

Detailed Broadcasting Programmes a Week in Advance

Wireless Weekly 3^p

INCORPORATING "RADIO IN AUSTRALIA & NEW ZEALAND"

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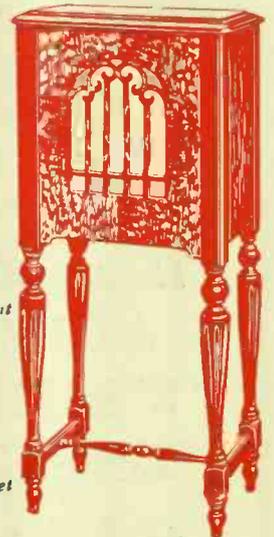


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Artificial Lightning

By creating artificial discharges of lightning as high as three million volts, electrical engineers are gathering valuable data for the protection of land lines and station equipment.

FIVE million volts of man-made and man-controlled lightning were heard as part of a programme broadcast recently from WGY, Schenectady, U.S.A. A talk on artificial lightning and its use to mankind, delivered by F. W. Peek, was punctuated by the discharge of 5,000,000 volts of electricity, the nearest approach man has yet made in reproducing Nature's lightning. Prior to the discharge a hissing sound could be heard from the corona as the voltage was built up. The artificial lightning was created in the laboratories of the General Electric Company, and the explosion was carried by wire to the radio transmitter of WGY.

Mr. Peek explained that the lightning is manufactured and kept harmless in a cage of a steel laboratory building, and is always under control. The reason for creating lightning when there is already too much of the wild sort about, stated Mr. Peek, is similar to that which prompts the physician to grow germs in test tubes. Knowledge of the habits of germs is an aid to combating the diseases the germs produce. By observing the characteristics and habits of artificial lightning at close range, natural lightning can be mastered.

"Lightning," explained Mr. Peek, "is electricity, and it is quite the same as the domestic variety except that it is given out at extremely high pressures, or voltages, and with great rapidity, or in gigantic puffs or blasts, as it were. In fact, it is discharged so rapidly that the time must be measured in millionths of seconds, and it is practically an electrical explosion. On the other hand domestic electricity is made to flow out evenly and smoothly at our will to turn wheels, light lamps, and do other useful work.

"Natural lightning is produced by electric charges formed by the action of the wind on raindrops. The electric charges are carried to the clouds by upward air currents. These clouds with the air and the earth form storage condensers for electricity. As these condensers become filled up, a great electric pressure is formed. When the air insulation can stand this pressure no more it suddenly breaks down in the lightning



A discharge showing a flash of more than three million volts. Needless to say the photograph is a double exposure, the figure having discreetly removed before the flash.

flash or becomes short-circuited in the lightning flash and 50 cents worth of electricity is sent forth at the rate or billions of horsepower—while it lasts. Although even a billion horsepower cannot do much work in a millionth of a second, it can, like 50 cents worth of dynamite, be quite destructive. The lightning energy is used up in heat, light, sound, and in chemical effects such as the production of ozone, nitric acid, etc. It is thus detected by the ears and eyes, and by the nose in the odor of ozone and nitric acid.

"If a church steeple happens to be in the path of a lightning stroke, part of the energy is used up in splitting wood or heaving bricks or, if a transmission line is in the way, it may open a path to ground and permit the escape of the domestic variety, causing the lights to go out or the motors to stop. It may fire a powder magazine at a distance, or destroy electrical apparatus or snuff out a life. Protection against such results is important. Our method of study has been to observe the effects of natural lightning and reproduce them in the laboratory with artificial lightning. The laboratory lightning is pro-

duced in much the same way that lightning is produced. The electrical energy is taken from the lighting circuit, stepped up to a very high voltage by a transformer, gradually stored in an artificial cloud condenser, and then discharged or spilled out in a few millionths of a second.

There is an exceedingly interesting instrument which makes a record of a lightning wave. It is called a cathode ray oscillograph. Electricity or lightning travels on a transmission line in the form of electric waves, just as water waves travel on the sea. Lightning waves cannot be seen with the naked eye as water waves can. However, with this cathode ray oscillograph these waves can readily be seen. The remarkable thing about this instrument is that, although these waves pass by a given point at the velocity of light or travel at the rate of about 1000 feet in a millionth part of a second, or one foot in a billionth of a second, a perfect record is obtained. This record is really painted by a pencil of electrons. What is observed as this wave reaches the end of the line is a great splash, just as the water wave splashes up to double value when it hits the seawall."

BETWEEN YOU AND ME AND THE MICROPHONE

Our Soul Enlarged—
Sublimated

THE severe mauling we received on this page from the feet of "Commonsense" a few issues ago stung a kind-hearted Queensland gentleman into action. He does not wish us to mention his name. (Ah, these names! These names! We are all very delicate on the question of names. How interested you would be, for instance, if you were to hear that we were conducting intimate correspondence with Lord St. ... n!—we dare not mention his name.) However, this gentleman says: "I have always considered your page, 'Between You and Me and the Microphone,' as being WIRELESS WEEKLY—the rest is good fill-up matter." Of course, although we quite agree with the gentleman's assertion, we would not think of publishing it without the consent of the remainder of WIRELESS WEEKLY'S staff. We took the letter first to Mr. Hull. He said: "Yes, that will be the first really good joke I've seen on your page; publish by all means." After bestowing on Mr. Hull a glance of deadly hatred, we showed it to Mr. Meadows. He said: "Yes; publish by all means. You won't get many of 'em; make hay while the sun shines." We showed it to Mr. Morse, our advertising manager. He said, after removing from his mouth the obnoxious cigar which distinguishes him from men you like to know: "What's this? What's this? Yes; publish by all means, my dear James. Remember what Shakespeare says: Sweet are the Uses of Advertisement!"

beg your pardon—you see, sir, it's easier to shelve a broadcasting feature two listeners have grown tired of than to keep him on for the hundred thousand-odd who haven't. Two listeners can continue a deuce of a row over an artist they don't like; but a hundred thousand listeners quickly forget the artist they once idolised when he is removed from the programme. That is the whole philosophy of broadcasting. Again, thank you very much, sir, for your kind-hearted letter. You may think we are a little not quite in the best taste in publishing from a congratulatory letter which, as you say, had more the nature of a personal communication; but we can assume you we are following precedents of taste established in none other than the Women's Sessions of some of our delightful Sydney stations.



short, it contained all the attributes of the healthy life, the progressive life, and of the good-fellow. Its equipment was lacking in only one particular.

It had no soul.

The bulk of modern scientific research goes to prove absolutely that nothing can exist without a soul. You may think you can exist—indeed, you are possibly at this present moment existing—without a soul; but that is quite wrong, and if you are indeed living in that state we have indicated, do not forget that you are living in nothing but a fool's paradise.

Nothing can exist without a soul. It will be easily understood that, as soon as this fact was scientifically ascertained, the Australian Aether stood in danger of imminent extinction. At this dangerous moment in its existence Australian broadcasting came. And what a change was immediately wrought!

The wireless waves, splashing daily through the Australian Aether, cleansed from it all impurities. Wonderful waves were these wireless waves; they carried the artistic soul of the Australian people! They brought to the Australian Aether the glorious rhythms of our Folk Songs ("It Ain't Gonna Rain No More," "Yes, We Have No Bananas," "Sonny Boy"); they brought to the Australian Aether Australian market reports and Australian horse-racing results; they communicated for the first time to the Australian Aether its message to the public—they gave the Australian Aether its soul!

What soul? The Australian soul—the democratic soul—laughing, careless, exultant in the dawn of a new life in a new and wonderful world. The great ethical concept of Aristotle was that of the means and the extremes. It may be truly said of broadcasting that it has constituted the Australian Aether the means by which the Australian message may be given to the extremes of Australia. Truly, Australian broadcasting has wonderfully benefited the Australian Aether by giving to it the Australian democratic attributes of freedom.

The air of the free in the Land of the Free!

Our Free Australian air—

But you have heard enough of that. . . .

James

AND now while we are so permeated with feelings of human love; now that our soul is uplifted to the very heaven of beatific inspiration, let us write a panegyric on that wonderful institution—Radio Broadcasting—which has enabled this paper to be published; which has enabled us to appear in this paper; and which has enabled us to receive this great, but merited, compliment from our Queensland gentleman.

"THE BENEFITS CONFERRED BY BROADCASTING ON THE AUSTRALIAN AETHER."

THROUGH the long and the dim and dark centuries before it was discovered by white men, the Australian Aether existed purposelessly. Some Scientists have advanced the opinion that its existence made possible the existence of the Australian Aborigines; but, as the extinction of these Aborigines occasioned the pioneers of our White Civilisation some trouble, it may be safely asserted that the existence of the Australian Aether before the coming of Captain Cook was either a grave fault or a Providential test of the endurance of Man.

However, in spite of its contamination by association with black peoples, the Australian Aether was observed by the publicity officials of numerous oversea passenger services to be most salubrious; and although it was some time before the faith of the multitudes could be gained over to an Aether of such (unintentionally) bad repute, the way was gradually opened to an ever-increasing participation in its vitalising company by the hosts of the chosen. So great was its vogue, even in the comparatively early days of Australian colonisation, that Adam Lindsay Gordon wrote of it as resembling "A long draught of wine"; high praise from days which knew the value of that delicious beverage.

The Australian Aether, then, was salubrious, vitalising, and intoxicating. In



If the Editor lets it get past, we can consider it published; and that's that, and thank you very much. Mr.—er—sorry; Mr. L.—d S—good heavens! nearly let the same slip!

Now, our Queensland gentleman wants to know, "Why did 2FC discontinue that nature of 'Mike Speaking'?" I think it was wonderful, and wish they would start it off again. It was worth tuning in to 2FC for that alone."

Well, the reason "Mike" was discontinued was this: Some people pretended to have got tired of him; and he'd been on for a long time, so it was decided to give him a short rest. You see, Mr.—I



IN APOLOGY for AMERICAN BROADCASTING

Our contributor, whose article constructively criticising the programmes has caused widespread interest, here outlines the principles of American radio "presentations."

By
**JOHN
BENSON**

presentation are of continuity and individuality. Continuity writing is a method of arranging an hour's programme so that one item will dovetail into another without disturbing the unified effect of the complete presentation. Men known as continuity writers are employed on the staffs of the broadcasting companies; and their one business in life is to put programmes into presentable, progressive order, and to write a thread of words and ideas on which the items of the programme may be strung, one after another, matched perfectly.

The idea of progress is no small consideration. Progress is one of the basic principles of art—in drama, music, and poetry it is known as rhythm; and music and poetry are useless without rhythmic progress of line and idea; because music and poetry appeal to the imagination; and if interest is to be sustained in any performance the imagination must move easily from one clearly defined image to another. Thus, in radio broadcasting (the perfect vehicle of music and poetry, where the appeal is purely to the imaginations of the audience) the best method of presentation is one in which clear descriptions of things or events are placed in succeeding order, so that each new description, item, or event proceeds naturally from that which went before it. You begin at the beginning, proceed till you come to the end; then stop.

'Imaginary Background'

The continuity writers attain this desirable objective in many ways. One is to set the presentation in an imaginary background. Thus one famous American "hour" is set in the "parlor" of a cottage in an American country town. The rustics, whose names and foibles have become known throughout the country, sit round the piano and sing the old time songs, creating interludes in which the latest happenings of the town, and the latest doings of the individuals come up for discussion. You hear them come in; you hear them talking; you hear them singing, and you hear them "think" it's time to go home. And everything they do or say is rearranged by a continuity writer.

Another famous "hour" is devoted to American legendry. Myths—Rip Van Winkle, Red Indian folk-lore, and so on—are treated. The announcer begins by conveying you in imagination to the scene of action. This is a very careful piece of work. The announcer takes you out on to the open road, describes the scenery as you walk, points out the trees on the wayside, the hills, mountains and forest oaths; speaks in the mood and atmosphere of the imaginary surroundings, until gradually you find yourself listening to dialogue—to Indian Chief Hiawatha telling the beautiful Minnehaha of that day's hunting. And so the presentation goes on as a play; but you have not noticed the transition—you are too busy waiting for what will happen next. Progress.

Announcer-Comedy

Yet one more famous "hour" is a kind of dance programme, in which two well-known singers, man and woman, a chorus, and an orchestra take part. This is produced in a manner reminiscent of musical comedy. The

MY last visit to America," writes Mr. Stuart F. Doyle, "was chiefly for the purpose of making a comprehensive study of broadcasting conditions there, and to investigate the most efficient methods adopted, not only in providing programmes, but also into the very important network system of relaying." And then Mr. Doyle goes on to talk about the technical peculiarities of American broadcasting and to contrast them with those of Australia.

But America had more lessons than those of radio engineering for Mr. Doyle. The first half of broadcasting is getting programmes on the air; the second half is presenting programmes to the public. And if the Americans know anything about broadcasting, they know how to present their programmes. In a recent article I was brazen enough to say that the New South Wales programmes were insipid; that a central organisation, controlling the programmes of both 2FC and 2BL robbed them of any originality they might have; that formal and restricted announcements buried the individualities of announcers; and I made suggestions towards protecting the individualities of the stations and bringing the dead personalities of the announcers to life again. These were, that each station should have its own programme director, and that stereotyped forms of announcing should be dropped.

Human Equation

In this article I propose to consider American broadcasting methods. The fact that I have never lived in America will not alter the truth or otherwise of what I write.

You must remember, in the first place, that no American can possibly be as bad as he is painted. At any rate, it would scarcely discredit Australia to say that the average American radio audience is as human as the average Australian radio audience. This is a very important point, because the one vital necessity to a radio audience is that it should be human. Being human, it will require different kinds and varying proportions of programmes in different countries; but it will react in the same way to the same method of presenting a programme in ANY country.

Now, in America, radio broadcasting programmes are paid for by advertising. They are put over by broadcasting companies who own stations all over the country, and who can relay one programme simultaneously to radio audiences from coast to coast. The National Broadcasting Company, for instance, has six stations regularly on its daily programme relays: KHQ, KOMO, KGO, KGW, KPO, and KFI, and uses as many as 30 for national hook-ups like a Presidential speech. Advertising companies pay high prices for the hours they use over the air; and it is on record that two American broadcasting "chains" expect to receive 23,000,000 dollars in advertising fees for 1929.

Too Dear to Leave to Chance

The point seems to be that the American advertiser pays so much for an hour's radio advertisement that he cannot possibly leave anything to chance in the proper presentation of his programme—otherwise listeners will tune him out, and the whole value of his hour's programme, as an advertisement, will be lost. You know where the advertisement comes in, of course—at the beginning and the end of the hour. People look forward to the hour, calling it by the manufacturer's name—Edison Hour, Ever-ready Hour, and so on. If the material which goes to make up the Edison Hour, or the Ever-ready Hour does not appeal to the public, or if the method of presentation does not sustain interest, the names of Edison and Ever-ready suffer harm from public opinion, and the advertisement defeats its end. Therefore, American methods of presentation are worth studying, because they have been devised to suit the human or emotional requirements of the American public.

The two great principles of American radio

Announcer takes the part of the comedian, although he is not always attempting humor; he introduces the artists and items rather by implication than directly, and he keeps the programme moving with references to the actions of the artists in the studio and with stories about the artists. Again you have progress—you are wondering what the announcer will say or do next. Change the word "progress" for "life."

American programmes are living programmes because they move on wings of creation and original ideas. That, possibly, is what WIRELESS WEEKLY meant when it welcomed Mr. Doyle to Australian broadcasting (21/5/29): "From such a man we may expect creative schemes and efficient methods, a constant striving after original ideas and living programmes, and quick appreciation of the worth of performers before the public." Let me say, in case I may be misunderstood, that Mr. Doyle's attitude towards broadcasting amply justifies that statement.

When the continuity is written, the presentation is left in the hands of the announcer. In view of my previous protest against stereotyped announcing, it may be necessary for me to point out here that there is nothing stereotyped about either the continuity or the announcer. The continuity story is written to suit exactly the mood in which it is put over. One continuity story is heard only once over the air. The announcer, then, is not asked to parrot off a series of set and formal statements, unvarying throughout the year; he is placed in a position of actor-producer. He "puts over" the story in his own personal and highly individual manner: he is the master of a presentation which succeeds or fails according to his ability to create interest in his personality.



Mr. G. C. Cooper's gardening talks from 2BL are now being broadcast on Saturday mornings at 10.10. Next Saturday he will give a talk on Japanese cedars. The above illustration shows one of these trees in the garden of Mr. F. E. Manning, at Bundanoon. "The Japanese cedars are admired by all visitors to Japan," states Mr. Cooper, "and in the cooler parts of N.S.W. they do well. Botanically known as Cryptomeria Japonica, they have bright green foliage, which in winter assumes a pleasing bronze tint; they grow in the shape of a pyramid, and, contrasted with a golden cypress, the effect is bewitching."

The Week's Talks

DAY SESSIONS

FRIDAY, September 13.—2FC: 12.12, Francis Jackson, "What to Read"; 2.2, W. S. Reay; 4.0, "Redgum." "Gardening." 2BL: 1.15, Mrs. Meredith Atkinson, "Adam Lindsay Gordon"; 2.30, C. R. Hall, "Know Australia First"; 2.45, Major Sandford Morgan, "Ninaveh—Mound and the Tomb." **SATURDAY.—2BL: 10.10, Mr. G. C. Cooper: "Gardening—Trees for Cooler Districts."**

Monday.—2FC: 12.12, V. C. Bell, "The Public Forum"; 2.2, W. S. Reay, "Literary Personalities."

2BL: 1.15, Dr. Sandford Morgan, "Hygiene, especially for Girls working in Offices"; 2.30, H. B. Sevier, "Paint Manufacture and Raw Materials"; 2.45, C. Price Congrave, "Cave Explorations in Western Australia."

Tuesday.—2FC: 12.12, C. N. Baeyeritz, "Modern Philosophy"; 2.2, J. R. Kinghorne, "Museum Subjects."

2BL: 1.15, Sister Parry, "Milk: Its Uses in Sickness, Pasteurisation, and Sterilisation to Preserve it from Infection"; 2.30, Fred Arlington-Burke; 2.45, Tom Gurr, "Zanzibar and the Bombardment."

Wednesday.—2FC: 12.12, Harry Thomas, "Dickens Sketches."

2BL: 1.15, Goodie Reere, "Aids to Personality"; 2.30, Dr. Harold Norrie (member of the Council of the Australian Historical Association), "Outstanding Personalities in Australian History—Captain Phillip"; 2.45, The Storyteller, "Romance of Bridge Building."

Thursday.—2FC: 12.12, Eleanor Ross, "With the Poets"; 2.2, C. N. Baeyeritz, "Spoken English."

2BL: 1.15, Annie Hughes, "Great Personalities I Have Known"; 2.30, Brunton Gibb; 2.45, Jean Armstrong, "Festivities and Celebrations of China."

EVENING SESSIONS

FRIDAY.—2FC: 7.5-7.15, Claude Corbett, "General Sporting"; 9.45-10.0, V. C. Bell.



Mr. E. T. FISK, who will deliver this week's feature talk from 2BL on Sunday. His subject will be: "Bridging the Gulfs of Distance."

SUNDAY.—6.40, E. T. Fisk, A.M.I.R.E.E., F.I.R.E.E., managing director Amalgamated Wirelax, "Bridging the Gulfs of Distance."

Monday.—10.0, C. N. Baeyeritz, "Humorists—Captain Stanley Garston." 2FC.

Tuesday.—9.30, The Storyteller, "Story of an Old College 'Ray.'" 2BL.

Wednesday.—7.5, Graham Kent, "On Bridge Playing." 2BL.

Thursday.—8.20, C. R. Hall, "Cameos of the City." 2FC.

NOTE.—The above schedule shows a talk for every evening of the week except Saturday evening. This is an improvement; but it is still rather sad to see much good material only half-used during the day sessions. Also, one may reasonably ask why Dr. Sandford Morgan is talking at 1.15 p.m. on "Hygiene, especially for Girls Working in Offices," when girls working in offices are either having lunch in their offices or at a city restaurant.

Proof of the power of the announcer in American broadcasting is contained in the fact that there are from six to ten announcers engaged every day in broadcasting programmes at different times from the same stations of the National Broadcasting Company's network. These men are all highly paid, and vie with one another in presenting programmes. Some of the larger advertising firms keep their own special announcer to present only their hour's programme once a week. The announcer is the most prominent person on an American presentation. When you remember that some of these presentations employ the services of the greatest artists in the country you will realise just what this means.

The result of these two principles of individuality and continuity, put into operation is a series of programme-hours on which you don't have to concentrate. You just have to listen. It is the effect of the theatre—all attention is concentrated on to a lighted stage where a series of events, progressing artistically, absorb the mind in undivided interest.

It is interesting to notice the effect of American broadcasting on some English radio journalists. Fred in the atmosphere of the British Broadcasting Corporation, and writing continually on broadcasting matters,

these men went over to America, and reported thus on what they heard:

"From the listener's point of view—and that the main thing after all—the American conditions we must concede, are very much more favorable than those obtaining in England. The subject matter of the American programmes is not radically different from that in England. Light variety, talks, and so music are just as much in demand here as in England, but, here's the point, the American programme are served up in a much more palatable way. If they seem to have the knack of turning the mediocre item into something that must not be missed on any account! The announcers are very different from anonymous—they take good care to say just what they are every few minutes; the result is that after very few hours of listening to these announcers I seem to become intimate friends. The whole atmosphere of American broadcasting is friendly to a high degree. Our Civil Servant announcers would be quite shocked at the intimacy of their American prototypes!"

If Americans had said that, we would have noticed it; but these men were Englishmen, and they understood radio backwards.

However, don't think that the above remarks are written to show what should be done in Australia; certainly, such an effect should be gained in Australia; but the question of how such an effect may be gained quite another matter. I have simply shown here what methods are adopted in American broadcasting studios to gain the attention of the public. Next week I shall deal in the same manner with the methods of the British Broadcasting Corporation.

ARTHUR BENJAMIN to Broadcast from 2FC

PROMINENT in the school of young modern composers is the Sydney pianist, Arthur Benjamin. During the last four or five years he has figured largely in musical circles in Great Britain, America, and the Continent. Mr. Benjamin was induced to re-visit Australia in 1929, as examiner for the leading English academy, and his work in this connection has taken him right through Australia. Opportunities have been taken in the various capital cities to obtain his association in concerto work with our big orchestras, with the result that he has already appeared with the N.S.W. State Conservatorium Orchestra in the Sydney Town Hall, and arrangements are being made for an appearance in Melbourne next month with the Melbourne Symphony Orchestra.

The Australian Broadcasting Company have been able to complete arrangements whereby Arthur Benjamin will make his first broadcast appearance in Australia from 2FC on Monday night, September 16, presenting a half an hour's recital, which will consist of some of the finest examples of the old masters as well as new compositions from the moderns. On Friday night, September 20, he will also be heard in association with Mr. Cyril Monk from the Conservatorium Hall, in a programme which consists entirely of his own compositions.



Ernest Long
Violinist
2 FC Friday



Signor Butta
Harp Solos.
2 FC Friday

Ernest Long--Violinist

ERNEST LONG studied in Paris under Thibaud and Hayot. While there he had the privilege of meeting Yehudi Menuhin, the eleven-year-old violinist, who is creating a sensation in America at present. "Before he left Europe," Mr. Long mentioned casually, "Yehudi was receiving a fee of a thousand pounds a concert. And," he added, "he deserved it." A fine violinist himself, Ernest Long should be a competent judge. He will play for listeners on the evening of September 16 from 2FC, before returning to Europe.

Ivy Dunstan--Contralto

IT has always seemed fitting that contraltos should be large, imposing women, who verge on stoutness; so that it seems almost incredible that the deep notes of Ivy Dunstan should come from so slight a frame; yet Ivy Dunstan can sing, and will demonstrate the fact over the air from 2BL on September 13, as duettist with Dulcie Starkey, who needs no introduction. The combination should be very effective, for the tones of the two voices blend very well. Listeners who like harmony and good vocalisation should hear this pair, who broadcast under the fitting name of "The Songsters."



