

WIRELESS WEEKLY

Broadcast Programmes a Week in Advance

VOLUME 11

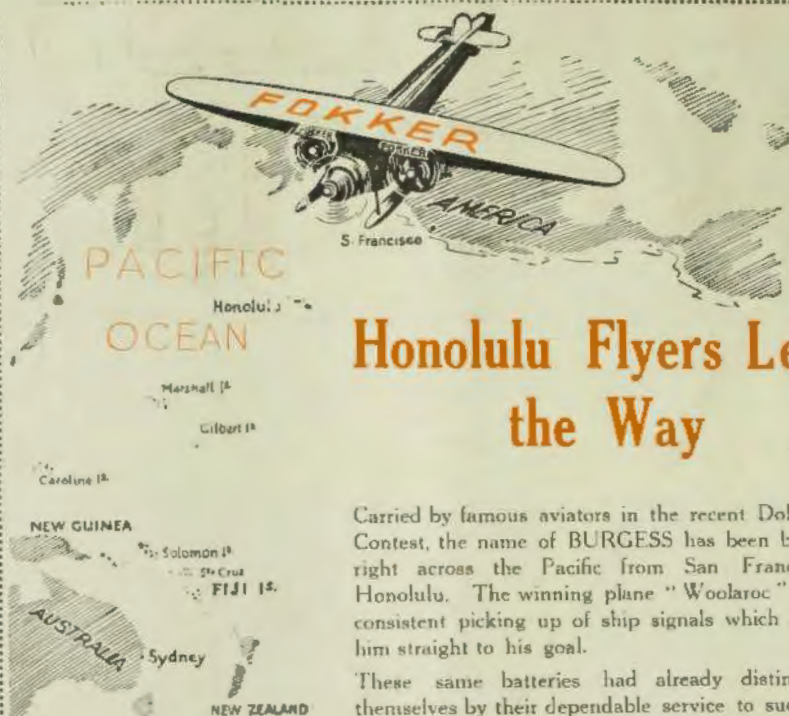
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Friday, December 30, 1927.

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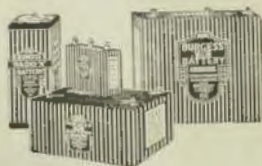


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Carried by famous aviators in the recent Dole Prize Contest, the name of BURGESS has been blazoned right across the Pacific from San Francisco to Honolulu. The winning plane "Woolaroc" reports consistent picking up of ship signals which directed him straight to his goal.

These same batteries had already distinguished themselves by their dependable service to such great adventurers as Byrd, Wilkins, Alexander Revell, Macmillan, and the American World Flyers and will accompany Kingsford Smith on his flight across the Pacific to Sydney.

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TRANSFORMER AND CHOKE

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- (2) Ample Cross Section of Iron;
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and Chokes are
Guaranteed.

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The A.W.A.
Super-Audio
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25, 50, and
100 Henries.



The A.W.A.
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Transformer.

Supplied in
Ratios of
2-1, 3-1, 5-1,
and 9-1.

An ——— Unsolicited Testimonial

Extract from Letter to
Amalgamated Wireless.

Brisbane,
16th October, 1927.

Since receiving three A.W.A. Super-Audio Transformers I have installed one in a broadcast four-valve receiver, and one in my short wave receiver at my radio station 4AL. There is no doubt that they are the berries, as we amateurs say, for on the four-valve I found an increase in volume, clearer music, especially the high notes of the violin and the concert, and very quiet operation.

Results on the one that I installed in my short wave receiver are as follows: A much more musical note on Morse stations, telephony much clearer, elimination of noises, thus making a better set all round. It is indeed with pleasure that I have found in this case that an Australian Transformer was better than an American manufacture.

Wishing every success to A.W.A. Australian-made Products.

Yours faithfully,
(Sgd.) B. W. M.

(Name on application.)

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Obtainable at All Radio Dealers.

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Dear Sirs,—

Please forward me your
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the A.W.A. Transformer and
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Address

T-2



D.X. Low Loss Short Wave Kit. Price 55/-

Complete with diagram, etc.

Guaranteed results.

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is guaranteed to give best results. Insist on genuine D.X.



D.X. Low Loss Short Wave Plug-in Set £8/10/-

Plugs into your present set.

The BEST AERIAL and the Cheapest

ELECTRON WIRE is the highest possible quality aerial, THE AERIAL WHICH ABOLISHED INSULATORS and OTHER COSTLY APPURTENANCES—produced in such quantities that it can be sold at 2/6 a 100 feet. Buy only Electron Wire. Note carefully the NAME and the distinctive BOX.



100 Feet

2/6

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Electron brings Wireless within the reach of all.

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- It Abolishes Masts.
- It Abolishes Renewals.
- It Promotes Comfort.
- It Saves Money.
- It brings results.
- Proof Proof.
- Storm Proof.
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The VIKING Audio Transformer



For power, clarity and compactness, specify these three ratios: 2-1, 3-1, 5-1. Guaranteed electrically and mechanically. Scientifically shielded to reduce inter-stage coupling effects.

Price 10/6 ea.



Delivers 85 Milliamps.

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WIRELESS WEEKLY

VOL. 11. No. 19.

FRIDAY, 30th DECEMBER, 1922.

What Happened at the Washington Conference?

NEWSPAPER reports from America have given interesting accounts of the Washington Radio Conference. It was attended by over 400 representatives of about 45 countries, and laws were made for the regulation of all kinds of wireless services.

We who are interested in broadcasting are apt to regard other activities of wireless as of secondary or little importance. Actually broadcasting was shown to be the comparatively unimportant activity. Wireless was first brought into the service of man as an auxiliary means of saving life at sea, and that form of service has remained for years the most important use to which wireless could be applied. The equipment was also used in most cases for sending and receiving messages for passengers on the ships, and this incidentally has grown into an extensive business and a necessary public facility.

After dealing with the type of equipment to be used on ships (in order to ensure efficient service) the conference tackled the problem of regulating the newest and most fascinating branch of wireless—entertainment broadcasting. We must here discriminate broadcasting in that manner, because there are several stations in different countries—England, France, Germany, Italy, and America, principally—which

broadcast a telegraphically signalled (Morse code) news service.

The big problem in internationally regulating the broadcasting services of the various nations was the prescribing of the wavelengths to be used. But for such a prescription there would be nothing to prevent adjacent countries using the same wavelengths, with consequent unavoidable interference, annoyance and possibly strained international relations.

Australia is better off than most countries in that regard. We have no closely contiguous nations who could interfere with us. But some sort of arrangement is necessary with New Zealand, Japan, Java and Singapore. Thanks to the attitude taken by Australia's delegate, Mr. H. P. Brown, of the Post Office, we will have greater freedom than most other countries. Wireless services may be carried on in any way that suits Australian authorities, so long as the services of neighboring nations are not interfered with.

Some people apparently gathered from newspaper reports that our broadcasting wavelengths would be altered. That is not necessarily so by reason of any conference decision. No one wants to see 3LO or 2FC alter their wavelengths again; and there appears to be but little likelihood of any such alteration occurring.

Catching Up with the Wireless World.

By R. E. CORDER.



THE RINGER: The excuse that he had won his crystal set at a game of "rings," and did not think a licence necessary, was offered by A. Clonsilla (Dublin), last month. He was fined 5/-, and ordered to take out a licence.

AN AFRICAN wireless paper estimates that out of thirty thousand wireless sets in operation, fifteen thousand are unlicensed. A British periodical reports that 400 licences only have been issued in Calcutta, India, whereas one firm only in that city has sold over 1,200 sets.

LICENCES: Australian listeners have to pay a licence fee to the Raving, which is collected through the postmen. The numbers registered in May of 1925, 1926, and 1927 respectively, were 145,000, 220,000, and 274,354.

THE FOLLOWING LIST shows the number of licensed transmitting stations in the various States of the Commonwealth. New Zealand and Brazil have also been included for comparison—N.S.W., 183; Vic., 164; Queensland, 67; S.A., 59; W.A., 32; Tasmania, 26; New Zealand, 107; Brazil, 33.

AIRSHIP WIRELESS: A dirigible costing £1,000,000 now under construction in America is to be fitted with a transmitter having a range of 2,500 miles.

TIME AT 3LO MELBOURNE: Many listeners wonder what the signals mean that are usually heard each hour at 3LO Melbourne. They are the Melbourne Observatory time signals, and come through in dashes resembling morse code. The start of the final dash corresponds to the hour o'clock precisely, and when it is followed by the Studio chimes it must be remembered that the first stroke of the chimes is about a second after the hour, and time-pieces should be adjusted accordingly.

POSSIBLE interest in radio in the Azores is handicapped by the fact that there are no large broadcasting stations; there are, however, no restrictions as to listening in, but the stations to be heard are located in England, France and Italy. Only the well-to-do seem able to maintain sets suitable for this reception, and consequently there is only fair interest manifested in radio broadcasting. There are four official and commercial radiotelegraph stations in these islands which are operated in general communication work.

FRENCH RADIO CONFERENCE. At the fourth annual Radio Conference held in Paris it was stated that broadcasting in France is in a most unsatisfactory position, largely on account of the reluctance of the French Post Office to allow private enterprise to undertake the formation of a station.

LIKES RADIO SET: A New Guinea native has become interested in Mike, the mysterious voice, which is heard between items from broadcasting station, 2FC, Sydney. A woman living at Earlwood tells about the New Guinea boy in a letter to Mike. She took a radio set with her on a recent trip to Papua and says she had no difficulty in picking up 2FC. "I had several native houseboys, and one in particular was very intelligent. I often allowed him to listen-in and he could never understand why your voice, Mike, was different from the others. When I explained what you were he laughed and said, 'No, Simbaba, that one Tabita, and he stop along Sydney.'

TO THOSE CONTEMPLATING matrimony, and who intend starting housekeeping in a home of their own. Mr. Brogan's talks on Architecture are full of interest. Mr. Brogan's correspondence is increasing each week. His mail contains enquiries from newly-engaged couples, couples just about to marry, and those who are married for better or for worse. Some possess the deposit for a house, some have purchased ground on which to build a house, and others have neither. However, no matter what the circumstances are, Mr. Brogan is advising to the best of his ability, and as a result, a boom in house-building may be expected.

Character From Characters.

(By "Whisker".)

If there's a thing you ought to know,
It is your moral make-up.
This is a question 3LO is eager now to take up.
A woman there, no palmist she, will read you from your hand,
(Provided you send half-a-crown, and join the Birth-day Band.)
Perhaps you're fast, perhaps you're slow,
Had at finance, too, perhaps.
Well, these are things you ought to know,
and now you have your chance to:
Perhaps you're always sure to win—
well, that is what she'll find out—
For if you send some writing in, she's there to make your mind out.
Perhaps your fingers touch in light,
perhaps your brain is nimble,
Just show Callers how you write each calligraphic symbol;
Perhaps your words success may spell,
do but to her refer,
And from your characters she'll tell what is your character.
If you are sure that yours is good, the time to test it's ripe,
But for myself—I feel this would be best set up in type.

"When I was returning to Sydney, Nogi was very reluctant to return to his village. He said he wanted to go to Sydney and 'talk along that Tabita Mike.' Your present interjections are to a wireless programme what the dame is to a pantomime or the champagne to a party. I think that listening to a programme without Mike would be like eating an egg without salt."

The Third Empire Broadcast

How the Third Empire Broadcast was received in London. Extracts from the letters of British listeners who tuned in 2FC. The return programme from 2LO London, was relayed by 2FC during Christmas

THOUGH the third Empire Broadcast took place over a month ago, letters of appreciation from England have only just arrived owing to the fact that it takes over a month for mail to reach us from the British Isles.

In response to the request made by 2FC, over 1000 letters were received, and it is interesting to note that in most cases each writer refers to a sudden bad period of reception and fading which should not have occurred at the hour in question, according to the general supposition that reception improves with night, but fades with approaching daylight.

In a nutshell, those who give a detailed notification of the reception, state that the reception was almost perfect at the commencement, which took place whilst it was still daylight in England—viz., 7 o'clock. It was 5 a.m. in Australia, and was still dark. Dawn was breaking in Australia, reception began to fade—thought it was becoming dark in England, and upon daylight breaking out in Australia, and a corresponding night in England, reception improved to such an extent, that it even improved on that received at the first part of the programme.

It is interesting to note that most correspondents agree that these fading occurred exactly at the same times both on the high and the low waves. Atmospherics were not very troubling, though now and again they marred some musical items. High pitched voices and instruments came through better than those of lower key, which seemed to be slightly distorted.

All were evidently highly delighted with the programme, and many young Englishwomen have fallen in love with Mr. Cochrane's cheery voice, which they say is most musical, easy, and charming.

The kookooburra, which 2FC broadcast during the concert, was remarked on in nearly every letter, though in various ways. Quite a number of listeners missed the name of our national bird, and their reports are most amusing.

One lady says:—"I heard some sea gulls making a funny noise during the broadcast. I suppose they were picked up as the waves crossed the ocean."

Another:—"Reception was perfect, even to the clucking of the hens." Several others worthy of note read as follows:—"There was a slight lisaing sound, like some wounded animal." "And was it a cockatoo we heard singing?" "It seemed as if you had a kangaroo or something else giving the station's call as we have from Germany—bells, clock, buzzer, and steam, etc."

"I heard a peculiar noise. What was it? It sounded like an Australian wild cat." "We heard a most extraordinary noise during the transmission, it seemed to be like a lot of birds jabbering—or was it the artists talking in the studio?" "The chickens were very noisy, but sounded nice—I suppose they'll be eaten at Christmas." "All items came through very clearly, especially that bird (I don't know how you spell it)."

The word "kookooburra" was spelt in many different ways, among them being kookookobourough, kookookoburgh, kookooburri, and many others.

One gentleman who writes from London claims as a brother Mr. John Howard Payne, the well-known author of "Home, Sweet Home"—that piece of music that stirs the mystic instinct of the wanderer.

When 2FC announced "Dawn is just breaking on a typical warm Summer's morning," many listeners wished they were here, for as they wrote, precisely at that moment, rain and sleet were pouring down, and the wind was bitterly cold. One lady so taken up with the programme, forgot that it was warm in Australia at the time, said "And I hope you don't forget to give the dear artists a nice hot drink as soon as they had finished."

THE GOVERNOR'S NEW YEAR GREETINGS.

Immediately after the G.P.O. clock chimes the hours of midnight on New Year's Eve, his Excellency, from his private residence at Sutton Forest, will broadcast a New Year's message to the people of New South Wales. His Excellency will be the first person to speak from 2BL during the New Year.

The artists had to be in the 2FC Studio by five a.m., and that there effort was appreciated is shown in many letters.

A writer from Chelsea says: "I am sure I could not laugh like some of you fellows at five o'clock in the morning. Seven-thirty is my time, and then I don't laugh—I grovel."

Many photographs were enclosed, some depicting beautiful countryside cottages, happy smiling families, and so on.

A misunderstanding must have been caused somehow regarding the words "2FC." Quite a number of the enthusiastic writers addressed their letters to 2SL, 2XL, 2SL, and other various unknown stations whose call signs are phonetic with that of 2FC.

The London "Daily Sketch" in an article states: "Coo-ee! came a man's high pitched voice last night, calling across the world from Sydney, Australia, to the British Isles. Sydney (2FC) was calling 2LO at 4 a.m. this morning (Aust. time), the early dawn of a late Spring morning in Australia, and Sunday ten time in Britain. This third Empire Broadcast was the most successful yet. It lasted for nearly two hours."

The Australian programme opened with the National Anthem, and consisted of pianoforte solos, cello solos, and popular airs from Gilbert and Sullivan and "Rose Marie." A correspondent writing from Wales, says the National Anthem seemed more inspiring to him than it has ever appeared before, and the whole company under his roof, joined heartily in the Anthem with the 2FC artists so far away.

To all those who have written to 2FC from abroad, cards will be sent. As there are well over 1000 letters to be attended to, 2FC are now working their very hardest in order that even the little children (whose scrawly remarks on the programme were welcomed) shall not be disappointed.

Australians are now looking forward eagerly to the return programme from 2LO London, which is being relayed by 2FC during Christmas. On Boxing morning, which will be Christmas Day evening in England, a further Empire Broadcast is to be arranged by 2FC, which will again be picked up by 5SW, and rebroadcast throughout the British Isles.



The Safety Valve

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

CATER FOR THE MAJORITY.

Dear Sir,—I quite agree with remarks of J. A. Bell, in "Wireless Weekly" of December 9th, re descriptions of race results, etc., on Saturday afternoons. It was quite a treat indeed to get an afternoon of decent musical items, etc., instead of that monotonous drone of race results, prices of winners, tote prices, scratching of last race, etc., which has been the vogue for some time past on Saturday afternoons.

Whilst not entering into any debate on the question of whether racing is in order, or not, I certainly do think that the broadcasting stations (A Grade) should cater for the big majority of listeners (who keep them going) and not for a mere handful of professional bettors and "hangers on."

It is bad enough to waste time on the results of the races, it is ridiculous, and a worse feature again is the descriptions of the motor racing at night. It is beyond words, I really think it is time the B stations woke up to themselves, and gave out stuff of a purely entertaining character, unless it is something that is of interest to the majority of people who listen-in constantly, and leave the race tracks to those who frequent them, otherwise they will find a good many "old hands" going out of the game of "tuning in."

W. HARGREAVES.

Leura.

HEAR! HEAR!

Dear Sir,—I am pleased to see that there are at least a few persons in this world who would rather listen to good quality music than horse races, and in replying to Mr. Bell's letter, which was published in "Wireless Weekly" on December 9th, I would just like to interject a hearty "Hear! Hear!" in order that he may know that he has some support.

If readers of this paper would only rise up against the treatment we are getting from our broadcasting stations, perhaps something might be done to ease matters to some extent, or at least to arrange programmes of the better general satisfaction of the public who have to pay for what they don't want.

A. MCGILL.

"IT'S A WONDERFUL WORLD."

Dear Sir,—Between 10.30 and 11.30 last night (Wednesday, December 14), I picked up a carrier wave on a low wave three valve set. Heard three items, two men and piano, singing, Paddy McGinty's Goat, and record playing, "I'm Telling The Birds, I'm Telling The Bees," and another record, "It's a Wonderful World After All," and then a speech.

Could any reader tell me who it might be? Also get RFM every evening 8 o'clock till 9 p.m. The set was made up from "Wireless Weekly"; it is a two valve Low Loss with 1 stage of audio.

Yours, etc.,
PAUL.

Manly.

"LOOKING FOR SOMEONE."

Dear Sir,—I noted Mr. G. W. Smith's letter in "Wireless Weekly" relative to a nearby oscillating set which is causing annoyance. Mr. Smith asks for a method of finding the direction of the disturbing signals, and I trust I may be able to help him.

Firstly, I think Mr. Smith should bear with the annoyance for a while, in order to give some probable learner a chance to grasp the necessary experience so that he can operate his set without causing annoyance to neighbours. You know, of course, that a loop aerial gives greater volume when turned towards the source of the signals, so why not utilise a loop aerial in order to trace the direction of unwanted oscillations?

As your letter states the offender is very near you; it should then be a simple matter to find him once you get the direction, unless, of course, he is using a loop, indoor, or other aerial not seen outside.

However, make sure that it is not your own set that is causing the trouble. Too large reaction, or even placing your loud speaker upon the top of the cabinet will usually excite oscillation. I should be pleased to hear through "Wireless Weekly" the results of Mr. Smith's experiments.

Yours, etc.,
ROBT. C. MEADOWS.

Sydney.

"DROWN THESE SOPRANOS!"

Dear Sir,—Can you, or any of your readers, explain why most of our broadcast songs are by sopranos? I'm getting heartily sick and tired of hearing their screechy voices, and I fully understand why our announcers complain of nightmares.

Most of these so-called singers remind me of a lot of cats, which fact explains the reason for our announcers' sleeplessness. There's only one soprano I've heard with a decent voice—a Miss Wilson by name. If a few of our aspiring singers cut out that slur from one note to another, perhaps one could really settle down to them.

Nevertheless, the fact that most items are by Miss "X," soprano, should be accounted for since there are quite a number of good singers of other denominations whose voices would be much more appreciated than the everlasting soprano.

Yours, etc.,
JAMES MCCREIDIE.

Chatswood.

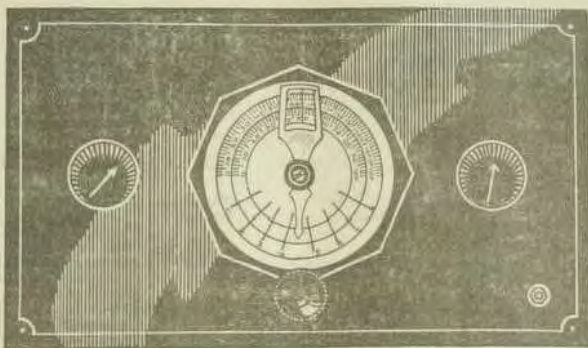
RESULTS!

Dear Sir,—I have built the Extraordinary One Valve, and have had good results with one stage of audio added. So far I have received 2FC, 2BL, 2GB, 2KY at loud speaker strength. On the 'phones I have received, 3LO, 3AR, 3BD, 5CL, 2BE, 5DN, 4QG, 1YA, 2PS, 2GQ, 2UW, 2UE, 7ZL, the last mentioned was very faint. I also received 2XT the "Great White Train" when it was broadcasting. I find that spider web coils of 20 and 50 turns spaced 2in. apart are an advantage over those as described in your paper.

Just lately I have built the Reinartz Short Wave Receiver. The first night I tuned in I received U.S.S.R. Russia, also 2BW. I haven't tried for any more yet, but have kept centred on U.S.S.R., which I again received on Sunday, Monday and Tuesday nights between 8 p.m. and 10 p.m.

I have also tried this set on the higher wave band, and have had good results also.

J. R. PRINGLE.
Bankstown.



THE ULTRAAUDION

PERHAPS one of the most popular single valve receivers ever described in "Wireless Weekly" has been the Ultraaudion. Very few people know it by this name, as it is better known as the Marnikay, and that it achieved much fame has been borne out by time. Results achieved by it have been outstanding, and certainly has rivalled its worthy confrere, the Extraordinary One Valver, in popularity. The parts required for it are few and far between, but they must be very well chosen in order that the best results are available.

Now what does one expect from a single valve receiver? In the summer time it is not possible to get anything like the same results as winter time produces. Still, when static permits the Ultraaudion will give splendid 'phone reception on inter-State stations. The local stations also are heard at remarkably good volume, but such a lot depends on handling that too much stress cannot be placed on the necessity for being discreet in tuning in this receiver.

Discreet Handling.

It has to be admitted, too, that indiscreet handling will give very inferior results, and it is very possible that neighbours will have their reception marred by the owner of an Ultraaudion unless it is handled carefully. Actually this receiver is inclined to oscillate very violently, and in doing so will transfer energy to the aerial, thus making it, what might be termed, a transmitter. Now it is not too pleasant to be listening into any particular station and to hear that

station's programme with a whistle caused by a howling valve. This is very liable to occur with a mishandled Ultraaudion, hence these opening remarks.

Still, the prospective constructor is advised not to be afraid of the Ultraaudion, because really it is a splendid little receiver to own. It is surprising to know just what results may be had from such a simple set. The writer recently built one, and was surprised to hear on the earphones not only the local stations but every inter-State station excepting GWF, Perth. These results are quite usual with the

Ultraaudion, and should be had by every one who builds one. It is not expensive to make up, although there are a Bradleystat and a Bradleyleak necessary in this construction. It is admitted that these parts are somewhat expensive, but the constructor who desires to keep down the cost can do so by substituting an Emmcostad for the Bradleystat and some form of variable grid leak in place of the Bradleyleak.

Sharpness of Tuning.

Exceptionally sharp tuning is a feature of the Ultraaudion, so much so that a Vernier dial is almost indispensable. The front view of the receiver shows one of the finest vernier dials that the writer has so far handled. It is the Ormond vernier dial, and has absolutely no backlash whatever. Besides this the hairline reading is very accurate, a fact which is very necessary when best results are sought.

Plenty of room is provided for all the parts. A panel size is quite generous, being 12 inches long by 7 inches high. The appearance of the completed receiver is very neat with the big dial right in the centre, and the knobs one on each side. No switch is inserted, although if the constructor so desires, one can be included on the left-hand side of the panel to balance off the jack. The wiring will have to be slightly altered. There are no terminals on the front panel, all the connections being made at the back.

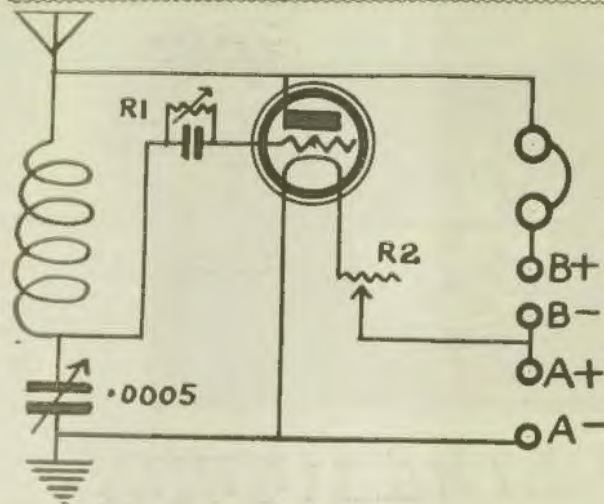
When this receiver was first described in our pages, it was during the

List of Parts.

Although the parts listed below and mentioned throughout the article were those actually used by us in the receiver described, it must be pointed out that it is not absolutely essential that they be rigidly adhered to.

Other parts of similar quality and technical values should function quite satisfactorily.

- 1-Dilecto or hard rubber panel 12x7x3/16,
- 1-0005 Emmco Variable condenser.
- 1-Bradleystat.
- 1-Bradleyleak.
- 1-Ormond vernier dial.
- 1-Valve socket.
- 1-00025 Wetless Grid condenser.
- 1-3-inch length of 3-inch Dilecto tubing.
- 4-oz. No. 24 D.S.C. wire.
- 1-Terminal board with 8 terminals.
- 1-S.C. jack.
- Bushbars, screws, etc.



time that 2FC was on the high wave length, so it necessarily followed that the inductance used was of the interchangeable type of honeycomb coil. To-day this is not necessary, and consequently, a far neater looking receiver is the result. The inductance is one which may be wound at home, the usual three inch Dilecto tubing being required for the purpose. A length of this diameter tubing about 8 1/2 inches long is required, but if desired good shellaced cardboard tubing may be substituted. Shellac varnish is easily made at home, and is useful for many purposes in wireless. For those who are not aware of how to make this shellac varnish, the following few words will be interesting.

Making Shellac.

Orange shellac may be purchased from any ironmongers and comes to you in thin flakes. Get half a pound of this dry shellac and put it in a wide-necked bottle or jar, such as a pickle bottle. Procure some methylated spirits and pour sufficient into the jar to cover the shellac. Put a stopper in the bottle and shake it a few moments, leaving it over night without disturbing it. In the morning it will be found that the shellac has dissolved, the result being a nice quick-drying varnish. It must be mentioned that a stopper should always be kept on the bottle when not in use, as the methylated spirits evaporates very quickly. It is quite usual to expect the cork to stick—all good shellac will do this. To treat the cardboard, coat the inside and the outside with the varnish, which has been previously mentioned; it dries very quickly.

Coil Winding.

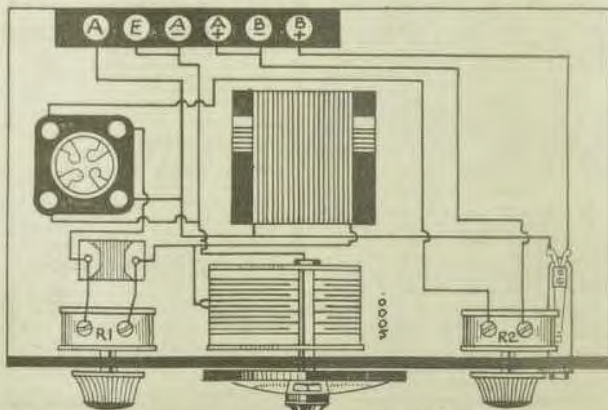
The winding of the coil is a matter of a few moments only. Begin, half an inch from one end, pierce or drill two very small holes, then thread the beginning of the wire through these holes, so that it is held securely. Then wind on 60 turns of this 24 gauge wire, each turn close to the adjacent one, and finish off by securing as previously mentioned. If this coil is wound on cardboard, it may be found advisable to give this winding a coat of shellac varnish, which will keep the wires from slipping. This is really not essential, when Dilecto tubing is the basis for this winding.

Panel Layout.

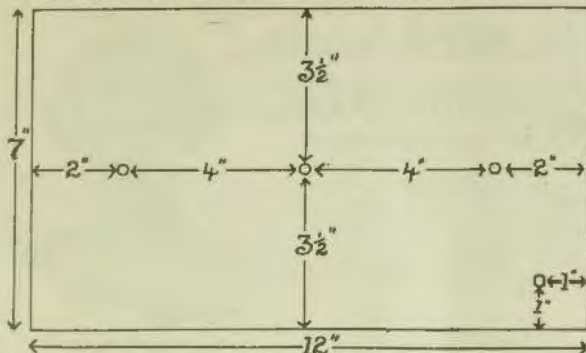
Now turn to the panel. The drilling here is a matter of a few moments. Firstly, centrepunch each position, making a neat indentation so that the drill will enter freely and not skid along the panel, leaving a ugly mark in its trail. The Emroc condenser used, required three fixing screws to hold it to the panel, and the manufacturers also always include in the packet a template, with the position of these fixing screws, clearly defined. This template should be placed in position on the panel, and marked out correctly. Always be certain that the panel is on an even surface, otherwise it will not be drilled true. Both the Bradleystat and the Bradleylock only require one seven-sixteenth of an inch hole for mounting purposes. The knobs of both these units are screwed right out, the fixing nut which is of generous dimensions is removed and the body of each unit is pressed through from the back of the panel, allowing a certain portion to protrude through the front. The locking nut is easily fixed in position, a turn of the pliers being all that is necessary to hold it securely.

Wiring.

Mount all the panel apparatus, not forgetting the hole for keeping the vernier dial in position, and fix the panel to the baseboard by means of three screws. It is not a hard matter to screw into position the valve socket and the coil and the terminal board on the baseboard. Two small brackets can easily be fashioned to raise the winding of the coil off the baseboard, this baseboard being given one or two coats of shellac varnish before any parts are mounted on it. The wiring can now be started and it must be impressed right here how careful one must be in wiring up a receiver of this description. The back



Four or more Valve Sets demand Philcos.



of panel wiring diagram shows you the destination of each connection, but for those who require it, the following written description will be of interest.

Using busbar, join the E terminal to the A negative terminal and continue this lead to the moving plates of the variable condenser, and also to one F terminal of the valve socket. Now join together the A positive and the B negative terminal, and continue this busbar to one side of the Bradleystat marked R2 on the diagrams, bringing the other side of this Bradleystat right back to the remaining F terminal of the valve socket. Now, shunt the Bradleyleak with the grid condenser, and continue one lead to the G terminal of the valve socket, taking the other side to the fixed plates of the variable condenser, and to one side of the coil. The other side of the coil, connect to one side of the jack and also to the aerial terminal on the terminal board. The remaining lug of the jack is connected to the B positive terminal on the terminal board. If desired, that screw which holds the vernier dial in position on the panel, may be connected to the moving plates of the condenser, these plates being at earth potential, and, therefore, any body capacity which may be present, will be overcome.

Body Capacity.

Body capacity in tuning a receiver is a decided nuisance, and is recognised by the awkwardness in receiving any station at its loudest point. It invariably happens that while your hand is on the tuning dial tuning in, the volume is very satisfactory, but when that hand is taken away the volume immediately drops and as often as not, the receiver breaks into oscillation, thereby running reception. With this dial this is overcome by earthing the metal front. In the event of some other dial being used, this body capacity may be lessened greatly by inserting a piece of brass or aluminium right on the back of

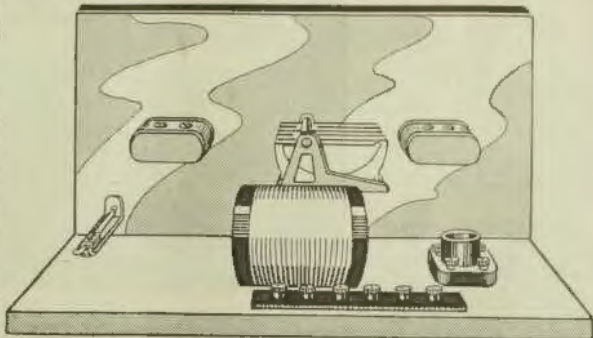
part, particularly in receiving the distant inter-State stations. On actual test with this particular valve 45 to 60 volts applied to the plate gave wonderful results. The aerial used was about 70 feet long overall and the earth the usual waterpipe connection.

Tuning.

All three adjustments on the panel will be found very critical. The Bradleystat earns its keep, as does the Bradleyleak, and it is the correct adjustment of each of these units in conjunction with the condenser give such wonderful results. The local stations will have a really wonderful volume for one valve, surprisingly good indeed, but it must not be overlooked that the Bradleystat is really the making of the receiver. You will notice when tuning in that as you turn the Bradleystat up, feeding more filament current to the valve, the volume of sound will increase proportionately, until it comes to one point when the receiver will break into oscillation, produced by supplying too much filament current. If, for example, you are listening into 3LO when this happens you will have to come right back with the Bradleystat and start over again. A little practice will soon give perfection in handling this Bradleystat, and it will be noticed that the Bradleyleak has got a slight toning effect on the whole receiver. Adelaide 5CL will be heard quite softly, and with this station in particular will the adjustment of the Bradleystat be found of extreme importance. The Vernier dial is absolutely indispensable for fine tuning, this will be found in actual practice to be very true. Too much stress cannot be laid on the necessity for careful handling of the Bradleystat, which will cause the receiver to oscillate violently and interfere with other listeners. Be a good radio neighbour and exercise prudence in handling this little wonder receiver.

Valve Used.

A very good detector valve which proved admirably suited to this Ultra-Anderson was the Radiokæ UX200A special detector, which is a valve of the soft variety and is very flexible indeed with different plate voltages. This valve is sincerely recommended, as the valve plays such an important



It's ALL ni the AIR



Miss Ella Goodman, the first soprano to sing from 2BL and who remains one of the most popular artists at that station.

LETTERS ARE STILL pouring in praising the broadcasting of the "Elijah" Concert, which was conducted by the Philharmonic Society.

2FC, who arranged this broadcast, desire to thank the many kind listeners who helped by forwarding the price of a ticket.

The honorary secretary of the Philharmonic Society says: "If the listeners-in could be induced to contribute in this way, I am sure different organisations would have no hesitancy in allowing the performances being broadcast."

INTEREST is now centred on the new studio orchestra, which is playing on two nights each week from 2FC. It is hoped by the management that the studio orchestra will mainly play request numbers, and to this end listeners are again invited to communicate with the studio, stating what types of music they would like the orchestra to render.

THE MANAGEMENT OF 2FC has now arranged for a full dance night on each Thursday evening, commencing at 8.30 and running through till 11.45. A special studio dance band has been installed for these nights, and a programme of popular vocal items will fill the short intervals between each dance. This band will also play request items in given due notice.

ON THURSDAY of each week from 7.30 to 8.30 the new 2FC full orchestra will be heard in a popular programme of diner music. Request numbers will be played if listeners will give due notice of their requirements.

Mrs. B. Campbell, I.C.M., and Gold Medallist, who has just returned from India after world tour, Mrs. Campbell and her husband will shortly give a series of Hawaiian Guitar duets from 2UW.



ON MONDAY, 2nd January, 3AR, Melbourne, have arranged to broadcast the first act of the popular pantomime, "Mother Goose," and on Wednesday, 4th, the second act will be "aired" from that station.

MADAME HILDA SEDGELEY, whose soprano voice has won for her the title of the "Riverina Nightingale," comes from Wagga, and as she is passing through Melbourne, will appear on Monday, 2nd, and Friday, 6th January, at 3AR, Melbourne.

A BRAW SCOTCH NIGHT. On Monday evening, January 2nd, 1928, a Scotch Night will be broadcast by 2BL.

COMPLETE ARRANGEMENTS have now been made for the description of all the interstate cricket matches to be played in Sydney during this season. For this purpose, station 2FC has again been successful in securing the services of Mr. A. G. Moyes, the well-known cricketer, who is also the sporting editor of the "Daily Telegraph."



Miss Helen Jean Beeding, who has taken charge of the Women's section broadcast from 2GB, at 10.30 a.m. each morning. Miss Beeding has had considerable experience in this connection in all parts of the world.

A VERY SPECIAL PROGRAMME was arranged for listeners by station 2FC for Christmas Eve from 8 to 8.30 p.m. A service of carols was broadcast from St. Andrew's Cathedral by courtesy of the Dean of Sydney. At 8.30 p.m. a version of the pantomime, "Cinderella," was staged in the studio. The pantomime had been written by Codrington Ball and was produced by Scott Alexander with a full company of 2FC artists. At the close of the pantomime, dance music was played until midnight. At 12 o'clock station 2FC relayed a programme which has been arranged by 2LO, London, for reception in Australia, and this ran until 2 a.m. The British Broadcasting Company arranged to open the programme with the chimes from London's Big Ben, and closed with the striking of four from the same clock. The programme consisted mainly of band music from one of England's leading military bands.

Sets Tuned from a Distance

A novel device enabling any sensitive modern receiver to be remotely controlled without wires has been invented. Details are given with article below.

AN electrical device contained in a little box which can be carried about the house or placed on the arm of a chair has been invented for the purpose of tuning a radio set no matter whether it be in the living room, attic or cellar (states the New York "Times"). There are no intervening wire or mechanical connections between the receiving set and the control box. The inventors are Bowden Washington and Wilson Aull.

The system comprises three units or methods of application, which, the inventors contend, can be successfully applied to receiving sets, making it possible to completely control the circuit by the manipulation of two knobs on the little box.

The receiver can be controlled from any spot convenient to the operator without manipulation of the tuning dials of the receiver proper. It is pointed out by the inventors that the main set can thus be installed in an out-of-the-way place and forgotten until a tube replacement or a maintenance adjustment must be effected.

"When a receiving set is brought into the home," said Mr. Washington, in explaining the need for remote control apparatus, "it is generally installed in one specific place and allowed to remain there. Obviously, it cannot be conveniently wheeled about the house, upstairs or down, in order that the set may be near enough to the operator to affect the tuning or volume control. To overcome such disadvantages, a small tuning box has been devised which may be carried about the house or out on the lawn and the set may be tuned and have its volume controlled without any physical connection whatsoever with the receiver.

"It is a simple matter to carry a loud-speaker to almost any part of the house by employing a long extension cord," he said, "but any one who has tried this will find himself making continual trips to the receiver to effect adjustments from one station to another or regulate the volume. A radio remote control device overcomes such difficulties.

"This is exactly what we have accomplished by our various inventions—not by means of motors, flexible shafts, reversing switches, and the like—for there are no moving parts

in the receiver proper. The control is had by simple and direct electrical means. A complete receiver with its remote control box may be built to operate under our systems, or attachments may be constructed allowing any existing thoroughly sensitive modern receiver to be remotely controlled."

Operation of the System.

Mr. Washington described the operation of the first way of attaining electrical remote control without wires, as follows:

It is applicable to any sensitive receiver of any frequency range, whether it be short wave, broadcast or commercial; or, if manufactured as a complete outfit of three units, the receiver may be of a comparatively inexpensive type having a radio frequency amplifier of a fixed frequency. A band amplifier, which in a sense is a multi-cell filter with valves interspersed, equally amplifies all frequencies within a chosen band, say the broadcast wave-lengths, and re-radiates them considerably strengthened. The control box may be compact and light. It may contain a regenerative detector, which in turn modulates a fixed frequency oscillator.

The operator, by manipulating the dial thereon, selects one of the frequencies re-radiated by the band amplifier, and re-transmits the signal at the fixed frequency of the control box oscillator to the receiver proper, which is permanently adjusted to this control box oscillator frequency. The desired signal is there further amplified at radio frequencies, detected, and again amplified at audio frequencies, as in the ordinary receiver. This output energy then goes directly to the loud-speaker.

Dry Battery Tubes Used.

The control box may utilize two 120 tubes operated entirely from small dry "A" and "B" batteries, and he made of sufficient sensitivity with automatic regeneration so that only two controls are necessary, the dial for selecting the wave to be received and the volume control. The latter may be a potentiometer controlling the modulation of the oscillator.

If a broadcast receiver is used for the fixed frequency receiver it may be adjusted to some wave that will not be affected by the radiation from

a station which is near enough to be received directly on the set. The band amplifier and fixed frequency receiver may be stored away in any convenient place and operated from the same batteries. The control box may be carried about the house as desired. In short, the system functions to strengthen all waves and send them on to the selector or control box, which picks out the desired one, by virtue of the position of its dial, and sends it on a fixed frequency to the final receiver.

The second system accomplishes the same results by a widely different method. The signals are first amplified by a band amplifier as in the first system. However, here the amplification need not be so great as in the first case, merely enough to overcome the loss that results from the lack of antenna tuning. The remote control box is a high frequency oscillator that interacts or heterodynes with the fixed oscillating detector placed in one of the wire connections following the band amplifier of the receiver proper. The output of this detector heterodynes with the incoming signal frequency to produce an intermediate frequency of the order of 41 kilocycles. The control box is constructed to radiate a frequency of the same order. The resultant frequency of the combination passes through the intermediate amplifier part of the receiver proper. Thus the operator in adjusting the remote control box, tunes the incoming wave to a frequency that will be accepted by the intermediate amplifier. The operation of the main receiver from this point is similar to the superheterodyne. Several advantages of operation are secured by using very high frequencies to control the receiver proper—namely, better transmission and reception with the small loops employed on the control device and main receiver, a larger number of available control bands at this frequency, and an absence of disturbing effect on neighboring broadcast receivers.

Set Has Sharp Cut-Off.

The intermediate frequency amplifier is constructed to have what radio engineers call a very sharp "cut-off" and accept only one side band of the input energy, which will prevent much interference and improve the quality, the inventors claim. Also

this amplifier may be adjusted so that interferences from outside heterodyning transmitters may be avoided, providing the stations themselves are operating on the correct waves, which would be frequencies in multiples of ten kilocycles.

The third system, though somewhat different, is applicable to any good modern receiver. The final heterodyning produces a frequency within the broadcast range, which is passed on to the main receiver. The main receiver dials are locked at a certain wave setting that is free from radiated energy from broadcast stations, namely, midway between two broadcast channels.

"At present," said Mr. Washington, "we happen to be using a well-known make of seven tube, one-dial broadcast receiver with this system. The receiver and control box oscillator may be tuned and set permanently to any one of a number of wave lengths that seem to be free from signals in New York. In the second and third systems the volume may be controlled by the strength of the control oscillator. In the first method we are at present controlling the volume at the loud-speaker by varying the modulation of the control box oscillator, but the oscillation strength may also be used here or both systems may be employed simultaneously.

"In a normal installation of any of these systems," he added, "everything but the control box could be installed in some out-of-the-way place, such as the top shelf of a cupboard. An extension line from the audio amplifier may be run to such places as the loud-speaker may be desired, and the control box moved from room to room with the speaker."

A GOOD SOLDERING FLUX.

For soldering connections in a radio set it is advisable to use resin instead of an acid flux. An acid flux is easier to work with and for this reason is more commonly used, to the detriment of any connection where fine wires are employed. The acid, besides corroding the wire, has a bad habit of "creeping" which often provides a high resistance leakage path between connections. This is particularly noticeable when soldering connections to jacks. An excellent flux, having resin for its base, may easily be made by the experimenter. It is non-corrosive, does not "creep," and leaves a neat-looking joint. This flux is made by dissolving resin in a small quantity of denatured alcohol. If the resin is powdered, it will be dissolved much more quickly. This flux should be kept in a corked bottle and when used, can be applied with a toothpick.

Radio as a Boon to the Deaf

WHEN radio broadcasting was young and radio news first took an important place as a newspaper feature, radio editors were besieged with all sorts of curious letters—questions, generally. Radio was looked to as a panacea for all human disabilities. Some asked the value of radio for the farmer, the invalid, the child, the housewife, the blind. But one day there came a letter asking what promise radio held for the deaf. The editor was puzzled—much as he might have been had some one asked what promise moving pictures held for the blind—and he could not answer.

However, subsequently came reports from many directions that radio was really a boon to the deaf—that with headphones persons who had for years been deprived of musical and spoken entertainment could again enjoy these things. And scientific testimony gave reasons.

The seat of hearing is in the brain, and connection between this and the middle ear—which in a radio system might represent the pickup wires or aerial—is made by the nerve of hearing. In the normal person sound is transmitted to the nerve of hearing through air conduction via the eardrum. But in the deaf, where the passage to the drum membrane has been obstructed or the drum has for other reason been rendered useless, sound is transmitted through bone conduction via the skull bones.

Dr. Curtis H. Muncie, a noted ear specialist, says that this latter is just what happens when deaf people who cannot hear ordinary spoken sounds can hear quite well through the headphones. The caps, pressed tightly against the ear structure transmit the sounds directly to the nerve of hearing through the bones of the head. In relation to this he tells the following interesting story:

"Several years ago the late Lord Leverhulme of England experienced one of the happy surprises of his shut-in life—but in because he had been deaf for years. In the early days of the radio he stopped in to see Joe Mitchell Chapple, as was his custom whenever he came to America. Mr. Chapple anticipated the visit. A small radio set had been constructed for the occasion and set up in a suite over the editorial offices of the 'National Magazine'—of which he was editor. Here Lord Leverhulme and his staff were congregated to listen to the radio programme being broadcast from the 'Amrad' station at Medford Hillsdale.

"All were enjoying the concert—all but Lord Leverhulme. He could hear nothing, although the loud speaker was working on 'all three cylinders.' Mr. Chapple, no less disappointed than his guest—yet equal to the occasion—rigged up a connection to which were attached earphones. Lord Leverhulme reluctantly clamped on the earphones—just to please his friend. Then he kept them on for an hour or so just to please himself."

Then Dr. Muncie goes on to say further that there are many people who, like Lord Leverhulme, are deaf to conversation yet can hear perfectly through radio earphones. Some cases hear better over the radio and the telephone than do persons having normal hearing.

However, in any case, the radio does not really restore hearing. What happens is that sound is conveyed to these individuals through bone conduction, and, the nerve of hearing being near normal, the dormant auditory perception, which has been inactive because of years of disuse, is thus awakened.

Dr. Muncie has recently concluded research in the use of radio in this capacity as a re-educational medium and to hasten restoration of hearing to cases under treatment. The types of cases benefited were those of catarrhal deafness and hereditary deafness. In other words, those who could hear better in a noisy environment, such as in a moving train or automobile, and those who could hear well over the telephone when the receiver is pressed against the ear or skull.

Those not having these symptoms—whose nerves of hearing were affected—did not respond favorably to radio re-education. They were unable to hear well through the ear pieces, and within from fifteen to thirty-five minutes there was a temporary impairment of hearing, due to fatigue and exhaustion.

RADIO CHURCH SERVICES:

Church services are being featured with great success by 5CL, Adelaide, every denomination being represented. There is an ever-growing interest on the part of the clergy in the matter of getting their services broadcast, and offers of such opportunities are received by 5CL with almost embarrassing regularity. The clergy are particularly pleased with the policy of 5CL in keeping Sunday in the proper manner, and broadcasting music of a non-secular nature.

At 3LO

News & Notes of Current and Coming Events at the Melbourne Station

CHARACTER FROM HANDWRITING: "Calligra," the celebrated graphologist, has arrived at 3LO, Melbourne, and is busily engaged delineating character from the handwriting of listeners who are sending along to 3LO half a crown for the Melbourne Hospital, together with half a dozen lines of their ordinary handwriting.

"SKULL AND CROSS BONES": No speaker at 3LO has maintained more enthusiastic interest than Captain Donald MacLean, who is now widely known through his famous talks on Pirates and Buccaneers. Whether it be to children or grown-ups these talks never cause the shutting off of the receiver or a change of the dial to another station. Instead the whole household usually gathers round the set to listen most intently, and woe betide the person who interrupts. Captain MacLean is to tell the tale of the skull and crossbones at 3LO on Friday evening, December 30th, during the Children's Hour.

