; May Broderick, piano; and Frank Johnstone, cello). "Op. 32 in D Minor" (Arensky). "Elegie Finale" (Op. 43 in G). Myrtle Walscott (contralto), "The Throne of Grace" (Bonheur). "The Holy Child" (Easthope Martin). 8.50 p.m.: Cecil Parkes (violin), "Hymn to the Sun" (Rimsky-Korsakov). "Caprice No. 13" (Paganini). "Tambourin Chinois" (Kreisler). 9.1 p.m.: Violet Jackson (soprano), "The Rose Tree" (Besley). "Music When Soft Voices Die" (Besley). 9.8 p.m.: May Broderick (piano), "Pastorale and Capriccio" (Searle). "Moto Perpetuo" (Weber). 9.16 p.m.: Myrtle Walscott (contralto), "Slumber, Dear Maid" (Handel). "The Rosary" (Nevin). 9.23 p.m.: Frank Johnstone (cellist), "Hungarian Rhapsody" (Ferdinand Liszt). 9.30 p.m.: Violet Jackson (soprano) solo. 9.37 p.m.: The Strad Trio. "Prelude" (Cui). "Novellettes No. 3 and 4" (Gade). "Extract from Brandenburg Concerto" (Bach). 9.50 p.m.: Various news service. Announcements. Our Christmas thought for to-day. 10.0 p.m.: God Save the King.

3AR

MORNING SESSION.—(Announcer: J. Stuart.) 11.0 a.m.: Morning service from Central Mission, Wesley Church, Lonsdale Street, Melbourne, conducted by Rev. J. H. Cain. Devology. Invocation, hymn "Praise My Soul, the King of Heaven." Prayer. Lord's Prayer, hymn "The King of Love My Shepherd Is." Scripture reading, solo, children's address, anthem, announcements and offering, hymn "Lead, Kindly Light," sermon, short prayer, hymn "Standing at the Portal of the Opening Year." Benediction. 12.15 p.m.: Close down. **AFTERNOON SESSION.—(Announcer: J. Stuart.) 3.0 p.m.:** Sweet solace from the Seraphina. 4.30 p.m.: Close down. **EVENING SESSION.—5.0 p.m.:** Brer Rabbit. "Such Wonderful Tales as Childhood Loves to Hear." 5.30 p.m.: Close down. **NIGHT SESSION.—(Announcer: J. Stuart.) 7.0 p.m.:** Hamilton Harty, conducting the Halle Orchestra, symphony, "From the New World" (Dvorak), in ten parts; Clara Butt, contralto, "Clemence" ("Cleansing Fires"); Sir Henry J. Wood and the New Queen's Hall Orchestra, "A Night on the Bare Mountains" (Moussorgsky); Capiton Zaporozetz, bass, "Song of the Fen"; Sir Henry J. Wood and the New Queen's Hall Orchestra, overture "Leonore No. 3" (Beethoven) and 2 (Beethoven); the Kedroff Quartette (Russian singers), unaccompanied, "Olaf Trigravson" Norwegian ballade, "Circassian Song"; Sir Henry J. Wood and the New Queen's Hall Orchestra, "Leonore No. 3" parts 3 and 4 (Beethoven); Challapin, bass, "The Moon is High in the Sky." "Crazy-herded John." 8.46 p.m.: Interval. A. S. Kenyon, "Ethnology of the Australian Aboriginal," continued. 9.0 p.m.: Felix Harty and the Royal Philharmonic Orchestra, "Symphony No. 6" ("Pastoral") (Beethoven), in ten parts; Clara Butt, contralto, "The Rosary." "Down by the Riverside" ("Starry"). "Sir Ivor Harty and the Halle Orchestra. "A Trumpet Voluntary" (for brass and organ (Purcell); Ben Davies, tenor, "Tom Bowling." "Come Into the Garden, Maud" (Balke); Philharmonic String Quartet, "Gavotte" (Thomas); "Spring Song" (Niensohn). 9.47 p.m.: News; announcements. 9.58 p.m.: Our Shakespearean good-night quotation. 10.0 p.m.: "God Save the King."

4QG

MORNING SESSION.—11.0 a.m.: From St. Andrew's Church of England—Morning service. 12.15 p.m.: Close down. **AFTERNOON SESSION.—3.15 p.m.:** From the Botanic Gardens, Band Concert. 4.30 p.m.: Close down. **EARLY EVENING SESSION.—6.30 p.m.:** A session for little listeners. Greetings and replies to letters. **NIGHT SESSION.—7.0 p.m.:** From St. Andrew's Church of England—Children's Service. 7.30 p.m.: Evening service. Municipal Concert Band, from Wleekham Park. 9.30 p.m.: Close down.

5CL

MORNING SESSION.—(Announcer: Athol Lykke.) 10.45 a.m.: Carillon of bells from Adelaide Town Hall. 11.0 a.m.: G.P.O. chimes. 11.1 a.m.: Divine service from Maughan Church, Franklin Street, conducted by Rev. W. H. Cann, sermon by Rev. D. Anear. From the studio. 12.15 p.m.: British Official wireless news. 12.20 p.m.: Close down. **AFTERNOON SESSION.—3.0 p.m.:** G.P.O. chimes. A recital of Russian music, H.M.V. recordings. The London Symphony Orchestra, conducted by Albert Coates, "Le Coo d'Op" ("The Golden Rooster") (Rimsky-Korsakov), "Prince Igor" ballet music with chorus (Borodin); the Russian State Choir, "Storm on the Volga" (Patschenko); Challapin, basso, "The Prophet," Op. 49 (Rimsky-Korsakov), "Song of the Volga Boatmen" (traditional); Fabio Casals, cellist, "Melody in B" (Rubenstein); Caruso, tenor, "Fourfold" ("Wh-?"), (Tchaikowsky); Renee Chemet, violinist, "Overture in C Sharp Minor," Op. 19, No. 4 (Tschalkowsky); Alfred Cortot, pianist, "Etude Pathetique" Op. 8 (Scriabin); "Prelude in C Sharp Minor" (Rachmaninoff); Russian Symphonic Choir, "Lord Have Mercy" (hymn); "Volga Boat Song" (traditional); F. Kreisler, violinist, "Dance Arabe" (Rimsky-Korsakov); "Dance Orientale" (Rimsky-Korsakov). 4.0 p.m.: G.P.O. chimes. **NIGHT SESSION.—(Announcer: Athol Lykke. Accompanist: Jean Finlay.) 6.0 p.m.:** G.P.O. chimes. 6.1 p.m.: S.A.R. information. 6.2 p.m.: Children's happy moments, songs and stories and greetings by Auntie Peggy. 6.25 p.m.: Carillon of bells from Adelaide Town Hall. 6.35 p.m.: The Bird Lady and the Sunshine Songsters, in hymns and moral stories. 7.0 p.m.: Chimes. 7.1 p.m.: A religious service, relayed from Stow Memorial Church. Prayer, Lord's Prayer, hymn "Standing at the Portal." Scripture, prayer, anthem, hymn "O God Our Help." New Year's message by Rev. Dr. Wright, hymn "Thy Kingdom Come." Benediction. From the studio. Orchestral and vocal concert. 8.20 p.m.: Station Orchestra, overture "Raymond" (Thomas). 8.28 p.m.: Linda Wald, soprano, "The Charm of Spring" (Clarke). "Caprice" (Purcell). 8.34 p.m.: Stanley A. Brown, trombone soloist. 8.40 p.m.: Frank McCabe, baritone, "Gray Days" (Johnson). "Dervis Vigil" (Valmore). 8.46 p.m.: Station Orchestra, in a descriptive number, suite "African" (Ring). 8.52 p.m.: Herbert King, tenor, "La Donna e Mobile" (Verdi). "Nita Gitana" (Newton). 8.58 p.m.: Lizette Foglia, violinist, "Rondo" (Mozart). 9.3 p.m.: Linda Wald, soprano, "Ave Maria" (Dubois). "Songs My Mother Taught Me" (Dvorak). 9.9 p.m.: Station Orchestra, "Two Tzigani Dances" (Bond). 9.16 p.m.: Frank McCabe, baritone, "In a Garden" (Hawley). "Harlequin" (Sanderson). 9.22 p.m.: Station Orchestra, selection "The Student Prince" (Romberg). 9.30 p.m.: Herbert King, tenor, "Umbr Mal Fu" (Handel). "Agnes Dei" (Bizet), with violin obbligato by Lizette Foglia. 9.36 p.m.: Station Orchestra, suite "Vive la Danse" (Flick). 9.45 p.m.: P. H. Nicholls, an address, "Beginning Again." 9.59 p.m.: Meteorological information. 10.0 p.m.: G.P.O. chimes; our good-night thought. 10.1 p.m.: "God Save the King."

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Local Programmes, Monday, January 7

2FC

MORNING SESSION

(Announcer: A. S. Cochrane.)

10 a.m.: "Big Ben" and announcements. 10.2 a.m.: Pianoforte selection. 10.10 a.m.: "Sydney Morning Herald" news service. 10.25 a.m.: Studio music. 10.30 a.m.: A talk by the 2FC racing commissioner. 10.45 a.m.: A talk on home cooking and recipes by Miss Ruth Furst. 11 a.m.: "Big Ben"; A.P.A. and Reuter's cable services. 11.5 a.m.: Close down.

MIDDAY SESSION

(Announcer: A. S. Cochrane.)

12 noon: "Big Ben" and announcements. 12.1 p.m.: Stock Exchange, first call. 12.3 p.m.: Official weather forecast, rainfall. 12.5 p.m.: Studio music. 12.10 p.m.: of news, "Sydney Morning Herald." 12.15 p.m.: Rugby wireless news. 12.18 p.m.: A reading. 12.30 p.m.: Studio music. 12.45 p.m.: Cricket scores, England v. Geelong, played at Geelong. 12.45 p.m.: Studio music. 1 p.m.: "Big Ben"; weather intelligence. 1.3 p.m.: "Evening News" midday news service; Producers' Distributing Society's report. 1.20 p.m.: Studio music. 1.28 p.m.: Stock Exchange, second call. 1.30 p.m.: Popular Studio music. 1.57 p.m.: Cricket scores. 2 p.m.: "Big Ben"; close down.

AFTERNOON SESSION

(Announcer: Laurence Halbert.)

(Accompanist: Ewart Chapple.)

2.30 p.m.: Programme announcements. 2.32 p.m.: Recital of selected records of world famous artists. 3 p.m.: "Big Ben"; pianoforte reproduction. 3.15 p.m.: Popular music. 3.30 p.m.: Florence Roache, soprano. 3.37 p.m.: Winifred M'Bride, contralto. 3.45 p.m.: Cricket scores, England v. Geelong, played at Geelong; Miss B. Macaulay will continue her series of talks "Your Son: The Heritage of the Present Boy." 4 p.m.: "Big Ben"; Florence Roache, soprano. 4.7 p.m.: From the Wentworth, the Wentworth Cafe Dance Orchestra, conducted by Jimmy Elkins. 4.20 p.m.: From the Studio. Winifred M'Bride, contralto. 4.27 p.m.: Popular music. 4.35 p.m.: From the Wentworth, the Wentworth Cafe Dance Orchestra, conducted by Jimmy Elkins. 4.45 p.m.: Cricket scores, England v. Geelong, played at Geelong; third call of the Stock Exchange. 4.47 p.m.: Studio music. 5 p.m.: "Big Ben"; close down.

EARLY EVENING SESSION

(Announcer: A. S. Cochrane.)

5.40 p.m.: The chimes of 2FC.
5.45 p.m.: The children's session, conducted by the "Hello Man"; letters and stories; music and entertainment.
6.30 p.m.: Dalretv's market reports (wheat, wheat, and stock).
6.40 p.m.: Fruit and vegetable markets.
6.43 p.m.: Stock Exchange information.
6.45 p.m.: Weather and shipping news.
6.48 p.m.: Rugby wireless news.
6.50 p.m.: Late sporting news.
7 p.m.: "Big Ben"; late news service.
7.10 p.m.: The 2FC Dinner Quartet, conducted by Horace Keats.

(a) "Intermezzo Irlandais" (Leigh).

(b) "La Lesonjera" (Chaminade).

(c) "The Vagabond King" (Friml).

(d) "Chanson Napolitaine" (d'Ambrosio).

(e) Fox trot.

EVENING SESSION

(Announcer: Laurence Halbert.)

(Accompanist: Ewart Chapple.)

7.40 p.m.: Programme announcements.
7.45 p.m.: Pianoforte reproduction
7.53 p.m.: Popular music.
8 p.m.: "Big Ben" From the Lyceum Theatre, the Lyceum Theatre Orchestra, conducted by Frank M'Cann.
8.20 n.m.: From the Studio. John Mitchell, tenor.
8.27 p.m.: Light Music Four, instrumental-

ists, "Brahmsiana" (arr. Langey).

8.37 p.m.: Clarice Coles, contralto.

(a) "How Lovely are Thy Dwellings" (Liddle).

(b) "None but the Weary Heart" (Tschaiakowsky).

8.44 p.m.: Light Music Four, instrumentalists, selection. "Paul Jones" (Planquette).

8.54 p.m.: John Mitchell, tenor.

9.1 p.m.: Weather report and forecast.

9.2 p.m.: Lucille Bruntnell will speak on "The country of England."

9.17 p.m.: From the Lyceum Theatre, the Lyceum Theatre Orchestra, conducted by Frank M'Cann.

9.37 p.m.: From the Studio, A. G. MacDon-

ald, baritone.

(a) "The Land of the Harlequinade" (Oliver).

(b) "A Dream" (Bartlett).

9.44 p.m.: Light Music Four, instrumentalists

(a) "Three Songs" (Strauss).

(b) "Intermezzo" (Strauss).

10 p.m.: "Big Ben"; John Mitchell, tenor.

10.7 p.m.: Clarice Coles, contralto.

(a) "O Western Wind" (Brahe).

(b) "Still as the Night" (Bohm).

(c) "Vale" (Russell).

10.14 p.m.: Light Music Four, instrumental-

ists, "First Suite" (Carmen), (Bizet).

10.27 p.m.: To-morrow's programme.

10.30 p.m.: National Anthem. Close.

2BL

MORNING SESSION

Announcer: A. C. C. Stevens.

8 a.m.: G.P.O. clock and chimes; metropolitan weather report. 8.1 a.m.: State weather report. 8.2 a.m.: Studio music. 8.15 a.m.: G.P.O. clock and chimes; news service from the "Daily Telegraph Pictorial." 8.25 a.m.: Studio music. 8.30 a.m.: G.P.O. clock and chimes; studio music. 8.35 a.m.: Information, mails, shipping, arrivals, departures, and sailings. 8.38 a.m.: News service from the "Daily Telegraph Pictorial." 8.45 a.m.: G.P.O. clock and chimes; studio music. 9 a.m.: G.P.O. clock and chimes; studio music. 9.30 a.m.: Half an hour with silent friends. 10 a.m.: G.P.O. clock and chimes; close down.

MIDDAY SESSION

Announcer: J. Knight Barnett

11 a.m.: G.P.O. clock and chimes; 2BL Women's Sports Association session, conducted by Miss Gwen Varley. 11.30 a.m.: Advertising hints. 11.40 a.m.: Women's session, conducted by Mrs. Cranfield. 12 noon: G.P.O. clock and chimes; special ocean forecast and weather report. 12.3 p.m.: Studio music. 12.30 p.m.: Shipping and mails. 12.35 p.m.: Market reports. 12.45 p.m.: Cricket scores, England v. Geelong, played at Geelong. 12.48 p.m.: "Sun" midday news service. 1 p.m.: Studio music. Talk to children and special entertainment for children in hospital. 1.57 p.m.: Cricket scores, England v. Geelong, played at Geelong. 2 p.m.: G.P.O. clock and chimes; close down.

AFTERNOON SESSION

Announcer: J. Knight Barnett.

Accompanist: Kathleen Roe.

3.45 p.m.: The chimes of the G.P.O. clock; cricket scores, England v. Geelong, played at Geelong. 3.47 p.m.: Studio music. 3.50 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 4 p.m.: The chimes of the G.P.O. clock; Thelma Lovett, soprano—(a) "Tip Toe" (Carew), (b) "Poor Man's Garden" (Russell). 4.7 p.m.: Captain Fred Aarons, Mystery Series—"The World Destroyer." 4.20 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 4.30 p.m.: Laurie Oaks, baritone. 4.37 p.m.: Thelma Lovett, soprano—(a) "That All" (Brahe), (b) "The Valley,

of Laughter" (Sanderson). 4.44 p.m.: "Sun" news service—cricket scores. 4.50 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 5 p.m.: The chimes of the G.P.O. clock; "Our Serial Story." 5.10 p.m. Laurie Oaks, baritone. 5.17 p.m.: Pianoforte reproduction. 5.35 p.m.: Racing resume. 5.37 p.m.: Features of the evening's programme.

EARLY EVENING SESSION

Announcers: J. Knight Barnett and Basil Kirke.

5.40 p.m.: Children's session—Music and entertainment. Letters and stories.
6.30 p.m.: "Sun" news and late sporting.
6.40 p.m.: 2BL Dinner Quartet—
(a) "Gretchen" (Martin),
(b) "Liebeslied" (Kriessler),
(c) "The Pink Lady" (Caryll),
(d) "Melodie" (Paderewski),
(e) "Roses of Ispaham" (Van Philips),
(f) "Brown Eyes I Love" (Coates).
7.10 p.m.: Cricket scores.
7.12 p.m.: 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; grain and fodder report ("Sun"); dairy produce report ("Sun").
7.25 p.m.: Mr. Plm and Miss Pam in advertising talks and nonsense.
7.55 p.m.: Programme and other announcements.

EVENING SESSION

Announcer: Basil Kirke.

Accompanist: G. Vern Barnett.

8 p.m.: G.P.O. clock and chimes. The Savoyans' Dance Band.
8.10 p.m.: Charles Lawrence, entertainer.
8.20 p.m.: Harrison White and Connie, with tinkling banjo and gay piano.
8.25 p.m.: Art Leonard and Brian Nevin in popular vocal numbers.
8.30 p.m.: A humorous sketch by Graham and Manning.
8.40 p.m.: The Savoyans' Dance Band.
8.50 p.m.: Weather report.
8.51 p.m.: "Sydney by Night"—a novelty stunt of intriguing interest to listeners, when a car, equipped with a transmitting set, will be sent on a flying trip around the city, and descriptions given from various points.
9.11 p.m.: From the studio, The Savoyans' Dance Band.
9.21 p.m.: Charles Lawrence, entertainer.
9.31 p.m.: Harrison White and Connie, with tinkling banjo and gay piano.
9.39 p.m.: Art Leonard and Brian Nevin.
9.44 p.m.: A humorous sketch by Graham and Manning.
9.54 p.m.: The Savoyans' Dance Band.
10.4 p.m.: Art Leonard and Brian Nevin.
10.10 p.m.: The Savoyans' Dance Band.
10.20 p.m.: Art Leonard and Brian Nevin.
10.25 p.m.: The Savoyans' Dance Band.
10.35 p.m.: Late weather and announcements.
10.37 p.m.: The Savoyans' Dance Band.
10.57 p.m.: Resume of the following day's programme.
10.58 p.m.: The Savoyans' Dance Band.
11.30 p.m.: National Anthem.
Close down.

2GB

a.m.: Women's session, by Miss Helen J. by A. E. Bennett. 10.20 a.m.: Music. 10.30 p.m.: Women's session, by Miss Helen J. Beegling. 11.30 a.m.: Close down. 2.0 p.m.: Music. 2.5 p.m.: Women's radio service, by Mrs. Dorothy Jordan; Pat Hansen sports talk. 2.50 p.m.: Music. 3.0 p.m.: Talk. 3.15 p.m.: Close down. 5.30 p.m.: Children's session, by Uncle George. 7.0 p.m.: Stock and market reports, by New Zealand Loan and Mercantile Agency, Ltd. 7.15 p.m.: Music. 8.0 p.m.