Ivy Dunstone
Contralto
2 BL Friday



Gladys Verona
Soprano
2FC Monday

Gladys Verona--Soprano

GLADYS VERONA has played the leading soprano parts in most of the famous operas. When she was in England she was a member of the Carl Rosa Opera Company, and is well known to British radio enthusiasts. "When you broadcast in England, you get ever so many letters and telephone calls, congratulating you, and criticising each item separately. There is a spontaneous personal interest in the artist which is noticeably lacking in Australia. People will sometimes grumble at the artist's selections, but will not take the trouble to tell an artist which items suit their taste. Individual appreciation is very rare, and unreasoning criticism far too common," declares Miss Verona, who will be heard on the programme to be relayed from the Walshaw Memorial Hall, Bathurst, through 2FC, on September 16.

Champion Victorian Band to be Relayed Through 2FC

ONE of the most popular bands in the Commonwealth is that of the Collingwood Citizens' (Victoria), which will be broadcast through 3LO on Friday, September 13, and relayed to New South Wales listeners through 2FC. The Collingwood Citizens' Band is preparing a special programme for this broadcast, as it is shortly leaving for West Australia to participate in the West Australian Centenary Competition. The conductor, Mr. Frank Johnston, is preparing a beautiful setting of Wagner's greatest opera, "Tristan and Isolde," and this particular gem is to be the test piece for the next Australian competition.

Signor Butta--Harpist

MANY are the concerts at which Signor Butta has distinguished himself for his fine performances on the harp. This instrument is not so familiar to listeners as it might be, and when Signor Butta broadcasts on September 13 through 2FC he should be welcomed as a novel addition to the programme. He has played at Sydney concerts for many years. The only break in his career

was during the war, when harp-strings could not be obtained in Australia for love nor money.

Next Children's Theatre Party

THE wonderful success of the last big Children's Party at St. James Theatre has brought about another, which will be held, at the generous offer of Mr. John Fuller, at Fullers' Theatre on Saturday, September 21, at 10 o'clock in the morning. The Hello Man, Mr. A. S. Cochrane, in conjunction with Mr. Norman Lyons, has charge of the arrangements, and the programme will include many "acts" by the clever pupils of Miss Kathleen Hannabury, a clown, some songs by Aunt Willa, Cousin Marjorie and Cousin Gwen, and by Little Errol. Mr. Cochrane will give an address. All radio children are invited to this splendid entertainment, which promises to be as great a success as the last. Precautions will be taken to prevent overcrowding, and Mr. Lyons' Scouts will be there to keep order, as they did so well before.

Wireless Weekly

Incorporating "Radio in Australia and New Zealand."

FRIDAY, SEPTEMBER 13, 1929.

RADIO THEORIES

A PISTOL shot rings out. We rush to the street and find a man lying dead on the footpath. "He has been shot," we say. But that is only a theory; we may, in fact, be wrong.

There are those who consider it a great event when a scientific theory is proved to be incorrect. "It shows," they say, "that science is not so infallible after all. Why should we be expected to accept the findings of scientists when one after another of their oldest and most respected theories are tumbling in the dust?" As a matter of fact, it is a poor scientist who is willing to accept any theory. It is not the business of a theory to be believed. It is its purpose to stimulate investigation.

Let us go back to the supposed murder. If we believe our theory we arrest the man who stands in the street brandishing a smoking gun. If we regard it properly as a theory it leads to investigation. To confirm our suspicions we examine the body. Suppose we find no evidence of a bullet mark. Our entire theory is upset, and we may now decide that it was heart failure that caused the death. The theory was, nevertheless, a good one, for it served its purpose admirably. It led us to further investigation, and that is exactly what it was intended to do. Without a theory our investigation would have been aimless. We now have a new theory, which also may be wrong until observation provides us with new facts.

This is exactly the manner in which science proceeds in the case of radio research. We have an observed fact, we form theories, this leads to other facts, and so on. It is not impossible that we should have two or even more theories upon which we are working at the same time. Neither may be correct, but both will lead to new and useful results. In other words, any theory based on observations must be good, even if it is wrong.

But a theory must not progress too far from observations. There are hundreds of individuals who have taken a single fact and generalised until they arrived at a theory of the universe. They have merely heard the pistol shot, yet they can give the name and address of all parties concerned, the make of pistol used and its calibre, and so on. This is dangerous, and detrimental to radio. Be sure that your theory is based on true observation.

TALKIES FOR SMALL STATIONS

BROADCASTING studios all over the world are at present being explored by the talkie people, and suitable voices are being spirited away to Hollywood and other locations. Many of the most popular announcers and artists are sadly missed over the air, but they are heard, often, alas, from mouths other than their own.

The effect is being felt in Australia, and already many prominent radio people have been tempted to face the "mike" for purposes more real than ethereal. There are not many really good micro-phone voices in the broadcasting arena in Australia, and if they are to be "pirated" for talkies then listeners will surely have cause to rue the march of invention.

Talking of talkies, why not radiotalkies? Not talkies for reproducing in theatres and halls, but talkies for a whole radio programme—announcements, music, and everything. What an interesting sideline for an enterprising talkie company! The radiotalkie would be made expressly for broadcasting without the synchronised picture. What an inestimable boon they would be to small stations, especially those in places where artists are few and resources of entertainment are limited.

Of course, this sort of thing has been done by gramophone records, but their limitations and disadvantages have prevented their successful use. The break in changing records is the great barrier, especially when the break occurs in the middle of a number.

In broadcasting these radiotalkies they could be run through the reproducing gear and amplifier in the usual way, but instead of picking them up with a microphone from the speaker they could be intercepted in the

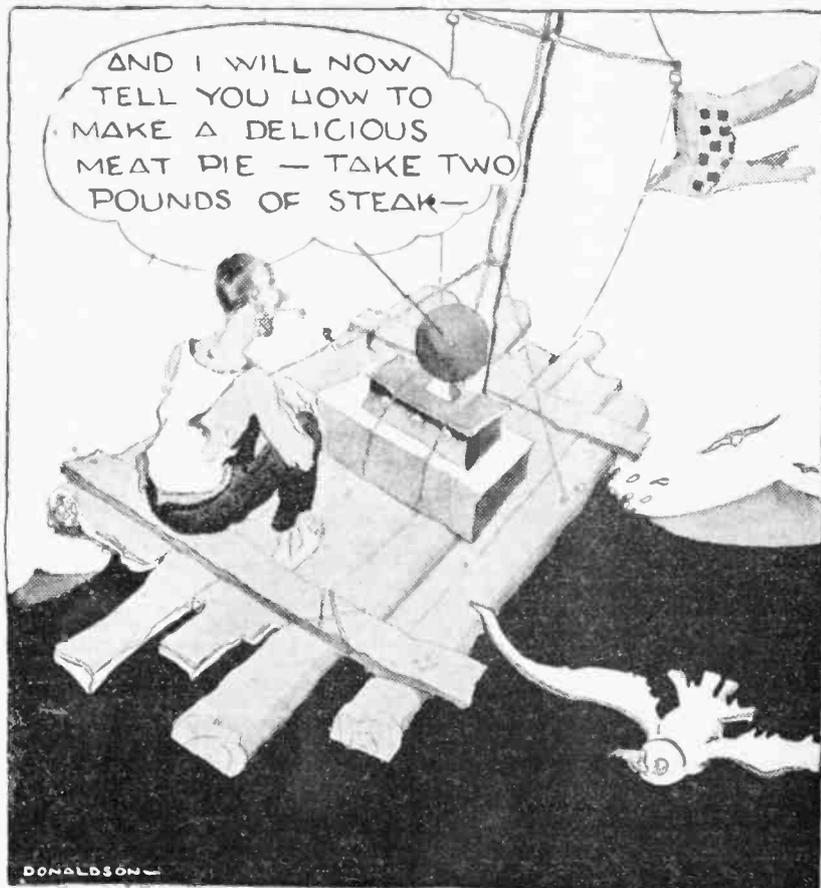
circuit at the amplifier panel. This would avoid some of the defects of the already reproduced music.

Radiotalkies would be of particular value to stations such as 6WF and 7ZL. In fact, they would be a feature at even 3LO and 2FC. There are unlimited possibilities for their development, and let us hope that the future will see their successful operation.

"Ah There Ginger"

GINGER MEGGS is fast becoming an Australian tradition. No Sunday is complete without Ginger. The bright cover of Series 6 of Ginger's adventures is now attracting attention on all the bookstalls. This collection contains 28 full-page picture chronicles in Mr. Bancks' best style. How Ginger felt the pangs of hunger; how he goes fishing with his father; how he takes the beautiful Min motoring; how his lot (and his shilling) falls among confidence men, and so on. Each page is full of action; each story has its well defined point; and the claim of the verse preface, that "Ginger is—You—or me" in the years when we weren't quite so old, is very well substantiated throughout the book. The printing in three colours on art paper is excellent.

One thing we have to regret: That Ginger has not yet become a radio fan. Is this because radio came after Mr. Bancks' time? In any case, it is an incident in Ginger's life which we have to look forward to, for it is certain that no modern boy reaches manhood without contracting the radio itch—and Ginger's youth seems everlasting.



The Safety Valve

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

Newcastle Radio Club and Interference

Dear Sir,—In Safety Valve (W.W. 30/8/29) there appeared a letter deploring the interference and widespread electrical disturbances in the Newcastle district. From time to time, many complaints have appeared in the press on this subject, with the result that both the P.M.G.'s Department and the newly-formed Australian Broadcasting Company are now well aware of these disturbances, and when the construction of the Newcastle station is commenced, we may rest assured that the authorities will be thoroughly "wise" to whatever difficulties they, and the local listeners, may have to contend with.

The Radio Club of Newcastle is striving to help the local listeners and they may have their grievances remedied, and, acting as one representative body, can exert influence for their benefit. We appreciate Mr. Cole's letter, yet at the same time it is apparent that if he and "most of our listeners around the district" would join the ranks of our members, then they would not only have better opportunities of airing their grievances, but would also have the gratification of witnessing them laid before the authorities and rectified. Our club is now a well established and stable organisation, and during the past six months has done good work in the fostering of radio in this district.

With the advent of the Newcastle station the club appeals to the local enthusiasts to co-operate with us to ensure that a satisfactory service is maintained. Weekly meetings are held every Tuesday night at 8 p.m. in the club rooms, Dixon Street, Hamilton, and a cordial welcome is extended to Mr. F. H. Cole his friends, and the hundreds of other radioists in the district, to come along and help carry on the good work.—Yours etc.

R. C. MORRIS (Hon. Secretary)
Newcastle.

2FC Hour Earlier

Dear Sir,—Re reception in this district. 2BL does not come in too well for daylight reception, and 2FC comes in very well. My suggestion is this: Couldn't the A.B.C. put 2FC on the air an hour earlier on Sunday afternoons, and close at 5 p.m., instead of 4.30? This would give us listeners-in out here one and a half hour's better reception. Perhaps some of the other listeners would send in their views on this matter. If this suggestion could be put into operation it would benefit a good many listeners-in in this part of N.S.W. Thanking you.—Yours etc.,

Gulargambone.
CONSTANT READER.

Gets KGO Instead

Dear Sir,—May I be permitted to suggest that 2FC put over the early news at 3 a.m.—7 a.m. is too early in the winter and news is what we country folk most appreciate. I do not think the programmes have improved under the new management. Some of the so-called artists are appalling and not fit to be allowed to broadcast. In despair, I have made up a short-wave receiver and now get some decent music and singing from America and England; KGO every Wednesday from 12 to 6 p.m., coming through very powerfully.—Yours etc.,

Llan Gethlen.
H. T. MACKENZIE.

Boiling Oil

Dear Sir,—Can you suggest anything nice with boiling oil in it for the cow who puts his time in twiddling the dials of his set and keeping it howling for the whole duration of a programme? We are inflicted with one such here, and although some of us have wished him everything we can think of, including his death and the blowing up of his set, it does not seem to have any effect. If you could publish this, there is a chance that this person will see it; and, if he does not want to have any pleasure from his set himself, perhaps his better feelings will prevail when he knows what a source of annoyance he is, and he will leave his set alone, giving us a chance of having an occasional listener in peace. We had him all the morning during the Church Service from St. Andrew's, Brisbane, Q., through 4QG.

I also wish to give M. Quade a pat on the back for his letter re accuracy of programmes. Not only do we fail to get the items in order as advertised, but generally we do not get them at all. This is quite common since the new company took over. Now it is a case of tune in and chance it. This is very unsatisfactory. 2FC and 2BL seem to be the worst offenders, although I must say one thing in fairness to these two stations, which is: The pick of the whole night programmes is the excellent music provided by the A.B.C. Orchestra each night. The numbers are fine and the playing is equal to anything I have heard anywhere. It makes one wonder why go to the expense of importing stage bands and orchestras when we have such fine combinations here as the National Broadcasting Orchestra. I look for them each night and am satisfied that they put the rest of the programme in the shade.

But why is it so hard to tune in to 2FC and 2BL sweetly for the past few weeks? These two stations are very rough on my set while 3LO and 3AR are perfect.—Yours etc.

Kingaroy, Q.
P. THOMSON.

Want Criticism

Dear Sir,—Do the people that write to the Safety Valve ever realise that it is a very indirect way of drawing the attention of the Australian Broadcasting Company. The same thing applies to the people who write direct to the particular announcers saying how they liked the old sessions in comparison with the new company's way of doing it. For these announcers to take along their correspondence to their directors would be not at all good taste, and, as I had a chat with Mr. Doyle a little while ago, he said very strongly that the directors of the new company want all the criticism they get so as to find out what the public wants. Wishing everybody the best of prosperity.—Yours etc.

Sydney.
FRANK DOWNES.

Standing at Ease

Dear Sir,—I feel like raising the lid of the "Safety Valve" to its utmost. Now that the A.B.C. have had plenty of time to get into their stride, I would like to ask if they realise that the country people purchased their radio sets to get at least a fair share of the daily news and other items of sport, instead of music and singing nearly all day and every day from every station. There were many complaints about the old company, but they did give us an excellent news service and a good share of every interesting sport. Take for instance, the big billiards match: 2BL for a week gave us about five minutes at a time, then back to the studio for the usual jazz stuff or singing; while, if one tuned in to 2FC the valves would run hot on a similar musical programme. There are six sets within a small radius of mine, and they are all standing at ease at the present time waiting to see if there is going to be any improvement for country listeners as, otherwise, these licences will not be renewed.—Yours etc.,

OUTBACK.

Crystal Performance

Dear Sir,—I notice (W.W. 30/8/29) a couple of letters on reception on one-valve sets, and, while not wishing to blow my own trumpet, I think that the crystal set I am using is worthy of comment. With this set, which, by the way, was made in 1926, I have logged the following stations: Sydney on loud speaker—2FC, 2BL, 2GB, 2UE, 2KY, 2UW, 2AD, 2OG; on phones, Melbourne—3DB, 3LO, 3AR, 3UZ, 3BY; Brisbane, 4QG; Adelaide, 5CL; Hobart, 7ZL. I have logged these stations for 1926 up to the present time.—Yours etc.,

Blakehurst.
J. THOMSON.

Chile With the Window Open!

Dear Sir,—Replying to "One-Valver" (70 stations, W.W. 30/8/29) I can do a lot better than that with the detector tube taken out of the set. I get 2LO midday, any day, can even hear the Thames waters on the embankment between the striking of Big Ben, etc. I also get Chile with the window open. How is that, SUPER ONE-VALVE?

But to get back to sense. Why not leave the "Safety Valve" page to the criticism of broadcasting. Surely there is plenty to be said. I think the new A.B.C. is a wonderful failure and I am sure I have the city folks with me when I say that for good music, the old "B" stations are first—our favorites being 2UW!—Yours etc.,

Clovelly.
H. E. BUDGEN.

FIRST AGAIN!

We Pioneered the Home Assembly B'liminator Field
THOUSANDS OF OUR ORIGINAL KITS ARE GIVING STERLING SERVICE
NOW! we present

The NEW IMPROVED

ECONOMIC B'LIMINATOR KIT

DON'T
BUY ANY
MORE
EXPENSIVE
"B"
BATTERIES

AT THE OLD PRICE

59/6

BUILD
ONE OF
THESE
B'LIMINATORS
TO-NIGHT

- NO COMPLICATED EARTH-ING SYSTEM.
- NO OLD-FASHIONED BELL TRANSFORMER
- NO HUM
- NO ALTERATIONS TO SET TROUBLE WHATEVER

Typical of HUNDREDS of SATISFIED USERS

Economic Radio Stores, Sydney.

Croydon Park, 30/7/29.

Dear Sirs.—Just a line to let you know that the B'liminator I made from the parts purchased from your store is all and more than you claim for it, and can recommend it to anyone.

I also wish to thank you for the advice you gave me. I should say the correct advice, which is very hard to obtain from most Radio Stores.

Wishing your Stores every success.

I am, yours faithfully,

L.A.W.

- YES IT HAS A SPECIALLY WOUND HIGH-GRADE TRANSFORMER.
- YES IT WILL DELIVER UP TO 180 VOLTS.
- YES VOLTAGE CAN BE VAR-IED FROM ZERO TO 180 VOLTS.
- YES IT WILL PAY FOR ITSELF IN A FEW MONTHS.

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TROUBLES
TO US

You'll Never
Regret It.

PUBLIC

Appreciate Our Genuine Reductions.

HERE ARE A FEW, GUARANTEED.

FOR 3 6 LIND .0005 slow motion condenser. No Vernier dial required. Were 6 6.

FOR 4 6 4-inch genuine DIORA Vernier dials. Were 6/9.

FOR 3 6 The famous ECONOTRON UX201A Valves. 6v. Were 5/6.

FOR 7 6 MIGNON AUDIO TRANSFORMERS.

Do
Not
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Our Famous
Renown 3
With
5-Valve
Performance,
Now Improved.
Ask About It.

"YOURS FOR LOWER PRICES AND SERVICE THAT SATISFIES."

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COUNTRY CLIENTS.—Our Mail Order Service reaches every corner of the Commonwealth. Send your orders to us conditionally that your money is refunded if you are not satisfied with goods. Returns must be made within ten days of receipt. We pay carriage on all orders of 10/- and over, except on Batteries, Cabinets, and Loud Speakers. Articles specially procured cannot be exchanged. Terms Cash or Cash on Delivery. No Discounts.

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25 New Royal Arcade.
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Palace Theatre.
'Phone, M6138.

NEWCASTLE
13 Union Street,
off
Hunter Street West
'Phone, New. 1622

PARRAMATTA
Corner Church
and
Macquarie Streets
'Phone, UW 9601.

SYDNEY
126A Pitt Street,
near
King Street.
'Phone, M6139.

A Cheap "B" Battery Eliminator

A first-class "B" Battery Eliminator suited to supply five or six valves and a reasonably high-powered output amplifier is an expensive proposition, as any enthusiast who studied the supply units specified for the Standard A.C. Four will realise. For a small receiver of one, two, or three valves in which the last amplifier does not take a heavy drain, the apparatus can be greatly simplified without a very serious effect over its performance. We suggest, however, that the limitations of the eliminator described in this article should be fully understood before its construction is undertaken.

By A. ALEXANDER

NOWADAYS one rarely sees a good quality radio set offered for sale, which is not equipped with a B power supply unit; indeed, most sets can be operated wholly from the electric power supply. Unfortunately, not all who own a radio set can afford such luxurious equipment, and one is constantly asked for details of the construction of a cheap eliminator which will be suitable for use with the receiver using one, two, or three valves.

Obviously it is not easy to build a unit equal to one which costs from £10 to £14 to purchase, but it is not difficult to build a more simple one, such as is illustrated by the diagram, figure 1. Several of these eliminators have been built. They have proved entirely satisfactory when operating receivers with three valves, the last amplifier being a power valve in each case.

The materials required are shown under the diagram, using two rectifying valves in parallel. Sufficient current is obtained to operate a power amplifier, the plate current demand of which is approximately 32 milliamperes, at a potential of 160 volts.

All of the material can be bought at several radio shops in the city. It may be noticed that the valve socket has not been shown as a separate item. An old fixed "R" type socket is required, and most shops will include one with the valve. An old W.D. 11 socket is better, and can be bought for sixpence or a shilling.

The valves used in all of the eliminators made to this design have been Ediswan PV3 power valves, operating at 4 volts filament potential and a current of .75 amperes, while some friends have found that Marconi R and R5V valves operate satisfactorily. In fact, one can use any valve which is suitable for use as an audio amplifier provided that its filament consumes at least .25 amperes at 4 or 6 volts.

Both Magnet and Jefferson bell trans-

formers have given satisfaction. Both have tapped secondaries, the former having a range of 3, 5, and 8 volts, while the latter provides for 6, 12, and 18 volts—obviously the 5 or 6 volt tappings, respectively, are the right ones to use. The load capacity of the bell transformers is such that two or three valves can be used in parallel, thus increasing the output current and voltage. The current is increased because the valves are in parallel—three valves will give about 60 milliamperes. This current may burn out the chokes if old transformers are used. The voltage is increased because the resistance of the three valves together is only one third of that of one valve alone.

The available voltage at the output terminals depends upon the resistance of R1 (i.e., the rated power of the lamp in watts) and Rv, the resistance of the valve (about 8000 ohms for the PV3), and the direct current resistance of the chokes. If each choke contains 10,000 turns of 40 gauge wire its resistance will be about 2500 ohms.

A choke, which will carry a current of 80 milliamperes in absolute safety, can be made by winding a pound of 30 B and S gauge enamelled copper wire on a 1 1/2 in. diameter insulated core about 4 in. long, composed of soft iron wires tightly bound together. The direct current resistance of this choke will be above 350 ohms (3300 feet per lb. at 105 ohms per thousand feet—346 ohms). When

completed this choke should be soaked in hot paraffin. It has been found, however, that the valve can be made to pass a current great enough to heat the plate to a cherry-red color and to so overload the filament that the valve is burnt out without burning the windings of the old transformers. Those used in the test units were bought from a firm who repair receivers. They consisted of the usual cheap transformers, in which the primary windings had been burnt out.

The resistance R2 is essential, and must not be omitted. Otherwise the valve will be burnt out within a few hours, as the overload when using the six-volt tap is 50 per cent.

The condensers C1 and C2 each has a capacity of 2 mfd., and are of the type guaranteed to withstand 350 volts.

The resistances R3 used in the test units were Pilot resistograds (in one unit a resistograd was used in place of the lamp at R1, but in this position a lamp is better).

In the average receiver with three valves the plate circuit current consumption is about 4 m.a. in the last stage, 2 1/2 m.a. in the first audio valve, and 1 m.a. in the detector—a total of 7 1/2 milliamperes.

At 240 volts a Marconi R valve has an emission of 10.3 milliamperes, while at 180 volts its emission is 7.6 m.a. Several friends use this valve for supplying power to three-valve sets, without any resistance at R1.

When used as a rectifier the grid and plate terminals of the valve socket are connected together as shown in Figure 1. This results in an increased current in the grid-plate to filament circuit, and in these circumstances it seems obvious that even a Marconi R valve will furnish enough current for the operation of the small receiver.

The PV3 valve, however, is a low-powered transmitting valve, which was used as a power amplifier before the intro-

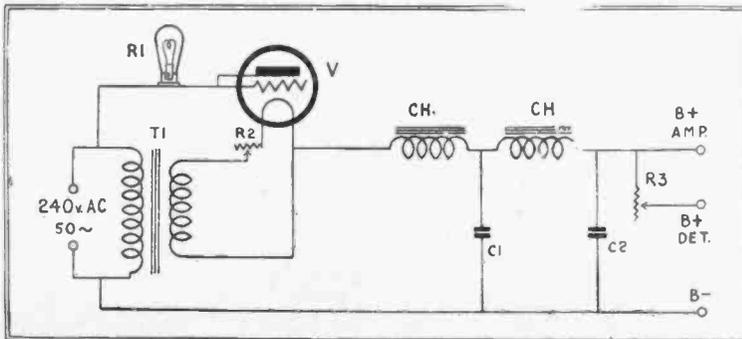
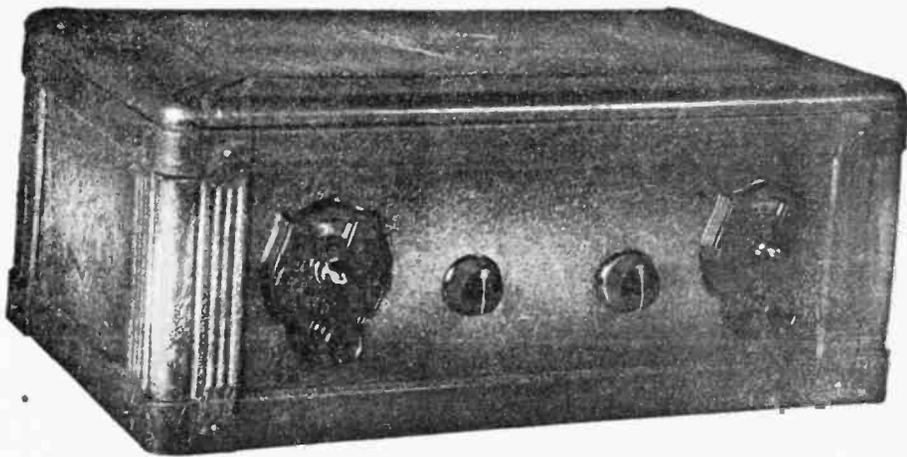


Fig. 1.