A REMARKABLE PROGRAMME: On Friday evening, December 30th, no less than three famous musical combinations are in the programme at 3LO, Melbourne, together with some world-famous artists. The Southern Choral Society are to sing some special numbers and the Collingwood Citizens' Band are to play, whilst they are to sing and play together in a few selections. In the programme are Eileen Castles, operatic soprano; Ern Trotman, comedian; Mr. and Mrs. Graham Burgin, Vaude and Verne, entertainers; Oreste Manzoni, the famous mandolinist, and Joe Aronson's Syncop-symphonists—truly a remarkable programme.

THE NEW YEAR: Many special broadcasting features are to be introduced by 3LO in the New Year. Ever on the look-out for the very best entertainment possible for their programmes they have procured many new artists and are bringing back some old favorites. The Lynch Bell-ringers are appearing during the first few weeks of 1928, and Rupert Hazell and Elsie Day may be expected soon. Listeners will be pleased again to hear from the ever-popular Rupert:—"Everybody happy—that the idea!"

GOLDEN RULE: "The old year is dead—the New Year will soon be born. Let us rejoice that we are granted one more New Year's Day on which to begin again—not in our childish way, but trustingly, patiently, knowing that we must ever carry with us our past and rejoicing that we may make the future better because of the past."

EILEEN CASTLES: Listeners will be glad to hear that Eileen Castles—one of the most popular and artistic sopranos ever heard over the air—is again broadcasting from Studio 3LO, and is in better voice than ever. Miss Castles has studied in all the great music centres of the world, and has sustained many operatic roles with great distinction, having been engaged in New York for seven successive seasons to play the "Doll" in "The Tales of Hoffman."



George Carney, the English comedian, who is broadcasting from 3LO.



Humphrey Bishop, of the Humphrey Bishop Musical Comedy Co., which produced a special programme from 3LO on December 19.

"SCROOGE": With the idea of maintaining old Christmas traditions, Studio 3LO provided a rare Christmas treat—a Dickensian sketch, entitled "Scrooge," which was produced with great artistry under the direction of Mr. Maurice Dudley, who portrayed the name part with care skill and understanding. Once again we were introduced to these very real people—who never seem to grow old—and who keep alive the spirit of Christmas in every corner of the civilized world—for it is interesting to note, that whenever a concert programme is arranged for Christmas—Scrooge invariably plays a part. Under the deft touch of both author and actor, we saw the dour old miser thaw into a genial kindly old gentleman, we were just as delighted as Bob Cratchit when we heard he was going to get a rise in salary—in imagination we tasted the Christmas pudding—like a speckled cannon ball gay with holly—provided by the worthy Mrs. Bob, and with Tiny Tim we echoed the good old sentiment, "God bless us every one."

Lynch Bellringers for 3LO

"Ring Out the Old—Ring In the New."

IT is indeed appropriate and seasonable that the celebrated Lynch Bellringers should be engaged for a season of broadcasting by 3LO, Melbourne, commencing on the second day of the New Year.

There is no need to dwell upon the remarkable artistry of this famous family's bellringing. It is unique. They have charmed record audiences in four continents for many years and wherever they go—whether it be to Bombay, Yokohama, Capetown, Singapore, Bangkok or Hong Kong, they receive the same enthusiastic reception as they do in their own country—Australia.

And now they are going to broadcast from 3LO, Melbourne. The mellow tones of their bells and glassophones ("angels' whispers" it has been called) and the sonorous notes of the aluminium organ, as well as the luring melodies of the Marimba Resonators should be admirably suitable for broadcasting.

There is something peculiarly fascinating and alluring in the chiming of bells—some indefinable magic that grips the very heartstrings recalling memories of the past—memories of bells ringing across sweet meadows or over rugged mountains or through the mysterious hush in the beauty of the evening stillness. This charm should be imparted by broadcasting with rare atmosphere and effect, bringing joy to many thousands of listeners to 3LO, Melbourne.

ON SUNDAY, JANUARY 1st (New Year's Day), the morning service broadcast from Sandwick Presbyterian Church, by 2BL. At 2 p.m. special session for children in hospitals. Recital, by courtesy of H.M.V. Gramophone Co. information service. At 3.15 the Bible Class (conducted by Mr. W. "Cairo" Bradley), followed by Pleasant Sunday Afternoon with the Balmain Central Methodist Mission. At 5.45 the Children's Service, followed by the service broadcast from Petersham Baptist Church. At 8.30 there will be items by Mr. Alfred Wilmore (tenor), Mr. Gordon Rodda (pianist), Miss Pauline Harford Foster (soprano), Mr. Moore McMahon (violin solos), Mr. Herman Treanynne (basso), Mr. Frank Hatherley (dramatic artist), Miss Mary Neal (mezzo contralto), and close down at 10.12 p.m.

RUBY SYKES LYON: Referred to often as Australia's Ella Wheeler Wilcox, Mrs. Ruby Sykes Lyon is widely known as a writer of delightful verse and charming fairy fantasies. For some months past she has been paying special attention to children's radio bedtime stories and many of her productions have been broadcast by 3LO with considerable success. An entirely new series will be commenced shortly and the reading of them will be in the capable hands of Maurice Dudley, as Billy Bunny, at 3LO. These are sure to delight not only the many thousands of children who listen-in regularly during the children's hour, but also the large audience of grown-ups who still retain the Peter Pan spirit, which prompts them to tune in to 3LO whenever they get a chance to enjoy with the children the fairy stories and droll humor of Billy Bunny and the other story tellers.

RUPERT HAZELL'S RETURN: Possibly the most popular comedian who has ever broadcast is Rupert Hazell, who made such a remarkable "hit" at 3LO, Melbourne, early in the year. Since then he has toured extensively in Africa, and has had many thrilling experiences in the land of big game. Now he has returned to Australia, and is eager again to broadcast from 3LO, but before doing so is compelled to fulfil certain vaudeville engagements in Melbourne and Sydney. He hopes, however, to be at 3LO early in the New Year, together with "His little grandmother," Miss Elsie Day, and an entirely new repertoire. They called at the studio of 3LO, Melbourne, and Rupert's well-known cheery greeting, "Everybody happy—that's the idea," made everybody happy indeed.

SEEKING THE OLD YEAR OUT: The old custom of fessing the old year out under the clock at the G.P.O. is evidently dying out, and a new order of things is asserting itself. Each New Year's Eve since the commencement of broadcasting the attendance outside of the studio of 3LO, Melbourne, has increased, and this year it is expected that there will be an enormous crowd in Melbourne Place outside of the new 3LO studio to listen to the special New Year's Eve programme by Joe Aronson's Band and to join in the midnight singing of Auld Lang Syne.

BELIEVING THAT the time has arrived when the star artists from 2FC should be accompanied by a full orchestra, the management has now asked Raymond Ellis, the British National Opera Baritone, and Hubert Carter, the eminent New Zealand tenor, to arrange a series of programmes in which they are to be accompanied by the orchestra. This series is to be continued at later dates, when other 2FC artists will arrange programmes.

2BL'S POPULAR DANCE NIGHT: Many hundreds of letters have been received from the appreciative listeners regarding the innovation introduced by 2BL in the form of a full dance programme every Saturday evening. The owners of radio sets who are desirous of holding dances and parties at their homes may now organise these popular functions and dance to the strains of the music from the Wentworth Cafe, of a Saturday evening.

GRAND OPERAS FROM 2BL: Realising the love of grand opera, and in view of the season that will take place early in the year, Mr. G. Vern Barnett is commencing a series of grand opera nights from 2BL, which will embrace all the favor of solo works, duets, quartettes and German, French and Italian opera. There will be brief notations by Mr. Vern Barnett regarding the lesser known items. The artists already engaged are: Miss Leonora Gotsch, who is probably the finest exponent in German Leider in Australia. Her knowledge of German opera is well known. Mr. Alfred Wilmore (tenor), who is also an accomplished singer of opera in German, Italian and French. Mr. Leslie McCallum (baritone), who has taken part in many productions of German and Italian opera throughout Australia and New Zealand with various operatic companies and philharmonic societies. He was also soloist of the Dundee Exhibition last year. Miss Heather Kinnaird will be the first contralto appearing on Friday night, which will inaugurate this series. A number of other innovations will be introduced in the near future.

Looking for Trouble

Now for the Gadgets.

So much for that. If none of the tests reveals the lurking place of the noise, it seems safe to look for it elsewhere. Of course, through some unusual combination of circumstances the defect may still be due to some broken or damaged apparatus inside the set—a blown audio transformer, for instance, or a leaky fixed condenser. But nowadays such difficulties are so infrequent as to be negligible.

Let us conclude then that the set is functioning properly or would be if not annoyed. Then the next step may be undertaken with a light boat and no appliances.

2. Note if any household appliances, such as flat-irons, electric fans, violet-ray machines and the like are turned on. If so, turn them off and note result, if any, in the loud speaker.

This home survey immediately disposes of a multitude of suspects. If the noise stops when any kitchen-gadget is switched off—well the conclusion is obvious. In five minutes this potent field for the manufacture of uproar may be narrowed to nothing by a mere inspection of light sockets and convenience outlets.

In flat buildings where there are a number of apartments it is obviously impossible to make this test thorough. A violet-ray machine or an unfiltered battery charger—as has been shown in the previous discussion of interference—is quite capable of spoiling reception for everybody within half a block. In many a search for interference, some disturbance of the sort has been located only after long search with a radio compass. But the point remains unchallengeable: "It is well to clear one's own doorstep before shouting for the constables."

If simple measures have no effect on the noise we shall proceed to—

3. Switch off light current at point where the line enters the house.

The purpose of this scheme is obvious. If, after the opening of the master switch, the noise continues it is safe to telephone to the power company for help. Such a test locates the disturbance in the line outside at a point manifestly beyond the powers of a householder.

Admittedly this test, so simple and all embracing, cannot be applied universally.

In a flat building for instance, there might be some objection on the part of a couple of hundred tenants to any experiment that would deprive them of light, whatever the advantage to one of their neighbors.

The fourth article of the series on Better Radio Reception, published by arrangement with the U.S.A Radio Manufacturers' Association. The fifth and last article will be published next week.

Again, where A. C. current is used by battery eliminators, the shutting off of the power would automatically shut off the set. It would end the noise, to be sure, but possibly might lead to erroneous conclusions. If such a test is to be made, the eliminator must temporarily be replaced by B batteries.

Even in flat buildings there is generally a switch near the light meter where current for one's own apartment may be cut off. If there is no such switch, one may still get on with the elimination test by removing the fuses. To make a thorough job of it, take the fuses out one at a time and note the effect on the crackling observed in the loud speaker. A loose fuse is a frequent offender.

The Time Element in the Search.

4. Observe carefully time at which disturbance occurs and co-ordinate it, if possible, with other occurrences due at the same moment.

For instance, one is generally aware when thermostat trips the trigger of an oil burning furnace equipment. Oil burners have caused trouble in the past because of motor operation and oddly enough have furnished problems that persisted despite a ready application of the usual solutions. The reason for this is generally the presence of an unseen and therefore unsuspected motor—an auxiliary operating the pump at the tank. On one occasion observed in the R. M. A. survey, this pump was located outside the house in a buried box. The motor at the furnace itself was shielded and bypassed, but the noise continued to baffle investigators until it was observed that static invariably accompanied the flow of oil from the storage tank.

A joy that has come to radio through modern invention is to be found in the electric ignition used in some oil burning heaters.

This source of static is lively enough to satisfy the most exacting critic and the output is sufficient to attract the clearest attention of radio listeners for blocks. Unlike natural static, it occurs most persistently in winter when normally there would be little to worry the broadcast listener except the programmes. But despite lack of

competition it is a voluminous enough and erratic enough to keep set operators alert.

The principle of the thing is simple enough—a spark plug broadcasting from the pit of a furnace. It is switched on by a thermostatic control which in itself is something to look after, and once switched on it continues its crackle for a considerable time to insure that the spray of oil being pumped into the fire pit is actually set afire.

The treatment indicated in such a case as this is a half mile condenser across the line. If that fails it may be necessary to ground the furnace. If the system is already grounded to the same water pipe used by the set operator—well why go into this matter? Let us move on to the next step. If the arrangements already suggested fail to work one can always pray. And as a matter of fact, prayer is probably the only recourse in many of these installations.

As a postscript to the prayer you might try writing a letter to the manufacturers of the plant. They, no doubt, will be tickled to death to hear from you.

It is easy to observe whether or not the objectionable sound in the receiver is increased by the passing of a street car or the starting of an elevator.

One man came to the end of a long search by discovering that the tripping of signal targets in an elevated railway system always coincided with a noise like the tearing of overalls.

Another who lived near the same railway, learned just this side of the psychopathic hospital, that for months he had been listening to signal bells which herald the approach of trains.

If disturbances are coincident with the ringing of the door or telephone bells, or if they occur when the house is shaken by heavy traffic outside, location of the source is not difficult. In the one case the telephone company probably will map to the rescue, in the other somebody had better start out to find a loose connection.

Beware the Handsome Aerial.

5. Investigate conditions of aerial and ground.

This measure, manifestly, is indicated only if tests seem to show the disturbance to be of an outside origin. However, it never does any harm to look at an aerial on any pretext. They are frequently hoisted only to be forgotten, these handsome ornaments. They can develop more ailments than an office boy, but one expects somehow to find them always sturdy and unharmed.

Make sure that insulators are not cracked or dirty, that aerial itself is not touching other aerials or trailing on the surface of the roof, that it is not parallel to—well, you know—that the lead in wire is electrically connected to it—and by an electrical connection is meant an electrical connection, that neither the aerial nor lead in wire is being scraped by trees, that neither wire is anchored to telephone or electric light poles.

6. Mark condition of weather at time interference occurs.

This, properly, should be included as part of "Good Advice No. 4." But perhaps it will do better as a separate lead for the blood hounds.

Moisture across insulators sometimes causes activity in leaks that are not observable in dry weather. Sleat on power wires causes trouble quite aside from its effect on radio reception.

Sometimes it may be noticed that wet weather brings better reception, in which event one may suspect the potency of one's ground connection.

Work for the Trouble-Shooters.

Having made all the tests one may feel safe in passing the problem on to the broad shoulders of the power companies. However, the report of difficulties should be made in an intelligent, if possible, manner.

It has been hinted before this, that sometimes the power companies are anxious to locate and remedy leaks and that their motives are not entirely altruistic.

It is strange that the Australian electric light companies have not maintained radio-trouble-shooting departments which would pay for their keep through the discovery of power losses and the establishment of goodwill on the part of customers whose bills have taken a jump since the advent of radio.

Many American companies have worked out a questionnaire to be filled in by the complainant and such reports are of immense value in defining the problem and limiting the field of search.

A sample is appended. It is similar in form to those used elsewhere and may be copied in a report to one's local power company if no other is available. It opens with the direction that reports should be made immediately upon the occurrence of interference and points out the uselessness of attempting to run down noises that have come and gone. It advises that an experienced service man be called in to answer questions outside the knowledge of the set operator. Then follows a list of questions—

- 1-Name of receiver
- Number and type of tubes
- 2-Name of dealer from whom purchased
- Address
- 3-Date tubes purchased
- Last tested or rejuvenated
- 4-Do your tubes flicker when tapped gently?
- Are they tight in sockets?
- 5-Is your set regenerative?
- Does it radiate?
- 6-Have you tightened up all connections both in the receiver and in antenna and ground system?
- 7-Type of batteries used
- A
- B
- C
- 8-When did you buy or rechange them?
- A
- B
- C
- 9-Date of reading of voltmeter tests of
- A
- B
- C
- 10-To what is your ground wire fastened?
- Height of aerial
- 11-Height of aerial
- Is it parallel to other wires?
- Is it lead-in a separate wire?
- Is it insulated and tightly soldered to antenna?
- 12-Is it properly insulated from all trees, ground, houses, etc.?
- 13-Is it fastened to electric light or telephone poles or does it cross over any wires?
- A
- B
- C
- 14-When was disturbance first heard in receiver?
- 15-With aerial and ground disconnected and their binding posts connected together with wire do you still hear the interference?
- Is it seasonal, or do you hear it all hours of the day or night?
- 16-Would you describe it as a steady (ringing) noise?
- Irregular humming?
- Irregular crackling?
- Steady crackling?
- Continuous "whistling"?
- Does it surge or seem to accumulate and discharge?
- 17-Does rainy weather seem to clear the trouble or increase the volume of the disturbance?
- 18-About what wavelength does it come in the band?
- How many points in your dial does it cover?
- 19-Does it continue when you pull the lighting switch for your whole house?
- 20-Have you checked the sockets, switches and other connections and fixtures in your house to see if they are loose?
- 21-Have you asked any neighbors to pull their service switch?
- 22-Do you or does any in your neighborhood own an oil burning furnace, heating or small motors, electric or mechanical, or other appliances?
- If so, please give their names and addresses below
- 23-Have you checked up to see if turning on and off any electrically operated appliances in your own home or your neighborhood affect the disturbance?
- 24-Does any of your neighbors hear the same disturbing sounds in their receivers?
- If so, please give their names and addresses

The questionnaire concludes with space for the signature of the complainant together with his address and telephone number and the date.

So much for that phase of the case. If you have not discovered the cause of interference, the investigating engineers will—given sufficient information and a fair chance. It is significant that in a town the size of Chicago, no such problem has been found beyond solution. And once the testive noise is run down, what then?

The matter seems worthy of discussion under a chapter heading of its own. One hates, really, to get on with it. After all this preliminary—making an important business of crackles and hums and such like—it seems really a shame to admit that it isn't actually important at all—that noises can be eliminated by devices scarcely more complicated than a couple of sticks of chewing gum and a lump of coal.

The Elimination Process.

Getting down to cases in the matter of stifling interference, one discovers that the whole process is merely an application of filters.

Two years ago one might have hesitated to mention the word "filter" before a large and varied audience. At that time a filter was supposed to be a little sack of carbon that clamped over the drinking water faucet. The true inwardness of the electrical sieve was known only to initiates, most of whom were too busy in the telephone service to worry about radio.

However, the popularity of battery eliminator devices and the need for loud speaker protection, resulting from the use of high plate voltages with the new power tubes has done much to spread the light among the radio enthusiasts. It is no longer a secret that a filter is a condenser or condenser-choke combination designed to keep unwanted currents where they belong.

The trouble of interference in electrical devices as we have seen is due to the generation of radio frequency currents at spots where there should be no radio frequency currents and the broadcasting of these volt-unters energies with the power lines acting as antennae.

What more natural, then, than to seize upon these emanations at their source and block them from the lines? There are various ways of doing it. In some instances they are allowed to wander into a condenser which acts as a sort of sump tank and loses them until their ambition is all gone. In others they are actually choked out of the line. Occasionally they are grounded.

It has been found by some genius who apparently does not have to worry about his light bill, that if one hooks a condenser of sufficient size across the feeders of his service-line at the point where it enters his house, he need worry no longer about interference from devices within his own walls. An ingenious plan, earnestly recommended to those who have plenty of money. It has only one drawback, which, of course, need not be considered: If the condenser is

(Continued on Page 23.)

Programme Features

ANOTHER INNOVATION at 2FC is the introduction of a fine instrumental trio, consisting of Reginald Scott, violin; Julius Van der Klei, 'cello; and Ewart Chapple, piano; who will play every Tuesday and Friday afternoon from the studio. Here again the management of 2FC is anxious that music desired by listeners will constitute the programme of this trio and requests that the public will make its wants known.

FOLLOWING THE FINE programme to be given from the Sydney Town Hall by the Commonwealth Band on Christmas Night, a special session of orchestral and vocal music will be transmitted until midnight. Promptly at 12 o'clock 2FC will commence a programme for relay by 2LO in England. After the striking of Sydney's Big Ben, a service of carols will be broadcast from St. Andrew's Cathedral. At 12.30 a studio programme will commence, when the 2FC full orchestra will perform, and will also accompany Raymond Ellis, Hubert Carter and Peter Gawthorne, in a series of operatic gems. Messages of greeting will be sent to Britain from the Governor-General, the State Governor, the Prime Minister and the Premier.



Jack Win, versatile entertainer of 2FC, who is over at a loss for new jokes and gags.

COLOURED HARMONISTS: One of the most artistic and unique musical turns broadcast from Studio 3LO is the vocal quartette, "The Four Coloured Emperors of Harmony." As their name implies, they specialise in Old Southern Negro Melodios—making a great feature of the "Spirituals"—which were introduced to Melbourne audiences some three years ago by Miss Edna Thomas. It would need "television" to appreciate the solo rendering of "Poor Old Joe" to the full—the facial expression of the old darkey being particularly good—but the ears of all listeners were delighted with such spirituals as "I've got Shoes" and "Ain't it a shame to work on Sunday," and a speciality Yodelling Quartette, in which the harmonies were cleverly blended.

ON WITH THE DANCE: "On with the dance—let joy be unconfined" will be the keynote of the festivities at Studio 3LO on New Year's Eve—for, following the now established custom, the directors will invite the staff and their friends to trip it merrily till the witching hour of midnight, when, to the accompaniment of bells and the singing of "Auld Lang Syne" the Old Year will be ceremoniously ushered "out" and the New Year welcomed "in." Those who have been fortunate enough to enjoy the hospitality of Studio 3LO in the past—this is the third New Year party—know the delightful time in store for them, and it is safe to say that the coveted invitations will be "accepted with thanks."



Miss Wandle, who with Jack Win, opposite, provides some of the finest of 2FC's comedy items.

ON 5th JANUARY, 1928, John Lane, tenor, will give some of his old English songs and oratorio work from 3AR, this class of singing making a pleasant variety in with the more modern music.

2FC ANNOUNCES a slight alteration in its transmitting hours. On Monday and Wednesday nights the station will, in future, close at 11 p.m., while on Tuesday, Thursday, Friday and Saturday nights, the evening sessions will be extended until 11.45 p.m. No alteration has been made in the Sunday night programmes.

FREE TRIP TO TASMANIA! It is safe to say that one of the most excited men in Melbourne a few weeks ago was Mr. Ben. Bottomley, of Coburg, the winner of the recent competition organised by Studio 3LO, the prize for which was a Free Trip to Tasmania. As the conditions were so simple—one had merely to send in the name and address and the number of their license—upwards of twenty three thousand entries came to hand—and out of the mountain of envelopes, Mr. Bottomley's proved to be the winner. This fortunate gentleman is an English migrant, and owing to the fact that his duties as a foreman in the Lincoln Mills keep him very busy throughout the year—he has not yet had time to pay a visit to Tasmania, therefore his holiday surprise was all the more welcome.



Miss Nellie Stewart, who, commencing on Wednesday, December 14, and continuing three times a week, entertained the children at Xmas from 2BL.

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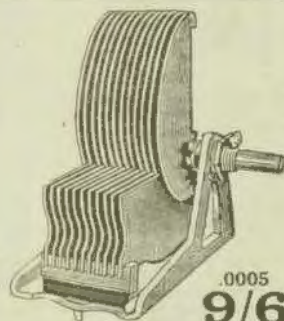
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1 B.M.S. Single Circuit Jack	0	1	7
1 B.M.S. Battery Switch	0	1	6
1 Eco Bakelite UX Socket	0	1	2
1 Ajax Terminal Board	0	2	3
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THE SELECTREX 4

We consider that this set is one of the very best four valve receivers ever described to the Australian Public. Of its performance we need say no more than that it is much more selective than the Browning-Drake, and a better "distance getter." Its adaptable features make it the ideal set for both the city and the country enthusiast. The veriest beginner need not fear to attempt the construction.

By Walter R. Hardy

Its Outstanding Features.

The most striking feature of this set is the high degree of selectivity that is obtainable, and the consequent ability to enjoy any particular programme without annoying interference from other stations. In the first place, the type of circuit used was chosen on account of its selective nature, and a number of new features were then introduced in order to effect further improvement. The first step was to loose couple the coils which feed the first valve (the radio frequency amplifier), and then to neutralise it by means of a somewhat new method. This greatly increased the ability of the set to separate the various stations and allowed the regeneration on the detector valve to be pushed to the utmost, when required. Selectivity was then again increased by adopting a similar form of coupling between the coils that feed the detector valve; and then this coupling was made adjustable so that it could be varied to suit the particular location in which the set was to be used. This made it possible to adjust the set so that it could be used to full advantage, both in the near vicinity of a high powered broadcasting station and in the country, where interference is unknown.

The efficient method of neutralisation which has been adopted permits of reaction being pushed to the utmost, thus giving the set the power of added valves and ensuring good volume from the intermediate stations. The radio-frequency amplifier is kept under perfect control, and there need be no fear that the set will radiate and annoy the neighbours.

Tuning is a two handed operation, and does not call for the possession of a third arm, nor any particular agility.

There are three controls only, and of these the reaction control may be set and the two hands then used to turn the two wavelength controls so as to receive the required station. The control that comes under the right hand is somewhat critical and is therefore fitted with a vernier dial. That which is operated by the

left hand is broader of tuning and easy of adjustment. When the set has been tuned to any particular station both dials show approximately the same reading. For local work the tuning is simplified since no regeneration is required; one operator having declared that "a one-eyed man could then tune-in and urce the baby at the same time." The author, however, hesitates to make such sweeping claims as that.

Filament rheostats are placed on the panel so that the current to any valve can be accurately adjusted to suit the operating conditions. A

at sufficient strength for dancing purposes and 100 and 500 could be heard at great volume. 1YA (New Zealand), and a number of lower powered interstate stations could be received at strengths varying from moderate speaker strength to fair phone strength. Among these latter stations 3DN predominates; this station always seeming to put out most exceptionally strong transmissions, when one considers the power used.

At approximately a quarter of a mile from 2BL, it was found that 3LO could still be heard without interference, when the coupling had been re-adjusted and the set properly tuned, but only at "phone strength." Recourse to an efficient wave-trap made it possible to once more place them on the speaker.

Construction.

Every effort has been made to simplify the construction as much as possible. A list of the components used, giving their size and type, has been prepared and is published along with the circuit diagram, baseboard lay-out and back of panel wiring diagram.

In each of these, each component, or the position it occupies, is marked by identification letters so that the table and diagrams can be quickly compared with each other. This should leave no possible doubt as to where any particular piece of apparatus belongs, nor as to how it is wired up.

Panel Assembly.

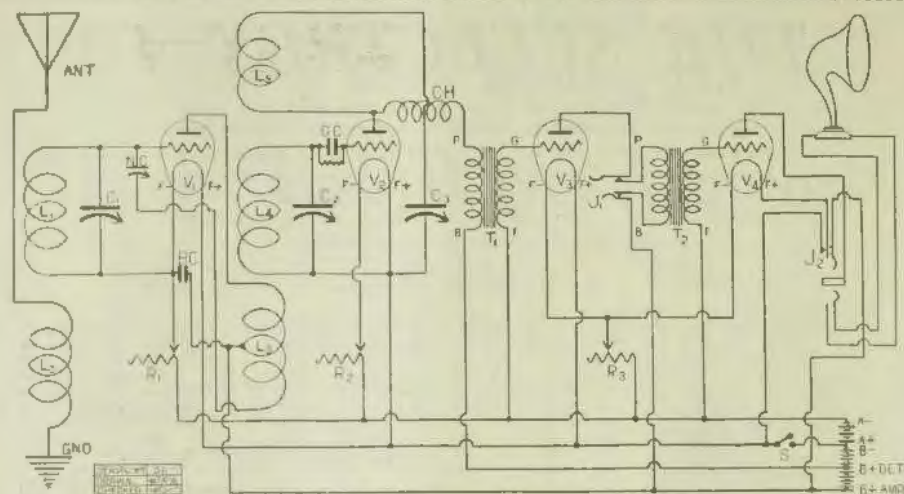
We will assume that all the necessary parts have been obtained; each being identical with those listed, so that the dimensions quoted need not be departed from. The panel should first be taken, and its sawn edges trimmed with a rough file. If the back edge is bevelled a little before beginning to file straight across the edges it will prevent chipping. If it requires any repolishing, to take out surface marks, use a mixture of fine whiting and petrol, with plenty of oil-soap-grease. When the rubbing is completed the last of the whiting

PARTS REQUIRED

Identification	Articles	Size of Type
Lectens	2-5LF Variable Con.	0005MFP
CI, C2 and CR	2-Dials	1 Inch
CI and CR	2-Vernier Dial	
R1 and R2	2-Rheostats	20 ohms
B3	1-Battery Switch	Push-Pull
J	1-Jack	Public Circuit
J1	1-Jack	Single Circuit P.C.
J2	4-Variable Rhos.	Standard 31A or 1K
V1, 2, 3 & 4	2-Audio Trans. 25, 10, 1 & 1/2 to 1	
T1 and T2	2-Midget Condens.	Plate
NC	1-Grid Condens.	5000 with 400V
GC	1-Grid Leak	4 Meg
GC	1-Grid Condens.	500 MF
L1, 2, 3 & 4	3-Coil Formers	6in. x 3in.
CR	1-Coil Former	1in. x 2 1/2in.
LL, LA, 1 & 2	24 SWG D.C.C. Wire	3/16in
CR	30 SWG D.C.C. Wire	3/16in.
	1-Terminal Bush	7 Terminals
	1-Panel Hinge	1/2 x 7/8 in.
	1-Baseboard	20 x 16 x 1/2 in
	1-Back-up Wire	1 Packet

battery switch of the push-pull type is provided, by means of which the set may be snapped on or off at will. This breaks both the A and B battery circuits at the same time, and, thus, the set may be simply turned off and left indefinitely, without any fear of leakage from either of the batteries.

Of its performance we need add but little to what has already been said. It was found that the Intermediate stations could be received at excellent speaker strength. Whilst 2BL was giving full blast, at a distance of about a mile, 3LO could be obtained



should be well washed off with petrol, and the face of the panel polished to a high shine with a piece of chamois. Do not use metal polish or Brasso. Although an excellent metal polish, the last mentioned is too thin a mixture of petrol and whiting to be suitable for our purpose. It also contains other substances for dissolving oxides off metals, and these are capable of considerably reducing the resistance of the panel.

The panel template should then be redrawn to full size, on stiff paper, and afterwards accurately fixed over the face of the panel by means of clips or small weights. The centre of each hole should then be marked through onto the panel by means of a centre punch; the marks being of sufficient depth to take the point of a drill. The holes may then be bored out with drills of the correct size, and preferably this should be done through the paper template in order to avoid making mistakes in the sizes of the various holes. One of the best methods is to glue the paper to the panel and then to soak it off and repolish after the drilling has been completed. Templates for locating the smaller holes used to mount the variable condensers are supplied with each of these instruments.

Specifications for Coils.

L1	50 turns on 3in. former
L2	22 turns on same former
L3	45 turns on 3in. former
L4	50 turns on 3in. former
L5	22 turns on same former

The assembling of the components on the panel is a simple matter and

few instructions will be found necessary at this stage. It will be noted that the holes which take the small mounting screws for the condensers and rheostats should be countersunk so that the heads of the screws will be flush with the surface of the panel.

The vernier dial and those for the other two condensers may be locked to the spindles by means of the set screws provided. The vernier can be attached to the panel by a special bolt, or with some of these instruments it may be held in position by the rubber pads which bear on the polished surface. The two jacks mount by means of nuts and washers, and the battery switch attaches in a similar manner.

The Coils.

These are described in the accompanying table where all necessary details as to number of turns which will give a convenient spacing of the stations on the dials are to be found. The wire used is 24 S.W.G., D.C.C. copper, and the 3 inch formers are of cardboard. They can be easily wound by hand and the novice will quickly learn how to keep the turns tight and close together. All ends and taps should be taken off along the one side of the former, each end being securely fixed in position by passing it several times through a couple of small holes made about a quarter of an inch apart in the cardboard.

It is important to remember that all the coils should be wound in the one direction, and care should be taken to see that no mistake is made

on this point. Always hold the former in the same position when commencing a winding, always begin at the same end of the former and always rotate it in the same direction. When one winding is completed, do not turn the former end for end in order to get a better grip of it whilst winding the other coil. Note that a lead has to be tapped off half way along L3. This can be best done by doubling the wire back on itself for about $\frac{1}{2}$ inch, and twisting the doubled wire tightly together. The copper can then be bared at the end of the loop, and the wire may be soldered on.

The choke coil is wound with 30 S.W.G., D.C.C. copper wire on a two inch former. A winding from 24 to 34 inches long will be quite suitable, and no special precautions need be taken as to the direction of winding. A margin of half an inch should be left at one end in order to leave room for the small brackets which fasten it to the baseboard.

In the case of the country listener who is not troubled by interference, additional volume can be obtained by leaving a space of only 3-8 inch between L1 and L2. L3 should then be wound on the same former as L4 and L5, leaving a space of only $\frac{1}{2}$ inch between.

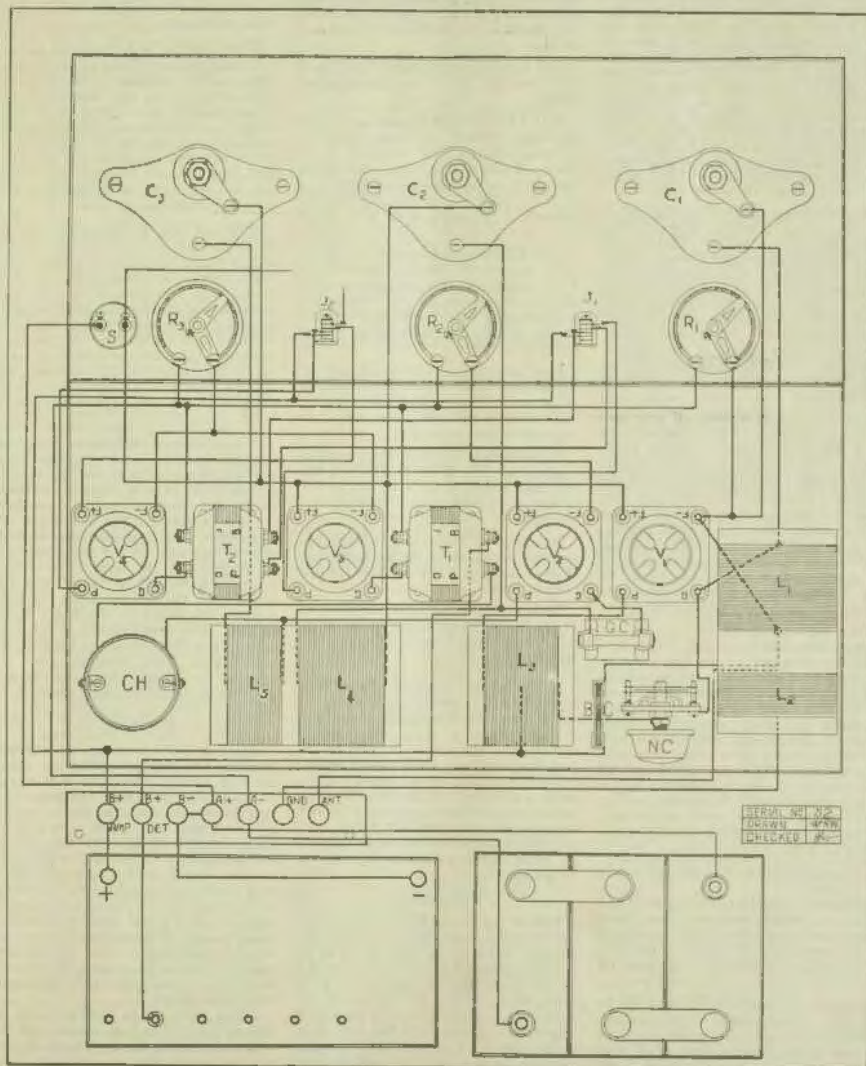
Baseboard Assembly.

Before attaching the apparatus to the baseboard, it would be a wise course to plane or sandpaper the latter and to apply several coats of shellac varnish (French polish). The lay-out of the components can be

seen from Fig. 2, and they should be all satisfactorily placed before commencing to screw them down to the board.

Remember not to place them too near to the front edge, as a clear margin of 2 1/2 inches should be allowed between it and the front of the

valve sockets in order to leave room for the condensers, jacks, and wiring. The valve sockets and transformers should be screwed down, the terminal



board fixed to the back edge, and the choke coil attached by means of two small brackets or grid leak clips.

Coils L1 and L2 should next be attended to. These may be screwed directly onto the baseboard by means of a small screw at either end; but it is strongly recommended that all coils be raised well above the wood. This can be easily done by securing some 3/8 inch bakelite or ebonite tubing and cutting it into 1 inch lengths. Brass screws, 1 inch long, are passed through the ends of the former and then through the pieces of tubing which act as long washers. Similar pieces of glass, wood, fibre, or rubber, may be easily obtained.

Coils L4 and L5 should be mounted in the same manner, remembering that room must be left so that L3 may be moved to and from L4 over a range of about 32 inches. L3 should be temporarily fixed near the end of L4, as the coupling between these coils will be adjusted at a later stage. The neutralising condenser should then be screwed down in its position, and the grid and bypass condensers should be set out in the positions indicated.

Wiring.

The experienced constructor will probably prefer to carry out a large portion of the wiring before attaching the panel to the baseboard; but the beginner is advised to screw the two together and to then proceed in the order given below. As each connection is completed, the corresponding instruction should be marked off with a pencil. Pains should be taken to see that no mistakes or omissions are made, for such may prove costly.

The wiring can all be seen on the wiring diagram, Fig. 2, but the constructor is urged to use the point to point system and not to try to imitate all the right angle bonds which have to be introduced by the draughtsman in order to avoid confusion. Note that wires crossing over each other, or running into each other, are only to be joined where the soldering of the joint is plainly represented by a heavy black mark. Where the wiring is shown in broken line it means that it passes underneath a part of some piece of apparatus.

A detailed list of the connections is as follows:—

Filament Circuits: Join R1 to R2 to R3 to A—on the terminal board. Join the other terminals of the rheostats as follows: R1 to F— of V1, R2 to F— of V2, and R3 to F— of both V3 and V4.

Join the F + of V1, V2, and V3 to the nearest terminal of the battery switch. Connect this same terminal to one of the filament lugs of J2 and join the other filament lug to F + of

V4. Join the remaining terminal of the switch to A + on the terminal board.

Coil L1: Join end nearest the panel to G of V1 and to fixed plates of C1. Join other end to F— of V1, to moving plates of C1, and also to one end of BC.

Coil L2: Join outer end to GND, and inner end to ANT on the terminal board.

Coil L3: Join right hand end (looking from back) to lock nuts on spindle, of NC, and connect fixed plates of NC to G of V1. Join centre tap of L3 to remaining end of BC and to B + AMP on the terminal board. Join the left hand end of L3 to F of V1.

Coil L4: The right hand end of L4 joins to the wire which connects to F + of V2, and this end also goes to the moving plates of C2. The other end connects to GC and to the fixed plates of C2. Join remaining end of GC to G of V2.

Coil L5: Connect inner end to F of V2 and to either end of CH. Join other end of L5 to the fixed plates of C3, and join moving plates of C3 to the wire which runs to F + of V2.

Transformer T1: Join P to remaining end of CH, B to B DET on the terminal board, G to G of V3, and F to the A— lead, which connects the rheostats.

Transformer T2: Join P to inside upper lug of J1, B to inside lower lug of J1, G to G of V4, F to A— lead as before.

Jacks: Join remaining terminal of J1 to lower terminal of J3 to B + AMP on terminal board. Connect remaining plug of J2 to P V4.

If the above directions have been carefully and correctly carried out, the set will now be completely wired, and it only remains to connect the aerial system and the batteries, and to attach the speaker. Care should be exercised in linking up the batteries, for many an enthusiast has found to his bitter sorrow that disaster soon follows carelessness. Do not let the B battery leads touch any wires or terminals except those to which they should be connected.

Adjustment.

Before the set is fitted for normal use it will be necessary to adjust the coupling between L3 and L4 so as to get the degree of selectivity called for in the particular locality where it is to be used. Where practically no interference is experienced L3 should be placed fairly close to L4, but if a high-powered broadcasting station operates in the neighborhood it may

be necessary to separate the two adjacent ends of the coils by a distance of up to 34 inches. It should be noted that any alteration of the coupling between these coils will probably make it necessary to re-adjust the neutralising condenser.

Neutralisation is carried out in the following manner: Tune in one of the broadcasting stations, preferably a weak one, using the reaction condenser to produce a squeal or whistle from the carrier-wave. Then turn the reaction condenser so that its moving plates are not interleaved with the fixed ones, and note whether the squeal can still be tuned in by re-adjusting the other condensers.

If it can still be heard it will be found necessary to increase the capacity of the neutralising condenser until the whistle just disappears. The set should then be tested to see that the controls can be adjusted over the full range of the broadcast band without breaking into oscillation. Should this occur at any point it will be necessary to further increase the capacity of N.C., but it should be remembered that signal strength is lost by over-neutralising.

A good test to determine whether neutralisation has been properly carried out is as follows: Set the centre dial at about 10 to 15 degrees and then adjust the reaction condenser so that the set is just outside the verge of oscillation. The first condenser should now be turned over the lower part of its range, and it should be noted whether a "click" or "plop" can be heard from the speaker when the two circuits are tuned to the same wave length. If no such sound is heard it is safe to say that the set is sufficiently neutralised. This method can be adopted to rapidly find the correct position of the neutralising condenser.

Operation.

After a few minutes of experimenting, the beginner will soon master any tuning difficulties met with. In searching for distant stations the operator should cause the set to oscillate by means of C3, and then search carefully with C1 and C2. Oscillation can easily be detected by the peculiar rushing sound caused, or by the fact that the set gives a loud "plop," both when the finger is placed on the grid terminal of V2 and when it is taken away again. When a carrier-wave is tuned in as a high pitched whistle the reaction should be gradually reduced until the transmission can be heard free from distortion.

When listening to local stations it will be found that best results will be obtained without the assistance of the reaction condenser.

When Grid Current Causes No Harm

EVER since the advent of the first transformer-coupled valve audio amplifier we have always guarded against the presence of grid current in the grid-flament circuit of the valves. We have been informed that grid current causes amplitude distortion, a change in the signal wave form, a reduction in the valve amplification, in general, everything detrimental to good audio amplification. In fact, all fans have been warned against permitting grid current in any amplifiers.

Now we hear of a new system of audio amplification in which grid current is permissible; in which the amount of grid current usually encountered with very detrimental results in a transformer-coupled audio system, has no effect upon the wave form or amplification. This new theory of amplification is propounded by E. E. Hiler, and pertains to tuned double impedance amplification.

The presence of grid current is usually considered as an indication of valve overloading, and is made audible in the loud speaker by a rasping or blasting sound on certain frequencies. With this new system, it seems as if this form of annoyance is removed. The reason for permitting a certain amount of grid current is founded upon the fact that the momentary change in the grid filament circuit when grid current is present is not reflected back upon the primary circuit of the coupling unit in this system of amplification. Neither is the amplifying operating characteristic of the grid choke altered until the grid filament resistance drops to a very low value.

(Continued from page 15)

large enough to function properly it is large enough to pass a considerable quantity of A.C. current, generally peddled at a price per kilowatt hour. The power company might object, therefore, to the installation of such a super filter ahead of the meter. And at a point immediately after the meter, but close enough to the point of entry to do any good it would remain in operation day and night from now till bankruptcy, whether or not the house lights might be turned on or the suspected devices in use.

For those who do not feel like making such a grand gesture, individual filters are recommended—one for each trouble maker. If properly connected, they cease to function when the device to which they are attached is shut off—and even when operating their size need not be large enough to pay an extra dividend on power company stock.

MEMORIES OF HALLABAT.

(By "Whisker.")

My mind is slow, my pen won't go,
I'm old and puny and nervous,
But life might like to know
They've done for me a service.

I'll tell you how; it's ages now
Since first I satit down
And led a life of toil and strife
To live at ease at lawn.

The years had made my memory fade,
The 3300 wrenched it,
Introducing at old Ballarat
—For then once more I viewed it.

Its concert class I did not hear,
My mind was far away;
The same old place I saw appear,
Not so it is to-day.

No more, I'm told, the fast for gold
Drives on the frantic crowd,
No single day brings wealth untold,
Sifted that clamour loud.

Let an' secret for some new set;
Spill memory's new-found store;
That thought returned I treasure yet,
For I knew young once more.

"Struck By a Dumb Futility"

MANY articles have been written on the subject of "what it feels like to face the microphone for the first time," but none has seemed to more accurately portray the situation than that written by Francis Hackett, the Irish novelist.

"In the studio there is perfect silence. You must begin. And for two instants you are struck by a dumb futility. How do you know that anyone is listening? This audience is a blank. It is inanimate. It cannot clap or boo or say 'Hear, hear.' For all you know, everyone has gone away to dinner and you are about to chatter to the void. This thick suspicion is an unbearable that you brace yourself to believe in something totally outside your experience.

"It is like a dive. In the way that a diver must say good-bye to his spring board and launch his body into the air, so must you pass from the sure footing of silence and launch into speech. With a rushing and breathless exuberance you give your words to space, and what you are saying flows by you unrecognized, like telegraph poles from a train window. This is a strange confusion. You know you have actually begun to speak, but what exactly you are expressing, what the words are conveying, is not in your grasp. In the first moments you have more sensations than you can deal with. This plunge is head-long, dizzying, and obliterating. You have broken with the habit of a lifetime, have lost the earth. Whenever before you have spoken in public you

have had your victims before you. They looked at you, you looked at them; they coughed if you bored them, and when they fell asleep you could enjoy their peaceful expression.

"After the first five minutes, what you want to say really takes possession of your mind, and you definitely want to communicate to those invisible listeners exactly what you have felt. As this conviction mounts, the act of speaking becomes more natural and more amusing. You are not courageous enough; to look at the clock, which is glaring at you from the right, and you dare not glance away from the microphone lest it should turn its back on you.

"The dive is over; you are no longer gulping the water and gasping; you begin to time your strokes, to find a rhythm, to swim. And as you do this, the futility of your own ideas gradually becomes less apparent; you actually convince yourself that what you are saying is not so idiotic.

"Then the pleasure of speaking to invisible listeners begins to gain on you. Can they escape from you? You don't believe it. The disease which attacks all speakers seizes on you—verbal elephantiasis. Your words begin to swell. You feel you have a great deal more to say, and you turn away so that the ugly, sour-faced clock can no longer see you.

"Several athletic young men loom up at this point and make formidable gestures. You plead. They threaten. They dart you away."

WHAT IS THE PHOTOELECTRIC CELL?

Even the latest of text books give no definition of this invention, which shortly will become famous through its relation to television. The photoelectric cell is a vacuum tube which is extremely sensitive to any changes of intensity of light falling upon it, due to the fact that its internal resistance varies with the intensity of the light reaching it.

The property of the cell has been utilized in many ways, such as in transmitting photographs, making talking motion pictures, improvement in the manufacture of gramophone records, and in accurately matching colors.

Except for a small area, the inside of the bulb glitters with metallic potassium. Depending on the amount of light striking it, this metal permits a varying amount of current to pass through the cell.

DO YOU KNOW? What do the letters T.S.F. represent? It is a French abbreviation for "telephonie sans fil," or telephony without wires, in other words—wireless.

WITH THE TRADERS

AIRZONE PORTABLE.

The recent vogue for portable receivers has brought to light many original designs, and amongst the most interesting of these is the Portable Four Valve Receiver, manufactured by "Airzone," Limited, Sydney.

The most striking feature of this set is the panel, which is of highly polished aluminium, provided with orna-



mented apertures to allow the four valves to project, giving, with the aid of the black dials, a most pleasing appearance.

The speaker and batteries are contained in the compartment below the receiver unit, and access is easily obtainable by pulling open the speaker panel, which is hinged.

An inspection revealed that the batteries comprised three one volts for A supply, two 45 volt B's and 44 volt C, but we understand that the manufacturers are also marketing a model containing an unspillable accumulator.

A pictorial diagram showing the battery connections is included in the compartment, and with its aid there should be no difficulty in the most inexperienced replacing the batteries.

The loop aerial is completely concealed in the lid and provision is made for connecting an aerial and earth to the receiver, although in most cases this will be found superfluous, as under favorable conditions excellent interstate reception can be obtained with the loop alone.

The receiver is very compact, measuring only 16in. square and weighing 28lb. This, combined with its high-class finish and excellent performance, should make it immediately popular.

HOW THE LOUD SPEAKER GOT ITS NAME.