Interstate Programmes, Monday, January 7

3LO

EARLY MORNING SESSION.—7.15 a.m.: Express train information. 7.16 a.m.: Morning melodies. 7.20 a.m.: Morning exercises to music. 7.30 a.m.: Stock reports; market reports; general news; shipping, sporting information. 8.0 a.m.: Melbourne Observatory time signal. 8.1 a.m.: Morning melodies. 8.15: Close down. **MORNING SESSION.—**(Announcer: J. O'Connor.) 8.15 a.m.: 3LO's different dainties for the daily dinner; to-day's radio recipe. 11.5 a.m.: Miss Olga Parker: "What Some Famous Poets Have Written for Children." 11.20 a.m.: Musical Interlude. 11.26 a.m.: Under the auspices of the St. John Ambulance Association, Miss Edith Wells will speak on "Home Nursing." 11.40: Gramophone recital of the latest records. **MID-DAY SESSION.—**12 noon: Melbourne Observatory time signal; express train information; Reuter's and the Australian Press Association cables; "Argus" news service. 12.15 p.m.: "News" market stock sales; special report by John M'Namara and Co. 1.45 p.m.: Stock Exchange information; meteorological information; weather forecast for Victoria, Tasmania, New South Wales, and South Australia; ocean forecasts; rainfall; Reuter's reports. 2.00 p.m.: Close down. **AFTER-NOON SESSION.—**(Announcer: C. J. O'Connor. Accompanist: Agnes Fortune.) 2.15 p.m.: The Station Orchestra, fantasia, "Marionette" (Aubert). 2.25 p.m.: Dyon, recital. The Station Orchestra, "Allegretto, Op. 164" (Schubert), "Vecchio" (Seabaldi). 2.50 p.m.: Herbert Browne, tenor. 2.57 p.m.: Tasma Tiernan, cello. "Abendlied" (Schumann). 3.00 p.m.: E. J. Jackson, soprano; "Where Violets Grow" (Forster). "To a Miniature" (Brahms). 3.11 p.m.: The Station Orchestra, "Allegretto, Op. 164" (Grieg). "Toreador" (Rubinstein). 3.18 p.m.: "Breaking the Ice" (Cast). Captain Selby, Chas. on Dyon; Mavis, Mrs. J. G. Dwyer. 3.41 p.m.: The Station Orchestra, fantasia, "Au Hofe" (Rossini). 3.51 p.m.: Jessie Smith, contralto. "Love Came Calling" (When You Are Old) (Sanderson). 3.59 p.m.: The Station Orchestra, "Symphony in E Flat Major." First and second movement (Haydn). 4.8 p.m.: Percy Code, trumpet. "Somewhere a Voice is Calling." 4.13 p.m.: Herbert Browne, tenor. **NIGHT SESSION.—**The Station Orchestra, "Symphony in E Flat Major," third and fourth movements (Haydn). 4.30 p.m.: Violet Jackson, soprano, "Early One Morning" (Old English). "T. Attenm" (The Slave's Sickness, to Fry). (Beethoven). 4.37 p.m.: Sonora recital. "The Eroica Symphony," by Beethoven. 5.0 p.m.: "Herald" news service. Stock Exchange information; acceptances for the Woodend races on Wednesday, January 9. During the afternoon progress scores in the cricket match, England v. Geelong, will be broadcast as they come to hand. 5.15 p.m.: Close down. **EVENING SESSION.—**(Announcer: Frank Hatherley. Answers to letters.) 5.00 p.m.: Birth day greetings by "Bobby Bluecum." 6.25 p.m.: Musical Interlude. 6.30 p.m.: Donald MacLean, "More Pirate Stories." 6.50 p.m.: "Bobby Bluecum" in song. **NIGHT SESSION.—**(Announcer: John Stuart. Accompanist: Agnes Fortune.) 7.5 p.m.: Stock Exchange information. 7.15 p.m.: Special report of John M'Namara and Co. Official reports of the Melbourne stock sales by the Associated Stock and Station Agents, Bourke Street, Melbourne; fish market reports by J. B. Barrett, Ltd.; rabbit prices; reuter's reports; market reports by the Victorian Producers Co-operative Co. Ltd.; poultry and ducks; the day's produce, potatoes, and onions; market reports of fruit by the Victorian Fruiters' Association; retail prices; wholesale prices of fruit by the Wholesale Fruit Merchants' Association. 7.30 p.m.: News session. 7.4 p.m.: Birth day greetings. 7.45 p.m.: "Out of the Past." 7.46 p.m.: Under the auspices of the Department of Agriculture, a special broadcast, "This is what we speak on 'Tobacco Culture—Seasonable Hints.'" 8.0 p.m.: "A Maker of History." First act of the pantomime beautiful "Dick Whittington and His Cat." Direction: William Anderson. Cast of characters: Immortalis: Demon King Rat, Darvall Thomas; Fairy Queen Cat, Florence Sutherland; Spirit of the Dance, Kathleen Butler. Mortals: Dick Whittington (a lad without friends and without money), Idle Jack (a rag doll), Alice (a lass who is sweeter than honey), Mae Seaton; Dame Wattleblossom (a cunning old devil, a sneaking old cat), Joe Brennan; Idle Jack (a lazy young rascal, a real Idiot); the care of the King, Harry Warren (the father of Alice, of this you all know). B. S. Monti: The Cat (Dick's only friend in weal or in woe). Theo. Foster: Sultan of Morocco (a great potentate in a rich, colorful). Darvall Thomas: Chamberlain (who takes care of the ladies a score). Jack Hodges: Tom, Master at Hounds (a great favorite with the ladies). Cooksey: Alan, Scene I. "Kings of the Rats." The Demon King. Scene II. "The Cat and the Fairy Queen, Cat, and Demon." Scene III. "A Trick to Work." general ensemble: "Don't Be Cruel to a Vegetable." Dame Wattleblossom: "Let a Smile Be Your Umbrella." Scene IV. "The King's Hat." "What Makes Me Love Her." Baron Fitzwarren: "Tumbledown Cottage of Dreams." Dick Whittington: "Tumbling Troubles into Puddles." general ensemble. Scene V. "A Heart That's Full of Fairy Queen, Cat." "Wobbly Walk." Master at Hounds: "Golden Dreams" (duet). Dick and Alice. Scene VI. "Rhons Rhons." general ensemble: "Gladabout Mamma." Idle Jack on Rag Doll. Scene VII. "The Tiny Tins." "Lonesome in the Moonlight." Dick: "Pecaninies' Lullaby." Alice and Jimmy Dunstan: "What's All This Row About?" general ensemble. Scene VIII. "Get Out and Get Under the Moon." Master at Hounds: "Fairy Queen, Fairy Queen, Dame, Baron, and Idle Jack." Scene IX. "Hunting, Hunting." Master at Hounds: "The Rotten King, King Rat." "Cat Specialty." The Cat and Kittens; "Leaf Ballet," dancing ensemble. "Turn Again,"

4QG

EARLY MORNING SESSION.—(Announcer: J. Tyson.) 7.43 a.m.: Time signals. 7.45 a.m.: News service. 8.0 a.m.: Some electric records. 8.15 a.m.: News service. 9.30 a.m.: Close down. **MORNING SESSION.—**(Announcer: Rita M'Allister.) 11.0 a.m.: Music. 11.5 a.m.: Social news. 11.15 a.m.: Lettucette arranged by the National Council of Women of Queensland. 11.30 a.m.: Music. 11.35 a.m.: More social news. 11.45 a.m.: From the Wintergarden Theatre—Wurlitzer organ. 12.0 Noon: Close down. **MID-DAY SESSION.—**(Announcer: R. Wight.) 1.0 p.m.: Market reports and weather information. 1.20 p.m.: Lunch-hour music. 2.0 p.m.: Close down. **AFTERNOON SESSION.—**(Announcer: H. Humphreys.) 3.0 p.m.: A programme of electrically reproduced records. 3.30 p.m.: Mail train running times. 4.15 p.m.: This afternoon's news. 4.30 p.m.: Close down. **EARLY EVENING SESSION.—**(Announcers: R. Wight and H. Humphreys.) 6.0 p.m.: Mail train running times; mail information; shipping news. 6.5 p.m.: Some electrically reproduced records. 6.25 p.m.: Commercial announcements. "The Children's Hour." 6.30 p.m.: Bedtime stories, conducted by "The Sandman." 7.0 p.m.: News in brief. 7.5 p.m.: Stock Exchange news. 7.6 p.m.: Metal quotations. 7.7 p.m.: Market reports. 7.25 p.m.: Fenwick's stock report. 7.30 p.m.: Weather information. 7.40 p.m.: Announcements. 7.50 p.m.: 52 time signals. 7.45 p.m.: Lecturette, "Pork Products on the Breakfast Menu." **NIGHT SESSION.—**(Announcer: H. Humphreys.) 8.0 p.m.: The Studio Orchestra (Conductor: A. R. Featherstone)—Selection, "The Mikado" (Gilbert and Sullivan). Soloist: Harry Humphreys—A reading from Charles Dickens: "Incidents in the short life of Paul Dombey" (from "Dombey and Son"). 8.25 p.m.: The Aloha Novelty Trio—In "An Old-fashioned Town" (Squire). 8.30 p.m.: Ellen M'Lennan (soprano), "Ave Maria" (Gounod). 8.35 p.m.: The Studio Orchestra—Selection, "The Gelsa" (Sydney Jones). 8.45 p.m.: George Williamson (tenor). "Red Devon." Parted. "Tostito." Wurlitzer organ solo. 9.0 p.m.: Metropolitan weather forecast. 9.1 p.m.: Jill Manners (soprano)—"Il Bacio" (Arditi). "Love Will Find a Way" (Fraser Simpson). 9.9 p.m.: The Aloha Trio. "The Sunset." "Song of Hawaii." 9.14 p.m.: Stanley (soprano), baritone, "Rocked in the Cradle of the Deep." "The Star of Bethlehem." 9.20 p.m.: J. Tyson, some accordion solos. 9.25 p.m.: Ellen M'Lennan (soprano), "Lark Jean." "The Studio Orchestra"—Selection, "Lullaby" (Ketyly). 9.33 p.m.: Arthur Sharman (pianist), "Autumn" (Chaminade). 9.43 p.m.: Aeolian Vocalion—The announcer at W.G.N. describing the motor races at Atlantic City. Speedway. 9.51 p.m.: The Studio Orchestra—Selection, "Lilac Time" (Schubert). 9.0 p.m.: The "Daily Mail" news; the "Courier" news; weather news.

3AR

10.0 a.m.: G.P.O. clock says "Ten." 10.1 a.m.: "Age" Stock Exchange reports. London metal market. 10.10 a.m.: "Age" market reports—Farm and station produce, fruit, fish, vegetables, etc. 10.25 a.m.: Mail notices; express train information. 10.35 a.m.: "Age" news service, exclusive to 3AR. 10.58 a.m.: Weather forecast. (Announcer: C. M. Housling.) 11.0 a.m.: Ned Tyrrell's Radi-o-Aces—"Meet Me To-morrow" (Dean). "Once Again" (Lumsdaine). "Tired Hands" (Wood). "Busy" (Miller). "Sweet Sue, Just You" (Tobias). "In a Bamboo Garden" (Donaldson). 11.20 a.m.: Vocal vivacity. 11.25 a.m.: Ned Tyrrell's Radi-o-Aces—"Anything You Say" (Donaldson). "Lonely Acres" (Robinson). "Shake It Down" (Williams). "New to You, I Like Me Next to You" (Williams). "What Was I To Do" (Reid). "Ohnatown" (Fyain). 11.45 a.m.: Vocal vivacity. 11.50 a.m.: Ned Tyrrell's Radi-o-Aces—"The Big Song" (Romberg). "The Dance of the Blue Danube" (Fischer). "Lonesome Boy's Rosary" (Harris). "High Up On a Hill Top" (Eber). "Tell Me Again" (Clark). "Up and Down" (Rose). 12 (noon): Vocal vivacity. 12.5 p.m.: Ned Tyrrell's Radi-o-Aces—"Mississippi Mud" (Harris). "Lolita" (Stoneman). "Without You, Sweetheart" (de Silva). "Dream Kisses" (Fellon). "Lenora" (Gilbert). 12.25 p.m.: British official wireless news. 12.35 p.m.: Vocal vivacity. 12.40 p.m.: Ned Tyrrell's Radi-o-Aces—"Virginia Creeper" (Laid). "Lilac Time" (Schubert). "Happy-go-lucky Lane" (Lewis). "All Day Long" (Cross). "Don't Keep Me in the Dark." "Bright Eyes" (Bryan). "Down Where the Sun Goes Down" (Jones). 12.50 p.m.: Vocal vivacity. 12.55 p.m.: Ned Tyrrell's Radi-o-Aces—"Dolores" (Kassell). "Like a Melody Out of the Sky" (Donaldson). "Because My Baby Don't Mean Maybe Now" (Donaldson). 1.15 p.m.: Vocal vivacity. 1.30 p.m.: Ned Tyrrell's Radi-o-Aces—"Guess Who's in Town" (Razay). "My Blackbirds" (E. Buehler). "Newlyweds" (Friend). "Louisiana" (Schafer). 1.30 p.m.: Close down. **EVENING SESSION.—**(Announcer: Frank Hatherley.) 6.0 p.m.: Selections from the repertoires of the Master Musicians. 7.50 p.m.: Results of Test cricket, England v. Geelong, at Geelong. **NIGHT SESSION.—**(Announcer: Frank Hatherley.) 8.0 p.m.: E. C. H. Taylor, "School Life and School Sport." 8.15 p.m.: T. Latham, president of the Historical Society of Victoria, on "The Aims and Objects of the Proposed Historical Exhibition." 8.30 p.m.: Alfred Firman, Book of the Year for 1928, day and to-morrow. 8.45 p.m.: Ned Tyrrell's Radi-o-Aces—"Blueberry Land" (Bryan). "Dellium" (Schurt). "Felix the Cat" (Naustraum). 8.56 p.m.: Keith Desmond, "Pithy Pleasantries." 8.58 p.m.: Ned Tyrrell's Radi-o-Aces—"Folly" (Zamocnik). "Back in Your Own Backyard" (Jolson). "Let a Smile be Your Umbrella" (Fair). 9.8 p.m.: John Byrne, bass, "The Old Black Mare" (Squire). 9.11 p.m.: Ned Tyrrell's Radi-o-Aces—"Tell Me Tonight" (Little). "When You Know Me" (Beehan). "I'm Sorry, Sally" (Kahn). 9.21 p.m.: Rosalind Hartnutt, contralto, "The Little Silver Ring" (Chaminade). 9.24 p.m.: Ned Tyrrell's Radi-o-Aces—"Dream House" (Fyain). "Leanne" (Gilbert). "Red Head" (Ermbye). 9.34 p.m.: Keith Desmond, "Wild and Witty." 9.37 p.m.: Ned Tyrrell's Radi-o-Aces—"Rose of Monterey" (Guy). "Sentimental Baby" (Davis). "In My Bouquet of Memories" (Lewis). 9.47 p.m.: John Byrne, bass, "Selected." 9.50 p.m.: Announcements. 9.53 p.m.: Ned Tyrrell's Radi-o-Aces—"Jazz Master—Piano Solo" (Mayerle). "Hum and Strum" (Meyere). "Don't Cry, Baby" (Kahn). 10.3 p.m.: Rosalind Hartnutt, contralto, "What's a Girl?" 10.6 p.m.: Ned Tyrrell's Radi-o-Aces—"Constantinople" (Anything You Say) (Donaldson). "In a Bamboo Garden" (Donaldson). "We'll Have a New Home in the Morning" (Buck). 10.20 p.m.: "Age" news service, exclusive to 3AR; results of Test crickets; England v. Geelong, at Geelong; announcements. 10.29: Our Shakespearean Good-night Quotation is from "Othello": "Good name in man or woman, dear my Lord, is the immediate jewel of their souls. Who steals my purse steals trash; 'tis something, nothing. 'Twas mine, 'tis his, and has been slave to thousands; but he that filches from me my good name robs me of that which not enriches him, and makes me poor indeed." 10.30 p.m.: God Save the King.

5CL

MORNING SESSION.—11.0 a.m.: G.P.O. chimes. 11.1 a.m.: A band concert. H.M.V. recordings by the Victoria Band of His Majesty's Coldstream Guards. "Adventure" (Keller-Bell). "The Gondolier" (Luigini). "La Voce des Cloches" (Luigini). "The Song of the Lark" (Luigini). "The Song of the Lark" (Luigini). 11.15 a.m.: "Economist," a talk on menu and kitchen craft. 11.30 a.m.: Vocal, pianoforte, Moisel-chamber music. H.M.V. recordings by F. Sharp (Chopin). "Perpetuum Mobile" (Weber). 12.15 p.m.: Sydney Coltham, tenor. "Star." "Of Bethlehem" (Adams). "The Minister Boy." "Tom Cooing" (Dwyer). "Virtuous" (Sullivan). "The Quartet" (D. Major). "First movement Poco Lento—Allegro—Poco Lento, second movement Scherzo—Vivace, third movement Larghetto." 12.40 p.m.: Grand opera. H.M.V. recordings. "Lohengrin." "They Drink the Potion" (Wagner). "Tristan and Isolde." "They Drink the Potion" (Wagner). Our commercial corner. 12.50 p.m.: S.A.R. information. 12.51 p.m.: S. C. Ward and Co.'s Meteorological information. 12.57 p.m.: Meteorological information. **MIDDAY SESSION.—**(Announcer: G. R. Lamprell. Accompanist: Jean Finlay.) 1.0 p.m.: G.P.O. chimes. 1.1 p.m.: Allan Kitson, entertainer, in pianoforte interludes and vocal solos. 1.15 p.m.: Florence Rendall, soprano, "The Spirit of Spring" (Parker). "The River of Years" (Marziels). 1.14 p.m.: Paul Jeacle, saxophonist, "Temptation Rik" (Lodge). "Romana" (imitating steel guitar). 1.21 p.m.: Will Belmont (humorist) in a comedy sketch. 1.31 p.m.: Allan Kitson, entertainer, in piano and vocal specialties. 1.37 p.m.: Florence Rendall, soprano, "Golden Bird" (Wood). "The Song of the Lark" (Luigini). 1.43 p.m.: Paul Jeacle, saxophonist, "Valse Classic." "Occerina Solo." 1.49 p.m.: Will Runge, humorist, in an original sketch. 1.59 p.m.: Meteorological information. 2.00 p.m.: Close down. **AFTERNOON SESSION.—**(Announcer: L. L. Norris. Accompanist: Jean Finlay.) 3.0 p.m.: G.P.O. chimes. 3.1 p.m.: A. Todd, banjoist, "Fanfare des Dragons" (Kennedy). "Dusky Dandy" (Grimshaw). 3.6 p.m.: Diana Belmont, contralto, "My Heart is Weary" (Thomas). 3.12 p.m.: Organ recital by Herbert Edwards. L.A.B. from Archer St. Methodist Church. "Postlude" (Spartak). "Alleluia" (B. Minor). "G.P.O. Polonez" (Polchinski). 3.26 p.m.: Gertrude Gray, mezzo. "A Swan" (Grieg). "The First Primrose" (Grieg). 3.34 p.m.: William Davey, xylophonist, "Flappertree" (Greer). "Constantinople" (Carton). 3.40 p.m.: Ralph Pearce, basso. "Shipmates o' Mine." "The Cold North Sea." 3.46 p.m.: A. Todd, banjoist. "The Gramatic" (Heath). "A Mexican Rite" (Grimshaw). 3.52 p.m.: Diana Belmont, contralto, "Faust's First Scene" (Lindt-Saens). "The Ships of Arcady." 3.58 p.m.: William Davey, xylophonist, "Nola" (Arndt). "The

(Continued on page 37.)

Local Programmes, Tuesday, January 8

2FC

Tuesday, January 8.

EARLY MORNING SESSION

7 a.m.: "Big Ben" and announcements. 7.5 a.m.: Studio music. 7.20 a.m.: Country session; official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, mail services, river reports. 7.25 a.m.: Investment market; mining sharemarket, metal quotations. 7.35 a.m.: Wool sales, breadstuffs markets, inter-State 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

(Announcer: A. S. Cochrane.)