ANNOUNCING! RADIO'S MOST BEAUTIFUL CABINET——— IT'S A RADIOKES PRODUCTION



To Set Manufacturers and Custom Builders

This latest product of Radiokes factory should prove of especial interest.

This beautiful pressed steel containing cabinet is the equal of any produced in any part of the Globe, and it has the added advantage that it is collapsible. The design is such that, when cabinet is assembled, the fact that same is supplied in knock-down form and home constructed is not apparent.

The finish is the latest two-tone bronze wrinkle lacquer, and is supplied in several beautiful metallic colour schemes which will blend in with any possible mode of room decoration.

These cabinets are supplied in two standard sizes drilled, punched, and bushed for the famous 3.33 type screen grid receivers.

A.C. 3.33 type, size 19 $\frac{3}{4}$ in. x 12in., price, £2 2 6 each.

D.C. 3.33 type, size 15 $\frac{1}{4}$ in. x 10 $\frac{1}{4}$ in., price, £2 each.

Any other sizes and drillings to suit your especial job at a slight variation in cost.

You can now build your receiver, and house same in this beautiful fireproof cabinet, with the assurance that the finished job will look superior to any factory built receiver on the market to-day.

Make a point of viewing these beautiful cabinets at your Radio dealer's shop to-day. You will be charmed.

Radiokes Manufacture Panel Assemblies

These units consist of a main panel, beautifully finished in two-tone bronze wrinkle lacquer, mounted upon a specially built sub-panel, and braced with the new RADIOKES sub-panel brackets.

The entire assembly is carried out in hard drawn, heavy gauge aluminium, excellently finished and bronzed. This is the ideal foundation unit upon which to construct your new receiver. The trend is now for all metal construction, which is strong, fireproof, rigid, permanent, and efficient.

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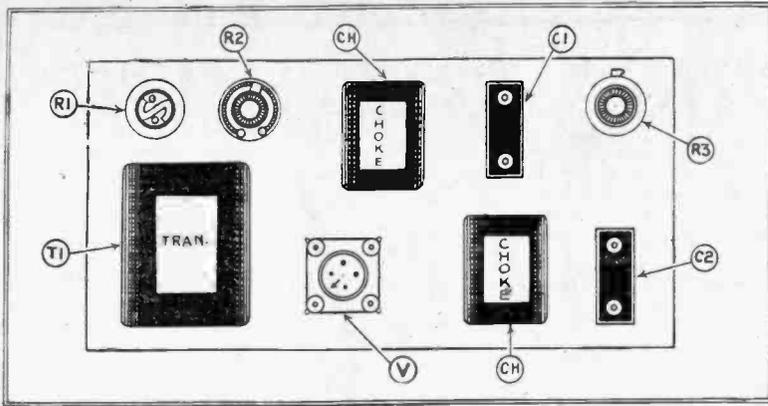


Fig. 1.

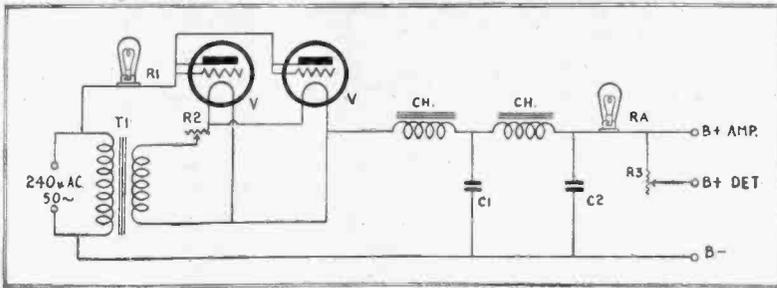


Fig. 2.

The lamp "RA" is included to reduce voltage to amplifier when necessary.

duction of valves with thorium-coated and metallic oxide-coated filaments.

When the grid and plate are connected together this valve has an emission of about 30 ma at 240 volts.

The resistance R1, which, being a lamp, can only be varied in steps, furnishes a control over the applied voltage. The most useful B power supply in radio sets is in the neighborhood of 120 volts and therefore if the resistance R1 is equal to the resistance of the valve we will have an applied potential of 120 volts.

Now a 5 watt lamp has a resistance of about 11,500 ohms, as calculated from a formula in which W equals power in watts and R, E and I are resistance, potential and current respectively.

We know that,

$$W = E \times I \quad \dots \dots (2)$$

$$R = \frac{E}{I} \quad \dots \dots (1)$$

Multiplying the right hand side of (1) by E over E we have,

$$R = \frac{E \times E}{E \times I}$$

$$\text{Now, } E \times I = W \quad \dots \dots (2)$$

$$\therefore R = \frac{E^2}{W} \quad \dots \dots (3)$$

By using formula (3) we are able to calculate the resistance of any lamp if we know both its power rating in watts and the voltage of the circuit for which it is designed.

Substituting in (3) the values for a 5 watt lamp, we have,

$$R = \frac{240 \times 240}{5} = 11,520 \text{ ohms}$$

Now when the grid and plate of the valve are connected together its impedance (i.e., more correctly resistance) is reduced; provided one knows the characteristics of the valve, this new resistance can be calculated. It is approximately 6000 ohms.

Apparently in order to obtain a voltage of 120, we need to use a 10 watt lamp, thus:

$$R = \frac{E^2}{W} \quad \dots \dots (3)$$

$$\therefore W = \frac{240 \times 240}{6,000} = 9.6 \text{ watts.}$$

The value of the resistance R3 can be calculated in the following manner. In the design the average current consumed by the detector was taken at .001 amps and using a valve with an internal resistance of 22,000 ohms the voltage required is:

$$E = I \times R = 22,000 \times .001 = 22 \text{ Volts.}$$

Now we have seen that the choke coils in the eliminator have a resistance together of 5000 ohms and as they carry a total current of .008 amps the voltage drop will be:

$$E = 5,000 \times .008 = 40$$

Therefore, voltage available at eliminator terminals is:

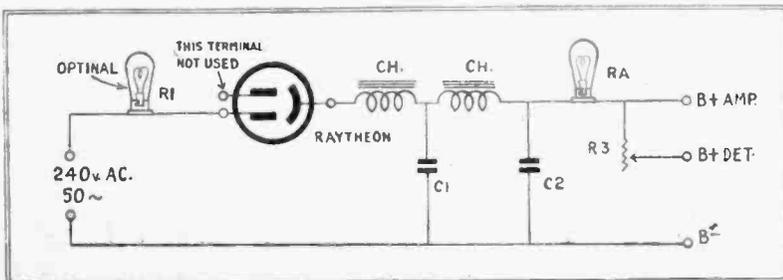


Fig. 4.

Appreciable hum is usually obtained from this circuit unless a transformer is used to permit full-wave rectification.

$$120 - 40 = 80 \text{ Volts.}$$

In the detector plate circuit we have a total resistance of 25,000 ohms, being 22,000 ohms internal valve resistance and 3000 ohm resistance of choke coupling. The voltage drop is:

$$E = 25,000 \times .001 = 25$$

Therefore, we have to design the resistance R3 so that it will reduce the applied e.m.f. to about 25 or 30 volts, i.e., a voltage drop across R3 of 80 - 30 equals 50 volts at .001 amperes:

$$\therefore R = \frac{50}{.001} = 50,000 \text{ ohms.}$$

It is now apparent that the resistance of 6000 ohms at R1 is excessive and we require to use a lamp of greater power (i.e. lower resistance) if we are to have an output potential of 120 volts. We may use a 15 watt lamp with a resistance of 4000 ohms, when the voltage across the valve will be:

$$E = \frac{240 \times 6}{4 + 6} = 120$$

Allowing for a drop of 40 volts in the eliminator we would have over 120 volts available at the output terminals.

To my mind this figure is excessive as the higher voltage increases the current demand in the receiver, and after making several simple tests with lamps of various powers (note that a 32 watt lamp caused three rectifier valves to burn out in quick succession) it was found that the specified value of 10 watts was the best. If one can afford it, a proper rectifying valve may be used instead of the PV3.

One of these valves will be required for the next eliminator to be described.

The actual construction is quite easy. Simply space the components on a piece of board and wire up as shown in Fig. 1. A very convenient arrangement is shown in Fig. 2. On completion the unit can be tested easily and quickly.

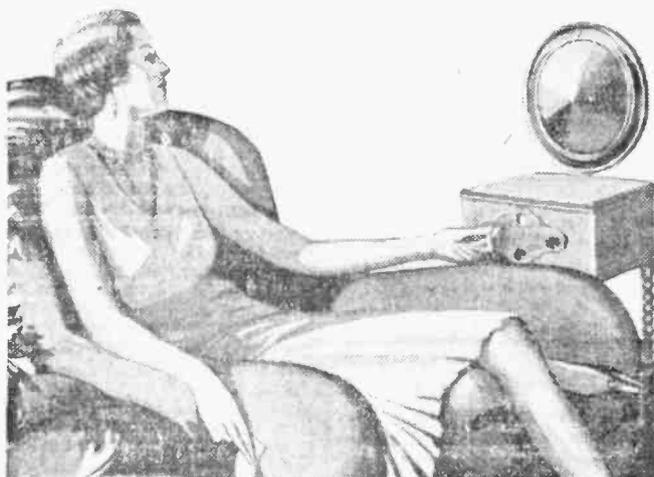
With a 40 volt battery and a pair of headphones test the two chokes for continuity of circuit, test the resistance R3 to ensure that it is operating, and test the condensers C1 and C2 to make sure that they do not contain a short circuit. The resistance lamp R1 and the valve are tested by connecting the unit to the electric power supply and turning the switch. If all is correct they will both light up. The next test is to see that the valve is rectifying. If all is correct we should have one way traffic in the circuit through the lamp and valve and the ideal method of proving this is to insert, temporarily, a neon lamp instead of the 10 watt lamp at R1. This neon lamp is sold under the trade name of Osglum and can be recognised by the construction of the elements inside it. One of the elements is a circular plate, while the other is either a letter or a beehive shaped coil of thick wire, but no filament. If this lamp is plugged into a standard socket both elements will glow if

AA1/1/29

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the supply is alternating current. Plug into the socket of R1 and as we expect to find direct current, then only one element should light up brightly. If it be reversed in the socket then the other element will light up in place of the former.

When making this final test a slight corona may be noticed at the element which is not illuminated. This is caused by the AC current which is leaking through the filter system. If this corona is pronounced then the filter is not as efficient as it should be and a distinct hum will be heard in the loud-speaker on connecting the power supply unit to a radio receiver.

However, this is not likely to occur and when connected to the receiver without an earth connection only the very faintest hum can be heard.

Most receivers are fitted with, or should be fitted with, "A" battery by-pass condensers. If they are not, then install them.

It is important to note that the earth connection must be disconnected from the radio receiver before connecting the eliminator. This is vital, otherwise you will have to climb on a box and renew your house fuses at the main switchboard. Although the earth connection has been removed, the receiver is still earthed because the power supply unit is grounded through the "B" connection to the electric light socket.

Before connecting the unit to the mains it is necessary to make sure that the house electric supply is AC and not DC current. Here in Sydney, all suburbs have an AC supply, but in the city between the Central Railway Station and Circular Quay the supply is DC. In country districts modern installations are AC, but in some towns the supply is DC, and, therefore, it should be tested if one is doubtful of the nature of the supply.

The best method of testing is by using the neon lamp as described above. If both electrodes are luminous no matter which way the lamp is inserted in the socket (a very convenient socket is to be found at the power

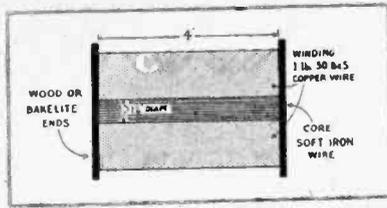


Fig. 5. Showing the construction of a simple choke coil.

plug for the electric iron or radiator, but any light socket will do) then the supply is AC. If, however, only one electrode is luminous and on reversing the lamp in the socket the other electrode is luminous, while the former is not, then the supply is DC, and the eliminator is not to be used in its present form.

For use on DC circuits, the transformer T1, the valve V and the resistance R2 are not required, but the lamp resistance should be used. The eliminator with these three elements removed can then be used, without any further alterations.

Before concluding, it might be mentioned for the benefit of the more advanced constructors, that proper rectifying valves can be used to advantage. They have an output to the filter of at least 40 m.a. at 170 volts when used as shown in the circuit diagram Fig. 3 with the resistance R1 replaced by a short circuit plug. Using these rectifiers it is essential to use chokes in the filter system which will carry the load without overheating and burning out.

An alternative circuit is shown in Fig. 4 in which the rectifier is a Raytheon valve. Notice that no bell transformer is required. These circuits will give a high output and, using an A.W.A. 25 Henry choke, the unit will operate receivers in which the last valve is a power valve of the 171 A type.

Anticipating criticism regarding the use of burnt out transformers as chokes, on the ground that they will not carry the current, it may be stated that a burnt out transformer of the cheap type has been in use daily for about eighteen months supplying a receiver equipped with a C509 as detector, a B406 as an audio amplifier, and a P610 as the power valve.

The resistance RA in figures 3 and 4 is included to reduce the voltage on the amplifying valves when required. A lamp is the cheapest and most reliable resistance obtainable. The following table shows the resistance of various half watt lamps (the half watt per candle power):—

5	11.520	50	1.152
10	5.760	60	870
15	3.840	75	753
20	2.880	100	575
25	2.304	150	444
30	1.920	200	288

The lamps R1 and RA act as indicators showing that power is switched on and that the apparatus is operating in a normal manner. They also act as an overload indicator, and when one becomes accustomed to a certain intensity of illumination from the lamp, excessive changes can be readily perceived. Should the light vary when particularly loud sounds are received, or when playing loud gramophone records, it is an indication that one of the amplifying valves is being overloaded, or if this be not so, then it indicates that either the applied grid bias is excessive or that the valve has deteriorated.

Figure 1. The material required includes:—T1, bell transformer; R1, 240 volt 10 watt lamp; R2, 6 ohm rheostat; V, bright exmitter valve and socket; CH, audio chokes (old transformers); C1, C2, condensers, 2 mids. capacity, 350 volt test; R3, variable resistance 0-100,000 ohms; RA, lamp and socket (Fig. 3) terminals, plug for power or light socket, 2 1/2 yards flex, bus-wires.

Melbourne Sport From 3LO

STATION 3LO will broadcast from the Melbourne Cricket Ground descriptions by Rod McGregor and Mel Morris of the semi-finals and final League football. The descriptions will be made from the press stand, which is one of the best vantage points on the ground for the purpose.

Broadcast descriptions will be made by Eric Welch of the whole of the events of the forthcoming Spring Racing Carnival, including the Caulfield Cup, Victoria Derby, the Melbourne Cup, and many other seasonal events, many of which will be relayed to other States for simultaneous broadcasting. Eric Welch will be kept busy during the carnival following "form" and compiling notes for an almost daily broadcast of the progress of the candidates, together with his anticipations.

An interlude in the racing fixtures, Henley comes as a welcome break to many. 3LO will broadcast a description of the annual river carnival.

Over 30 machines have been entered for the forthcoming Sydney to Perth Air Race which is being organised in connection with the West Australian Centenary Celebration. The race will take place at the end of September, and 3LO and 3AR will broadcast progress results and descriptions by Captain Guy Moore, the organiser. The race is attracting world-wide interest.

May Sharpe--Novelty Pianist

"IT is my proud boast that I have been practically everything," said May Sharpe when an interviewer asked her what she considered her special forte. "Piano novelties such as I am broadcasting from 2BL on September 14, seem to suit me best. I have managed my own comedy company, and

acted in other companies, dancing, singing, and playing the piano."

Colston Carter--Novelty Pianist

MR. COLSTON CARTER, novelty pianist, hails from England, and is a student of the Midlands Institute of Music. Mr. Carter made his debut before the microphone early last year in Newcastle, England. He is fond of the modern school of music, and will feature some modern piano solos from 2BL on Saturday, September 14.

Lawrence Macaulay--Basso

"THERE have been so many jokes made over the fact that I come from Glasgow," Lawrence Macaulay says, "that it doesn't matter if you make some more. But please spell my name correctly. WIRELESS WEEKLY once spelt it nine different ways. Lawrence Macaulay was on the programme of the broadcast to America, which was made some time ago from 2FC, and has broadcast on many other occasions. He will be heard from 2BL on September 17 in vocal numbers.

Kookaburra Saxophone Quartette

(ONE of the most interesting instrumental combinations on the air is the Kookaburra Saxophone Quartette, which was brought into being by Mr. J. C. Little, a noted saxophonist. The Quartette had wide experience as saxophone experts, and is well known as a broadcasting combination. It does not confine itself to popular music alone, but also makes a study of the classics. Mr. J. C. Little, the soloist, is a saxophonist who has played in various countries, both on the stage (in motion picture orchestras) and on the air. The Kookaburra Quartette will appear from 2BL on Saturday, September 14.

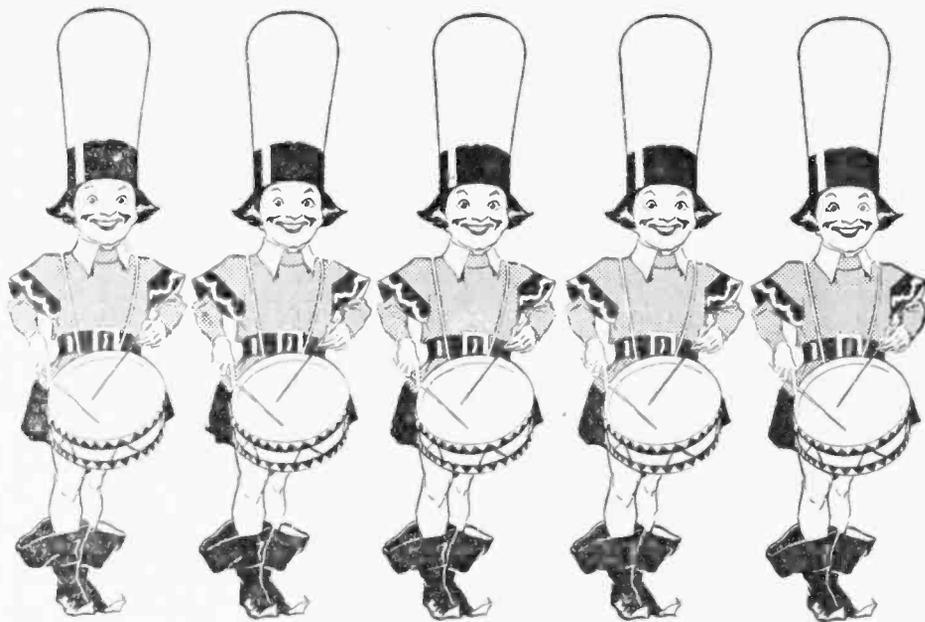
6WF Opens Under A.B.C.

THE inaugural programme of 6WF under the A.B.C. was given on September 2: announced by Mr. Basil Kirke—who, incidentally, is continuing as Uncle Bas in Western Australia with a certain Aunty Max. Sir Benjamin Fuller was there in person to open the station on behalf of the directors of the Australian Broadcasting Company, and Mr. W. R. Roberts, Deputy Director of Posts and Telegraphs, represented the Government. The well-known "Opera Star" Quartette, Madame Lillian Gibson, Rene Maxwell, Alfred Cunningham, and Charles Nicls. were on the opening programme, which included the Ambassadors Orchestra, Silata Kalmikoff (cellist), Billy Edwards and Percy Hill (comedian), the Hawaiian Trio, Lionel Carter (basso), the A.B.C. Dance Band, Reuben Betts (personality singer), and Charles Court (cornetist). This programme, the best heard in Western Australia for quite a long while, was marred by faulty transmission. It is understood that the P.M.G.'s Department's mechanics are now at work on the station's transmitting apparatus.

The Royal Show

FOR the benefit of country listeners, a special talk will be given from 3LO on September 17 by Mr. R. Crowe, who will discuss the Royal Show. Everyone is agreed that this is the event of the year for "The Man on the Land," and while it is possible for many hundreds of farmers to pay their annual visit to the show, many thousands are debarred from this pleasure, and the entertaining and instructive talk prepared by Mr. Crowe will be greatly appreciated.

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FIRST OUTDOOR MODEL PLANE

Below is described the "Outdoor Twin Pusher," the first large size model 'plane in WIRELESS WEEKLY. Men and boys of all ages can gain much entertainment and instruction from flying it.

THE outdoor twin pusher is the 'plane that marks the climax of every model builder's career. It's the type boys and girls will fly in outdoor contests.

This 'plane is much larger than any indoor model. It requires no more care in workmanship, but it takes a lot more time. It requires more material and a greater expenditure. But it's worth every bit of extra time and money. What indoor ship has ever been known to fly for ten minutes? The outdoor twin pusher holds the world's record of 10 minutes and 14 seconds. Flights of over four minutes are common.

The kit for this 'plane, obtainable by sending to the Boy Scouts Association Shop, 258 George Street, Sydney, contains, in addition to all the metal parts, wood, bamboo, wire, two 8-strand rubber motors and 13 finished balsa ribs for the wing.

If you do not buy the kit, you'll want the following materials:—

- 2 balsa blocks, 15-16 by 1 1/4 by 10 1/2 inches long for propellers.
- 2 balsa strips, 5-32 by 3-8, by 40 inches for the frame.
- 2 balsa spars 1-8 by 5-16 by 17 7-8 inches for the wings.

- 2 balsa strips 3-8 by 3-8 by 17 inches for the leading edge.
- 1 balsa strip 1-16 by 1 3/4 by 36 inches for the ribs.
- 3 pieces of bamboo 1-16 by 1-4 by 15 inches.
- 2 pieces of bamboo 1-16 by 1-4 by 12 inches.
- 3 sheets of celero tissue for covering.
- 2 small 1-16 inch brads for thrust bearings.

- 1 piece of No. 10 music wire, two feet long.
- 1 piece of No. 15 music wire, one foot long.
- 4 hard brass washers, outside diameter 1-4 inch, inside diameter .040 inch.
- 1 one-ounce bottle of A.C. adhesive (cement).
- 1 ounce of Double A dope.

You'll need the same tools you used on the indoor models: A sharp knife, a small block 'plane, a pair of round-nosed pliers, and some fine sandpaper.

Before you begin, study the drawings; and plan to follow them at every step in the road.

Start with the wing. The wing used in the twin pusher is built up. It is covered top and bottom with tissue, and has a spar and rib structure inside. The wing's cross section is called an "airfoil."