To hundreds of thousands of listeners the name "loud speaker" is so familiar that it arouses little interest. Yet, when a new instrument is made a name must be found for it. The late Alfred Graham, inventor of the prototype of the loud speaker, first called it the "Loud Speaking Telephone," and later, in 1893, changed to "Loud Talking Apparatus." In 1894, Mr. Graham made the acquaintance of Professor McKendrick, of Glasgow University, who became associated with him in several subsequent experiments. Professor McKendrick, in his lectures, invariably referred to the instruments designed by Mr. Graham (who, by the way, originated the firm which produces the Amplion Loud Speaker) as "Electrical" or "Telephonic" Loud Speakers, and thus to a Scotoman belongs the credit for coining the almost universally used expression "loud speaker," though in America the term "table talker" is rapidly increasing in use.

ADVANCE S.L.F.

There is no doubt that the straight line frequency type of condenser is the most universally used in present day radio circuits, and many brands of S.L.F. Condensers are now on the market.

We have recently tested a sample of the "Advance" S.L.F. Condenser, manufactured by the Radio Corporation of Australia, Pty., Ltd. This condenser is built throughout in the company's factory at North Melbourne, and designed especially to suit Australian conditions.

The plates are cut from the best aluminium and are mathematically accurate, being mounted so as to give perfect rigidity, thus eliminating all end play.

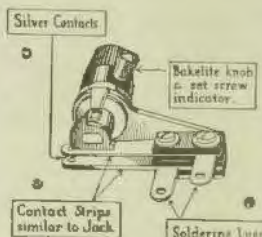
Needless to say, the tuning is everything that can be desired, all broadcasting stations being received without any "bunching."

These condensers are obtainable in capacities of .0025, .0035 and .0050 from all Radio dealers.

SATURN FILAMENT SWITCH.

Advice is to hand from Amalgamated Wireless A'sia Ltd., of Wireless House, 47 York Street, Sydney, who inform us that stocks have now been opened of the new Saturn Filament Switch.

They are particularly neat and very compact, requiring approximately 1in. behind the panel. It is simple to mount, requiring only one hole in the panel; is positive acting and fitted with a genuine polished Bakelite knob. Metal parts are heavily nickelled brass, and it is simple to connect by means of tinned soldering lugs incorporated in the contact arms. These switches, apart from presenting a neat and efficient appearance on the front of the panel, should prove most



popular on account of their compactness and accessibility for connecting purposes, combined with the extraordinarily small amount of room required for the assembly, which in no way detracts from their efficiency as a switch. The set screw on the Bakelite knob acts as an indicator, and a stop is incorporated in the switch so that it cannot be turned beyond either the "On" or "Off" position.

It operates on the same principle as the plug and jack, that is to say, by turning the knob, two contact strips are brought together, the actual points of contact being made of sterling silver and insulation of hard rubber.

ONE TENTH OF A THOUSANDTH OF A MILLIONTH OF AN AMPERE:

An instrument that indicates a change in current as small as a tenth of a thousandth of a millionth part of an ampere has been developed in America. The usual electric lamp uses 200,000,000,000 times as much current as the amount represented by one sub-division on the scale of this instrument, which is so sensitive that it has to be mounted on jewel bearings.

What Quick Test Will Reveal a Good Battery?

Some Interesting Information.

This is something not only Radio users would like to know, but is also a subject even experts could be more fully advised about.

Mr. R. M. Davies, who is the man behind Burgess Battery Sales in Australia, has written quite a readable and newsy article on what would otherwise be quite a dry subject.

A quick, easy, but absolutely accurate comparative test of Radio Batteries is something of which "there isn't." Of course, we are sorry. It would be a simple matter if batteries could be measured by weight and the heaviest selected as the best—the Burgess Company would then not have to spend thousands of dollars a month in testing expense.

Still, this question has to be answered, as hundreds of customers wish to conduct tests in their own fashion, which, although not strictly accurate, will give some good idea of a good battery.

Perhaps the following explanation of battery peculiarities and their testing will be of help.

A battery is not like an egg that can be handled to see if it is good or bad.

We know that no gauge will indicate service performance without destroying the unit tested.

A battery is like dynamite—it must be destroyed to test it. An accurate test of a battery ruins it. Any test then is indicative only of what similar batteries, of the same brand, will do.

If the manufacturer does not have the ability to produce a uniform product this single test will be of no value. One test of an "orphan" battery should not carry much weight, because the maker is unknown, and there is no way of knowing how closely the test battery lends the general brand.

To compare batteries they must be discharged under exactly the same conditions. When the Burgess Company compare batteries they always run them at the same time. They do not compare a test on Monday with another made on Friday, in spite of the fact that they control their temperatures carefully.

In their battery testing laboratories they have a heat insulated room of about 3,000 square feet of floor area, which is constantly kept at 70-deg. F.

The load under which a battery is tested is mighty important. The Burgess Company use resistance coils which are very accurately made.

A 5,000 ohm coil is accurate to 1/100th of an ohm; an accuracy of one in half a million.

The measuring instruments, voltmeters, ammeters, and such like, are carefully housed in glass cases, and never moved, because they are so sensitive and accurate. Some instruments cost hundreds of pounds, but it is necessary to have them to obtain the degree of accuracy they require.

Experience has proven that voltage and amperage alone will not show whether a battery will perform satisfactorily. It is true that both tests are of value when properly understood. A low voltage generally indicates discharge or lack of service, and low amperage a high internal resistance.

How do we test for service? Let us first consider what the requirements of efficient service are. Capacity, shelf, and uniformity make up this triumvirate. The tests which are generally accepted are those which most closely imitate service. Instead of using actual telephones or engines, or receivers, constant resistances are used which eliminate any change with age or use.

CAPACITY might be defined as the ability to deliver currents at the constant rate. As a measure we use units of time. 5,000 ohms continuous, 5,000 ohms 4 hours per day, and 1250 ohms 4 hours per day are generally considered the most representative tests for a 22½ volt battery. The slower tests may last for a year and a half or more.

Suppose we draw twice the current, will the battery last one-half as long? No, it is not possible to accurately estimate in this manner. Here we have a "B" Battery which has a remarkable long life on the fastest test (5000 ohms, continuous). Will this battery give good service on my set? Here we have a shelf life to consider.

SELF LIFE may be defined as the ability to withstand deterioration. This test consists of storing batteries at room temperature and recording their voltage and amperage with time. A rapid fall in either indicates rapid depreciation. Every battery has a certain shelf storage life, for none are used strictly fresh. The consumer naturally must be assured of service. That is the reason that Burgess insist on making each Burgess Battery with excellent shelf life so the high capacity will not leak out. One shelf test on a Burgess Battery recently took over ten years to complete. It is not difficult to build a trick battery with a phenomenal capacity, but they invariably fall down on shelf. We might term it, "To have and to hold."

UNIFORMITY.—The quality of likeness or sameness. Saturday I played a good game of golf, but on Sunday I was terrible. This is a lack of ability or experience which finds no welcome in Burgess plants. Experience and years of research make uniformity one of Burgess attributes.

We may test uniformity of voltage and amperage with voltmeters and ammeters, but service uniformity—only by long drawn out tests.

Quick service tests are of no more value than weighing a pint of beer to tell how long it will last.

Electric Facts

WHEN we consider what radical changes have taken place in this world of ours in the last few hundred years, is it any wonder that we sometimes try to look ahead and visualize what will have taken place in a few hundred years' time?

The use of electricity for wire communication took many advancing steps during the nineteenth century. Morse produced the telegraph in 1835, but it was bettered the next year by Wheatstone, an Englishman, who developed the electro-magnetic telegraph. Gintl, an Austrian, found out how to send two messages simultaneously over the same wire in 1835, and in 1874 Thomas A. Edison demonstrated quadruplex telegraphy, thus doubling the country's wire capacity without stringing an additional mile of line. In 1895, Preece in England went still further when he invented telegraphy through the air by the use of low frequency electric waves. Mar-

coni came along next year with high frequency, long distance waves,—now known as wireless.

In 1879, Edison made the first incandescent lamp, thus giving electric light to the world. The filament was a delicate thing of burnt thread that broke at the slightest jar, but it grew red hot and gave off a little light inside its glass globe.

After that, all sorts of filaments were used, year by year, until the industry learned how to make sturdy ones of tungsten. The first electric carbon lamp, known as the arc lamp, was invented by Brush in 1879, and soon came into common use for street lighting. In 1876 Alexander Graham Bell invented the telephone. 1927 saw the first Engine Broadband. So the world goes on, inventions revolutionize the world, and are later improved on to such an extent that the original method becomes obsolete, whilst its principles make other men famous.

XMAS "RADIO"

By far the best issue of the new "RADIO" is the Christmas issue containing the following features:

DX, being a humorous treatise on long distance reception, by Charles D. MacLurcan.

STRONG TEA. A short story of Amateur Radio, by Russell Roberts.

HISTORICAL AND MODERN SIGNALLING. By Sidney F. H. Laws, General Manager of 7ZL.

SOUTHWARD HO! Further adventures of Brasso.

FOUR FAMOUS ANNOUNCERS, in caricature and print. Meet Laurence Halbert, Arthur Cochrane, Alfred Andrew, and Maurice Dudley, face to face.

HAS IT EVER OCCURRED TO YOU THAT MEN MONOPOLISE RADIO? A protest against the common belief that women are not interested in radio.

THE STROBODYNE. A new eight valve receiving circuit, embodying the principles of the superheterodyne and the Stroboscope.

THE SIMPLICITY THREE. A receiver made possible by modern apparatus which gives clear volume on the loud speaker, yet remains simple to operate.

THE SAMPSON TWO VALVE RECEIVER. An inexpensive receiver remarkable for its astounding volume. An ideal receiver to build and present as a Christmas gift.

DO YOU KNOW THE BEST SYSTEM OF AUDIO AMPLIFICATION? By R. C. V. Humphery.

THE GO-GETTER SHORT-WAVE RECEIVER, by Don. B. Knock (2NO),
AMATEUR SECTION. A special enlarged Amateur Section is published, which includes Ham News from all seven districts.

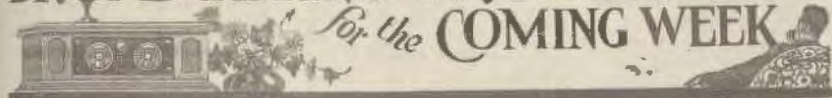
"A DIGEST OF WORLD WIDE RADIO NEWS," "Christmas With Our Contributors," and "Your Choice Among Receivers," are the titles of other general articles.

On Sale Now—The

XMAS "RADIO"

One Shilling

BROADCASTING PROGRAMMES



Friday, Dec. 30
2FC, SYDNEY.

Farmer's Broadcasting Service.

Wave Length, 442 Metres.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

- 7.45 a.m.—"Big Ben" and announcements.
8 a.m.—Studio music.
8.15 a.m.—"Sydney Morning Herald" news service.
8.30 a.m.—Studio music.
8.45 a.m.—A reading.
9 a.m.—Studio music.
9.15 a.m.—"Big Bass" studio music.
9.30 a.m.—A.P.A. and Reader's Cable Service.
9.45 a.m.—Studio music.
10 a.m.—A talk on Home Cooking and Recipes by Miss Ruth Ford.
10.15 a.m.—Close down.

MIDDAY SESSION.

- 11 noon.—"Big Ben" and announcements.
11.15 a.m.—Stock Exchange, first call.
11.30 a.m.—Local weather forecast, rainfall.
11.45 a.m.—Studio music.
12 noon.—Summary of "Sydney Morning Herald" news service.
12.15 p.m.—Radio wireless news.
12.30 p.m.—Studio music.
12.45 p.m.—Annie Selger, mezzo.
12.55 p.m.—"Dancing Days," waltz song (Stanley Dickson).
1 p.m.—Studio music.
1.05 p.m.—"Big Ben," Weather Intelligence.
1.10 p.m.—"Evening News" midday news service.
1.15 p.m.—Distributors' Society's Report.
1.30 p.m.—Studio music.
1.35 p.m.—Stock Exchange, second call.
1.40 p.m.—Studio music.
1.45 p.m.—Annie Selger, mezzo.
1.55 p.m.—"Jack O' Hazeldean" (Sir Walter Scott).
2 p.m.—Studio music.
2.05 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

- 2.45 p.m.—"Big Ben" and announcements.
3 a.m.—Lionel Lunt, English baritone.
3.15 p.m.—"The Radio-Triad."
3.30 p.m.—Mr. Ewart Chapple.
3.45 p.m.—Fosse Brabell, contralto.
3.55 p.m.—"Four by the Clock" (Mulliner).
4 p.m.—Kathleen Horne, soprano.
4.10 p.m.—"Wags Jack, Fosse and Brabell" (Ball).
4.15 p.m.—"The Radio-Triad."
4.25 p.m.—Mr. Ewart Chapple.
4.35 p.m.—Fosse Brabell, contralto.
4.45 p.m.—"Gala" (Harden).
4.55 p.m.—"Big Ben."
5 p.m.—Evelyn Horne, soprano.
5.05 p.m.—"Kathleen" (Frelch).
5.15 p.m.—Muriel Watt, contralto.
5.25 p.m.—"A little less just for two" (Loh).
5.35 p.m.—The "Radio-Triad."
5.45 p.m.—Mr. Ewart Chapple.
5.55 p.m.—Popular records.
6.15 p.m.—Jeanette Honey, contralto.
6.30 p.m.—"If in the Great Bazaar" (Amy Woodford Fiddler).
6.40 p.m.—A pianoforte reproduction.
6.45 p.m.—Studio music.
6.55 p.m.—Stock Exchange, third call.
7 p.m.—Studio music.
7.15 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.

- 7.40 p.m.—The chimes of 2FC.
7.45 p.m.—The "Hello Man" talks to the children.
8.15 p.m.—A programme for the young folk, supplied by pupils of Madame Ada Baker.
8.40 p.m.—Studio music.
9 p.m.—"Big Ben."
9.15 p.m.—Late sporting news and racing information given by the J.F.O. Commissioner.
9.30 p.m.—Dagety's market reports (wool, wheat and stock).
9.45 p.m.—Fruit and vegetable markets.
10 p.m.—Weather and shipping news.
10.15 p.m.—"Evening News" late news service.
10.30 p.m.—Close down.

NIGHT SESSION.

- 10.35 p.m.—Programme 100-100-100.
10.45 p.m.—"Let's go round the World," a talk by the Rev. F. H. Beward.
11 p.m.—Muriel O'Malley, contralto.
11.15 p.m.—Ad Crox, Scotch comedian.
11.30 p.m.—"Big Ben."
11.45 p.m.—From Her Majesty's Theatre, Sydney: The first act of the Musical Comedy,

"WILDFLOWER."

- featuring Marie Boucks and Herbert Browne (by permission of J. C. Williamson, Ltd.).
9.5 p.m.—From the Studio: Latest weather forecast.
9.55 p.m.—Win and Windie, English entertainers.
10 p.m.—Close down.

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

- 2FC.—Farmer's Broadcasting Station. 144.8 Metres, wavelength 442 metres, power 5000 watts.
2BL.—Broadcasters' Ltd., Sydney, wavelength 258 metres, power 5000 watts.
2BD.—Theological Broadcasting Station, Ltd., Sydney, wavelength 216 metres, power 3000 watts.
2ET.—Trade and Labor Council, Sydney, wavelength 288 metres, power 1200 watts.
2LW.—Sandel Radio, Sydney, wavelength 288 metres, power 500 watts.
2ML.—Mackler Bros., Rufford, wavelength 216 metres, power 350 watts.
2LE.—Electrical Utilites Supply Co., Sydney, wavelength 258 metres, power 500 watts.
2LR.—Laurian Electric Co., Sydney, wavelength 316 metres, 100 watts.
HFD.—H. A. Douglas, Newcastle, wavelength 268 metres, 100 watts.

- 2LH p.m.—Muriel O'Malley, contralto.
9.22 p.m.—Bruce Gibb will tell the story of "The Keg of Brandy," by Guy de Maupassant.
9.33 p.m.—Lionel Lunt, English baritone.
9.41 p.m.—Lionel Lawson, violinist.
9.50 p.m.—Andrew Higginson and Enid Lewis, entertainers:
(a) "Patrol."
(b) "Bachelor Days" (Wunderle).
(c) "I heard you singing" (Eric Coates).
9.58 p.m.—Selwyn Seymour, vocalists: "Christmas Day in the Workhouse" (G. B. Sims).
10.3 p.m.—Lionel Lunt, baritone.
10.15 p.m.—Ad Crox, Scotch comedian.
10.34 p.m.—Lionel Lawson, violinist.
10.35 p.m.—Latest weather forecast.
10.38 p.m.—Win and Windie, English entertainers.
10.40 p.m.—Selwyn Seymour, English close-up artist.
10.45 p.m.—"The Dars Devils" (Ingie Allen).
10.49 p.m.—Andrew Higginson and Enid Lewis, entertainers:
(a) "Patrol."
(b) "The Only Thing a Woman is Afraid Of" (Walt and Watson).
(c) "The Little Old Garden" (Thomas Hewitt).
10.57 p.m.—Late news and announcements.
11 p.m.—"Big Ben."
11.15 p.m.—National Anthem.
11.30 p.m.—Close down.

2BL, SYDNEY.

Broadcaster's Ltd.

Wave Length, 363 Metres.

Friday

EARLY MORNING SESSION.

8 a.m. to 9 a.m.

MORNING SESSION.

- 7.30 a.m.—G.P.O. Clock and Chimes.
Musical programme from the Studio.
7.45 a.m.—News from the "Daily Telegraph" (Fitzgerald).
7.50 a.m.—Musical programme from the Studio.
8 a.m.—G.P.O. Clock and Chimes.
8.15 a.m.—Announcements.
8.30 a.m.—Musical programme from the Studio.
8.45 a.m.—Women's Empire.
Talk on "Croquet," by Miss Gwen Varley, Broadcasters' Women's Events Authority.
Musical Notes: Replies to Correspondents, by Mrs. Jordan.
Talk on "Feuding the Family," by Mrs. Jordan.
9 a.m.—G.P.O. Clock and Chimes.
Special Ocean Forecast and Weather report.
9.15 a.m.—Musical programme from the Studio.
9.30 a.m.—Information: Mail, Shipping and Post Directories.
9.45 p.m.—Basis in call by Wireless.
9.55 p.m.—Fruit Market report.
10.15 p.m.—Vegetable Market report.
10.30 p.m.—London Mail Market report.
10.45 p.m.—Dairy Farm and Produce Market report.
11.00 p.m.—Foreign Market report.

Ask any Radio Engineer about Burgess.

12.24 p.m.—Fish market report.
 12.36 p.m.—Rabbit market report.
 12.54 p.m.—Stock Exchange report.
 12.59 p.m.—HMV Gramophone Record.
 1.27 p.m.—Stock Exchange report.
 1.30 p.m.—G.P.O. Clock and Chimes.
 Talk to Children and Special Entertainment for Children in Hospital.
 2 p.m.—G.P.O. Clock and Chimes.
 Close down.

AFTERNOON SESSION.

Racing information broadcast immediately after each race, by courtesy of the "Sun" Newspapers.
 2 p.m.—G.P.O. Clock and Chimes.
 Legal Talk by Mr. Ross Douglas.
 3.15 p.m.—Civil Service Stores Trio.
 2.50 p.m.—G.P.O. Clock and Chimes.
 Women's Session:
 Talk on "Banking," Talk on "Sport," by Miss Verber.
 4 p.m.—G.P.O. Clock and Chimes.
 Civil Service Stores Trio.
 4.15 p.m.—Talk on Women of the Orient of all ages.
 4.55 p.m.—Pianoforte recital from the Studio.
 4.55 p.m.—Resume of night's programmes.
 4.57 p.m.—Racing resume.
 4.59 p.m.—Special Opera forecast.
 5 p.m.—G.P.O. Clock and Chimes.
 Close down.

EARLY EVENING SESSION.

6.45 p.m.—G.P.O. Clock and Chimes.
 "Uncle Jack" and "Uncle Ben" entertain the Children.

SPECIAL COUNTRY SESSION.

8.30 p.m.—G.P.O. Clock and Chimes.
 Australian Newcastle Land and Finance Co's report.
 Weather report and forecast, by courtesy of the Government Meteorologist.
 Producers' Distributing Society's Fruit and Vegetable Market report.
 Clock Exchange reports.
 Grain and Fodder report ("Bun").
 Dairy Produce report ("Bun").
 N.E.M.A. Talk.
 Eucharistic Conference Notes.
 6.45 p.m.—News from the "Sun."
 7 p.m.—Musical Recital by courtesy of His Master's Voice Gramophone Co.
 7.10 p.m.—Talk on Gardening Science by Mr. Cooper, Park Superintendent, City Council.

EVENING SESSION

8 p.m.—G.P.O. Clock and Chimes.
 Broadcasters' Special Chorus.
 8.1 p.m.—Broadcasters' Light Orchestra, under the direction of Mr. J. Knight Barnett.
 8.13 p.m.—Miss Grace Jewell (contralto).
 8.20 p.m.—Mr. J. M. Post, voice soloist.
 8.27 p.m.—Mr. Norman Wright (tenor).
 8.34 p.m.—Miss Dulcie Blair (soprano soloist).
 8.41 p.m.—Mr. Bert Gilbert (comedian), assisted by Miss Ivy Ray, presents a further Adventure of Mr. Hopcroft.
 8.55 p.m.—Resume of following day's programme.
 9 p.m.—G.P.O. Clock and Chimes.
 9.1 p.m.—Broadcasters' Light Orchestra.
 9.11 p.m.—Miss Grace Jewell.
 9.18 p.m.—Mr. J. M. Post.
 9.25 p.m.—Broadcasters' Light Orchestra.
 9.35 p.m.—Mr. Norman Wright.
 9.43 p.m.—Miss Dulcie Blair.
 9.49 p.m.—Broadcasters' Light Orchestra.
 9.59 p.m.—Weather report and forecast, by courtesy of Mr. C. A. Hares, Government Meteorologist.
 10 p.m.—G.P.O. Clock and Chimes.
 10.1 p.m.—The Sporting Editor of the "Sun" will talk on the prospects of Saturday's Racing.
 10.16 p.m.—Hemans' Dance Orchestra under the direction of Mr. Merv. Lyons, Broadcast from Remuera.
 11.50 p.m.—G.P.O. Clock and Chimes.
 National Anthem.

2GB, SYDNEY

Theosophical Broadcasting Service.
 Wave Length, 316 Metres.

Friday.

MORNING SESSION.
 9 a.m.—Music.
 9.15 a.m.—Good Cheer talk.
 9.35 p.m.—Music.
 9.50 a.m.—Psychological Class.
 9.40 a.m.—Music.
 9.45 a.m.—Health and Diet.
 10 a.m.—Close down.

AFTERNOON SESSION.

2 p.m.—Music.
 2.35 p.m.—Address.
 2.50 p.m.—Music.
 3 p.m.—Address.
 4.25 p.m.—Music.
 4.30 p.m.—Close down.

NIGHT SESSION.

7 p.m.—Address.
 7.35 p.m.—Address.
 7.45 p.m.—Music.
 7.50 p.m.—Address.
 7.55 p.m.—Music.
 8 p.m.—Address, by Mr. F. Houshine, B.A.
 8.10 p.m.—Instrumental Trio, Dan Seally, Marielle Lang, Ada Brook.
 8.15 p.m.—Address by Dr. P. K. Boast.
 8.20 p.m.—Songs by Esie Brown.
 1. "My Lovely Gella" (George Munroe).
 2. "Princess Charming" (Lila Lehmann).
 8.25 p.m.—Instrumental Quartet, Dan Seally, Marielle Lang, L. Brewer, Ada Brook.
 8.30 p.m.—Piano solo Esie Brown.
 9 p.m.—Address by J. K. Powell.
 9.10 p.m.—Violin solo by L. Brewer.
 L. "Pale Moon" (Logan Kreidler).
 E. "Chanson Bretonne" (Rimsky Karneffoff).
 9.25 p.m.—Songs by Esie Brown.
 1. "Bid me discourse" (Hibberd).
 2. "Amarilla" (Wynne).
 9.30 p.m.—Instrumental Trio: Dan Seally, Marielle Lang, Ada Brook.
 9.40 p.m.—Good Cheer talk.
 10 p.m.—Close down.

2 UW, SYDNEY

Sandel Radio, Ltd.
 Wave Length, 267 Metres.

Friday

9 a.m.—News, shipping, mails, and studio items.
 9.45 a.m.—Women's session.
 10 a.m.—Close down.
 12.15 p.m.—Special employees' luncheon session.
 12.45 p.m.—Close down.
 1 p.m.—Where to go.
 1.10 p.m.—Studio items.
 1.30 p.m.—Miss Cecily Ellis, soprano: Selected.
 1.35 p.m.—Mr. G. F. Manuel, tenor: "I hear you calling me."
 1.46 p.m.—Mr. Reg Ellis: Jazz interlude.
 1.58 p.m.—Miss Jeanette Patterson, pianoforte solo:
 "Liebestraum."
 2.4 p.m.—Mr. G. F. Manuel, tenor: "Who is Sylvia?"
 2.15 p.m.—Miss Cecily Ellis, soprano: "Mummy like a rose" (Nevin).
 2.20 p.m.—News items.
 2.30 p.m.—Miss Jeanette Patterson, pianoforte solo:
 "Prelude in C Minor" (Bachmannoff).
 2.35 p.m.—Gen. F. Manuel, tenor: "Little Mother of Mine."
 2.46 p.m.—Jazz interlude by Mr. Reg Ellis.
 2.5 p.m.—Weather forecast and news.
 2.55 p.m.—Miss Jeanette Patterson, pianoforte solo:
 "Wedding Day" (Greig).
 3.15 p.m.—Studio items.
 3.50 p.m.—Close down.

3LO, MELBOURNE.

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

Friday.

MORNING SESSION.
 7.15 a.m.—"Herald" morning service.
 8.10 a.m.—Close down.

MIDDAY SESSION.

11.30 a.m.—Description of Interstate Cricket, Victoria v. South Australia; at M.C.G., by Mr. Rod McGregor.
 12 noon—Melbourne Observatory time signal.
 12.1 p.m.—Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange this day.
 Butler's and the Australian Press Association cables. British official wireless news from Rugby. "Argus" news service.
 12.20 p.m.—STUDIO QUARTETTE:
 "The Beauty Parade" (Schub).
 "Happy Holid Hours" (Schub).
 12.30 p.m.—ERN. THOMAN, entertainer:
 "Oh, list to me!"
 12.37 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. South Australia, at M.C.G., by Mr. Rod McGregor.
 12.52 p.m.—STUDIO QUARTETTE:
 "Two in a Bed" a Musical Contail, Mixed by Coppins, dematured by (Sanders).
 "Good night" (Harnes).
 1.2 p.m.—VAUDE AND VERNE, entertainers:
 "High Links."
 1.13 p.m.—Meteorological information. Weather forecast and rainfall for Victoria, Tasmania, South Australia and New South Wales. Ocean forecasts. River reports.
 1.19 p.m.—STUDIO QUARTETTE:
 "The Brocaded Petticoat."

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

5LO.—Broadcasting Company of Australia, Ltd., Melbourne, wavelength 371 metres, power 5000 watts.
 6LW.—Associated Radio Co. Ltd., Melbourne, wavelength 484 metres, power 5000 watts.
 4W.—Queensland Radio Service, Brisbane, wavelength 354 metres, power 2500 watts.
 4CL (Central) Broadcasters' Ltd., Adelaide, wavelength 395 metres, power 4000 watts.
 4WR.—Western Farmers, Ltd., Perth, wavelength 1230 metres, power 4000 watts.
 7ZL.—Tasmanian Broadcasters, Ltd., Hobart, wavelength 516 metres, 3000 watts.
 2DB.—The 2DB Broadcasting Co. Pty., Ltd., Capital House, Melbourne, wavelength 295 metres, power 500 watts.
 1U2.—J. J. Nilson & Co., Melbourne, wavelength 313 metres, power 100 watts.
 4WR.—Cold Radio Electric Service, Toowoomba, Queensland, wavelength 284 metres, power 100 watts.
 6KA.—Spurs & Sons' Broadcasting Station, Adelaide, wavelength 283 metres, power 1000 watts.
 6DN.—6DN Pty. Ltd., Adelaide, wavelength 213 metres, 500 watts.

- 1:28 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. South Australia, at M.C.G., by Mr. Rod McCreagh.
- 1:35 p.m.—THE PREMIER FOUR (his kind members) of J. C. Williamson, Ltd.:
"Melodine in the Wood" (Gosst).
"Sweet and Low" (Harnack).
- 1:40 p.m.—STUDIO QUARTETTE:
"Mollo's Song."
- 1:51 p.m.—ERN. TROTMAN, entertainer:
"Checkin'."
- 1:52 p.m.—THE PREMIER FOUR:
"I'd like to go down south once more" (Hicks).
"Ukulele Dream Man" (Sterling).
- 2 p.m.—Close down.
- 2:15 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. South Australia, at M.C.G., by Mr. Rod McCreagh.
- 2:30 p.m.—Close down.
- 2:35 p.m.—Description of INTERSTATE CRICKET MATCH, Victoria v. South Australia, at M.C.G., by Mr. Rod McCreagh.

AFTERNOON SESSION.

- 3 p.m.—Melodine (Observatory) time signal.
- 3:10 p.m.—STUDIO QUARTETTE:
"Sounds from Italy."
- 3:10 p.m.—MISS FRANCES FRASER:
"Ring Out the Old, Ring in the New."
- 3:25 p.m.—EILEEN CASTLES, soprano:
"On Wings of Song" (Mandelstam).
"Like the Rosebud" (La Forge).
- 3:32 p.m.—STUDIO QUARTETTE:
"Suite Tragicque," Part 1 (Fr. Busse).
- 3:39 p.m.—ALBERT CARLILE, tenor (by permission J. C. Williamson, Ltd.):
"A Love Not Just for You" (Loehr).
"Angels Guard Them" (Gosard).
- 3:43 p.m.—STUDIO QUARTETTE:
"Suite Tragicque," Part 2 (Fr. Busse).
- 3:42 p.m.—Description of interstate cricket match, Victoria v. South Australia, at M.C.G., by Mr. Rod McCreagh.
- 4 p.m.—EILEEN CASTLES, soprano:
"Qui La Voe" (Bellini).
"Such a Lil' Fellow" (Diermond).
- 4:1 p.m.—STUDIO QUARTETTE:
"The Franciscan" (Boydell).
- 4:11 p.m.—ALBERT CARLILE, tenor:
"Quona o' Quilla" (Bjorketer).
"Rosebud" (Drummond).
- 4:21 p.m.—MR. M. CALLAWAY MARGOLD:
"Such a Lil' Fellow" (Diermond).
- 4:43 p.m.—"Herald" news service.
- 5 p.m.—Description of interstate cricket match, Victoria v. South Australia, at M.C.G., by Mr. Rod McCreagh.
- 5:15 p.m.—Close down.

EVENING SESSION.

- 5:30 p.m.—Answers to letters and birthday greetings by "HILLY BUNNY."
- 5:50 p.m.—MR. ROD McCREAGH will give a description of the final of today's interstate cricket match, Victoria v. South Australia, at M.C.G.
- 6 p.m.—"BILLY BONNY" will continue the greetings.
- 6:10 p.m.—JESSIE SMITH, contralto:
"Babe's Mine" (J. Smith).
- 6:15 p.m.—"Herald" news service.
- 6:17 p.m.—CAPTAIN DONALD McLEAN:
"A Tale of the Skull and Cross Bones."
- 6:22 p.m.—JESSIE SMITH, contralto:
Songs for the children.
- 6:40 p.m.—Official report of Newmarket Stock Sale by the Associated Stock and Station Agents, Bourke street, Melbourne.
- 6:45 p.m.—"Herald" news service. Weather particulars. Shipping movements.
- 6:52 p.m.—Stock Exchange information.
- 6:57 p.m.—Fish market reports by J. R. Keeney, Ltd. Rabbit prices.
- 6:59 p.m.—Rover reports.
- 7 p.m.—Market reports by the Victorian Traders' Cooperative Co., Ltd. Poultry, grain, hay, straw, late dairy produce, potatoes and onions. Market reports of fruit by the Victorian Fruitgrowers' Association. Retail prices. Wholesale prices of fruit by the Wholesale Fruit Merchants' Association. Citrus fruits.

NIGHT SESSION.

- 7:15 p.m.—Superphonic Sonora Recital! Programme of specially selected items:
March, "The Nut Grove."
- 7:30 p.m.—COLLINGWOOD CITIZENS' BAND:
"Fort Fort," Al. Sanderson.
7:40 p.m.—ERN. TROTMAN, entertainer:
"The Water" (Le Brun).
7:41 p.m.—MR. H. K. LOVE:
"Tonalities."
- Mr. Love will be glad to attend to your wireless difficulties, and we ask you to write to him for any advice that you may require.
- 7:57 p.m.—COLLINGWOOD CITIZENS' BAND:
Selection, "The Mithad."
8:17 p.m.—ERN. TROTMAN, entertainer:
"Sixty Writings" (C. Grey).
- 8:24 p.m.—GUEST GEORGIO MANZONI (mandolinist).
Solo, "The Storm" (unaccompanied (Cheloni).
- 8:24 p.m.—SOUTHERN CHORAL SOCIETY—
Solo, "The Hills of New York."
Choir, "The Hills of St. Mary" (Adams).
"Just a Cobble small" (Henly).
- 8:28 p.m.—COLLINGWOOD CITIZENS' BAND:
Current solo, "Beulah."
8:28 p.m.—Spotlights on Evening Newspaper Production, by GEORGE TAYLOR News Editor of the "Herald."
"The Handling and Distribution of News."
8:50 p.m.—GUEST GEORGIO MANZONI, Mandolinist.
Solo, "Melody" arr. (H. O. Mansoni).
8:55 p.m.—Announcements.
- Did you write or wire to the Old Folks at Home for Christmas? They will be thinking of you. How about sending them Greetings for the New Year? Do you remember Len White singing, "He's Coming Home?"
- 9:4 p.m.—EILEEN CASTLES, soprano:
"Cunna To" (Thomas).
"His Little Teard Beae" (Thomas).
- 9:21 p.m.—VAUDE AND VERNE:
"Bright Day."
9:21 p.m.—COLLINGWOOD CITIZENS' BAND:
Intermezzo, "After Sunset."
9:28 p.m.—MR. AND MRS. GRAHAM BURGIN:
Duo, "In the Garden of My Heart" (Hall).
"The Youngster" (Sanderson).
- 9:35 p.m.—COLLINGWOOD CITIZENS' BAND:
Waltz, "Fond Memories."
9:42 p.m.—ERN. TROTMAN, entertainer:
Selected.

- 9:50 p.m.—"DONCASTER" (Mr. Frank Dea-ter), of the "Argus," will speak on tomorrow's races at Enam.
- 10 p.m.—EILEEN CASTLES, soprano:
"Smile as the Night" (Lobo).
"Serenade de Gulliver" (Gaulther).
- 10:17 p.m.—COLLINGWOOD CITIZENS' BAND:
"Tomorrow solo, "The Trumpeter."
10:18 p.m.—"Argus" news service. Meteorological information. Road Notes.
- 10:24 p.m.—GRAHAM BURGIN, baritone:
"Love Lily."
"Lighterman Tom" (Squire).
- 10:30 p.m.—COLLINGWOOD CITIZENS' BAND:
March, "Fort Lincoln."
- 10:35 p.m.—SOUTHERN CHORAL SOCIETY, with band accompaniment by the Collingwood Citizens' Band:
"Peace Come Again" (Stanford).
"The Gloria" (Mozart).
- 10:42 p.m.—British official wireless news from Rome. Announcements. Island Master's comments.
- 10:50 p.m.—MR. ARONSON AND HIS SYMPATHIZING SYMPHONISTS:
"Are You Happy" (Yellen).
"So Blue" (De Sylva).
"The Spinks Just Sit and Think and Think" (Fried).
- 11 p.m.—OUR GREAT THOUGHT:
"Whatever the past year may have meant to you, make it dead history. But let the New Year be a living year. Enter the year with as bright a thought for everyone. You need not kiss the hand that smote you, but grasp it in cordial feeling, and that will you and yours be happy."
- 11:1 p.m.—MR. ARONSON AND HIS SYMPATHIZING SYMPHONISTS.
- 11:40 p.m.—GOD SAVE THE KING.

3AR, MELBOURNE

Associated Radio Co.
Wave Length, 484 Metres.

Friday.

MORNING NEWS SESSION.
12:30 to 12:50 p.m.

MIDNIGHT CONCERT BESS ON.

- 12:1 p.m.—Transmitted from Esmerette House, 121 Collins Street (by wireless permission of Wills and Paton Ltd) on the Brunswick Peninsula.
- 12:1 p.m.—Close down.

MATTIN SESSION
DANCE CONCERT.

- 2:30 p.m.—Studio Orchestra:
"Overture to an Irish Comedy" (Ansell).
Selection, "The Carmen" (Ar. Tchaik).
2:38 p.m.—Mr. Tom White, clarinet:
"Andante and Polonaise" (La Telle).
2:58 p.m.—Ayras Danonians.
2:58 p.m.—Mr. Herbert Pettrifer, violin:
"Serenade" (Tchaikowsky).
- 3:10 p.m.—Studio Orchestra:
"Bardiana Sketches" (White).
Suite, "Danstik" (Tchaikowsky).
3:10 p.m.—Mr. Allen Adeock, humorous entertainer. In some regular numbers from his little girgle book!
- 3:17 p.m.—Ayras Danonians.
- 4 p.m.—G.P.O. Check and "Four."
- 4:1 p.m.—And Weather forecast.
- 4:3 p.m.—Announcements.
- 4:5 p.m.—Max Ethel Brearley, piano:
"Valse" (Liszt).
5 p.m.—Ayras Danonians.
5:30 p.m.—Allen Adeock, entertainer.
The popular comedian turns over another one of his Fat Ladies' conversation books to find some funny stories of the piano.
- 4:58 p.m.—Studio Orchestra:
Triolet Suite "Nymph" (Hollway).
4:58 p.m.—To-night's Entertainment.
5 p.m.—G.P.O. Check and "Five."
Close down.

NEW ZEALAND STATIONS;

- 1YA, Auckland, The Radio Broadcasting Co. of New Zealand, Ltd.
Power 500 Watts; Wave-length, 333 Metres. Silent Night, Monday.
- 2YA, Wellington, The Radio Broadcasting Co. of New Zealand, Ltd.
Power 5000 Watts; Wave-length, 420 Metres.
- 3YA, Christchurch, The Radio Broadcasting Co. of New Zealand, Ltd.
Power 500 Watts; Wave-length, 306 Metres. Silent Night, Thursday.
- 4YA, Dunedin, The Radio Broadcasting Co. of New Zealand, Ltd.
Power 750 Watts; Wave-length, 463 Metres.

CHILDREN'S SESSION.

8.30 p.m.—The Farmyard Fives.

EVENING SESSION.

New Year Camp-Fire Night.

8.30 p.m.—"The Romance of Ice Cream."

An interesting account of the strange history of frozen delicacies from Arctic times to nowadays by Mr. O. A. Meadekosh, B.Sc., F.C.S., A.A.C.I. Public Analyst.

8.45 p.m.—"Fifth Class" Special review for teachers' week.

9.15 p.m.—Week-end Tourist's Guide.

9.30 p.m.—Mr. Walter Quirk, piano:

"Liebestraum" (Liszt).

"John Danes" (Nationalist Duet).

9.45 p.m.—Mr. Noel Barker, baritone:

"Hybrid the Orphan" (Elliot).

"I'll sing to you" (Thompson).

10.15 p.m.—Hawaiian Instrumental Trio, Steel

Guitar, Spanish Guitar, Ukulele.

Conductor: Miss Emily Halaal of Ballarat.

"Aloha" (Kaal).

"Honey Mary of Argyll" (Nelsoo).

"Hawaiian Hula" (Kaal).

9.35 p.m.—"Brigade and Hood."

More of the series of adventures in the

act by "Ivan."

10.15 p.m.—Mr. Harry Loft, tenor:

"Master Joubert" (Grimshaw).

"March Normans" (Kowalski).

10.45 p.m.—Music story with verse by the com-

posers writers and poets of Australia.

Miss Beth Currie, contralto:

"Thinking" (Brand).

"Waxy wind of the West" (Coutts).

10.50 p.m.—Miss Milly Hunt, violin.

Two pieces from a suite by Louis Lavater:

(a) "Andalé"

(b) "Bagatelle"

"Innocence" (Ester Rofel).

10.57 p.m.—Mr. W. McLennan:

An interlude of whimsical humor who will

add to his act of quaint stories, "The

Kookaburra Song," one of his own com-

positions.

11 p.m.—Special New Year Camp Fire—

Special:

Mr. V. Hutton-Brown. Specially arranged

series from the poems of Robert W. Service

("The Spilling of Canada").

The musical accompaniments and effects

during the Camp Fire have been arranged

by Mr. Walter Quirk and Miss Helen Moore.

11.35 p.m.—Mr. Arthur Kempton, baritone:

"Nocturne" (Drukey Glantz).

"Wreckshire Woeing" (Wm. James).

11.42 p.m.—Miss Milly Hunt, violin:

"Vespérale" (Stewart Burton).

"Serenade" (Stewart Burton).

"Columbus" (Milly Hunt).

11.49 p.m.—Miss Beth Currie, contralto:

"Waltz Maori" (A.H. Bing).

"Before the Dawn" (Lang).

11.56 p.m.—Announcements.

10 p.m.—G.P.O. Clock says "Ten."

10.2 p.m.—Mr. Nathan S. Spielvogel.

One of our best-known authors will narrate

the legend of his thrilling series on "The

Affair at Burska."

This incident in the historic Eureka

Rebellion is entitled:

"Hunting the Southern Cross."

10.14 p.m.—Mr. W. H. McLennan:

Further stories and quaint fun and, as an

added item his own original composition!

The Bunions' Song" (Milly Hunt).

10.21 p.m.—Mr. Arthur Kempton, baritone:

"If you had sought to say to me" (Felix

Hart).

"Love and Sleep" (Felix Hart).

10.27 p.m.—Oversea agents items from every-

where.

10.25 p.m.—Miss Emily Halaal, steel guitar:

with accompaniment by piano, Spanish

guitar and ukulele.

"Kalanui" (Keei Awa).

"Danny Boy" (Rud. sup).

"Kahala March" (A.C. Fern. Kaal).

10.35 p.m.—Mr. Noel Barker, baritone:

"Glorious Dawn" (German).

"The Little Irish Girl" (Lobe).

10.42 p.m.—Mr. Harry Loft, tenor:

"Cupid's arrow" (Vera-Owen).

"Dreams of Darkie lands" (Heller).

10.50 p.m.—"Age" News bulletin, exclusive to

"A.R."

10.55 p.m.—Our Australian Good-Night Quote

is taken from the poem: "The Spinner" by

Mary Gilmore.

11 p.m.—G.P.O. Clock says "Eleven."

God Save the King.

4QG, BRISBANE

Queensland Radio Service

Wave Length, 305 Metres.

Friday.

MIDDAY SESSION.

1 p.m.—Market reports; weather information;

"The Daily Mail" and "The Daily Standard"

news.

1.20 p.m.—Lunch hour music.

1.35 p.m.—Standard time signal.

2 p.m.—Close down.

AFTERNOON SESSION.

2.30 p.m.—A programme of music from the

Studio.

4.15 p.m.—"The Telegraph" news; weather

news.

4.45 p.m.—Close down.

EARLY EVENING SESSION.

5 p.m.—"Daily Standard" news; weather in-

formation; announcements.

8.10 p.m.—A talk on Teeth: "Deciduous Teeth,

Normal and Irregular," by Mr. W. G. Ling-

worth (Dental Surgeon).

8.30 p.m.—Bedtime stories by "The Seaman"

7 p.m.—Market reports; stock reports.

9.30 p.m.—Weather news; announcements.

10.15 p.m.—Standard time signal.

10.40 p.m.—Lectures: A review of tomorrow's

sailing.

NIGHT SESSION.

9 p.m.—From the Tivoli Theatre:

Orchestral music and vocalists. Tivoli

Operatic Orchestra, under the baton of Mr.

C. G. Gross.

8.30 p.m.—Hawaiian instrumentalists:

The Aloha Novelty Trio.

Hawaiian solo: "Land of Delight" (Sander-

son).

Mr. D. K. Symes.

Overture, "King Myra" (Ellenberg).

The Studio Orchestra.

Soprano solo: "Bird of Love Divine" (Feyn-

wood).

Miss Jean McDougall.

Ten Minutes of Humour, by the Mahony

Duo.

10.15 p.m.—Week-end road information for

Motorists, officially supplied by the Royal

Automobile Club of Queensland.

11.15 p.m.—Characteristic Pat Peruri:

"Tangled Yarns" (Kestely).

The Studio Orchestra.

Piano and English concertina in Selected

Numbers.

Mr. and Miss Griffiths.

Baritone solo:

"Jogging Along the Highway" (Banuel).

Mr. D. K. Symes.

Cornet and Clarinet Duet:

"The Partners" (Cramer).

Mezzo: H. Jackson and C. Hansen.

Hawaiian Instrumental Trio:

The Aloha Novelty Trio.

Soprano solo:

"The Strain of Pearl" (Phillips).

Miss Jean McDougall.

March, "The Constitution" (Carey).

The Studio Orchestra.

10 p.m.—From the Studio:

"The Daily Mail" news.

Weather news.

Close down.

5CL, ADELAIDE

Central Broadcasters, Ltd.

Wave Length, 305 Metres.

Friday.

MORNING SESSION.

11 noon to 2 p.m.

AFTERNOON SESSION.

3 p.m.—G.P.O. Chimes.

3.15 p.m.—Orchestral selections from the Maple

Leaf Club.

Section: "The Golden Mesh" (Novosil).

"Bells across the Meadows" (Kreller).

Solo: "Just one again" (Donner).

Violin solo: "Le Grenier" (Saint-Saëns).

Waltz: "Charmaine" (Felsch).

3.45 p.m.—Music numbers from the studio.

4 p.m.—G.P.O. Chimes.

4.15 p.m.—Orchestral selections from the

Arcadia Cafe.

Vocalist, Yveta Harvey.

4.57 p.m.—S. C. Ward and Co's Stock ex-

change intelligence.

5 p.m.—G.P.O. Chimes and close down.

EVENING SESSION.

6 p.m.—G.P.O. Chimes.

6.15 p.m.—Dinner Music by Covent Garden

Orchestra.

5.50 p.m.—Children's time.

7.20 p.m.—Market reports by W. A. Sandford

& Co. A. S. Hall & Co. Dalgety & Co.

S. A. Farmers Co-operative Union, Taylor

Bro, Retail Grocer's Association, J. H.

Young's special report on the Tambo Mac-

quarie Intestate Fruit and Produce Market

Co. Ltd. S. C. Ward and Co's Stock ex-

change intelligence.

7.30 p.m.—Extracts from "News Bulletin."

7.25 p.m.—Windup sporting services.

7.50 p.m.—Extracts from "Willow."

8 p.m.—G.P.O. Chimes.

8.1 p.m.—Orchestral selections by Malook

Reid's Orchestra.

8.20 p.m.—Tenor solo, Hubert King.

8.24 p.m.—Orchestral selections continued Mal-

ook Reid's Orchestra.

8.45 p.m.—Tenor solo, Hubert King.

8.48 p.m.—Selections by Malook Reid and

Co's Orchestra.

9 p.m.—G.P.O. Chimes.

9.15 p.m.—Meteorological information.

9.5 p.m.—Dalgety's wheat report.

9.55 p.m.—Quartette, Madras, Male Quartette.

9.55 p.m.—Violin solo, Fred Grulk.

10.15 p.m.—Baritone solo, Frank McCall.

10.16 p.m.—Baritone solo, Seth Smith.

10.20 p.m.—Quartette, Madras, Male Quartette.

10.25 p.m.—Violin solo, Fred Grulk.

10.30 p.m.—Comedy Sketch, Duo Parrell.

10.35 p.m.—Baritone solo, Frank McCall.

10.41 p.m.—Baritone solo, Seth Smith.

10.45 p.m.—Bass solo, Arthur Bartie.

10.49 p.m.—Comedy Sketch, Duo Parrell.

10.51 p.m.—Baritone solo, Seth Smith.

10.54 p.m.—Bass solo, Arthur Bartie.

10 p.m.—G.P.O. Chimes.