10 a.m.: "Big Ben" and announcements. 10.2 a.m.: Pianoforte reproduction. 10.10 a.m.: "Sydney Morning Herald" news service. 10.25 a.m.: Studio music. 10.30 a.m.: Last minute sporting information by the 2FC racing commissioner. 10.40 a.m.: Studio music. 10.50 a.m.: Pianoforte reproduction. 11 a.m.: "Big Ben"; A.P.A. and Reuter's cables. 11.5 a.m.: Close down. Note.—Race results.

MIDDAY SESSION

(Announcer: A. S. Cochrane.)

12 noon: "Big Ben" and announcements. 12.1 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 news, "Sydney Morning Herald." 12.15 p.m.: Rugby wireless news. 12.18 p.m.: A reading. 12.30 p.m.: Studio music. 12.45 p.m.: Cricket scores, England v. Geelong, played at Geelong. 12.47 p.m.: Studio music. 1 p.m.: "Big Ben"; weather intelligence. 1.3 p.m.: "Evening News" midday service; Producers' Distributing Society's report. 1.20 p.m.: Studio music. 1.28 p.m.: Stock Exchange, second call. 1.30 p.m.: Studio music. 1.57 p.m.: Cricket scores. 2 p.m.: "Big Ben"; close down.

AFTERNOON SESSION

(Accompanist: Ewart Chapple.)

2.30 p.m.: Programme announcements. 2.32 p.m.: Recital of selected records of world famous artists. 3 p.m.: "Big Ben"; pianoforte reproduction. 3.15 p.m.: Popular music. 3.30 p.m.: Bessie Wagner, contralto. 3.37 p.m.: Eric Cox, boy soprano. 3.45 p.m.: From the Lyceum Theatre, the Lyceum Theatre Orchestra, conducted by Frank McCann. 4 p.m.: "Big Ben." From the Studio, Bessie Wagner, contralto. 4.7 p.m.: William Krasnik, violinist, (a) "Valse Triste" (Alfred Hill), (b) "Second Romance" (Schumann-Monk). 4.14 p.m.: From the Wentworth, The Wentworth Cafe Dance Orchestra, conducted by Jimmie Elkins. 4.34: From the Studio, Eric Cox, boy soprano. 4.31: William Krasnik, violinist (a) "Ballet Music from Rosamunde" (Kreisler), (b) "Duck" (Hill). 4.38 p.m.: Popular music. 4.45 p.m.: Third call of the Stock Exchange. 4.47 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 Children's Session, conducted by the "Hello Man"; letters and stories; music and entertainment.
6.30 p.m.: Dalgety's market reports; wool, wheat and stock.
6.40 p.m.: Fruit and vegetable markets.
6.43 p.m.: Stock Exchange information.
6.45 p.m.: Weather and shipping news.
6.48 p.m.: Rugby wireless news.
6.50 p.m.: Late sporting news.
7 p.m.: "Big Ben"; late news service.
7.10 p.m.: The 2FC Dinner Quartet, conducted by Horace Keats.
(a) "Red Poppies" (Elliott).
(b) "L'heure Supreme" (Lotter).

(c) "Meditation" (Gillet).
(d) "Merrie England" (German).
(e) "Passepied" (Delibes).
(f) Fox trot.

EVENING SESSION

(Announcer: Laurence Halbert.)
(Accompanist: Ewart Chapple.)

7.40 p.m.: Programme announcements.
7.45 p.m.: Pianoforte reproduction.
7.53 p.m.: Popular music.
8 p.m.: "Big Ben." From the Dee Why Theatre, concert programme arranged by the Dee Why and District Choral Society.
8.5 p.m.: (1) Chorus, "The Carnovale" (Rossini), the Society.
8.10 p.m.: (2) Songs (a) "The Star" (Rogers), (b) "I Love the Moon" (Reubens), Miss Dorothy Cosgrove.
8.15 p.m.: (3) Choruses (1) "In Sherwood Lived stout Robin Hood" (Lloyd); (2) "The Dawn of Day" (Reary), The Society.
8.26 p.m.: (4) violin, Last Movement of Sonata A Major (Saint-Saens), Mr. Dan Scully.
8.36 p.m.: (5) Chorus, "The Three Ships" (Thomas), The Society.
8.40 p.m.: (6) Songs (a) "A Brown Bird Singing" (Wood), (b) "Uncle Rome" (Homer), Mr. Clement Williams.
8.48 p.m.: (7) Chorus, (a) "Where Art Thou Beam of Light" (Bishop), (b) "Drink to Me Only" (Button).
8.55 p.m.: From the Studio, Weather report and announcements.
8.57 p.m.: Studio Dance Band, conducted by Cec. Morrison.
9.7 p.m.: Sketches by Scott Alexander.
9.19 p.m.: Len Maurice in the newest song hits.
9.26 p.m.: Maggie Foster, violinist.
(a) "Mighty Lak a Rose" (Nevin).
(b) "Ave Maria" (Schubert).
(c) "Sometimes I'm Happy."
9.34 p.m.: Studio Dance Band, conducted by Cec. Morrison.
9.44 p.m.: Sketches by Scott Alexander.
9.56 p.m.: Len Maurice in the newest song hits.
10.3 p.m.: Maggie Foster, violinist.
(a) "Elfantanz."
(b) "Salut d'Amour" (Elgar).
10.10 p.m.: Studio Dance Band, with popular choruses by Len Maurice.
10.30 p.m.: Late weather and announcements.
10.32 p.m.: Studio Dance Band, conducted by Len Maurice.
10.57 p.m.: To-morrow's programme.
10.59 p.m.: Studio Dance Band, conducted by Len Maurice.
11.30 p.m.: National Anthem; Close down.

2BL

MORNING SESSION

8 a.m.: G.P.O. clock and chimes; metropolitan weather report. 8.1 a.m.: State weather report. 8.2 a.m.: Studio music. 8.15 a.m.: G.P.O. clock and chimes; news from the "Daily Telegraph Pictorial." 8.25 a.m.: Studio music. 8.30 a.m.: G.P.O. chimes; studio music. 8.35 a.m.: Information mails, shipping, arrivals, departures, and sailings. 8.38 a.m.: News from the "Daily Telegraph Pictorial." 8.45 a.m.: G.P.O. clock and chimes; studio music. 9 a.m.: G.P.O. clock and chimes; studio music. 9.30 a.m.: Half an hour with silent friends. 10 a.m.: G.P.O. clock and chimes; close down.

MIDDAY SESSION

Announcer: J. Knight Barnett.

11 a.m.: G.P.O. clock and chimes; women's session, conducted by Mrs. Cranfield. 12 noon: G.P.O. clock and chimes; special ocean forecast and weather report. 12.3 p.m.: Studio music. 12.30 p.m.: Shipping and mails. 12.35 p.m.: Market reports. 12.48 p.m.: "Sun" midday news service. 1 p.m.: Studio music. 1.30 p.m.: Talk to children and special entertainment for children in

hospital. 2 p.m.: G.P.O. clock and chimes; close down.
Note.—Race results.

AFTERNOON SESSION

Accompanist: Kathleen Roe.

3.45 p.m.: The chimes of the G.P.O. clock; studio music. 3.50 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 4 p.m.: The chimes of the G.P.O.; from the studio, Laurie Oaks, baritone. 4.7 p.m.: "Yarns by a Wanderer." 4.20 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. From the studio: 4.30 p.m.: David McKissock, 'cellist. 4.37 p.m.: Laurie Oaks, baritone. 4.44 p.m.: "Sun" news service. 4.50 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 5 p.m.: The chimes of the G.P.O. Clock; from the studio, "Our Serial Story." 5.10 p.m.: David McKissock, 'cellist. 5.17 p.m.: "Sun" news service. 5.22 p.m.: Pianoforte reproduction. 5.15 p.m.: Producers' Distributing Society's poultry report. 5.37 p.m.: Features of the evening's programme.

EARLY EVENING SESSION

5.40 p.m.: Children's session—music and entertainment.
6 p.m.: Letters and stories.
6.30 p.m.: "Sun" news and late sporting.
6.40 p.m.: 2BL Dinner Quartet—
(a) "Mazurka" (Glinka).
(b) "Souvenirs of the Ball" (Boccalari).
(c) "Romance" (Wienlawski).
(d) "Sally" (Kern).
(e) "Moonbeams" (Drigo).
(f) "Poupee Valvante" (Poldini).
7.10 p.m.: 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; grain and fodder report ("Sun"); dairy produce report ("Sun").
7.25 p.m.: Mr. Pim and Miss Pam in advertising talks and nonsense.
7.55 p.m.: Programme and other announcements.

EVENING SESSION

Accompanist: G. Vern Barnett.

8 p.m.: G.P.O. clock and chimes. The Music Makers.
8.15 p.m.: John Mitchell, tenor.
8.27 p.m.: Mrs. C. R. Roberts, winner of the Welsh Vocal Championship for Queensland, who competed with the winners of other States in Melbourne, and is now on her way back to Brisbane.
8.29 p.m.: The Music Makers.
8.49 p.m.: "Bringa" will give a talk on the Aborigines.
9.3 p.m.: Weather report.
9.5 p.m.: From the Dee Why Theatre, the second part of the concert programme arranged by the Dee Why and District Choral Society.
Chorus, "The Great God, Pan" (Farebrother).
Songs, (a) "The Birth of Morn," (b) "I Hear a Thrush at Eve," Miss Dorothy Cosgrove.
Chorus, "After Many a Dusty Mile" (Elgar).
Violin, "Allegretto from Sonata" (Grieg). Mr. Dan Scully.
Chorus, "Sir Eglamore" (Balfour Gardiner).
Song, "Mr. Clement Williams.
Chorus, "Song of the River" (Cowen), "In Going to My Lonesome Bed" (Edwards).
9.55 p.m.: From the studio—The Music Makers.
10.5 p.m.: Mrs. C. R. Roberts, soprano.
10.12 p.m.: John Mitchell, Tenor.
10.19 p.m.: The Music Makers.
10.27 p.m.: Resume of following day's programme.
10.30 p.m.: National Anthem. Close down.

2GB

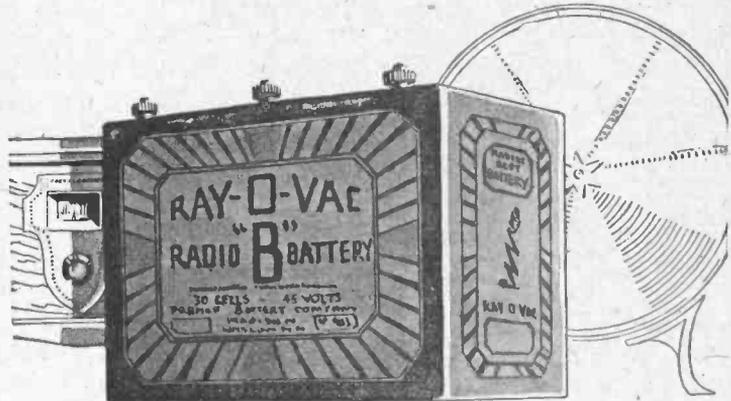
10.0 a.m.: Music. 10.10 p.m.: Happiness talk by A. E. Bennett. 10.20 a.m.: Music. 10.30 a.m.: Women's session, by Miss Helen J. Beegling. 11.30 a.m.: Close down. 2.0 p.m.: Music. 2.5 p.m.: Women's radio service, by Mrs. Dorothy Jordan. 2.50 p.m.: Music. 3.0 p.m.: Talk. 3.15 p.m.: Close down. 5.30 p.m.: Children's session, by Uncle George. 7.0 p.m.: Stock and market reports, by New Zealand Loan and Mercantile Agency, Ltd. 7.15 p.m.: Music. 8.0 p.m.: 2GB Instrumental Trio, Miss Ada Brook, Mr. Cecil Berry, Mr. Cedric Ashton. 8.15 p.m.: Songs by Miss Alesia Haywood. 8.25 p.m.: A humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 8.30 p.m.: Violin solos by Mr. Cecil Berry. 8.40 p.m.: Songs by Mr. C. E. Cooke. 8.50 p.m.: Pianoforte solos by Miss Ada Brook. 9.0 p.m.: Weather report. 9.3 p.m.: Address. 9.15 p.m.: Songs by Miss Alesia Haywood. 9.25 p.m.: Cello solos by Mr. Cedric Ashton. 9.35 p.m.: A humorous interlude. 9.40 p.m.: Songs by Mr. C. E. Cooke. 9.50 p.m.: 2GB Instrumental Trio. 10.10 p.m.: Orchestral music. 10.30 p.m.: Close down.

5CL, Monday

(Continued from page 35.)

Merry Widow" (Lehor). 4.4 p.m.: Gertrude Gray, mezzo. "Lackaday" (Crampton). "Salaam" (Long). 4.10 p.m.: Organ recital by Herbert Edwards, L.A.B., from Archer Street Methodist Church. "In a Monastery Garden" (Ketilby). "Le Cygne" (Saint-Saens). "Finale" (Hissi). Studio. 4.24 p.m.: Ralph Pace, basso. "Drinking, Drinking, Drinking." "Friend of Mine." 4.30 p.m.: Twenty-five minutes with H.M.V. artists. Paul Whiteman's Orchestra. "I'm Afraid of You" (Gottler). "My Pet" (Ager); Nat Shilkret and his Orchestra. "What's the Reason" (Rubens). "Ready for the River" (Moret). "Fascination Vamp" (Nussbaum). "Beautiful" (Gillespie); Paul Whiteman's Orchestra. "Dancing Shadows." "It Was the Dawn of Love." 4.57 p.m.: S. C. Ward and Co.'s Stock Exchange information. 5.0 p.m.: G.P.O. chimes and close down. **EVENING SESSION.**—(Announcer: J. L. Norris. Accompanist: Jean Finlay.) 6.0 p.m.: G.P.O. chimes. 6.1 p.m.: International cricket scores, England v. Geelong. 6.5 p.m.: Children's happy moments, birthday greetings, correspondence, songs and stories by "Miss Wireless." 6.30 p.m.: Dinner music interlude on Sonora, H.M.V. recordings. 7.0 p.m.: G.P.O. chimes. 7.1 p.m.: S. C. Ward and Co.'s Stock Exchange information. 7.5 p.m.: General market reports. 7.10 p.m.: Mr. D. T. Laurie (Government Poultry Expert), a talk on "Poultry Tick." 7.30 p.m.: The 5CL Twinkler Boys' Club, entertainment by the "Twinkler." **NIGHT SESSION.**—(Announcer: J. L. Norris. Accompanist: Jean Finlay.) 8.0 p.m.: G.P.O. chimes. 8.1 p.m.: Magill Vice-Regal Band, quick-step "The Flying Squad," overture "Le Diable." 8.15 p.m.: Diana Belmont, contralto, "The Enchantress" (Hullah). "Vale" (Russell). 8.19 p.m.: Seth Smith, banjoist, "Cheerio" (Stainer). "En Avant" (Cammeyer). 8.25 p.m.: Jack Burgess, "She's Everybody's Sweetheart but Nobody's Girl" (Conrad). "What Does It Matter?" (Berlin). 8.31 p.m.: Magill Vice-Regal Band, selection, "Beethoven's Works." 8.41 p.m.: Gertrude Gray, mezzo, "Bird Lullaby" (Sanderson). "If My Songs Were Only Winged" (Hallin). 8.47 p.m.: A sketch by Courtney Ford. "The Sea Captain." 8.53 p.m.: Magill Vice-Regal Band, serenade, "The Warblers' Serenade." 9.0 p.m.: G.P.O. Adelaide. 9.1 p.m.: Diana Belmont, contralto, "Before the Dawn," "Rose Leaves." 9.7 p.m.: Seth Smith, banjoist, "When I Sing the Rosary" (Gilbert). "To the Front" (Cammeyer). 9.13 p.m.: Howard Bauerochse. "Ah, Moon of My Delight" (Lehmann). "Youth." 9.19 p.m.: Magill Vice-Regal Band, waltz "Ramona," march "The Iron Division." 9.29 p.m.: Jack Burgess, "You Don't Like It, Not Much!" (De Rose). "Are You Happy?" (Vellen). 9.35 p.m.: Magill Vice-Regal Band, Morceau, "Dreamland Bells." 9.41 p.m.: A sketch by Courtney Ford. "The Burning Studio." 9.50 p.m.: Gertrude Gray, mezzo, "My Task" (Ashford). "Fleurette" (M'Geoch). 9.56 p.m.: Magill Vice-Regal Band. "You're a Real Sweetheart." "Take in the Sun Hang out the Moon." 10.5 p.m.: Howard Bauerochse, "Eleanore" (Taylor). "On St. Nicholas's Day" (Martin). 10.11 p.m.: Magill Vice-Regal Band. "You're a Real Sweetheart." "Take in 10.15 p.m.: "Advertiser" general news service; British Official wireless news; meteorological information; station announcements. 10.29 p.m.: Our good-night thought. 10.30 p.m.: The dance is the thing; by courtesy of J.L.O. Melbourne, dance music by the famous Radi-o-Aces. 11.10 p.m.: God Save the King.