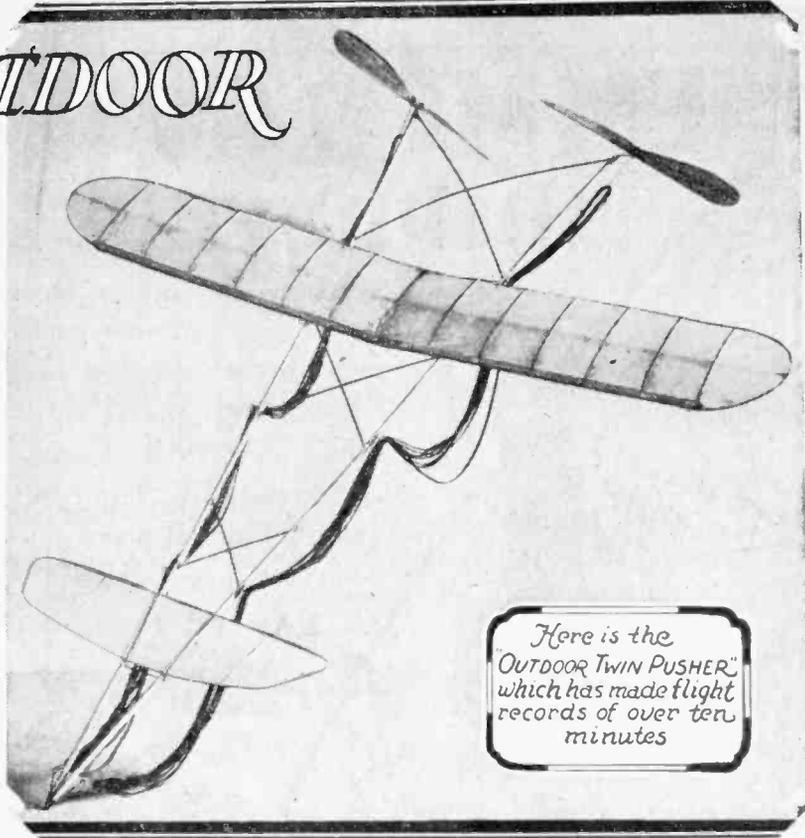
Examine the full-size wing section drawing. The upper section, marked A, is called the Clark Y airfoil.

Thirteen finished ribs, similar to A, are furnished in the kit. If you prefer to make your own, you can cut a sheet-brass template—or pattern—using the section drawing as a model. With this brass template, you can cut the ribs from 1-16 inch flat balsa.

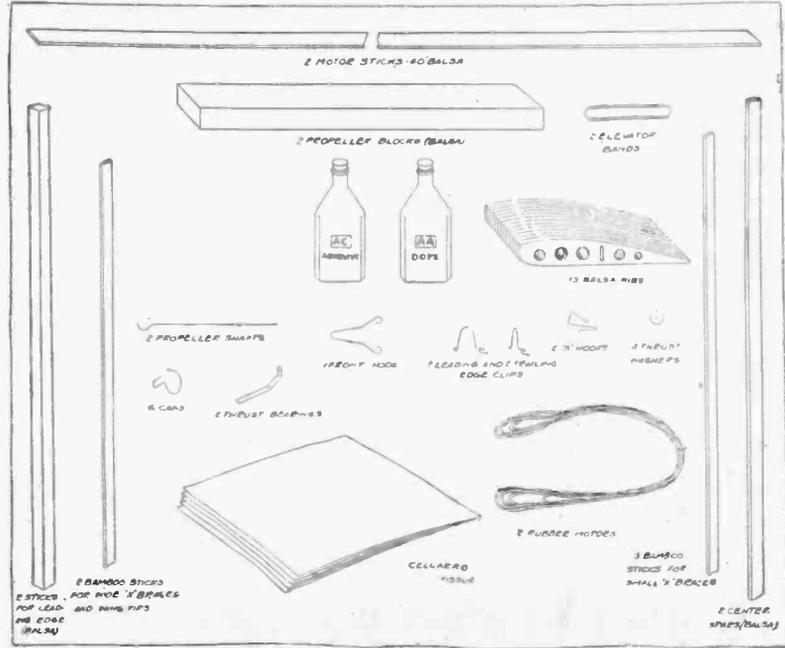
The slot for the spar may vary in size. The drawing calls for 3-64 by 1-4, which is just right for the contest 'plane, but beginners should use a larger spar. For the Clark Y, this should be 1-8 by 5-16.

Instead of cutting the holes and the slot in your brass template, just punch a phonograph needle through the template to locate the centre of each hole, and two holes to locate the ends of your slot. The purpose of the holes is to lighten your ribs.

There's just one part of the wing section that the template doesn't provide for. That's the leading edge. Notice the shaded part in the wing section drawing? It's just a quarter of an inch deep. This shaded part is a cross section of the leading edge, which is a solid



Here is the "OUTDOOR TWIN PUSHER" which has made flight records of over ten minutes



All the parts you will require for the "Outdoor Pusher" are obtainable at the Boy Scouts' Shop, 258 George Street.

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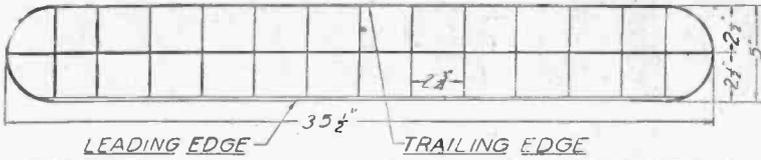
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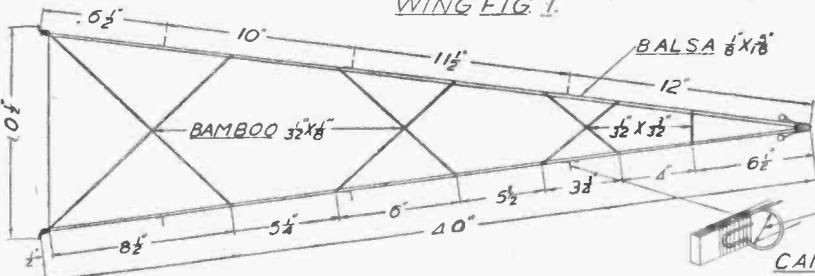
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OUTDOOR TWIN PUSHER.



WING FIG. 1.



FRAME FIG. 2.

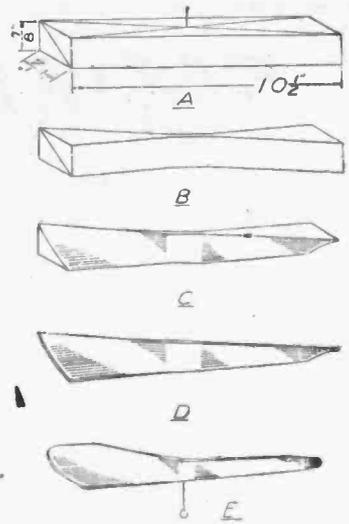


FIG. 6.

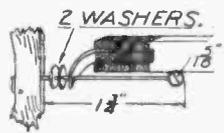


FIG. 3.

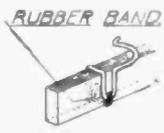
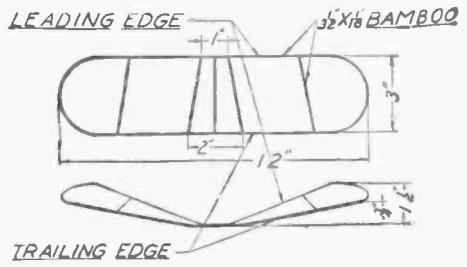


FIG. 4.



ELEVATOR FIG. 5.

Keep one eye on this drawing while you build the outdoor twin pusher described in the accompanying article. The drawing is your best guide—the text only helps make it clear. Get the picture in your mind, check your dimensions carefully, and then go ahead. Care does it.

balsa beam extending along the entire front of the wing.

The front of the wing, as you know, is called the leading edge, and the rear, the trailing edge. To shape the leading edge, you'll need another brass template, the exact shape and size of the "leading edge template," opposite the drawing of the wing section.

You'll need two leading edges—one for each half of the wing. Each is made from a piece of balsa 3-8 inch square and 16 1-4 inches long. You can rough out the curve along the entire length of the beam with your knife, and finish it by scraping with the brass template. Be careful not to let the template twist in your hand, or it will gouge the beam.

When your leading edges and your ribs are finished, you're ready to construct your tips. The drawing shows round tips, but you may pattern them any shape you wish. Since the tips are less easy to cover than other parts of the wing, many boys let their end ribs act as tips, which gives the wing a square tip.

If you decide on the round type, which is the most efficient, bend your tips from bamboo, 15 inches long and 1-16 inch square. Heat your bamboo over an open flame—taking care that it doesn't char—and bend it gently to the correct shape. When it cools it will hold this shape.

Now you have one tip, 1-16 inch square. Split it carefully along its entire length, and you'll have your two tips; exactly the same shape.

Your trailing edge is bamboo, 1-64 by 3-64 inch, extending from one wing tip to another. When it is in place, the flat side is up and the thin edges are to the front and rear.

Your first step, in assembling the wing, is

to taper the end of the leading edge to fit your wing tip. See the lower drawing in Fig. 1. Notice that all the tapering is done on top to leave the bottom flat. After tapering, groove the leading edge to receive the wing tip.

Your centre spar, which is simply a straight piece of balsa 17 1/2 inches long by 1-8 thick by 5-16 wide, should also be tapered down to the point where it meets the wing tip. You'll need two such centre spars—one for each half of the wing.

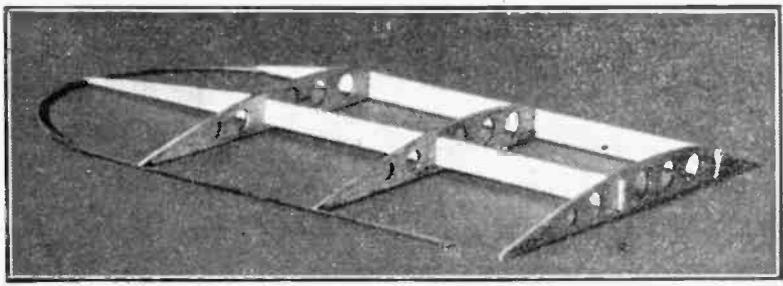
Now mark the position of your ribs on the leading edge 2 1/2 inches apart. Cut shallow grooves into the flat side of the leading edge at each of these marks to receive the ends of the ribs. The grooves should be just the width of the ribs and about 1-64 inch deep.

Next, slide the ribs on to the centre spar, and fit them into the grooves in the leading edge. At this point, check up the wing for trueness by laying it on a flat table top. Make sure that every rib touches the table along

its entire length. If it doesn't, you'll want to enlarge the slot in the rib that's out of line, to allow the spar a bit of play. After you're sure that the wing is perfectly flat, and that your ribs are at right angles to the spar, cement the ribs in place on the leading edge and centre spar.

When you've made your other half of the wing up to this point, you're ready to assemble the two. First, though, take a look at the bottom drawing in Fig. 1. The two halves, you'll see, slant downward to the middle, to form what is called the dihedral angle. To get this angle, place a block 1 1/2 inches square and six inches long under each tip, so that the leading edge beams overlap—one in front of the other—about 1-8-inch. This will permit you to cut down through both beams at the same time with a razor blade. In this manner, you'll get a perfectly-fitting butt joint at the middle, both for the leading edge beams and the centre spars.

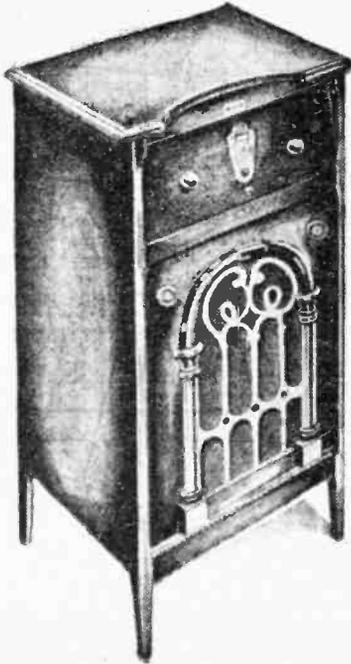
Now slip your centre rib (the thirteenth



This picture shows the inside construction of the wing at the tip. Notice how the bamboo tip extends around to the rear to form the trailing edge of the wing. Note how the spar—the centre strip of balsa—is tapered down to the bamboo tip. Careful study of this photo will make clear the entire wing construction.

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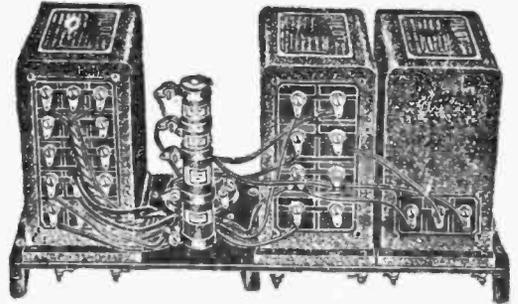
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(b) into place and cement all joints. Leave the wing on the blocks for an hour or so, until the cement is perfectly dry.

Next join your trailing edge of bamboo to your wing tips, with cement. Take a few turns of silk thread around each joint, and cement again. That completes the frame of the wing.

Cover your wing with celloero tissue, a half at a time. Paint the centre rib with oil, lay on the paper, and then work outward toward the tip, covering the top only. Stretch your paper from front to rear, rather than sideways, to avoid a hammock effect between ribs. When the top is covered, fold the overlapping paper over, and cover the bottom.

Dope your wing with two coats of Double A. This will glaze and shrink your paper in place.

The A-shaped frame, shown in Fig. 2, is made of two balsa beams, cemented together to form a large A. For a light model, these beams may be 1-8 by 1-4, but for your first ships, use beams 1-8 by 5-16, to avoid cracking up your plane.

The cross braces are made entirely of bamboo, the size shown in the drawing. Study Fig. 2. At each point where a cross brace meets the beam, you must cut a slit in the beam with your sharp knife point. Insert your bamboo braces—all of them—allowing the ends to stick through the beam. Then adjust the beams so that the ends are just

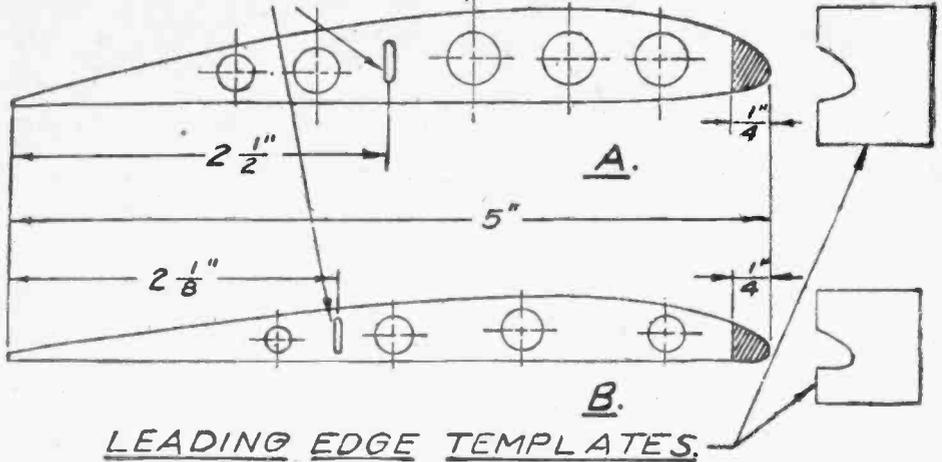
10¹/₈ inches apart. Cement all joints, and when the frame is dry, cut off each cross brace flush with the beam. Bind the centre of each X with thread, and cement with A.C. adhesive.

At the left end of each beam, Fig. 2, you'll notice a thrust bearing, shown in detail in Fig. 3. These are 3-16 inch flattened brads, drilled with a small hole, and bent so that the hole will be just 3-8 inch above the beam.

Bind the bearings on the ends of the beams, and coat with cement.

The six cans, or hooks, along the side of the frame prevent the frame from bending and breaking under the strain of the rubber. These cans are bent from No. 10 music wire, and their shape is clearly shown in the drawing just below the right end of Fig. 2.

SLOT FOR SPAR $\frac{3}{8}'' \times \frac{1}{4}''$



Here's your wing section. Most beginners use the thicker one, marked A. Put it out, paste it on brass, and cut out a brass template, or pattern. Mark the centre of each hole and the ends of the slot by punching a phonograph needle through the brass. Then you can construct each of the ribs for your wing exactly the same.

REVIEWING THE STROMBERG-CARLSON A31

Continuing the series on modern A.C. Receivers

By ROSS A. HULL

WE have some very good reasons for believing that our aim in writing these reviews has been misunderstood. Recently, we said that a receiver was "a sanely, engineer and highly satisfactory outfit," and we were afterwards accused of being "luke-warm" in reviewing the set. The trouble apparently is that we failed to give advance notice that we were not to do "write-ups" of receivers in the conventional manner, but that we planned to be as straightforward and sincere as our nature permitted. This intention still holds good. We do not believe that any useful purpose would be served if we made each review a splatter of carelessly-used superlatives. After all, a receiver that is well built and possessed of all the desirable features is merely excellent, and the use of more elaborate and more sweeping terminology surely could not be interpreted by the normal reader as anything but pure puerility.

And so (to get down to brass tacks) when we say that we believe the Stromberg-Carlson A31 to be a well-designed and splendidly-built receiver capable of giving good service to the listener whose interest is not, distance hunting we mean just that.

MECHANICAL AND ELECTRICAL DESIGN

The receiver is built around four valves—a full-wave rectifier tube associated with the power supply unit and a detector and two audio frequency valves in the receiver proper. The receiver is designed for full operation from the a.c. mains, and the detector and first audio frequency valves are therefore of the indirectly heated type. In accordance with modern practice, the foundation of the complete receiver is of heavy pressed metal, almost all of the wiring being carried beneath it. Since the valve sockets and most

of the other components are so arranged that their terminals emerge on the underside of the base, a very neat internal appearance is preserved.

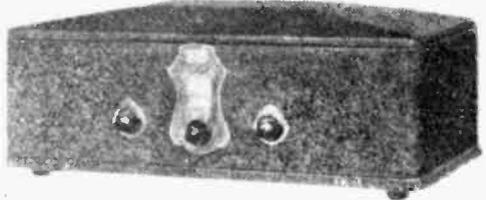
The power supply equipment is all contained in a plain box-like metal container. Judging from the small size of the unit it would seem that considerable care has been taken in the design and arrangement of the apparatus included in it. At the opposite end of the chassis are the two audio frequency transformers and their associate equipment, and located in their neighborhood are the shielded coil unit and the detector. The main tuning condenser, driven from a geared vernier dial, is of the standard Stromberg-Carlson pattern, of which the careful engineering and solid construction are features already well known to most enthusiasts. The usual miniature lamp is provided for the illumination of the dial. Regeneration control is obtained by means of a midjet condenser and the circuits are so adjusted that one setting of this control serves quite well over the entire band.

EXTERIOR APPEARANCE

The chassis of the receiver is contained in a metal box, as is the vogue, having a "baked" bronze-gold finish. Openings are provided at the rear for the aerial and speaker terminals, and also for ventilation. The escutcheon plates on the box front, as can be seen from the illustration, are of pleasing appearance. The main tuning control is, of course, the large knob located midway between the regeneration control and the power switch.

OPERATION

It is quite possible that our aerial was much



smaller than that specified in the manufacturer's instruction booklet (it being about 30 feet long and 10 feet high). Nevertheless, we were able to drive a moving-coil speaker at what could be described as full volume from all the local stations without having to push the regeneration control to the point where distortion became evident. The regeneration control is, of course, styled "volume control" on the receiver, and in this role it served splendidly. Any of the stations could be dropped to a low volume by decreasing the control to its minimum setting. With our small aerial the receiver could be made to oscillate very readily, as might be expected, and we agree with the manufacturers that owners of such receivers should avoid operating them in an oscillating condition.

Even when feeding a moving-coil speaker—highly sensitive to the low frequencies—the hum from the receiver was of a low value. With a magnetic type of speaker it was hardly detectable at distances greater than a couple of feet. Considering the relatively low-powered output valve used in the particular set examined by us, the musical quality was of a high order.

The design of this thoroughly well built and highly finished receiver was influenced in some respects by the work of the engineers of the world-known Stromberg-Carlson Co., at Rochester, New York State. With the exception of the grid leak and the valves, however, the entire apparatus was built locally.

'AND ITS PRICE IS ONLY



10

and it is 100p.c. British

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NAME

ADDRESS

The Modern Super-Heterodyne

Curves Ahead

The Experimenters Department of Technical Progress... Conducted by Ross. A. Hull M. I. R. E.

FOR many years the super-heterodyne has been considered as providing greater sensitivity in a more practical manner than any other type of receiver. Wherever a set was required to give extremely high radio frequency amplification with reasonable ease of control and good selectivity characteristics, advantage usually was taken of the super-heterodyne principle.

Prior to the development of the neutrodyne type of receiver, the super-heterodyne idea certainly constituted the only practical means of attaining a high degree of radio frequency gain. With the development of the neutrodyne and other stabilised straight radio frequency amplifier receivers, interest in the super waned for some years, for it was found that satisfactory sensitivity and selectivity could be had without recourse to the various complications inherent in the double-detection system. Then the birth of the practical screen-grid valve, making possible a practical uncentralised radio frequency amplifier of enormous gain, resulted in still less interest in the super.

More recently, however, it has been realised that the straight radio frequency amplifier with screen-grid valves is not the simple, straightforward affair that it might appear at first sight. Splendid

radio frequency amplification is possible with two or three stages of amplification, but considerable difficulties must first be overcome in the mechanical design of the shielding and in the general arrangement of the receiver. Up to the present time it has rarely been possible for the home set-builder to obtain a genuine performance from two or more screen-grid valves in a straight radio frequency amplifier, chiefly on account of the problems which have to be met in shielding, wiring, and in the precise adjustment of ganged tuning condensers. In short, the new valves are not, in themselves, the solution to the quite old problem of getting the greatest useful radio-frequency amplification without unduly complicated apparatus or unreasonable tuning difficulties.

It really could be considered that the screen-grid valve is a greater contribution to the super-heterodyne than to the straight radio frequency amplifier type of receiver. In the intermediate amplifier of the super, the screen-grid valves probably could be operated to give more nearly their maximum performance on account of the lower frequency at which they operate and because of the possibility of a permanently low order of tuning capacity across the inter-valve coupling devices. In addition to this, a satisfactory degree of selectivity—with a flat-topped characteristic in the intermediate amplifier—could certainly be attained without the same complications found necessary in the other type of set.

One of the most serious troubles with the old type of super-heterodyne—in which a low intermediate frequency was employed to permit maximum radio frequency gain—was that the receiver responded to two bands of frequencies. If, for instance, the intermediate frequency was 30 kilocycles and the oscillator was tuned to 1000 kilocycles signals would not only be produced by a transmitter

on or near 1030 k.c., but also by any transmitter on or near 970 k.c. Further, with the first detector tuned to any one station, the station could be received at two points on the oscillator dial 60 k.c. apart.

A partial solution of this problem was the use of a relatively high intermediate frequency for which the two oscillator settings would be so far apart that one of them would be off the broadcast band at all times. This, of course, somewhat defeated the original idea of providing a high gain in the intermediate amplifier by using a low frequency, but nevertheless it was an advance. Interference from any signals on the second frequency still was possible when the first detector was not preceded with radio frequency amplification and it was not until the neutrodyne straight radio frequency amplifier was combined with

the two detectors and the intermediate amplifier of the super-heterodyne that the double spot trouble was entirely overcome.

The marked success of one particular commercial receiver of the latter type leads one to conclude that the same general arrangement, but employing screen-grid valves throughout, would permit a particularly brilliant performance. The soundness of this conclusion, indeed, has been made evident by preliminary work which has been done on the design

of a full a.c. operated super employing screen-grid valves for all radio frequency amplifiers and the two detectors.

Many quite difficult design problems have come up in the course of the work, but it is hoped that further refinement and development will result in a highly practical receiver suited for duplication by the home-builder anxious to have an a.c. receiver capable of relatively limitless radio frequency gain, the optimum selectivity and a splendid audio frequency response characteristic.

Increasing use of screen-grid valve

THOUGH the screen-grid valve has been used experimentally for some considerable time, it is only recently that its possibilities have been exploited in commercially manufactured receivers.

It would now appear, however, as if the screen-grid tube is on the verge of quite general adoption, not only for radio frequency amplification, but also for detection and audio frequency amplification. In other words, it would seem that the "screen-gridder" is to be the general purpose valve of the future.

Commenting on this trend of development, "Radio Broadcast" says in part:—

The fact that the screen-grid tube is the tube par excellence for radio-frequency sockets, and that it can be used as a detector, coupled with the general use of single-stage a.f. amplifiers, leads us to wonder if the a.c.

screen-grid tube will not become the general-purpose tube of the future.