10.1 p.m.—"Advertiser" news service.

10.15 p.m.—Comedy sketch, Duo Parrell.

10.18 p.m.—Radio Solo, Seth Smith.

FOREIGN BROADCASTERS.

JOCK—Nagasaki Radio Broadcasting Co.,

Nagasaki, JAPAN: 308 metres, 1000

watts. (Announcement in English and

Japanese).

JOBK—Osaka Central Broadcasting Co.,

Osaka, JAPAN: 335 metres, 1000

watts. (Announcement in English and

Japanese).

JOAK—Tokyo Broadcasting Co. Tokyo,

JAPAN: 375 metres, 1000 watts.

(Announcement in English and

Japanese).

JFC—Bataviaische Radio Verzending,

BATAVIA, 226 metres, 40 watts.

KZBK—Manila, PHILIPPINE IS-

LANDS: 473 metres, 1000 watts.

(Announcement in English and

Philippine).

KIU—Hollandia Advertiser, Hollandia,

HAWAII 270 metres, 100 watts.

KGO—Oakland, CALIFORNIA: 301.5

metres, 5000 watts.

KFI—Los Angeles, CALIFORNIA, 467

metres, 5000 watts.

KOA—Denver, COLORADO: 322.4

metres, 1000 watts.

10.33 p.m.—Man solo, Arthur Barrie.
 10.37 p.m.—Station announcements.
 10.40 p.m.—Solo from the Maison De Danse.
 Gleeing—Dance selections.
 10.55 p.m.—Saturday's programme, Meteorological information.
 11.1 p.m.—G.P.O. Chimes and close down.

6WF, PERTH

Westralian Farmer's.

Wave Length, 1250 Metres.

Friday.

12.50 p.m.—Tune in.
 12.55 p.m.—Market, News and Cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 1.5 p.m.—Studio Quintette.
 2 p.m.—Class down.
 2.30 p.m.—Tune in.
 2.35 p.m.—Organ music relayed from the Grand Theatre, Murray Street.
 Vocal instruction from the Studio.
 4.20 p.m.—Close down.
 4.45 p.m.—Tune in.
 4.50 p.m.—Musical evening for the Kiddies by Louise Henry and Duffy.
 5.30 p.m.—Stocks, Markets, News.
 7.45 p.m.—Racing talk by the Sporting Editor of "Truth" Newspaper Coy.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 Station announcements such as alterations to programmes, etc.

POPULAR NIGHT.

8.3 p.m.—Musical programme, including vocal and instrumental artists.
 Items by the Messrs Mason and De Boulay, instrumental duo, of the La Kitchener.
 Orchestral music, played by Hoyt's Orchestra, conducted by Mr. Harold Partridge, relayed from Hoyt's Regent Theatre, William Street.

10 p.m.—Talk: "Sail Work and Life Saving," by Mr. C. Rader, President, City of Perth Rowing Club.
 10 p.m.—Late News Items, by courtesy of "The Daily News" Newspaper Coy.
 Ships with range announcement.
 Weather Report and Forecast.
 10.30 p.m.—Close down.

11.45 METRE TRANSMISSION.
 Simultaneous broadcast on 164.5 Metres of Programme given on 1250 Metres, commencing at 4.45 p.m.

7ZL, HOBART

Tasmanian Broadcasters, Ltd.

Wave Length, 516 Metres.

Friday

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

2 p.m.—G.P.O. Clock chimes the Hour.
 3.1 p.m.—Tune in selection.
 4 p.m.—Hobart Stock Exchange Quotations.
 Weather information.
 Items of interest.
 4.15 p.m.—Orchestral selections by 7ZL Studio.
 Trio.
 March, "Centurion" (Coper).
 Solo, "Summer Days" (Coster).
 "Alcade" (Berger).
 Selection, "Tip Top" (Sullivan).
 "Fin rotter Parade" (Jussel).
 Violin solo, Selected, Mr. J. McEwan.
 4.3 p.m.—Educational talk.
 4.35 p.m.—Close down.

EARLY EVENING SESSION.

5.30 p.m.—Children's Corner with the "Radio Lady."
 5 p.m.—Young Folks' Gardening Chat by Mr. George Nalton.
 NIGHT SESSION.

7.50 p.m.—Musical selection, from "Foolery and Prologue Republic, through the courtesy of Roberta and Co., Ltd., Hobart.
 7.55 p.m.—Weekly Gardening Talk by Mr. George Nalton, of Glen Nervaria, Coocandoo.
 7.58 p.m.—"Mercury" special Tasmanian news service.
 Railway station produce sales.
 Weather forecasts.
 8 p.m.—G.P.O. Clock chimes the Hour.
 8.1 p.m.—Selections by 7ZL Studio Trio: "A Trip to the North Pole" (Zawadzki).
 Intermezzo, "Gossamer" (Bord).
 Valse, "Husky" (Drigt).
 Clarinet solo, Selected, Mr. A. Caidle.
 "In the Children" (Torpang).
 Selections from "Our Miss Gibbs" (Caryl and Mouskoff).
 "Chanson Trixie" (Tschakowsky).
 Intermezzo, "The Merry Puppets" (Petroni).
 Pianoforte solo, Selected, Mr. A. Roberts.
 "Polish dance" (Barock).
 "Jazzette" (Ancliffe).
 "Ray Gallantry" (Fletcher).
 Items interspersed by the following:
 Mrs. Jack Green (soprano).
 Mrs. Ken Deer (contralto).
 Miss Ruby Pharo (pianist).
 Miss Nancy Cain (solist).
 Mr. Harry Foster (baritone).
 Mr. Thomas Dod (baritone).
 8.45 p.m.—British official wireless news.
 8.50 p.m.—"Mercury" special inter-State news service.

Tasmanian District Weather Reports.
 9 p.m.—Weather forecast.
 Station announcements; Tomorrow's programme.
 National Anthem.

Saturday, Dec. 31

2FC, SYDNEY

EARLY EVENING SESSION.

7 a.m. to 9 a.m.

MORNING SESSION.

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

Short Wave Broadcaster's

Schedules and Wavelengths Subject to Change.

2NM, Gerald Mercus, Catterham, England, 20 and 44 metres (B.B.C. Programme).
 PC22, Philips' Experimental Station, Eindhoven, Holland, 30.2 metres (B.B.C. Programme).
 2XAF, General Electric Co., Schenectady, New York State, U.S.A., 27.77 metres (W.G.Y. Programme).
 2XAT, General Electric Co., Schenectady, New York State, 14, 20 and 32 metres (W.G.Y. Programme).
 XDA, Westinghouse Electric Co., Pittsburgh, Penn., U.S.A., 43.3, 34 and 44 metres.
 W.T.W., Crosley Radio Corporation, Cincinnati, Ohio, U.S.A., 52 metres.
 2XAL, "Radio News," New York City, U.S.A., 30.91 metres (W.G.Y. Programme).
 JR, Johannesburg Broadcasting Company, South Africa, 30 and 29 metres.
 2XW, Marconi Company, Chelmsford, England, 24 metres.
 RPN, Moscow, U.S.S.R., 29 metres.

10.15 a.m.—"Galaxy Morning Herald" news service.
 10.20 a.m.—Studio music.
 10.35 a.m.—A talk by the 2FC Racing Commissioner.
 10.45 a.m.—Studio music.
 11 a.m.—"Big Ben."
 A. A. and Robinson's Cable Services.
 11.5 a.m.—A talk on Gardening, by Mr. G. J. Lockley ("Redgem"), until 11.55 a.m.

MIDDAY AND AFTERNOON SESSIONS.

11.40 a.m.—From the Sydney Cricket Ground: A complete description of the play, New South Wales versus Queensland, Cricket match.
 12 noon—"Big Ben" and announcements.
 12.2 p.m.—Stock Exchange, first call.
 12.3 p.m.—Studio music.
 12.35 p.m.—"Sydney Morning Herald" news service.
 12.45 p.m.—Rugby wireless news.
 12.55 a.m.—Studio music.
 NUTS, Events of the A.F.C. Meeting at Randwick, will be described throughout the day by the I.F.C. Racing Commissioner, Cricket scores and a description of the play until the luncheon adjournment at 1.15 p.m.
 1.15 p.m.—Weather intelligence.
 1.15 p.m.—"Teatime News" military news service.
 1.30 p.m.—Studio music, interspersed with news descriptions and results.
 2 p.m.—From the Sydney Cricket Ground: Further description of the Cricket match, New South Wales versus Queensland, during Mailing and Cricket intervals the following Musical Items will be given:
 From the Crystal Palace Theatre, George Street, Sydney:
 Orchestral Gems, under the baton of Mr. Harry Green.
 From the Studios:
 During Mailing and Cricket intervals:
 White, White, loudly played.
 Lionel Lott, English baritone.
 Sid Montague and Cliff Arnold, instrumentalists.
 (a) "Everything's made for love" (Tobias and Sherman).
 (b) "Red Lion—like my blue away" (Braga and Wendling).
 (c) "Suzette" (Hound) (Wendel) (Italy).
 (d) "All I Want to Do" (Darandani).
 (e) "I'll not a sweetie No" (Bacchi and Gilliam).
 (f) "Ain't so may be."

4.10 p.m.—Sporting results.
 Cricket scores and description of play until 4.40 p.m.

EARLY EVENING SESSION.

5.40 p.m.—The chimes of 2FC.
 5.45 p.m.—The "Hello Man" talks in the studios.
 5.50 p.m.—Story line for the young folk.
 6.45 p.m.—Studio music.
 7 p.m.—"Big Ben." Weather intelligence.
 7.30 p.m.—Late sporting news.
 7.15 p.m.—"Evening News" late news service.
 7.25 p.m.—Studio music.

NIGHT SESSION.

7.40 p.m.—Programme announcements.
 7.45 p.m.—2FC Studio Bulletin.
 Following the practice of previous years, I.F.C.'s principal artists will assemble in the studio and provide an all-star programme.
 7.50 p.m.—R. A. Hartmann, baritone.
 "Red Star of Romance" (Sunderland).
 7.55 p.m.—Madame Evelyn Grigg.
 Pianoforte solo.
 8 p.m.—Alfred Cunningham, baritone.
 "Chorus Gentlemen" (Lohr).
 8.5 p.m.—Win and Wanda, English soprano.
 8.10 p.m.—Ellie Perlow, soprano.
 "Spring is Here" (Henschelberg).
 8.15 p.m.—Lionel Lawson, violinist.
 8.20 p.m.—Raymond Ellis, English operatic baritone.
 8.25 p.m.—Sofia Alexander.
 8.30 p.m.—Madame Lilian Gillson, contralto.
 8.35 p.m.—Eril Monk, violinist.
 "Laudatory Air" (Mrs. Monk).

There's the right Burgess for every Set

- 8.40 p.m.—Oliver King, bass:
"Come, let's be merry" (Wilson).
- 9.00 p.m.—Iris Galt, soprano:
"Heart's Ease" (Willeby).
- 9.10 p.m.—Gleeth Boyd, contralto:
"Heart's Ease" (Willeby).
- 9.15 p.m.—Brinston Gibb, elocutionist:
"Mirinda Bounding" (Rotherford).
- 9.20 p.m.—"Big Ben": Late weather forecast.
Lindley Kovna, pianoforte solo.
- 9.3 p.m.—James Brash, and Alec Prouse, contralto:
"Open thy blue eyes" (Massenet, arr. Brash).
- 9.19 p.m.—Alexander Korzenjky, pianoforte solo:
"In Autumn" (Moszkowski).
- 9.15 p.m.—James Donnelly, tenor.
9.20 p.m.—H. W. Varca.
9.25 p.m.—Louise Hanfner, lady harpistess:
"Thanks very much" (Hat Parcell).
- 9.30 p.m.—Mabel Batchelor, soprano:
"Minetta's Waltz Song" (Puccini).
- 9.35 p.m.—Montgomery Stuart, elocutionist.
9.40 p.m.—Gwen Selva, soprano:
"The Sarah Rose" (Arditti).
- 9.45 p.m.—Wally Davson, comedien.
9.50 p.m.—Ernest Archer, tenor.
9.55 p.m.—Wilfred Thomas, bass.
10.00 p.m.—Carlton Page, pianoforte solo:
"Impromptu in A Flat, Opus 142" (Schubert).
- 10.5 p.m.—Virginia Bessant, contralto:
"A Shepherd's Song" (Bontal).
- 10.10 p.m.—Shirley Cooke, soprante.
10.15 p.m.—Charles Lawrence, entertainer.
10.20 p.m.—Erni D'Arcy, soprano:
"Anne Laurie" (Lehmann).
- 10.25 p.m.—Len Maurice, popular baritone.
10.30 p.m.—Late weather forecast.
Peggy Dunbar, contralto.
10.35 p.m.—Harry White, novelty pianist.
10.40 p.m.—Ad Cree, Scotch comedian.
10.45 p.m.—Jillie Van Der Ziel, radio solo.
10.50 p.m.—Clyde Finlay, emcee:
"Who is Sylvia?"
10.55 p.m.—Cec Morrison conducting the 2FC Studio Dance Band in popular numbers until 1.30 a.m.
- 11.30 p.m.—From the Lyceum Hall, Pitt Street, Sydney.
Rev. F. H. Bassant will conduct a Watch-night Service.
12 midnight—"Big Ben"
From the Studio:
New Year Greetings from 2FC.
12.5 a.m.—National Anthem.
Close down.

2BL, SYDNEY.

Saturday.

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

MORNING SESSION.

- 11 a.m.—G.P.O. Clock and Chimes.
Musical programme from the Studio.
12.15 p.m.—Women's Section: Social Notes by Mrs. Jordan, and Talk.

AFTERNOON SESSION.

- 12 noon.—G.P.O. Clock and Chimes.
Special Open Forecast and Weather Report.
12.30 p.m.—Musical programme from the Studio.
12.40 p.m.—News from "Sun."
12.50 p.m.—Sporting and athletic features.
12.57 p.m.—What's on at the Picture and Theatre.
12.59 p.m.—Musical programme from the Studio.
12.40 p.m.—News from "Sun."
12.50 p.m.—Musical programme from the Studio.
1 p.m.—G.P.O. Clock and Chimes.
Musical programme from Studio.
1.10 p.m.—Sporting talk and athletic features for the day.
1.20 p.m.—Musical programme from the Studio.
1.30 p.m.—G.P.O. Clock and Chimes.
Talk to children and special entertainment for children in hospital.
2 p.m.—G.P.O. Clock and Chimes.
Racing resume.

- 2.1 p.m.—Talk on Women of the Orient of all ages.
2.30 p.m.—Musical programme from the Studio.
2.50 p.m.—G.P.O. Clock and Chimes.
News from the "Sun."
2.40 p.m.—Musical programme from the Studio.
3.35 p.m.—News from the "Sun."
3 p.m.—G.P.O. Clock and Chimes.
Racing resume.
3.30 p.m.—Musical programme from the Studio.
3.35 p.m.—News from the "Sun."
3.25 p.m.—Musical programme from Studio.
3.40 p.m.—Dunwoody Dance Band, broadcast from Dunwoody Cabaret.
4 a.m.—G.P.O. Clock and Chimes.
Racing resume.
4.30 p.m.—Musical programme from the Studio.
4.50 p.m.—News from the "Sun."
4.40 p.m.—Dunwoody Dance Band.
4.50 p.m.—Resume of night's programme.
4.52 p.m.—Racing resume.
5 p.m.—G.P.O. Clock and Chimes.
Close down.

EARLY EVENING SESSION.

- 8.45 p.m.—G.P.O. Clock and Chimes.
Uncle Jack and Uncle Bass will entertain the children.
9.30 p.m.—Singing results and country news from the "Sun."
9 p.m.—Musical programme from the Studio.
9.30 p.m.—Talk on "The Aborigines" by "Irlings".

EVENING SESSION.

- 9 p.m.—G.P.O. Clock and Chimes.
Broadcasters' Teatime.
9.4 p.m.—Special Dance Night.
During intervals between dances, humorous and popular items will be broadcast from the Studio.
10 p.m.—G.P.O. Clock and Chimes.
National Anthem.

2 UW, SYDNEY

Saturday.

CLOSE DOWN.

3LO, MELBOURNE.

Saturday.

MORNING SESSION.

- 7.15 a.m.—Herald Morning Session.
7.45 a.m.—Close Down.

MIDDAY SESSION.

- 11 a.m.—JOE ARONSON AND HIS SYND. SYMPHONISTS:
"The Mad Water" (Friend).
"Kerouathin' Pooches" (Squire).
"Mamma's Guss Young, Papa's Guss Did" (Lee).
11.30 a.m.—Description of Interstate Cricket Victoria against South Australia at the M.C.G. by Mr. Rod McGregor.
11.35 a.m.—JOE ARONSON AND HIS SYND. SYMPHONISTS:
"Fingerette" (piano solo) (Greer).
"A. Sandown" (Donahill).
"Culet" (Kahn).
11.38 a.m.—ERN TROTMAN, Entertainer:
"The Old Fiddler's Song" (Smith).
11.45 a.m.—JOE ARONSON AND HIS SYND. SYMPHONISTS:
"The Whole World is Laughing at Me"
"Falling in Love with You" (Myer).
"Whistle Your Blues Away" (Myer).
11.41 p.m.—EILEEN CASTLES, soprano:
"Deep River" ("In me O'Lord").
"Spiritual" (Burleigh).
11.41 a.m.—JOE ARONSON AND HIS SYND. SYMPHONISTS:
"Hello Swann, Hello" (Cowan).
"She Knows Her Onions" (Yellen).

- 12 noon.—Melbourne Observatory Time Signal.
"Are you one of the heedless, foolish ones who cross the streets against the traffic signals. Resolve with the New Year to set a good example. Think of the indignity of being a bedraggled corpse in the street. Remember the Australian Safety Signal."

- 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, Bristol and the Australian Press Association Cables. News service.
12.30 p.m.—STUDIO QUARTETTE:
"Daisy Goo."

- 12.35 p.m.—I. NOEL SMITH, baritone (by permission of L. Williamson Ltd.)
"Shipmate's Mine" (Sanderson).
"A Devonshire Wedding" (Loyal Phillips).
12.40 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at M.C.G. by Mr. Rod McGregor.
12.42 p.m.—JOE ARONSON AND HIS SYND. SYMPHONISTS:
"Hamelin Song Bird" (Leslie).
"Claustrum—Piano solo" (Langel).
"I Love the College Girls" (Jaffe).

- 12.51 p.m.—EILEEN CASTLES, soprano:
"Meeting of the Waters" (Irish).
"Butterfly" (Clarke).

- 12.55 p.m.—STUDIO QUARTETTE:
"Songs of the Hudson" (Fraser).
12.56 p.m.—JOE ARONSON AND HIS SYND. SYMPHONISTS:
"The Little White House to Honeycomb Lane" (Cowling).

- 1 p.m.—I. NOEL SMITH, baritone:
"I Ain't Got Nobody and Nobody Cares for Me" (Graham).
"I'm Going to Dance with the Guy Who Truag Me" (Kreffe).
"Look up and nod your head forward and back; look up and nod in; lean a head. Are you doing your bit in making this world brighter and better?"
1.01 p.m.—L. NOEL SMITH, baritone:
"I Dream of a Garden of Sunshines" (Herman Lohr).
"Star of the South" (Herman Lohr).

- 1.14 p.m.—Meteorological Information. Weather forecast and rainfall for Victoria, Tasmania, South Australia and New South Wales. Ocean forecasts. River reports.
1.21 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia at M.C.G. by MR. MCGREGOR.

- 1.41 p.m.—STUDIO QUARTETTE:
"King Manfred"—Prelude and Romance (Kietzler).

- 1.48 p.m.—STUDIO QUARTETTE:
"Pas des Fleurs" (DeLisse).
1.51 p.m.—VAUDE AD VERNE:
"Jazz Joke."

- 2.10 p.m.—Description of Open Handicap (6 furlongs) EPSON RACES, by "Musket" of the Sporting Globe.

- 2.15 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia at M.C.G. by MR. MCGREGOR.

- 2.40 p.m.—Description of Epson Race, 4 furlongs EPSON RACES, by "Musket" of the Sporting Globe.

- 2.42 p.m.—Description of Interstate cricket Match, Victoria v. South Australia at M.C.G. by MR. ROD MCGREGOR.
Results of Bushyong Turf Club races will be given so they come to hand.

AFTERNOON SESSION.

- 3 p.m.—Melbourne Observatory Time Signal.

- 3.1 p.m.—JOHN'S STUDIO BOYS:
Selections from Comic Opera.
3.15 p.m.—Description of Handicap (1 mile) EPSON RACES, by "Musket" of the Sporting Globe.

- 3.16 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at M.C.G. by MR. ROD MCGREGOR.
FROM THE STUDIO.

- 3.30 p.m.—JOHN'S STUDIO BOYS:
Selections from Comic Opera.

- 3.40 p.m.—Description of Epson Handicap, 1 mile, EPSON RACES, by "Musket" of the Sporting Globe.

- 3.43 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at M.C.G. by Mr. Rod McGregor.

- 3.55 p.m.—JOHN'S STUDIO BOYS:
More Selections from Comic Opera.
4 p.m.—Description of Epson Race, 6 furlongs EPSON RACES by "Musket" of the Sporting Globe.

4.11 p.m.—JOHNSON'S STUDIO BOYS:
Selection from Comic Opera.
4.24 p.m.—Description of Interstate Cricket
Match, Victoria v. South Australia, at
M.C.G., by Mr. Rod McFerguson.
4.40 p.m.—Description of Walter Handicap, 1
mile, EPFOM RACES, by "Maaker" of the
Sporting Globe.
4.43 p.m.—JOHNSON'S STUDIO BOYS:
Selections from Comic Opera.
5.0 p.m.—Description of Interstate Cricket
Match, Victoria v. South Australia, at
M.C.G., by Mr. Rod McFerguson.
5.16 p.m.—Close down.

EVENING SESSION.

5.30 p.m.—Sporting results.
5.40 p.m.—Answers to letters and birthday
greetings for "LITTLE MISS KOOKABURRA."
5.44 p.m.—Description of Finale of today's
Interstate Cricket Match, Victoria v. South
Australia, by Mr. Rod McFerguson.
5.46 p.m.—"LITTLE MISS KOOKABURRA"
"More Greetings."
6.10 p.m.—THE STUDIO QUARTETTE:
"The Warrior Returns" (Kuehn).
6.17 p.m.—"LITTLE MISS KOOKABURRA"
"The Plucky Patroller."
6.30 p.m.—THE STUDIO QUARTETTE:
"An Old Old Love Story" (Puxine).
6.41 p.m.—"All in Myself" (Denimoz).
6.45 p.m.—Sporting results.
6.48 p.m.—Herald news service. Weather
synopsis. Slipping movements.
6.52 p.m.—Stock Exchange information.
6.57 p.m.—River reports.

NIGHT SESSION.

7.11 p.m.—MR. R. J. A. BARNARD, of the
Melbourne University, will speak on
"Comets."
7.30 p.m.—MR. E. E. PESCOFF:
"Austrologia: Food Plants of the Aborigines."
7.43 p.m.—MR. A. S. G. BAKER, Factorial
of the Herald of the Herald, will speak on
"The Editorial Side of Newspaper work."
7.56 p.m.—Raouls of Royal St. Kilda Yacht
Club races.
8.0 p.m.—JOE ARONSON AND HIS
SYNCO-PATYMPHONISTS:
"International Patrol" (Polka).
"Sing me a ball song" (Rhaps).
"Good Bye Kiss" (Lullaby).
8.9 p.m.—EILEEN CASTLES, Soprano:
"A Little Love Serenade" (Romance).
8.11 p.m.—JOE ARONSON AND HIS
SYNCO-PATYMPHONISTS:
"South Wind" (De Sylva).
"Black Bottom's Got 'Em" (Jones).
"By All Depends on You" (Henderson).
8.21 p.m.—ERN TROTSMAN, Entertainer:
"Bright Boy."
8.24 p.m.—JOE ARONSON AND HIS
SYNCO-PATYMPHONISTS:
"Just an Ivy Covered Shack" (Rupp).
"Good Bye Kiss" (Hirsch).
"Sweet Yvette" (Davis).
8.33 p.m.—VAUDE AND VERNE, Entertainers:
"Comedy Cuts."
8.36 p.m.—JOE ARONSON AND HIS
SYNCO-PATYMPHONISTS:
"Hoot Everything" (Schubert).
"I'm Not in the Mood" (Lorenz).
"Love is Just a Bit of Heaven" (Davis).
8.43 p.m.—FRENCH BROS., Banjoists:
"Forgotten."
8.46 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
8.51 p.m.—J. ALEXANDER BROWNE, baritone:
"Molly Brownrigg" (Stanford).
9.0 p.m.—JOE ARONSON AND HIS SYNCO-
PATYMPHONISTS.
8.53 p.m.—EILEEN CASTLES, soprano:
"Obscure."
9.11 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
9.13 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
9.21 p.m.—ERN TROTSMAN, Entertainer:
"Vaudeville's Night Out and the Hearing
Aid" (Aron).
9.24 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
9.31 p.m.—VAUDE AND VERNE, Entertainers:
"Vaudeville Vanities."
9.36 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
9.40 p.m.—FRENCH BROS., Banjoists:
"Crown a Lullaby."

9.48 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
9.47 p.m.—J. ALEXANDER BROWNE, baritone:
"The Farmer's Bride" (K. Russell).
10.0 p.m.—JOE ARONSON AND HIS SYNCO-
PATYMPHONISTS.
10.21 p.m.—JOE ARONSON AND HIS SYNCO-
PATYMPHONISTS.
10.20 p.m.—EILEEN CASTLES, Soprano:
"Mimi's Aria" (Puccini).
10.33 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
10.42 p.m.—ERN TROTSMAN, Entertainer:
"A Discourse on Eggs" (Original).
10.45 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
10.54 p.m.—VAUDE AND VERNE, Entertainers:
"Selected."
10.57 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
11.0 p.m.—OUR GREAT THOUGHT:
"The old year is dead, the new year will
soon be born. Let us rejoice that we are
granted the more New Year's Day on
which to begin again—not in our children's
way, with utter disregard of the past, but
travelling, patiently, knowing that we
must ever carry with us our past, and
rejoicing that with God's help, we may
make the future better because of the
past."

11.11 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
11.20 p.m.—FRENCH BROS., Banjoists:
"Hawaiian Melodies."
11.23 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS.
11.31 p.m.—J. ALEXANDER BROWNE,
baritone:
"A Tumble Down Nook by the Sea"
("Ma Kezlee").
11.33 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS:
11.42 p.m.—EILEEN CASTLES, soprano:
11.45 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS:
11.51 p.m.—ERN TROTSMAN, baritone:
"Merry and Bright."
11.57 p.m.—JOE ARONSON AND HIS SYN-
CO-PATYMPHONISTS:
12 midnight.—The bells of St. Paul's Cathedral
will ring the New Year in
510 Melbourne's New Year Message to all
GOD SAVE THE KING.

3AR, MELBOURNE

Saturday.

MORNING NEWS SESSION.

11 a.m. to 12 noon.

MIDDAY CONCERT SESSION.

12 noon.—G.P.O. Clock says "Twelve."
12.1 p.m.—Transmitted from Paradise House,
532 Collins Street by exclusive transmission
of Wills and Paton Ltd. on the Brunswick
Panatrop.
1.0 p.m.—Sheffield Shield Cricket Scores.
Close down.

MATINEE SESSION.

ORCHESTRAL CONCERT.

Sports results.—During the afternoon the
results of the races at Sydney and Koonen
will be broadcast immediately each race is
run. Also Sheffield Cricket Scores.
2.50 p.m.—Studio Orchestra.
2.45 p.m.—Miss Julia Russell, soprano:
"Piper Tune" (Molly Carey).
"Aye Maria" (Maccheroni).
2.53 p.m.—Studio Orchestra.
2.57 p.m.—Mr. Ronald Bevanzy, solo:
"Larghetto" (Handel).
3.0 p.m.—Studio Orchestra:
3.25 p.m.—Miss Julia Russell, soprano:
"Softly awakes my heart" (St. Saens).
"Chant Venetian" (Bomberg).
3.40 p.m.—Mr. Herbert Pfeiffer, violin:
"Chant Indou" (Rimsky-Korsakoff).

2.58 p.m.—Studio Orchestra:
4.0 p.m.—G.P.O. Clock says "Four."
4.1 p.m.—2nd Weather forecast.
4.3 p.m.—Announcements.
4.6 p.m.—Mr. Harold "Mah" baritone:
"Beautiful Tom" (Kemp).
"Daffodi Gold" (Hodgson).
4.14 p.m.—Studio Orchestra.
4.37 p.m.—"Mah" baritone:
"For you Alone" (Gosell).
"Go lovely now" (Guitler).
4.40 p.m.—Studio Orchestra:
4.50 p.m.—"Mah" baritone:
4.4 p.m.—G.P.O. Clock says "Five."
Close down.

CHILDREN'S SESSION.

4.30 p.m.—Uncle Max's entertainment.

EVENING SESSION.

NEW YEAR'S EVE.

7.30 p.m.—Everman's Garden. Special work-
end talk by Mr. W. B. Warner, President
of the New Year's and Seaside's Associa-
tion of Victoria.
7.45 p.m.—Newmarket. Cattle sales. Notices.
Today's sporting results.
8.0 p.m.—G.P.O. Clock says "Eight."
8.1 p.m.—Special New Year's Eve Pro-
gramme to be broadcast from St. Patrick's
Hall Bourke Street. Coman's "Merryland
Jazz Band" will be performing for the first
time on the air.
Conductor: Mr. M. F. Coman.
Personal Accompanist: Miss Emily Davies.
8.5 p.m.—Miss Winifred Raach, soprano:
"Sometimes in Summer" (Hossett).
"Salama" (Lang).
8.8 p.m.—Mr. Reginald Symons, tenor:
"Ma! Beogradu" from Il Trovatore (Verdi).
"Venetian Carnival" (Branke).
8.15 p.m.—Miss Gwen Soffers, entertainer:
"Hudud McFerguson's Christmas" (Lorenz).
"A Vagabond" (Anon).
8.22 p.m.—Miss Jocelyn Butler, soprano:
"Love Nones" (Verdi).
"Robin Adair" (Old Scotch).
8.20 p.m.—Coman's Merryland Jazz Band.
9.0 p.m.—Mr. Stanley J. Allan, soloist:
"Blithro" (Stanford).
"Dunno Mary of Argyll" (Neilson).
9.1 p.m.—Miss Gladys Corran, soprano:
"Just a rose in Old Kilbride" (RWALL).
"My Treasure" (Trevalia).
9.14 p.m.—Comedy Sketch:
"By the Sea-side."
Characters:
Martha Malone Uncle Max.
Miss Sylvester Blue Bell
Lena Pollock Arthur Williams.
Hawson Stanley J. Allan Solo.
Allan Bell.
9.14 p.m.—Mr. Raoul Gordonov, baritone:
"The Carpet" (Sanderson).
"Er! Tu" (Verdi).
9.41 p.m.—Coman's Merryland Jazz Band.
10.0 p.m.—G.P.O. Clock says "Ten."
10.1 p.m.—Semi final weather forecast.
10.10 p.m.—Miss Winifred Raach, soprano:
"Invitation" (Hofner).
"The Market" (Caron).
10.17 p.m.—Mr. Reginald Symons, tenor:
"Lullaby" (Handel).
"Goodbye" (Lorenz).
10.18 p.m.—Miss Gwen Soffers, entertainer:
"The New Food" (Lorenz).
"Nelly's essay" (Anon).
10.21 p.m.—Miss Jocelyn Butler, soprano:
"Mignon" (Handel).
"Annie Laurie" (Old Scotch).
10.48 p.m.—Coman's Merryland Jazz Band:
11.0 p.m.—Mr. Stanley J. Allan, tenor:
"Harold Song" (Mack Gould).
"Mojan" (Stanford).
11.15 p.m.—Miss Diana Norrme, contralto:
"Lovers Chorus" (Handel).
"One Sweet Hour" (Dorothy Lee).
11.22 p.m.—Mr. Raoul Gordonov, baritone:
"Time was I roved the Mountains" (Lohr).
"I know that you're a Bait me" (Lorenz).
11.20 p.m.—Coman's Jazz Band.
11.50 p.m.—Final Weather forecast.
11.55 p.m.—Stand by for the Midnight Chimes.
12 midnight.—G.P.O. Clock says "Twelve."
March of Old Man "Nineteen Twen-
ty-two" Bright of the New Boy, "Nineteen
Twenty-eight."
12.1 a.m.—New Year's Greetings.
12.1 p.m.—Auld Lang Syne.
12.5 a.m.—God save the King.

4QG, BRISBANE.

Saturday.

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

8.30 p.m.—A mid-new for little listeners by "Miss Wenzel."

4.30 p.m.—Close down.

EVENING SESSION.

8.00 p.m.—Ballroom stories by Uncle Ben.
 8.15 p.m.—Bachelors' Revue.
 9.00 p.m.—Today's Sporting News described.
 9.30 p.m.—Balling Notes by Fred Smith.
 9.45 p.m.—Lecturette: "A New Year's Message in Diagrams," by Mr. H. Fraser Burt (State President National Ballroom and Salsas' Imperial League of Australia).

NIGHT SESSION.

8 p.m.—From the Galets Theatre, Toowoomba: Orchestra music.
 8.30 p.m.—From the Speedway.
 9.00 p.m.—From Leanna's Ballroom.
 Dance music.

NEW YEAR'S EVE.

Station 4QG will link up by special line with the residence of Mr. W. Donald, Sunsea Street, West End, where New Year's Eve will be celebrated in true Scottish style. Many listeners have heard of Scotchmen and their New Year's Eve parties; this year they will have an opportunity of hearing just what it's all about!
 10 p.m.—From Mr. Donald's Studio: A Scotch Entertainment.
 12 midnight.—New Year's Greetings.
 12.30 a.m.—Close down.

5CL, ADELAIDE.

Saturday.

MORNING SESSION.

12 noon.—G.P.O. Chimes.
 12.1 p.m.—"Advertiser" news service.
 12.45 p.m.—Musical numbers from the studio.
 1 p.m.—G.P.O. Chimes and close down.

AFTERNOON SESSION.

2 p.m.—G.P.O. Chimes.
 2.5 p.m.—Musical numbers from the studio.
 3 p.m.—Close down.
 EVENING SESSION.
 6 p.m.—G.P.O. Chimes.
 6.1 p.m.—Dinner Music by Covent Garden Orchestra.
 6.30 p.m.—Children's time.
 6.50 p.m.—S. G. Ward and Co's Stock Exchange Intelligence.
 7.10 p.m.—Talk by Mr. F. J. Mills "The Stocky work."
 7.50 p.m.—Talk.
 8 p.m.—G.P.O. Chimes.

NEW YEAR'S EVE DANCE NIGHT.

8.15 p.m.—Soprano solo, Margery Walsh.
 8.5 p.m.—Violin solo, Helen Margery.
 9.3 p.m.—Berlitz solo, Don Wilemuth.
 9.15 p.m.—Begrats solo, Margery Walsh.
 9.45 p.m.—Relay from Floating Palms Tavern Lido—Dance selections.
 9.30 p.m.—Baritone solo, Don Wilemuth.
 9.55 p.m.—Violin solo, Helen Margery.
 10.20 p.m.—Soprano solo, Margery Walsh.
 10.45 p.m.—Relay from Floating Palms.
 9 p.m.—G.P.O. Chimes.
 9.1 p.m.—Talk by Rev. G. H. Hale, Dickens Square "The Christmas."
 9.15 p.m.—Berlitz solo, Don Wilemuth.
 9.15 p.m.—Violin solo, Helen Margery.
 9.55 p.m.—Dance selection from the Floating Palms.
 10 p.m.—Talk by Rev. G. H. Hale, Dickens Square "The Christmas."
 9.45 p.m.—Cello solo, Fred Guster.
 9.45 p.m.—Dance selections from the Floating Palms.
 10 p.m.—G.P.O. Chimes.
 10.1 p.m.—Relay from the Maison De Danse Glenelg—Dance selections.
 10.15 p.m.—Bass solo, Fred Guster.
 10.15 p.m.—Sello solo, Fred Guster.
 10.25 p.m.—Bass solo, Fred Guster.

10.25 p.m.—Relay from the Maison De Danse Glenelg—Dance selections.
 11 p.m.—G.P.O. Chimes.
 11.1 p.m.—Relay from the Adelaide Town Hall Ballroom—Dance selections.
 11.15 p.m.—Relay from the Maison De Danse.
 11.30 p.m.—Relay from the Adelaide Town Hall.
 New Year Celebrations.
 1.00 p.m.—Y.M.C.A.
 12.1 a.m.—G.P.O. Chimes.
 12.1 a.m.—Station's Greetings.
 12.5 p.m.—National Anthem and close down.

6WF, PERTH.

Saturday.

12 noon.—Time in.
 12.5 p.m.—Musical programme, including Piano-forte selections by Miss Evelyn Willis, A.R.C.M.
 12.47 p.m.—Market, News, and Cables.
 1 p.m.—Time signal from Perth Observatory.
 1.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 1.17 p.m.—Close down.
 1.40 p.m.—Time in.

SPORTING SESSION.

LUP DAY.

Racing events described in detail from the Ascot Racecourse, Belmont.
 2 p.m.—G.P.O. Chimes.
 2.45 p.m.—Eggon Handicap.
 3.20 p.m.—PERTH CUP.
 3.30 p.m.—From the Studio: Musical programme, including vocal and instrumental articles.
 Progressive Cricket scores.
 4 p.m.—Golfing Note.
 4.40 p.m.—All Aged Stakes.
 5.20 p.m.—Salford Handicap.
 5.30 p.m.—Close down.
 6.45 p.m.—Time in.
 The Evening Transmission is broadcast on 104.5 Metres, as well as the usual wave-length.
 8.30 p.m.—Birthday greetings for the Kiddies by Uncle Duffy and Rag.
 7.10 p.m.—Sports results.
 7.30 p.m.—Market, News, and Cables.
 7.45 p.m.—Dinner music.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia. Station announcements such as alterations to programmes etc.
 SPECIAL NEW YEAR'S EVE CONCERT.
 8.5 p.m.—Musical programme from the Studio, including vocal and instrumental articles: Items by the Mimosa Duo, instrumentalists. Detailed description of Music-selling events relayed from the Cleverest Speedway, Claremont.
 Trotting events described in detail from the W.A.T.A. Grandstand.
 Play specially written for Broadcasting by Mr. H. T. Newton.
 11.30 p.m.—Novelty Transmission.
 12 midnight.—The Perth Town Hall clock chimes the New Year in.
 12.15 a.m.—Close down.

104.5 METRE TRANSMISSION.

Simultaneous broadcast on 104.5 Metres of Programme given on 1250 Metres, commencing at 8.45 p.m.

7ZL, HOBART

Saturday

MORNING SESSION.

11 a.m. to 12 noon.

AFTERNOON SESSION.

2 p.m.—G.P.O. Clock chimes the Hour.
 Sporting events and musical items from the Studio.
 Close down.

EARLY EVENING SESSION.

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

NIGHT SESSION.

7.30 p.m.—Musical selection by Neville Dances.
 7.35 p.m.—Nature Lesson Book opened by Mr. F. G. Roberts.
 7.50 p.m.—"Mercury" special Tasmanian news service.
 Railway station price news.
 Hobart Stock Exchange quotations.
 Weather information.
 8 p.m.—G.P.O. Clock chimes the Hour.
 8.15 p.m.—Dance numbers by Neville Dances Band from the City Hall, Hobart, interspersed with musical items from the Studio.
 10.25 p.m.—British official wireless news.
 Ships within wireless range.
 Weather information.
 Station announcements: To-morrow's programme.
 10.30 p.m.—Dance numbers continued from Pavilion Dance Band, Hobart.
 12 midnight.—"Hail the New Year! The Directors and Staff extend New Year Greetings to Listeners.
 12.15 a.m.—Our New Year Thought, and close down.

**Sunday, Jan. 1
2FC, SYDNEY**

MORNING SESSION.

12.15 a.m.—Programme announcements.
 11 a.m.—"Big Ben."
 From St. Stephen's Presbyterian Church, Phillip Street, Sydney: The Morning Service.
 Frencher, Rev. Hugh Eaton.
 12.15 p.m.—From the Studio: News Session.
 12.30 p.m.—Close down.

AFTERNOON SESSION.

2 p.m.—"Big Ben," and programme announcements.
 2.2 p.m.—Suzanne Ennis, contralto; (a) "Suzanne" (Michael Heed).
 2.5 p.m.—Veta Wareham, violinist; "Suzanne and Rigandon" (Francoise Kreisler).
 3.11 p.m.—Suzanne Knott, contralto; (a) "Suzanne" (Michael Heed).
 (b) Request number.
 3.19 p.m.—Veta Wareham, violinist; 1. "Spanish Solo" (Grandes-Kessler). 2. (a) "Chose" (Tune) (Herbert Howells). (b) "Sonata" (Arensky).
 3.27 p.m.—Suzanne Knott, contralto. At the piano: Mr. Hal Stead.
 3.30 p.m.—From Taroxa Para, Sydney: A concert programme by the Commonwealth Band.
 4 p.m.—"Big Ben" Close down.

EVENING SESSION.

6 p.m.—"Big Ben" and announcements.
 6.5 p.m.—Nellie Ravosa, contralto.
 8.0 p.m.—Edna Dowse, violin solo; (a) "Melodrama" (Guiraud). (b) "Masur" (Mlynarski).
 8.17 p.m.—Madame Evelyn Grieg, pianoforte solo; (a) "Polonaise G Sharp Minor" (Chopin). (b) "Arioso" (Chaminade).
 8.24 p.m.—Edna Dowse, soprano; (a) "Valse" (Kandery Kussel). (b) "Benedict" (Neidinger).
 8.31 p.m.—Edna Dowse, violin solo; "Tanzsuite" (Drdla).
 8.34 p.m.—Nellie Ravosa, contralto.
 8.35 p.m.—Madame Evelyn Grieg, pianoforte solo; (a) "El Tercillo" (Cavero). (b) "Tango" (Albeniz).
 8.45 p.m.—Edna Dowse, soprano; "Gipsy" (Hermann Lohr).
 8.50 p.m.—Edna Dowse, violin solo; "Cavatina" (Rat).
 8.55 p.m.—Nellie Ravosa, contralto.
 7.4 p.m.—Madame Evelyn Grieg, pianoforte Request number.

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4SR7	4	40 "	3 0 0

C.R. TYPE RADIO BATTERIES.

Type.	Volts.	Capacity.	Price.
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6CR7	6	60 "	4 10 0
6CR9	6	75 "	5 10 0
6CR11	6	90 "	6 15 0
6CR13	6	105 "	7 10 0
4CR7	4	60 "	3 10 0
4CR9	4	75 "	4 10 0

AT ALL DEALERS.

Made by the Clyde Engineering Company Limited

- 1.10 p.m.—Eud D'Arcy, soprano: "Dawn, Gentle Flower" (Stevendale Bennett).
- 7.16 p.m.—From St. James' Church of England, Sydney: The Evening Service, including special singing by the Choir. Preacher, Rev. P. A. Macklem, M.A.
- 8.30 p.m.—From the Band Rotunda, Muntz Beach: A programme by the Manly Municipal Band, conducted by Mr. James Pheloung.
- 9.30 p.m.—From the Studio: David Craven, baritone—Songs by Australian Composers: (a) "The Sun God" (William James), (b) "Evening" (O'Connor).
- 9.54 p.m.—Eileen Starr, soprano: Selected numbers, with folk shagbats, by Mr. Victor McMahon.
- 9.61 p.m.—David Craven, baritone: "Tangit" (Hill).
- 10 p.m.—"Big Ben."
- Victor McMahon, flute solo.
- 10.4 p.m.—Eileen Starr, soprano: "Dull Song" (from "Fables of Hoffmann" (Offenbach).
- 10.19 p.m.—David Craven, baritone: "Fare of Solitude" (James Heath).
- 10.25 p.m.—National Anthem. Close down.

2BL, SYDNEY

Sunday.

MORNING SESSION.

- 10.45 a.m.—G.P.O. Clock and chimes. Special news service.
- 11 a.m.—Service broadcast from Bandwick Presbyterian Church.
- 11.45 a.m.—G.P.O. Clock and chimes.
- 12.10 p.m.—G.P.O. Clock and chimes. Special service for Children in Hospitals.
- 2.10 p.m.—Racial, by courtesy of H.M.V. Gramophone Company.
- 3.45 p.m.—Information service.
- 3.55 p.m.—G.P.O. Clock and chimes. Close down.
- 2.16 p.m.—Bible class, conducted by Mr. W. "Cairo" Bradley.
- 4 p.m.—Flowers Sunday afternoon with the Balmain Central Methodist Mission.
- 5 p.m.—G.P.O. Clock and chimes. Close down.

EVENING SESSION.

- 8.45 p.m.—G.P.O. Clock and chimes. Children's Service.
- 9 p.m.—Service broadcast from Petersham Baptist Church.
- 9.30 p.m.—Mr. Alfred Wilmore, tenor.
- 9.35 p.m.—Mr. Gordon Rodda, pianist.
- 9.44 p.m.—Miss Pauline Harford, soprano.
- 9.51 p.m.—Mr. Maura McMahon, violin solo.
- 9.58 p.m.—Weather report and forecast by courtesy of Mr. G. J. Mann, Government Meteorologist. Review of following day's programme.
- 9 p.m.—G.P.O. Clock and chimes.
- 9.51 p.m.—Mr. Herman Treumayn, bass.
- 9.53 p.m.—Mr. Frank Hathorley, dramatic artist.
- 9.16 p.m.—Miss Mary Neal, mezzo contralto.
- 9.28 p.m.—Mr. Gordon Rodda.
- 9.36 p.m.—Mr. Frank Hathorley.
- 9.57 p.m.—Mr. Norman Wright.
- 9.64 p.m.—Miss Pauline Harford, tenor.
- 9.71 p.m.—Mr. Herman Treumayn, bass.
- 9.84 p.m.—Mr. Herman Treumayn.
- 10.6 p.m.—Miss Mary Neal.
- 10.12 p.m.—National Anthem.

2GB, SYDNEY

Sunday.

MORNING SESSION.

- 10.12 a.m.—Music from St. Alban's Liberal Catholic Church.
- 10.20 a.m.—Morning Service from St. Alban's Church, Bondi.
- 11 noon.—Close down.

EVENING SESSION.

- 8.30 p.m.—Children's Service.
- 8.40 p.m.—Music from the Studio.
- 9 p.m.—Church Service.
- 9.26 p.m.—Violin Solos by PHYLLIS CAMPBELL.
- 9.31 p.m.—Pianoforte solo by DOROTHY SPARK.
- 9.45 p.m.—Address.
- 9.55 p.m.—Songs by GWEN ROCHESTER.
- 10.12 p.m.—Violin Solos by PHYLLIS CAMPBELL.
- 10.19 p.m.—Pianoforte Solo by DOROTHY SPARK.
- 10.23 p.m.—Songs by Gwen Rochester.
- 10.30 p.m.—Close down.

2 UW, SYDNEY

Sunday

CLOSE DOWN.

3LO, MELBOURNE

Sunday.

MORNING SESSION.

- Express Train Information.
- 10.30 a.m.—Bells from St. Paul's Cathedral.
- 10.40 a.m.—MORNING SERVICE FROM ST. PAUL'S CATHEDRAL, MELBOURNE.
- 12.16 p.m.—British Official Wireless News Disp. (Rugby News from yesterday's papers).
- 12.25 p.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—PLEASANT SUNDAY AFTERNOON SERVICE FROM CENTRAL WESLEY MISSION, LONEDALL STREET, MELBOURNE. CHAIDMAN, REV. DR. S. J. NOBAN. hymn No. 113, "All people that on earth are dwellers." Praver, Rev. J. H. Cain. Hymn No. 69, "I Love that wit not let me go." Solo, Mr. J. H. Hill. Music by Mr. Frederick, violin. ORGAN. ADDRESS, REV. J. ERNEST JAMES, B.D. "THE OUTLOOK FOR 1928." National Anthem. Benediction.
- 4.30 p.m.—Close down.

EVENING SESSION.

- CHILDREN'S HOUR.
- 5.30 p.m.—Answers to letters and Birthday Greetings by "BILLY BUNNY."
- 6 p.m.—"THE FIVE PIPERS": Carols and Choruses.
- 8.25 p.m.—"BROTHER BILL" will have a chat about "New Year Resolutions."
- 9.44 p.m.—Bells from St. Paul's Cathedral.