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Wireless Department, First Floor

FARMER'S

PITT, MARKET & GEORGE STS., SYDNEY

Interstate Programmes, Tuesday, January 3

3LO

EARLY MORNING SESSION—7.15 a.m.: Morning melodies. 7.20 a.m.: Morning exercises to music. 7.30 a.m.: Stock reports; market reports; general news; shipping; sporting information; express train information. 8 a.m.: Melbourne Observatory time signal. 8.15 a.m.: Morning melodies. 9.15 a.m.: Close down. **MORNING SESSION—(Announcer: C. J. O'Connor.)** 11 a.m.: 3LO's different dainties for the Daily Dinner. To-day's Radio Recipe: Yorkshire Pudding. 11.5 a.m.: J. Howlett Ross will speak on "The Mother of Literature." 11.20 a.m.: Musical Interlude. 11.25 a.m.: Mrs. Dorothy Silk will speak on "Homecrafts." 11.40 a.m.: Musical Interlude. 11.45 a.m.: Mid-day News Session. 12 noon: Melbourne Observatory time signal. Express train information. 12.1 p.m.: Meta 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. 12.15 p.m.: Newmarket stock sales; special report by John M'Namara and Co. **MID-DAY MUSICAL SESSION—12.20 p.m.:** The Station Orchestra, selection, "Glaconda" (Ponchelli). 12.30 p.m.: Herbert Browne, tenor (by permission J. O. Williamson, Ltd.). 12.37 p.m.: Stock Exchange Interlude. 12.40 p.m.: The Station Orchestra, selection, "Manon" (Massenet). 12.50 p.m.: Violet Jackson, soprano, "Open Thy Blue Eyes" (Massenet), selected. 12.57 p.m.: Guildford Bishop, violin, "Chanson Du Printemps" (Havé), selected. 1.3 p.m.: Herbert Browne, tenor. 1.34 p.m.: The Station Orchestra, fantasia, "Wunderklänge" (Bizet). 1.37 p.m.: Violet Jackson, soprano, "Know'st Thou the Land" from "Mignon" (Thomas). 1.45 p.m.: Close down. **AFTERNOON SESSION—(Announcer: C. O'Connor. Accompanist: Agnes Fortune.)** 2.15 p.m.: The Radi-o-Aces, "Virginia Creeper" (Wade). "Little Log Cabin of Dreams" (Harley). "Last Night I Dreamt You Kissed Me" (Kahn). 2.24 p.m.: Syd. Hollister, comedian, "Jest and Jollity." 2.31 p.m.: The Radi-o-Aces, "Who Knows" (Dixon). "An Sweet Mystery of Life" (Herbert). "Evening Star" (Turk). 2.40 p.m.: John Byrne, bass (by permission J. O. Williamson, Ltd.). 2.47 p.m.: The Radi-o-Aces, "Down Home Rag" (Sweetman). "Henry's Made a Lady Out of Lizzie" (O'Keefe). "Luck in Love" (Henderson). 2.56 p.m.: Jean Lewis, contralto, "Little Old Garden" (Hewitt). "Star of the East" (Lohp). 3.3 p.m.: The Radi-o-Aces, "The Best Things in Life are Free" (Henderson). "In a Bamboo Garden" (Donaldson). "Anything You Say" (Donaldson). 3.12 p.m.: Keith Desmond, elocutionist, will give a short recital. 3.19 p.m.: The Radi-o-Aces, "That Melody of Love" (Donaldson). "Constantinople" (Carlton). "Don't Cry, Baby" (Kahn). 3.28 p.m.: Sonora Recital. 3.58 p.m.: The Radi-o-Aces, "Hum and Skrum" (Henderson). "Lady of Love" (Nausbaum). "Jazz Master", piano solo (Mayeral). 4.7 p.m.: Syd. Hollister, comedian, "Vaudevilainies." 4.14 p.m.: The Radi-o-Aces, "In My Bouquet of Memories" (Lewis). "Contentment Baby" (Palmer). "The Mystery of Money" (Guy). 4.23 p.m.: John Byrne, bass. 4.30 p.m.: The Radi-o-Aces, "Red Head" (Embury). "Jeannine" (Gilbert). "Dream House" (Fox). 4.39 p.m.: Jean Lewis, contralto, "When the Stars Were Young" (Rubens). "Puppies for Fighting" (Henderson). 4.46 p.m.: The Radi-o-Aces, "I'm Sorry, Sally" (Kahn). "When You Know Me" (Baden). "Tell Me To-Night" (Little). 4.53 p.m.: Keith Desmond, elocutionist, will give a short recital. 5 p.m.: "Herald" news service; Stock Exchange information. 5.10 p.m.: Close down. **EVENING SESSION—(Announcer: Frank Hatherley.)** 6 p.m.: Answers to letters and birthday greetings by "Bobby Blue-gum." 6.25 p.m.: Musical Interlude. 6.30 p.m.: "Little Miss Kookaburra" will tell you about "Tubby Kityca's" holidays, and then some more about "Jack and Jill" and the "Jolly Jay's Secret." 6.50 p.m.: "Bobby Blue-gum," songs and stories. **NIGHT SESSION—(Announcer: John Stuart. Accompanist: Agnes Fortune.)** 7.5 p.m.: Stock Exchange information. 7.15 p.m.: Market reports by John M'Namara and Co., official report of the Newmarket stock sales by the Associated Stock and Station Agents, Bourke Street, Melbourne. Fish market reports by J. R. Borritt, Ltd., Rabbit prices. River reports. 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 Associated Fruitgrowers' Association; retail prices; wholesale prices of fruit by the Wholesale Fruit Merchants' Association; citrus fruits. 7.30 p.m.: News session. 7.43 p.m.: Birthday greetings. 7.45 p.m.: Out of the Past. 7.46 p.m.: Under the auspices of the University Extension Board, Mr. J. T. Saxton, M.A., will speak on "Playgrounds." 8 p.m.: A Maker of History. 8.1 p.m.: The 59th Battalion Band,verture, "Golden Cross." 8.12 p.m.: Jean Lewis, contralto, "Tired Hands" (Sanderson). "Memory Song" (Oliver). 8.19 p.m.: The 59th Battalion Band, march "Caractacus." 8.24 p.m.: Bernard Manning, bass (by permission J. O. Williamson, Ltd.). 8.31 p.m.: Violin, piano and vocal recital by Wm. G. James, Donald M'Beath, and Mrs. Sarah Arnov. A travogue. 9 p.m.: Professor R. J. A. Berry, "St. Louis Mo and Sometimes, Mi." 9.15 p.m.: The 59th Battalion Band, march, "Ivanhoe" for treble selected. 9.25 p.m.: Violet Jackson, soprano, "A Brown Bird Singing" (Wood). "Happy Song" (Riego). 9.32 p.m.: The 59th Battalion Band, waltz, "Golden Sunbeams." 9.42

p.m.: Syd. Hollister, comedian, "A Laughter Lecturette." 9.52 p.m.: Jean Lewis, contralto, "The Night Has a Thousand Eyes" (Lambert). "Only the River Running" (John Hopkins). 10.2 p.m.: The 59th Battalion Band, stately dance, "Good Queen Bess." 10.9 p.m.: Bernard Manning, bass. 10.16 p.m.: "Argus" news service; meteorological information; British official wireless news; announcements; sporting notes by "Olympus." Eric Welch's selections for the Wooded races to-morrow. 10.26 p.m.: The 59th Battalion Band, selected. 10.31 p.m.: Violet Jackson, soprano, "Snow-flakes." "Philosophy." 10.38 p.m.: The 59th Battalion Band, selected. 10.43 p.m.: Announcements. 10.45 p.m.: The Radi-o-Aces, "The Dance of the Blue Danube" (Fisher). "It is Gonna Be Long" (Whiting). 11.1 p.m.: Our Great Thought for Today is: People seldom improve when they have no other model but themselves to copy from" (Goldsmith). 11.2 p.m.: The Radi-o-Aces, "It Goes Like This" (Caesar). "Roses of Yesterday" (Berlia). "Forever More" (Runnett). "Nebraska" (Aitken). "That's My Weakness Now" (Steph). "Get Out and Get Under the Moon" (Tobias). "In a Bamboo Garden" (Donaldson). "Anything You Say" (Donaldson). "Good Night Waltz" (Blbo). Good Night Song. 11.40 p.m.: God Save the King.

3AR

MORNING SESSION—(Announcer: C. H. Hosking.) 10 a.m.: G.P.O. clock says "Ten." 10.1 a.m.: "Age" Stock Exchange reports; London metal market. 10.10 a.m.: "Age" market reports; farm and station produce; fruit and vegetables, etc. 10.25 a.m.: "Age" shipping reports; ocean forecast. 10.30 a.m.: Mail notices; express train information. 10.35 a.m.: "Age" news service, exclusive to 3AR. 10.39 p.m.: Weather forecast. 10.42 p.m.: Ned Tyrrell's Radi-o-Ace, "Lonely in a Crowd" (Greer). "Chloe" (Kahn). "Parting with You" (Conley). "Kiss Before the Dawn" (Perkins). 11.10 a.m.: Vocal vivacity. 11.15 p.m.: Ned Tyrrell's Radi-o-Aces, "Angelia Mine" (Rappee). "Nebraska" (Sills). "Forever More" (Burnett). "What Do I Care What Somebody Said" (Woods). 11.25 a.m.: Vocal vivacity. 11.30 a.m.: Ned Tyrrell's Radi-o-Aces, "You're in a Whirl" (Whiting). "Somebody's Crazy About You" (Murphy). "Get Out and Get Under the Moon" (Tobias). "That's My Weakness Now" (Steph). 11.40 a.m.: Vocal vivacity. 11.45 a.m.: Interlude. Captain Donald McLean, M.A. I Ask is a Merry Yarn from a Laughing Fellow Rover" (John Masefield). 12.0 noon: Ned Tyrrell's Radi-o-Aces, "What a Baby" (Whiting). 12.09 p.m.: Weather forecast. "We Got the Sunday Every Day" (Summers). "Sticky Paws" (Andrina). 12.10 p.m.: Vocal vivacity. 12.13 p.m.: Ned Tyrrell's Radi-o-Aces, "Laugh, Clown, Laugh" (Goun). "Never Before Never Again" (Chik). "You're in Love, I'm in Love" (Donaldson). "Adoree" (Silver). "Please Tell Me" (Miller). 12.23 p.m.: Wireless news; announcements. 12.35 p.m.: Ned Tyrrell's Radi-o-Aces, "A Stolen Melody" (Fisher). "Sunshine and Beauty" (New). "Date with a Little Girl" (Tobias). "Jeannine" (Gilberts). 12.43 p.m.: Vocal vivacity. 12.48 p.m.: Ned Tyrrell's Radi-o-Aces, "Dream House" (Fox). "Chil-lies" (Whiting). "I'm So Sorry" (Frich). 12.58 p.m.: Vocal vivacity. 1.3 p.m.: Ned Tyrrell's Radi-o-Aces, "Take You To-morrow" (Henderson). "Lucky in Love" (Henderson). "The Best Things in Life are Free" (Henderson). "Sleepy Baby" (Tierney). 1.13 p.m.: Vocal vivacity. 1.18 p.m.: Ned Tyrrell's Radi-o-Aces, "The Kin-Kijou" (Tierney). "Rio Rita" (Tierney). "I'm Sorry, Sally" (Kahn). "A Little Change of Atmosphere" (Brown). "I Wanna Go Voon Voon" (Brown). 1.30 p.m.: Close down. **EVENING SESSION—(Announcer: Frank Hatherley.)** 6.0 p.m.: Sweet solace from the Seraphina. **NIGHT SESSION—(Announcer: Frank Hatherley.)** 6.0 p.m.: Under the auspices of the Royal Automobile Club, Victoria, Alured Kelly will speak on "The Month in Motordom." 8.15 p.m.: A. G. Kelson, president of the 3AR Stamp Club, "Stamps." 8.30: The Station Orchestra,verture, "The Blue Bird." 8.32 p.m.: Keith Desmond, "Cute Catches." 8.47 p.m.: Memorials of the Strauss Family; the Station Orchestra, selection, "La Chauve Souris" (J. Strauss). 8.57 p.m.: "Ella" Strauss, contralto, "Dream in the Twilight" (Strauss). "Res'nee" (Strauss). 9.4 p.m.: The Station Orchestra, selection, "A Waltz Dream" (Oscar Strauss). 9.9 p.m.: Ella Armstrong, contralto, "To None Will I My Love Ever Discover" (Strauss). "Aa, My!" (Strauss). 9.16 p.m.: News Interval. 9.18 p.m.: The Station Orchestra, Andante from "Santuz, Op. 6" (Grieg). 9.24 p.m.: Keith Desmond, "Desultory Discussions." 9.30 p.m.: Transmission from the Victory Theatre, Melbourne, the Victory Theatre Orchestra, under the baton of Henri Penn. 10.30 p.m.: From the studio, "Age" news service, exclusive to 3AR; "Argus" news service. 10.25 p.m.: Our Shakespearean good-night quotation is from "Macbeth." "To-morrow, and to-morrow, and to-morrow, Creeps in this petty pace from day to day, To the last syllable of recorded time; And all our yesterdays have lighted fools the way to dusty death. Out, out, brief candle! Life's but a walking shadow, a poor player, That struts and frets his hour upon the stage, and then is heard no more; it is a tale, told by an idiot, full of sound and fury, Signifying nothing." 10.30 p.m.: God Save the King.

4QG

EARLY MORNING SESSION—7.43 a.m.: Time signals. 7.45 a.m.: News service. 8.0 a.m.: Some electric records. 8.15 a.m.: News service. 8.30 a.m.: Close down. **MORNING SESSION—(Announcer: Rita M'Auliffe.)** 11.0 a.m.: Music. 11.5 a.m.: Social news. 11.55 a.m.: Lecturette: Talk on "Home Crafts," by Mrs. R. L. Reid. 11.45 a.m.:

Wurlitzer organ. 12.0 Noon: Close down. **MID-DAY SESSION—(Announcer: R. Wight.)** 1.0 p.m.: Market reports and weather information. 1.20 p.m.: Lunch-hour music. 2.0 p.m.: Close down. **AFTERNOON SESSION—(Announcer: H. Humphreys.)** 3.0 p.m.: A programme of electrically reproduced records. 3.30 p.m.: Mail train running times. 4.15 p.m.: This afternoon's news. 4.30 p.m.: Close down. **EARLY EVENING SESSION—(Announcers: R. Wight and H. Humphreys.)** 6.0 p.m.: Mail train running times; mail information; shipping news. 6.5 p.m.: Dinner music. 6.30 p.m.: Bedtime stories, conducted by "Uncle Ben." 7.0 p.m.: News in brief. 7.5 p.m.: Stock Exchange news. 7.6 p.m.: Market quotations. 7.7 p.m.: Market reports. 7.25 p.m.: Fenwick's report. 7.30 p.m.: Weather information. 7.40 p.m.: Announcements. 7.43 p.m.: Standard time signals. 7.45 p.m.: Lecturette—"A Talk on Dairying," by Mr. C. McGrath (Chief Supervisor of Dairying). **NIGHT SESSION—(Announcers: E. Humphreys and A. V. James.)** 8.0 p.m.: A concert arranged by Messrs. Olsen and Goodchap. 9.0 p.m.: Metropolitan weather forecast. Part II.—Radio Mystery Play, "The Serphagus," by W. S. Mees. The second portion of the programme will comprise the sequel to the radio mystery play, "The Serphagus," which was presented by 4QG on Thursday, January 3. It will be remembered that the play, which was based on the fulfilment of a curse of Old Egypt, broke off at a most mysterious point. Listeners were asked to attempt to solve it, and forward their attempts to 4QG, a prize of £2/2 being offered for the best solution. The play will be resumed to-night, taken up again at an interesting point, and concluded. The name of the prizewinner will then be announced. 9.0 p.m.: From the Studio—Sequel to the mystery play, "The Serphagus." (Cast: Amen-Ra King, W. S. Mees, Meta W. S. Mees, The Hon. Sir Arthur Colville (Egyptologist), Ernest Barry, Dr. Harrington Farrow (his friend), W. S. Mees; Hazel Colville, Mavis Macfarlane; Jack Sterling (Hazel's fiance), C. D. Moran; Esaye (Colville's Egyptian servant), H. Collins; Fasola (Colville's Egyptian servant), Z. Anita (Hazel's Egyptian maid), Constance Archdall. 10.0 p.m.: The "Daily Mail" news; the "Courier" news; weather news; "Queenslander" bi-weekly news service for distant listeners. Close down.

5CL

MORNING SESSION—(Announcer: J. L. Norris. Accompanist: Jean Finlay.) 11 a.m.: G.P.O. chimes. 11.1 a.m.: Vocal and instrumental concert on the Sonora, Columbia recordings. Robert Easton, bass, "The Midnight Reveler" (Glinka), "A Song of Elysias the Great" (Elliot). Johann Strauss and Symphony Orchestra, "The Gipsy Baron" (Strauss), in two parts. Louis Gravenre, baritone, "Where My Caravan has Rested." 11.5 a.m.: Home Dishes, "Economist," Kitchen Craft and Many others. 11.30 a.m.: Paul Whitehead and his Band, "Evening Star" (Turk). "Get Out and Get Under the Moon," "Constantinople." 11.45 a.m.: Maggie Tulliver, "The Man I Love." Talk on "The Notary of Hageneau." "My Melancholy Baby." 12.15 p.m.: The British official wireless news. 12.40 p.m.: Grand Opera. Lina Scavizzi, soprano, "Vol to Sapete O Maimm," from "Cavalleria Rusticana" (Mascagni). "Vissi d'arte," from "Tosca" (Puccini). 12.50 p.m.: S.A. railway information. 12.51 p.m.: C. O. War and Co.'s Stock Exchange information. 12.57 p.m.: Meteorological information. 1 p.m.: G.P.O. chimes. 1.1 p.m.: Geoff Goldsworthy, cellist, "Al" (Matheson). "Londonderry Air." 1.6 p.m.: Meta Riedel, mezzo, "I Heard You Singing" (Grieg). "A Legend" (Tschalkovsky). 1.12: Paul Jeacle, saxophonist, "Valse Saxioso" (Jeacle). "It's Too Late to be Sorry Now." 1.18 p.m.: A Symphonic Inter-lude by the British Broadcasting Symphony Orchestra,verture, "The Bohemian Girl" (Balle). "Concert Waltz in A." "The Jewels of the Madonna" (Ferrari). "The Empire" (Elgar). 1.38 p.m.: Geoff Goldsworthy, Cellist, "Old Italian Love Songs." "Le Cygne" (Saint-Saens). Spilke, "The Moorish Maid" (Paris). "I Love a Little Cottage." 1.50: Paul Jeacle, saxophonist, "Gloria" (Weldoelt), popular melodies. 1.56 p.m.: Station announcements. 1.58 p.m.: Meteorological information. 2 p.m.: G.P.O. chimes close down. **AFTERNOON SESSION—3 p.m.:** G.P.O. chimes. 3.1 p.m.: Boake Smith's Palais Royal Band, "Get Out and Get Under the Moon," "Just Like a Melody Out of the Sky," "Down South." 3.12 p.m.: Diana Belmont, contralto, "Before the Dawn," "The Enchantress." 3.18 p.m.: Lulu Hackendorf, violiniste, "Fantasia Appassionata" (Wieltemper). 3.24 p.m.: Courtney Ford, humorist in a Humorous Interlude. 3.32 p.m.: Boake Smith's Band, "Girl of My Dreams," "Alabama Stomp," "Mary Ann." 3.42 p.m.: Gertrude Gray, mezzo, "The Blind Ploughman," "I Love the Moon." 3.48 p.m.: Jean Finlay, pianiste, selected pianoforte solos. 4 p.m.: G.P.O. chimes. 4.1 p.m.: Boake Smith's Band, "Chloe," "I'm Wingin' Home," "Last Night I Dreamed." "Cherita." 4.2 p.m.: Courtney Ford, humorist, in Humorous Interlude. 4.28 p.m.: Lulu Hackendorf, violiniste "Gipsy Air" (Sarasate). 4.24 p.m.: Gertrude Gray, mezzo, "Swing Low Sweet Chariot," "This Me, O Lord." 4.30 p.m.: Boake Smith's Band, "That's My Weakness Now." "Side by Side." 4.34 p.m.: Rev. G. E. Hale, B.A., talk on "Don't You Worry." 4.40 p.m.: S. C. Ward and Co.'s Stock Exchange information. 5 p.m.: G.P.O. chimes; close down. **EVENING SESSION—(Announcer: Athol Lykke.)** 6 p.m.: G.P.O. chimes. 6.1 p.m.: Children's Happy Mo-

Local Programmes, Wednesday, January 9

2FC

EARLY MORNING SESSION

(Announcer: A. S. Cochrane).

7 a.m.: "Big Ben" and announcements. 7.5 a.m.: Studio music. 7.20 a.m.: Country session; official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, mail services, river reports. 7.25 a.m.: Investment market, mining sharemarket, metal quotations. 7.35 a.m.: Wool sales, breadstuffs markets, inter-State 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.

(Announcer: A. S. Cochrane.)

10 a.m.: "Big Ben" and announcements. 10.2 a.m.: Pianoforte reproduction. 10.10 a.m.: "Sydney Morning Herald" news service. 10.25 a.m.: Studio music. 10.45 a.m.: A talk on Home Cooking and Recipes, by Miss Ruth Furst. 11 a.m.: "Big Ben", A.P.A. and Reuter's cable services. 11.5: Close down.

MIDDAY SESSION.

(Announcer: A. S. Cochrane.)

Note—Race results.
12 noon: "Big Ben" and announcements. 12.2 p.m.: Stock Exchange, first call. 12.3: Official weather forecast, rainfall. 12.5: p.m.: Musical item. 12.1 p.m.: Summary of news, "Sydney Morning Herald." 12.15 p.m.: Rugby wireless news. 12.18 p.m.: A reading. 12.30 p.m.: Studio music. 12.45 p.m.: Cricket scores, England v. Bendigo. 12.47 p.m.: Studio music. 1 p.m.: "Big Ben"; weather intelligence. 1.3 p.m.: "Evening News" midday news service; Producers' Distributing Society's report. 1.20 p.m.: Studio music. 1.28 p.m.: Stock Exchange, second call. 1.30 p.m.: Studio music. 1.57 p.m.: Cricket scores. 2 p.m.: "Big Ben"; close down.

AFTERNOON SESSION.

(Announcer: Laurence Halbert.)

(Accompanist: Ewart Chapple.)

2.30 p.m.: Programme announcements. 2.32 p.m.: Recital of selected records of world famous artists. 3 p.m.: "Big Ben"; pianoforte reproduction. 3.15 p.m.: Popular music. 3.30 p.m.: Nea Hallet, in popular numbers. 3.37 p.m.: Cliff Arnold, novelty pianist. 3.45 p.m.: Cricket scores, England v. Bendigo, played at Bendigo; a reading. 4 p.m.: "Big Ben"; Nea Hallett in popular numbers. 4.7 p.m.: Cliff Arnold, novelty pianist. 4.14 p.m.: From the Wentworth, the Wentworth Cafe Dance Orchestra, conducted by Jimmy Elkins. 4.24 p.m.: From the Studio, popular music. 4.45 p.m.: Third call of the Stock Exchange. 4.47 p.m.: Studio music. 5 p.m.: "Big Ben"; close down.