As a detector of the C-bias type, the 322-type tube is about three times as sensitive as the 327-type tube, and the 324 is about ten times as sensitive as the familiar heater-type three-element tubes now employed in the detector socket of all a.c. receivers. Data now at hand indicate that an audio-frequency output of sufficient voltage to load up a 171 or 245 type tube may be obtained with an r.f. input of from 2 to 3 volts.

Now let us look at this rather critically. Such a tube will have to be coupled to the grid of the following tube either through a resistance or a choke because of its own very high plate resistance. A 500-henry choke or a 200,000-ohm resistor could be used, but the latter would make it necessary to supply more voltage to the ground end of the coupling resistor than is used in the power tubes—which we shall assume will be the 245 type, for it appears to be the power tube for nearly all home receivers.

It looks then, as though the screen-grid detector must be coupled to the following power tube through a fairly low-resistance high-inductance choke of low distributed capacity. If shunted by a 250,000-ohm resistor and by a capacity of not over 100 mmfd., a 500-henry choke would provide a characteristic as good as many of the best a.f. amplifiers now being put into commercial radio receivers.

The disadvantage of resistance or choke coupling would be the fact that a push-pull amplifier could not be used, and it seems to be the tendency at the present time to make the final stage push-pull. If then another a.f. stage were inserted between the screen-grid detector and the power tube, a lot of a.f. gain would have to be thrown away in order to enjoy the advantage of push-pull, namely, freedom from hum on a.c. operation, cheapness of output transformer, and freedom from overloading difficulties.

With one or two screen-grid tubes as r.f. amplifiers, a screen-grid detector, and a power tube, with pre-selecting ahead of the r.f. amplifier, we ought to have a pretty economical set to build, operate, and keep in order.

In an early issue of WIRELESS WEEKLY constructional details for a modern super heterodyne will be described. This will be the first super-het. to have been published for more than two years, during which the famous old circuit has been revolutionised. Next week Mr. Hull will further discuss the super-heterodyne.



Filament Bead Fire.—Fire and British General Electric filaments have no interest in each other. A 500 watt Osram lamp gas-filled, went through a big fire at Dobbie and Co., Perth, recently. As shown in the photograph it was twisted into all shapes, and the glass smashed; but the filament remained intact.



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Inductance and Kinetic Energy

WE have already seen that a current of electricity flowing along a conductor causes the surrounding ether to be subjected to a magnetic strain; in other words, the conductor is surrounded by magnetic lines of force in concentric circles.

There is a converse effect which we shall now proceed to study.

If a wire is surrounded by ether in a magnetic state of strain, and that magnetic strain suddenly changes in value, electrons will flow along the wire, and one end of it will momentarily be at a higher electrical potential than the other end.

A wire surrounded by magnetic lines of force, if placed in a magnetic field, is said to be "interlinked" with the magnetic lines, so that we can describe the phenomena in this way:—"If a wire is interlinked with a magnetic field, and the number of magnetic lines interlinked with the wire changes, a momentary potential difference is set up between the two ends of the wire."

For example suppose the conductor AB (Fig. 1) is moved upwards and downwards. Whenever it is moved, the lines of force linked by the whole circuit will be varied, an e.m.f. will be set up in it, and current will flow. This is the principle of the alternator.

The current is termed an "Induced current," and the action occurring is called "Induction."

If the conductor is moved downwards, it will be found that current will flow from B to A. If upwards, the flow of current will be from A towards B.

There are four methods of producing induced e.m.f.'s. These are as follows:—

- (1) Stationary flux and moving conductor.
- (2) Moving flux and stationary conductor.
- (3) Variable flux and stationary conductor.
- (4) Variable flux and moving conductor.

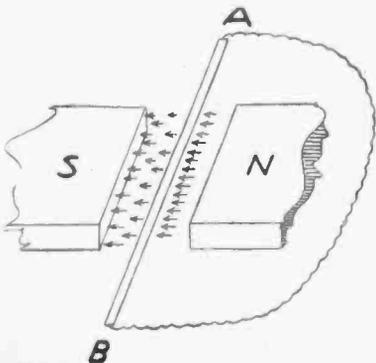
Practically all cases where an e.m.f. is induced by a conductor being cut by lines of force will fall under one of the above classifications.

The magnitude of the e.m.f. induced depends on the rate of cutting lines of force, i.e., the greater the number of lines cut by a conductor in a given time, the greater will be the e.m.f. induced in the conductor.

It is evident from the above that there are several factors, each of which will assist in determining the value of the e.m.f. induced. These are:—

(1) Speed with which the conductor moves through flux or with which flux moves past conductor. The greater the relative rate of movement of the conductor and magnetic field with respect to one another, the greater the induced e.m.f.

(2) Strength of the field through which the conductor cuts. A greater e.m.f. will be



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induced in a conductor in a given time, through a strong field than through a weak one.

(3) Angle of direction of conductor with respect to direction of field.

If a conductor, being moved at a uniform speed, cuts through the lines of flux at right angles to the lines, the rate of cutting of lines of force linked will be greater than if it cuts through them at any less angle. Hence the maximum e.m.f. is generated when the conductor cuts a given field at right angles.

(4) Length of conductor which cuts lines. The longer the conductor being moved in a field, the more lines it will cut per second, provided, of course, that the cutting conductor always lies wholly within the field.

Faraday's Law for finding the voltage induced in a circuit is:—

$$\text{E.M.F. (volts) induced, equals—} \\ \frac{10 \text{ to the 8th power} \times \text{time in seconds.}}{\text{change of flux}}$$

Here is an example. If the flux between the N and S pole faces of Fig. 1 is 800,000,000 lines, and the conductor is moved through this field in 1.5 seconds, what e.m.f. is induced in the conductor?

$$\begin{aligned} \text{E equals:—} \\ \frac{\text{change of flux}}{10 \text{ to the 8th power} \times \text{t.}} \\ \text{equals} \\ \frac{8}{1.5} \\ \text{equals 5.3 volts.} \end{aligned}$$

Work this one out yourself, then check your answer. If the flux between the two pole faces was 16,000,000 lines, and the conductor was moved through this field in 1-8 of a second, what would be the e.m.f. induced? Give answer in decimals.

Your answer should be 1.28 volts. If a coil is moved through a uniform field, the total e.m.f. induced in each turn will assist in forcing current round the circuit. Thus the e.m.f. induced in a coil of "N" turns, moving through a field after "t" seconds, will be:—

$$\frac{\text{change of flux} \times \text{N}}{\text{t} \times 10 \text{ to the 8th power.}}$$

"t" usually represents time in seconds, and N invariably represents number (not necessarily number of turns—just "number.")

See if you can work out this sum. The answer is appended:—

If a coil of 400 turns be moved through a field of 100,000 lines in one second, find the e.m.f. induced in the coil.

The answer is .4 volts.

When a conductor is cut by its own lines of force, i.e., when the lines of force associated with its current vary in number due to the current changing its strength, an e.m.f. will be induced in the conductor. This is termed "Self induction."

Under any circumstances there are only two cases to be considered:—

(1) When the current is increasing.

(2) When the current is decreasing.

Consider a D.C. circuit, or portion of it, consisting of a single conductor, and let the current be switched on.

A short interval of time will elapse before the current attains its maximum and steady value—just as, with all bodies, it takes time to produce speed in them.

In this interval of time in which the current and the lines of force are increasing in magnitude, the conductor will be cut by all the lines of force as they emanate from the centre of the conductor, and expand in the form of concentric circles in and around it. Thus the conductor will be cut at every instant in this space of time by an increasing number of lines of force, and an e.m.f. (varying in value from one instant to another), will be induced in it. This e.m.f. is termed the e.m.f. of Self Induction. The induced e.m.f. acts in opposition to the e.m.f. applied to the circuit, and thus delays the growth of the current. When the current reaches its maximum steady value, the lines of force cease to increase, and lie steadily round the conductor, cutting it no longer; hence there will be no e.m.f. induced whilst the current is steady.

When the circuit is broken, the current and the attendant lines of force take time to fall to zero value.

The circuit is cut by decreasing lines of force as they collapse inwards, and an induced e.m.f. appears again. The effect of the induced e.m.f. on a circuit whose current and applied e.m.f. is decreasing, is to endeavor to keep the original current flowing.

In consequence, a spark will appear where the circuit is broken; this represents the endeavor of the original current to continue. The induced e.m.f., together with the applied e.m.f., act across the break or gap in the circuit, overcome the resistance of the air gap, and cause a current in the form of a spark, i.e., a "convection current," to flow across it. It lasts until the current, flux, and induced e.m.f. have died away.

It must be thoroughly understood, that the effect of self induction only occurs when the current is increasing or decreasing, and when the current is changing, the effect of self induction must always be present.

The effects just described remind us exactly of those with which we are familiar in the starting of a body from rest, and in its change of motion. It would be useless for a man to kick his motor car in an endeavor to start its motion on level ground. He would have to push steadily until its "inertia" or disinclination to move had been overcome. Once under way, movement would be easier. When the same man wished to stop his motor car with the same force (i.e. without the brakes) he would have to pull or push against it just as hard as he did to start it, or more simply, he expends its "kinetic" energy, i.e., the energy it possesses on account of its motion, in the form of man-power, or in the event of brakes, in the form of heat generated by the friction of the brakes.

Local Programmes, Friday, September 13

2FC

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 412 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
- 7.3: This morning's news from the "Sydney Morning Herald."
- 7.8: Austradio musical reproduction.
- 7.45: Mails and shipping.
- 7.48: What's on to-day?
- 7.50: Children's birthday calls.
- 8.0: Music from the studio.
- 8.15: Close.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
- 10.32: To-morrow's sporting events by Oscar Lind.
- 10.45: Recital on the Grand Organ by Horace Weber.
- 11.0: Household Helps: Cooking by Miss Ruth Furst.
- 11.10: Cables—A.P.A. and "Sun"—"Herald" news service. British official wireless press.
- 11.15: Morning devotion.
- 11.30: Austradio musical reproduction.
- 12.0: "Big Ben," Stock Exchange and metal quotations.
- 12.5: Illustrated music lecture.
- 12.20: Middyday weather forecast and weather synopsis. Special produce market session for the man on the land supplied by the State Marketing Board.
- 12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch to music with the National Broadcasting Orchestra.
- 2.0: Stock Exchange, second call.
- 2.2: A glance at the afternoon "Sun" and News.
- 2.7: Popular Education. W. S. Reay.
- 2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: The 2FC Instrumental Trio.
- 2.42: Peggy Dunbar, contralto—
- (a) "Eleanore" (Mallinson).
- (b) "Little Holes in Heaven" (Hope).
- 2.49: Rhys Kemmis, violinist—
- (a) "Zigeunertanze" (Nachez).
- (b) "Deep River" (Old Negro Melody) (Elman).
- 2.56: Herbert Cosgrove and Etta Field, vocal duets—

- (a) "Nocturne Duet" (Chaminade).
- (b) "Coolan Du" (Leonie).
- (c) "At Dawning" (Cadman), Etta Field.
- 3.4: The 2FC Instrumental Trio.
- 3.16: Gertrude Gray, soprano—
- (a) "Now Sleeps the Crimson Petal" (Quilter).
- (b) "Sylvan" (Landon Ronald).

- 3.23: Rhys Kemmis, violinist—
- (a) "Orientale" (Cui).
- (b) "Saltarelle" (Harrhy), by special permission of the composer.
- 3.30: Peggy Dunbar, contralto—
- (a) "Cradle Me Low" (Brahe).
- (b) "Mellsande in the Wood" (Goetz).
- (c) "The Wind" (Bantock).
- 3.37: The 2FC Instrumental Trio.
- 3.49: Herbert Cosgrove and Etta Field, vocal duets—

- (a) "Chalita Duet" (Scherzinger).
- (b) "Dear Love of Mine" (Thomas).
- (c) "The Roadside Fire" (Williams).
- (d) "Darkness" (Stance).
- (e) "Awake" (Pelissier).
- 3.57: "Redgum" will give a talk on Gardening.
- 4.12: Gertrude Gray, soprano—
- (a) "I Will Not Grieve" (Schumann).
- (b) "Swing Low, Sweet Chariot" (Burleigh), Negro Spiritual.

- 4.19: The 2FC Instrumental Trio.
- 4.28: Stock Exchange, third call.
- 4.30: Close.

EARLY EVENING SESSION—5.45 to 7.55.

- 5.45: Kiddies' "Goodnight" stories told by the "Hello Man," assisted by the Farmyard Five.
- 6.45: The National Broadcasting Orchestra will play dinner music.
- 7.30: A.B.C. sporting service.
- 7.37: Special country session. Stock Exchange resume. Markets. Weather forecast. Late news service. Truck bookings.
- 7.58: To-night's programme.

THE EVENING PRESENTATION—8 to 11.30

2FC's programme to-night features the Melbourne relay, which commences at 9.15. After opening with a programme of organ music from the Aeolian Hall, followed by numbers by the Arcadians Male Quartette and harp solos, we cross to the southern State, when our listeners will have an opportunity of hearing 3LO's programme until 10.15.

2BL offers song groups from Clifford Lathlean, Lance Jeffree, and duets by Dulcie Starkey and Ivy Dunstan. Musical monologues by Margaret Kerr. Instrumental relief will be supplied by the National Broadcasting Orchestra.

8.0: From the Aeolian Hall: An Organ Recital by Herbert Michael, at the Aeolian Residence Pipe Organ—

Grand March from "Aida" (Verdi).
Interpreted by the Aeolian Organ Guild.
"Somewhere a Voice is Calling" (Tate).
Interpreted by the Aeolian Organ Guild
"Toccata and Fugue in D Minor" (Bach)
Organ Solo, Pietro Yon—
"Lost Chord" (Sullivan).

Interpreted by the Aeolian Organ Guild
"Kashmiri Song" (Woodford-Finden).
Interpreted by the Aeolian Organ Guild
8.30: From the Studio: The Arcadians Male Quartette—

(a) "Ise G'wine Back to Dixie" (White).
(b) "Geneve".
(c) "The Rosary" (Atkins).

8.40: A talkie short.
8.50: Signor Butta, harp solos—
"Souvenir de Baden Baden" (Bousquet)
(Valse Brillante).

8.57: The Country Man's Weather session:
(a) New South Wales Forecasts.
(b) Inter-State Weather Synopses.

8.58: The Arcadians Male Quartette—
(a) "Ye Banks and Braes" (arr. Fletcher).

- (b) "Old Uncle Moon" (White).
- (c) "Aloha Oe."
- 9.8: Signor Butta, harp solos—
"Toselli's Serenata" (arr. Butta).

- 9.15: A Relay from 3LO, Melbourne.
- 10.15: From the Studio: Announcements.

Late Official Weather Forecast.
10.20: From the Oriental Cafe: Sydney Simpson's Syncopaters in dance music.
11.30: Close. National Anthem.

2BL

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 353 Metres).

OPENING SESSION, 8.15 a.m. to 11 a.m.

- 8.15: G.P.O. chimes. Music for every mood
- 8.45: Meteorological data for the country.
- 8.50: Austradio musical reproduction
- 9.30: British official wireless news.
- 9.35: New music.
- 10.5: News from the "Sydney Morning Herald."

10.10: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.

10.30: Austradio musical reproduction.
10.45: This morning's story.
11.0: G.P.O. chimes. Close.

MIDDAY SESSION, 12 Noon to 2.30 p.m.

- 12.0: G.P.O. chimes. Announcements.
- 12.2: The National Broadcasting Orchestra
- 1.0: Afternoon news from the "Evening News" and "The Sun."
- 1.5: Studio music.
- 1.15: Women's "interest talk." Mrs. Meredith Atkinson, "An Australian in Venice."
- 1.30: Austradio musical reproduction.
- 2.0: J. Knight Barnett at the "Wurlitzer."
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT, 2.30 p.m. to 5.45 p.m.

2.30: Talk on "Architecture," by James Peddle.
2.45: "The Magic Carpet," by Major H Sandford-Morgan, "Minevah-Mosul and the Tomb."

3.0: From the ballroom of the Oriental: Sydney Simpson's Syncopaters in dance music.

3.12: From the studio: Anne Melhuish, soprano.

(a) "The Bee" (Lehmann).
(b) "Lovers in the Lane" (Lehmann).

3.19: The melody of the moment.
3.22: From the ballroom of the Oriental: Sydney Simpson's Syncopaters, in dance music.

3.32: From the studio. Dismal Desmond, comedian.
"The Postman" (Gibson).

3.40: A dance number.
3.42: From the ballroom of the Oriental: Sydney Simpson's Syncopaters, in dance music.

3.52: From the studio. Heather Jones, popular vocalist.
(a) "She's Funny That Way" (Moret).
(b) "Sunshine" (Berlin).

3.59: Popular music.
4.2: From the ballroom of the Oriental: Sydney Simpson's Syncopaters in dance music.

4.12: From the studio. Anne Melhuish, soprano.
(a) "A Coon Lullaby" (Montague Phillips).
(b) "Were I a Moth" (Montague Phillips).

4.19: Dismal Desmond, comedian.
(a) "Old England" (Weston and Lee).
(b) "Counting Mad" (Stark).

4.26: From the ballroom of the Oriental: Sydney Simpson's Syncopaters, in dance music.

4.32: From the studio. Heather Jones, popular vocalist.
(a) "Rainbow Round My Shoulder" (Jolson).

- (b) "Sweeping the Cobwebs Off the Moon."
- 4.39: Melody memories.
- 4.45: "The Trade Hour," demonstration music.

5.45: Weather information. Close.

THE DINNER HOUR, 6.15 p.m. to 7.55 p.m.

6.15: The National Broadcasting Orchestra.
6.45: The A.B.C. Younger Set session; the A.B.C. Boy Scouts' Club, conducted by Mr. Norman Lyons.

7.5: Talk on "Sporting," by Claude Corbett
7.15: The Country Man's market session: Wool, wheat, stock, farm produce, fruit, vegetable, and poultry markets; truck bookings.

7.30: The National Broadcasting Orchestra.
7.45: Austradio musical reproduction.
7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION, 8 p.m. to 10.30 p.m.

2BL offers songs, grave and gay, and light orchestral numbers to-night. 2FC's programme opens with an organ recital, and, after harp solos by Signor Butta and vocal quartet numbers by the Arcadians, 3LO's programme will be relayed at 9.15 p.m.
8 p.m.: G.P.O. chimes. The National Broadcasting Orchestra.

(a) "Windows in Spain" (Kennett).
(b) Trumpet solo, with orchestra. "Ben Bolt" (arr. Louisreudeau).

8.15: Lance Jeffree, tenor.
(a) "Lanski's Aria" (Tschaikowsky).
(b) "On Wings of Song" (Mendelssohn).

8.22: Clifford Lathlean, basso.
(a) "Fair House of Joy" (Quilter).
(b) "Silver" (Armstrong Gibbs).

- (c) "Rolling down to Rio" (German).
- 8.29: G. Vern Barnett, pianoforte solos.
- 8.39: The Songsters, vocal duets

- (a) "Nocturne" (Dorzy).
- (b) Solo, "Swingin' Vine" (Grosvenor).
Miss Dulcie Starkey.

- (c) "When Song is Sweet" (Sans Souci).
- 8.46: The National Broadcasting Orchestra.
"Hiawatha Ballet Suite" (Coleridge-Taylor).

9.0: Margaret Kerr, in a musical monologue.
9.7: Muriel Lang, 'cellist.

9.14: Lance Jeffree, tenor. Four Old English melodies, arranged by Lane Wilson.
1. "The Slighted Swain."

2. "My Lovely Celia."
3. "The Forsaken Maid."

4. "Phyllis Has Such Charming Graces."
9.21: Margaret Kerr, in a musical monologue.

9.28: Clifford Lathlean, basso.
(a) "Swing Low, Sweet Chariot" (arr. Brown).

- (b) "Billy Boy," Sea Chanty (Terry).
- (c) "The Derby Ram" (Hurlstone).

9.35: The National Broadcasting Orchestra
"No, No, Napette" (Youmans).

9.45: V. C. Bell will give a short address.
 10.0: The Songsters, vocal duets.
 (a) "In the Garden of My Heart" (Ball).
 (b) Solo. "A Little Coon's Prayer."
 (Hope). Miss Ivy Dunstane, contralto.
 (c) "Absent" (Metcalfe).
 10.10: The National Broadcasting Orchestra.
 (a) "The Five O'Clock Girl" (Ruby).
 (b) Ballet Music, "Rienzi" (Wagner).
 10.25: Official weather forecast, metropolitan and country; late news from the "Evening News" and "The Sun."
 10.30: Close. National Anthem.

2GB

Theosophical Broadcasting Station, 29 Bligh St., Sydney. (Wavelength, 316 Metres).
 10.0: Music. 10.10: Happiness Talk by A. E. Bennett. 10.20: Music. 10.30: Women's Session by Miss Helen J. Beegling. 11.30: Music. 11.45: Close down. 2.0: Music. 2.5: Women's Radio Service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Music. 3.30: Close down. 5.30: Children's Session by Uncle George. 7.0: Music. 7.30: Feature story. 8.0: Mr. Len Howell, tenor. 8.7: Instrumental Trio. 8.15: Madame Betts-Vincent in an illustrated talk on "The Sonatas of Beethoven." 8.30: Miss Gwen Selva, soprano. 8.40: Humorous Interlude by Mr. Jack Win and Mr. Heath Burdock. 8.45: Symphony Orchestra. 8.50: Mr. Len Howell, tenor. 9.0: Weather report. 9.1: Address. 9.15: Instrumental Trio. 9.20: Miss Gwen Selva, soprano. 9.30: Selections from "Tristan and Isolde." 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting Ltd., Palmer's Building, Ash St., Sydney. (Wavelength, 324 Metres).

MIDDAY SESSION.

12.30: Request numbers. 1.0: G.P.O. clock and chimes; music. 1.15: Talk on Home-craft, by Pandora. 1.40: Music and request numbers. 2.30: Close down. 4.30: Musical programme.

EVENING SESSION.

5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close down. 7.0: G.P.O. clock and chimes. Request numbers. 8.0: Popular songs of the day. 9.0: G.P.O. clock and chimes. Comments on Foreign Affairs by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close down.

2KY

Trades and Labor Council, Goughburn St., Sydney. (Wavelength, 280 Metres).

MORNING SESSION

10.0: Tune in to the ticking of the clock. 10.3: Popular fox-trots. 10.15: Hawaiian steel guitar selections. 10.30: Women's Session. Home Hints and Information, conducted by Mrs. Gray. 11.0: A few laughs. 11.5: pianoforte selections. 11.15: Calls and announcements. 11.20: Musical interlude. 11.30: Request numbers. 11.40: Music and vocal numbers. 11.55: Where to go to-night. 12.0 noon: Closing announcements.

CHILDREN'S SESSION

6.0: Birthday calls, request numbers and kiddies' entertainment, Aunt Jennina and Uncle Bert.

EVENING SESSION

7.0: Musical interlude. 7.5: Birthday calls. 7.15: Sporting Feature. Turf topics. Review of candidates and their prospects for to-morrow. Mr. Geo. A. Davis. 7.40: Request numbers. 8.0: Hawaiian steel guitar selections. 8.15: Women's informative service, Mrs. Gray. 8.30: Music and vocal items from the strata. 9.10: Sporting feature, presented by Tooth and Co. Kent Brewery, from the ring-side of M'Hugh's Leichhardt Stadium. Full description of main 15 rounds fight. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney. (Wavelength, 298 Metres).

EARLY MORNING SESSION

7.15: Breakfast Time Hour orchestral music. 8.30: Weather report. Close down.

MIDDAY SESSION

11.30: Orchestral music and old time selections. 12.30: Close down.

AFTERNOON SESSION

1.0: Vocal and orchestral music. 1.45: Organ recital. 2.0: Announcements. 2.3: Orchestral and vocal items. 2.30: Close.

EVENING SESSION

7.15: Orchestral music. 7.58: Programme announcements. 8.0: Overture, "Il Trovatore" selections. 8.10: Vocal and instrumental concert. 10.15: National Anthem.