NIGHT SESSION.

- 7 p.m.—EVENING SERVICE FROM ST. PAUL'S CATHEDRAL, MELBOURNE FROM THE STUDIO.
- 8.30 p.m.—Shipping announcements.
- 8.51 p.m.—COLLINGWOOD CITIZENS' BAND: Match, "Brilliant." Overture, "Tancredi."
- 8.49 p.m.—EDWARD LAMBERT, violon: "Pavane in G major" (Rameau). Variations by Tartini.
- 8.58 p.m.—VICTORIA WILSON, soprano: "O Divine Redeemer" (Gounod), "My Prayer" (Squire).
- 9.57 p.m.—COLLINGWOOD CITIZENS' BAND: Scatole from Lucia di Lammermoor. 9.4 p.m.—CAPTAIN GUY MOORE, tenor: "Ah Moos of my Delight" (Lohmann), "Barber Song" (Ware).
- 10.11 p.m.—COLLINGWOOD CITIZENS' BAND: Concert duet, "A Night in Venise." E. Hones and I. Harvitt.

- 9.14 p.m.—EDWARD LAMBERT, violon: "Nocturne" (Beethoven), "Gavotte" (Gossec).
- 9.22 p.m.—VICTORIA WILSON, soprano: "The Arrow and the Song" (Halpe), "Who is Sylvia?" (Schubert).
- 9.33 p.m.—COLLINGWOOD CITIZENS' BAND: Selection, "Memories of Scotland." 9.49 p.m.—CAPTAIN GUY MOORE, tenor: "I had a Flower" (Kelly), "At the Mid-land of Light" (Cresson).
- 9.47 p.m.—COLLINGWOOD CITIZENS' BAND: Concert solo, "The Tropic" (Edmund J. Robertson).
- 9.52 p.m.—Announcements.
- 10 p.m.—ONE GREAT THOUGHT: "Bespoke and Made to Order in what manner he could best promote the happiness of France. Her reply is full of political wisdom," she said.—Instruct the mothers of the French people!—Daniel Webster.
- 10.1 p.m.—"GOD SAVE THE KING."

3AR, MELBOURNE

Sunday.

NEW YEAR'S DAY MORNING SESSION.

- 11 a.m.—Morning Service from St. James Old Cathedral Melbourne.

AFTERNOON SESSION.

- Celebrity Concert.
- 2 p.m.—Miss Grace Evans, soprano: "Solange Song" (Greig), "The Fairy Meeting" (Greig).
- 2.1 p.m.—Mr. Colin MacRae, baritone: "The Sea" (Schubert), "Edward" (Lowe).
- 2.14 p.m.—Mr. Cecil Parker, violin: "Scottish Fantasia" (Max Heubach).
- 2.26 p.m.—Miss Grace Evans and Mr. Colin MacRae. Duets: "The Sabbath Moon" (Mendelssohn), "Duet," "I would that my love" (Mendelssohn).
- 2.33 p.m.—Miss Grace Evans, soprano, violin: "Scherzo 'El Fiat Mince'" (Chopin).
- 3.49 p.m.—Mr. Cecil Parker, violin: "Valse Triste" (Siboni), "Turkish March" (Beethoven), "Träumerei" (Schumann), "Indian Snake Dance" (Cecil Durbach).
- 3.50 p.m.—Mr. Colin MacRae: A ten minute talk on "The Art Song."
- 4.5 p.m.—Miss Grace Evans, soprano: "Knowest thou the land" from Mignon (Thomas), "I at Song" (Ware).
- 4.12 p.m.—Miss Grace Evans, soprano, piano: "Noel" (Balfor Gardner), "Gavotte Musette" (D'Alber), "The Vagabond" (Vaughan Williams), "Dirge in the woods" (Perry).
- 4.26 p.m.—Mr. Cecil Parker, violin: "Toccata" (Schubert), "Cobler's Dance" (Buzziini).
- 4.35 p.m.—God Save the King.

CHILDREN'S SESSION.

- 4 p.m.—Special Children's Hour conducted by Brer Rabbit.
- 7 p.m.—Evangelical Church Session, New Year's Night, Service from the Independent Church, Collins Street, Melbourne.

EVENING CONCERT SESSION.

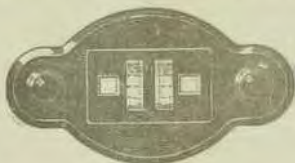
- 8.30 p.m.—Brandsford Panatrophe Entertainment. Broadcast from Panatrophe House, 232 Collins Street, Melbourne by exclusive permission of Willis and Patten Ltd., under the direction of the Panatrophe Programme Committee. Chairman, Mr. W. D. S. Taylor. Selector, M. John Feil. Director, Mr. Edward Gascoigne Holder.
- 8.31 p.m.—British Broadcaster's Symphony Orchestra (Conductor, Mr. Percy Pitt) Overture in "The Bohemian Girl" (Halpe) in two parts.
- 8.48 p.m.—Mr. Franklin Furber, tenor: "The far-away bell" (Furber).

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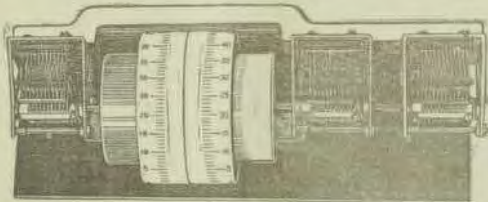
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- 8.45 p.m.—Mr. Gil Dech, Popular Billed Pianist.
"Yesterday" (Whitby).
- 9.10 p.m.—Signor Giuseppe Dardas, baritone:
"The Lullies in Fairy Province" from Act II of the opera, "La Traviata" (Verdi).
- 9.40 p.m.—Mr. Vernon Lee and Mr. Charles Godeham (with chorus by School Societies):
"A Camp-fire Sing Song," Part I and Part II.
- 9.50 p.m.—Mr. Lew White, Kimball Organ:
"Hallelujah Chorus" (Lawrence) by request.
- 9.55 p.m.—Parson Hecker's Land:
Medley "Old Friends" (In two Parts).
- 10.10 p.m.—British Boundaries Opera Chorus (With Orchestra):
"Soldiers' Chorus" from the opera, Faust (Gounod).
- 10.15 p.m.—Mr. G. T. Pattinson, Grand Organ:
"Grand Toccata and Fugue in D Minor" (in two parts).
- 10.35 p.m.—Mr. Elizabeth Williams, Famous English Entertainer:
Devoes from the Christmas Carol by Charles Dickens:
(a) "Oh! Freeze, the Miller," "Before the Storm."
(b) "Strange's Dream."
(c) "Old Weaver's awakening on Christmas Day."
- 9.45 p.m.—The Don Cosacko Choir (Conductor: Mr. George Jassoff):
"Montgomery sings the 'Hill Ball'" (Burling Hill Song) by request.
- 9.55 p.m.—Ely Macgarry's Grandiose Opera Band (Conductor: Lionel George Miller):
A magnificent representation of the great moment of the fragmentary youth of the world-known Wesley Military Tattoo. Presented in four acts.
- 9.55 p.m.—The "Age" News Bulletin exclusive on S.B.R.
- 9.57 p.m.—Tomorrow's entertainment.
- 9.58 p.m.—Final Weather forecast.
- 9.59 p.m.—Our Australian Good-night songs from the poem, "New Year in Australia" by V.E.H.
- 10 p.m.—God Save the King.

4QG, BRISBANE.

Sunday.

MORNING SESSION.

- The complete Morning Service will be relayed from St. Stephen's Roman Catholic Cathedral.
- 11 a.m.—Tenth St. Stephen's Cathedral: Morning Service.
- 12.30 p.m.—Close down.

AFTERNOON SESSION.

- The Concert by the Federal Band will be relayed from the Bonville Gardens, Brisbane.
- 3.15 p.m.—Band Concert.
- 4.30 p.m.—Close down.

NIGHT SESSION.

- The complete Evening Service will be relayed from St. Stephen's Roman Catholic Cathedral.
- 7.20 p.m.—From St. Stephen's Cathedral: Evening Service.
- All the conclusion of the Church Service, the Concert by the Brisbane Municipal Concert Band will be relayed from Wickham Park.
- 8.30 p.m.—From Wickham Park: Band Concert.
- 9.30 p.m.—Close down.

5CL, ADELAIDE

Sunday.

MORNING SESSION.

- 10.15 a.m.—Canton of Bells from St. Andrew's Church, Walkerville.
- 11 a.m.—G.P.O. Chimes.
- 11.15 a.m.—Rev. Hugh Finlayson Street Baptist Church: Divine Service.
- 10.10 p.m.—(Approx). Close down.

AFTERNOON SESSION.

- 9 p.m.—G.P.O. Chimes.
- 2.1 p.m.—Sacred Concert arranged by Fitzroy Street Baptist Church.
- 4 p.m.—G.P.O. Chimes and organ down.

EVENING SESSION.

- 8.30 p.m.—G.P.O. Chimes.
- 8.41 p.m.—Sunday Story for children.
- 6.40 p.m.—Running time of Eski Wool Express.
- 6.5 p.m.—Canton of Bells from St. Andrew's Church, Walkerville.
- 7 p.m.—G.P.O. Chimes.
- 7.1 p.m.—Divine Service broadcast from Rose Park Congregational Church.
- 8.15 p.m.—Sacred Concert from Rose Park Congregational Church.
- 9 p.m.—G.P.O. Chimes.
- 8.1 p.m.—Ballet from Herby Beach Rotunda.
- 8.45 p.m.—Concert by Holders Silver Band.
- 8.50 p.m.—Talk by Mr. P. H. Nicholls.
- 9.30 p.m.—Monday's Programme, and Meteorological information.
- 9.55 p.m.—National Anthem and close down.

6WF, PERTH.

Sunday.

- 10.45 a.m.—Tune in.
- 11 a.m.—Morning Church Service.
- 12.15 p.m.—Close down.
- 2.35 p.m.—Tune in.
- 2.45 p.m.—From the Studio:
Musical programme, including vocal and instrumental artists.
- 4.10 p.m.—Close down.
- 5 p.m.—Tune in.
- The Evening Transmission is broadcast on 104.5 metres, as well as the usual wavelength.
- 7.5 a.m.—Children's bedtime stories.
- 7.30 p.m.—Evening Church Service.
- 8.45 p.m.—After Church Services:
Musical programme.
- 10.5 p.m.—Close down.

104.5 METRE TRANSMISSION.

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7ZL, HOBART

Sunday.

NEW YEAR'S DAY.

MORNING SESSION.

- 11 a.m.—Church Service from Memorial Congregational Church, Hobart.
Preacher, Rev. Arthur C. Nelson.
(Close down).

AFTERNOON SESSION.

- 3.30 p.m.—G.P.O. Clock chimes.
- 3.31 p.m.—Pleasant Sunday Afternoon Concert from the Studio.
- 4.20 p.m.—Close down.
- 6.30 p.m.—Children's Corner with the "Sunday Lady."

NIGHT SESSION.

- 7 p.m.—Church Service from Chalmers Presbyterian Church, Hobart.
Preacher, Rev. H. Carroll.
At conclusion of Church Service Concert from the Studio, or Band Concert from St. David's Park.
- 9.40 p.m.—"Mercury" special inter-state news service.
British official wireless news.
Notes within wireless range.
9 p.m.—Weather forecasts.
Station announcements: Tomorrow's programme.
National Anthem.

Monday, Jan. 2

2FC, SYDNEY.

MORNING SESSION.

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

- 11.5 a.m.—News items, weather intelligence, sporting information, interspersed with musical items from the Studio until 11.30 a.m.

- 11.30 a.m.—From the Sydney Cricket Ground:
A description of the match, New South Wales versus Queensland, with progress notes, until the luncheon adjournment at 1.15 p.m.

- 12.20 p.m.—From the Studio:
"Sydney Morning Herald" news service.
- 12.30 p.m.—From the Sydney Cricket Ground:
Crickets scores and description of the play; During the intervals at the Cricket Ground, musical items will be given from the Studio, including:
May Craven, mezzo.
"The Dawn" (D'Hardtlet).

- "Big Ben."
"The Dawn" (D'Hardtlet).
- 1.15 p.m.—"Evening News" midday news service.
- Crickets scores prior to the luncheon adjournment at 1.15 p.m.
- 1.20 p.m.—Studio music.
- 1.40 p.m.—May Craven, mezzo:
"The Violin Song" (Paul Rubens).

- 1.45 p.m.—Studio music until 2 p.m.
- 2 p.m.—"Big Ben."
From the Sydney Cricket Ground: Continuation of description of the Cricket match, N.S.W. v. Queensland.

- 9 p.m.—"Big Ben."
From the Studio:
Programme announcements.
- 2.3 p.m.—Cliff Stanley, violinist:
"Moment Music" (Schubert).
- 2.40 p.m.—Phantom Melody" (A-Kelleyby).
- 3.10 p.m.—Anne Mills, soprano.
- 3.14 p.m.—Cricket results.
- 3.17 p.m.—Edward Barry, baritone:
"The Longshoreman" (Chebanik).
- 3.20 p.m.—Joyce Gillespie, soprano:
"In Late September" (Barker).
- 3.25 p.m.—From the Sydney Cricket Ground:
Description of the Play and progress notes.
- 3.50 p.m.—From the Studio:
Cliff Hanney, violinist.

- 3.55 p.m.—Anne Mills, mezzo.
- 4 p.m.—Cricket scores and description of the play.
- 4.15 p.m.—Joyce Gillespie, soprano:
"Pale Yellow Rose" (Phillips).

- 4.20 p.m.—Cliff Hanney, violinist:
(a) "Carillon" (Bosch).
(b) "Sohn Rosmarin" (Kreutzer).
- 4.25 p.m.—Cricket scores and description of the play.
- 4.45 p.m.—From the Studio:
Stock Exchange, third call.

- 4.47 p.m.—Edward Barry, baritone:
"Sea Peace" (Ireland).
- 4.50 p.m.—"Friendships" (Lohr).
- 4.55 p.m.—From the Sydney Cricket Ground:
Progress scores and description of the match, Queensland v. N.S.W., until 5.40 p.m.

EARLY EVENING SESSION.

- 5.40 p.m.—"The Chimes of 2FC.
- 6.45 p.m.—"The Hello Man" talks to the children.
- 6.50 p.m.—Cricket scores.
- 6.55 p.m.—Short-time for the young folk.
- 6.58 p.m.—Dance music.

- The 2FC Studio Orchestra, conducted by Mr. Horace Kratz.
- 7 p.m.—"Big Ben."
Weather intelligence.
- 7.3 p.m.—Late sporting news.
- 7.35 p.m.—"Evening News" late news service.
- 7.35 p.m.—Studio music.

NIGHT SESSION.

- 7.40 p.m.—Programme announcements.
- 7.45 p.m.—The 2FC Studio Orchestra, conducted by Mr. Horace Kratz.
- 8 p.m.—"Big Ben."

- The 2FC Studio Orchestra.
- 8.15 p.m.—From the Warrington Hall:
The first 1928 Monthly Wail of the North Sydney Orphan Club.

- 8.18 p.m.—From the Studio:
Latest weather forecast.
- 8.18 p.m.—The 2FC Studio Orchestra conducted by Mr. Horace Kratz.
- 8.30 p.m.—Win and Windle, English entertainment.
- 8.38 p.m.—The 2FC Studio Orchestra.

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- 8.00 p.m.—Win and Windie, English entertainers.
 10 p.m.—"Big Ben."
 From the Warrington Hall:
 The second part of the Concert by the North Sydney Orphan's Club.
 Late weather report.
 10.45 p.m.—From the Studio:
 The 2FC Studio Orchestra.
 10.55 p.m.—Lep Mautrice, popular baritone.
 10.57 p.m.—Late news and announcements.
 11.15 p.m.—"Big Ben."
 Relayed from London:
 Items from 2LO Station, transmitting on a short wave length through 85W.
 11.30 p.m.—National Anthem.
 Close down.

2BL, SYDNEY

Monday.

MORNING SESSION.

- 11.30 a.m.—G.P.O. Clock and chimes.
 Musical programme from the Studio.
 11.40 a.m.—News from the "Daily Telegraph Fictional."
 11.50 a.m.—Musical programme from the Studio.
 12 noon.—G.P.O. Clock and chimes.
 Special ocean forecast and weather report.
 12.3 p.m.—Musical programme from the Studio.
 12.20 p.m.—News from the "Sun."
 1.225 p.m.—Sporting and athletic features.
 1.57 p.m.—What's on at the Pictures and Theatres.
 12.30 p.m.—Musical programme from the Studio.
 12.40 p.m.—News from the "Sun."
 12.50 p.m.—Musical programme from the Studio.
 1 p.m.—G.P.O. Clock and chimes.
 Musical programme from the Studio.
 1.10 p.m.—Sporting and athletic features for the day.
 1.20 p.m.—Musical programme from the Studio.
 1.30 p.m.—G.P.O. Clock and chimes.
 Racing resume.
 1.35 p.m.—Talk to children and special entertainment for children in Hospital.

AFTERNOON SESSION.

- 2 p.m.—G.P.O. Clock and chimes.
 Racing resume.
 2.3 p.m.—Talk on "Women of the Orient of 18 Ages."
 2.20 p.m.—Musical programme from the Studio.
 2.30 p.m.—G.P.O. Clock and chimes.
 Racing resume.
 2.35 p.m.—News from the "Sun."
 2.40 p.m.—Musical programme from the Studio.
 2.50 p.m.—News from the "Sun."
 2 p.m.—G.P.O. Clock and chimes.
 Racing resume.
 During the afternoon race results from Turfway's Races by courtesy of the "Sun" Newspapers.
 3.3 p.m.—Musical programme from the Studio.
 3.20 p.m.—News from the "Sun."
 3.25 p.m.—Musical programme from the Studio.
 3.40 p.m.—Inaugural Dance Band, broadcast from Dingoona Cabaret.
 4 p.m.—G.P.O. Clock and chimes.
 Racing resume.
 4.1 p.m.—Musical programme from the Studio.
 4.20 p.m.—News from the "Sun."
 4.20 p.m.—Dingoona Dance Band.
 4.30 p.m.—Resume of night's programme.
 4.32 p.m.—Racing resume.
 4.35 p.m.—G.P.O. Clock and chimes.
 Close down.

EARLY EVENING SESSION.

- 6.45 p.m.—G.P.O. Clock and chimes.
 Uncle Jack and Uncle Bass will entertain the Children.
 6.30 p.m.—Musical programme from the Studio.
 7.45 p.m.—Racing resume, and news from the "Sun."

EVENING SESSION.

- A BRAVE SCOTCH NIGHT.
 8 p.m.—G.P.O. Clock and chimes.
 Broadcasters' Topical Chorus.
 An Hour's programme presented by Lindsay.
 8.5 p.m.—The Newtown Band broadcast from Industrial Hall, Newtown.
 8.22 p.m.—Miss Heather Kinnaird, contralto.
 8.30 p.m.—Mr. Douglas Graham, Scottish Comedian.
 8.37 p.m.—Mr. B. Adler Scott, tenor.
 8.44 p.m.—Talk on Voices.
 8.50 p.m.—Miss Elsie Findlay, soprano.
 8.55 p.m.—Mr. Douglas Graham.
 9 p.m.—G.P.O. Clock and chimes.
 9.1 p.m.—Bagpipes Selection.
 9.15 p.m.—Mr. Frank Ryan, Scotch Stories.
 9.16 p.m.—The Newtown Band.
 9.25 p.m.—Miss Heather Kinnaird.
 9.42 p.m.—Mr. Douglas Graham.
 9.46 p.m.—Mr. B. Adler Scott.
 9.53 p.m.—Miss Elsie Findlay.
 9.55 p.m.—G.P.O. Clock and chimes.
 10.1 p.m.—Mr. Frank Ryan.
 10.5 p.m.—Weather report, and forecast by courtesy of Mr. C. J. Maree, Government Meteorologist.
 Resume of following day's programme.
 10.12 p.m.—Romano's Dance Orchestra, under the direction of Mr. Merv. Loxton, broadcast from Romano's.
 11.10 p.m.—G.P.O. Clock and chimes.
 National Anthem.

2GB, SYDNEY

Monday.

MORNING SESSION.

- 10 a.m.—Music.
 10.30 a.m.—"Good Cheer" Talk.
 10.20 a.m.—Music.
 10.30 a.m.—Happiness Talk.
 10.40 a.m.—Women's Session.
 11 a.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—Music.
 2.7 p.m.—Address.
 2.12 p.m.—Music.
 2.17 p.m.—Address.
 2.32 p.m.—Music.
 3 p.m.—Close down.

EVENING SESSION.

- 5.30 p.m.—Children's Session.
 6.30 p.m.—Music.
 7 p.m.—Announcements, News, Market reports.
 7.30 p.m.—Music.
 7.40 p.m.—Address by Rev. R. H. S. Hambridge "Reading Broken Men."
 7.45 p.m.—Music.
 8 p.m.—Instrumental Trio: DAN SCULLY, MABELLE LANG, DOROTHY SPARK.
 8.15 p.m.—Address.
 8.30 p.m.—Songs by RUFERT MARSHALL.
 8.37 p.m.—Violin solo by DAN SCULLY.
 8.47 p.m.—Songs by EVA CROFT.
 8.54 p.m.—Instrumental Trio: DAN SCULLY, MABELLE LANG, DOROTHY SPARK.
 9.10 p.m.—Talk.
 9.30 p.m.—Songs by RUFERT MARSHALL.
 9.37 p.m.—Serial Story.
 9.47 p.m.—Songs by EVA CROFT.
 8.54 p.m.—Good-night Talk.
 10 p.m.—Close down.

2 UW, SYDNEY

Monday.

CLOSE DOWN.

3LO, MELBOURNE.

Monday.

MORNING SESSION.

- 7.15 a.m.—"Herald" morning session.
 9.15 a.m.—Close down.

MIDDAY SESSION.

- 11 a.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Ned McGregor.

- 11.30 a.m.—Close down.
 11.40 a.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Ned McGregor.
 11.50 p.m.—Melbourne Observatory Time Signal.
 12.1 p.m.—British Official Wireless news from River House, London, and the Wireless Press Association, Cable, "Argus" news service.
 12.20 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS.
 12.25 p.m.—BERNARD THOMAS, tenor:
 "Tillie"
 "Mother Shuckers."
 12.36 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS.
 12.40 p.m.—We now have much pleasure in introducing to you a great novelty and which we feel sure you will thoroughly enjoy:
 THE LYNCH BELLRINGERS.
 Intermission from "Cavalaria Rusticana."
 12.50 p.m.—FRANCES LEE, soprano:
 "Forever to Remember" (Adorned).
 "La Paloma" (Lieder).
 12.55 p.m.—THE LYNCH BELLRINGERS on the Gramophone:
 "Kiss a Stranger"
 "Home, Sweet Home."
 1 p.m.—Melbourne Observatory Time Signal.
 1.1 p.m.—Description of New Year Hurdle Race, 8 miles, V.R.C., FLEMINGTON, by "Newbury" of the "Argus."
 1.15 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS.

- 1.15 p.m.—Melbourne Information, Weather forecast and rainfall for Victoria, Tasmania, South Australia and New South Wales, Ocean Forecast, River reports.
 1.21 p.m.—Description of Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Ned McGregor.
 1.25 p.m.—FROM THE STUDIO:
 BERNARD THOMAS, tenor:
 "Mother of Mine" (Cover).
 "Where'er you Walk" (Cover).
 1.40 p.m.—Description of Standing Handicap, 5 furlongs, V.R.C., FLEMINGTON, by "Newbury" of the "Argus."
 1.45 p.m.—JOE ARONSON AND HIS SYMCO-SYMPHONISTS.
 1.48 p.m.—THE LYNCH BELLRINGERS on the Gramophone:
 "Lead, Kindly Light"
 "Abide with Me."
 1.50 p.m.—FRANCES LEE, soprano:
 "Argus" McDonald (Hoschel).
 "O'Connell" (Graham).
 2 p.m.—Close down.
 2.20 p.m.—Description of Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Ned McGregor.
 2.30 p.m.—Description of January Steeplechase, 2 miles by furlong, V.R.C., FLEMINGTON, by "Newbury" of the "Argus."
 2.40 p.m.—Close down.
 2.40 p.m.—Description of events from Japan Sports Carnival, transmitted from Japan.
 2.50 p.m.—Description of events from the Marchborough Highland Society's Sports Meeting, transmitted from Marchborough. Results of Koorndook Jockey Club Winter Results of Burnside Park and Woodmere Racing Club.
 Results of Apollo Hay Races.
 Results of Coleraine Racing Club.
 Results of Lal Lal Falls Turf Club.
 Results of Linton Park Turf Club.
 Results of Linton Park Turf Club.
 will be given at intervals during the day as they come to hand.

AFTERNOON SESSION.

- 3.1 p.m.—Melbourne Observatory Time Signal.
 3.1 p.m.—STUDIOS QUARETS:
 "Chanson Indienne" (Korczak-Korczak).
 3.15 p.m.—Result of Hurdle Handicap, 1 1/2 miles, V.R.C., FLEMINGTON, by "Newbury" of the "Argus."
 3.20 p.m.—LILLIAN SCOTT, soprano:
 "To a Water Lily" (Gies).
 "Robin's Song" (White).
 3.27 p.m.—Description of events from Japan Sports Carnival, transmitted from Japan.
 3.30 p.m.—HOBART PEARCE, baritone:
 "In Old Madrid" (Cover).
 "The Veteran's Song" (Adorned).

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Type	H.F.	L.F.	D06 H.F.	D06 Det.	D06 L.F.	MD06	D3 H.F.
Filament voltage.	3.2—3.0	3.2—3.6	3.0	2.5—3.0	3.0	3.0	1.0—2.0
Filament current, amps.	0.6	0.6	0.6	0.6	0.6	0.6	0.3
Anode voltage ..	30—90	30—90	50—125	20—100	30—100	30—100	50—125
Total emission, m/a.	5	5	8.0	8.0	8.0	8.0	8.0
Impedance, ohms.	20,000	30,000	60,000	17,000	17,000	17,000	60,000
Purpose	Radio, also Resistance Coupling	Audio	Radio, also Resistance Coupling	Detector	Audio	Audio	Radio, also Resistance Coupling
	6/-	6/-	6/-	7/6	7/6	7/6	7/6
Type	D3 Det.	D3 L.F.	MD3	DFA0	DFA1	DFA3	DFA4
Filament voltage.	1.5—2.0	1.0—2.0	1.0—2.0	3.5	5.5	5.5—4.0	5.5
Filament current, amps.	0.3	0.3	0.3	0.35	0.2	0.6	0.2
Anode voltage ..	20—100	30—100	30—100	50—100	50—100	50—100	75—125
Total emission, m/a.	8	8.0	8.0	20.0	25.0	15.0	15.0
Impedance, ohms.	16,000	16,000	16,000	7,000	8,300	13,000	27,000
Purpose	Detector	Audio	Audio	Power Amplifier	Power Amplifier	Audio	Resistance Coupling

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THE MASTER VALVE

- 8.41 p.m.—VAUDE AND VERNE.
 8.48 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGreggor.
 8.55 p.m.—Description of Criterion Handicap, 6 furlongs, V.R.C., FLEMINGTON, by "Newbury," of the "Argus."
FROM THE STUDIO:
 9 p.m.—LILIAN STAY, soprano:
 "Tropics to you," from "Loulou" (Chapentier).
 9.17 p.m.—Description of events from the Maryborough Highland Society's Sports Meetings, transmitted from Maryborough.
 9.17 p.m.—BOBBY TEARCE, baritone:
 "La Spagnola" (Di Capua).
 "Marguerite" (Lohé).
 9.24 p.m.—STUDIO QUARTET:
 "Blazing Quartets, 1st Movement" (Ponchi).
 9.30 p.m.—Description of January Handicap, 1 mile, V.R.C., FLEMINGTON, by "Newbury," of the "Argus."
 9.32 p.m.—REGINALD BRADLEY, violin, and ADELPHI PUPPETE, piano:
 "Sonata, G Minor" (Bartók).
 9.40 p.m.—"Herald" news service.
 9.5 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGreggor.
 9.10 p.m.—Description of events from Jeparit Sports Carnival, transmitted from Jeparit.
 9.20 p.m.—Description of events from the Maryborough Highland Society's Sports Meeting, transmitted from Maryborough.
 9.30 p.m.—Acceptances for Wednesday's Races at Mornington.

EVENING SESSION.

- 9 p.m.—MR. ROD MCGREGGOR will give a description of the final of today's Interstate Cricket Match, Victoria v. South Australia, from Melbourne Cricket Ground.
FROM THE STUDIO:
 9.1 p.m.—Greetings by "LITTLE MISS KOOKABURRA."
 9.30 p.m.—VERONICA COX, soprano:
 "A Little Birdie" (Puccini).
 "The Belle" (Debussy).
 9.37 p.m.—LITTLE MISS KOOKABURRA:
 "A Story for the Children."
 9.40 p.m.—News Announcements.
 9 p.m.—STUDIO QUARTET:
 "Blumbeery Seas" (Morse).
 9.10 p.m.—VERONICA COX, soprano:
 "A Feast of Lastings" (Bartók).
 "Cradle Song" (Kreutzer).
 9.17 p.m.—STUDIO QUARTET.

NIGHT SESSION.

- 9.30 p.m.—MR. E. C. H. TAYLOR will talk to the Heirs of the Acre on "School Life and School Sport."
 9.45 p.m.—MR. GEORGE HYDE, the Australian and New Zealand 1, 2 & 3 Mile Champion, will speak on "Long Distance Running."
 9 p.m.—THE FIRST ACT OF "QUEEN BEGGIE" transmission from the Theatre Royal, by permission J. G. Williamson, Ltd.
 A Glorious Gallop of Girls and Gallop, Captivating Comedy, a Feast of Fanciful Frolicking, a Million Marvellous Melodies, a Colossal A Dream of Delicious Delights.
FROM THE STUDIO:
 9 p.m.—Announcements. G.P. Guide Notes.
 9.4 p.m.—MR. W. A. BOMBASSET will continue a series of talks on "Shipwrecks in Australian Waters."
 9.10 p.m.—SOUTH MELBOURNE BAND:
 March, "Christiana" (Layman).
 Fox Trot, "If you see Sally" (Donaldson).
 9.28 p.m.—BERNARD THOMAS, tenor:
 "Ave Maria" (Grieg).
 "Moulinet and Ronce" (Menet).
 9.35 p.m.—THE LYNCH BELLRINGERS:
 Organ chimes, "Rondevaux."
 9.55 p.m.—Description of to-night's Stadium event, by Mr. Norman McCance.
 9.57 p.m.—THE LYNCH BELLRINGERS:
 "The Rosary."
 9.56 p.m.—VAUDE AND VERNE.
 10.7 p.m.—"Argus" news service. Announcements. Meteorological information.

- 10.14 p.m.—JESSIE IRWIN, soprano:
 "Here's to Love" (Rohlen).
 "Keep on Hopin'" (Kathleen-Maxwell).
 10.21 p.m.—THE LYNCH BELLRINGERS, on the Marimba Hostess:
 "Come Back to Keltin."
 "I Want to be Happy."
 10.26 p.m.—SOUTH MELBOURNE BAND:
 Euphonium solo, "Kentucky Home" (Green).
 Bandstand, 4 Furlongs.
 10.25 p.m.—JESSIE IRWIN, soprano:
 "The Shadow Song" from "Tiphora" (Luz-ber).
 "The Singer" (Ella Maxwell).
 10.42 p.m.—SOUTH MELBOURNE BAND:
 "Wellington Town" (by request).
 10.52 p.m.—BERNARD THOMAS, tenor:
 "Variet" (Costi).
 "Beneath Thy Window" (De Capua).
 10.55 p.m.—At the conclusion of to-night's Stadium event, a rebroadcast will be given by Mr. Norman McCance.
 11 p.m.—OUR GREAT THOUGHT:
 "A thing of beauty is a joy forever:
 Its loveliness increases; it will never
 Pass into nothingness; but still will keep
 A bower quiet for us, and a sleep
 Full of sweet dreams, and health, and quiet
 Breathing."—Keats.
 11.1 p.m.—JOE KINGSON AND HIS
 STENO-SYMPHONISTS.
 11.40 p.m.—GOD SAVE THE KING."

3AR, MELBOURNE

Monday.

MORNING NEWS SESSION.

11 a.m. to 12 noon.

MIDDAY CONCERT SESSION.

12 noon to 1 p.m.

Transmitted from Panoptrope House, 252 Collins Street, by exclusive permission of White and Paton, Ltd., on the Brunswick Panoptrope.
 1 p.m.—Close down.

MATINEE SESSION

ORCHESTRAL CONCERT.

- Sports Results.—During the afternoon results of the races at Sydney and Flemington will be given, as will other information as it comes to hand. Sheffield Shield Cricket scores will be given at frequent intervals during the afternoon.
 2.50 p.m.—Flemington Races. Result of New Year Handicaps, 2 miles.
 2.51 p.m.—Flemington Races. Result of Stanthill Handicap, 6 furlongs.
 2.52 p.m.—Gaulthier Orchestra.
 2.54 p.m.—Flemington Races. Result of January Stipend, 2 miles and 1/2 furlongs.
 2.55 p.m.—Miss Alice Mallon, soprano:
 "Ave Maria" (Bach-Gounod).
 "The Violet" (Mozart).
 2.53 p.m.—Studio Orchestra.
 2.54 p.m.—Mr. Herbert Pettifer, violin:
 "Carnosetto" (Gowland).
 2.55 p.m.—Studio Orchestra.
 2.58 p.m.—Miss Alice Mallon, soprano:
 "The Lass with a delicate air" (Arne).
 "Musetta's Valse" from "La Bohème" (Puccini).
 2.54 p.m.—Flemington Races. Result of Regat Handicap, 1 1/2 miles.
 2.56 p.m.—Studio Orchestra.
 2.59 p.m.—Miss E. Housley, piano:
 A bracket from Mendelssohn's "Songs Without Words" (by special request).
 4 p.m.—G.P.O. clock says Four.
 4.1 p.m.—Second weather forecast.
 4.1 p.m.—Announcements.
 4.2 p.m.—Mr. Edward Pipe, tenor:
 "Unto" (Sanderson).
 "I passed by your window" (Brahm).
 4.14 p.m.—Studio Orchestra.
 4.24 p.m.—Flemington Races. Result of Criterion Handicap, 5 furlongs.
 4.32 p.m.—Mr. Edward Pipe, tenor:
 "Arioso" from Pagliacci (Leoncavallo).
 "Passing by" (Puccini), by request.

- 4.40 p.m.—Studio Orchestra.
 4.50 p.m.—To-night's entertainment.
 4.53 p.m.—Special racing reports, acceptances and barrier positions for Melbourne Races, by "Lynbrook."
 4 p.m.—G.P.O. clock says Five.
 Close down.

CHILDREN'S SESSION.

6.10 p.m.—The Farmyard Fife.

EVENING SESSION.

AUSTRALIAN PANTOMIME.

- 6.30 p.m.—Amateur Show. Special topical sporting talk, arranged by Mr. H. R. Weir, hon. sec. of the V.A.A.A.
 7.45 p.m.—Mr. Howard Joo, hon. secretary of the National Sports Campaign, will continue his interesting series of popular addresses.
 8 p.m.—G.P.O. clock says Eight.
 8.1 p.m.—Australian Pantomime, "Mother Goose."
 8.20 p.m.—From Jai Studio.
 8.25 p.m.—The Karaoke Duo—Miss H. Ida Station, violin, 14th, Gilbert Fyfe, piano.
 "Chant Hindu" (stunak)-Korazaki-Krisia.
 "Boles" (Hohm).
 "Authentic Cantabile" (Dobakowski-Kreisler).
 8.30 p.m.—Miss Beth Corrie, contralto:
 "Lament of Alfy" (Bartók).
 "Hans of Moor" (Mazbach).
 8.38 p.m.—Mr. Alfred Firmans:
 Chief Librarian of Mullens, will give his racy and interesting rapid reviews on "Fiction for all," books of yesterday, to-day and to-morrow.
 8.45 p.m.—Mr. Jack Harris, comedian:
 "Viewing the Baky" (Weston) and "Lout."
 "Monday she goes to be shingled" (Wenton).
 8.45 p.m.—Mr. Noel Bunker, baritone:
 "Nephtis" (Gard).
 "Lighterman Tom" (Squire).
 10 p.m.—G.P.O. clock says Ten.
 10.1 p.m.—Semi-final weather forecast especially for our country listeners.
 10.2 p.m.—Yes, Australia. Know Australia. Vivid and interesting news of our own sources. The one drama with Bright and the Alps district. Specially prepared for 3AR, by Mr. W. H. Goldworthy, editor of "The Alpine Explorer."
 10.14 p.m.—Miss Beth Corrie, contralto:
 "Come, Gentle Night" (Rigler).
 "Little Shepherd of Rhine" (Hemery).
 10.22 p.m.—The Karola Trio:
 Selection from popular musical plays of the day.
 10.32 p.m.—Mr. Jack Harris, comedian:
 The popular laugh-maker on one of his specially funny songs, with his amazing patter.
 10.40 p.m.—Mr. Noel Bunker, baritone:
 "The Deathless Army" (Trotter), by request.
 "Trooper Johnny Ludlow" (Trotter).
 10.45 p.m.—"Age" news bulletin, exclusive to 3AR.
 10.53 p.m.—To-morrow's entertainment.
 10.58 p.m.—Final weather forecast.
 10.59 p.m.—Our Australian Good-night Quote is from the poem, "Song of the Future," by A. B. Paterson.
 11 p.m.—G.P.O. clock says Eleven.
 Close Save the King.

4QE, BRISBANE

Monday.

NO MORNING TRANSMISSION.

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

- The Q.T.C. Races at Ascot will be described in detail direct from the course. Music will be broadcast from the Studio between events.
 2 p.m.—From Ascot: Q.T.C. Races.
 3 p.m.—Close down.

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EARLY EVENING SESSION

- 6 p.m.—News service supplied by "The Daily Standard."
 6.30 p.m.—Lectures: (A)
 7.00 p.m.—The children's edition: Stories by "The Bandman."
 7.15 p.m.—Market reports, stock reports.
 7.30 p.m.—Weather news, "Daily Standard" news.
 7.45 p.m.—Standard time signals.
 7.55 p.m.—Lectures: "A Casino Visited Yesterday" by Mr. E. J. Gillroy.

NIGHT SESSION.

- "A HAPPY NEW YEAR TO ALL."
 Bulletin 140 will usher in the New Year by presenting a popular type of programme. Each item will comprise either an old-time or modern favourite.
 8 p.m.—From the Studio:
 Chorus, "Fresh Flowers Anthem."
 The Bohemians.
 (Accompanied by the Studio Orchestra)
 Yes! Yes! "Ragging Through the Yip"
 (Solo).

The Studio Orchestra.

- (With vocal refrain by the Bohemians.)
 Tenor solo, "Crying Heine" (Wilkey).
 Mr. Geo. Williamson.
 Minnie, "Dance Dine" (Kipling).
 Mr. Tom Muller.
 Miss Thelma Champion, assisted by the Bohemians will explain what it feels like to be "Lucky."

- Double quartet, "Marr Law."
 The Bohemians.

- Baritone solo, "Tuck Me in Sleep in My Old Kentucky Home" (Bever).
 Mr. F. Crane.

- (Accompanied by the Studio Orchestra).
 Wally, "Over the Wall."
 The Studio Orchestra.

- Soloists, "My Mammy" (Donaldson).
 Miss Pat McElroy.

- The Studio Orchestra and the Bohemians will assist.

- A—Old Ducky Melody, "Old Kentucky Home" (Factor).
 The Bohemians.

- (Soloist, Mr. E. P. Casswell).
 Selection, "The Birth of New York" (Berkey).

- The Studio Orchestra.

- The Bohemians will spend five minutes around the studio and will entertain with a group of old-time favourites, including:

- (a) "Sweet Rosie O'Grady."
 (b) "The Hideaways of New York."
 (c) "After the Ball."
 (d) "Auntie Rooney."
 (e) "Two Little Girls in Blue."
 (f) "A Boylike Build for Two."

- 9 p.m.—Metropolitan weather forecast.
 9.15 p.m.—Fox trial, "Boasting at the World Through Risk Colored Glasses."
 The Studio Orchestra.

- (Vocal Refrain by the Bohemians)
 Tenor solo, "Sally Harner."
 Mr. Geo. Williamson.

- Pat McElroy, assisted by the Bohemians, will explain what happens when you're "Smiffy" (Bass).

- Baritone solo, "Ed Love to Fall Alone and Wake Up in My Mammy's Arms" (Ahlfert).
 Mr. E. Harner.

- Chorus, "Sweetest Girl."
 The Bohemians.
 (Soloist, Mr. H. Gilroy).

- Duet, "Singing will Return with You."
 Miss Thelma Champion and Mr. Geo. Williamson.

- 8.40 p.m.—A Short Radio Interlude:
 "Hymns of the Old Church Choir."
 The Bohemians.

- Old Man, Mr. T. Muller; The Verger, Mr. C. Woodring.

- 4.0 p.m.—Bassette solo, "Little Brown Jug."
 Mr. Ray Bruce.

- Orchestra—"A Medley of Old Favourites"
 —No. 1.
 The Studio Orchestra.

- Tenor solo, "Want You Buy my Pretty Flowers."
 Mr. E. W. Muller.

- Ten Double Melodies.

- (a) "Swanee Ribber."
 (b) "Good Old Jeff."
 The Bohemians.
 (Soloist, Mr. T. Muller).

- Artistic solo, "Texas in the Broad Atlantic."
 Mr. E. Harner.

- (Accompanied by the Bohemians)
 Orchestral "Medley of Old-time Favourites"
 —No. 2.

- The Studio Orchestra
 Chorus, "End of a Perfect Day" (Carroll Jacob Bond).

- The Bohemians.
 10 p.m.—"The Brilly Man" news, weather news.
 Close down.

5CL, ADELAIDE

Monday.

MIDDAY SESSION.

- 12 p.m.—G.P.O. Chimes.

- 12.15 p.m.—Advertising news service.

- 12.30 p.m.—Musical numbers from the studio.

- 1.00 p.m.—Solo by Mr. Murphyville-Keecey.

- A running description of events by Mr. Arnold Treloar interspersed with intermission results and physical numbers from the Studio.

- 1.30 p.m.—(Approx.) Close down.

EVENING SESSION.

- 6.30 p.m.—G.P.O. Chimes.

- 6.45 p.m.—Children's time.

- 7.30 p.m.—Excerpts from "News Bulletin."

- 7.55 p.m.—Singing results.

- 8.00 p.m.—Talk by Capt. R. B. Playford.

- 7.55 p.m.—Station announcements.

- 8 p.m.—G.P.O. Chimes.

- 8.15 p.m.—Solo by Mr. Mason De Dance.

- 8.20 p.m.—Dance selections.

- 8.25 p.m.—Humor, Don Farwell.

- 8.30 p.m.—Comic Opera Selection (Orchestra), Studio Orchestra.

- 8.40 p.m.—Comedy Duo, Don Farwell, Noel Temp.

- 8.45 p.m.—Solo by the Milton De Dance.

- 8.50 p.m.—Dance selections.

- 9 p.m.—G.P.O. Chimes.

- 9.1 p.m.—Metropolitan information.

- 9.2 p.m.—Daily's what report.

- 9.3 p.m.—Station announcements.

- 9.4 p.m.—Bartlett solo, Arnold Maters.

- 9.45 p.m.—Orchestra selections, "Carmen" (Berger) Studio Orchestra.

- 9.50 p.m.—Soprano solo, Mrs. Keith Steward.

- 9.55 p.m.—Organ Recital of Schubert Works.

- 10.00 p.m.—Musical recital by Raymond Lambert the Belgian Novice.

- 9.55 p.m.—Violin solo, Loretta Foglia.

- 10.00 p.m.—G.P.O. Chimes.

- 10.10 p.m.—Advertising news service.

- 10.15 p.m.—Singing results.

- 10.20 p.m.—Bartlett solo, (Popular Ballads) Arnold Maters.

- 10.25 p.m.—Comic Opera Numbers, Studio Orchestra.

- 10.30 p.m.—Soprano solo, (Popular Song) Mrs. Keith Steward.

- 10.35 p.m.—Dance selections.

- 10.40 p.m.—Tuesday's Programme and Meteorological information.

- 11 p.m.—G.P.O. Chimes and National Anthem.

6WF, PERTH.

Monday.

- 11.30 p.m.—Time signal.

- 12.30 p.m.—Markets, News, and Cabot.

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

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

- 1.2 p.m.—From the Studio:

- Musical programme, including vocal and instrumental articles.

AT ASCOT.

- 2 p.m.—Detailed description of Races relayed from the Ascot Racecourse, Belmont.

- 2 p.m.—Fremantle Plate.

- 2.40 p.m.—Coronation Plate.

- 3.20 p.m.—Imperial Handicap.

- 3.35 p.m.—From the Studio:

- Musical programme, including vocal and instrumental articles.

- 4 p.m.—Commemorative Handicap.

- 4.40 p.m.—C.B. Cox Final.

- 5.20 p.m.—Final Handicap.

- 6.30 p.m.—Close down.

- 6.45 p.m.—Time signal.

- The Evening Programme is broadcast on 104.5 Metres, as well as the usual wave-length.

- 6.50 p.m.—Stories for the Kiddies by Uncle Henry and Dotty.

- 7.20 p.m.—Markets, News, and Cabot.

- 7.45 p.m.—Talk by Lindt Col. Le Sourd, Director of the Zoological Gardens, South Perth.

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

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

- Station announcements such as alterations to Programmes, etc.

SCOTTISH NIGHT.

- 8.3 p.m.—Grand Scottish Entertainment, under auspices of the Caledonian Society of W.A. relayed from the Perth Town Hall.

- 10 p.m.—Late News items, by courtesy of "The Daily News" Newspaper Co.

- Stops within range announcement.

- Weather Report and Forecast.

- 10.30 p.m.—Close down.

104.5 METRE TRANSMISSION.

- Simultaneous broadcast on 104.5 Metres of Programme given on 1250 Metres, commencing at 6.45 p.m.

7ZL, HOBART

Monday.

MORNING SESSION.

- 11 a.m. to 12 noon.

AFTERNOON SESSION.

- 3 p.m.—G.P.O. Clock chimes the Hour.

- 3.15 p.m.—Time signal.

- 3.30 p.m.—Hobart Stock Exchange Quotations.

- Weather information.

- Items of Interest, Announcements.

- 4.15 p.m.—Selections by 7ZL Studio Trio.

- "Marche des Cadets" (Houppé).

- "If Winter Comes" (Tennant).

- "Musical Telegrams" (Rulach).

- Selection, "Flourishes" (Paganini).

- Violin solo, Selected, Mr. E. J. McCann.

- Piano solo, Mr. A. Roberts.

- 4.45 p.m.—Fashion Talk, by "Aunt Edna" of Brownlee Ltd., Hobart.

- 4.50 p.m.—Close down.

EARLY EVENING SESSION.

- 8.30 p.m.—"Uncle Peter's" half-hour.

- 7 p.m.—"Uncle Hector" talks to the children.

NIGHT SESSION.

- 1.30 p.m.—Musical selection.

- 7.35 p.m.—Physical culture talk by Lieutenant Reginald McKinlock.

- 7.50 p.m.—"Mercury" special Tasmanian news service.

- Railway action produce sales.

- Weather information.

- Hobart Stock Exchange quotations.

- 8 p.m.—G.P.O. Clock chimes the Hour.

- 8.1 p.m.—Results of Shipwrights Point Regatta.

- Broadcast by direct wire from Strand Theatre, Hobart, incidental music to the film, "The Cat and the Canary," and description talk by Mr. R. W. Brooks.

- At conclusion of Strand programme:

- British official wireless news.

- "Mercury" special inter-State news service.

- Tasmanian district weather reports.

- 8 p.m.—Weather forecasts.

- Station announcements: To-morrow's programme.

- National Anthem.

Tuesday, Jan. 3

2FC, SYDNEY

EARLY MORNING SESSION.
7 a.m. to 8 a.m.

MORNING SESSION.