EARLY EVENING SESSION.

(Announcer: A. S. Cochrane.)

5.40 p.m.: The Chimes of 2FC.
5.45 p.m.: The Children's Session, conducted by "Hello Man," assisted by Uncle Ted and Sandy; letters and stories; music and entertainment.
6.30 p.m.: Dalgety's market reports (wool, wheat, and stock).
6.40 p.m.: Fruit and vegetable markets.
6.43 p.m.: Stock Exchange information.
6.45 p.m.: Weather and shipping news.
6.48 p.m.: Rugby wireless news.
7 p.m.: "Big Ben"; late news service.
7.10 p.m.: The 2FC Dinner Quartet, conducted by Horace Keats.
(a) "Polonaise" (Chopin).
(b) "Russian Cradle Song" (Kreln).
(c) "Les Deux Pigeons" (Messenger).
(d) "Orientale" (Cul).
(e) "Romance" (Rubinstein).
(f) Fox trot.

EVENING SESSION

(Announcer: Laurence Halbert.)

(Accompanist: Ewart Chapple.)

7.40 p.m.: Programme announcements.
7.45 p.m.: Pianoforte reproduction.
7.53 p.m.: Popular music.
8 p.m.: "Big Ben". Classic night. This is the first of the series of Classic Programmes which the N.S.W. Broadcasting Company are offering to listeners each Wednesday night through 2FC service for the first three months of the new year. Listeners to whom Classic Music does not appeal are reminded that a Programme on popular lines has been arranged to-night through 2BL service. Programme arranged by Oliver King. Gerald Walenn and Bryce Carter, "First Movement" from Trio in D Minor" (Arensky).
8.7 p.m.: Miss Gwen Selva, soprano.
(a) "Vergebliches Standchen" (Brahms).
(b) "Andie Nachtigall" (Brahms).
(c) "Les Papillons" (Chansonn).
(d) "Les Berceaux" (Faure).
(e) "Nell" (Faure).
8.17 p.m.: Miss Dagmar Roberts, pianiste, "Scherzo B flat Minor" (Chopin).
8.29 p.m.: Gerald Walenn, violin.
(a) "Minuet" (Veracini).
(b) "Tambourin" (Neclair-Kreisler).
8.35 p.m.: Oliver King, songs.
(a) "My Abode" (Schubert).
(b) "Dream in the Twilight" (Strauss).
8.45 p.m.: Bryce Carter, cello.
(a) "Andante from Concerto" (Lindner).
8.52 p.m.: Miss Gwen Selva and Oliver King, duets—
(a) "La ci Darem" (Mozart) (from "Don Giovanni").
(b) "Trot Here and There" (from Veronique), (Messenger).
9 p.m.: "Big Ben"; and weather report and forecast.
9.1 p.m.: The second of a series of talks arranged by Mr. C. R. Hall, "Out and About Iraq and Persia," "The Tollers."
9.15 p.m.: Second part of the Classic Programme arranged by Mr. Oliver King, Gerald Walenn and Bryce Carter, violin and cello and Ewart Chapple, pianiste, "Slow Movement and Finale from Trio in D Minor" (Arensky).
9.24 p.m.: Miss Gwen Selva, soprano, "Group of Old English Songs."
9.34 p.m.: Miss Dagmar Roberts, pianiste.
(a) "Bohemian Dance" (Smetana).
(b) "Gavotte" (Gluck-Brahms).
(c) "Caprice," by request (Paganini-Schumann).
9.46 p.m.: Gerald Walenn, violinist
(a) "Chinese Dance" (Kreisler).
9.53 p.m.: Oliver King, songs—
(a) "Now Phoebus Sinketh in the West" (from Milton's Comus) (ArnelMoffat).
(b) "The Ship of Rio" (Frederick Kiel).
10.1 p.m.: Bryce Carter, cello.
(a) "Traumerei" (Schumann).
(b) "Tarantelle" (Popper).
10.8 p.m.: Community singing by Studio audience, led by Oliver King.
10.15 p.m.: "Round the World by Wireless," relays from various stations.
10.30 p.m.: National Anthem; close

2BL

MORNING SESSION

Announcer: A. C. C. Stevens.

8 a.m.: G.P.O. clock and chimes; metropolitan weather report. 8.1 a.m.: State weather report. 8.2 a.m.: Studio music. 8.15 a.m.: G.P.O. clock and chimes; studio music. 8.35 a.m.: Information, mails, shipping, arrivals, departures, and sailings. 8.38 a.m.: News from the "Daily Telegraph Pictorial." 8.45 a.m.: G.P.O. clock and chimes; studio

music. 9 a.m.: G.P.O. clock and chimes; studio music. 9.30 a.m.: Half an hour with silent friends. 10 a.m.: G.P.O. clock and chimes; close down.

MIDDAY SESSION

Announcer: J. Knight Barnett.

11 a.m.: G.P.O. clock and chimes; 2BL Women's Sports Association session, conducted by Miss Gwen Varley. 11.30 a.m.: Advertising hints. 11.40 a.m.: Women's session, conducted by Mrs. Cranfield. 12 noon: G.P.O. clock and chimes; special ocean forecast and weather report. 12.3 p.m.: Pianoforte reproduction. 12.30 p.m.: Shipping and mails. 12.35 p.m.: Market reports. 12.45 p.m.: Cricket scores, England v. Bendigo, played at Bendigo. 12.48 p.m.: "Sun" midday news service. 1 p.m.: Studio music. 1.30 p.m.: Talk to children and special entertainment for children in hospital. 2 p.m.: G.P.O. clock and chimes. Close down.

Note: Race results.

AFTERNOON SESSION

Announcer: J. Knight Barnett.

Accompanist: Kathleen Roe.

3.45 p.m.: The Chimes of the G.P.O. clock; cricket scores, England v. Bendigo, played at Bendigo. 3.47 p.m.: Studio music. 3.50 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 4 p.m.: The chimes of the G.P.O. clock; from the studio, Regina Bannon, soprano. 4.7 p.m.: Ivy Pawsey, contralto. 4.14 p.m.: "Sun" news service. 4.20 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 4.30 p.m.: Regina Bannon, soprano. 4.37 p.m.: Ivy Pawsey, contralto. 4.44 p.m.: Cricket scores, England v. Bendigo, played at Bendigo. 4.45 p.m.: "Sun" news service. 4.50 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 5 p.m.: The Chimes of the G.P.O. clock; from the studio, "Our Serial Story." 5.10 p.m.: Pianoforte reproduction. 5.20 p.m.: Racing resume. 5.37 p.m.: Features of the evening's programme.

EARLY EVENING SESSION

Announcers: J. Knight Barnett and Basil Kirke.

5.40 p.m.: Children's session, music and entertainment.
6 p.m.: Letters and stories.
6.30 p.m.: "Sun" news and late sporting.
6.40 p.m.: 2BL Dinner Quartet—
(a) "Mauresque Caprice" (Boccalari),
(b) "Promotionen" (Strauss),
(c) "It Happened in Nordland" (Herbert),
(d) "Hindoo Song" (Bemberg),
(e) "Anitra's Dance" (Grieg),
(f) "Finale" (Haydn).
7.10 p.m.: Cricket scores.
7.12 p.m.: Aust. 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; grain and fodder report ("Sun"); dairy produce report ("Sun").
7.25 p.m.: Mr. Pim and Miss Pam in advertising talks and nonsense.
7.55 p.m.: Programme and other announcements.

EVENING SESSION

Announcer: Basil Kirke.

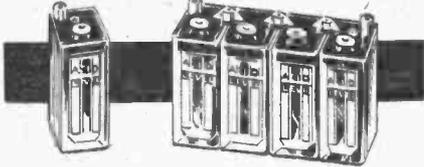
Accompanist: G. Vern Barnett.

8 p.m.: G.P.O. clock and chimes, Jack Barnett and Dorothy Dewar, entertainers.
8.10 p.m.: From the Rose Bay Wintergarden Theatre—The Rose Bay Theatre Orchestra, under the conductorship of Lionel Hart.
8.30 p.m.: From the Studio—Sydney Calland, baritone.
8.37 p.m.: A sketch by the players of the Players' Club.

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- 8.49 p.m.: The Savoyans' Dance Band.
- 9 p.m.: G.P.O. clock and chimes; weather report.
- 9.1 p.m.: A sports talk by Claude Corbett.
- 9.16 p.m.: Sydney Calland, baritone.
- 9.23 p.m.: A sketch by the players of the Players' Club.
- 9.35 p.m.: Jack Barnett and Dorothy Dewar.
- 9.45 p.m.: The Savoyans' Dance Band.
- 9.55 p.m.: Art Leonard, in the newest song hits.
- 10.2 p.m.: From the Rose Bay Wintergarden Theatre, the Rose Bay Theatre Orchestra, under the conductorship of Lionel Hart.
- 10.22 p.m.: From the studio—Late weather and announcements.
- 10.25 p.m.: Art Leonard, in the newest song hits.
- 10.30 p.m.: The Savoyans' Dance Band.
- 10.57 p.m.: Resume of following day's programme.
- 10.59 p.m.: The Savoyans' Dance Band.
- During the intervals between dance items "Sun" news will be broadcast.
- 11.30 p.m.: National Anthem.
- Close down.

2GB

Wednesday, January 9.

- 10.0 a.m.: Music. 10.10 p.m.: Happiness talk by A. E. Bennett. 10.20 a.m.: Music. 10.30 a.m.: Women's session, by Miss Helen J. Beegling. 11.30 a.m.: Close down. 2.0 p.m.: Music. 2.5 p.m.: Women's radio service by Mrs. Dorothy Jordan. 2.50 p.m.: Music. 3.0 p.m.: Talk. 3.15 p.m.: Close down. 5.30 p.m.: Children's session, by Uncle George. 7.0 p.m.: Stock and market reports, by New Zealand Loan and Mercantile Agency, Ltd. 7.15 p.m.: Music. 8.0 p.m.: Sid and Molly Owen and Joyce Slatyer, instrumentalists. 8.10 p.m.: Songs by Mr. Leon Novello. 8.20 p.m.: A humorous interlude by Mr Jack Win and Mr. Heath Burdock. 8.25 p.m.: Pianoforte solos by Miss Ruth Pearce Jones. 8.35 p.m.: Songs by Miss Heather Kinnaird. 8.45 p.m.: Violin solos by Mr. Edmund Collins. 8.55 p.m.: A humorous interlude. 9.0 p.m.: Weather report. 9.3 p.m.: Address. 9.15 p.m.: Songs by Mr. Leon Novello. 9.25 p.m.: Sid and Molly Owen and Joyce Slatyer. 9.35 p.m.: Songs by Miss Heather Kinnaird. 9.45 p.m.: A humorous interlude. 9.50 p.m.: Violin solos by Mr. Edmund Collins. 10.0 p.m.: Orchestral music. 10.30 p.m.: Close down.

5CL, Tuesday

(Continued from page 38.)

- ments; birthday greetings; correspondence, songs, and stories by "The Wattle Lady." 6.30 p.m.: Dinner Music Interlude on The Sonora. Columbia Recordings. 7 p.m.: G.P.O. chimes. 7.1 p.m.: S. G. Ward and Co.'s Stock Exchange information. 7.5 p.m.: General market reports. 7.8 p.m.: Sporting service by "Silvius." 7.20 p.m.: Miss Laurie McLeod, talk on the Art of Dancing. 7.40 p.m.: Dr. Herbert Basedow, an Australian talk.
- NIGHT SESSION.—8 p.m.: G.P.O. chimes. Excerpts from "Faust" (Gounod), by Foxhall Robinson's Operatic Company, assisted by the Station Orchestra; brief synopsis of the opera. 8.3 p.m.: Station Orchestra, selection, "Faust" (Gounod); the Company, "The Kermesse Scene"; Mrs. Lucy Hill, solo, "The Flower Song"; Station Orchestra, incidental music; L. Schapel, "Cavatina"; Lynnne Gilbert, solo, "The Jewel Song"; the Company, waltz chorus, "Light as Air"; Jessie Le Cornu, solo, "Romanza"; the Company, chorus, "The Soldiers' Chorus"; W. R. Griffiths, bass, "Serena." 9 p.m.: G.P.O. chimes. 9.1 p.m.: Meteorological information. 9.3 p.m.: Overseas grain report. Light orchestral and vocal concert. 9.4 p.m.: Station Orchestra, selection, "Rose Marie" (Friml). 9.12 p.m.: Diana Belmont, contralto, "Down in the Quiet Hills," "That's All." 9.18 p.m.: Station Orchestra, suite, "Vive la Dance" (Finck). 9.24 p.m.: Will Runge, humorist, in droll humor. 9.30 p.m.: Gertrude Gray, mezzo. "Steal Away." "Were You There." 9.36 p.m.: Tom King, pianist, original compositions. 9.41 p.m.: Diana Belmont, contralto, "Sognia," "Still as the Night" (Bohm). 9.45 p.m.: Station Orchestra. "Two Tzigane Dances" (Bonds). 9.54 p.m.: Will Runge, humorist, in droll humor. 10.4 p.m.: Gertrude Gray, mezzo, "Pale Moon" (Logan). "I Love You Truly." 10.10 p.m.: Station Orchestra, novelette, "In a Tea Garden" (Lodge). 10.15 p.m.: "The Advertiser" general news service; British official wireless news; 5CL's sporting service, by "Silvius"; meteorological information. 10.29 p.m.: Our Good Night Thoughts. 10.30 p.m.: Take a Step, Take a Step, by courtesy of 3LO. Melbourne, Modern Dance numbers by the Famous Radi-o-Aces. 11.10 p.m.: God Save the King.

Interstate Programmes, Wednesday, January 9

3LO

EARLY MORNING SESSION.—7.15 a.m.: Morning melodies. 7.20 a.m.: Morning exercises to music. 7.30 a.m.: General news. 8.0 a.m.: Melbourne Observatory time signals. 8.1 a.m.: Morning melodrama. 8.15 a.m.: Close down. **MORNING SESSION.—11.0 a.m.:** G.P.O.'s different dances for the daily dinner. To-day's radio recipe, Oatmeal Biscuits. 11.5 a.m.: Miss L. D. Beavan, "Home-made Confectionery." 11.20 a.m.: Musical interlude. 11.25 a.m.: Mrs. H. Callaway Mahood, "Color in Decoration." 11.30 a.m.: Gramophone recital. **MID-DAY NEWS SESSION.—12.0 noon:** Melbourne Observatory time signal. Express train information. 12.1 p.m.: British official wireless news from Rugby. Reuter's and the Australian Press Association. "Argus" news service. 12.15 p.m.: Newmarket stock sales. Special report by John M'Namara and Co. 12.20 p.m.: Johnston's studio boys. March, "London's Pride." Overture, "King Edward." 12.30 p.m.: Keith Desmond (elocutionist) will give a short recital. 12.37 p.m.: Stock Exchange information. 12.40 p.m.: Johnston's Studio Boys. March, "Silverwood." Cornet solo, "Love's Old, Sweet Song." 12.47 p.m.: Valerie Walsh (contralto), "Away in Athlone" (Lohr). "For the Green" (Lohr). Johnston's Studio Boys. Waltz, "Vision of Salome." Part song, "Sweet and Low." 1.11 p.m.: Meteorological information. Weather forecast for Victoria, South Australia, New South Wales, and Tasmania. Ocean forecasts. River reports. Rainfall. 1.17 p.m.: Valerie Walsh (contralto), "The Shepherd's Song" (Elgar). "The Green Bonnets" (d'Hardast). 1.24 p.m.: Johnston's Studio Boys. "Prelude in G Minor" (Rachmaninoff). 1.30 p.m.: Keith Desmond (elocutionist) will give a short recital. 1.37 p.m.: Johnston's Studio Boys. March, "Freedom." Cornet solo, "Roses of Picardy." 1.45 p.m.: Close down. **AFTERNOON SESSION.—(Announcer: C. J. O'Connor. Accompanist: Agnes Fortune.) 1.59 p.m.:** Description of Maiden Plate, 5 furlongs, at Woodend Races, by Eric Welch. 2.5 p.m.: The station orchestra. Fantasia, "Andrea Chenier" (Giordano). 2.16 p.m.: Violet Jackson (soprano), "My Heart is Sair for Somebody" (Old Scotch). "Comin' Thro' the Rye." 2.22 p.m.: The station orchestra. Selection, "Erinnerungen" (Grieg). 2.28 p.m.: Description of Mayfield Handicap, 5 furlongs, Woodend Races. 2.35 p.m.: Syd. Hollister (comedian). "Verbal Vignettes." 2.42 p.m.: A. Anderson (clarinet). "Andante and Polonaise" (Le Thiere). 2.47 p.m.: The station orchestra. Selection, "Tortuate Tasso" (Donizetti). 2.55 p.m.: John Byrne (bass), by permission J. O. Williamson, Ltd., "The Races." 3.25 p.m.: S. P. Hollister (comedian). "The station orchestra." "Suite Ballet" (Peby). 3.37 p.m.: Violet Jackson (soprano), "The Violet" (Mozart). Selected. 3.44 p.m.: The station orchestra. "The Purple Vine" (Ancliffe). 3.48 p.m.: Description of Novice Handicap, 5 furlongs, Woodend Races. 3.55 p.m.: Tyrrell (violin). "Canzonette" (Godard). 4.2 p.m.: Syd. Hollister (comedian). "A Laughable Lydette." 4.9 p.m.: The station orchestra. "Gipsy Pictures." 4.18 p.m.: Description of Macedon Three-year-old Handicap, Woodend Races. 4.25 p.m.: John Byrne (bass). "The station orchestra. Suite, "From the South" (Nicode). 4.40 p.m.: Victor Baxter (tenor). "A Dream" (Bartlett). "Uncle Rome" (Homer). 4.48 p.m.: Description of Hillside Highweight Handicap, 6 1/4 furlongs, Woodend Races. 4.55 p.m.: "Here we go" session. Stock Exchange information. During the afternoon progress scores of the cricket match, England v. Bendigo, will be broadcast as they come to hand. 5.10 p.m.: Close down. **EVENING SESSION.—(Announcer: Frank Hatherley.) 6.0 p.m.:** Answer to letters and birthday greetings by "Mary Mary." 6.25 p.m.: Musical interlude. 6.30 p.m.: "Mary, Mary" will tell you stories of "The Gingerbread Man," a nonsense tale; "The Letter that Flew Away," a story of a birthday party. **NIGHT SESSION.—(Announcer: John Stuart. Accompanist: Agnes Fortune.) 7.5 a.m.:** Stock Exchange information. 7.15 p.m.: Market reports by John M'Namara and Co. Official report of the Newmarket stock sales by the Associated Stock and Station Agents, Bourke Street, Melbourne. Weather synopsis. "Gin morning" session. Wholesale prices of fruit by the Wholesale Fruit Merchants' Association. Citrus fruits. 7.30 p.m.: News service. Stumps scores, cricket match, England v. Bendigo. 7.43 p.m.: Birthday greetings. 7.45 p.m.: Out of the Past. 7.46 p.m.: Under the auspices of the Department of Agriculture, Mr. R. Crowe, exports superintendent, will speak on "Marketing Methods." 8.0 p.m.: A Maker of History. 9.18 p.m.: Professor R. J. A. Berry, "Chicago, the City Beautiful." 9.30 p.m.: The station orchestra. Suite, "Callirhoe" (Chaminade). "The delude Meulenaere" (soprano). "O Sleep, Why Dost Thou Leave Me" (Handel). "The Echo Song," with flute obbligato by J. Barrille (Bishop). 9.47 p.m.: The station orchestra. "Deuxieme Petite Suite" (Michele). 9.50 p.m.: Bernard Manning (bass). "Here we go." Keith Desmond (elocutionist) will give a short recital. 10.8 p.m.: The station orchestra. "Souvenir and Serenade" (Geel). 10.15 p.m.: "Argus" news session. British official wireless news from Rugby.