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30	3	0	0	9	0
40	5	0	0	11	0
50	7	10	0	12	6
60	10	0	0	15	0
70	12	10	0	17	6
80	15	0	0	20	0
90	17	10	0	22	6
100	20	0	0	25	0
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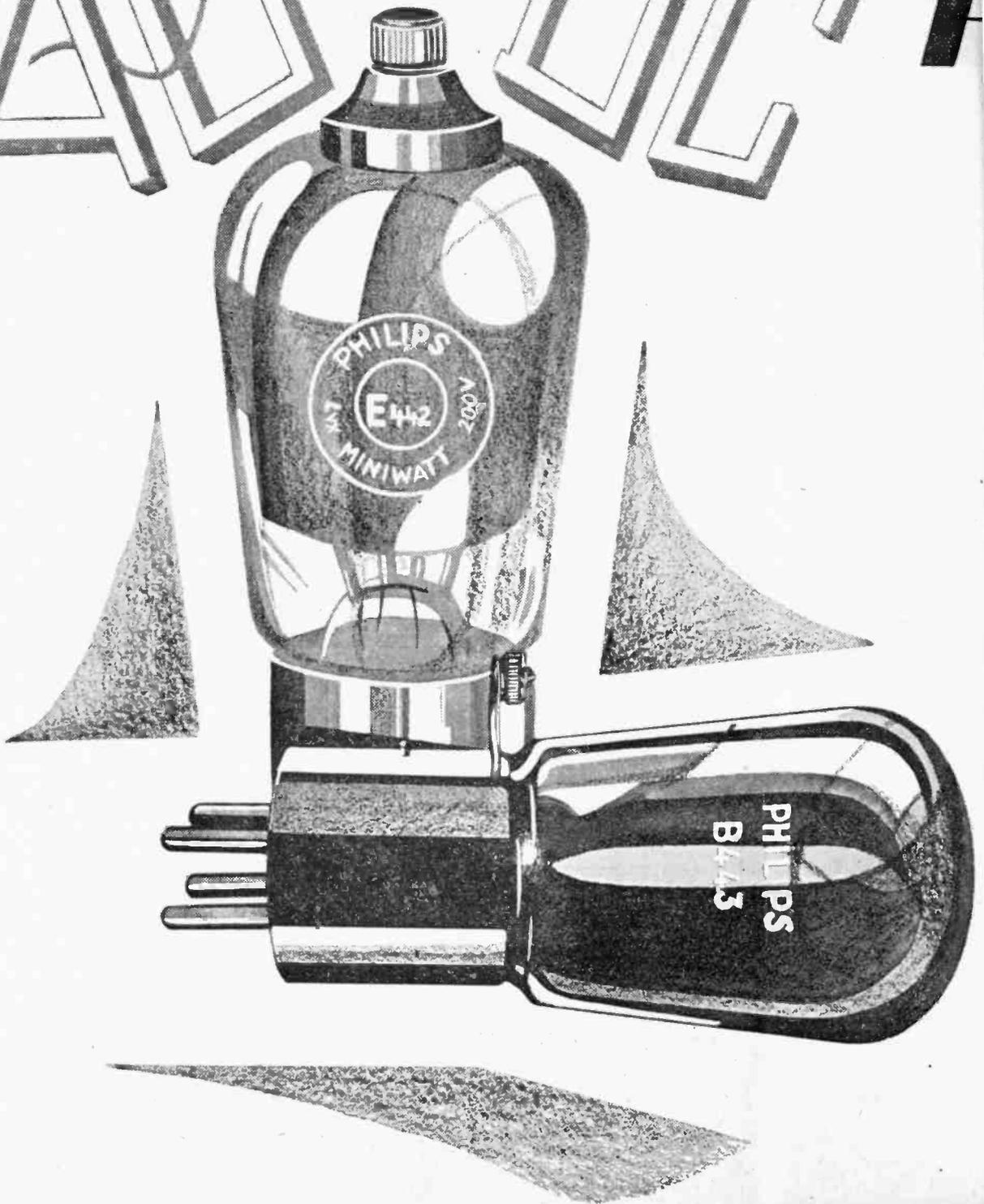
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A442	R.F. Screen Grid	0.06	—	—	—	—	30/-
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†B406	Audio	0.1	6.0	9.0	12.0	15.0	12/6
†B409	High Gain Power	0.15	4.5	6.0	7.5	9.0	15/-
†B443	Penthode	0.15	—	9.0	12.0	15.0	32/6

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Type.	Purpose.	Fila- ment Current	Grid Bias at				Price.
			80.	100.	120.	150.	
A600	Gen. Pur.	.06	4.5	6.0	7.5	9.0	12/6
A615	Det., 1st Audio	.08	1.5	3.0	3.0	4.5	12/6
A630	Res. Cap., R.F.	.06	—	—	1.5	1.5	12/6
A635	R.F.	.06	—	—	—	—	12/6
†B603	Audio	.12	6.0	9.0	15.0	18.0	12/6
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E409	Audio	9	3	25/-
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E424	Spec. Det. 1st Audio	24	3	35/-
E430	Res. Cap., R.F.	30	2	30/-
E435	R.F.	35	2	30/-
E442	Screen Grid	—	1.2	40/-
C443	Penthode	60	1.5	40/-

AMERICAN REPLACEMENT SERIES

Type.	Purpose.	Amp. Factor.	M/cond. (Slope).	Price.
F109	R.F., 1st Audio	9.0	1.2	15/-
F209	Det.	9.0	1.0	22/6
C603	Super Power	3.0	2.0	15/-
L560	Full Wave Rectifier	—	—	30/-

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Type.	Purpose.	Amp. Factor.	M cond. (Slope).	Price.
TB04/10	Power Amplifier	7.5	2.0	45/-
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PHILIPS

for better radio

Interstate Programmes, Friday, September 13

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 371 Metres).

EARLY MORNING SESSION

7.0: Melbourne Observatory time signal. 7.1: Shipping news. 7.3: Physical exercises set to music. 7.20: Reproduced music. 7.40: Mail notices. 7.42: What's on to-day? 7.45: Market reports. 7.53: Weather forecasts. 7.55: News service. 8.0: Melbourne Observatory time signal. 8.1: Arrival times of express trains. 8.2: Musical interlude. 8.15: Close down.

MORNING SESSION

10.30: Current happenings in sport, by Mel Morris. 10.45: Melby Broadcasts. 12.0: Melbourne Observatory time signal. 12.1: Melody Broadcast. 12.15: News service. Corn Exchange midday report. Newmarket stock sales. Associated stock and station agents' official report. 12.30: Close down.

MIDDAY SESSION

1.0: Melbourne Observatory time signal. Stock Exchange information. Meteorological data. Weather forecast for Victoria, New South Wales, South Australia, and Tasmania. Ocean forecast. River reports. Rainfall. Comments on the day's news. 1.30: Reproduced music.

EDUCATIONAL SESSION

2.0: "Strange People of Strange Countries," Mr. H. J. G. Esmond. 2.15: Musical interlude. 2.26: "Oems of English Literature—Burns' Poems," Prof. G. H. Cowling, M.A. 2.35: Musical interlude. 2.45: A Talk in German, Mr. C. E. Geen, M.A., Dip. Ed.

MATINEE

Transmission from the Melbourne Town Hall—3.0: An orchestral programme for State School students, arranged by Professor Bernard Heinze with the University Symphony Orchestra, in conjunction with the National Broadcasting Orchestra. 4.30: Close down.

THE CHILDREN'S CORNER

4.45: John the Piper's Son is here again. Now for some adventures with "Noisy Parker." 6.0: Birthday greetings by "John the Piper's Son." 6.15: Rita Hilton entertains with songs at the piano. 6.30: "John the Piper's Son" has a bit more to say.

EVENING SESSION

6.40: "What's Wrong with Radio?" Mr. H. Kingsley Love. 7.0: Melbourne Observatory time signal. 7.1: Countryman's Session—Stock Exchange information. Corn Exchange report. Associated stock and station agents' official report. Wool Exchange report. Mines and metals. Fish and rabbit prices. Farm and dairy produce report supplied by the Inter-State Dairy Produce Committee. Wholesale fruit prices, supplied by the Wholesale Fruit Merchants' Association. Retail fruit prices, supplied by the Victorian Fruitgrowers' Association. Citrus fruit prices, supplied by the Victorian Central Citrus Association. Weather synopsis. River reports. Rainfall data. 7.25: Gardening hints, under the auspices of the Royal Horticultural Society of Victoria—Chrysanthemum culture. 7.40: "Herald" news service. 7.45: "Ancient Civilisations," Dr. E. Sweetman, M.A., Litt.D.

NIGHT SESSION

8.0: Collingwood Citizens' Band (conductor, F. C. Johnson).
March, "Marine Artillery."
Overture, "Morning, Noon, and Night."
8.10: R. Nicholson, baritone—
"Land of Delight" (Sanderson).
"The Rolling Stone" (Hamblen).
8.17: Allan Adeock, entertainer, at the piano—
Looking Backward from Baytime to Jazz.
8.30: Collingwood Citizens' Band
Trumpet solo, "Il Bacio."
8.35: The Melbourne Repertory Theatre Company present—
"The Dear Departed," a comedy in one act by Stanley Houghton.
Persons of the Play (in order of speaking)—
Mrs. Slater—Betsy Rae.
Victoria (her daughter)—Hilary Blake.
Henry Slater (her husband)—Claude Thomas.
Mrs. Jordan (her sister)—Ruby May.
Ben Jordan (her brother-in-law)—Reg. Moyle.
Abel Merryweather (her father)—Frank D. Clewlow.

The scene is the Slaters' sitting-room in a small Lancashire town on a Saturday afternoon. This is the first play by the author of "Hindle Wakes," which achieved such fame in England and all other English-speaking countries. It is a little gem of Lancashire humor garnered from the author's intimate knowledge of the people of his county.

The play produced by Frank D. Clewlow
9.5: Headley and Bartlett—
A smart programme of musical novelties.
9.15: Collingwood Citizens' Band—
"Tristan and Isolde" (Wagner).
9.45: Russell Callow, tenor—
Modern melodies.
9.52: Hendley and Bartlett—
Musical novelties.
9.57: R. Nicholson, baritone, and Russell Callow, tenor—
Duets: "Sylvia" (Sargeant).
"Soldiers and Comrades"
10.4: Collingwood Citizens' Band—
Selection from musical comedy.
10.15: Eric Welch will speak on to-morrow's races at Moonie Valley.

10.25: Meteorological information, British official wireless news, Items of interest.
10.35: "The Rex" Dance Band.
11.30: God Save the King

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 484 Metres).

MORNING SESSION

8.15: Morning music. 8.45: Weather data. 9.0: G.P.O. chimes. 9.1: News service. 9.5: Reproduced

music. 10.0: G.P.O. chimes. 10.1: British official wireless news. 10.10: Announcements. 10.30: Arnold Coleman at the Wurliizer. 10.50: A message for the day. 11.0: Close down.

MIDDAY SESSION

12.0: G.P.O. chimes. 12.1: Famous Women—Madame Curie—Miss J. S. W. Webb, M.A. 12.15: Fifteen minutes' synopcation. 12.30: Luncheon Music, supplied by the National Broadcasting Orchestra. Under direction, Wm. G. James. Conductor, Percy Code. 2.0: G.P.O. chimes.

AFTERNOON SESSION

The Artistic Reproduction of Absent Artists, with instrumental numbers by "A.B.O. Troubadours." 2.1: Regal Orchestra—The Shannon Four Male Quartet Trio Nuovo—a new Trio, Manuello, Violin. 3.40: Home Management—Hygiene in the Home—Miss Kathleen Benningfield. 3.55: Musical interlude. 4.0: What Science is doing for Women—Mr. E. S. Richards, M.Sc. 4.15: Reproduced music. 5.0: G.P.O. chimes. 5.30: Weather data. 5.45: Close down.

EVENING SESSION

6.15: Dinner Music supplied by the "Troubadours." 7.30: What's on the air to-night? 7.32: Latest Musical Releases. 7.50: Mel Morris will speak on "Football." 8.0: Close down.

NIGHT SESSION

8.0: Australian Problems in Economics—The Business Outlook. Prof. D. B. Copland, M.A., D.Sc. 8.15: Community Singing from the Malvern Town Hall.
10: Weather information and "Herald" news.
10.10: Community singing resumed.
10.30: God Save the King.

3DB

The "Herald" Broadcasting Station, Flinders Street, Melbourne. (235 Metres).

MORNING SESSION

11.0: New Concert Orchestra—"Hydropaten Waltz." 11.30: "La Vogue—"The World's Fashions and Fables." 11.35: John Turner (tenor), "Sweet, Early Violets." 12.0: Trix Sisters. "Hundred Years from Now." 12.30: Market reports by John M'Namara and Co., Pty. Ltd. 12.35: Berlin Philharmonic Orchestra, "Carnaval Roman." 1.0: Piccadilly Players, "Who Did? You Did." 1.30: Oily Oakley (banjo), "Black Coquette." 1.45: Close down.

AFTERNOON SESSION

2.15: Claqueot Club Eskimos, "Too Busy." 2.30: Kirkby Lunn, "Boat Song" (Stanford). 3.0: Atwater-Kent Radio Hour, sponsored by A. O. Healing Ltd. and E. T. Muir. 4.0: Close down.

EARLY EVENING SESSION

5.30: The Halle Orchestra, "Rosamunde" Overture. 6.0: Hubert Eisdell (tenor), "Come, Sing to Me." 6.30: Debroj Somers Band, "Wide Open Spaces." 7.0: Cedric Sharp (cello), "Drink to Me Only With Thine Eyes." 7.15: Market reports by John M'Namara and Co., Pty. Ltd. 7.25: Jesse Crawford (organ), "Falling in Love." 7.30: Market reports by Gippsland and Northern Co-operative Co., Ltd. 7.40: Coldstream Guards' Band, "Poli' Bergere."

EVENING SESSION

8.0: Ben Selvin and His Orchestra, "Doing the Raccoon." 8.30: Will Fette, "Selling Up the Clyde." 9.0: Layton and Johnstone, "Dance, Little Lady." 9.30: De Oroot—Piccadilly Orchestra, "The Flower." 10.0: Alfred O'Shea, "Old Refrain." 10.30: Arthur Meale (organ), "Fountain Melody." 10.40: News. 10.45: God Save the King.

4QG

Queensland Government Radio Service, Brisbane. (Wavelength, 385 Metres).

EARLY MORNING SESSION

7.43: Time signals. 7.45: News service. 8.0: Records. 8.15: News service. 8.30: Close down.

MORNING SESSION

11.0: Music. 11.5: Social news. 11.15: Lecturette. 11.30: Music. 12.0: Noon. Close down.

MIDDAY SESSION

1.0: Market reports; weather information. 1.15: Lunch-hour music. 1.58: Special time signals. 2.0: Close down.

AFTERNOON SESSION

3.0: Records. 3.30: Mail train running times. 3.31: A recital by Mr. George Sampson, F.R.C.O. (City Organist) from St. John's Cathedral. 4.15: News. 4.30: Close down.

EARLY EVENING SESSION

6.0: Mail train running times; mail information; shipping news. 6.5: Records. 6.25: Commercial announcements. 6.30: Bedtime stories, conducted by the Sandman. 7.0: News in brief. 7.5: Stock Exchange. 7.6: Metal quotations. 7.7: Market reports. 7.25: Fenwick stock report. 7.30: Weather. 7.40: Announcements. 7.43: Time signals. 7.45: To-morrow's sporting fixtures reviewed.

NIGHT SESSION

8.0: The Ipswich Vico-regal Brass Quartette—"Le Prohete" (Rhimmer).
8.7: Jack Land, tenor—
"Where'er You Walk" (Handel).
8.12: D. Jordan and A. Clarke—
Instrumental duet, "Friendship" (Lafont).
8.17: Dorothy Sanders, soprano—
"Sweet Early Violets" (Sherrington).
8.21: Arthur Aldridge, tenor—
Selected.
8.27: J. W. Burgemeister, F. Bowers, and A. Clark, instrumental trio—
"The Friends' Good-night" (Round).
8.33: Stanley Tamblin, bass—
"Up From Somerset" (Sanderson).
8.37: F. Bowers and J. W. Burgemeister—
Instrumental duet, "Tasmania" (Lithgow).
8.42: Jack Ludt, tenor—

"The Bloom is on the Rye" (Bishop).
8.47: J. Tyson and his Accordion.
8.53: The Ipswich Vico-regal Brass Quartette—"In the Merry Month of May" (Cook).
9.0: Metropolitan weather forecast.
9.1: Week-end road information for motorists, officially supplied by the R.A.C.Q.
9.15: Dorothy Sanders, soprano—
"Love is Meant to Make Us Glad" (German).
9.19: J. Tyson and his Accordion.
9.23: Stanley Tamblin, baritone—
"Bedouin Love Song" (Pinsuti).
Gramophone recital: A short recital of electrically-reproduced records.
10.0: News supplied by courtesy of the metropolitan dailies. Weather information. Close down.

5CL

Central Broadcasters, Ltd., 111 Hindmarsh Square, Adelaide. (Wavelength, 409 Metres).

MORNING SESSION

11.15: Chimes. 11.16: Recordings. 11.45: Kitchen craft and menu talk. 12.1: Recordings. 12.15: General news service. 12.40: Recordings. 12.52: Railway, Exchange, and meteorological information. 1.1: From the Adelaide Town Hall—community singing. 1.59: Meteorological information. 2.0: Close down.

AFTERNOON SESSION

3.0: Chimes. 3.15: Rupert Hazell and Elsie Day. 3.25: Hawaiian music. 3.30: "Australyn," will give a true story, entitled "A Bush Romance" (Part 2). 3.45: Vocal recital. 4.1: Rupert Hazell and Elsie Day. 4.10: An educational talk. 4.25: Stock Exchange. 4.30: Close down.

EVENING SESSION

6.0: Chimes. 6.1: Birthday greetings. 6.15: Children's request number. 6.50: Dinner session. 7.0: Chimes. 7.1: Senior Birthday League greetings. Sporting service. Review of to-morrow's races at Cheltenham and Moonie Valley. Soccer notes. General market reports. 7.20: Rev. E. S. Kiek, M.A., B.D. will give a talk, entitled "Was the Execution of Charles I. Justified?" 7.35: Sir David Gordon will give a talk "Of Interest to Everybody." 7.45: Dr. Jethro Brown will continue his series of talks, entitled "Strife in Industry—Why?"

NIGHT SESSION

8.0: Chimes.
8.1: The captains of the Soccer Cup final teams will speak.
8.10: The Steiner Trio.
"L'Elisir d'Amour" (Donizetti).
8.20: Margaret Pirie, contralto.
"Cradle Me Low" (May Brahe).
"The Miniature" (May Brahe).
8.27: Rupert Hazell and Elsie Day.
8.37: The Hawaiian Trio.
"Dreamy Hawaii."
"Honorulu March."
8.44: Dr. P. Ray Newling, baritone.
8.51: The Steiner Trio.
"Andante con Vite" (Mendelssohn).
"Spring Song" (Lind).
9.1: Meteorological information, including semaphore tides.
9.2: Overseas grain report.
9.3: General news service.
9.5: The Hawaiian Trio.
"The Pijian Farewell."
"Medley of Popular Songs."
9.12: Dr. P. Ray Newling, baritone.
9.19: The Steiner Trio.
"Andante" (Reissiger).
"Minuet" (Boccherini).
9.23: A recital from the pianist "School for Scandal" (produced by Beryl Alford). Characters: Lady Teazle, Beryl Alford; Sir Peter Teazle, Frank Johnstone.
9.44: Margaret Pirie, contralto.
"By the Waters of Minnetonka" (Lieurance).
"A Japanese Love Song" (Brahe).
9.51: Guido Chichetto, recital.
9.58: Rupert Hazell and Elsie Day.
10.8: The Steiner Trio.
"Narcissus" (Nevin).
"Andante" (Tschaiowsky).
10.15: General news service: British official wireless news; meteorological information; 5CL's sporting service.
10.30: Recordings.
11.0: Close down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth. (Wavelength, 435 Metres).

EARLY MORNING SESSION, 7.30 to 8.30.

7.30: Town Hall chimes. 7.31: The Day's Maxim. 7.32: Meteorological report. 7.35: Early rising music (reproduced). 7.55: Mails and shipping intelligence. 8.0: What's on To-day? 8.5: Early rising music (reproduced). 8.22: News. 8.27: Features of to-day's programme. 8.30: Close down.

MORNING SESSION, 10 to 11.

10.0: Town Hall chimes. 10.1: Popular music (reproduced). 10.15: Women's interest talk. 10.30: Organ recital from the Ambassadors, Jack Laing at the console of the Wurliizer Organ. 11.0: Close down.

THE LUNCH HOUR, 12.30 p.m. to 2 p.m.

12.30: Town Hall Chimes. 12.31: Vocal recital (reproduced). 12.45: Midday news service. 12.50: Items of interest. 12.58: Weather report. 1.0: Time signal. 1.1: Luncheon music by the A.B.C. Orchestra. 2.0: Close down.

THE RADIO MATINEE, 3 p.m. to 5 p.m.

3.0: Town Hall chimes. 3.1: Vocal recital (reproduced). 3.15: "Travelogue." Captain Donald McLean. 3.30: Fifteen minutes with great artists. 3.45: Talk of interest to women. 4.0: Town Hall chimes. 4.1:

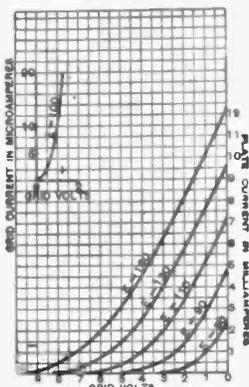
(Continued on page 35.)

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Local Programmes, Saturday, September 14

2FC

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 442 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
- 7.3: This morning's news from the "Sydney Morning Herald."
- 7.8: Austradio musical reproduction.
- 7.45: Mails and shipping.
- 7.48: What's on to-day?
- 7.50: Children's birthday calls.
- 8.0: Music from the studio.
- 8.15: Close.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
- 10.32: A.B.C. racing observer.
- 10.45: Studio music.
- 11.0: Household Helps: Week and Suggestions, by Miss Ruth Furst.
- 11.10: Cables—A.P.A. and "Sun"—"Herald" news service. British official wireless press.
- 11.15: Austradio musical reproduction.
- 12.0: "Big Ben." Stock Exchange and metal quotations.
- 12.5: Austradio musical reproduction.
- 12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land supplied by the State Marketing Board.
- 12.30: Studio music.
- 12.43: Basil Rye, baritone.
- 12.50: From Randwick: Description of Tattersall's Club race meeting in the running. During the afternoon vocal items by Basil Rye and instrumental music by the Warwick Strollers.
- 4.35: Complete sporting resume.
- 4.45: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies' "Goodnight" stories told by the "Hello Man," assisted by Aunt Willa and Cousin Clarice.
- 6.45: The National Broadcasting Orchestra will play dinner music.
- 7.30: A.B.C. sporting service.
- 7.37: Special country session. Stock Exchange resume. Markets. Weather forecast. Late news from the "Sun" and "News."
- 7.58: To-night's programme.

THE EVENING PRESENTATION—8 to 11.30

2FC's programme to-night is in popular vein. "Dismal Desmond" has prepared a special "Microphun" Revue.

2BL listeners will welcome the re-appearance of Harold Hickey, and unusual saxophone numbers by the Kookaburra's Sextette.

- 8.0: Desmond's "Microphun" Revue—Opening Chorus.
- A song by Arnold Ashworth and Company. A Railway Burlesque by the Company. Dorothy Manning and William Everard in a duet.
- Ruby Dent and a Piano.
- Arnold Ashworth in Song.
- Dismal Desmond as a Fireman, assisted by Edith Cowley.
- Dorothy Manning sings.
- William Everard and Arnold Ashworth.
- Edith Cowley.
- Sketch, "The Test of Love."
- William Everard sings.
- Dismal Desmond.
- Ruby Dent.
- A Burlesque Trio.
- Edith Cowley.
- Ashworth and Dismal Argue.
- Finale.

- 9.30: The Country Man's weather session: (a) New South Wales Forecasts. (b) Inter-State Weather Synopses.
- 9.32: The 2FC Instrumental Trio.
- 9.47: William Everard, tenor—(a) "My Dream Home" (Tennant). (b) "Sorter Miss You" (Smith).
- 9.52: The 2FC Instrumental Trio.
- 10.8: William Everard, tenor—(a) "Honey Mine" (Gordon). (b) "Dear Little Mother o' Mine."
- 10.15: Announcements. Late official weather forecast.
- 10.20: From the Oriental Cafe: Sydney Simpson's Syncopaters in dance music.
- 11.30: Close. National Anthem.