- 10 a.m.—"Big Ben" and announcements.
10.5 a.m.—Studio music.
10.15 a.m.—"Sydney Morning Herald" news service.
10.30 a.m.—Studio music.
10.35 a.m.—Last minute sporting information by the 2FC Racing Commentator.
10.45 a.m.—Studio music.
11 a.m.—"Big Ben." Studio music.
11.5 a.m.—A.P.A. and Radio's Cable Services.
11.15 a.m.—Studio music, until 11.30 a.m.

MIDDAY SESSION.

- 11.30 a.m.—From the Sydney Cricket Ground: Descriptions and scores of the Cricket match, New South Wales versus Queensland.
12 noon—"Big Ben."
From the Studio:
Programme announcements.
12.2 p.m.—Stock Exchange, first call.
12.5 p.m.—Studio music.
12.15 p.m.—Summary of "Sydney Morning Herald" news service.
Rugby wireless news.
12.25 p.m.—Studio music.
12.30 p.m.—Hilda Nelson, mezzo:
"Provenza" (Carné).
12.35 p.m.—Popular records, and cricket scores.
12.40 p.m.—Kathleen Stollery, mezzo.
12.45 p.m.—Cricket scores.
1 p.m.—"Big Ben."
Weather intelligence.
1.5 p.m.—"Evening News" midday news service.
Producers' Distributing Society's Report.
1.20 p.m.—Hilda Nelson, mezzo:
"But Why" (Logan).
1.24 p.m.—Studio music.
1.28 p.m.—Stock Exchange, second call.
1.30 p.m.—Studio music.
1.45 p.m.—Kathleen Stollery, mezzo.
1.50 p.m.—Studio music.
From the Sydney Cricket Ground:
Description of the match, New South Wales versus Queensland, with program scores throughout the afternoon.

AFTERNOON SESSION.

- 2 p.m.—"Big Ben" and announcements.
2.3 p.m.—From the Studio:
Persia Butler, soprano:
"A Song and a Dream" (Wakefield).
3.7 p.m.—The "Radio-Triad," instrumentalists:
Leader, Mr. Ewart Chapple.
3.15 p.m.—Katherine Beverley, soprano:
"Autumn" (Albert Mallinson).
3.20 p.m.—From the Sydney Cricket Ground:
Further descriptions of the match, N.S.W. v. Queensland.
3.30 p.m.—From the Studio:
The "Radio-Triad."
Leader, Mr. Ewart Chapple.
3.37 p.m.—Further cricket scores and descriptions of the play.
3.50 p.m.—From the Studio:
Persia Butler, soprano:
"Just for To-day" (Harding).
3.54 p.m.—The "Radio-Triad."
Leader, Mr. Ewart Chapple.
4 p.m.—From the Sydney Cricket Ground:
Further scores and descriptions of the play.
4.20 p.m.—From the Studio:
Katherine Beverley, soprano:
"Love-illy" (Thomson).
4.25 p.m.—The "Radio-Triad."
Leader, Mr. Ewart Chapple.
4.38 p.m.—From the Sydney Cricket Ground:
Cricket scores and description of play.
4.45 p.m.—From the Studio:
Stock Exchange, third call.
4.47 p.m.—Cricket scores and descriptions of the play will be given until 5.40 p.m.



Standard 2-Valve Receiver £14

complete with all accessories

Farmer's standard two-valve receiver, combining efficiency with reliability, entirely eliminates outside interference. Included in standard equipment are two "Radiotron" valves of a type particularly adaptable to this set. Erected in the city and suburbs free. Maintenance cost is remarkably low. Price, with one pair of headphones, .. £14/-

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This means no acid spills and no violent burnt out.

A compact, 3-inch cube, "Acme" charger will fit neatly into any corner of the house and do the job twice as well at a quarter the cost. Price £4/17/6

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The "Grotan" Shielded Coil Kit comprises three sets of coils, each protected with an efficient screen of specially insulated aluminium. This special covering prevents the coil windings, increases selectivity and decreases direct pick-up. Coils may be purchased separately. Price, 32/6 Or the complete kit of three. Price £37/6

Wireless Department, Ground Floor, New Building.

FARMER'S

Pitt, Market and George Streets.

EARLY EVENING SESSION.

- 8.40 a.m.—The Chimes of St. Paul.
 8.45 p.m.—The "Tolly Man" talks to the children.
 9 p.m.—"Big Ben."
 9.15 p.m.—Children's stories.
 9.2 p.m.—Continuation of the children's session.
 9.30 p.m.—Story time for the young folk.
 9.35 p.m.—Dinner music.
 9.40 p.m.—"Big Ben" late sporting news.
 9.45 p.m.—Dargatz's market reports (wool, wheat and stock).
 7.15 p.m.—Fruit and vegetable markets.
 P.D.S. Poultry markets.
 7.25 p.m.—Weather and shipping news.
 7.35 p.m.—"Evening News" late news service.

NIGHT SESSION.

- 7.55 p.m.—Programme announcements.
 8.45 p.m.—Louise Homfray, lady harpist.
 (a) "The You Went Away" (Newell).
 (b) "Moon" (Giddens).
 9.15 p.m.—Scott Alexander will present the 2nd Annual Music Association, specially written for BBC by Cedricynne Hall, entitled "KEEPING UP WITH THE TIMES."
 9.2 p.m.—The Royal Beach Concert Band, conducted by Mr. W. Farrington.
 9.25 p.m.—Miss Mildred Cunningham, harpist.
 "How flows that winter wind" (Swergin).
 9.35 p.m.—A Talk by Miss Goodie Jones.
 9.45 p.m.—The Royal Beach Concert Band, Conductor, Mr. W. Farrington.
 9.55 p.m.—Miss Mildred Cunningham, harpist.
 "Drops of Young Love" (Hendel).
 10.25 p.m.—The Royal Beach Concert Band.
 9 p.m.—"Big Ben" latest weather forecast.
 9.1 p.m.—Louise Homfray, lady harpist.
 "My Idea of Heaven" (Johnson).
 9.25 p.m.—Scott Alexander will present a farcical radio play adapted from the French by Cedricynne Hall, entitled "THE FRODOURGE OYSTER."
 Mr. Alexander will be supported by his privately selected company of Radio Artists.
 9.25 The Royal Beach Concert Band, Conductor, Mr. W. Farrington.
 9.35 p.m.—Miss Mildred Cunningham, harpist.
 (a) "The Jolly Jack" (Bollman).
 (b) "Tally Ho" (Lambert).
 9.45 p.m.—Miss Lilian Lawson, violinist.
 (a) "Air" (Hodson).
 (b) "Valse Serenade" (Tchaikowsky-Aver).
 9.55 p.m.—Louise Homfray, lady harpist.
 "This one is lady's song" (Davidson).
 10 a.m.—"Big Ben."
 The Royal Beach Concert Band, Conductor, Mr. W. Farrington.
 10.15 p.m.—From the Ambassadors.
 The Ambassadors Dance Orchestra, Conductor, Mr. Al Hammer.
 10.20 p.m.—Late weather forecast from the Studio.
 10.25 p.m.—The Ambassadors Dance Orchestra in regular number.
 10.35 p.m.—Late news and announcements.
 11 p.m.—"Big Ben."
 The Ambassadors Dance Orchestra until 11.45 p.m.
 11.45 p.m.—Statistical System.

2BL, SYDNEY.

Tuesday.

EARLY MORNING SESSION, 8 TO 9 A.M.

MORNING SESSION.

- 8.55 a.m.—G.P.O. Clock and chimes.
 Musical programme from the Studio.
 10.40 a.m.—News from the "Daily Telegraph" (Special).
 10.45 a.m.—Musical programme from the Studio.
 11 a.m.—G.P.O. Clock and chimes.
 WOMEN'S SESSION.
 Social Notes. Replies to correspondents by Mrs. Jordan.
 "The Old Hints" by Mrs. Jordan.
 12 noon.—G.P.O. Clock and chimes.
 Special ocean forecast and weather report.
 12 p.m.—Musical programme from the Studio.

12.5 p.m.—Information: Mails, Shipping and port directory.

- 1.15 p.m.—Musical in call by wireless.
 1.25 p.m.—Fruit market report.
 1.35 p.m.—Vegetable market report.
 1.45 p.m.—London Metal Market report.
 1.55 p.m.—Dairy Farm and Produce market report.
 2.05 p.m.—FORAGE market report.
 2.15 p.m.—Rabbit market report.
 2.25 p.m.—Stock Exchange report.
 2.35 p.m.—H.M.V. Gramophone Recital.
 2.45 p.m.—Stock Exchange report.
 2.55 p.m.—G.P.O. Clock and chimes.
 Talk to the Children, and special entertainment for Children in Hospital.
 3 p.m.—G.P.O. Clock and chimes.
 Close down.

AFTERNOON SESSION.

- Hearing information broadcast immediately after each hour by courtesy of the "Sun."
 3 p.m.—G.P.O. Clock and chimes.
 News from the "Sun."
 3.15 p.m.—CIVIL SERVICE STORES TRIO, Direction, Miss de Courcy Bremer.
 3.20 p.m.—G.P.O. Clock and chimes.
 News from the "Sun."
 3.30 p.m.—Pianoforte recital from the Studio.
 3.40 p.m.—News from the "Sun."
 3.50 p.m.—G.P.O. Clock and chimes.
 CIVIL SERVICE STORES TRIO.
 4.15 p.m.—Talk on "Women of the Orient of all Ages."
 4.25 p.m.—Musical programme from the Studio.
 4.50 p.m.—News from the "Sun."
 4.55 p.m.—Resume of night's programme.
 5.05 p.m.—Dance routine.
 5.15 p.m.—Special ocean forecast.
 5.25 p.m.—G.P.O. Clock and chimes.
 Close down.

EARLY EVENING SESSION.

- 8.45 p.m.—G.P.O. Clock and chimes.
 Uncle Jack and Uncle Sam will entertain the Children.

SPECIAL COUNTRY SESSION.

- 8.55 p.m.—G.P.O. Clock and chimes.
 Australian Mercantile Land and Finance Co.'s report.
 Weather report and forecast, by courtesy of Government Meteorologist.
 Stock Exchange reports.
 Producers' Distributors' Society's Fruit and Vegetable market report. Grain and Fodder report ("Sun").
 Dairies' Produce report ("Sun").
 N.A.M.A. Talk.
 9.45 p.m.—Country news from the "Sun."
 9.55 p.m.—G.P.O. Clock and chimes.
 Musical recital by courtesy of His Masters Voice Gramophone Co.
 10.30 p.m.—Talk by a member of the St. John's Ambulance Association.

EVENING SESSION.

- 8 p.m.—G.P.O. Clock and chimes.
 Broadcasters' Topical Chorus.
 8.15 p.m.—Broadcasters' Light Orchestra, under the direction of Mr. J. Knight.
 8.30 p.m.—Miss Maudie Bergart, contralto.
 8.45 p.m.—Miss Dulcie Blay, violin solo.
 8.55 p.m.—Mr. Stoffel Rosenzweig, baritone.
 9.05 p.m.—Miss Edna Fenner, elocutionist.
 9.15 p.m.—Mr. Haagen Holtenberg, piano solo.
 9.25 p.m.—Miss Ella Goodman, soprano.
 9.35 p.m.—Weather report and forecast by courtesy of Mr. C. J. Marco, Government Meteorologist.
 9.45 p.m.—Broadcasters' Light Orchestra.
 9.55 p.m.—Miss Dulcie Blay.
 10.05 p.m.—Mr. Stoffel Rosenzweig.
 10.15 p.m.—Miss Maudie Bergart, piano solo.
 10.30 p.m.—Miss Maudie Bergart.
 10.40 p.m.—Broadcasters' Light Orchestra.
 10.50 p.m.—Miss Ella Goodman.
 10.55 p.m.—Resume of following day's programme.
 10 p.m.—G.P.O. Clock and chimes.
 10.15 p.m.—Miss Edna Fenner.
 10.35 p.m.—Broadcasters' Light Orchestra.
 10.45 p.m.—Cyril Kaye and the Westworth Cafe Orchestra, Symphonist from the ball-room of the Westworth.
 11.30 p.m.—G.P.O. Clock and chimes.
 National Anthem.

2GB, SYDNEY

Tuesday.

MORNING SESSION.

- 10 a.m.—Muscle.
 10.10 a.m.—"Good Cheer" Talk.
 10.15 p.m.—Stock.
 10.30 a.m.—Happiest Talk.
 10.40 a.m.—Women's Session.
 11 a.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—Muscle.
 2.15 p.m.—Address.
 2.25 p.m.—Muscle.
 2.35 p.m.—Address.
 2.45 p.m.—Close down.

EVENING SESSION.

- 8.55 p.m.—Children's Session.
 9.30 p.m.—Muscle.
 7.15 p.m.—Announcements; News; Market reports, etc.
 8.20 p.m.—Muscle.
 7.45 p.m.—Address.
 7.55 p.m.—Muscle.
 8 p.m.—Violin Solo by LEONARD BRISBER.
 8.25 p.m.—Songs by MAURICE DALY.
 8.45 p.m.—Address.
 8.50 a.m.—Songs at the Piano by IRENE JAY.
 8.57 p.m.—Pianoforte solo by DOROTHY SPARK.
 9.05 p.m.—Songs by GLADYS HART.
 9.15 p.m.—Violin solo by LEONARD BRISBER.
 9.35 p.m.—Songs by MAURICE DALY.
 9.45 p.m.—Musical Monologues by IRENE JAY.
 9.55 p.m.—Talk.
 10.00 p.m.—Songs by GLADYS HART.
 9.45 p.m.—Serial Story.
 9.47 p.m.—Violin solo by LEONARD BRISBER.
 9.54 p.m.—Good-night Talk.
 10 p.m.—Close down.

2 UW, SYDNEY

Tuesday.

- 9 a.m.—Studio items.
 9.35 a.m.—Women's session.
 10 a.m.—Close down.
 12.15 p.m.—Special employees' luncheon session.
 12.45 p.m.—Close down.
 7 p.m.—Where to go.
 7.10 p.m.—Studio items.
 7.30 p.m.—Orchestral Indian Love Lyrics Woodford.
 7.40 p.m.—Violin solo: Hummer (Vjtrak).
 7.45 p.m.—Songs:
 "O. Sole Mio" (Di Capua).
 7.50 p.m.—Quartet from Rigoletto (Verdi).
 8 p.m.—Gems of the Opera:
 "Barber of Seville" (Rossini).
 Arranged and presented by George Y. Maurel.
 (a) Biographical sketch of composer.
 (b) "Story of the Opera."
 (c) Vocal and instrumental items from each act of the opera.
 8.15 p.m.—Resume of forward programme.
 8.17 p.m.—Studio items.
 8.30 p.m.—Close down.

3LO, MELBOURNE

Tuesday.

MORNING SESSION.

- 1.10 a.m.—"Herald" morning session.
 8.15 a.m.—Close down.

MIDDAY SESSION.

- 11 a.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Westbourne Cricket Ground, by Mr. Red McGregor.

- 11.30 a.m.—Close down.
- 11.30 a.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGregor.
- 12 noon.—Melbourne Observatory Time Signal.
- 12.13 p.m.—Metal prices received by the Australian Mines and Metals Association from the London Stock Exchange, the day British Official Wireless news from Rugby, Reuters and the Australian Press Association cables. "Argus" news service.
- 12.25 p.m.—STUDIO QUARTET:
"Songs of the Hebrides" (Fraser).
- 12.30 p.m.—BERNARD THOMAS, tenor:
"Little Mother of Mine"
"Gipsy Annman."
- 12.40 p.m.—STUDIO QUARTET:
"Cyrano de Bergerac," Part 1 (Rouse).
- 12.47 p.m.—THE PREMIER POUR (by permission of J. C. Williamson, Ltd.):
"Alceste" (Métcalfe).
"Take in the Sun" (Woods).
- 12.54 p.m.—THE LYNCH BELLRINGERS, on the Glassophones:
"Nearer, my God, to Thee."
"Lay me Down to Sleep."
- 1 p.m.—Melbourne Observatory Time Signal.
- 1.10 p.m.—THE STUDIO QUARTET:
"Cyrano de Bergerac," Part 2 (Rouse).
- 1.19 p.m.—Meteorological information. Weather forecast and rainfall for Victoria, Tasmania, New South Wales and New South Wales. Ocean forecasts. River reports.
- 1.27 p.m.—BERNARD THOMAS, tenor:
"Mardiola" (Schertzingers).
- 1.30 p.m.—"Gaily Horner."
- 1.34 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGregor.
- 1.40 p.m.—THE LYNCH BELLRINGERS:
Organic rhymes, "Ah Che La Motte."
"Killarney."
- 1.42 p.m.—THE STUDIO QUARTET:
Two Favourite Classics from Schubert.
- 1.45 p.m.—THE PREMIER FOUR:
"Yesterday" (Harrison).
"The World is Waiting for the Sunrise" (Seitz).
- 1.52 p.m.—THE LYNCH BELLRINGERS:
"Hansons" (Offenbach).
- 1.57 p.m.—VALER AND VERNE.
- 2 p.m.—Close down.
- 2.15 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGregor.
- 2.30 p.m.—Description of Novice Handicap 7 furlongs, MENTONE RACES, by "Muskiet" of the "Sporting Globe."
- 2.33 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGregor.
- 2.40 p.m.—AFTERNOON SESSION.
- 2.45 p.m.—Melbourne Observatory Time Signal.
- 2.50 p.m.—Description of Mentone Plate 6 furlongs, MENTONE RACES, by "Muskiet" of the "Sporting Globe."
- 3 p.m.—FROM THE STUDIO:
3.3 p.m.—JOE ARONSON AND HIS SYNCO-SYMPHONISTS.
- 3.45 p.m.—MADAME ETHEL ASHTON, soprano:
"Hidden Love" (Grieg).
"The Dawn."
- 3.55 p.m.—JOE ARONSON AND HIS SYNCO-SYMPHONISTS.
- 4 p.m.—Description of British Steeplechase 2 miles 4 furlongs, MENTONE RACES, by "Muskiet" of the "Sporting Globe."
- 4.12 p.m.—PAT McLEAN, comedienne:
Child Impersonations.
- 4.22 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGregor.
- 4.30 p.m.—Description of Mentone Handicap 1 mile, MENTONE RACES, by "Muskiet" of the "Sporting Globe."
- 4.45 p.m.—ONE ACT PLAY:
"ROLLS AND SALT."

Played by LOUISE MOOREHEAD and FELIX ST. H. JELICOE



The IGRANIC — SUPER-HETERODYNE SET

Is the choice of experts and discriminating Amateurs alike.

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4.35 p.m.—**JOE ARONSON AND HIS SYNGO-SYMPHONISTS.**

4.40 p.m.—Description of Mentone Races, 4 furlongs, MENTONE RACES, by "Musket," of the "Sporting Globe."

FROM THE STUDIO:

4.45 p.m.—**MADAME ETHEL ASHTON, soprano.**

"The Star" (Moulayou Phillipot)

"The Boat Song" (Harriet Ware)

4.41 p.m.—**VAIDE AND VERNE.**

4.40 p.m.—"Herald" News Service.

5 p.m.—Description of Jupiter Flat Race, MENTONE RACES, by "Musket," of the "Sporting Globe."

5.3 p.m.—Description of Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGregor.

EVENING SESSION.

6 p.m.—Description of the finale of today's Interstate Cricket Match, Victoria v. South Australia, at Melbourne Cricket Ground, by Mr. Rod McGregor.

FROM THE STUDIO:

6.7 p.m.—**"BILLY RUNNY"** will give birthday greetings.

6.10 p.m.—**CAPTAIN DONALD MACLEAN.**

"At the Sign of the Skull and Crossbones."

6.45 p.m.—**"BILLY RUNNY"**

"The Treasure Seekers are still on the Track."

7 p.m.—Official Report of Newmarket Stock Sales by the Associated Stock and Cattle Agents, Burke, Carew, Melbourne.

7.5 p.m.—"Herald" News Service. Weather synopsis. Shipping movements.

7.15 p.m.—Stock Exchange information.

7.17 p.m.—Fish Market reports by J. R. Borrett, Ltd. Rabbit prices.

7.19 p.m.—River Reports.

7.25 p.m.—Market Reports by the Victorian Producers' Co-operative Co., Ltd. Poultry, Grain, Hay, Straw, Jute, Peas, Potatoes and Onions. Market reports of fruit by the Victorian Fruitgrowers' Association. Retail Prices. Wholesale Prices of Fruit by the Wholesale Fruit Merchants' Association. Citrus fruits. Ballarat Sheep Market reports.

NIGHT SESSION.

7.50 p.m.—Under the auspices of the UNIVERSITY EXTENSION BOARD, MR. G. L. WOOD, M.A., will speak on:

"Working Conditions in the Pacific."

8.40 p.m.—MR. E. M. PASCOE.

"Rosa."

9 p.m.—**COBURG CITY BAND.**

March, "St. Kilda" (Tranuel).

March, "Remembrance" (Rimmer).

10 p.m.—**BERNARD THOMAS, tenor.**

"Macanah" (MacMurchioch).

"Leila" (Brazz Peccia).

10.17 p.m.—**THE LYNCH BELLRINGERS** on the Maritime Resonators.

"That Certain Party."

"Honey."

10.24 p.m.—**MR. W. A. SOMERSET.**

"Shipwrecks in Australian Waters." No. 2.

10.25 p.m.—**COBURG CITY BAND.**

Quintette, "The Rinking Bee."

10.30 p.m.—**LOUIE HILBURN, contralto.**

"The Auld Scotch Songs."

"Castle Golden" (Hennett).

10.32 p.m.—**THE LYNCH BELLRINGERS** on the Glassharmon.

"Gustia."

10.56 p.m.—Announcements.

9 p.m.—**COBURG CITY BAND.**

Current solo "Current King" (Greenwood).

March, by "Under the Alked Banner" (Olderskaw).

10.40 p.m.—**ONE ACT PLAY:**

"THE MONKEY'S PAW."

A story in three scenes by W. W. Jacobs, Dramatized by Louis N. Parker.

Characters in the order of their speaking:

MR. WHITE, MAURICE DUDLEY.

HERBERT, HECTOR M. HILL.

MRS. WHITE, MRS. MAURICE DUDLEY.

SERGE-MAJOR MORRIS, FRANK HATHERLEY.

Scene: The Living Room of an Old-fashioned Cottage in the outskirts of Pullman.

Scene 1. Night. Story Hugging Guards.

Scene 2. Next Morning.

Scene 3. Night. Ten days later.

Produced by MAURICE DUDLEY.

9.30 p.m.—**COBURG CITY BAND.**

Rail. Made from "Coorina" (Delibes).

9.31 p.m.—**BERNARD THOMAS, tenor.**

"Where's yer walk" (Cooper).

"Parted" (Toot).

9.44 p.m.—**THE LYNCH BELLRINGERS** on the Organ Chimes.

"The Blue Abbotin Mountains."

"Mother Mahtree."

9.49 p.m.—**COBURG CITY BAND.**

Waltz, "Golden Sunshine."

9.55 p.m.—**BOB MOLYNEUX, baritone.**

"My Blue Heaven."

"Mountain Waters."

10.3 p.m.—"Argon" news service. Meteorological information. British Official Wireless News from Rugby.

"Are you remembering Safety-Fix at all times and in all places. Resolve not to Jay Walk-to Sleep, Look and Listen at the Low Pressing and Warning Junctions. To be careful with fire when you picnic, and show all to see that your children learn to swim."

10.10 p.m.—**COBURG CITY BAND.**

Unaltered.

10.15 p.m.—**LOUIE HILBURN, contralto.**

"I Like Blah de Grass."

"Nightie has a nice" (Lehmann).

10.22 p.m.—**VAIDE AND VERNE.**

10.23 p.m.—**BOB MOLYNEUX, baritone.**

"Baby Mine."

"Spanish Morn."

10.40 p.m.—Spurring Notes, by "Olympus."

Grand Steamer Musicians' Announcements.

10.45 p.m.—**JOE ARONSON AND HIS SYNGO-SYMPHONISTS.**

11 p.m.—**OUR GREAT THOUGHT.**

"He who establishes his argument by noise and command shows that reason is weak."

Unaltered.

11.1 p.m.—**JOE ARONSON AND HIS SYNGO-SYMPHONISTS.**

11.40 p.m.—"GOD SAVE THE KING"

3AR, MELBOURNE

Tuesday.

MORNING NEWS SESSION.

11.0 a.m. to 12 noon.

MIDDAY CONCERT SESSION, 12.1.

10 p.m.—Newmarket Stock Sales; Special "Snap" Report on the Progress of this Morning's Stock Sales at Newmarket, by courtesy of John Macnamara and Co. To be repeated at 2.30 specially for the benefit of our Country Listeners.

Case Down.

MATINEE SESSION.

ORCHESTRAL CONCERT.

Sheffield Shield Cricket. Scores will be given at frequent intervals. During the afternoon the Results of the Mentone Races and other information will be broadcast.

2.30 p.m.—Newmarket Stock Sales; Special "Snap" Program direct from the yards by courtesy of John Macnamara and Co.

2.31 p.m.—Studio Orchestra.

"Mintan Spicks" (Ferna).

2.35 p.m.—Mentone Races; Result of Novice Handicap, 4 furlongs.

2.45 p.m.—Miss Ellen Jupp, Soprano:

"As You Passed by" (Busuel).

"A May Morning" (Denns).

2.53 p.m.—Studio Orchestra.

2.54 p.m.—Mentone Races; Result of Mentone Plate, 6 furlongs.

3.7 p.m.—Mr. Ronald Brearley, Cello:

"Ballade" (Weinberger).

3.11 p.m.—Studio Orchestra.

3.15 p.m.—Miss Ellen Jupp, Soprano:

"The Early Morn" (Pari).

"The Clothes of Heaven" (Dunhill).

3.57 p.m.—Mentone Races; Result of Brush Steeple, 2 miles, 15 chains.

3.58 p.m.—Studio Orchestra.

3.59 p.m.—Mr. George Lyngren, Tenor:

"An O' Garden" (Timothy).

"Love, Could I Only Tell Thee" (Capel).

4.0 p.m.—G.P.O. Clock Says "Four."

4.1 p.m.—2nd Weather Forecast.

4.3 p.m.—Announcements.

4.6 p.m.—Madame Ethel Ashton, Tenor:

"Topsy, Home Robbins and Novel Solutions for Our Lady Listeners."

4.8 p.m.—Studio Orchestra.

4.82 p.m.—Mr. George Lyngren, Tenor:

"Little Brown Bull" (Arundale).

"The White Dawn in Evening" (Gadman).

4.91 p.m.—Mentone Races; Result of Mentone Race, 4 furlongs.

4.90 p.m.—Studio Orchestra.

4.95 p.m.—Tonight's Entertainment.

5 p.m.—G.P.O. Clock Says "Five" Glass Down.

CHILDREN'S SESSION.

5.30 p.m.—Uncle Mac's Entertainment.

EVING SESSION.

CLASSICS AND COMEDY.

7.50 p.m.—"The Captain," School Life and School Sport for all the boys and girls of Australia.

7.55 p.m.—Newmarket Stock Sales; Notice.

8.0 p.m.—"The Circus Says 'Hello!'"

8.1 p.m.—"The Circus Tries."

"Amica" (Liska).

"Cher, I Love You" (Gardman).

8.7 p.m.—Miss Ellen Jupp, Soprano:

"Dennis in Jail" from Louise (Charpentier), by request.

"The Dove" (Romald).

8.10 p.m.—Mr. Jim Forbes:

"The Goodbye."

Society Number, "Chinese Moon" (Maunsbaum).

"Sam, the Old Accordion Man" (Denaldin).

8.25 p.m.—An Announcement.

8.26 p.m.—"The Classic Trio."

"In a Persian Market" (Kestley), by request.

8.57 p.m.—Mr. Ronald Blamp, Baritone:

"Three for Jack" (Bullitt).

"O Flower of All the World" (Finlay).

9.10 p.m.—Miss Ellen Jupp, Soprano:

"O Flower of All the World" (Finlay).

9.30 p.m.—Miss Ellen Jupp, Soprano:

"A Dainty Songbird, and her Ukulele."

"If You Do What You Do" (Cantelo).

"Heads of the Southern Cross" (Cantelo).

The first time this charming number has been broadcast.

9.6 p.m.—Mr. Leslie Buss, "The Melo Boy"; Song at the Plains, "The Faraday" (McHugh).

Melo-Plans Solo, "The Rosary" (Newby).

9.8 p.m.—Miss Julia Russell, Soprano:

"Fishermen" from the Opera Carmen (Bizet).

"A Night In" (Langborough).

9.10 p.m.—Mr. Alan Adcock, Entertainer:

"At Zemenet Fay" (Weston and Lee).

A little surprise: Alan forsakes the crooked path for the straight. Listen and Listen!

9.23 p.m.—Announcements.

9.27 p.m.—"The Classic Trio."

Selections from "Rote Alarm" (Friml).

9.35 p.m.—Mr. Jim Forbes, The Chamberlains' Song: Some classical airs from Ben Hur. A new musical score from Ben Hur. A new score of Shakespeare:

"Shew Me the Way to Go Home" with orchestra (Klar) as accompaniment.

9.43 p.m.—Mr. Ronald Blamp, Baritone:

"A Serenade of the Lute" (Squire).

"I Sing These Songs of Arab" (Clay).

9.51 p.m.—Miss Ellen Jupp, Soprano:

"A Dainty Songbird and her Ukulele."

"If You Take Me Away From Dixie" (Lewis).

"If You Tell Those Eyes at Me" (Lor-Jeller).

10.0 p.m.—G.P.O. Clock Says "Ten."

10.1 p.m.—Semi-final Weather Forecast, specially for our country listeners.

10.2 p.m.—Answers by "Audio" Reports and Answers by 3AR Radio Engineer's Staff to Listeners who seek expert advice. The service is free.

10.5 p.m.—Miss Felice Crozier, Violin:

"Stellina" (Perpoglio).

"Gardias" (Mauri).

10.52 p.m.—Mr. Alan Adcock, Entertainer:

"The Old Days" (Older Jones) (Loug).

10.50 p.m.—Mr. Leslie Buss, "The Melo Boy"; At the Plains, "Yesterday" (Harrison).

Melo-Plans Solo, "Any Ten To-55."

10.37 p.m.—The Classic Trio
"Fragilium" (Zanerfret).
"Seaside" (17920).
10.40 p.m.—Special Racing Report: Anticipations and Latest Track Information for To-morrow's Races, by "Skip".
10.50 p.m.—To-morrow's Entertainment.
10.53 p.m.—The "Age" News Bulletin, exclusive to 2AL.
10.55 p.m.—Final Weather Forecast.
10.59 p.m.—Our Australian Good-Night Quote is taken from the poem: "The Happy Islands," by Isabel Mauds Paroche.
11.0 p.m.—G.P.O. Clock Says: "Eleven"; God Save the King.

4QG, BRISBANE.

Tuesday,

MORNING SESSION.

10.30 a.m.—Today's social news.
10.40 a.m.—Music.
10.45 a.m.—An introductory talk.
11.0 a.m.—Music.
11.10 a.m.—General news.
11.20 a.m.—Music.
11.30 a.m.—Close down.

MIDDAY SESSION

1 p.m.—Market reports; weather information; "The Daily Mail" and "The Daily Standard" news.
1.20 p.m.—Lunch music.
1.30 p.m.—Standard time signal.
1.40 p.m.—Close down.

AFTERNOON SESSION.

3.30 p.m.—Afternoon tea music.
3.45 p.m.—"The Telephone" news.
4.30 p.m.—Close down.

FAMILY EVENING SESSION.

6 p.m.—"Daily Standard" news; announcements.
10 p.m.—A talk arranged by the Queensland Radio "Franchise" League.
7.30 p.m.—Special news service; market reports; stock reports.
7.50 p.m.—Weather news; announcements.
7.57 p.m.—Standard time signal.
8.45 p.m.—A talk on Sheep and Wool by Mr. J. Carver (Assistant Inspector in Sheep and Wool).

NIGHT SESSION.

Tonight's programme will be in the form of a radio "stunt," entitled "A Night Out."

During the course of the evening, the adventures of members of 4QG's staff who attempt to vary the monotony of ordinary everyday existence, will be placed before listeners.

Station 4QG had "A Night Out" some months ago, and those who remember just what happened will doubtless find to-night's programme interesting.

Foliations of full details would take away much from the pleasure of the evening. Radio enthusiasts should, therefore, listen very carefully at eight o'clock sharp and hear the amusing announcement from the station.

8 p.m.—Radio Novelty: "A Night Out."

10 p.m.—"The Daily Mail" news; weather news.
Close down.

5CL, ADELAIDE.

Tuesday,

MORNING SESSION.

12 noon, to 2 p.m.

AFTERNOON SESSION.

3 p.m.—G.F.O. Climes.
3.15 p.m.—Musical numbers.
3.45 p.m.—Talk by Rev. G. R. Hale D.A.
4 p.m.—G.P.O. Climes.
4.1 p.m.—Musical numbers.
4.57 p.m.—S.C. Ward and Co's Stock Exchange Intelligence.
5 p.m.—G.F.O. Climes and close down.

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EVENING SESSION

- 6.50 p.m.—G.P.O. Chimes.
 6.51 p.m.—Childrens' Hymn.
 7.20 p.m.—Market news by A. W. Stanford and Co. A. E. Hall and Co. Dalgety and Co. S. A. Factors Co-operative Union, Tazewell Bros. Retail Grocers Association, J. H. Young's special reports on the Tamaki Market. Interstate Fruit and Produce Market Co. Ltd. S. E. Ward and Co's Stock Exchange Intelligence.
 7.33 p.m.—Editor from "News Bulletin".
 7.38 p.m.—Gardening talk by Lasewick's Nurseries Lachery.
 7.44 p.m.—Home Beautiful talk by "Domus".
 7.45 p.m.—Station Announcements.
 8 p.m.—G.P.O. Chimes.
 8.1 p.m.—Band selection: "Works of Hadyn" S. A. B. Band.
 8.15 p.m.—Hymns Will Range.
 8.25 p.m.—Brazz Band "Popular Air" S. A. B. Band.
 8.55 p.m.—One Act Play, Stephen Danks and Owen Hooper.
 9.00 p.m.—G.P.O. Chimes.
 9.1 p.m.—Meteorological information.
 9.3 p.m.—Dalgety's wheat report.
 9.7 p.m.—Bass solo (Fugate Ballads), Fred Goller.
 9.12 p.m.—Piano-forte Recital by Raymond Lachery, The Belgian Cantos.
 9.22 p.m.—Brazz Band selection: "Musical Comedy selections" S.A.B. Band.
 9.40 p.m.—Contralto solo, Mrs. J. J. Davey.
 9.45 p.m.—Humorous Interludes, Will Range.
 9.50 p.m.—G.P.O. Chimes.
 10 p.m.—"Advertiser" news service.
 10.15 p.m.—Brazz Band (Dance numbers) from the "Blissful" by Davey.
 10.30 p.m.—Contralto solo (Popular), Mrs. J. J. Davey.
 10.34 p.m.—Saxette S.A.B. Band.
 10.41 p.m.—Saxette solo with Band Association, G. J. Murray.
 10.45 p.m.—Brazz Band (Dance numbers), S.A.B. Band.
 10.50 p.m.—Wednesday's programme and Meteorological information.
 11 p.m.—G.P.O. Chimes and National Anthem.

6WF, PERTH.

Tuesday.

- 12.30 p.m.—Time in.
 12.35 p.m.—Market, News, and Cable.
 1 p.m.—Time signal from Perth Observatory.
 1.15 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
 1.2 p.m.—Studio Instrumental Trio.
 1.30 p.m.—Close down.
 2.30 p.m.—Time in.
 2.35 p.m.—Organ music, relayed from the Grand Theatre, Murray Street.
 Vocal and instrumental interludes from the Studio.
 4.30 p.m.—Close down.
 6.45 p.m.—Time in.
 The Evening Transmission is broadcast on 104.5 Metres, as well as the usual wavelength.
 6.48 p.m.—Stories for the Kiddies by Udaley, Henry and Duffy.
 7.29 p.m.—Stocks, Markets, News.
 7.35 p.m.—Talk.
 8 p.m.—Time signal from Perth Observatory.
 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia. Station announcements such as alterations in programmes, etc.

ORCHESTRAL NIGHT.

- 8.1 p.m.—Concert by 6WF's String Orchestra, conducted by Mr. Donald E. Moyle, A.T.C.L. Vocal assisting artist.
 10 p.m.—Late News Item, by courtesy of "The Daily News" Newspaper Coy. Closes within range announcement.
 Weather Report and Forecast.
 10.30 p.m.—Close down.
 104.5 METRE TRANSMISSION.
 Simultaneous broadcast on 104.5 Metres of Programme given on 1255 Metres, commencing at 6.45 p.m.

7ZL, HOBART

Tuesday.

- MORNING SESSION.
 11 a.m. to 12 noon.
 AFTERNOON SESSION.
 3 p.m.—G.P.O. Clock chimes the Hour.
 3.1 p.m.—Time in selection.
 3.11 p.m.—Hobart Stock Exchange quotations.
 Weather information.
 Items of Interest, Announcements.
 3.15 p.m.—Selections by T.Z.L. Studio Trio.
 3.18 p.m.—Looking talk by "Rogulo".
 4.30 p.m.—Close down.
 EARLY EVENING SESSION.
 6.30 p.m.—"Uncle Peter" talks to the children.
 7 p.m.—"Uncle Peter's" half-hour.
 NIGHT SESSION.
 7.30 p.m.—Musical selections.
 7.35 p.m.—Literary Lectures and Library Lets by Mr. W. K. Fuller.
 7.40 p.m.—"Mercury" special Tasmanian news service.
 Railway auction proceeds sale.
 Weather forecasts.
 Hobart Stock Exchange quotations.
 8 p.m.—G.P.O. Clock chimes the Hour.
 8.1 p.m.—Broadcast by direct wire from Imperial Hotel, Hobart.
 Dance numbers by Mrs. Sheppard's Dance Trio.
 Interfered with items by the following: Miss Beal Scudine (soprano), Miss E. Lasewick (soprano), Mrs. J. Gunn (entertainer).
 8 p.m.—Radio Question Corner, by "Anode".
 9.40 p.m.—British official wireless news.
 9.50 p.m.—"Mercury" special info-State news service.
 Ships within wireless range.
 Weather reports.
 9 p.m.—Weather forecasts.
 Station Announcements: To-morrow's programme.
 National Anthem.

Wednes., Jan. 4

2FC, SYDNEY

- EARLY MORNING SESSION
 7 a.m. to 8 a.m.
 MORNING SESSION
 10 a.m.—"Big Ben" and announcements.
 10.5 a.m.—Studio music.
 10.15 a.m.—"Sydney Morning Herald" news service.
 10.30 a.m.—Studio music.
 10.55 a.m.—A reading.
 11.15 a.m.—Studio music.
 11 a.m.—"Big Ben." Studio music.
 11.5 a.m.—A.P.A. and Reiter's Cable Services.
 11.30 a.m.—Studio music.
 11.55 a.m.—Close down.
 MIDDAY SESSION.
 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 "Sydney Morning Herald" news service.
 12.15 p.m.—Rugby wireless news.
 12.20 p.m.—Studio music.
 12.30 p.m.—Father Herford, soprano.
 "Little Dove" (Woodforde-Finder).
 12.35 p.m.—Studio music.
 12.40 p.m.—A piano-forte reproduction.
 12.50 p.m.—Ida Holmes, lyric soprano.
 "Angels Guard Them" (Godard).
 12.55 p.m.—Studio music.
 1 p.m.—"Big Ben" Weather Intelligence.
 1.8 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.—Father Herford, soprano.
 "Fiesta of Aired" (William G. James).
 1.35 p.m.—Studio music.
 1.38 p.m.—Ida Holmes, lyric soprano.
 "Villanelle" (Dell Aoual).
 1.55 p.m.—Studio music.
 2 p.m.—"Big Ben." Close down.
 AFTERNOON SESSION.
 3 p.m.—"Big Ben" and programme announcements.
 3.1 p.m.—From the Lyceum Theatre, Pitt Street, Sydney.
 Orchestral items.
 3.15 p.m.—From the Studio.
 Mariel Watt, contralto.
 "If I might come to you" (Squire).
 3.18 p.m.—"Mercury" Grant, soprano.
 "Love has eyes" (Bishop).
 3.22 p.m.—From the Lyceum Theatre, Pitt Street, Sydney.
 Orchestral items.
 3.24 p.m.—From the Studio.
 Irene Duncan, soprano.
 "The Hallowed Hour" (Wood).
 3.34 p.m.—A reading.
 4 p.m.—"Big Ben."
 From the Lyceum Theatre, Pitt Street, Sydney.
 Orchestral items.
 4.15 p.m.—From the Studio.
 Florence Grant, soprano.
 "Should He Turn?"
 4.20 p.m.—Mariel Watt, contralto.
 "Mighty Lak a Rose" (Nevin).
 4.25 p.m.—From the Lyceum Theatre, Pitt Street, Sydney.
 Orchestral items.
 4.40 p.m.—From the Studio.
 Irene Duncan, soprano.
 "Oh for the Wings of a Swallow" (Lohr).
 4.45 p.m.—Stock Exchange, third call.
 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 Hello Man" talks to the children.
 5.55 p.m.—Uncle Ben and "Judy" entertain the young folk.
 6.30 p.m.—Studio music.
 7 p.m.—"Big Ben." Late sporting news.
 7.30 p.m.—Dalgety's market reports (wheat, wheat and stock).
 7.15 p.m.—Fruit and vegetable markets.
 7.24 p.m.—Weather and shipping news.
 7.55 p.m.—"Evening News" late news service.
 NIGHT SESSION.
 7.40 p.m.—Programme announcements.
 7.45 p.m.—Overseas Topics discussed by Captain Fred Aarons.
 7.55 p.m.—Announcements.
 8 p.m.—"Big Ben."
 From the Haymarket Theatre, George Street, Sydney.
 Items by the Haymarket Operatic Orchestra, conducted by Mr. Stanley Porter.
 8.25 p.m.—From the Studio.
 James Donnelly, tenor.
 8.30 p.m.—Captain Frank Harley will give the third of his new series of Adventure Talks.
 8 p.m.—"Big Ben." Late weather forecast.
 9.1 p.m.—Colman and Harris, instrumentalists.
 9.5 p.m.—"The Two White Oats".
 9.14 p.m.—Lionel Lunt, baritone.
 9.18 p.m.—Cyril Fay and Ewart Chapple in two-act comedy, "The Bird".
 9.22 p.m.—Lionel Lunt, baritone.
 9.30 p.m.—Colman and Harris, instrumentalists.
 9.35 p.m.—Wally Bayler, comedian.
 9.43 p.m.—James Donnelly, tenor.
 9.45 p.m.—Colman and Harris, instrumentalists.
 9.53 p.m.—Lionel Lunt, English baritone.
 9.55 p.m.—"Big Ben."
 From the Haymarket Theatre, George Street, Sydney.
 Orchestral items by the Haymarket Orchestra, conducted by Mr. Stanley Porter.

- 10.10 p.m.—"The Two White Owls" from the Studio.
 10.15 p.m.—Carlton Kay and Swart (Kappie): Two pianists items.
 10.20 p.m.—The Studio Dance Trio, conducted by Mr. Cec Morrison.
 10.20 p.m.—Late weather forecast.
 10.31 p.m.—The Studio Dance Trio, conducted by Mr. Cec Morrison.
 10.57 p.m.—Late news and announcements.
 11 p.m.—"Big Ben." National Anthem.
 Close down.

2BL, SYDNEY.

Wednesday.

EARLY MORNING SESSION, 8 to 9 a.m.

MORNING SESSION.

- 11 a.m.—G.P.O. Clock and chimes.
 WOMEN'S SESSION.
 Talk on "Canning," by Miss Varley, Broad-caster Women's Sports Authority.
 Social Notes. Replies to correspondents by Mrs. Jordan.
 "Welfare Talk," by Mrs. Jordan.

AFTERNOON SESSION.

- Racing information broadcast immediately after each race by courtesy of the "Sun."
 12 noon.—G.P.O. Clock and chimes.
 Special ocean forecast and weather report.
 12.3 p.m.—Musical programme from the Studio.
 12.8 p.m.—Information. Mails, Shipping and Port Directory.
 12.11 p.m.—Boats in sail by wireless.
 12.15 p.m.—Fruit market report.
 12.15 p.m.—Vegetable market report.
 12.17 p.m.—London metal market report.
 12.19 p.m.—Dairy and Farm Produce report.
 12.22 p.m.—Furage market report.
 12.23 p.m.—Fash market report.
 12.28 p.m.—Babbit market report.
 12.28 p.m.—Stock Exchange report.
 12.30 p.m.—H.M.V. Gramophone Revival.
 1.2 p.m.—Stock Exchange report.
 1.30 p.m.—G.P.O. Clock and chimes.
 Talk to Children and special entertainment for Children in Hospital.
 2 p.m.—G.P.O. Clock and chimes.
 Racing resume.
 2.5 p.m.—Musical programme from the Studio.
 2.10 p.m.—News from the "Sun."
 2.30 p.m.—Musical programme from the Studio.
 2.45 p.m.—Talk on "Celtic Mythology."
 3 p.m.—G.P.O. Clock and chimes.
 Racing resume.
 3.5 p.m.—News from the "Sun."
 3.10 p.m.—Planeterre recall from the Studio.
 3.20 p.m.—News from the "Sun."
 3.30 p.m.—Musical programme from the Studio.
 3.40 p.m.—Dunowen Dance Band. Broadcast from Dunowen Cabaret.
 4 p.m.—G.P.O. Clock and chimes.
 Racing resume.
 4.15 p.m.—Musical programme from the Studio.
 4.20 p.m.—Talk on "Women of the Orient of all Ages."
 4.35 p.m.—Dunowen Dance Band.
 4.50 p.m.—Resume of night's programme.
 4.55 p.m.—Special Ocean Forecast.
 5.15 p.m.—Racing resume.
 5 p.m.—G.P.O. Clock and chimes.
 Close down.

EARLY EVENING SESSION.

- 6.45 p.m.—G.P.O. Clock and chimes.
 (CHILDREN'S) SESSION.
 SPECIAL COUNTRY SESSION.
 6.50 p.m.—G.P.O. Clock and chimes.
 Australian Mercantile Lead and Finance Co.'s report.
 Weather report and forecast by courtesy of Government Meteorologist.
 Producers Distributing Society's fruit and vegetable market report.
 Stock Exchange reports.
 Grain and Fodder reports ("Sun").
 Dairy Produce report ("Sun").
 N.E.M.A. Talk.

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- 8.45 p.m.—Country News from the "Box."
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 Greater Music.
 9.10 p.m.—Talk on "Lennie," by Dr. McAlister.
 9 p.m.—G.P.O. Clock and chimes.
 Broadcasting Tropical Chorus.
 9.15 p.m.—Recital broadcast from the Strathfield Station.
 9 p.m.—G.P.O. Clock and chimes.
 9.15 p.m.—Broadcasters all experts expert will talk on general sporting.
 9.15 p.m.—The Canterbury District Band (Incorporating Mr. Stan Nicholls) broadcast from Baker's Hall, Temple.
 9.30 p.m.—Londony Manning and Harry Graham in song and story.
 9.35 p.m.—Miss Edna Lister, contralto.
 9.35 p.m.—The Cathedral District Band.
 10.5 p.m.—Miss Faina Lister.
 10.10 p.m.—Review of following day's programme. Weather report and forecast by courtesy of Mr. C. J. Meers, Govt. Meteorologist.
 10.15 p.m.—Romano's Dancer Orchestra under the direction of Mr. Herv. Lycop broadcast from Romano's Cafe.
 11.40 p.m.—G.P.O. Clock and chimes.
 National Anthem.

2GB, SYDNEY

Wednesday.

MORNING SESSION.

- 10 a.m.—Music.
 10.15 a.m.—"Good Cheer" Talk.
 10.20 a.m.—Music.
 10.30 a.m.—Gramophone Talk.
 10.35 a.m.—Women's Session.
 11 a.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—Music.
 2.15 p.m.—Address.
 2.25 p.m.—Music.
 2.35 p.m.—Address.
 3 p.m.—Close down.

EVENING SESSION.