Meteorological information. Announcements. 10.25 p.m.: Adelaide Meulenaere (soprano), "Solveig's Song" (Grieg). "Theme and Variations" (Froch). Flute obbligato by J. Barrille. 10.32 p.m.: The station orchestra. "Largo, op. 10" (Beethoven). 10.40 p.m.: Bernard Manning (bass). 10.47 p.m.: Keith Desmond (elocutionist) will give a short recital. 10.54 p.m.: Our Great Thought for today is: "The tongue of a fool is the key of his counsel" (Socrates). 10.55 p.m.: The Radi-o-Aces. "Googly-Goo" (Davis). "Guess Who's in Town" (Razaf). "That Stolen Melody" (Fisher). "Lenora" (Gilbert). "Chloe" (Kahn). "That's What You Mean to Me" (Davis). "Lazy Feet," piano solo (Masman). "Just Like a Melody Out of the Sky" (Donaldson). "Beloved" (Kahn). "Because My Baby Don't Mean Maybe Now" (Donaldson). "I Love to Dunk a Hunk of Sponge Cake" (Casthill). "Rah!" (Kahn). "Ramona" (Wayne). "Clarinet Marmalade" (Pergasi). "Nebraska" (Revel). "Forever More" (Barnet). 11.40 p.m.: God Save the King.

3AR

MORNING SESSION.—10.0 a.m.: G.P.O. clock says "Ten." 10.1 a.m.: "Age" Stock Exchange reports. London metal market. "Age" market reports. Farm and station produce, fruit, fish, vegetables, etc. 10.25 a.m.: "Age" sheep reports. Piano forecast. 10.30 a.m.: Mail notices. Express train information. 10.35 a.m.: "Age" news service, exclusive to 3AR. 10.59 a.m.: Weather forecast. **MORNING MUSICAL SESSION.—(Announcer: O. M. Hooking.) 1.0 a.m.:** Ned Tyrrell's Radi-o-Aces. "Down Upon the Sands" (Hamy). "Mallika" (Reel). "You Said Good-night, but You Meant Good-bye" (Kahn). "The Desert Song" (Romberg). 11.20 a.m.: Vocal versatility, selected. 11.25 a.m.: Ned Tyrrell's Radi-o-Aces. "Once Upon a Time" (Romberg). "Meet Me To-day" (Dean). "Once Again" (Lumsdale). "Tired Hands" (Woods). 11.45 a.m.: Vocal versatility. 11.50 a.m.: Ned Tyrrell's Radi-o-Aces. "Too Busy" (Miller). "Sweet Sue, Just You" (Tobias). "In a Bamboo Garden" (Donaldson). "Anything You Say" (Donaldson). 12 noon: Vocal versatility. 12.5 p.m.: Interlude. Captain Donald M'Lean. 12.20 p.m.: Ned Tyrrell's Radi-o-Aces. "Lonely Acres" (Robinson). "Shake It Down" (Wills). "Next to You, I Like Me Next to You" (Bito). 12.30 p.m.: British official wireless news. Announcements. 12.40 p.m.: Ned Tyrrell's Radi-o-Aces. "What Was I to Do" (Reid). "Chinatown" (Yvain). "The Rif Song" (Romberg). "A Lonesome Boy's Rosary" (Tobias). 12.50 p.m.: Vocal versatility. 12.55 p.m.: Ned Tyrrell's Radi-o-Aces. "High Up on a Hilltop" (Baer). "Tell Me Again" (Clark). "Ups and Downs" (Rose). "Mississippi Mud" (Harris). 1.5 p.m.: Vocal versatility. 1.10 p.m.: Ned Tyrrell's Radi-o-Aces. "Lollita" (Stoneham). "Whout You, Sweetheart" (De Silva). "Dream Kisses" (Yellow). "Lenora" (Gilbert). 1.20: Vocal versatility. 1.25 p.m.: Ned Tyrrell's Radi-o-Aces. "Virginia Creeper" (Wade). "Little Log Cabin of Dreams" (Hanley). "Happy-go-lucky Lane" (Lewis). "All Day Long" (Cross). 1.30 p.m.: Close down. **EVENING SESSION.—(Announcer: Frank Hatherley.) 8.0 p.m.:** Selections on the Seraphim. 8.10 p.m.: "The Cricket, England v. Bendigo. **NIGHT SESSION.—(Speakers: H. Webb, C. W. Game. Artists: Violet Jackson, Ned Tyrrell, Syd. Hollister.)** Coburg City Band (conductor T. B. Davison) (Announcer: Frank Hatherley.) 8.0 p.m.: H. Webb, manager of the Tasmanian Government Tourist Department, will speak on "Tasmania's Mining Industry." 8.15 p.m.: C. W. Game. A little talk to Scouts' parents. 8.30 p.m.: A studio concert. Coburg City Band. March, "The Storm Flood" (Greenwood). Waltz, "Ricordanza. Ships" (Violet Jackson (soprano). "My Ship" (Barratt). "Happy Song" (Riego). 8.47 p.m.: Coburg City Band. "Hawaiian Hilo." Waltz, "Golden Sunbeams" (Rimmer). 8.55 p.m.: Ned Tyrrell (banjo). Selected. 9.4 p.m.: Coburg City Band. Intermezzo, "Southern Smiles" (Kelly). March, "The Middy" (Alford). 9.11 p.m.: Syd. Hollister. "Hindered Holidays." 9.18 p.m.: Coburg City Band. Waltz, "Fascination." 9.28 p.m.: Ned Tyrrell (banjo). Selected. 9.35 p.m.: Coburg City Band. Intermezzo, "Golden Smiles." 9.42 p.m.: Announcements. 9.47 p.m.: Violet Jackson (soprano). "Moonlight" (Schumann). "The Lotus Flower" (Schumann). 9.54 p.m.: Coburg City Band. Selected. 9.57 p.m.: Syd. Hollister will entertain you. 10.0 p.m.: Coburg City Band. Overture, "Veronica" (Raynor). March, "Anglo-Oriental" (Hume). 10.20 p.m.: "Age" news service, exclusive to 3AR. Results of Test cricket, England v. Bendigo. 10.30 p.m.: Our Shakespearean good-night quotation from "Richard II." "The putest treasure mortal times afford Is spotless reputation; that away, Men are but gilded loam, or painted clay. A Jewel in a ten-times barred-up chest Is a bold spirit in a loyal breast. Overture. Mine honor is my life; both grow in one; Take honor from me, and my life is done." God Save the King.

4QG

EARLY MORNING SESSION.—(Announcer: J. Tyson.) 7.43 a.m.: Time signals. 7.45 a.m.: News service. 8.0 a.m.: Some electric records. 8.15 a.m.: News service. 8.30 a.m.: Close down. **MORNING SESSION.—11.0 a.m.:** Music. 11.5 a.m.: Social news. 11.15 a.m.: A talk on "Artistic Uses of Sealing Wax and Crepe Paper," by "Denise." 11.30 a.m.: Music. 11.35 a.m.: More social news. 11.45 a.m.: Music. 12.0 noon: MIDDAY SESSION.—(Announcer: R. Wright.) 1.0 p.m.: Market reports and weather information. 1.15 p.m.: From the G.P.O.—The Postal Institute Or-

chestra. 2.0 p.m.: Close down. **AFTERNOON SESSION.—3.0 p.m.:** A programme of electrically reproduced records. 3.30 p.m.: All right singing times. 3.31 p.m.: From St. John's Cathedral—A recital by Mr. George Sampson, F.R.C.O. (City Organist). 4.0 p.m.: Afternoon news. 4.30 p.m.: Close down. **EARLY EVENING SESSION.—(Announcers: Wight and E. Humphreys.) 6.0 p.m.:** Mail train running times; mail information; shipping news. 6.5 p.m.: Some electrically reproduced records. 6.25 p.m.: Commercial announcements. 6.30 p.m.: Bedtime stories, conducted by "Little Miss Brishand." 7.0 p.m.: News in brief. 7.5 p.m.: Stock Exchange news. 7.8 p.m.: Metal quotations. 7.7 p.m.: Market reports. 7.25 p.m.: Fenwick's stock report. 7.30 p.m.: Weather information. 7.40 p.m.: Announcements. 7.43 p.m.: Standard time signals. 7.45 p.m.: Lecture, arranged by the Queensland Agricultural High School and College. **NIGHT SESSION.—(Announcer: H. Humphreys.) 8.0 p.m.:** From the Studio—All Featherstone and his Orchestra: Fox-trot, "Mother Goose Parade" (Brenan); Fox-trot, "After All I Adore You" (Richardson). 8.10 p.m.: Harry Humphreys in a comedy turn—"A Friendly Chat Across the Fence on Washing Day." 8.20 p.m.: All Featherstone and his Orchestra—Fox-trot, "You're a Real Sweetheart" (Friedel); Fox-trot, "Lonesome in the Moonlight" (Baer). 8.30 p.m.: Mabel Malouf (soprano), "A Heart That's Free" (Robyn). 8.38 p.m.: All Featherstone and his Orchestra—Fox-trot, "The Tutti Tutti Song" (C. Flynn); Fox-trot, "Who's Who Knocking at My Door" (Kahn). 8.48 p.m.: Feo Todd (elocutionist)—"Specially Jim"; "The Broken Prayer." 8.55 p.m.: All Featherstone and his Orchestra—Jazz waltz, "Jeanning" (Skilher). 9.0 p.m.: Metropolitan weather forecast; meteorological information. 9.1 p.m.: Beryl Pratten (pianist)—"Dance Negre" (Cyril Scott); "Dancing Doll" (Piddin). 9.3 p.m.: All Featherstone and his Orchestra—Fox-trot, "Across the Street From Heaven" (Newman); fox-trot, "You Have No Idea" (Dougherty); fox-trot, "Old Fashioned Locket" (Winbow). 9.43 p.m.: "Shipmates of Mine" (Sanderson). 10.0 p.m.: The "Daily Mail" news; the "Courier" news; weather news. 10.15 p.m.: All Featherstone and his Orchestra—Three-quarters of an hour's dance music. 11.0 p.m.: Close down.

5CL

MORNING SESSION.—(Announcer: Athol Lykke. Accompanist: Jean Pinlay.) 11.0 a.m.: G.P.O. chimes. 11.1 a.m.: Pianoforte recital, Columbia recordings, by Myra Hess, "Sonata in A Major" (Schubert). Parts 1 and 2. Allegro Moderato (in two parts). Andante. Part 3. Andante. Part 4. Andante (concluded). Allegro (first part). 11.15 a.m.: "Economist" talk on menu and kitchen craft. 11.20 a.m.: A variety programme, Columbia records. Frank Webster, tenor. "A Moorish Idea" (Dougherty); fox-trot, "Old Fashioned Locket" (Winbow). 9.43 p.m.: "Shipmates of Mine" (Sanderson). 10.0 p.m.: The "Daily Mail" news; the "Courier" news; weather news. 10.15 p.m.: All Featherstone and his Orchestra—Three-quarters of an hour's dance music. 11.0 p.m.: Close down.

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Local Programmes, Thursday, January 10

2FC

EARLY MORNING SESSION.

(Announcer: A. S. Cochrane.)

7 a.m.: "Big Ben" and announcements. 7.5 a.m.: Studio music. 7.20 a.m.: Country session; official weather forecast, rainfall, temperatures, astronomical memoranda, shipping intelligence, mail services, river reports. 7.25 a.m.: Investment market, mining sharemarket, metal quotations. 7.35 a.m.: Wool sales, breadstuffs, 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.

(Announcer: A. S. Cochrane.)

10 a.m.: "Big Ben" and announcements. 10.2 a.m.: Pianoforte reproduction. 10.10 a.m.: "Sydney Morning Herald" news service. 10.25 a.m.: Studio music. 10.30 a.m.: Last minute sporting information by the 2FC racing commissioner. 10.40 a.m.: Studio music. 10.45 a.m.: A talk on "Pandora." 11 a.m.: "Big Ben"; A.P.A. and Reuter's cable services. 11.5 a.m.: Close down.

MIDDAY SESSION.

(Announcer: A. S. Cochrane.)

12 noon: "Big Ben" and announcements. 12.1 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 news, "Sydney Morning Herald." 12.15 p.m.: Rugby wireless news. 12.18: A reading. 12.30: Studio music. 12.45: Cricket scores, England v. Bendigo, played at Bendigo. 1 p.m.: "Big Ben"; weather intelligence. 12.47 p.m.: Studio music. 1.3 p.m.: "Evening News" midday news service; Producers' Distributing Society's report. 1.20 p.m.: Studio music. 1.28 p.m.: Stock Exchange, second call. 1.30 p.m.: Studio music. 1.50 p.m.: Racing information by the 2FC racing commissioner. 1.57 p.m.: Cricket scores. 2 p.m.: "Big Ben"; close down.

AFTERNOON SESSION

(Announcer: Laurence Halbert.)
(Accompanist: Ewart Chapple.)

2.30 p.m.: Programme Announcements. 2.32 p.m.: Recital of selected records of world famous artists. 3 p.m.: "Big Ben"; pianoforte reproduction. 3.15 p.m.: Popular music. 3.30 p.m.: From Pitt Street Congregational Church, organ recital arranged by Miss Enid Elliott. 3.45 p.m.: From the Studio; cricket scores, England v. Bendigo, played at Bendigo. 3.46 p.m.: Isabel Thiselton, soprano, (a) "The Smile of Spring" (Percy Fletcher), (b) "Mifanwy" (Forster). 3.53 p.m.: Kathleen Logue, violinist. 4 p.m.: "Big Ben"; from Pitt Street Congregational Church, organ recital by Miss Enid Elliott. 4.15 p.m.: From the Studio, Isabel Thiselton, soprano, (a) "Laugh and Sing" (Drummond), (b) "Cheer up, do" (Robert Coverly). 4.22 p.m.: Kathleen Logue, violinist. 4.29 p.m.: From the Wentworth, The Wentworth Cafe Dance Orchestra, conducted by Jimmy Elkins. 4.39 p.m.: From the Studio, Studio music. 4.44: Cricket scores. 4.45 p.m.: Third call of the Stock Exchange. 4.47 p.m.: Popular music. 5 p.m.: "Big Ben"; close down.

EARLY EVENING SESSION.

(Announcer: A. S. Cochrane.)

6.40 p.m.: The chimes of 2FC.
5.45 p.m.: The Children's Session, conducted by the "Hello Man"; letters and stories; music and entertainment.
6.30 p.m.: Dalgety's market reports (wheat, and stock).
6.40 p.m.: Fruit and vegetable markets.
6.43 p.m.: Stock Exchange information.
6.45 p.m.: Weather and shipping news.
6.48 p.m.: Rugby wireless news.

6.50 p.m.: Late sporting news.
7 p.m.: "Big Ben"; late news service.
7.10 p.m.: The 2FC Dinner Quartet, conducted by Horace Keats.
(a) "Rusticarella" (Cortopassi).
(b) "Valse d'Amour" (Cremleux).
(c) "Songs of the Volga Boatmen" (arr. Lake).
(d) "Three Dances" (Cyril Scott).
(e) "Un Peu d'Amour" (Silesu).
(f) Fox trot.

EVENING SESSION.

(Announcer: Laurence Halbert.)
(Accompanist: Ewart Chapple.)

7.40 p.m.: Programme announcements.
7.45 p.m.: Pianoforte reproduction.
7.52 p.m.: Popular music.
8 p.m.: "Big Ben"; from the Capitol Theatre, The Capitol Unit of Entertainment.
8.22 p.m.: From the Studio, John Mitchell, tenor.
8.29 p.m.: Lindley Evans, pianist.
8.41 p.m.: Eileen Boyd, contralto.
8.48 p.m.: To-night's competition.
8.58 p.m.: Weather report and forecast.
8.59 p.m.: John Mitchell, tenor.
9.6 p.m.: Chronicles of Creamy Creek, by the Bush Parson.
9.20 p.m.: From the Capitol Theatre.
9.45 p.m.: From the studio, Eileen Boyd, contralto.
9.52 p.m.: Lindley Evans, pianist.
10.4 p.m.: Len. Maurice in the newest song hits.
10.11 p.m.: From the Hotel Australia, Cec. Morrison's Dance Band.
10.25 p.m.: From the Studio; late weather forecast.
10.26 p.m.: Len. Maurice in the newest song hits.
10.33 p.m.: From the Hotel Australia, Cec. Morrison's Dance Band.
10.57 p.m.: From the Studio, To-morrow's programme.
10.59 p.m.: From the Hotel Australia, Cec. Morrison's Dance Band.
11.30 p.m.: National Anthem; close down.

2BL

MORNING SESSION

Announcer: A. C. C. Stevens.

8 a.m.: G.P.O. clock and chimes; metropolitan weather report. 8.1 a.m.: State weather report. 8.2 a.m.: Studio music. 8.15 a.m.: G.P.O. clock and chimes. 8.25 a.m.: Studio music. 8.30 a.m.: G.P.O. clock and chimes; studio music. 8.35 a.m.: Information, mails, shipping, arrivals, departures, and sailings. 8.38 a.m.: News from the "Daily Telegraph Pictorial." 8.45 a.m.: G.P.O. Clock and chimes; studio music. 9 a.m.: G.P.O. clock and chimes; studio music. 9.30 a.m.: Half an hour with silent friends. 10 a.m.: G.P.O. clock and chimes; close down.

MIDDAY SESSION

Announcer: J. Knight Barnett.

11 a.m.: G.P.O. clock and chimes; 2BL Women's Sports Association session, conducted by Miss Gwen Varley. 11.30 a.m.: Advertising hints. 11.40 a.m.: Women's session, conducted by Mrs. Cranfield. 12 noon: G.P.O. clock and chimes; special ocean forecast and weather forecast. 12.3 p.m.: Pianoforte reproduction. 12.30 p.m.: Shipping and mails. 12.35 p.m.: Market reports. 12.45 p.m.: Cricket scores, England v. Bendigo, played at Bendigo. 12.48 p.m.: "Sun" midday news service. 1 p.m.: Studio music. 1.30 p.m.: Talk to children and special entertainment for children in hospital. 2 p.m.: G.P.O. clock and chimes; close down.

AFTERNOON SESSION

Announcer: J. Knight Barnett.
Accompanist: Kathleen Roe.

3.45 p.m.: The chimes of the G.P.O. clock;

cricket scores, England v. Bendigo, played at Bendigo. 3.47 p.m.: Studio music. 3.50 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 4 p.m.: The chimes of the G.P.O. clock; from the studio—Kathleen Nicholls, soprano—(a) "Arise, O Sun" (Day), (b) "She Wandered Down the Mountain Side." 4.1 p.m.: Captain Fred Aarons—Mystery Series—"The Black Cat." 4.20 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 4.30 p.m.: From the studio, Kathleen Nicholls, soprano—(a) "Selected," (b) "Annie Laurie" (Lehman). 4.37 p.m.: James Walker, pianist, "Song without Words in E Major" (Mendelssohn). 4.47 p.m.: "Sun" news service. 4.50 p.m.: Romano's Dance Orchestra, conducted by Bennie Abrahams. 5 p.m.: The chimes of the G.P.O. clock; from the studio, "Our Serial Story." 5.10 p.m.: James Walker, pianist, "Schubert Impromptu in A Flat." 5.20 p.m.: Popular music. 5.37 p.m.: Features of the evening's programme.

EARLY EVENING SESSION

Announcer: Basil Kirke.

5.40 p.m.: Children's session—music and entertainment.
6 p.m.: Letters and stories.
6.30 p.m.: "Sun" news and late sporting.
6.40 p.m.: 2BL Dinner Quartet—
(a) "A Spring Day" (Harris),
(b) "My Dream" (Waldteufel).
(c) "Three Dream Dances" (Coleridge-Taylor).
(d) "Winds in the Trees" (Goring-Thomas).
(e) "Waltz" (Carreno).
(f) "Serenata" (Mascagni).
7.10 p.m.: Cricket scores.
7.12 p.m.: 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; grain and fodder report ("Sun"); dairy produce report ("Sun"); weekly traffic bulletin.
7.25 p.m.: Mr. Pim and Miss Pam in advertising talks and nonsense.
7.55 p.m.: Programme and other announcements.