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2BL

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 353 Metres).

OPENING SESSION, 8.15 a.m. to 11 a.m.

- 8.15: G.P.O. chimes. Music for every mood.
- 8.45: Meteorological data for the country.
- 8.50: Austradio musical reproduction.
- 9.30: British official wireless news.
- 9.35: New music.
- 10.5: News from the "Sydney Morning Herald."
- 10.10: Talk on "Gardening," by G. Cooper, park superintendent, City Council.
- 10.30: Austradio musical reproduction.
- 11.0: G.P.O. chimes. Close.

MIDDAY SESSION, 12 noon to 2.30 p.m.

- 12.0: G.P.O. chimes. Announcements.
- 12.2: The National Broadcasting Orchestra.
- 1.0: Afternoon news, from the "Evening News" and "The Sun."
- 1.5: Studio music.
- 1.30: Austradio musical reproduction.
- 2.0: J. Knight Barnett at the Wurlitzer.
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT, 2.30 p.m. to 5.15 p.m.

- 2.30: 2BL Instrumental Trio.
- 2.42: Lotys Lescaut, soprano. (a) "A Summer Night" (Goring Thomas). (b) "Chanson de Mai" (Grumbert). (c) "Birth of Morn" (Leon).
- 2.49: Mildred Hill, pianist. "Ballade in G Minor" (Chopin).
- 2.59: 2BL Instrumental Trio.
- 3.11: Norman Francis, tenor. (a) "All Hail, Thow Dwelling" (Gounod). (b) "Sally Horner." (c) "Drink to Me Only with Thine Eyes" (Wallace).
- 3.18: Douglas Graham, Scottish comedian. (a) "The First Wee Drapple." (b) "I Love My Mary."
- 3.28: 2BL Instrumental Trio.
- 3.40: Lotys Lescaut, soprano. (a) "In the Silent Night" (Rachmaninoff). (b) "Pleading" (Elgar).
- 3.47: Mildred Hill, pianist. (a) "To the Spring" (Grieg). (b) "Mjnuet" (Paderewski). (c) "Romance" (Sibellus).
- 3.55: 2BL Instrumental Trio.
- 4.10: Norman Francis, tenor. (a) "Angels Guard Thee" (Goddard). (b) "At Dawning" (Cadman).
- 4.17: Douglas Graham, Scottish comedian. "Sailing Up the Clyde."
- 4.27: Austradio musical reproduction.
- 5.0: Complete sporting resume.
- 5.15: Close. Weather information.

THE DINNER HOUR, 6.15 p.m. to 7.55 p.m.

- 6.15: The National Broadcasting Orchestra.
- 6.45: The A.B.C. Younger Set session. Travel and Adventure—The Captain.
- 7.5: The A.B.C. sporting resume.
- 7.17: Studio music.
- 7.30: The National Broadcasting Orchestra.
- 7.45: Austradio musical reproduction.
- 7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION, 8 p.m. to 12 Midnight.

Our programme to-night is a pot-pourri of popularities. Through 2FC service, Dismal Desmond, the lugubrious wit, has arranged an unusual revue.

8 p.m.: G.P.O. chimes. The Kookaburra Saxophone Sextette.

- (a) "Sweet and Low" (Barnby).
- (b) "The Village Blacksmith" (Weiss).
- (c) "Sleep Waltz" (Lebieg).
- 8.10: Fred Bluett, comedian. "Good Ship Hardship" (Harrington).
- 8.22: Colston Carter, novelty pianist. (a) "Slipova" (Bargey). (b) "Pretty Pol" (Little). (c) "Lolita." "Caprice Espagnol" (Chaminade).
- 8.30: The Australian Broadcasting Dance Orchestra. 8.42: Harold Hickey, tenor. 8.49: Charles Lawrence, entertainer. 8.59: May Sharpe, songs at the piano. (a) "She's Funny That Way" (Whiting and Moret). (b) Selected. 9.6: The Kookaburra Saxophone Sextette. (a) "Love Boat" (Brown and Freed). (b) "Broadway Melody" (Brown and Freed). (c) "Good-night, Good-night, Beloved" (Pinsuti).
- 9.16: Harold Hickey, tenor.
- 9.23: The Australian Broadcasting Dance Orchestra. 9.33: Late weather forecast, for the man on the land. 9.34: Charles Lawrence, entertainer. 9.44: Colston Carter, novelty pianist. (a) "Marilyn" (Alter). (b) "Staccato Caprice" (Cooke). 9.51: The Australian Broadcasting Dance Orchestra. 10.3: May Sharpe, songs at the piano. (a) "Love Dream" (Axt and Mendoza). (b) Piano novelty, with vocal interlude, "You Were Meant for Me" (Freed and Brown).
- 10.10: The Australian Broadcasting Dance Orchestra. 10.25: Official weather forecast, metropolitan and country; late news from the "Evening News" and "The Sun."
- 10.30: The Australian Broadcasting Dance Orchestra. 11.30: Romano's Dance Orchestra, conducted by Bennie Abrahams.
- 12.0: Close. National Anthem.

2GB

Theosophical Broadcasting Station, 29 Bligh St. Sydney. (Wavelength, 318 Metres).

- 3.0: Musical Session. 5.30: Children's Session by Uncle George. 7.0: Request hour. 8.0: Dance programme by Sutton's Dance Orchestra. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Pallin's Building, Ash St. Sydney. (Wavelength, 267 Metres).

- 5.30 p.m.: Children's Hour, conducted by Uncle Jack. 6.30: Close down. 7.0: Musical programme and request numbers. 10.30: Close down.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra. Sydney. (Wavelength, 293 Metres).

- EARLY MORNING SESSION
- 7.15: Breakfast Time Four orchestral music. 8.30: Weather forecast. Close down.
- EVENING SESSION
- 7.15: Orchestral dinner music. 8.0: Overture, "Orpheus in Hades." 8.10: Vocal and instrumental selections. 10.30: Close down.

SENSATIONAL REDUCTIONS!



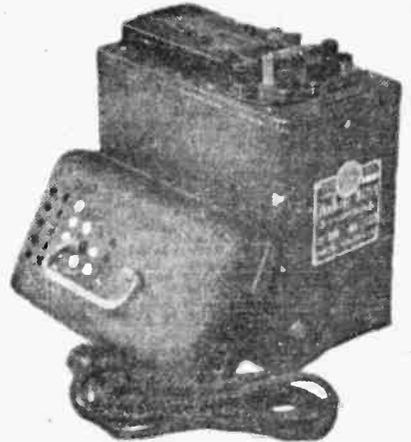
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Interstate Programmes, Saturday, September 14

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 371 Metres).

EARLY MORNING SESSION.

7.0 to 8.15: See Friday.
MORNING SESSION.
 10.30: Current happenings in Sport, by Eric Welch.
 10.45: Melody Broadcast, 10.0: Melbourne Observatory time signal. 12.1: Melody Broadcast. 12.15: "The Argus" news service. British official news. Corn Exchange midday report. Newmarket stock sales. Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION.

1.0: Melbourne Observatory time signal. 1.1: Stock Exchange information. Meteorological data. Weather forecast for Victoria, New South Wales, South Australia, and Tasmania. Ocean forecast. River reports. Rainfall. 1.15: Comments on the day's news. 1.30: Musical interlude.

AFTERNOON SESSION.

2.0: Melbourne Observatory time signal. 2.1: Moonee Valley races, described by Eric Welch. Football match, described by M. A. Morris. 5.30: Final football scores and resume of sporting results.

THE CHILDREN'S CORNER.

5.45: "Little Miss Cookaburra" will tell the third instalment of "The Guides at Calamity Hill." 6.0: Birthday greetings. 6.20: Musical interlude. 6.25: A talk of interest to the boys and girls.

EVENING SESSION.

6.40: Sporting results. 6.55: Musical interlude. 7.0: Melbourne Observatory time signal. 7.1: Countryman's Session. 7.25: "Stories of Our Mining Fields—The Victorian Gold Rush." Mr. Charles Daley. 7.40: "Herald" news service. 7.45: "Come With Us Round the World—(6) The City of Lhasa in Tibet." Mr. H. J. O. Esmonde.

NIGHT SESSION.

8.0: National Broadcasting Orchestra, under the direction of Wm. G. James (conductor, Percy Code).
 Selection, "The Fortune Teller" (Herbert).
 8.10: Victor Baxter, tenor—
 "Colt's" (Edith Barry).
 "Requiem" (Edith Barry).
 8.17: Gus Quinn, "The Radio Magician," will entertain.
 (Have your pack of cards, pencil, and paper in readiness.)
 8.22: "J and G." The Confidential Two—
 "Kiss Me Again."
 "The Song I Love."
 Piano novelty, "To-morrow."
 8.33: Violet Jackson, soprano—
 "My Desire" (Cadmans).
 "Synova's Song" (Kjerulf).
 8.40: Orchestras—
 Characteristic piece,
 "The Knight Errant" (Scmerville).
 8.45: A special programme has been arranged.
 8.45: Orchestras
 "Habenera" (Herbert).
 8.55: Victor Baxter, tenor, and Violet Jackson, soprano—
 Duets.
 "O Lovely Night" (Landon Ronald).
 "A Night in Venice."
 10.0: Gus Quinn, "The Radio Magician"—
 "More Radio Magic."
 10.10: Orchestras—
 Ballet Suite "Vive Le Danse" (Finck).
 10.20: Meteorological information.
 British official wireless news.
 Items of interest.
 10.30: "The Rex" Dance Band
 11.30: God Save the King

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 481 Metres).

MORNING SESSION.

8.15 to 11.0: See Friday.

MIDDAY SESSION.

12: G.P.O. chimes. 12.15: Fifteen minutes syncope. 12.30: Luncheon music supplied by the National Broadcasting Orchestra. Under direction: Wm. G. James. Conductor: Percy Code. 2: G.P.O. chimes

EDUCATIONAL SESSION.

2.1: The Story of Hawatha (Longfellow), Rev. W. Bottomley. 2.55: "In a Tropical Jungle." Mr. A. A. Downs. 2.45: Personal adventures while exploring. Lt.-Col. Edward P. O'Flaherty, D.S.O., F.R.G.S.

THE RADIO MATINEE.

3: National Broadcasting Orchestra. Under direction, Wm. G. James. Conductor, Percy Code. Suite: Woodland Pictures (Pletcher). 3.10: Syd. Hollister. A few Hollisterisms. 3.17: Edna Davis, xylophone. "The Wedding of the Painted Doll" (Brown). "Do Something" (Bob Green). 3.22: Russell Callow, tenor. Popular numbers. 3.30: Orchestra. Selection, "Katzka, the Dancer" (Gilbert). 3.40: Madoline Knight, contralto. "Lily of Laguna." "O Dem Golden Slippers." 3.47: Orchestras. Evolution of Dixie. 3.57: Russell Callow, tenor. More popular numbers. 4.4: Edna Davis, xylophone. Selections, "Rigoletto" (Verdi). "You Were Meant For Me." 4.9: Syd. Hollister. More Hollisterisms. 4.16: Madoline Knight, contralto. Selected. 4.24: Orchestra. A Southern Rhapsody. "Virginia" (Haydn Wood). 4.30: Reproduced music. 5.0: G.P.O. chimes. 5.1: Reproduced music. 5.30: Weather data. 5.45: Close down.

EVENING SESSION.

6.15: Dinner music, supplied by the National Broadcasting Orchestra. 7.30: What's on the Air To-night? 7.32: Latest musical releases. 8.0: G.P.O. chimes

NIGHT SESSION.

8.1: Coburg City Band.
 Conductor, Thos. Davison.
 March, "Moray Firth" (McKenzie).

8.5: Claude Schilling, baritone—
 "Loving Smile of Sister Kind" (Gounod).
 "The Song of the Clock" (Burchell).
 8.12: "The Barmaids".
 Scottish Mirth and Melody.
 8.22: An Original Comedy Sketch.
 "Breaking it Gently."
 Produced by Thomas Leslie
 Characters:
 The Master, Gerald Heathcote.
 The Man, Thomas Leslie.
 8.42: Coburg City Band.
 Selection (Scott), "Fair Maid o' Perth" (Volpi).
 8.52: Madame Elsie Davies, soprano—
 "Will o' the Wisp" (Spross).
 "Ave Maria" (Mascagni), obligato by Bertha Jorgensen.
 "The Minstrel Boy" (T. Moore).
 9.0: Coburg City Band.
 Cornet solo, "On the Banks of Allan Water."
 9.3: Joe Brennan and Ida Newton will entertain.
 9.10: Coburg City Band—
 Selection (Scott), "In Edinboro Town" (Smith).
 9.20: Harry Kells, tenor—
 "Serenade" (Schubert).
 "Love Lily" (Thomson).
 9.37: Norman's Royal Hawaiians—
 "Sweet Luana"
 "Hawaiian Willight."
 "Oh, Sole Mio."
 Popular Melodies.
 9.34: Claude Schilling, baritone—
 "Eleanore" (Coleridge Taylor).
 Request number.
 9.41: Coburg City Band—
 Waltz, "Rosalmido" (Greenwood).
 9.50: "The Barmaids"—
 More Scottish Mirth and Melody.
 10.0: Weather data and "Herald" news.
 10.15: Madame Elsie Davies, soprano—
 "La Partida" (Alvarez).
 "Walta Pol" (Alfred Hill).
 "The Owl" (Wells).
 10.22: Norman's Royal Hawaiians—
 "Kawana Waltz."
 "Lei Pooli Hula."
 "Beautiful Hawaii."
 "Girl of My Dreams."
 "Annie Laurie."
 10.30: Harry Kells, tenor.
 "Life and Death" (Coleridge Taylor).
 "Ah, Moon of My Delight" (Lehmann).
 10.37: Joe Brennan and Ida Newton will entertain.
 10.45: Coburg City Band—
 Selection of favorite melodies (Raymond).
 "Soldiers' Chorus" from "Faust" (Gounod).
 11.0: "The Troubadours".
 12.0: God Save the King.

3DB

The "Herald" Broadcasting Station, Flinders Street, Melbourne. (255 Metres).

AFTERNOON SESSION.

2.0: Columbia Symphony Orchestra, "The Flatterer." 2.30: Robert Radford, "Father O' Flynn." 3.0: Sophie Tucker, "Away Down South in Heaven." 3.30: Royal Air Force Band, "Chinese Patrol." 4.0: The Duncan Sisters, "Bullfrog Patrol." 4.30: Nat Shilkret and His Orchestra, "When Summer is Gone." 5.0: Ray Starita and His Ambassadors Band, "Truly Rural." 5.30: Close down. During the afternoon results of races and progress reports of football matches will be given at intervals.

EARLY EVENING SESSION.

6.0: Piccadilly Players, "Happy-go-lucky Bird." 6.30: All sporting results. 6.45: The Troubadours, "Another Kiss." 7.0: Ed Lowry (tenor), "My Mother Eyes." 7.30: Dusolina Giannini, "I Love You Truly."

EVENING SESSION.

8.0: Lee Morse and Blue Grass Boys, "Mississippi Mud." 8.30: Black Diamonds Band, "Broom, the Bonny, Bonny Broom." 9.0: The Sharwood Sponsors' Quartet, "The Ballad" (Coven).
 From the Green Mill, 10.0: J. H. Squire Celeste Octet, "I Love the Moon." 10.30: John Lemmon (fute), "By the Brook." 10.45: News. 10.55: God Save the King.

4QG

Queensland Government Radio Service, Brisbane. (Wavelength, 385 Metres).

7.43 to 8.30: See Friday.

AFTERNOON SESSION.

3.0: Records 3.30: Mail train running times. 4.15: This afternoon's news. 4.30: Close down.

EARLY EVENING SESSION.

6.16: Bi-weekly news service for distant listeners. 6.30: Bedtime stories, conducted by "Uncle Ben." 7.0: To-day's race results in detail. 7.20: General sporting notes. 7.30: Sailing notes, by Mr. Fred. Smith.

NIGHT SESSION.

8.0: The Studio Orchestra (conductor, A. R. Featherstone)—
 Overture, "Raymond" (Thomas).
 8.7: James Hunter, baritone—
 "Border Ballad" (Coven).
 8.12: W. H. Davis, cornetist—
 "Polka Brilliant" (Osbourne).
 8.17: Margaret Sinclair-Anderson—
 "Mighty Like a Rose" (Nevin).
 "Strawberry Fair" (Barning Gould).
 8.22: B. F. Kelly, faustist—
 "Meditation" (Massenet).
 8.27: David Felsman, bass—
 "Muleteer of Malaga" (Trotters).
 8.31: The Studio Orchestra—
 Novelty One-steps—
 "General Mikup" (Allen).
 "Near Beer" (Costillo).

8.39: Merna Gillies, pianist—
 "Hungarian Dance" (Brahms).
 8.44: James Hunter, baritone—
 "The Ballad" (Coven).
 8.48: Carl Hansen—
 Clarinet solo, "Shower of Gold" (Bouillon).
 (Accompanied by the Studio Orchestra).
 8.53: Margaret Sinclair-Anderson—
 "In Autumn" (Franz).
 9.0: Metropolitan weather forecast.
 9.1: The Studio Orchestra—
 A quarter of an hour's dance music.
 9.16: David Felsman, baritone—
 "Maire, My Girl."
 9.20: W. H. Davis, cornetist—
 "Beautiful Isle of the Sea" (Arr. Riveire).
 9.25: Bernice Berg—
 Popular vocal number, "That Wonderful Mother of Mine" (Goodwin).
 9.30: B. F. Kelly, faustist—
 "Scherzo Copricelo" (Sabathli).
 9.35: The Studio Orchestra—
 Ten minutes' dance music.
 9.45: Bernice Berg—
 Popular vocal number—
 "Just a Little Lady" (Crocker).
 9.50: The Studio Orchestra—
 minutes' dance music.
 10.0: News supplied by courtesy of the metropolitan dailies. Weather information. Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide. (Wavelength, 409 Metres).

AFTERNOON SESSION.

12.0: Chimes. 12.1: Special late selections for Moonee Valley races by our Melbourne representatives. 12.3: Probable starters and selections for races at Cheltenham to-day. 12.15: General news service. 12.55: Cheltenham. Riders and positions for Jumpers' Flat Race, one and a half miles. 1.0: Moonee Valley race result. 1.10: Cheltenham. Running description of Jumpers' Flat Race. 1.15: Recordings. 1.35: Cheltenham. Riders and positions for Juvenile Handicap, four furlongs and 54 yards. 1.40: Recordings. 1.50: Cheltenham. Running description of Juvenile Handicap. 1.55: Moonee Valley race result. 1.58: Recordings. 2.15: Cheltenham. Riders and positions for Port Adelaide Guineas, one mile one furlong and 40 yards. 2.20: Recordings. 2.30: Cheltenham. Running description of Port Adelaide Guineas. 2.35: Recordings. 2.50: League football. 2.55: Cheltenham. Riders and positions for Port Adelaide Steeplechase, about three miles. 3.0: Moonee Valley race results. 3.1: League football. 3.10: Cheltenham. Running description of Port Adelaide Steeplechase. 3.15: Recordings. 3.22: League football. 3.35: Cheltenham. Riders and positions for Spring Handicap, one mile and three furlongs. 3.40: League football. 3.45: Recordings. 3.50: Cheltenham. Running description of Spring Handicap. 3.55: Moonee Valley race result. 4.5: League football. 4.15: Cheltenham. Riders and positions for Highweight Handicap, six and a half furlongs. 4.20: League football. 4.30: Cheltenham. Description of Highweight Handicap. 4.35: League football. 4.40: Moonee Valley Race Result. 4.41: Recordings. 4.45: Cheltenham. Riders and position for Divert Handicap, five furlongs. 5.0: League football. 5.10: Cheltenham. Description of Divert Handicap. 5.15: League football scores. Resume of race results. 5.20: Close down.

EVENING SESSION.

6.0: Chimes. 6.1: Resume of race results and final League football scores. 6.2: Birthday greetings. 6.15: Children's request numbers. 6.30: Dinner Session. 6.0: Chimes. 7.1: Stock Exchange information. 7.10: Rev. C. G. P. R.A. will speak on "Does League Pay?" 7.25: Mr. C. G. P. R.A. will speak on "Items of Interest." 7.40: Sporting service.

NIGHT SESSION.

8.0: Rev. G. E. Hale, R.A.
 "I'll be with you—Everlasting Yours."
 8.10: Hindmarsh Municipal Band.
 March, "Palmer House" (Petee).
 "Tancred" (Rossini).
 8.20: Gordon Hele, bass.
 "The Company Sargent Major" (Sanderson).
 "Red Deton by the Sea" (Clarke).
 8.27: Rupert Hazell and Elsie Day.
 8.37: Hindmarsh Municipal Band.
 Waltz, "Jeunesse Deree" (Waldteufel).
 8.47: Phyllis Tier, elocutionist.
 "Home."
 8.51: A. Ellis, cornetist.
 "The North Star" (Greenwood).
 8.58: Vincent M. Murray, tenor.
 "Echo" (Rosselli).
 "Serenade" (Schubert).
 9.5: Hindmarsh Municipal Band.
 Fantasia, "Knight Errant" (Trussell).
 9.15: Rupert Hazell and Elsie Day.
 9.25: H. Clayton, xylophonist.
 "Ramona" (Wagner).
 9.32: Gordon Hele, bass.
 "Young Tom o' Devon" (Russell).
 "To-morrow" (Keel).
 9.39: Hindmarsh Municipal Band.
 Selection, "Echoes of Scotland" (Rimmer).
 9.49: Phyllis Tier, elocutionist.
 "Men."
 9.54: Hindmarsh Municipal Band.
 Japanese romance, "Poppies" (Moret).
 10.0: Vincent Murray, tenor.
 "The English Rose."
 "Down the Vale."
 10.7: Hindmarsh Municipal Band.
 March, "The Challenge" (Gulvert).
 10.15: SCL's Sporting Service.
 Including Moonee Valley and Cheltenham race results. League football scores, basket ball scores, hockey, lacrosse, cycling, and other sporting results.
 10.30: Modern dance music, recordings.
 11.0: Close down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth. (Wavelength, 435 Metres).

EARLY MORNING SESSION, 7.30 to 8.00.

See Friday.

MORNING SESSION, 10 to 11.

10.0: Town Hall chimes. 10.1: Popular music (reproduced). 10.15: Resume of to-day's racing, sporting, and athletic fixtures. 10.30: Organ recital at the Ambassador's, Jack Laing at the Console of the Wurliitzer organ. 11.0: Close down.

THE LUNCH HOUR, 12.30 p.m. to 2 p.m.

See Friday.

THE RADIO MATINEE, 3 p.m. to 5 p.m.

See Friday.

During the afternoon rests and sporting information will be broadcast immediately received.

EARLY EVENING SESSION, 5.45 to 8.

5.45: Children's "Good Night" Stories by Uncle Bas and Aunty Max. 6.15: Studio Dinner Music. 7.30: Weather report. 7.31: News service. 7.35: A.B.C. market reports. 7.40: Complete resume of to-day's racing, with results of all athletic fixtures. 7.48: The A.B.C. sporting observer's impressions of to-day's game. 7.57: Features of to-night's presentation.

EVENING SESSION, 8 to 11.

SPECIAL DANCE NIGHT. 8.0: Harmony Girls. Interlude. Harmony Girls. 9.0: Weather report. Harmony Girls. 10.0: "Travelogue." Captain Donald McLean. 10.15: Temple Court Dance Orchestra, conducted by Merv. Lyons. 11.0: Close down

7ZL

Tasmanian Broadcasters Pty., Bursary Bldgs., Elizabeth St., Hobart. (Wavelength, 516 Metres).

11.30 a.m.: Record recital. 11.34: Midlands weather forecast. 11.35: Record recital. 11.55: Tasmanian stations' 9 a.m. weather report. 12.0: G.P.O. clock chimes the hour. 12.1: Shipping information, mail notices, housewives' guide. 12.2: Selections. 12.30: News service, announcements. 12.40: Record recital. 1.5: British official wireless news, railway auction sales. 1.10: Record recital. 1.30: Close down. 3.0: G.P.O. clock chimes the hour. 3.1: Transmission from the North Hobart Oval, football match, League semi-final, described by Sid. Jones. 4.50: All Sporting results to hand. 5.0: Close down. 6.10: All sporting results. 6.30: Children's hour with "Uncle David." 7.30: Roy Johnson will speak on "Manual Training." 7.45: J. M. Counsel will speak on "European Affairs." 8.0: G.P.O. clock chimes the hour. 8.1: Record recital. 8.15: A request programme of popular records specially arranged by Paton's Music Warehouse. 9.30: News session. 9.32: British official wireless news. 9.35: Request programme (continued). 10.20: Close down.