- 8.20 p.m.—Children's Session.
 Music.
 8.30 p.m.—Music.
 7 p.m.—Announcement News: Market Reports.
 7.30 p.m.—Music.
 7.35 p.m.—Address.
 7.45 p.m.—Music.
 8 p.m.—Songs for Viola and Pianoforte.
 DAWN SWEETLY and DOROTHY SPARK.
 8.15 p.m.—Address.
 8.30 p.m.—Songs by ARTHUR RHYS.
 8.35 p.m.—Piano solo.
 8.45 p.m.—Songs by ELSIE BROWN.
 8.55 p.m.—Character Solo by DOROTHY SPARK.
 9 p.m.—Songs by ARTHUR RHYS.
 9.10 p.m.—Talk.
 9.30 p.m.—Piano solo.
 9.35 p.m.—Singer Story.
 9.45 p.m.—Songs by ELSIE BROWN.
 9.55 p.m.—Gramophone Talk.
 10 p.m.—Close down.

2 UW, SYDNEY

Wednesday.

- 5 a.m.—News, shipping mails and mail items.
 9.45 p.m.—Women's session, by Aunt Flo.
 10 a.m.—Close down.
 12.15 p.m.—Special employees' luncheon session.
 12.30 p.m.—Close down.
 7 p.m.—Where to go.
 7.10 p.m.—Strata items.
 7.20 p.m.—Jazz Interlude by Gordon James McDonald.
 (a) "I wonder how I look when I'm asleep."
 (b) "Istanbul Dream Girl."
 (c) "Out You."
 (d) "Moonbeam, kiss her for me."
 (e) "Rolie O'Ryan."

- 1.20 p.m.—Miss Sylvia Churchill, soprano; "The Blind Ploughman."
 7.25 p.m.—Mrs. Dalton, pianoforte solo; "Hobly in F" (Rabimowitz).
 8.15 p.m.—New Items.
 8.10 p.m.—Mr. Douglas Rae, tenor (a) "Obstinately" (Fuentesillo). (b) "Benno" (D'Hardelle).
 8.15 p.m.—Mr. Modler, contralto solo; Selected.
 8.20 p.m.—Dad, Miss Sylvia Churchill, soprano, and Douglas Rae, tenor; Selected.
 8.34 p.m.—Mrs. Dalton, pianoforte solo (a) "Nocturne" (Schop). (b) "Fugues" (Bach).
 8.50 p.m.—Mr. Douglas Rae, tenor; "Alone" (Molander).
 8.55 p.m.—Review of forward programme.
 9 a.m.—Weather forecast and news items.
 9.15 a.m.—Miss Sylvia Churchill, soprano; "Hill Song" by service.
 9.25 p.m.—Music items.
 9.30 p.m.—Close down.

3LO, MELBOURNE

Wednesday.

MORNING SESSION.

- 7.15 a.m.—"Herald" Morning Session.
 8.15 a.m.—Close down.

MIDDAY SESSION.

- 11 a.m.—Description of INTERSTATE CRICKET MATCH, VICTORIA v. SOUTH AUSTRALIA, at the Melbourne Cricket Ground, by Mr. Bob McGregor.
 12 noon.—Melbourne Observatory Time Signal.
 BACK TO THE STUDIO.
 12.15 p.m.—Meal prices recorded by the Australian Mines and Metals Association from the London Stock Exchange this day.
 British Official Wireless News from Rugby.
 Readers' and the Australian Press Association's Cable "Argus" News Service.
 12.20 p.m.—VAUDE and VERNE.
 12.25 p.m.—BERNARD THOMAS, tenor; "Auld Man's."
 Selected.

- 12.30 p.m.—JOE ARONSON and HIS SYNCO-GEOMPHONISTS.

- 12.42 p.m.—Rock Exchange information.
 12.45 p.m.—"KEITH IRWIN, soprano; "The Winds to the South" (John Scott). "The Elf Song" (John Ward).

- 12.55 p.m.—JOE ARONSON and HIS SYNCO-GEOMPHONISTS.

- 1 p.m.—Melbourne Observatory Time Signal.
 You feel to-day don't you? How about to-morrow? Wind blows do you take crossing the street against the traffic signals—howling when you cannot swim—the bus pushing you and your children jumping in the streets. Remember Safety First!

- 1.15 p.m.—THE LYNCH BELLRINGERS; "The Blue Danube Waltz."
 1.25 p.m.—BERNARD THOMAS, tenor; "With All Your Heart."
 Selected.

- 1.31 p.m.—Meteorological information. Weather forecast and rainfall for Victoria, Tasmania, South Australia and New South Wales. Grain forecasts. River reports.
 1.35 p.m.—Description of INTERSTATE CRICKET MATCH, VICTORIA v. SOUTH AUSTRALIA, at Melbourne Cricket Ground.
 1.40 p.m.—ROSMARY CLUE LUNCHEON SPEECH transmitted from Anzac House.
 2 p.m.—Close down.

- The Results of Shepparton Races will be given at intervals during the afternoon as they come to hand.

- 2.10 p.m.—Description of Trial Handle 2 miles, MORNINGTON RACES, by "Musket" of the "Sporting Globe."
 2.15 p.m.—Close down.

- 2.20 p.m.—Description of Malleson Plate 2 furlongs, MORNINGTON RACES, by "Musket" of the "Sporting Globe."
 2.30 p.m.—Close down.

AFTERNOON SESSION.

- 2 p.m.—MELBOURNE OBSERVATORY TIME SIGNAL.

- 2.1 p.m.—METROPOLITAN FIRE BRIGADE BAND; "March, Jack O'Lantern."
 Overture, "The Crimson Star."

- 2.15 p.m.—ALMA BORELOCK, soprano; "Wave of India" (Rinsky-Kraushar). "Where the Sea Smokes."

- 2.18 p.m.—Description of Mornington Cup, 9 1/2 furlongs, MORNINGTON RACES, by "Musket" of the "Sporting Globe."
 FROM THE STUDIO.

- 2.20 p.m.—METROPOLITAN FIRE BRIGADE BAND; "Trombone Solo, 'Send me your Aid'."
 Soloist, J. WATTSON.

- 2.25 p.m.—JOHN IS FRASER, baritone; "Di Evrouma" (Verdi).
 "I will love Thee" (Comedy Opera).

- 2.34 p.m.—CAPTAIN DONALD MACLEAN; "The Big Boy" (Lorenz).
 "John B. Boy" (Lorenz).

- 2.40 p.m.—Description of Trial Handle 2 furlongs, MORNINGTON RACES, by "Musket" of the "Sporting Globe."
 FROM THE STUDIO.

- 2.52 p.m.—METROPOLITAN FIRE BRIGADE BAND; "The Harmonious Pachelbel."
 Soloist, J. WATTSON.

- 2.58 p.m.—ALMA BORELOCK, soprano; "Big Lady Rose" (Coburn-Tavoni). "Duchess" (Rinsky-Kraushar).

- 3.10 p.m.—METROPOLITAN FIRE BRIGADE BAND; "Vision of Salome."
 March, "20th Century."

- 3.18 p.m.—Description of Noddy Handicap, 9 furlongs, MORNINGTON RACES, by "Musket" of the "Sporting Globe."
 FROM THE STUDIO.

- 3.25 p.m.—JOHN IS FRASER, baritone; "The Hawk" (Clunierly Clarke).
 "The Hawk" (Clunierly Clarke).

- 3.32 p.m.—SISTER LOCKHART; "Baby Welfare."
 3.45 p.m.—Rock Exchange information.

- 3.50 p.m.—Description of Water Handicap, 7 furlongs, MORNINGTON RACES, by "Musket" of the "Sporting Globe."
 FROM THE STUDIO.

- 4.02 p.m.—"Bright" new service.
 4.10 p.m.—Close down.

EVENING SESSION.

- 8 p.m.—Answers to letters and Birthday Greetings, by "MARY MARY."

- 8.20 p.m.—STUDIO QUARTET; "Music Masters" Gavotte (Kegner).
 8.27 p.m.—"BOBBES" MR. BUTCHER will talk to boys and girls on "The Love of the Postage Stamp."

- 8.45 p.m.—STUDIO QUARTET; "Good-Night" (Harnon).
 8.50 p.m.—"MARY MARY"; "The Desert Island."

- 9 p.m.—Official Report of Newmarket Stock Sales by the Associated Stock and Station Agents, Bourke Street, Melbourne.

- 9.15 p.m.—"Herald" News Service. Weather synopsis. Shipping movements.
 9.20 p.m.—Stock Exchange information.

- 9.27 p.m.—Fish Market reports by J. R. Bennett, Ltd. Rabbit prices.
 9.29 p.m.—River Reports.

- 9.31 p.m.—Market Reports by the Victorian Producers' Co-operative Co. Ltd.; Poultry, Grain, Hay, Straw, Eggs, Dairy Produce, Potatoes and Onions. Market reports of fruit by the Victorian Fruit Growers' Association. Retail prices. Wholesale prices of fruit by the Wholesale Fruit Merchants' Association. Citrus fruits.

NIGHT SESSION.

- 7.30 p.m.—Under the auspices of the Institution of Engineers, Australia, Melbourne Division, Mr. C. T. BRIGGS, M.I.E., will speak on "The Yallourn Power Station."

- 7.45 p.m.—Next to acquiring good friends, the best acquisition is that of good books. Captain C. H. PETERS will speak on "Books, wise and otherwise."

- 8 p.m.—ST. KILDA BAND:
March, "Neworth Castle."
Overture, "Callish of Bagdad."
- 9.10 p.m.—BERNARD THOMAS, tenor:
"Adagio Eideles."
Selected.
- 9.17 p.m.—THE LYNCH BELLRINGERS, on
the Glassophone:
"Last Rose of Summer."
"Swiss River."
- 9.20 p.m.—MR. W. A. SOMERSET will speak
on:
"Shipwreck in Australian Waters," No. 2.
- 9.35 p.m.—ST. KILDA BAND:
Selection, "Rigolotto."
- 9.45 p.m.—DORATHEA MA/MASTER, piano:
Arabesque in E Major (Debussy).
Nocturne for the left hand piano (Schubert).
Intermezzo in E Flat (Brahms).
Vals Op. 20 No. 8 (Brahms).
Scherzo in E Flat Minor (Brahms).
- 9.55 p.m.—MADAME ETHEL ASHTON, so-
prano:
"Ritornello" (Mascagni).
"Two Roses" (Ballet Gidartes).
- 10.12 p.m.—ST. KILDA BAND:
Waltz, "Senta."
- 10.20 p.m.—Australian Club Chamberlains:
Waltz, Polo Contest, City Baths, described
by Mr. W. B. Favreil, Hon. Gen. Sec.,
Y.A.S.A.
- 10.30 p.m.—ST. KILDA BAND:
Selection, "Footin' Fatimé."
- 10.40 p.m.—BERNARD THOMAS, tenor:
"I Hear a Thrush at Eve."
Selected.
- 10.47 p.m.—THE LYNCH BELLRINGERS, on
the Organ Chimes:
"Ah, the la Meris."
"Killarney."
- 10.52 p.m.—"Argas," News Service. Meteorolo-
gical information. British Official Wire-
less News from Buchs.
- 10 p.m.—VAUDE AND VERNE.
- 10.10 p.m.—THE LYNCH BELLRINGERS:
"International Melodies."
- 10.14 p.m.—ST. KILDA BAND:
Cornet solo, "O Solo Mio."
Fox Trot, "At Sundown."
- 10.21 p.m.—MADAME ETHEL ASHTON, so-
prano:
"Over the Breemland Sea" (L. Phillips).
"When the Broom" (Reichardt).
- 10.23 p.m.—Announcements. Island Shipping
Movements.
- 10.22 p.m.—ST. KILDA BAND:
Selection, "Patience."
- 10.45 p.m.—JACK O'HAGAN, baritone:
Selected.
- 10.49 p.m.—JOE ARONSON AND HIS
SYNCO-SYMPHONISTS.
- 10.55 p.m.—JACK O'HAGAN, baritone:
Selected.
- 11.5 p.m.—OUR GREAT THOUGHT:
"If you have built castles in the air, your
work need not be lost; that is where they
shrink. Now put the foundation under
them."—Thoreau.
- 11.6 p.m.—JOE ARONSON AND HIS
SYNCO-SYMPHONISTS.
- 11.16 p.m.—"GOD SAVE THE KING."

3AR, MELBOURNE

Wednesday.

MORNING NEWS SESSION.

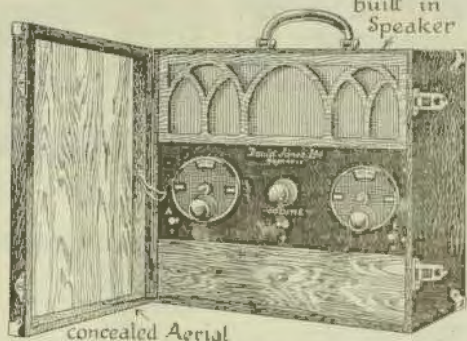
11.0 a.m. to 12 noon.

MIDDAY CONCERT SESSION, 12.1 p.m.

Transmitted from Panatope House, 252
Collins Street (by exclusive permission of
Wills and Paton, Ltd.), on the Brunswick
Panatope.

1.0 p.m.—Newmarket Stock Sales; Special
"Gossip" Report on the progress of this
morning's Stock Sales at Newmarket (by
courtesy of John Macnamara and Co.). To
be repeated at 2.10 p.m. specially for the
benefit of our Country Listeners.

1.2 p.m.—Close Down.



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DAVID JONES'

Castlereagh, Market & Elizabeth Streets

MATINEE SESSION,
DANCE CONCERT.

Sports Results: During the afternoon the results of the Mornington Races and other information will be given as it comes to hand.

- 7.30 p.m.—Newmarket Stalk Sides; Special "Snap" Progress Report direct from the yards (by courtesy of John Macanara and Co.).
- 8.15 p.m.—Mornington Races: Result of Trial Hurdle, 2 miles.
- 8.30 p.m.—Studio Orchestra.
- 8.40 p.m.—Mornington Races: Result of Maiden Plate, 5 furlongs.
- 8.50 p.m.—Ayers Danzonians.
- 9.00 p.m.—Mr. Tom White, Saxophone; "Dance Nonpareil" (King-Bazey).
- 9.15 p.m.—Studio Orchestra.
- 9.25 p.m.—Mornington Races: Result of Mornington Cup, 9/4 furlongs.
- 9.35 p.m.—Mr. Herbert Purifier, Violin; "Chanson Medicinale" (Cortinez).
- 9.51 p.m.—Ayers Danzonians; "Just Like a Butterfly" (Woods).
- 10.01 p.m.—"Can't Get Over a Girl Like You" (Brooker).
- 10.05 p.m.—"There's Everything Nice About You" (Wendling).
- 10.15 p.m.—Miss Freda Colburn, Contralto; "When Love is Kind" (Lisa Leikmann); "Beloved Sleep" (Teschmacher).
- 10.30 p.m.—Studio Orchestra.
- 10.50 p.m.—Mornington Races: Result of Trial Handicap, 5 furlongs.
- 11.00 p.m.—G.P.O. Clock Says "Four".
- 11.10 p.m.—Band Weather Forecast.
- 11.20 p.m.—Announcements.
- 11.30 p.m.—Ayers Danzonians; "Swirling Almonds" (Stamper); "Sonny Boy" (Stamper); "Takes Your Finger Out of Your Mouth" (Yellman).
- 11.41 p.m.—Miss Ethel Broadley, Piano; "Duetto" (Mandelsohn).
- 11.53 p.m.—Mornington Races: Result of Moving Handicap, 5 furlongs.
- 12.00 p.m.—Miss Freda Colburn, Contralto; "Beloved, I-I Move" (Aylward); "The Crown" (Morr).
- 12.11 p.m.—Studio Orchestra.
- 12.25 p.m.—"The Sun God" (Lynn).
- 12.30 p.m.—G.P.O. Clock Says "Five"; Close Down.

CHILDREN'S SESSION.

6.30 p.m.—The Favourite Five.

EVENING SESSION.

AUSTRALIAN PANTOMIME.

- 7.30 p.m.—Mr. A. G. Kelton, Vice-President of the S.A.R. Stamp Club—Stamp Collecting for young and old.
- 8.5 p.m.—G.P.O. Clock Says "Eight".
- 8.11 p.m.—Vegobone Trio (Conductor, Mr. Will Jerran); "Who Wouldn't Love You" (Davis); "Don't Sing Alone When I Go" (Mace); "Mighty Men" (Wahkka), with Vocal Chorus.
- 8.30 p.m.—Madame Hilda Seitzler, Contralto; Spanish engagement of this well-known Riviera artist; "Annie MacDonald" (Rocheckel); "Leading" (Eggar).
- 8.53 p.m.—Mr. Nathan S. Spidevogel, Australian Author. One of our best-known authors will narrate the third of his thrilling series on "The Affair at Euraska." The Euraka Stockade incident amplified Chapter III—"December 2nd, 1854."
- 9.25 p.m.—Mr. Syd. Holmes, Baritone; "The Wrenbird" (Selous), by request; "My Ship" (del Rio).
- 9.40 p.m.—Vegobone Trio; Mr. Will Jerran (Soprano solo, with piano and harp accompaniment); "Am I Wasting My Time on You" (Johnson); Miss Amy Green, Piano; "Doll Dances" (Brown); Trio; "There Ain't No Maybe in My Baby's Eyes" (Donaldson).
- 9.59 p.m.—Madame Hilda Seitzler, Contralto; "Sink Red Sun" (del Rio); "Slips That Fall in the Night" (Stevenson).
- 10.9 p.m.—"Early Victorian History" Series B. Written specially for SAR by Mr. F. A. Currie.

- 9.5 p.m.—Mr. Walter Quirk, Piano; "Segundilla" (Albeniz).
- 9.55 p.m.—Mr. Syd. Holmes, Baritone; "The Sun God" (Lynn); "Shipmate O' Mine" (Sanderson).
- 10.20 p.m.—Vegobone Trio, (Conductor, Mr. Will Jerran); "Mr. W. Lonsome Hours" (Lyman); Mr. Will Jerran, Banjo; "Yes, Sir! That's My Baby" (Donaldson); Trio; "Jane Nights" (Bazey), by request.
- 10.30 p.m.—Australian Pianonists; "Mother Goose".
- 10.50 p.m.—The "Age" News Bulletin, exclusive to SAR.
- 11.00 p.m.—To-morrow's Entertainment.
- 11.25 p.m.—Fina Danzonians.
- 11.30 p.m.—Our Australian Good-Night Quote by John Sandes.
- 11.40 p.m.—From the poem, "The Earth-Mother"; Wm.—G.P.O. Clock Says "Eleven"; God Save the King.

4QG, BRISBANE.

Wednesday.

EARLY MORNING SESSION.

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

MORNING SESSION.

- 10.30 a.m.—Today's social news.
- 10.40 a.m.—Music.
- 10.45 a.m.—A Beauty Talk by Dorothy Webster.
- 11 a.m.—Music.
- 11.10 a.m.—General news.
- 11.20 a.m.—Music.
- 11.30 a.m.—Close down.

MIDDAY SESSION.

- 1 p.m.—Market reports; weather information; "The Daily Mail" and "The Daily Standard" news.
- 1.30 p.m.—Lunch hour music.
- 1.40 p.m.—"The Telegraph" news.
- 2 p.m.—Close down.

AFTERNOON SESSION.

- 2.30 p.m.—Afternoon Tea Music.
- 3 p.m.—"The Telegraph" news.
- 4.30 p.m.—Close down.

EARLY EVENING SESSION.

- 6 p.m.—"Daily Standard" news; announcements.
- 6.30 p.m.—The Children's Hour; Stories by "Little Miss Brisbane"; 7 p.m.—Special reports; Market reports; Stock reports.
- 7.20 p.m.—Weather news, announcements.
- 7.40 p.m.—Standard time signal.
- 7.45 p.m.—Lecture arranged by the Queensland Agricultural High School and College.

NIGHT SESSION.

- A programme of dance music by Alf Featherstone and his Studio Syncopators.
- 8 p.m.—FROM THE STUDIO: Dance Music, Fox Trots: (a) "My Sapphire Sea" (Ryder); (b) "That Night is Amazing" (Snyder).
- Fox Trots: (a) "Petushka" (Rose); (b) "What are We Waiting For" (Conlow).
- Fox Trots: (a) "Everyone Home is Asking for You" (Eggar); (b) "Get His Time" (Eggar).
- Fox Trots: (a) "Oh, What a Marvellous Girl" (Olson); (b) "Oriental Moonlight" (Seaman).
- Fox Trots: "Collette" (Kahn).
- Fox Trots: (a) "Papa-Paderewski" (Sampson); (b) "Schoss of Ireland" (Lange).
- Enthousiastic Paraphrase: "Lambada" (Lange).
- Between items the following numbers will be broadcast:—
Tiger Solos
"Daddy's Wonderful Pal"
(b) "Days of Yesterday"
Singer Quartet.
Ambrosie Numbers: Selected.
Miss Thelma Champion.
- 10 p.m.—"The Daily Mail" news; Weather news. Close down.

5CL, ADELAIDE.

Wednesday.

MORNING SESSION.

12 noon to 2 p.m.

AFTERNOON SESSION.

- 2 p.m.—G.P.O. Chimes.
- 2.1 p.m.—Musical numbers.
- 2.45 p.m.—Weekly Fashion Talk.
- 3 p.m.—G.P.O. Chimes.
- 4.1 p.m.—Musical numbers.
- 4.57 p.m.—S. C. Ward and Co.'s Stock Exchange Intelligence.
- 5 p.m.—G.P.O. Chimes and close down.

EVENING SESSION.

- 6.30 p.m.—G.P.O. Chimes.
- 6.41 p.m.—Children's time.
- 7.20 p.m.—Market reports by A. W. Sandford and Co., Dalrymple and Co.'s, H.A. Farquhar-Co-operative Union, Taylor Bros., Retail Grocers' Association, J. H. Young's special report on the Temula Market, Interstate Fruit and Produce Market Co., Ltd., S. C. Ward and Co.'s Stock Exchange Intelligence.
- 7.27 p.m.—Extracts from "News Bulletin".
- 7.30 p.m.—"Boy Scout" Corner.
- 7.45 p.m.—Fauldings Talk by Mr. J. A. Ramsay.
- 7.55 p.m.—Station announcements.
- 8 p.m.—G.P.O. Chimes.
- 8.1 p.m.—Band Concert from Reesley Beach Hotel, by Holroyd's Silver Band, interspersed with vocal and instrumental numbers by the following artists:—
- 8.45 p.m.—Pianoforte Recital by Raymond Lambert, the Belgian Genius.
- 9 p.m.—G.P.O. Chimes.
- 9.1 p.m.—Meteorological information.
- 9.8 p.m.—Delgaty's wheat report.
- 9.4 p.m.—Station announcements.
- 9.7 p.m.—Band and vocal concert continued.
- 10 p.m.—G.P.O. Chimes.
- 10.1 p.m.—"Advertiser" News Service.
- 10.15 p.m.—Vocal and instrumental concert continued.
- 10.30 p.m.—Relay from the Maison De Danne, Le Havre, France, dance selections.
- 10.55 p.m.—Thursday's programme and meteorological information.
- 11 p.m.—G.P.O. Chimes and National Anthem.

6WF, PERTH.

Wednesday.

- 12.50 p.m.—Tune in.
- 12.55 p.m.—Market, News, and Callers.
- 1 p.m.—Time signal from Perth Observatory.
- 1.05 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia.
- 1.15 p.m.—Studio Quintette.
- 1.30 p.m.—Close down.
- 2.30 p.m.—Tune in.
- 2.35 p.m.—Talks: "Shop Windows," by Julietta.
- 2.55 p.m.—Orchestral music played by Hoyte's Orchestra, conducted by Mr. Harold Partington, relayed from Hoyt's Regent Theatre, William Street.
- Vocal interludes from the Studio.
- 3.30 p.m.—Close down.
- 3.45 p.m.—Tune in.
- The Evening Transmission is broadcast on 104.5 Metres, as well as the usual wavelength.
- 8.00 p.m.—Stories for the children by Aunty Jute and Uncle Duff.
- 7.30 p.m.—Stock Markets, News & R. Greenwell.
- 7.45 p.m.—Sporting Talk by Mr. A. R. Greenwell.
- 8 p.m.—Time signal from Perth Observatory.
- 8.1 p.m.—Weather notes supplied by the Meteorological Bureau of Western Australia. Station announcements such as alterations to programmes, etc.

There is no "just-as-good" as Burgess.

CONCERT NIGHT.

8.3 p.m.—Musical programme from the Studio, including vocal and instrumental artists. Orchestral music played by Harold Partington and his seventeen-piece Orchestra, relayed from His Majesty's Theatre, William Street.

10 p.m.—Late News Items, by courtesy of "The Daily News" Newspaper Coy.

Ships within range announcement.

Weather Report and Forecast.

10.50 p.m.—Close down.

104.5 METRE TRANSMISSION.

Simultaneous broadcast on 104.5 Metres of Programmes given on 1250 Metres, commencing at 0.45 p.m.

Thurs., Jan. 5
2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m.—"Big Ben" and announcements.

10.5 a.m.—Studio music.

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

10.50 a.m.—Studio music.

10.45 a.m.—Last minute racing information by the J.P.O. Commissioner.

10.40 a.m.—Studio music.

11 a.m.—"Big Ben," Studio music.

11.5 a.m.—A.P.A. and Kester's Cables.

11.10 a.m.—Studio music.

11.5 a.m.—A reading.

11.50 a.m.—Close down.

NOTE: If the Cricket match, N.S.W. versus Queensland, is still in progress, a description of the play will be given direct from the ground, throughout the day.

MIDDAY SESSION.

12 noon—"Big Ben" and announcements.

12.3 p.m.—Stark Exchange, first call.

10.3 p.m.—Official weather forecast, rainfall.

12.5 p.m.—Studio music.

12.10 p.m.—Summary of "Sydney Morning Herald" news service.

12.15 p.m.—Rugby wireless news.

12.20 p.m.—Studio music.

12.30 p.m.—Thomas Lindesdale, mezzo: "Serenata" (Morsakowski).

12.40 p.m.—Studio music.

12.45 p.m.—Jeanette Rooney, contralto: "The Fairies Tree" (Saver Quilter).

12.50 p.m.—Studio music.

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

1.1 p.m.—"Evening News" midday news service.

Professors' Distributing Society's Report.

1.10 p.m.—Studio music.

1.20 p.m.—Stark Exchange, second call.

1.30 p.m.—Thomas Lindesdale, mezzo: "What ever is it best" (Lohé).

1.40 p.m.—A pianoforte reproduction.

1.45 p.m.—Jeanette Rooney, contralto: "I Passed by your Window" (Brube).

1.50 p.m.—The J.P.O. Racing Commissioner in the latest sporting information.

2 p.m.—"Big Ben." Close down.

AFTERNOON SESSION.

3 p.m.—"Big Ben" and programme announcements.

3.3 p.m.—Organ Recital by the Christ Church, St. Laurence, Sydney:

An Organ Recital by Mr. Christian Hollemann:

(a) "Overture in F Major" (D'Evers).

(b) "Lamento" (Hellenmann).

3.50 p.m.—From the Studio:

Bileen Moreau, soprano.

3.55 p.m.—From the Christ Church, St. Laurence, Sydney:

Organ Recital by Mr. Christian Hollemann:

(a) "Choral Prelude" (Saint-Saens).

(b) "Romanes" (Boettmann).

(c) "Grande Offertoire" (Battala).

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2BL, SYDNEY.

Thursday.

8.40 p.m.—From the Studio;
Ethel Muller, contralto;
"Break, break, break" (Lavater).

8.45 p.m.—From the Christ Church, St. Lawrence, Sydney.

Continuation of Organ Recital by Mr. Christian Heilemann:
(a) "Serenata" (Moszkowski).
(b) "Romance" (Toschkowsky).
(c) March from "Pastoral Symphony" (Tschaikowsky).

9 p.m.—"Big Ben."
From the Studio;
Agnes McDermid, soprano.

9.10 p.m.—From the Christ Church, St. Lawrence, Sydney.

Continuing items from the Organ Recital by Mr. Christian Heilemann:
(a) "Capriccio" (Danzelt).
(b) "Duetto" (Mendelssohn).
(c) Grand March from "Naaman" (Costa).

9.20 p.m.—From the Studio;
Eileen Moreau, soprano.

9.25 p.m.—A reading.
9.30 p.m.—Ethel Muller, contralto;
"The Crown" (Kenneth Kay).

9.45 p.m.—Stock Exchange, third call.
9.47 p.m.—Agnes McDermid, soprano.

9.50 p.m.—A pianoforte reproduction.
10 p.m.—"Big Ben." Close down.

EARLY EVENING SESSION.
8.40 p.m.—The Chimes of St. Paul.

8.45 p.m.—The "Hello Man" talks to the children.

9.15 p.m.—Story time for the young folk.
9.30 p.m.—Dinner music: The ZFC Studio Orchestra; conductor, Mr. Horace Keats.

9.40 p.m.—"Big Ben." Late sporting news.
9.45 p.m.—Dalgety's market reports (wool, wheat and stock).

9.50 p.m.—Fruit and vegetable markets.
P.D.S. Poultry reports.

9.55 p.m.—Weather and shipping news.
10.25 p.m.—"Evening News" late news service.

NIGHT SESSION.
7.25 p.m.—Program announcements.

7.35 p.m.—The ZFC Studio Orchestra, conducted by Mr. Horace Keats.

7.50 p.m.—Miss May Matthews—a member of the recent Industrial Trade Commission to America—will continue her travel talks.

8.0 p.m.—The ZFC Studio Orchestra.
8.10 p.m.—Signor Ubaldo Russo, tenor.

8.20 p.m.—The ZFC Studio Orchestra, conducted by Mr. Horace Keats.

8.30 p.m.—James Pheloung, trumpet solo.
8.34 p.m.—Eileen Boyd, contralto;
"Four Butterflies" (Hibbell).

8.38 p.m.—The ZFC Studio Dance Band, conducted by Cec Morrison, in a night of dance music.

8.45 p.m.—"Run Gallop in mirth and melody."
8.54 p.m.—The ZFC Studio Dance Band.

9.04 p.m.—Latest weather forecast.
9.15 p.m.—Signor Ubaldo Russo, tenor.

9.20 p.m.—The ZFC Studio Dance Band.
9.25 p.m.—James Pheloung, trumpet solo.

9.24 p.m.—Eileen Boyd, contralto;
"Consolation" (Corbell).

9.28 p.m.—The ZFC Studio Dance Band, conducted by Cec Morrison.

9.33 p.m.—"Run Gallop."
9.43 p.m.—The ZFC Studio Dance Band.

9.53 p.m.—Eileen Boyd, contralto;
"The Bonnie, Bonnie Banks o' Loch Lomond."

9.56 p.m.—The ZFC Studio Dance Band.
10.06 p.m.—John F. Dean, comedian.

10.12 p.m.—The ZFC Studio Dance Band.
10.22 p.m.—Signor Ubaldo Russo, tenor.

10.25 p.m.—The ZFC Studio Dance Band.
10.35 p.m.—Late weather forecast.

10.58 p.m.—Signor Ubaldo Russo, tenor.
10.42 p.m.—The ZFC Studio Dance Band.

10.62 p.m.—Eileen Boyd, contralto;
"Schwags Lied" (Grieg).

10.67 p.m.—Late news and announcements.
11 p.m.—"Big Ben."
The ZFC Studio Dance Band.

11.16 p.m.—John F. Dean, comedian.
11.25 p.m.—The ZFC Studio Dance Band.

11.35 p.m.—John F. Dean, comedian.
11.36 p.m.—The ZFC Studio Dance Band.
11.45 p.m.—National Anthem.
Close down.

2BL, SYDNEY.

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

MORNING SESSION.
10.30 a.m.—G.P.O. Clock and chimes.
Musical programme from the Studio.

10.40 a.m.—News from the "Daily Telegraph"

10.50 a.m.—Musical programme from the studio.

11 a.m.—G.P.O. Clock and chimes.
Women's Session: Social Notes—Replies to correspondents by Mr. Jordan. Talk on "Interior Decorations" by Mr. Irogan. Talk on "Denise Crut" by Miss Hoyle.

12 noon.—G.P.O. Clock and chimes.
Special Ocean forecast and weather report.

12.3 p.m.—Musical programme from the studio.
12.8 p.m.—Institution—Mail, Shipping, arrivals, departures and sailings.

12.11 p.m.—Boats in call by wireless.
12.13 p.m.—Fruit Market report.

12.15 p.m.—Vegetable Market report.
12.17 p.m.—London Metal Market report.

12.19 p.m.—Dairy Farm and Produce Market report.

12.22 p.m.—Forage Market report.
12.24 p.m.—Fish Market report.

12.25 p.m.—Rabbit Market report.
12.28 p.m.—Stock Exchange report.

12.30 p.m.—H.M.V. Gramophone recital.
12.35 p.m.—Exchange report.

1.10 p.m.—G.P.O. Clock and chimes.
Talk to children and special entertainment for children in Hospital.

2 p.m.—G.P.O. Clock and chimes. Close down.

AFTERNOON SESSION.
3 p.m.—G.P.O. Clock and chimes.
Musical programme from studio.

3.10 p.m.—News from the "Sun."
3.20 p.m.—Pianoforte Recital from Studio.

3.30 p.m.—News from the "Sun."
3.40 p.m.—Dungowan Dance Band. Broadcast from Dungowan Cabaret.

3.50 p.m.—G.P.O. Clock and chimes.
News from the "Sun."

4.5 p.m.—Musical programme from the studio.
4.15 p.m.—Talk on Women of the Orient of all ages.

4.20 p.m.—Dungowan Dance Band.
4.30 p.m.—News from the "Sun."

4.35 p.m.—Resume of night's programme.
4.57 p.m.—Hearing Resume.

5.09 p.m.—Special Ocean Forecast.
5 p.m.—G.P.O. Clock and chimes. Close down.

EARLY EVENING SESSION.
8.45 p.m.—G.P.O. Clock and chimes.
Children's Session.

SPECIAL COUNTRY SESSION.
6.30 p.m.—G.P.O. Clock and chimes.
Australasian Mercantile Land and Finance Co's report.

Weather report and forecast by courtesy of Govt. Meteorologist.
Producers Distributing Society's Fruit and Vegetable Market report.

Stock Exchange report ("Sun")
Grain and Fodder report ("Sun")
Dairy Produce Report ("Sun").

Monthly Trade Bulletin.
Talk about Books.

8.45 p.m.—Country news from the "Sun."
8.55 p.m.—Helpful hints to listeners by Mr. Alan Barrows.

9 p.m.—G.P.O. Clock and chimes.
Dinner Music.

9.30 p.m.—Talk on "The Galleries Brown Coal Deposits" by Mr. Rupert Markham B.E.

9.50 p.m.—Talk on "The Ramble lives of the world's greatest composers" (By courtesy of Home Recreations).

10 p.m.—G.P.O. Clock and chimes.
Broadcasters' Tropical Chorus.

An hon'rs programme presented by Home Recreations Limited.

8.3 p.m.—The Salomela Dance Orchestra.
8.18 p.m.—Miss Nell Crane, comedienne.

8.30 p.m.—The Salomela Dance Orchestra.
8.36 p.m.—Mr. Warwick McKenzie, violinist.

8.37 p.m.—The Salomela Dance Orchestra.
8.47 p.m.—Miss Hilda Walker, soprano.

8.54 p.m.—The Salomela Dance Orchestra.
9 a.m.—G.P.O. Clock and chimes.

9.1 p.m.—The Merrickville Salvation Army Band (bandmaster Mr. N. H. Knight) broadcast from Wemyss Street, Merrickville.

9.21 p.m.—Miss Nell Crane.
9.24 p.m.—Mr. Warwick McKenzie.

9.35 p.m.—Miss Hilda Walker.
9.42 p.m.—The Merrickville Salvation Army Band.

10.2 p.m.—Comedy Sketch by Mollie Rayner and Jack Beattie.

10.17 p.m.—Resume of following day's programme. Weather report and forecast by courtesy of Mr. C. Marce, Govt. Meteorologist.

10.20 p.m.—Cyril Kaye and The Westworth Cafe Orchestra Broadcast from the Ballroom of the Westworth.

11.30 p.m.—G.P.O. Clock and chimes.
National Anthem.

2GB, SYDNEY

Thursday.

MORNING SESSION.

10 a.m.—Music.
10.10 a.m.—"Good Cheer" T.S.R.

10.20 a.m.—Music.
10.25 a.m.—Happiness Talk.

10.40 a.m.—Women's Session.
11 a.m.—Close down.

AFTERNOON SESSION.

3 p.m.—Music.
3.27 p.m.—Address.

3.35 p.m.—Music.
3.57 p.m.—Address.

8 p.m.—Music.
EVENING SESSION.

6.30 p.m.—Children's Session.
6.35 p.m.—Music.

6.50 p.m.—Announcements; News; Market reports.

7.20 p.m.—Music.
7.30 p.m.—Address.

7.40 p.m.—Music.
8 p.m.—Violin solos by LEONARD BREWER.

8.5 p.m.—Songs by W. J. STELZER.
8.15 p.m.—Address.

8.30 p.m.—Pianoforte solos by DOROTHY SPARK.

8.40 p.m.—Songs by MR. BROWN.
8.47 p.m.—Songs by MAESMORE MORRIS.

8.54 p.m.—Violin solos by LEONARD BREWER.

8.5 p.m.—Songs by W. J. STELZER.
9.10 p.m.—Talk.

9.20 p.m.—Songs by MAESMORE MORRIS.
9.37 p.m.—Serial story.

9.47 p.m.—Songs by MR. BROWN.
10 p.m.—Close down.

3LO, MELBOURNE.

Thursday.

EARLY MORNING SESSION.

7.15 a.m.—"Herald" morning session.
8.10 a.m.—Close down.

MIDDAY SESSION.

11.28 a.m.—Description of TEANIS, Davis Cup Trial Matches by Mr. A.H. Dunlop, of Koooyong Tennis Courts, Melbourne.

FROM THE STUDIO.

12 noon—Melbourne Observers Time signal.
Metal prices received by the Australian
Mining and Metals Association from the
London Stock Exchange this day. Brokers' and
the Australian Press Association cables.
British Official Wireless News from Rugby.
"Argus" News Service.

12.30 p.m.—COMMUNITY SINGING FROM
THE STUDIO (Conductor, G. J. Mackay),
assisted by THE STUDIO QUARTET (Con-
ductor, Reginald Bratby).
Soloists:

BERNARD THOMAS:
"Evening Song" (Blumenthal),
"Ave Maria" (Cooper),
NELLIE JUDGES:
"Providence"
"Just a Cottage Small."

1.45 p.m.—Meteorological information. Wea-
ther forecast and rainfall for Victoria, Tas-
mania, South Australia and New South
Wales. Ocean forecast. River reports.
Stock Exchange information.

1 p.m.—Close down.

AFTERNOON SESSION

1 p.m.—Description of TENNIS Davis Cup
Tie-Break Matches by Mr. A.H. Dunlop, at Koo-
yong Tennis Courts, Melbourne.

2.15 p.m.—JOHN D. FITZER, by permis-
sion of J. C. Williamson, Ltd.:
"A Farewell,"
"Brown Cottage."

2.32 p.m.—J. HOWLETT ROSS:
"Australian Poets and Australian Flora."

4.15 p.m.—STUDIO QUARTET:

"Chanson Bretonnaise" (Held),
2.45 p.m.—MADAME E. ASHLEY, soprano:
"Soper Vociata, Un Ballo (Vardi),
"Hush, Little One" (Bergrinow).

4.21 p.m.—STUDIO QUARTET:

"Linae Time Selection."

4.30 p.m.—JOHN D. FITZER, baritone:

"A Yuchelle"
"The Grimsome."

4.45 p.m.—STUDIO QUARTET:

"Three Eastern Sketches" (Hawgill).

4.50 p.m.—Description of TENNIS, Davis Cup
Tie-Break Matches, by Mr. A.H. Dunlop, from
Kooyong Courts, Melbourne.

5.15 p.m.—EVENING, transmitted from St.
Paul's Cathedral.

5.30 p.m.—Accounts for Saturday's Races
at Sandown "Herald" News Service.
Stock Exchange Information.

EVENING SESSION

CHILDREN'S HOUR

6 p.m.—Answers to Letters and Birthday

Greetings by "BILLY BUNNY".

6.20 p.m.—ELISE BRADSHAW:

"Songs for the Children."

6.37 p.m.—MISS M. SHEPHERD:

"Strange Tales for the Children."

6.42 p.m.—ELISE BRADSHAW will play and

Sing.

6.56 p.m.—"BILLY BUNNY":

"The Treasure Seekers."

7 p.m.—Official report of Newmarket Stock

Sales by the Associated Stock and Station

Agents, Banker Street, Melbourne.

7.5 p.m.—"Herald" news service. Weather

summary, shipping movements.

7.12 p.m.—Stock Exchange information.

7.17 p.m.—Fish market reports by J. R.

Borrett, Ltd. Rabbit prices.

7.19 p.m.—River reports.

7.21 p.m.—Market reports by the Victorian

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

Grain, Hay, Straw, Juice, Dairy Produce,

Potatoes and Onions. Market reports of

fruit by the Victorian Fruitgrowers' Associa-

tion; retail prices. Wholesale prices of

fruit by the Wholesale Fruit Merchants' Association. Citrus fruits.

Ballarat Pig Market reports, by the Ballarat Stock and Station Agents.



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NIGHT SESSION.

7.30 p.m.—Under the auspices of the South Association of Australia, MR. P. J. RYAN will speak on "The Cause and Effect of Irregularity of the Teeth."

7.45 p.m.—IRENE NORTH, now appearing in "Queen High" at the Theatre Royal, will speak to you from her dressing-room, by permission of J. C. Williamson, Ltd.

8 p.m.—MR. MUD MCGREGOR will speak on "Cricket."

8.15 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

8.15 p.m.—BERNARD THOMAS (tenor): "Beneath Thy Window."

8.27 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

8.35 p.m.—THE LYNCH BELLRINGERS, via the Marimba Resonator:

"Honey."

8.39 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

8.48 p.m.—MARY MACK, contralto:

"Time was I loved the Mountain," (from "Songs of the Northland.")

8.51 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

9 p.m.—J. HOWARD KING, baritone:

"The Cavern Men."

9.1 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

9.12 p.m.—VAUDE AND VERNE:

"Vaudevilianities."

9.15 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

9.24 p.m.—THE LYNCH BELLRINGERS, on the Glassophone:

"Because I Love You."

9.28 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

9.31 p.m.—MARY MACK, contralto:

"The Birds Go North Again" (Wibsey).

9.40 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

9.43 p.m.—J. HOWARD KING, baritone:

"Songs of Araby."

9.47 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

10 p.m.—"Argus" news service, British Overseas Wireless News Agency, Meteorological Information, Announcements, Sporting News by "Olympus," Island Shipping movements.

10.15 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

10.23 p.m.—BERNARD THOMAS, tenor:

Selected.

10.27 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

10.35 p.m.—THE LYNCH BELLRINGERS on the Glassophone:

"Forgotten."

10.40 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

11 p.m.—OUR GREAT THOUGHT:

"To me there is something thrilling and exalting in the thought that we are drifting forward into a splendid history—into something that no mortal eye has yet seen, no intelligence has yet declared." (Bhagya)

11.1 p.m.—JOE ARONSON AND HIS SYMPO-SYMPHONISTS.

11.40 p.m.—GOD SAVE THE KING.

3AR, MELBOURNE

Thursday.

MORNING NEWS SESSION.

11 a.m. to 12 noon.

MIDDAY CONCERT SESSION.

12.1 p.m.—Transmitted from Peninsula House, 215 Collins Street (by exclusive permission of Wills and Paton Ltd.) on the Brunswick Paraphone.

1 p.m.—Newmarket stock sales. Special "Special" program report on the progress of this morning's stock sales at Newmarket (by courtesy of John Macnamara and Co.). To be repeated at 2.30 specially for our Country Listeners.

1.2 p.m.—Close down.

MACHINE SESSION.
ORCHESTRAL CONCERT.

2.30 p.m.—Newmarket Stock Sales. Special "Special" program report direct from the yards (by courtesy of John Macnamara and Co.).

2.41 p.m.—Studio Orchestra.

2.43 p.m.—Mrs Ann Middleton soprano:

"Fairy Pipes" (Dewey) by request.

"Lifes Epitome" (Barr).

2.49 p.m.—Studio Orchestra.

2.51 p.m.—Mr. Ronald Brassey, cellist:

"The Phantom Melody" (Kettley) by request.

3 p.m.—Studio Orchestra.

3.03 p.m.—Mrs Ann Middleton, soprano:

"My Mother like me" (Hayden).

"Open thy big eyes" (Mannell).

3.11 p.m.—Studio Orchestra.

3.14 p.m.—Mr. Herbert Pascher, violinist:

"Mazurka" (Gottmann).

4 p.m.—G.P.O. Clock says "Four."

4.1 p.m.—Mid Weather forecast.

4.20 p.m.—Announcements.

4.6 p.m.—"Madamemoiselle Jeunesse."

Timely topics: Home, Hobbies, and Novel Novelties for our lady listeners.

4.45 p.m.—Mr. Gilbert L. Cameron, Entertainer:

Comedy Sketch: "The Vicar's Presentation."

4.54 p.m.—Studio Orchestra.

4.59 p.m.—Tonight's entertainment.

5.03 p.m.—Special racing report. Accidents and barrier positions for Saturday's races by G.P.F.E.

5 p.m.—G.P.O. Clock says "Five."

Close down.

CHILDREN'S SESSION.

5.30 p.m.—Uncle Max' entertainment.

EVENING SESSION.

NEAPOLITAN NIGHT.

7.30 p.m.—Our Boy Seamus, Commissioner W. D. Kennedy, Deputy Camp Chief of Victoria will give his interesting weekly notes and news on the Boy Scout Movement.

7.40 p.m.—Newmarket Stock Sales and pig market reports.

8 p.m.—G.P.O. Clock says "Eight."

8.1 p.m.—Len Gibson's Neapolitan Orchestra:

"Bella, little girl" (Berk).

"Hawaiian Song" (McKay).

8.7 p.m.—Mr. Horace Jno. Beck, electrician:

Extractions from "The Pickwick Papers" (Dickens).

8.11 p.m.—Miss Alice Mellon, soprano:

"Les quatre de Nostra" (Old French).

"Morning" (Oty speaks).

8.22 p.m.—Announcements.

8.25 p.m.—Len Gibson's Neapolitan Orchestra:

"Hawaiian Moon" (Lawrence) by request.

"Consolation" (Boesley).

"Amare cordata" (Ferrioni) by request.

8.37 p.m.—Mr. Alan Bell, comedian:

"The Independent Candidate" (Season).

8.45 p.m.—Mr. Harold Webb, Phillips, by request:

"Wimmen, Oh, Wimmen" (Phillips), by request.

"Now sleeps the crimson petal" (Quiller).

8.52 p.m.—Miss Elyse Stewart, entertainer:

In some catchy numbers.

"Naughty Words" (Longstaff).

"On a Saturday Night" (Bratton).

9 p.m.—Len Gibson's Neapolitan Orchestra:

"Hawaiian Melody" (arr. Len Gibson).

Mr. Len Gibson, mandolin solo.

Orchestra, "Villa" from "The Merry Widow" (Lehar).

9.5 p.m.—Mr. Horace Jno. Beck, electrician:

Selections from "The Ballads of a Cheesemonger" (Robert W. Service).

"My Friends"

"The Black Sheep"

9.12 p.m.—Mr. John Lane, tenor:

"Mifajny" (Paster).

"Believe me if all those endearing young charms" (Tradition).

9.25 p.m.—Announcements.

9.27 p.m.—Studio Orchestra.

Dr. Geo. Payne Phillips, president of "The First Education Society of Victoria, and Editor of "The National Health Magazine" will speak on "The Care of the Nervous System."

9.35 p.m.—Miss Alice Mellon, soprano:

"The Lass with a delicate air" (Arne).

"The Violet" (Old English).

9.45 p.m.—Len Gibson's Neapolitan Orchestra:

"Because I Love" (Bertini).

"Kentucky Lullaby" (Miller Conn).

9.50 p.m.—Mr. Alan Bell, comedian:

"The Bull Fighter" (Cawling and Leigh).

10 p.m.—G.P.O. clock says Ten.

10.1 p.m.—Semi-fun! weather forecast especially for our country listeners.

10.2 p.m.—Yes, Australia. Know Australia. Vivid and interesting news of our own country. This one deals with a second series of Mr. E. A. Currie's trips.