EVENING SESSION

Announcer: Basil Kirke.
Accompanist: G. Vern Barnett.

8 p.m.: G.P.O. clock and chimes; from the Manresa Hall, North Sydney—the North Sydney Tramway Band.
8.15 p.m.: From the studio, Laurie Oaks, baritone.
8.22 p.m.: Christopher Faulkner, cornet solos.
8.29 p.m.: Cliff Gane, comedian.
8.36 p.m.: Ivy Saxton, in the newest song hits.
8.43 p.m.: From the Manresa Hall—the North Sydney Tramway Band.
9 p.m.: From the studio. G.P.O. clock and chimes.
Weather report.
9.1 p.m.: Ambrose Bourke and Mary McCormack, vocal duets.
9.8 p.m.: Rene Rich, violinist.
9.15 p.m.: Leo Rowan, tenor.
9.22 p.m.: From Manresa Hall, North Sydney—the North Sydney Tramway Band.
9.37 p.m.: From the studio. Laurie Oaks, baritone.
9.44: Christopher Faulkner, cornetist.
9.51 p.m.: Ivy Saxton in the newest song hits.
9.58 p.m.: Cliff Gane, comedian.
10.5 p.m.: Leo Rowan, tenor.
10.12 p.m.: Rene Rich, violinist.
10.19 p.m.: Ambrose Bourke and Mary McCormack.
10.27 p.m.: Resume of following day's programme.
10.30 p.m.: National Anthem. Close down.

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The WIRELESS WEEKLY

RADIO INFORMATION

Under the direction of
Ray Allsop
 and
Don B. Knock
 (Associate Technical Editors)

Service

Correspondence Answered
 only through
 these
 Columns
 (See Coupon Below)

W.O. (Moree).—"I am enclosing a list of valves used in my receiver. Could I improve on them?"

Answer: Yes, I think you will find the Philips six-volt valves would suit your purpose.

"Ham" (Camberwell).—"I have just obtained my A.O.P.C., and would be much obliged if you would answer the following questions through your column. How is the magnetic pick-up connected in the receiver? Can it work independently of the receiver? Using a Colpitt's circuit with a .0005 variable condenser for aerial tuning, how many turns of wire would I need on the coils for the 200-250 metre band? Please let me know the diameter of the coils, and gauge of wire required. Is the loop system of modulation considered good? For my power supply, I'm going to use an Electrolytic Rectifier, with 600 volts each side of the secondary tapping on the step-up tranny, and 12 jars for the rectifier. Would the solution be in the proportion of 2lb. of ordinary borax to one gallon of distilled water? Would a bank of 50 candle-power lamps in series with the mains be O.K. for forming? Would a 201A valve stand up to 600 volts on the plate? Would the valves in the transmitter be paralysed if I turned them on whilst the transmitter was running? With 610 volts on a UX-210, what would be the input? About 15-20 watts wouldn't it?"

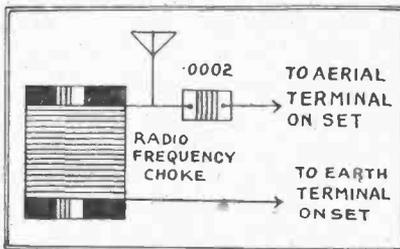
Answer: The magnetic pick-up should be plugged into the jack in place of the microphone. It will work independently of the receiver. Wind 40 turns of 14-gauge bare copper wire on a 6in. diameter former. The loop system of modulation is not considered to be as efficient as other well known methods, such as grid modulation, Heising modulation, etc. Make the solution fairly weak. With 600 volts on the plate of a 201A, it would flash over. Paralysed valves would be the result of having the receiver too near the transmitter. The input would depend upon the milliamperage taken. It would be approximately 30 watts. Welcome to the "Ham" ranks O.M.

"Anxious" (Marrickville).—"I have built the Super-Screen-Grid-Peridyne, and cannot get it to oscillate."

Answer: Try different detector valves, and vary the "B" voltages. The receiver should oscillate easily. Perhaps some component is at fault. Make certain valves are making good contact in the sockets.

F.A. (Wollongong).—"I have an electrical lighting plant in my neighborhood. Is there anything I could do to reduce interference from this source?"

Answer: See the diagram printed in these columns. This is an interference eliminator. Wind 100 turns of 26 D.C.C. on a 3in. former. This is the radio-frequency choke. The condenser (which is fixed), has a capacity of .0002 mfd. The aerial must be connected at the junction of the choke and condenser.

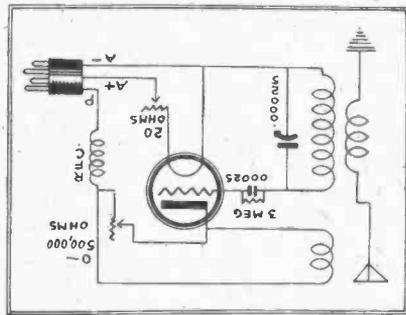


D.W.B. (Nelson, N.Z.).—"In connection with the article "Adding a Stage of R.F. to the Browning Drake," which appeared in the August 'Radio,' will you kindly tell me if the 80 turns on the detector coil is continuous, or are the secondary (70 turns) and the reaction (14 turns) separate coils? Where should the secondary coil be tapped for neutralising purposes?"

Answer: The two coils are separate. For neutralising purposes tap at the centre of the secondary coil. Thanks for your kind remarks.

"Gas" (Willoughby).—"I am enclosing sketch of my two-valve circuit, which until recently has been working very well. I could at one time get inter-State stations on the loud speaker. Selectivity seems to be the trouble, and the set is getting worse every day. I have tried different plug-in coils without success."

Answer: The grid-leak is faulty. It is fluctuating and changing. The obvious remedy is to try another. Use coils of 25, 50, and 45 turns respectively for aerial, grid, and reaction.



F.P.K. (Eastwood).—"I have a three-valve receiver, and desire to receive London and other distant stations. At present I can receive only the local broadcasting stations. Will you please give me an adaptor circuit?"

Answer: The circuit appears here. The coils should be one of the short-wave coil kits put out by Radiokes of Lewcos—or some other good make. The tuning condenser has a capacity of .00025 mfd. Use an old valve base, and solder the A plus, A minus, and plate leads to the proper terminals. In order to find out which are the correct legs, hold the valve base right end up, with the pin toward you. The two rear terminals are the filament connections, whilst the front leg is the plate. After soldering the flexible leads to the proper valve legs, fill up the cavity of the socket with sealing wax. Remove the detector valve from your set, and place it in the short-wave adaptor. Tune with the condenser and the variable resistance of 0-500,000 ohms. The choke may be bought or constructed at home. If constructed, wind 100 turns of 28 D.C.C. at random on a wooden spool 1/4-in. in diameter with a 1/4-in. core.

J.G.L. (Lithgow).—"Would you publish in 'Wireless Weekly' a short-wave adaptor for a four-valve receiver, mentioning parts required? I am enclosing circuit of receiver."

Answer: See reply to F.P.K. above. In your case it will be necessary to remove the R.F. valve in your four-valve receiver. The .002 condenser is absolutely necessary.

E.F. (Five Dock).—"I have a five-valve set, with three dials, each numbering 0-100. I can receive the N.S.W. stations, but I cannot find the correct number on the dials for Melbourne, Adelaide, and Brisbane. I would be grateful if you could tell me the numbers required to tune in these stations please."

Answer: It is impossible to tell you this. The numbers vary with almost every receiver. They depend upon the capacity and inductance of your coils, wiring, condensers, aerial, etc. However, as a guide, you will find 3LO just above 2BL, 3AR just above 2FC, 4 QG just above 3LO, and 5CL just above 4QG.

R.S.B. (Minto).—"I wish to make a short-wave adaptor, and am wondering how to mount the coils. Would a sub-panel be O.K.?"

Answer: Yes, use a bakelite or ebonite sub-panel, with terminals mounted for the leads. It would be better though, if you could re-wind, or alter your coils so that they could be used with Eco plugs and sockets. This saves many long leads, and makes the coil system more efficient.

P.M. (Newtown).—"I have a three-valve set. Could I add another valve to it without altering the wiring? Can you tell me why I cannot get Station 2UW plainly? I can get the rest of the stations properly."

Answer: You do not enclose a circuit diagram, nor do you tell us what circuit you are using. It will be necessary for you to advise us whether or no your receiver consists of a detector and two audios, or a stage of R.F., one detector, and one audio. If you are using a detector and two audios, I would advise the addition of a stage of R.F. A slight alteration in wiring would be necessary to the aerial and earth connections. If your receiver is one consisting of a stage of R.F., a detector, and one audio, an extra stage of A.F. could be added. As you do not tell us something about your receiver, we cannot advise why you cannot receive 2UW. Perhaps the receiver itself is faulty, or your set may be insensitive, or not tuning low enough. Perhaps the aerial system is at fault. There may be local screens. There are a hundred explanations that might be made without knowing more about your receiver. Write again.

W.U. (Lue).—"I have a five-valve receiver (a Neutrodyne), made by David Jones. Would it be possible to insert an Osram Screen Grid valve into this set? What should be the correct length of aerial for best results? I am using a certain type of bell-shaped loud-speaker. (Name mentioned.) What do you think of this type speaker? It does not seem to handle volume too well, especially speech. What speaker do you recommend for a set of this kind? I do not know anything technically about wireless, but am very interested. Is there any book I could get to educate myself enough, as I would like to try out some of the circuits appearing in "Wireless Weekly."

Answer: No, the S.G. valve cannot be inserted in this receiver, it would mean re-building. The correct length of aerial for you to use depends on local receiving conditions, and you should adjust it accordingly. You will find the best length is between 50 and 100 feet. The receiver is less selective when more aerial is used. I have often mentioned that comparisons are odious, and for obvious reasons we cannot compare one manufacturer's products with another. You may use an Amplion Cone type AC9 speaker for good results. You will get good reproduction. "1001 Radio Questions and Answers" (obtainable from Swain's), would be a good investment.

W.J.R. (Leeton).—"I have a three-valve receiver which gives good results, and of which I enclose a wiring sketch. I would be very pleased if you would answer the following questions. If I removed the whole of the coils, and substituted a new set, wound as follows, aerial 9, grid 15, reaction 11, using 26-gauge wire on a 2 1/2in. former, would the set then function as a short-wave receiver? If so, on what waveband? Would it be necessary to add an extra variable condenser? How many turns of 24 D.C.C. would be required on a grid

QUERY COUPON

If you are in difficulties about reception or set-construction, which we know, and we will endeavor to set you right. Make your questions brief to the point, and, where possible, show lay-out and wiring design. Under no circumstances will answers to queries be made by letter or by telephone. All answers will appear in the columns of this department in the order in which they are received.

The Radio Information Service
 WIRELESS WEEKLY
 Please answer the accompanying queries in your earliest convenience. I enclose this coupon in order to indicate that I am a bona-fide reader.

A STRONG FILAMENT



A Mullard P.M. Filament can be tied in a knot after more than 1000 hours' use. Remember that a filament is a piece of metal, thinner than a hair, and you will realise the enormous strength necessary to withstand such a strain.

Due to this quality, a Mullard P.M. Filament will give uniform unequalled results for amazing periods of time. In the words of Mullard users—"They last for years."

Added to this great strength the Mullard P.M. Filament has other advantages. Its huge emission surface ensures maximum volume together with an improvement in tone and it consumes only .075 amps.

There's not a valve to touch the Mullard P.M. Ask your radio dealer — he stocks them.

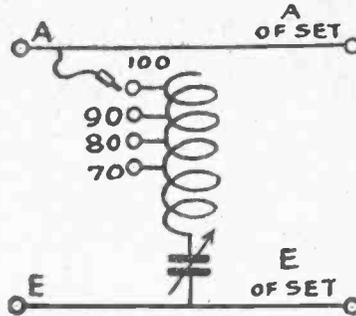
Mullard
THE MASTER VALVE

coil wound on a 3in. former to enable me to listen to the Marine band (600 metres)? I would like to be able to listen in on short waves, but do not wish to go to the expense of building a separate set.

Answer: The coil combination mentioned will tune from approximately 50-150 metres. No additional condensers will be required. From 75 to 80 turns will be necessary for the 600 metre band.

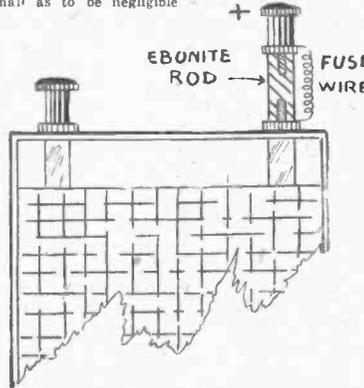
A.P. (Bull).—"Will you please give me a circuit of a good simple wave-trap, as I experience interference when tuning in S.L.O."

Answer: The circuit appears in these columns. Unfortunately it was left out last week, when your query was answered. Wind 100 turns of 24-gauge wire on a 2in. former, and tap at the 70th, 80th, and 90th turns. Use a variable condenser of .00035 mfd., and connect E to earth and A to aerial. The other two terminals are connected to the receiver aerial and earth terminals as shown.



A.D.G. (Sydney).—"I notice in Queries columns that fuses may be used in the receiver to stop the valves from being burnt out? I am rather particular about my A.C. accumulator, which is an expensive one. Could I fix a fuse somehow to protect this battery? What beats me, is the fact that fuse wire has a very high resistance (so I read recently), so will it not interfere with the operation of the receiver?"

Answer: We are publishing a diagram showing you how to protect your accumulator with a piece of fuse wire. In the case of a short-circuit, the fuse wire would burn out, and the circuit would be broken, thus saving the accumulator from damage. Fuse wire certainly has a great resistance, but the amount of fuse wire used in fuses is so small as to be negligible.



W.H.C. (Bathurst): See above. Probably there may be a short inside the receiver. I think you are a short on one of the battery leads, or there will find the two leads shorting; are the B plus 45 volts and the B negative of the last "B" battery? This would cause the battery to heat up, and sometimes little hills would form over the sealing wax covering.

F.L. (Canberra): The circuit is correct. Try using a Jackson condenser. They are very solid, and will suit your requirements admirably.

M.T.R. (Cross Roads): In answer to your phone call! To the best of my knowledge, feeding the loud-speaker with beer would be very unwise. You should use champagne; and I should have met your query in Radiocronics columns!

T.O.P. (Mosman): Your receipt has been forwarded. Regret we have no copies of the Marco Four. Many readers are asking for this circuit, which will probably be published again in the near future.

A.L. (Wollongong): The best straight one-valve set is a Reinartz.

D.A. (Campbelltown): The experimental license costs 20/. You must first sit for an examination. It will be necessary to have a good knowledge of methods of radio communication by Morse, also elementary radio and electrical theory.

T.S. (Newcastle): Please tell me if Radiokes Circlod coils can be used with screen grid valves? Answer: Yes, by tuned anode coupling.

K.D.F. Gulargambone.—"On Vemy receiver 4 (a Radiola straight six) I have picked up several times on 56 of my dial reading a foreign station. I have not been able to understand his call or language. He can be heard after 2BL closes down."

Answer: In cases like this it would be a great help if readers gave us the approximate wave-length of the station by comparing it with the tuning and wave-length of stations known. You do not mention the nights on which the transmissions were received, but since you mention 2BL—I think the station would be one of the Japs—JOAK probably, which will be found just below 2BL'S tuning. The Japs are coming in very well lately. Dial readings vary with different receivers.

E.B. (Wellington).—"I built the screen grid four, published in 'Radio', and find the set works O.K. on dry batteries, but not with an eliminator. Should this be so? If not, where could I send the eliminator for overhaul?"

Answer: Yes, the receiver should work O.K. with the eliminator. Perhaps you are not giving sufficient voltage to the screen grid. Remember that eliminators do not yet cater for this tapping. It would be advisable to take an additional lead off the amplifying tap and insert a resistance to drop the voltage down as required. Insert also an R.F. choke in this lead. If you are satisfied that everything is O.K. send the eliminator to the makers or agents for examination.

V.C.M. (Randwick).—"Why is it that when I bring the sections of my gang condenser up into a certain position with one another that the receiver starts squealing? I built the 1926 Solodyne. When the reaction condenser is placed with its plates all out the set squeals and does not stop until the reaction condenser is moved about half-way in."

Answer: The whistle is caused through resonance between the circuits. Try reducing the "B" voltage on the R.F. stages, and insert R.F. chokes in B plus leads, in order to resist R.F. from getting into the audio side of the receiver. Make certain the plates of the reaction condenser are not touching.

J.S.H. (Paddington).—"I wish to build a set for a friend of mine living 600 miles from here—in Queensland. The set must embody simplicity, ease of control and must be cheap to build. Anything up to a four-valve set will be satisfactory. Loud-speaker results on inter-State stations is desired. Perhaps you could recommend some circuit that has been published in your paper."

Answer: Build the Pentavox receiver, which has three valves, but gives results equal to a five-valve receiver. Your kind wishes are reciprocated.

"BELLBIRD" (N.S.W.).—"I have a battery-operated set with an ordinary button-switch as lightning arrester on the lead-in. The earth wire comes from the water-pipe up through the floor to the dry battery. When the button is turned off the receiver will still give results, though it is not a storm comes the switch ticks. Would it be wise to put a wire above the switch and connect it direct to earth?"

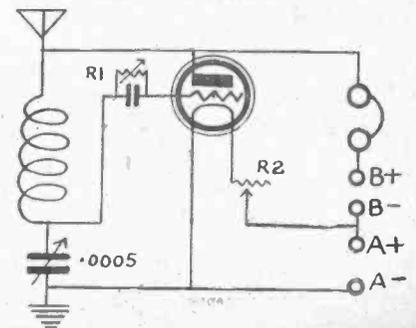
Answer: Your proposal is unsafe. A lightning arrester should be used. Lightning takes the path of least resistance to earth, but often goes the longer way round also. Use D.P.D.T. switch and isolate the set. The reason why you can still faintly hear stations when the switch is on is because the only coil earthed is the primary. The secondary coil acts as a pick-up.

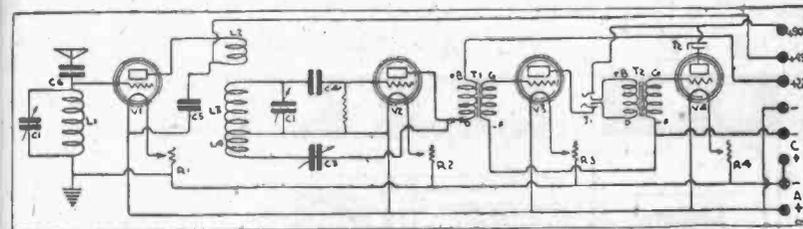
L.A. (Sydney).—"I notice a par. in queries relative to chargers. The par. says: 'For less trouble the trickle charger would meet demands. However, if you wish to keep your battery in good order, it would be advisable to use a charger.' I am using a Philips' trickle charger in conjunction with a four-valve accumulator. Do I understand that a trickle charger is detrimental to the battery?"

Answer: No, the trickle charger is not detrimental, and it will always keep the battery in full charge without fuss or trouble. The answer referred to put forward the point that it is good to thoroughly discharge and re-charge the battery at times, and this may be done with your trickle charger, though it will take slightly longer than would be the case with a charger. However, this should be no trouble. Merely leave the trickle charger off for a week or so, then give the accumulator a good charge by means of the trickle charger—i.e., leave the trickle charger on a little longer than you would ordinarily do so.

"SCOTTY" (Newcastle).—"My boy wants a radio set so I told him to build one himself. The only circuits I can find prove too expensive, so can you give me a simple one-valve circuit using one coil, one valve, and one tuning condenser?"

Answer: The circuit is published in these columns. The coil consists of 50 turns of 24-gauge D.C.C. wire, wound on a three-inch former. The grid-leads should be made variable from 0—about 5 ohms. This receiver can be made for less than £2. The grid condenser has a capacity of .00025 mfd., whilst the rheostat has a resistance of 30 ohms. One 45-volt "B" battery will be sufficient.





The long-awaited circuit of the Marco Four Receiver—one of the most popular of the "Wireless Weekly" receivers.

UARBRITE (Uarbry).—"Could a fairly handy amateur (possibly make an efficient dry "B" battery for radio work? If this is possible, will you consider the question of giving detailed instructions in an article in "W.W." at an early date?"

Answer: Generally speaking, it is not worth the time put into it. However, in a new series commencing with the Christmas number of "Wireless Weekly," entitled "Proving Radio," I have given detailed instructions for making your own dry batteries. These batteries are for use in experiments, but may be used as "A," "B," or "C" batteries. It would be a better proposition to make wet "B" batteries. Instructions for the building of these will also appear under the heading "Proving Radio."

(2) "Will you give a short description in an early issue of 'W.W.' on how to rejuvenate a 'B' battery. A fairly clear description would be appreciated, as such a process is very handy to country radioists, for dry batteries are not obtainable at every corner, and dry batteries are liable to run out at unlikely and unreasonable times. Even if the rejuvenated battery did duty for a few days it would be handy."

Answer: Providing the procedure outlined here is followed before the battery is beyond aid or improvement your battery may be rejuvenated. On tests I have personally carried out after rejuvenating "B" batteries with a reading of 20 volts (normal reading 45 volts) each battery after attention gave approximately five weeks' service. This was with inmates of cardboard and paper, and with a crew-driver or other implement scrape away the insulation covering the cells, both on top and underneath. With a 0-5 voltmeter take a reading of each separate cell. Keep those that show any reading at all, real if only a swing of the voltmeter needle. Throw away the dead cells. Now in the bottoms of each good cell pierce a hole. In a sal ammoniac electrolyte place these cells so that the zinc casings are completely covered. Whilst they are receiving treatment each cell should be connected up to the next, in series. Solder carefully, otherwise the fine connection wires may become broken. Bind all the cells together with some non-conductive material after they have received treatment. Do not forget to insulate each cell from its neighbor. If by chance the sealing wax separating the cells has broken away waxed paper may be used. Solder up the bottoms of the cells after the treatment. On taking a reading with a "B" voltmeter you will find that each cell is giving its maximum 1½ volts.

L.E.S. (Marrickville).—"I have built a three-valve Reinartz. If loudly adjusted there is a high squeal or whistle."

Answer: It seems you are using too much reaction. However, pay attention also to grid bias on the audio valves. Perhaps the valves you are using are not suitable.

W.B.M. (Kogarah).—"I have a three-valve Reinartz. When my accumulator is fully charged the hand capacity is nil, but when discharged hand capacity increases considerably. A howl also develops when the reaction and tuning condensers are 20 degrees apart. I am using a loop aerial. The coils were wound by myself—airial 9 turns, filament 45 turns, reaction 25 turns."

Answer: The whistle is probably due to a faulty or dead "B" battery. Use a single wire aerial 50 feet long. If your tuning condensers are of .0025 (or .0035) for reaction and .0025 for grid tuning, your coils are wrong. On a 3/4-inch former you should wind 45 turns for the secondary and 20 turns for the reaction. Use 24-gauge D.C.C. wire. Space these two coils quarter of an inch. The aerial coil should be wound on a similar former, and should consist of 25 turns of the same gauge wire.

H.G. (Blacktown).—"Is it possible to receive any other station than 2FC on the crystal receiver published in "W.W." 24th June, 1927? I am living five miles from Pennant Hills and 20 miles from Coogee."

Answer: You are too near to 2FC's transmitter to expect a crystal receiver to pick up any other station. The circuit is selective, nevertheless. You may be able to hear 2BL, but you may hear 2FC also whilst listening to the former station.

(2) With regard to the three-coil regenerative circuit, in which the output of the valve is fed back into the grid circuit, I have been told that the use of the reaction coil in the getting of distant stations is equal to a stage of R.F. before the detector valve. Would you say that this is so?"

Answer: Hardly so, though reaction gives a good percentage of this quality it cannot be equalled to the results given by an R.F. valve. Try it for yourself. Reaction is very useful on local stations also, but R.F. is useless in this respect.

R.H.W. (Bondi).—"Will you please tell me how I can cut out 2GB and get 3FC? The circuit of my crystal receiver is enclosed."

Answer: Build the wave-trap appearing in these columns. Wind 100 turns 24-gauge D.C.C. on a two-inch former, and tap at the 70th, 80th, and 90th turns. Use a variable condenser of .00035 mfd.

A.S. (Lidcombe).—"I would deem it a great favor if you would send me the circuit for the 'Marco Four,' as I wish to remodel my set during Christmas. I have lent my circuit so often that I have now lost trace of it. So far I have not heard a four-valver to equal the Marco Four for pure tone with volume. I trust you are able to oblige with such a long-distance back number."

Answer: Within a few days of publication of this receiver (Nov. 4th, 1927) all copies but that kept for reference were sold out. However, as I have had so many inquiries for this circuit it is reproduced in these columns. We shall be pleased to supply any information required.

GENERAL.—It is only natural that a few queries should come to hand from readers asking why they cannot hear experimental station VK-2NO at present. The answer is simple. Mr. Knock has temporarily dismantled his station, and is re-erecting it at the address of VK-2AW. The two stations will be housed in the one transmitting room, and between them will cover every phase of experimental transmission. At least a month will elapse before VK-2NO is ready to resume his experimental 'phone transmissions, which take place on wave-lengths varying from 160 to 220 metres. The apparatus will be considerably improved, particularly with regard to modulation.

BRIEF REPLIES.

G.W. (Narrandera).—Build the Marco Four. The circuit is being reproduced if possible in this issue—look through the query columns. If it does not appear here you will find it next week.

R.S. (Glebe).—(1) The Marco Four receiver consists of a three-valve Reinartz receiver with a stage of radio-frequency added. (2) No, the Marco Four has not yet been adapted to the screen-grid. This will probably be done later. (3) The screen-grid has the power to amplify R.F. signals in a manner that is not possible with the ordinary three electrode valves. (4) Yes, the receiver could be made into a portable receiver. (5) Circuits in recent issues will suit your requirements.

L.D. (Newcastle).—Sorry we have no copies left of the issue you require. Would you like another circuit? You could not do better than build the Marco Four. See also below.

GENERAL.—Mr. L. D., of 43 Maitland Street, Stockton, Newcastle, would like to get hold of a copy of "W.W." May 27th, 1927. Can any reader oblige?

A.G. (Mt. Como).—You will require rheostats of 30 ohm resistance each. If desired to work all valves from the one rheostat a 6 ohm resistance will be necessary.

G.R.H. (England).—Glad you like our paper. The reason why Morse code is not made up systematically—such as dot for A, dot dot for B, and so on—is because certain letters in the English language are repeated so often in the spelling of a word that it was considered advisable by Morse (who made the code) to make these recurring letters as simple and as short as possible. Thus A is merely dot dash, I is dot, dot. E is dot, T is dash, and so on. No, S.O.S. does not represent any words, such as "Save Our Souls." The three letters were chosen because they are easily remembered and are very short to send. The three letters are also rhythmic, and one's attention is easily arrested when hearing the three dots, followed by three dashes, and three more dots.

R.F. (Camden).—A complete list of the new radio letter signals will appear in the December issue of "Radio."

W.R.D. (Woolowin).—The circuit submitted is correct, with the exception of the 0 positive connection, which should go to A negative, and not A positive, as shown.

T.P.G. (Lithgow).—Build the "Go-Getter" short wave receiver.

U.R.T. (Bronte).—The secondary tuning coil of most receivers is tuned with a .0005 variable condenser. If you are making up your own circuit you will need to find the correct amount of turns, but you will find it is approximately 50 turns on a 3-inch former.

A.L. (Five Dock).—The following is a list of the general purpose valves in the Phillips' line. One-volt filament series, A109; two-volt, A209; (the three-volt types are now obsolete); four-volt, A409; six-volt, A609.

T.P.T. (Botany).—The A.O.P.C. course will appear in "W.W." shortly. It will follow a series of articles leading up to the course.

A.M.A. (Queensland).—Your supposition is correct. The symbol resembling a garden rake is the earth. It is an old American idea.

YOUR SET IS OLD, OBSOLETE

Out of Date as well as Costly in Upkeep.

We will convert it into an ALL - ELECTRIC model for £18/18/-. Terms arranged. Otherwise trade it in for one of our All-Electric Sets, priced from £26/10/, in neat cabinet, complete with Speaker. These sets are absolutely the last word in quality of tone and volume. Deposit £3/19/6, and 9/6 weekly.

A written guarantee with every set.

Demonstrations in your home do not place you under any obligation.

Our customers are our friends. We strive to please.

We sell parts on terms, also.

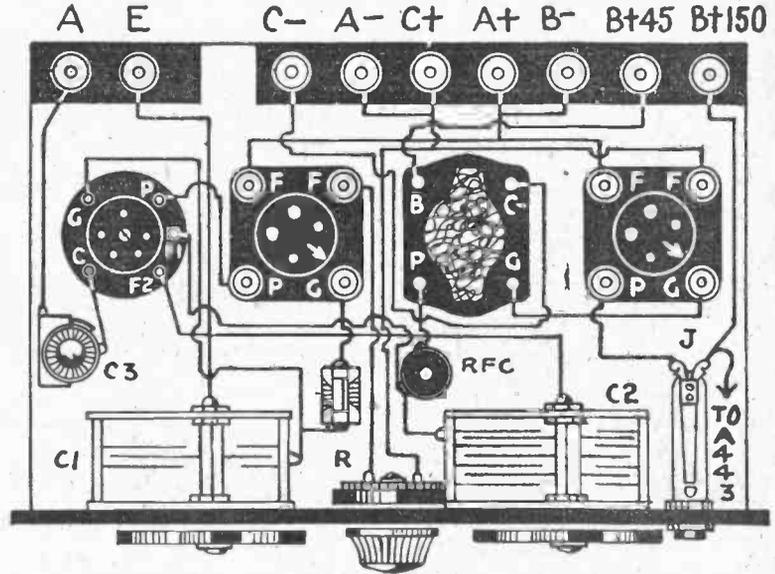
C. A. Holmes and Co.,
515 George Street, Sydney
Phone M3903

2GB Programme Thursday, January 10.

10.0 a.m.: Music. 10.10 a.m.: Happiness talk by A. E. Bennett. 10.20 a.m.: Music. 10.30 a.m.: Women's session, by Miss Helen J. Beegling. 11.30 a.m.: Close down. 2.0 p.m.: Music. 2.5 p.m.: Women's radio service, by Mrs. Dorothy Jordan; Pat Hansen, sports talk. 2.50 p.m.: Music. 3.0 p.m.: Talk. 3.15 p.m.: Close down. 5.30 p.m.: Children's session, by Uncle George. 7.0 p.m.: Stock and market reports, by New Zealand Loan and Mercantile Agency, Ltd. 7.15 p.m.: Music. 8.0 p.m.: Cornet solos, by Mr. Phil Conchman. 8.10 p.m.: Songs by Mr. Clement Hosking. 8.20 p.m.: Violin solos by Mr. Lionel Hargreaves. 8.30 p.m.: Mr. Jack Win and Miss Nora Windle in original selections from their extensive repertoire. 8.40 p.m.: Pianoforte solos by Miss Belle Yong. 8.50 p.m.: Songs by Madame Bennett North. 9.0 p.m.: Weather report. 9.3 p.m.: Address. 9.15 p.m.: Cornet solos by Mr. Phil Conchman. 9.25 p.m.: Songs by Mr. Clement Hosking. 9.35 p.m.: A humorous interlude. 9.40 p.m.: Violin solos by Mr. Lionel Hargreaves. 9.50 p.m.: Songs by Madame Bennett North. 10.0 p.m.: Mr. Jack Win and Miss Nora Windle. 10.10 p.m.: Orchestral music. 10.30 p.m.: Close down.

Friday, January 11.

10.0 a.m.: Music. 10.10 a.m.: Happiness talk by A. E. Bennett. 10.20 a.m.: Music. 10.30 a.m.: Women's session, by Miss Helen J. Beegling. 11.30 a.m.: Close down. 2.0 p.m.: Music. 2.5 p.m.: Women's radio service, by Mrs. Dorothy Jordan. 2.50 p.m.: Music. 3.0 p.m.: Talk. 3.15 p.m.: Close down. 5.30 p.m.: Children's session, by Uncle George. 7.0 p.m.: Stock and market reports, by New Zealand Loan and Mercantile Agency, Ltd. 7.15 p.m.: Music. 8.0 p.m.: 2GB Instrumental Trio; Miss Ada Brook, Mr Cecil Berry, Mr. Cedric Ashton. 8.15 p.m.: Songs



The Wiring Diagram of the Wasp Receiver, described by Ray Allsop in the last issue.

by Miss Nance Marley. 8.15 p.m.: A humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 8.30 p.m.: Cello solos by Mr. Cedric Ashton. 8.40 p.m.: Songs by Signor Mario Gustimo. 8.50 p.m.: Pianoforte solos by Miss Ada Brook. 9.0 p.m.: Weather report. 9.3 p.m.: Address. 9.15 p.m.: Songs by Miss Nance Marley. 9.25 p.m.: 2GB Instrumental Trio. 9.40 p.m.: A humorous interlude. 9.45 p.m.: Songs by Signor Mario Gustimo. 9.55 p.m.: Violin solos by Mr. Cecil Berry. 10.5 p.m.: Orchestral music. 10.30 p.m.: Close down.

Tobacco Culture

IN view of the fact that the tobacco-growing industry promises to become of great importance in Australia the talk given from 3LO on January 9 by T. A. J. Smith on "Tobacco Growing" should command the attention of a wide circle of listeners. The many young men who are migrating to the country these days with a view to taking up the profitable culture of "My Lady Nicotine" should be able to glean much valuable information from this talk, as Mr. Smith is the foremost expert in Australia on this subject.

PROVING RADIO!

(Continued from Page 23.)

If you light a candle, and, after burning it for a few moments, put it out, then hold it so that the wick will be just below the rod of the Leyden jar and in front of the discharger, a spark will pass which will light the candle. This is because there is a heated column of gas that is given off by the wick, and which lights easily.

Now we shall leave static electricity and pass on to the methods of producing current. Most of our experiments will require a current of electricity. This can be obtained from a dynamo, if this is available, but, for the sake of those who would care to make everything as they go along, we shall describe some very simple cells which may be made for a few pence, and which are quite serviceable. The materials for these cells can be obtained without trouble.

As a side note, you should remember that no battery composed of a single cell, whether it be as small as your finger, or as large as a house, can deliver more than 1.2 volts. If a greater voltage is desired a number of these cells should be connected in series, whereas if the same voltage but a greater amperage, is required a number of them should be connected in parallel.

To make the cell procure 1oz. of sal-ammoniac (ammonium chloride). This can be obtained from any chemist. Place it in a tumbler about three-quarters full of water, and stir until the sal-ammoniac is thoroughly dissolved. Get a rod of zinc and one of carbon about 4in. long (B.G.E. seemed to be the only firm that could supply the latter item), and twist the end of a long copper wire, which you have scraped perfectly clean

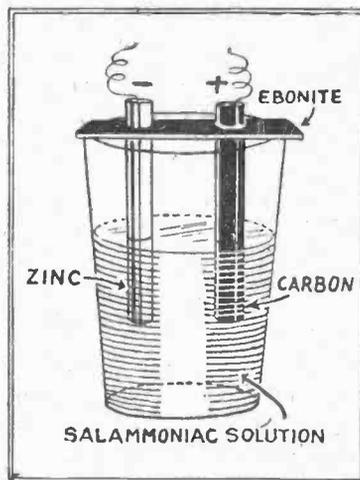


FIG. 4.—A SIMPLE CELL.

round one end of each rod. This done, cut a piece of old ebonite or other insulating material large enough to cover the top of the glass, and in the ebonite make two holes about one inch apart, and push in the zinc and carbon rods, with the join uppermost. (Fig. 4.)

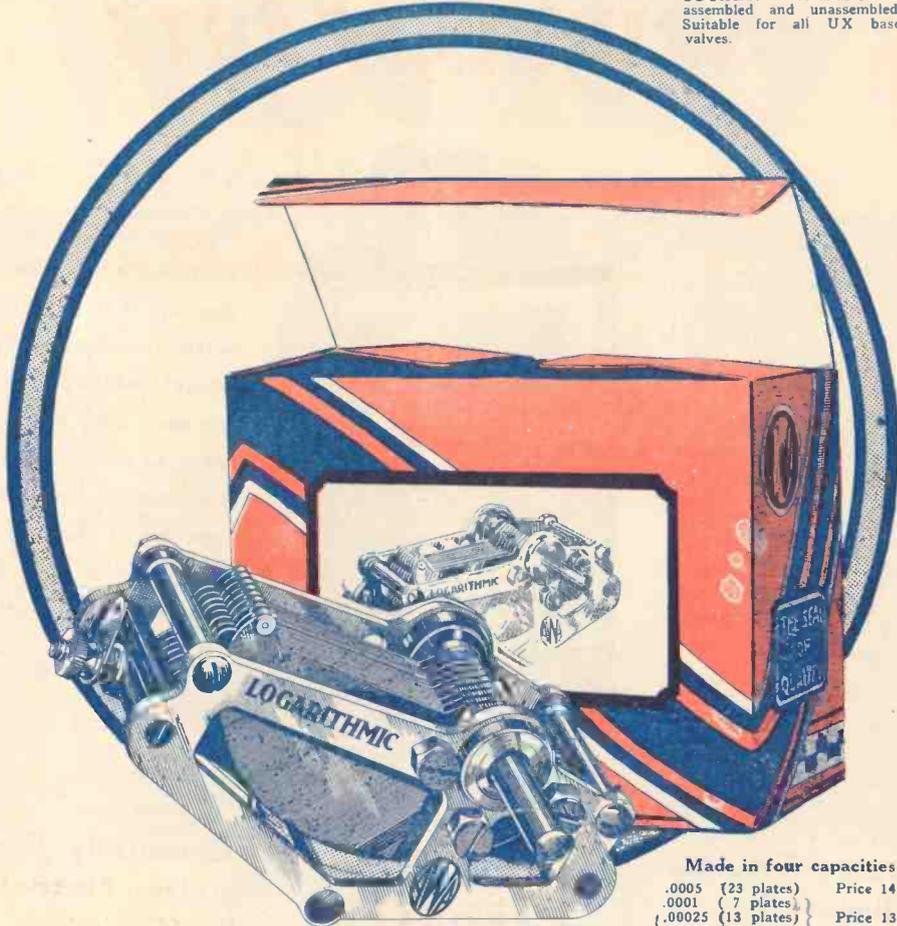
The solution you have made is called the electrolyte. The zinc rod is your negative battery lead, whilst the carbon is positive.

Directly you close the circuit, that is, connect the two wires together, either directly or through an instrument, the cell will commence to generate a current. The cell can be made more powerful by pouring very slowly 1oz. of sulphuric acid into the electrolyte, and stirring it with a glass rod. If you use this cell make sure to take the two poles out as soon as you have finished, as otherwise they will be eaten away.

In next issue we shall describe the construction of better cells, both wet and dry, and a method will be shown whereby power from the mains may be used. We shall also produce a shower of electric sparks—shall taste electricity, make a current tester and polarity indicator, decompose water, make a water resistance, and make a flash-light telegraph.

If you make a discharger, that is, a piece of wire so bent that it will make contact with the outside tin-foil, and also the wire, there will be a flash and a crack, and here have manufactured from static electricity a small sample of thunder and lightning. It is advisable to so bend the discharger that a handle of wood may be put upon it.

If, instead of entirely coating the inside of the jar, it is covered with pieces of tin-foil cut in diamond shape, and the outside treated likewise, it will be seen that the jar is filled with sparks whilst it is being charged and discharged. The distance between the diamond pieces must be very small, as otherwise, owing to the small amount of current available, no action will take place.



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