10.3 p.m.—Mr. Harold Webb, harpist:

"Nicoise" (Mona Zucca).

"Thank God for a steward" (Del Riego).

10.32 p.m.—Miss Elyse Stewart, entertainer:

"Some more catchy numbers."

"Pickating Sandbar" (Talbert).

"Down where the dinged babies grow" (Lung).

10.39 p.m.—Mr. John Lane, tenor:

"Oh, wien's night" (Mendelssohn).

"Oh in the silly night" (Tradition).

10.51 p.m.—Len Gibson's Neapolitan Orchestra:

"Always" (Berlioz).

Mr. Len Gibson, mandolin solo:

"The Broken Melody" (Van Buren).

10.54 p.m.—"Blue Eyes" (Berlioz).

10.58 p.m.—"Age" news bulletin, exclusive to 3AR.

10.59 p.m.—Tomorrow's entertainment.

11 p.m.—Final weather forecast.

11.14 p.m.—Our Australian good-night quote from the poem, "The Harp's Song," by Frank S. Williamson.

11 p.m.—G.P.O. clock says Eleven.

God Save the King.

4QG, BRISBANE

Thursday

MORNING SESSION.

10.30 a.m.—Today's Social News.

10.40 a.m.—Music.

10.45 a.m.—A Gardenlike Talk by "Greenie."

"Gardening from the Feminine Viewpoint."

11.0 a.m.—Music.

11.10 a.m.—General News.

11.20 a.m.—"The Telegraph" News.

11.30 a.m.—Close Down.

MIDDAY SESSION.

1.0 p.m.—Market Reports: Weather Information: "The Daily Mail" and "The Daily Standard" News.

1.10 p.m.—A Lunch Hour Address.

1.25 p.m.—Standard Time Signal.

2.0 p.m.—Close Down.

AFTERNOON SESSION.

2.30 p.m.—A Programme of Music by the Studio Orchestra.

3.15 p.m.—"The Telegraph" News.

4.50 p.m.—Close Down.

EARLY EVENING SESSION.

6.0 p.m.—"Daily Standard" News; Announcements.

6.30 p.m.—Bedtime Stories by "The Standard."

7.30 p.m.—Market Reports, Stock Reports.
7.30 p.m.—Weather News, Announcements
"Daily Standard" News.
7.43 p.m.—Standard Time Signal.
7.48 p.m.—A Talk on Books Arranged by
McLeod's.

NIGHT SESSION

THE TROUBADOURS.

A full night's programme by The Troubadours (conductor, Mr. Reg. Yorston).
8.0 p.m.—From the Studio:
Meltingly Sea Song, "The Jolly Roger"
(Caden).
The Troubadours.
Tener Solo, "Come Into the Garden, Maud"
(Balfe).
Mr. A. Smith.
Hase Solo, "The Village Band" (Weatherly).
Mr. R. Pike.
March, "Entry of the Gladiators" (Fuchs).
The Troubadour Instrumental Quartette.
Misa Quartaeta, "When the Great Red Dawn
is Shining" (Sharp).
The Troubadours.
Harmon Solo, "Lullaby Rhapsody" (Costes).
Mr. E. Phillips.
Vocal Waltz, "The Blue Danube" (Strauss).
The Troubadours.
Pianoforte Solo, "Nocturne" (Chopin).
Tener Solo, "Cavatina" (Sanderson).
Mr. C. T. Birkbeck.
Numerous Part Song, "A Mistake" (Hunt).
The Troubadours.
Interlude, "Simple Song" (Thomas).
The Troubadour Instrumental Quartette.
Numerous Items Selected.
Mr. E. Kenyon (the Entertainer).
8.3 p.m.—Metropolitan Weather Forecast.
8.4 p.m.—Part Song (Numerous), "An Old
Rat's Tale" (Bridge).
The Troubadours.
Male Quartette, "Fenella, Fenella"
(Dental).
The Troubadours.
Waltz, "Maiden's Blush" (Arch Joyce).
The Troubadour Instrumental Quartette.
Sketch Song (Numerous), "Inverary"
(Lauder).
Mr. David Stevens.
Humorous Part Song, "The Mellow Melon"
(Richardson).
The Troubadours.
Pianoforte Solo, "Waltz" (Chopin).
Miss Esleie Torson.
Tener Solo (Humorous), "A Dandy Court-
ship" (Costes).
Mr. Phillips.
Plantain Melody, "Who's That a-Calling"
(Berquist).
The Troubadours.
Carrie, "Dance of the Moths" (Weldt).
The Troubadour Instrumental Quartette.
Hase Solo (Humorous), "The Boatman's
Story" (Malloy).
Mr. R. Pike.
Humorous Item Selected.
Mr. Edgar Kenyon (the Entertainer).
Finale, "Good-night" (Kralfo).
10.0 p.m.—"The Daily Mail" News Weather
News; Close Down.

5CL, ADELAIDE.
Thursday.
MORNING SESSION
12 noon to 2 p.m.
AFTERNOON SESSION
2 p.m.—G.P.O. Chimes.
2.3 p.m.—Musical numbers.
2.45 p.m.—Domestic Science talk by Mrs. Mur-
ray Coghill.
4 p.m.—G.P.O. Chimes.
4.1 p.m.—Musical numbers.
4.27 p.m.—S. C. Ward and Co.'s Stock Ex-
change Intelligence.
4.1 p.m.—G.P.O. Chimes and close down.

EVENING SESSION.

6.00 p.m.—G.P.O. Chimes.
6.01 p.m.—Children's Time.
7.20 p.m.—Market reports by A. W. Sandford
and Co., A. E. Hall and Co., Dalgety and Co.,
S.A. Farmers' Co-operative Union, Taylor
Bro., Retail Grocers' Association, J. H.
Young's special report on the tomato mar-
ket, Interstate Fruit and Vegetable Market
Co., Ltd., S. C. Ward and Co.'s Stock Ex-
change Intelligence.
7.30 p.m.—Extracts from "News Bulletin"
7.34 p.m.—Popular Science, "White"
7.45 p.m.—Talk by M. Whittebury.
7.45 p.m.—Station announcements.
8 p.m.—G.P.O. Chimes.
8.1 p.m.—Novelty Broadcast.
8.20 p.m.—Instrumental Concert of Popular
and Classical numbers.
9 p.m.—G.P.O. Chimes.
9.1 p.m.—Meteorological information.
9.3 p.m.—Dalgety's wheat report.
9.5 p.m.—Station announcements.
9.8 p.m.—Instrumental concert continued.
10 p.m.—G.P.O. Chimes.
10.1 p.m.—"Advertiser" news service.
10.15 p.m.—Instrumental numbers continued.
10.30 p.m.—Relay from the Malton De Bance.
Dance selections.
10.55 p.m.—Friday's programme and Meteor-
ological information.
11 p.m.—G.P.O. Chimes and National Anthem.



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Friday, Jan. 6

2FC, SYDNEY.

EARLY MORNING SESSION.

7 a.m. to 8 a.m.

MORNING SESSION.

10 a.m.—"Big Ben" and announcements.
10.5 a.m.—Studio music.
10.18 a.m.—"Sydney Morning Herald" news service.
10.30 a.m.—Studio music.
10.35 a.m.—A reading.
10.45 a.m.—Studio music.
11 a.m.—"Big Ben." Studio music.
11.5 a.m.—A.P.A. and Butler's Cable Services.
11.50 a.m.—Studio music until 11.55 a.m.
11.58 a.m.—From the Sydney Cricket Ground.
Description of the play and scores of the cricket match, New South Wales versus South Australia.

MIDDAY SESSION.

12 noon—"Big Ben."
From the Studio!
Programme announcements.
12.3 p.m.—Stock Exchange, first call.
12.8 p.m.—Official weather forecast, rainfall.
12.5 p.m.—Studio music.
12.30 p.m.—Summary of "Sydney Morning Herald" news service.
Rugby wireless news.
12.55 p.m.—From the Sydney Cricket Ground:
Further scores and description of play.
12.40 p.m.—From the Studio:
Anne Luciano, soprano.
12.45 p.m.—From the Sydney Cricket Ground:
Cricket scores and description of play.
1 p.m.—"Big Ben." Weather intelligence from the Studio.
1.0 p.m.—"Evening News" midday news service.
Producers' Distributing Society's Report.
1.20 p.m.—From the Studio:
Lorraine Jernam, soprano:
(a) "Before the Dawn" (Lang).
(b) "Malam" (Lang).
1.25 p.m.—A popular record.
1.28 p.m.—Stock Exchange, second call.
1.30 p.m.—Studio music. Two-pianola re-
presentations.
1.40 p.m.—From the Studio:
Anne Luciano, soprano.

159 p.m.—Cricket scores. Studio music.
 159 p.m.—From the Studio:
 Lorraine Jarman, soprano:
 "Cricket Song" (Jarman).
 7 p.m.—"Big Ben."
 From the Sydney Cricket Ground:
 Continuation of the description of play with
 scores at intervals.

AFTERNOON SESSION.

9 p.m.—"Big Ben."
 From the Studio:
 The "Radio Trio":
 Leader, Mr. Ewart Chapple.
 10 p.m.—Phyllis Broadbent, soprano:
 "I wonder if love is a dream."
 10 p.m.—Cricket descriptions and scores of
 the match, N.S.W. versus South Australia.
 10 p.m.—From the Leader:
 The "Radio Trio":
 Leader, Mr. Ewart Chapple.
 10 p.m.—Edithen Cobb, mezzo:
 "The King my Mother King" (Grimsshaw).
 11 p.m.—Frank Williams, baritone:
 "Tommy Tom" (Macintosh).
 11 p.m.—From the Cricket Ground:
 Description of the play with scores.
 11 p.m.—"Big Ben."
 From the Studio:
 The "Radio Trio":
 Leader, Mr. Ewart Chapple.
 12 p.m.—Florence Roberts, soprano:
 "Still as the night" (Gari Bolm).
 12 p.m.—Phyllis Broadbent, soprano:
 "The Little Princess" (Svedby).
 12 p.m.—From the Sydney Cricket Ground:
 Description of the cricket match and scores.
 12 p.m.—From the Studio:
 The "Radio Trio":
 Leader, Mr. Ewart Chapple.
 12 p.m.—Kathleen Gills, mezzo:
 "London Lane" (Vanderpool).
 12 p.m.—Irene Exchange, third call.
 12 p.m.—Frank Williams, baritone:
 "Here I come" (Gosnell).
 12 p.m.—From the Sydney Cricket Ground:
 Further description of play and scores
 until 1.15 p.m.

EARLY EVENING SESSION.

1.40 p.m.—The Children of 1870.
 1.45 p.m.—The "Radio Man" talks to the children.
 2 p.m.—"Big Ben."
 Scores drawn scores of the cricket match,
 N.S.W. versus South Australia.
 2 p.m.—"Here I come" for the young folk.
 2.30 p.m.—"Here I come."
 3 p.m.—"Big Ben."—Last sporting news.
 A talk by the 2FC Racing Commissioner.
 3.15 p.m.—Burgess's market reports (wheat,
 meat and stock).
 3.15 p.m.—Fruit and vegetable markets.
 3.25 p.m.—Weather and shipping news.
 3.28 p.m.—"Rousing News" late news service.

NIGHT SESSION.

7.40 p.m.—Programme announcements.
 7.45 p.m.—"Let's go around the World" No. 7,
 7 of the series of talks by the Rev. P. H.
 Howard.
 8 p.m.—"Big Ben."
 From the Majestic Theatre (by permission
 of J. C. Williamson, Ltd.):
 A Theatrical Transmission.
 8.10 p.m.—From the Studio:
 Latest weather forecast.
 8.11 p.m.—Graham Kent will commence a new
 series of talks on "Bridges."
 8.20 p.m.—Lindsay Evans, pianoforte solo:
 "Forsythe and Ficus in B Major"
 (Inack).
 (a) "Impromptu in B Flat" (Schubert).
 (b) "Branley Gibb, clarinetist.
 8.26 p.m.—William Bowyer and William Smith,
 duet, "The Battle Song" (Hoehner).
 8.40 p.m.—Bertha Warren, soprano:
 "A Spirit Flower" (Campbell Tipton).
 8.45 p.m.—William Bowyer and William Smith,
 duet:
 (a) "A-hankler we will go" (Fielding).
 (b) "The Army and Navy" (Cooks).

8.51 p.m.—Lindsay Evans, pianoforte solo:
 (a) "Danse des Clochettes" (Beethoven).
 (b) "Andante" (Glasunow).
 (c) "Sensitiva" (Albeniz).
 10.2 p.m.—Branley Gibb, clarinetist.
 10.10 p.m.—Bertha Warren, soprano:
 "A Bush Lullaby" (Dorothy Myrtholot).
 10.14 p.m.—From the Ambassadors:
 The Ambassadors Orchestra, conducted by
 Mr. A. Hammett.
 10.21 p.m.—From the Studio:
 William Bowyer and William Smith, duet:
 "Boatman's Song" (A.M.).
 10.27 p.m.—Bertha Warren, soprano:
 (a) "The Trout" (Franz Schubert).
 (b) "The Blacksmith" (Brahms).
 10.35 p.m.—Late weather forecast.
 10.54 p.m.—Len Maurice, popular baritone.
 10.59 p.m.—From the Ambassadors: Dance
 music under the baton of Mr. A. Hammett.
 10.57 p.m.—Late news and announcements.
 11 p.m.—"Big Ben."
 From the Ambassadors:
 The Ambassadors Dance Orchestra, inter-
 spersed with items from the Studio by Mr.
 Len Maurice, popular baritone.
 11.45 p.m.—National Anthem.
 Close down.

3.10, MELBOURNE.

Friday

MORNING SESSION.

7.15 a.m.—"Herald" morning service.
 7.18 a.m.—Close down.

MIDDAY SESSION.

11.15 a.m.—Description of CROQUET, Test
 Matches, England v. Australia, by Mr. C.
 J. Miller, from the Melbourne Croquet Club,
 Union Street, Windsor.
 11.30 a.m.—Description of TENNIS, Davis
 Cup, Trial Matches, by Mr. A. H. Dunlop,
 from Kooyong Courts, Melbourne (Moon v.
 Huggan).
 12 noon.—Melbourne Observatory Time Signal.
 12.1 p.m.—Metal prices received by The Aus-
 tralian Mines and Metals Association from
 the London Stock Exchange this day.
 British official Wireless news from Hughy
 Butler's and The Australian Press Associa-
 tion cables. "Argus" news service.
 12.15 p.m.—STUDIO QUARTETTE.
 Selection of Mendelssohn's "Memories, Part I."
 12.30 p.m.—ALBERT CARLISE, tenor (by
 invitation of J. C. Williamson, Ltd.):
 "Lorraine" (Halderson).
 "Cassidy" (Carnell).
 12.37 p.m.—Stock Exchange information.
 12.40 p.m.—BERTHA JOERGENSEN, violin:
 "Sonata in A" (Händel).
 12.45 p.m.—JEAN HAMBLETTON, contralto:
 "Serenade" (L. Garsen) (Hertz).
 "The Lover's Curse" (Hughes).
 12.47 p.m.—THE STUDIO QUARTETTE:
 "Sakalanda Greens" (Goldmark).
 12.50 p.m.—THE LYNCH BELLRINGERS:
 "Sweet Charming Belle."
 12.52 p.m.—Meteorological information: air-
 fall for Victoria, Tasmania, South Aus-
 tralia, and New South Wales. Ocean fur-
 nishes. River reports.
 12.59 p.m.—ALBERT CARLISE, tenor:
 "Told You My Heart" (Briggs).
 "Mother in Ireland" (Geldin).
 12.59 p.m.—STUDIO QUARTETTE:
 "Mendelssohn's Melody, Part II."
 1.04 p.m.—JEAN HAMBLETTON, contralto:
 "Turn ye to Me" (John Highland Melody).
 "The Lament of Iain" (Bantock).
 1.10 p.m.—Description of TENNIS, Davis Cup
 Trial Matches, Crawford v. Haworth, by Mr.
 A. H. Dunlop, from Kooyong Courts, Mel-
 bourne.
 1.15 p.m.—STUDIO QUARTETTE.

1.50 p.m.—VAUDE AND VERNE.

2 p.m.—Close down.

2.45 p.m.—Description of CROQUET, Test
 Matches, England v. Australia, by Mr. C.
 J. Miller, from Melbourne Croquet Club,
 Melbourne.

AFTERNOON SESSION.

3 p.m.—Melbourne Observatory Time Signal.
 3.1 p.m.—STUDIO QUARTETTE:
 Selection from "La Bohème" (Puccini).
 3.10 p.m.—MISS FRANCES FRASER, Harpist
 of Fiction:
 "King Arthur."
 3.25 p.m.—BERNARD THOMAS, tenor:
 "Ave Maria" (Coccos).
 "Mother Mackere."
 3.32 p.m.—STUDIO QUARTETTE:
 Selection, "La Traviata" (Verdi).
 3.42 p.m.—ALICE MALLON, soprano:
 "Mourning" (Smetak).
 "The Lass with the Delicate Air."
 3.48 p.m.—AGNES FORTUNE, Piano:
 "Sarcasmo" (Ruggerini).
 4 p.m.—BERNARD THOMAS, tenor:
 "Bonny Mary of Argyll."
 "Little Mother of Mine" (Ruzeligh).
 4.7 p.m.—MRS. M. CALLAWAY MAHOOG:
 Study and Colour—Blue.
 4.23 p.m.—ALICE MALLON, soprano:
 "The Kerry Dance."
 "When Love is Kind."
 4.30 p.m.—Description of TENNIS, Davis Cup
 Trial, by Mr. A. H. Dunlop, from Kooyong
 Tennis Courts (Patterson-Crawford v. Hop-
 man-O'Hara Wood).
 4.40 p.m.—"Herald" news service.
 4.45 p.m.—Description of TENNIS, Davis Cup
 Trial Match, by Mr. A. H. Dunlop, from
 Kooyong Tennis Courts, Melbourne (Patterson-
 Hopman v. Crawford-O'Hara Wood).
 4.10 p.m.—Close down.

EVENING SESSION.

4 p.m.—Answers to Letters and Birthdays
 GreenShips from "BILLY BUNNY."
 4.20 p.m.—FREDA NOBLECOTE, contralto:
 "The Little Old Garden" (Hewitt).
 "Smiles Through" (Penn).
 4.37 p.m.—CAPTAIN DONALD MACLELLAN:
 "More Fimical Persons."
 4.42 p.m.—FREDA NOBLECOTE, contralto:
 "Japanese Love Song" (Thomas).
 "Children Alone" (Hobart).
 4.50 p.m.—"BILLY BUNNY":
 "The Treasure Seekers are Still Seeking."
 7 p.m.—Official report of Newmarket Stock
 Sales by the Associated Stock and Station
 Agents, Bourke Street, Melbourne.
 7.5 p.m.—"Herald" news service. Weather
 synopsis. Shipping movements.
 7.12 p.m.—Stock Exchange information.
 7.17 p.m.—Fish market reports by J. R.
 Borrett Ltd. Rabbit prices.
 7.18 p.m.—Liver reports.
 7.21 p.m.—Market reports by the Victorian
 Producers' Co-operative Co. Ltd., Fruitful,
 Geelong, Har., Swan, Alta, Ezzelino, and
 Ontario. Market reports of Fruit by the
 Wholesale Fruit Merchants Association,
 Citrus fruits.

NIGHT SESSION.

7.30 p.m.—COLLINGWOOD CITIZENS'
 BAND:
 March, "The Voice of the Guns."
 Overture, "The Southern Cross."
 7.40 p.m.—BERNARD THOMAS, tenor:
 "Selected."

Saturday, Jan. 7

2FC, SYDNEY.

EARLY MORNING SESSION
7 a.m. to 8 a.m.

MORNING SESSION

- 7.41 p.m.—MR. H. K. LOVE:
"Technologist."
Mr. Love will be glad to attend to your wireless difficulties, and we ask you write to him for any advice that you may require.
- 7.57 p.m.—COLLINGWOOD CITIZENS BAND:
"An Evening Song."
- 8.4 p.m.—HARMONISTS MALE QUARTETTE:
"A Melley of Negro Folk Songs."
- 8.11 p.m.—THE LYNCH BELLRINGERS:
"Selection from La Traviata."
- 8.15 p.m.—COLLINGWOOD CITIZENS BAND:
"Selection, 'Lullabye'."
- 8.25 p.m.—VICTORIA WILSON, soprano:
(V. Roberts a tu che ador (Mybeber), "Robin Adair."
- 8.42 p.m.—THE FRENCH BROS., Banjoists:
"Hurdy Gurdy."
"Hurdy Lou."
- 8.48 p.m.—VAUDE AND VERNIS:
"Selected."
- 8.50 p.m.—CAPTAIN DONALD MACLEAN:
"Practical Pilgrimages."
- 9.2 p.m.—THE LYNCH BELLRINGERS, on the Marimba Banjoists:
"Hurdy Gurdy."
"Home, Sweet Home."
- 9.10 p.m.—TOM MASTERS and JAMES FRASER, Duets:
"The Fisherman."
"The Justice of Your Neat."
- 9.17 p.m.—COLLINGWOOD CITIZENS BAND:
"Garden of Flowers."
- 9.25 p.m.—BERNARD THOMAS, tenor:
"Selected."
- 9.31 p.m.—THE FRENCH BROS., banjoists:
"Tuck Me to Sleep."
"Hawaiian Melodies."
- 9.38 p.m.—THE HARMONISTS MALE QUARTETTE:
"Thi a Lullaby for You."
"Merry of Arlyle."
- 9.41 p.m.—COLLINGWOOD CITIZENS BAND:
"Recollections of Wales."
- 9.55 p.m.—"DONCASTER," Mr. Frank Dexter, of the "Argos," will talk on to-morrow's Races.
- 10.2 p.m.—VICTORIA WILSON, soprano:
"Cairo Nona."
"Being Low, Sweet Chariot" (Negro Spiritual).
- 10.12 p.m.—THE LYNCH BELLRINGERS:
"Intermezzo from Cavalleria Rusticana."
- 10.17 p.m.—COLLINGWOOD CITIZENS BAND:
"March, 'Carnival King'."
- 10.23 p.m.—MR. JAMES SCOTT, bass:
"Hear me ye winds and waves"—from Julius Caesar.
"HOLACE WHITE, tenor:
"O! Flower Divine" (Hedy Wood).
- 10.32 p.m.—"Argos" news service. Meteorological information. Road News. British Official Wireless news from Rugby. Island Steam movements.
- 10.45 p.m.—JOE ARONSON and HIS SYM-COPATING SYMPHONISTS:
"Along a Moonlit Way" (Weeks).
"Just one Again" (Ash).
"Charmies" (Hayes).
"Monday, Sweetheart" (Spiken).
"Yah Gonna be Home to-night" (Dublin).
- 1 p.m.—OER GREAT THOUGHT:
"Courage is by no means incompatible with tenderness. On the contrary, gentleness and tenderness have been found to characterize the man, no less than the woman, who have done the most courageous deeds."
—Samuel Smiles.
- 1.1 p.m.—JOE ARONSON and HIS SYM-COPATING SYMPHONISTS.
- 1.40 p.m.—GOD SAVE THE KING.

- 10 a.m.—"Big Ben" and announcements.
10.5 a.m.—Studio music.
10.15 a.m.—"Sydney Morning Herald" news service.
10.30 a.m.—Studio music.
10.35 a.m.—A talk by the 2FC Racing Commentator.
10.42 a.m.—Studio music.
11 a.m.—"Big Ben."
A.P.A. and Reuters' Cable Services.
11.3 a.m.—A talk on Gardening by Mr. G. J. Luckley ("Magnum").
11.30 a.m.—From the Sydney Cricket Ground: Description of the Cricket match, N.S.W. versus South Australia.
12 noon.—"Big Ben."
Stock Exchange, list call.
12.2 p.m.—Studio music.
Further cricket scores and description of the play direct from the ground.
12.20 p.m.—From the Studio:
"Sydney Morning Herald" news service.
12.31 p.m.—Rugby wireless news.
12.35 p.m.—Studio music.
From the Sydney Cricket Ground: Further descriptions and scores from the match, N.S.W. v. South Australia, until the lunch adjournment at 1.15.
1.15 p.m.—Weather intelligence.
1.18 p.m.—"Evening News" midday news service.
1.35 p.m.—Studio music.
NOTE: Events of the A.J.C. Meeting at Warwick Farm will be described in the running by the 2FC Racing Commentator, throughout the afternoon.
Studio music.

EARLY EVENING SESSION

- 5.40 p.m.—The Chorus of EFC.
5.45 p.m.—The "Hello Man" talks to the children.
6 p.m.—"Big Ben."
Stumps drawn scores of the cricket match, N.S.W. versus South Australia.
6.2 p.m.—Continuation of the Children's Hour.
6.10 p.m.—Story time for the young folk.
6.30 p.m.—Dinner music.
7 p.m.—"Big Ben."
Weather intelligence.
7.3 p.m.—Late sporting news.
7.18 p.m.—"Evening News" late news service.
7.45 p.m.—Studio music.

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NIGHT SESSION.

- 7.40 p.m.—Programme announcements.
 7.45 p.m.—The Congress Band.
 8 p.m.—"Big Ben." Mr. R. A. Hutchinson, baritone.
 8.10 p.m.—The Congress Band.
 8.15 p.m.—Gladys Plummer, soprano.
 8.20 p.m.—The Congress Band.
 8.24 p.m.—Charles Lawrence, entertainer.
 8.43 p.m.—Carlton Fay, pianoforte solo.
 8.54 p.m.—Win and Winda, English entertainers.
 9 p.m.—"Big Ben." Late weather forecast.
 9.12 p.m.—The Congress Band.
 9.15 p.m.—Laurence Hubert, baritone.
 9.16 p.m.—Carlton Fay, pianoforte solo.
 9.23 p.m.—The "Radio Revelers," led by Mr. Laurens Halbert.
 10.12 p.m.—Win and Winda, English entertainers.
 10.23 p.m.—From the Ambassadors: The Ambassadors Dance Orchestra, under the leadership of Mr. Al Hammett.
 10.30 p.m.—From the Studio: Late weather forecast.
 10.41 p.m.—From the Ambassadors: The Ambassadors Dance Orchestra. Conductor, Mr. Al Hammett.
 10.57 p.m.—Late news and announcements.
 11 p.m.—"Big Ben." The Ambassadors Orchestra, interspersed with musical items from the Studio until 11.45 p.m.
 11.45 p.m.—National Anthem.
 Close doors.

3.10, MELBOURNE.

Saturday.

MORNING SESSION.

- 11 a.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
 11.9 a.m.—"THE PREMIER FOURS," "Blue Skies" (Berlin).
 "Just a Cottage Road" (Huskey).
 11.14 a.m.—THE LYNCH BELLRINGERS.
 "International Melodist."
 11.26 a.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
 11.19 a.m.—Description of CROQUET Test Matches, England v. Australia, by Mr. C. J. Miller, at Melbourne Cricket Ground, Union Street, Windsor.
 11.29 a.m.—Description of TENNIS Davis Cup Trial, by Mr. Alf Dunlop, from Kooyong Tennis Courts, Muen v. Howe.
 11.55 a.m.—"THE PREMIER FOURS," Selected.
 12.13 p.m.—Metal prices received by the Australasian 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.
 12.23 p.m.—THE LYNCH BELLRINGERS, on the Martinis Recorders:
 "Come Back to Erin."
 "I Want to be Happy."
 12.35 p.m.—VAUDE AND VERNE, selected.
 12.49 p.m.—Stock Exchange information.
 12.45 p.m.—STUDIO QUARTETTE:
 "Waltz," "The Magic of Love."
 12.53 p.m.—BERNARD THOMAS, Tenor.
 1 p.m.—Melbourne Observatory Time Signal. Are you going out Motoring, Fishing, Swimming? Remember always for your own sake as well as for others SAFETY FIRST—and don't forget to see that you leave your bicycle absolutely O.K.

MIDDAY SESSION.

- 1.1 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
 1.9 p.m.—Meteorological information. Weather forecast and rainfall for Victoria, Tasmania, South Australia and New South Wales. Ocean forecasts. River reports.
 1.12 p.m.—Description of cricket match, St. Kilda v. Melbourne, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 1.30 p.m.—Description of TENNIS, Davis Cup Trial, by Mr. Alf Dunlop, from Kooyong Tennis Courts (Crawford v. Kalmus).
 1.40 p.m.—MYRTLE SKINNER, soprano:
 "A lovely evening in summer," "ras" (Grieg).
 "Sing! Sing!" (Kjerulf).
 1.47 p.m.—STUDIO QUARTETTE:
 Selection, "Madame Pempador."
 1.54 p.m.—MYRTLE SKINNER, soprano:
 "Music who passed whirling through the night" (Grieg).
 "April Bells" (Grieg).
 2.2 p.m.—Description of TENNIS, Davis Cup Trial, by Mr. Alf Dunlop, from Kooyong Tennis Courts (Crawford v. Kalmus).
 Results of Queensland Charity Race, "Road" Flat Club and the Australian game at Manly—official opening—will be given as they come to hand.
 2.15 p.m.—Description of CRICKET MATCH, St. Kilda v. Melbourne, at Melbourne Cricket Grounds, by Mr. Rod McGregor.
 2.30 p.m.—Description of Two-year-old, five furlong, SANDOWN PARK RACES, by "Muskiet," of the "Sporting Globe."
 2.43 p.m.—Description of CRICKET MATCH, St. Kilda v. Melbourne, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 2.45 p.m.—Description of Croquet Test Match, at Melbourne Croquet Club, Union-street, Windsor, by Mr. C. J. Miller.

AFTERNOON SESSION.

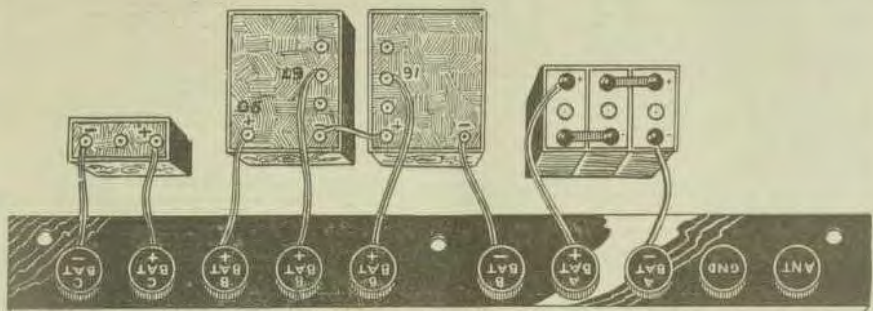
HARRY SHUGG'S STUDIO BOYS.

- 3 p.m.—Melbourne Observatory time signal.
 3.1 p.m.—Description of Trial Welter, 3 mile, SANDOWN PARK RACES, by "Muskiet," of the "Sporting Globe."
 3.5 p.m.—Description of TENNIS MATCH, Davis Cup Trial, by Mr. Alf Dunlop, from Kooyong Tennis Courts.
 4.20 p.m.—HARRY SHUGG'S STUDIO BOYS:
 Selection, "Comie Opera."
 4.30 p.m.—Description of Sandown Plaza 5 furlong, SANDOWN PARK RACES, by "Muskiet," of the "Sporting Globe."
 4.35 p.m.—HARRY SHUGG'S STUDIO BOYS:
 Selection, "Comie Opera."
 4.45 p.m.—Description of CRICKET MATCH, St. Kilda v. Melbourne, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 4 p.m.—Description of Sandown Park Handicap, 1 mile, SANDOWN PARK RACES, by "Muskiet," of the "Sporting Globe."
 4.5 p.m.—Description of TENNIS MATCH, Davis Cup Trials, by Mr. Alf Dunlop, from Kooyong Tennis Courts.
 4.20 p.m.—HARRY SHUGG'S STUDIO BOYS:
 Selections, "Comie Opera."
 4.30 p.m.—Description of Sandown Purse, SANDOWN PARK RACES, by "Muskiet," of the "Sporting Globe."
 4.35 p.m.—Description of CRICKET MATCH, St. Kilda v. Melbourne, at Melbourne Cricket Ground, by Mr. Rod McGregor.
 4.50 p.m.—Description of TENNIS, Davis Cup Trial, by Mr. Alf Dunlop, from Kooyong Courts, Melbourne (Paterson and Hopman v. Crawford and G'Have Wood).

- 5 p.m.—Description of Jumpers' Flat Race 1 1/4 miles, SANDOWN PARK RACES, by "Muskiet," of the "Sporting Globe."
 5.5 p.m.—Description of TENNIS MATCH, Davis Cup Trial, by Mr. Alf Dunlop, from Kooyong Tennis Courts.
 5.15 p.m.—"Herald" news service.
 5.30 p.m.—Description of CRICKET MATCH, St. Kilda v. Melbourne, at Melbourne Cricket Ground, by Mr. Rod McGregor.

EVENING SESSION.

- 7 p.m.—Sporting results.
 7.10 p.m.—Answers to Letters and Birthday Greetings by "LITTLE MISS KOOLABURRA."
 8.30 p.m.—STUDIO QUARTETTE:
 Children's Overture, Part I. (Boyer Quilter).
 8.37 p.m.—"LITTLE MISS KOOLABURRA":
 A Story for the Little One.
 8.50 p.m.—STUDIO QUARTETTE:
 Children's Overture Part II. (Boyer Quilter).
 9 p.m.—Sporting results.
 7.5 p.m.—"Herald" news service. Weather synopsis. Shipping movements. Weather. Stock Exchange information.
 7.32 p.m.—Stock Exchange information.
 7.51 p.m.—River reports.
 7.59 p.m.—Market reports by the Victorian Producers' Co-operative Co., Ltd.: Poultry, Grain, Hay, Straw, Jute, Dairs Produce, Potatoes and Onions.
 7.21 p.m.—Wholesale Prices of Fruit by the Wholesale Fruit Merchants' Association, Citrus Fruits.
 7.30 p.m.—Mr. F. CHAPMAN, of the National Museum:
 "Hundred Foreshore."
 7.45 p.m.—MR. J. G. PYKE:
 "An Explorer's Experiences in the Balkans."
 8 p.m.—MALVERN TRAMWAYS BAND:
 Overture, "Taucered" (Rossini).
 March, "The Boomerang" (White).
 8.10 p.m.—Results of Yacht Club Races (Royal St. Kilda Yacht Club Races).
 8.15 p.m.—J. ALEXANDER BROWNE, baritone:
 "See! Fever" (Ireland).
 "Hope the Harp Blower" (Ireland).
 8.26 p.m.—MALVERN TRAMWAYS BAND:
 Waltz, "River of Pearls" (Rimsky).
 8.27 p.m.—MADAME ELLA KINGSTON, soprano:
 "The Waking of Spring."
 Selected.
 8.34 p.m.—W. A. BOMBERST:
 "Shipwreck in Australian Waters," No. 1.
 8.50 p.m.—THE LYNCH BELLRINGERS:
 "Sweet Chiming Bells."
 8.55 p.m.—VAUDE AND VERNE.
 9 p.m.—THE LYNCH BELLRINGERS:
 Waltz, "The Blue Danube."
 9.1 p.m.—J. ALEXANDER BROWNE, baritone:
 "The Jolly Miller" (Quilter).
 "O Mistress Mine" (Quilter).
 9.10 p.m.—THE DI GUTANA REVUE will be transmitted from the "Jolly Theatre," Melbourne, by permission of J. C. Williamson.
 10.30 p.m.—ELLA KINGSTON:
 "The Lovers."
 Selected.
 10.37 p.m.—MALVERN TRAMWAYS BAND:
 March, "Panchinello."
 10.45 p.m.—Late Sporting Notes.
 11 p.m.—MR. ERIC AITKEN will give a course of to-night's events at the Motor-drome.
 11.5 p.m.—OUR GREAT THOUGHT:
 "People badly need do anything in quest of which they do not merit."—Richardson.
 11.8 p.m.—JOE ARONSON AND HIS SYNCO-PATING SYMPHONISTS.
 11.40 p.m.—GOD SAVE THE KING.



All Readers' Queries Answered Here.

W.R. (FARTWOOD): See "Wireless Weekly," 28.12.26.

H.W. (COORAMBONG): Return the set and build one as shown in December issue of "Radio."

R.E.A. (DORRIGO): To fully explain your circuit would call for more space in the paper, than I would be permitted to use. Wouldn't you purchase a handbook on wireless valves? Mr. John Root Tappart writes a very good treatise on wireless valves covering all your subjects most extensively.

B. MAC (DULWICH HILL): The eliminator in question is not advised for 250v receivers.

G.H. (GRANVILLE): You have an open circuit in your wiring.

JOEY (YANDINA, Q.): Your B batteries are running low.

W.H. (MASCOT): You will have to keep your eliminator well away from your receiver to eliminate this hum.

C.C. (STRAWBERRY HILLS): The chokes you mention is suitable. There is a space a quarter of an inch between L1 and L2.

N.P.D. (BRISBANE): This battery should be charged up every night before being used.

H.W. (DARLINGHURST): I cannot compare circuits.

G.W.T. (NEUTRAL BAY): 24 D.B.C. wire will be quite alright, so would the ampere, but not the midgeot condenser.

G.J. (WOLLONGONG): You will have to build the coils as specified in the article.

A.C. (DULWICH HILL): Mr. Watson will be found at Railway and Tramway Institute, Devonshire Street, Sydney.

E.B. (THORNLEY): I am afraid you will have to build a Super-heterodyne.

G.N. (NORTH SYDNEY): The secret of success in this line is the height of your minimum to the electric.

A.M. (MORMAN): I am afraid you have a radio frequency transformer mixed up with an audio frequency transformer.

R.A.F. (BANKSIA): Don't earth your A battery.

A.E. (ILFRACOMBE, Q.): By all means obtain a more modern type of condenser. Those having a capacity of 5000 mfd are most suitable. If your valves are as old as you say they are, then by all means substitute for new ones, such as Casoot, Mullard, or Philips.

H.L. (STAMFORD): Many thanks for your interesting letter. Your own conclusions regarding valves are quite correct, and I might go as far as to state that the advice given you by the dealer you mention is ridiculous. The 2A2 valves are the correct valves to use in the radio frequency stages, and the 2A5 is an ideal detector valve. The fact that D400 valves are of an impedance of 4000 ohms, renders them useless for radio frequency purposes and the Philips people themselves specifically advise listeners against using these valves in every stage. I am indeed glad to note that you have added a few terms to the last serial described in October (th. "Wireless Weekly." This is quite correct. Thanking you for your interesting suggestions.

M.M. (SYDNEY): What you heard was a burrstone of 250v interference in your trouble, and incidentally a faulty choke, look to both.

C.W.G. (BRIGHTON LE SANDS): See Mr. F. Cole, of 34 Gordon Street, Brighton le Sands.

J.W.C. (MANWICK): Your transformer is not suitable, as this accounts for your 201A valve not working so well as it did previously. The transformer you mention delivers 12 volts to the filament of the valve, which is designed for 6 volts. It was to obviate such a possibility that I specified the brand of transformer.

E.M. (NORTH TAMBOURNE, Q.): You must stick to original specifications regarding the values of parts, particularly in a short-wave receiver. Failure always attend a substitution of parts which you may have an hand, unless they are of the correct value and fitted to the receiver.

E.J. (BARLWOOD): See "Radio" for October.

A.E. (SYDNEY): The eliminator will not deliver as much as 130 volts, but will give you milliamperage you seek.

C.W.O. (COOTAMUNDRA): The noise you experience is static.

W.M. (MARRICKVILLE)—Q: I have a five valve Neutrodyne receiver, and I am not sure of the method of connecting the A, B and C batteries to the receiver. The terminal board has ten terminals connected one for the aerial, one for the earth, one for the A negative, one for the A positive, one for the B negative, one for the B positive, detector, one for the B positive radio frequency valves, one for the B positive amplifying valves, and two for the C battery. On looking underneath this terminal board, I find that the C positive, the B negative and the A negative are joined together. Might I ask you to publish a pictorial diagram showing how to connect the various batteries.

A: Reproduced on this page is the diagram you seek. A 6 volt A battery is shown, but each cell is distinctly marked and an each cell is of 1 1/2 volts each you can see the serial in the connections. If your A battery is either 2 or 4 volts it is only necessary to connect the A battery negative terminal of the terminal board, to the A battery negative terminal of the accumulator, and the same applies to the A positive terminal of the terminal board with the A positive of the accumulator itself. It will be noticed that the radio frequency valves are being fed with 6 or 7 volts, this being perhaps the most suitable voltage for your receiver. Still, try different values, or perhaps I should say voltages, with not only the radio frequency valves, but also the amplifier valves. Try your letter I realize that you do not employ a power valve in the last stage of audio therefore, this diagram will be of assistance not only to yourself, but to many readers of our paper. The aerial, of course, is connected to the terminal marked ANT, and the earth to terminal GND.

E. M. (TEMORA)—Q: I would be greatly obliged if you would answer a couple of questions through your paper columns. I have built the 5 valve combination long and short wave set published by you last July, and I have had good results from it. New for the first question: (1) Up to about a month ago I was able to receive 400 volts clearly, but since they were restricted to be going on to greater power, they have become mushy and blurred. Could you tell me the reason for it, or the action to be now affected. Could you tell me how to add a stage of radio to a three valve set, or publish an article dealing with it, which I am sure would be appreciated by your many readers?

A: I am afraid that you will have to write to the director of G.P.O. and ask him why this is so. Personally, I find that this station is not nearly so clear as it has been. The necessary instructions for adding a stage of radio frequency will be published very shortly.

F.J.R. (BANGALOW).—For the past 12 months I have been using a five valve neutrotype ("Wireless Weekly," 22 in. 21p.) and although it has been giving me excellent results as regards reception, etc., it has been rather hard on transformers, having burnt out three "Eccles" transformers. There, if you will answer the following queries I shall be very grateful to you: (1) If the aerial is left connected with the set during a very severe thunderstorm would it affect the transformers? (2) What is the correct ratio for transformers for the above mentioned set? (3) Would it pay me to get the burnt out transformer rewound or would it be better to buy a new one?

A.: The aerial over during a thunderstorm should not have an antenna whatever is the ratio of your receiver. It is always a wise policy to use a lightning arrester. The general ratio is 4 to 1 on the first stage and 1 to 1 on the second stage. I hardly think it would pay you to have the broken down transformer rewound. The new transformer you get, see that the primary is of generous dimensions, but enough to last for years.

T.M.Y. (STRATFORD).—Q: I intend shortly to build the "Solodex" receiver and would like your opinion on the following: I intended using a Philips A425 valve in R.F. Stage, A416 Philips Special Det. with B405 in Audio stages, would you recommend an A425 in place of the A416 in Det. stage? Would the A416 be of any advantage at all in the Det. stage being of lower impedance than the A425 valve?

A.: Use the A425 valve in the R.F. Stage the A416 in the Detector, and the B405 in the audio stages.

G.R.T. (STOCKTON).—Q: I am building a 5 valve receiver and would like to know and the following: Is the screened grid a better set than the Neutrodyne? Why is a grid leak not used in the screened grid? Would a volume control improve the above set? Which of the following 500 volt valves are more suitable for this set, Philips or Mullard?

A.: It is impossible to compare one receiver with the other in this comparative answer. Both sets are particularly good receivers, the advantage of the Screened Grid being the entire elimination of inter-station notes on the radio side. A grid leak is not used in this receiver because a form of Anode bend rectification is used. A volume control is always an amplification to every receiver. Use either of the valves mentioned.

C.B. (CONDOBOLN).—Is it harmful to use the headphones on the loud speaker Jack? What is the total cost of building the Extraordinary One Valve receiver complete with valve and hardware, but without headphones or cabinet? What is the tuning range of this set? I have heard that this set does not require any B batteries in the city, would I need these B batteries here? Can I receive Inter-State stations on the phone?

A.: You are very liable to burn out the delicate windings of the headphones if they are plugged into a Jack which takes the output of two stages of audio frequency. Write to one of the advertisers in our paper for the cost of the set. The Extraordinary Tuner from 200 to 600 metres. A "B" battery is required in both city and country. There is no reason why you should not receive Inter-State stations, others are doing it every night.

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H.W. (MERRYLOW).—Q: I have built the "B" battery eliminator, but I find it will not work in my set satisfactorily. My set is the Harkness 3 Valve Radio, using Radiotron valves. Since I have had the eliminator I find that the crystal in the set refuses to detect, "Wave Adapter" suitable for use with the "B" I can get 2FC with beams of volume. The other local stations come in with squeal and howl, and I have a job to stop the set from howling, but when I connect the crystal I cut everything out except a slight hum. My set had been working nicely on 40-volt "B" batteries before I made the eliminator, so I don't think my set is at fault. I have added another condenser and transformer choke to the eliminator, but it made very little difference. Hoping you can help me out of my trouble.

A.: I rather regret to inform you that the "B" battery eliminator you have is not suited to the Reflex receiver, any other set up to 3 valves will be found O.K. with this eliminator.

W.K.M. (MARRANO).—Q: Is the "Short Wave Adapter" suitable for use with the Rine Neutrodyne, and if so should it be "plugged in" the detector of "Rine Neutrodyne," or should the flex. P. be connected to P of an auto transformer. Also I have a 5000 cond. could I use this instead of the 60023 electrolytic.

A.: Yes, a Short Wave Adapter is quite suitable, and any set increases regarding plugging into the detector of the broadcast receiver. The 6005 Plate condensers is much too large.

A.C. (ROZELLE).—Q: I wish to thank you for the information you have sent regarding the three valve Harkness Reflex set published in "Wireless Weekly." I have altered the wiring as you suggested, and the set is now working satisfactorily.

A.: Thank you.

H.S. (DAY ROAD).—Q: I regard to the Extraordinary One Valve receiver, mentioned in your July number of "Wireless Weekly," I would be very much obliged if you would advise me, how to rectify this matter. In the copy it says to use a 6025 variable condenser, and I have a 60035 V.C. to rectify this, would I reduce the coils or increase them?

A.: Your far better plan is to do the thing properly is to obtain a 6026 variable condenser, and leave the 60035 on the shelf for the time being. However, if you wish, try the 60035 without altering any coils.

AN ENTIRELY NEW METHOD of deriving filament heating current is presented in a device which obtains power from the ordinary gas. This device is said to be most efficient, and as three hours' running cost less than 1d., it is also more economical than the usual types of "A" battery.

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WORLD'S HIGH POWER STATIONS.

THE following list sets out the main high power wireless stations of the world. Most of these stations may be heard by the amateur in Australia, who can read Morse, providing he uses the correct coils. The usual coils for broadcast reception have only a capacity of from 200 to 600 metres, and a considerable difference in the number of turns is necessary if it is required to bring in, say, Bordeaux (France), on 23,400 metres.

Name of Station.	Method	W.F.L.	Call
Avenon (N.Z.)	Spark	2,000	VLA
Sitohondo	Spark	2,500	PKC
Keopang	Spark	2,800	PKL
Amboina	Spark	3,000	PKF
Malsburg	C.W.	2,000	PKX
Halkopasa	Spark	3,375	PKZ
Turkhan	Spark	3,375	PKI
San Francisco	C.W.	5,000	NFO
Funabashi (Japan)	Spark	3,000	JJC
Cavite (Manila)	C.W.	5,000	NPO
Malabang	C.W.	4,000	PKK
Nauen (Germany)	C.W.	16,000	POZ
San Diego	C.W.	8,000	NFL
Pearl Harb. (Honolulu)	C.W.	11,200	NPM
Nauen	C.W.	12,000	POZ
Carson (Wales)	C.W.	13,200	MIL
Lyons (France)	C.W.	15,250	YV
Kootwik-Samboek	C.W.	17,750	POJ
Annapolis (U.S.A.)	C.W.	17,000	SPS
Madras (India)	C.W.	16,000	POZ
Bordeaux (France)	C.W.	23,400	LY

A WIRELESS SET which automatically switches "on" when the stations are broadcast, and "off" when they have closed down, is being marketed in London, England, at a price about 10 per cent. in excess of the set alone.



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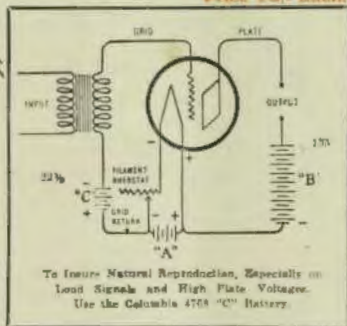
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