6WF

Friday, September 13

(Continued from Page 30.)

Instrumental music. 4.15: The Story of the Des. 4.30: Popular music (reproduced). 4.55: Features of this evening's presentation. 5.0: Close down.

EARLY EVENING SESSION, 5.45 to 8.

5.45: Children's "Good Night" Stories by Uncle Bas and Aunty Max. 6.15: A.B.C. Younger Set Session, "Things Strange but True." 6.30: Studio Dinner Music. 7.30: Weather report. 7.31: News service. 7.35: A.B.C. market reports. 7.40: Stock Exchange. 7.42: "Travelogue." Captain Donald McLean. 7.57: Features of this evening's presentation.

EVENING SESSION, 8 to 11.

8.0: Ambassador's Orchestra, conducted by Bert Howell. "Overture." 8.5: Foley and Long, Instrumentalists. 8.15: A.B.C. racing observer. 8.30: Foley and Long, Instrumentalists. 8.45: Helpful hints to garden lovers, by James Conarty. 9.0: Weather report. 9.1: Vocal recital. 9.15: Ringside description of boxing contest broadcast from Perth Stadium, by Basil Kirke. 10.10: Features of tomorrow's programme. 10.15: Temple Court Dance Orchestra, conducted by Merv. Lyons. 11.0: Close down.

7ZL

Tasmanian Broadcasters Pty., Bursary Bldgs., Elizabeth St., Hobart. (Wavelength, 516 Metres).

Friday, September 13

11.30 a.m.: Selections. 11.34: Midlands weather forecast. 11.35: Selections. 11.55: Tasmanian Stations' 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information, mail notices, housewives' guide. 12.8: Record recital. 12.30: News service, announcements. 12.40: Record recital. 1.5: British official wireless news, railway auction sales. 1.10: Record recital. 1.30: Close down. 3.0: G.P.O. clock chimes the hour. 3.1: Record recital. 3.4: Weather information. 3.5: Record recital. 4.15: Personalities; readings. 4.30: Close down. 6.15: Children's hour with "Uncle David" and "The Storey Lady." 7.15: Sid Jones will speak on "Football." 7.30: 7ZL broadcast a Studio Concert. 7ZL artists. 7.37: Ruby Wallace, soprano. "The Winds of the South" (Scott). "The Little Brown Bird" (Del Riego). 7.45: Ed. Brooker, Aeolo solos. "Lieder ohne Worte" (Mendelssohn). The Rosary (Nevini). 7.52: Will Thompson, baritone. "Drake Goes West." "I Hear You Calling Me." 8.8: Ruby Wallace, soprano. "Four Leaf Clover" (Willeby). "Daddy's Sweetheart" Lehmann. 8.15: Ed. Brooker, Aeolo solos. "The Broken Melody." "Absent" (Metcalfe). 8.25: Will Thompson, baritone. "Macushia." "The Lute Player." 8.45: J. M. Counsel. "The History and Development of Music." 9.45: News session. 10.0: G.P.O. clock chimes the hour. 10.1: Close down.

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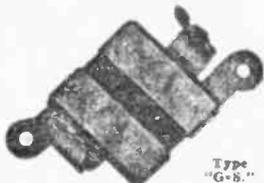
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ELECTRAD

Local Programmes, Sun., Sept. 15

2FC

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 442 Metres.)

THE CHURCH HOUR—10.0 a.m. to 12.30 p.m.
10.0: Announcements.
10.5: Studio music.
10.30: This morning's news, from "Sunday Sun," "Sunday Times," and "Truth."
10.35: British Official Wireless Press.
10.45: Musical items.
11.0: From Petersham Congregational Church: Morning Service, conducted by Rev. A. P. Doran.
Call to Worship.
Invocation and Lord's Prayer.
Hymn, "Rise, My Soul, Adore Thy Maker."
Psalm 103.
Solo and Chorus.
Lesson—John, 1 Chapter.
Hymn—"Our Blest Redeemer."
Prayer.
Anthem.
Hymn, "Lord of Life and King of Glory."
Sermon.
Hymn—"Take My Life and Let It Be."
Benediction.
12.15: Music.
12.30: Close.

AFTERNOON CONCERT—3.0 p.m. to 4.30 p.m.

3.0: From the School of Arts, Bathurst: The Bathurst District Band, conducted by S. Lewins:—
(a) March, "Old Regiment" (Thomas).
(b) Overture, "Light Cavalry" (Suppe).
(c) Fantasia, "Classic Gems" (arr. Rimmer).
(d) Selection, "Memories of Britain" (arr. Rimmer).
(e) Trombone Solo—Soloist, Mr. L. Clarke "The Winning Spirit" (Clough).
(f) Fantasy Overture, "John o' Gaunt" (Rimmer).
(g) March, "Northumbrian" (Rimmer).
4.0: Austradio Musical Reproduction.
4.30: Close.

EVENING PROGRAMME—6.0 p.m. to 10.30 p.m.

6.0: From the Bathurst Cathedral: Organ Recital by Mr. F. M. Johnstone—
(a) "Toccata and Fugue in D Minor" (Bach).
(b) "Madrigal" (Lemare).
(c) "Minuet and Trio" (Faulkes).
(d) Contralto Solo, Mary Howell—"O Thou that Tellest," from "Messiah" (Handel).
(e) "Turkish March," from "Ruins of Athens" (Beethoven).
(f) "Coronach" (Barrett).
(g) "Polonaise. A Major" (Lemare-Chopin).
6.40: An Address by a Prominent Personality.
7.0: A Recital of Grand Opera—"Pagliacci"—arranged by Madame Evelyn Grieg.
8.0: Ted Henkel's Capotollans, with Fred Scholl at the Wuritzer.
9.0: The Country Man's Weather Session—
(a) New South Wales Forecasts.
(b) Inter-State Weather Synopsis.
10.0: Meditation music.
10.30: Close. National Anthem.

2BL

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 353 Metres.)

MIDDAY SESSION, 10.55 a.m. to 3 p.m.
10.55: Announcements.
11.0: From All Saints' Cathedral, Bathurst. The morning service, conducted by the Sub Dean of Bathurst, Rev. Canon Holmes.
Voluntary.
The Prayer Book Service.
Te Deum, by Steane, in F.
Anthem, "Hymn to the Trinity" (Tchaykowsky).
Hymn.
Sermon, Rev. Canon Holmes, Sub Dean.
Hymn.
Blessing.
12.15: From the Studio. Musical items
12.30: News from the "Sunday Sun," "Sunday Times," and "Truth."
12.38: Austradio Musical Reproduction.

2.0: From the Grand Opera House, Sydney. A lecture on "Christian Science," by the Hon. William E. Brown, C.S.B., member of the Board of Lectureship of the Mother Church, The First Church of Christ, Scientist, in Boston, Massachusetts.
3.0: Close.

LATE AFTERNOON, 4.30 to 6 o'clock.

4.30: From the Capitol Theatre.
Organ Recital by J. Knight Barnett.
4.50: Amy Ostinga, contralto.
(a) "Morning" (Oley Speaks).
(b) "Trees" (Rasbach).
(c) "Only the River Running By" (Hopkins).
4.57: Organ Recital by J. Knight Barnett.
5.17: Raymond Beatty, basso.
(a) "Rose of My Life" (Rose).
(b) "Sally Horner."
5.24: Organ Recital by J. Knight Barnett.
5.44: Amy Ostinga, contralto.
(a) "The Nightingales of Lincoln's Inn" (Oliver).
(b) "O Western Wind" (Brahe).
5.51: Raymond Beatty, basso.
(a) "The Floral Dance" (Moss).
(b) "Believe me if all those endearing young charms" (Moore).

EVENING SESSION, 6 p.m. to 10 p.m.
6.0: For children in hospital. Session conducted by Uncle Steve, assisted by Aunt Goodie.

6.50: Organ solos.
7.0: From the Lyceum, Central Methodist Mission. The evening service, conducted by Rev. H. C. Foreman.
8.30: Relay from 3LO, Melbourne. The State Theatre's Sunday Night Musical Ensemble.
Stan. Porter's Symphony Orchestra.
Bob M'Questen's Band.
Frank Lanterman at the Grand Organ.
And Company of Broadcasting Vocalists and Instrumentalists.
10.0: Close. National Anthem.

2GB

Theosophical Broadcasting Station, 29 Bligh St. Sydney. (Wavelength, 316 Metres.)

9.0: Address by Miss Mary Rivett. 9.30: Address by Mr. Victor E. Cromer. 10.15: Organ music from St. Alban's Church, Regent Street, Sydney. 10.30: Morning service from St. Alban's Church, Regent Street, Sydney. 12 noon: Music. 12.30: Close down. 3.0: Musical Session. 5.30: Children's Session by Uncle George. 7.0: Music. 7.45: Lecture from Adyar House. 8.15: Concert from Adyar House by courtesy of Suttons, Ltd., player piano solo. 8.23: Miss Maesmore Morris, contralto. 8.30: Mr. Gregory Valentine, violinist. 8.38: Mr. Austin Punch, baritone. 8.45: Miss Elsie Peerless, soprano. 8.52: Player piano solo. 9.0: Weather report. 9.1: Miss Maesmore Morris, contralto. 9.8: Mr. Austin Punch, baritone. 9.15: Mr. Gregory Valentine, violinist. 9.27: Miss Elsie Peerless, soprano. 9.30: Address by Mr. Victor E. Cromer. 9.45: Close down.

2UW

Radio Broadcasting, Ltd., Paling's Building, Ash St. Sydney. (Wavelength, 367 Metres.)

10.3 a.m.: Music and request numbers. 1 p.m.: Close down. 5.30 p.m.: Children's Hour, conducted by Uncle Jack. 6.30: Close down. 7.0: Musical programme. 10.30: Close down.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra. Sydney. (Wavelength, 293 Metres.)

MIDDAY SESSION
11.0: Mass. 12.30: Orchestral and vocal music. 1.0: Close down.

EVENING SESSION
6.0: Music from Catholic Studio. 6.5: Session arranged by Rev. Father T. Walsh, S.J. 6.30: Music. 6.35: "Question Box" talks arranged by Dr. L. Rumble, M.S.C. 7.30: Announcements. 7.33: Evening devotions. 8.30: Overture, "Faust." 8.39: Vocal and instrumental concert. 10.15: Close down.

Interstate Programmes, Sun., Sept. 15

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 371 Metres).

MORNING SESSION.

10.0: Melbourne Observatory time signal. 10.1: A special programme of reproduced music. 10.40: British official wireless news; Items of Interest. 10.44: Express train information. 10.45: Bells of St. Paul's Cathedral. 11.0: Morning service from Cairns Memorial Church, East Melbourne—organ voluntary, Miss F. F. Thurman. "Intermezzo in D Flat" (Hollins); anthem, "Sun of My Soul" (Turner); sermon, Rev. F. A. Hagenauer, M.A. 12.30: Close down.

AFTERNOON SESSION.

3.0: Pleasant Sunday afternoon service from Wesley Church Central Mission, Lonsdale Street, Melbourne. 4.30: Close down.

THE CHILDREN'S CORNER.

6.0: "Brother Bill." 6.15: Birthday greetings, by "Billy Bunny." 6.30: A special recital of famous "Kidde" records. 6.45: "Billy Bunny" will entertain.

EVENING SESSION.

7.0: "The Dorian" Trio. 8.0: Sunday night ensemble.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 384 Metres).

MORNING SESSION.

11.0: Chimes. 11.1: Divine service from Wesley Church; sermon, Rev. J. H. Cain.

MIDDAY SESSION.

12.30: A studio programme of specially selected reproduced music. 2.0: Frank Lanterman at the Wurliizer. 3.0: Close down.

AFTERNOON SESSION.

4.30: A complete symphony, by reproduction.

THE WEEK'S GOOD CAUSE.

5.10: Sunday motoring accidents, Mr. E. J. Book (National Safety Council).

THE ARTISTIC REPRODUCTION OF ABSENT ARTISTS.

5.20: Cello recital, Casals. 5.28: Contralto solo, Madie Clara Butt. 5.36: Piano recital, Levitzky. 6.0: Quartette, Reno Male Quartette. 6.16: Tenor solo, Charles Hackett. 6.24: A special programme of request numbers. 6.45: What's on the air to-night? 6.47: St. Paul's Cathedral bells.

EVENING SESSION.

7.0: Divine service from Scots' Church, Collins Street, Melbourne. Sermon, Rev. Dr. W. Borland Subject, "The Vineyard on the Hill".

Anthem: "Hail Gladdening Light."

8.30: "The Rossignol" String Quartette—Quartette" (Haydn).

8.45: William Bossence, baritone—"How Great, O Lord" (Benedict). "Elegie" (Massenet).

8.52: Vassili Ister, piano—"Fairy Tale" (Medtner). "Prelude in G Minor" (Rachmaninoff).

9.0: Dorothy Humphries, soprano—"The Young Nun" (Schubert). "Hark, Hark the Lark" (Schubert). "The Blacksmith" (Brahms).

9.13: Sonata (Strauss). Cello and Piano—Opus. 1 (Strauss). Zisserman, cellist.

Vassili Ister, pianist.

9.26: William Bossence, baritone—"A Knight in Bechlehem." "O Si les Fleurs" (Massenet).

9.33: Schumann Quintette, played by "The Rossignol" String Quartette.

Pianist, Vassili Ister.

9.58: Weather information.

10.0: God Save the King.

3DB

The "Herald" Broadcasting Station, Flinders Street, Melbourne (258 metres).

AFTERNOON SESSION.

3.0: Chamber music. 3.45: A concert specially arranged for the hospitals, by the C.T.A. Concert Party. 4.30: Close down.

EVENING SESSION.

8.30: Requests. 8.0: The Astor Session, with Eddie Fitch at the Wurliizer, of the Regent Theatre. 10.0: God Save the King.

4QG

Queensland Government Radio Service, Brisbane. (Wavelength, 385 Metres).

MORNING SESSION.

The complete morning service will be relayed from the Albert Street Methodist Church. 12.15: Close down.

AFTERNOON SESSION.

3.15: The concert by the Brisbane Federal Band will be relayed from the Botanic Gardens (conductor, W. H. Davis). 4.30: Close down.

EARLY EVENING SESSION.

6.0: Stories and greetings to little listeners, and replies to letters.

NIGHT SESSION.

7.0: Children's service, from Albert Street Methodist Church. 7.30: Evening service. At the conclusion of the church service the concert by the Brisbane Municipal Concert Band will be relayed from Wickham Park. 9.30: Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide. (Wavelength, 409 Metres).

MORNING SESSION.

10.45: Carillon of bells from the Adelaide Town Hall. 11.1: Service from Flinders-street Baptist Church. 12.10: British official wireless news. 12.15: Close down.

AFTERNOON SESSION.

3.0: Chimes. 3.1: A pleasant Sunday afternoon service from Maughan Church, Franklin-street. 4.0: Close down.

EVENING SESSION.

6.0: Chimes. 6.1: Birthday greetings. 6.15: "The Bird Lady" and "The Sunshine Songsters," will entertain the children. 6.45: Church Choir numbers. 7.1: Service from Rose Park Congregational Church.

NIGHT SESSION.

8.20: Announcements.

8.30: The Station Quartette—"Scene d'Allet" (Logan). Melodie, "By Firelight" (St. Clair).

8.40: Linda Wald, soprano—"Heart's Desire" (H. Fraser Simson). "Songs my Mother Taught Me" (Dvorak).

8.47: Tom King, pianist—"Southern Melody," "Virginia Rhapsodie" (Hadyu Wood).

8.54: The Madrigal Singers—"My Boy Billie" English Folk Songs. Oh, no, John.

9.1: The Station Quartette—"Selection," "Terese Del Riego's Songs."

9.11: Gordon Hele, bass—"Adagio" (Ries).

9.25: The Madrigal Singers—"Swing Low Sweet Chariot" (arranged by Horace Perkins). "Gossip Jane."

9.32: The Station Quartette—"Anitra's Dance and Death of Ase from Sulu" (Grieg).

9.40: Rev. Ph. B. Zweck of the Lutheran Mission will speak on "Self Denial."

9.50: Geoff Goldsworthy, "Oelst"—"Air" (Matheson). (Schumann).

9.55: "The Advertiser" General News Service. Announcements.

10.0: Close down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth. (Wavelength, 435 Metres).

EARLY MORNING SESSION.

10.40: Sporting resume. 10.50: Sunday news service. 11.0: Church service, Salvation Army Fortress. 12.30: Reproduced music. 1.0: Close down.

AFTERNOON SESSION.

3.0: Organ recital from Trinity Congregational Church. 5.0: Close down.

EVENING SESSION.

6.30: Children's session. 7.15: Talk, "What of Our Philosophy?" 7.30: Church service, Wesley Church. 8.45: Special musicale, arranged by Bert Howell, broadcast from Ambassador's Theatre. Including items by the orchestra and Wurliizer organ, and the supporting vocalists, Ethel Treadgold and Phyll Francis. 10.30: Close down. God Save the King.

7ZL

Tasmanian Broadcasters Pty., Bursary Bldgs., Elizabeth St., Hobart. (Wavelength, 516 Metres).

10.45: Bells from Trinity Church, Hobart. 11.0: Morning service from Chalmers Presbyterian Church, Hobart. 12.15: Close down. 3.30: From the Studio, a concert programme arranged by The Pleasant Sunday Afternoon Association. 4.30: Close down. 6.15: Children's chorus singing. Conductor, Trevor M. Morris. 6.45: Bertha Scholey Brammhall will read a poem to the wee folk. 7.0: Evening service from St. David's Cathedral, Hobart. 8.25: From the Studio. A programme of sacred and classical music, arranged by James Counsel. 9.45: News session. 9.50: Close down.

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Local Programmes, Monday, September 16

2FC

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 442 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben," and meteorological information for the man on the land.
7.3: This morning's news from the "Daily Telegraph Pictorial."
7.8: Austradio Musical Reproduction.
7.45: Mails and shipping.
7.48: What's on To-day?
7.50: Children's birthday calls.
8.0: Music from the Studio.
8.15: Close.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
10.32: A.B.C. Racing Observer.
10.45: Recital on the grand organ by Horace Weber.
11.0: Household Helps—Cooking, by Miss Ruth Furst.
11.10: Cables—A.P.A. and "Sun"—"Herald" News Service. British Official Wireless Press.
11.15: Morning Devotion.
11.30: Austradio Musical Reproduction.
12.0: "Big Ben." Stock Exchange and metal quotations.
12.5: V. C. Bell will speak from The Public Forum.
12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board.
12.30: Close.

THE LUNCH HOUR—1.0 p.m. to 2.30 p.m.

- 1.0: Lunch to Music with the National Broadcasting Orchestra.
2.0: Stock Exchange, second call.
2.2: A Glance at the Afternoon "Sun."
2.7: Popular Education: W. S. Reay.
2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: The 2FC Instrumental Trio.
2.42: Roger Jones, baritone—
(a) "New Lamps for Old" (Tennent).
(b) "My Little Garden World" (Carew).
2.49: Gladys M'Master, pianist—
(a) "Etude" (Chopin).
(b) "Nocturne" (Sibelius).
(c) "Dance des Clochettes" (Rebikoff).
2.56: Annie Hughes, in a sketch—
"Mother and Daughter" (Hughes).
3.3: Peggy Bell, soprano—
(a) "If My Songs were only Winged" (Hahn).
(b) "Fragile Things" (Phillips).
(c) "May Dreams" (Phillips).
3.10: The 2FC Instrumental Trio.
3.20: Roger Jones, baritone—
(a) "Fairy Lights" (Lohr).
(b) "Our Little Home" (Coates).
3.27: Annie Hughes, in a sketch—
"Miss Tittle Tattle" (Hughes).
3.34: Gladys M'Master, pianist—
(a) "Valse" (Chopin).
(b) "Valse Suite" (Coleridge Taylor).
(c) "Valse Suite" (Coleridge Taylor).
3.42: Peggy Bell, soprano—
(a) "O. Ship of My Delight" (Phillips).
(b) "The Lass with the Delicate Air" (A.L.).
(c) "My Castles" (Del Riego).
3.49: The 2FC Instrumental Trio—
4.0: An Afternoon Story.
4.15: The 2FC Instrumental Trio.
4.28: Stock Exchange, third call.
4.30: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies' "Good-night" Stories, told by the "Hello Man," assisted by Aunt Eily.
6.45: The National Broadcasting Orchestra, will play Dinner Music.
7.30: A.B.C. Sporting Service.
7.37: Special Country Session. Stock Exchange Resume. Markets. Weather Forecast. Late news service from the "Sun." Truck Bookings.
7.58: To-night's Programme.

THE EVENING PRESENTATION—8 p.m. to 11.30 p.m.

- 2FC's programme to-night is along classical lines, and will appeal to lovers of good music. 2BL's big feature—description of the wrest-

ling match—will please those who are sports lovers.

- 8.0: First broadcast appearance of the world-famous pianist, Arthur Benjamin.
8.30: From the Walshaw Memorial Hall, Bathurst—Concert Programme arranged by the Bathurst Musical and Dramatic Society
The Bathurst Gleemen—
"Serenade" (Beschnitt):
Ernest Long, violinist—
(a) "La Preclieuse" (Couperin-Kreisler).
(b) "Variations" (Tartini-Kreisler).
Gladys Verona, soprano—
"Una Voce Poco Fa" (Rossini).
Ellis Price, entertainer—
"Orange Blossom" (Rohmer).
Wilfred Thomas, basso—
(a) "Shepherd, See Thy Horse's Foaming Mane" (Korbay).
(b) "Long Ago, when I was Free" (arr. Korbay).
(c) "List to Me, Rosebud" (Korbay).
9.0: From the Studio: The Country Man's Weather Session—
(a) New South Wales Forecasts.
(b) Inter-State Weather Synopsis. Announcements.
9.10: From the Walshaw Memorial Hall, Bathurst: Second half of Concert Programme arranged by the Bathurst Musical and Dramatic Society—
The Bathurst Gleemen—
"The Merry Frogs" (Spelser).
Gladys Verona, soprano—
(a) "Phyllis has Such Charming Graces" (Young).
(b) "Shepherd, Thy Demeanor Vary" (Brown).
Ernest Long, violinist—
(a) "Melodie" (Gluck).
(b) "Capriccio Valse" (Wieniawski).
Wilfred Thomas, basso—
"The Hanging of Danny Deever" (Damosch).
Ellis Price, entertainer—
"How He Recited 'The Birth of the Opal'" (Price).
Gladys Verona and Wilfred Thomas, duet—
"La Ci Darem" (Mozart).
10.0: C. N. Baeyeritz, continuing his series "Great Humorists I Have Met"—Captain Stanley Garston".
10.15: Announcements.
Late Official Weather Forecast.
10.20: From the Oriental Cafe: Sydney Simpson's Syncopaters in Dance Music.
11.30: Close. National Anthem.

2BL

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 353 Metres).

OPENING SESSION, 8.15 a.m. to 11 a.m.

- 8.15: G.P.O. chimes.
Music for every mood.
8.45: Meteorological data for the country.
8.50: Austradio Musical reproduction.
9.30: British official wireless news.
9.35: New music.
10.5: News from the "Daily Telegraph Pictorial."
10.10: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
10.30: Austradio Musical reproduction.
10.45: This morning's story.
11.0: G.P.O. chimes; close.

MIDDAY SESSION, 12 noon to 2.30 p.m.

- 12.0: G.P.O. chimes.
Announcements.
12.2: The National Broadcasting Orchestra
1.0: Afternoon news from the "Sun."
1.5: Studio music.
1.15: Women's "Interest Talk." Dr. Sandford Morgan, "Hygiene," especially for girls working in offices.
1.30: Austradio Musical reproduction.
2.0: J. Knight Barnett at the "Wurlitzer."
2.12: Studio music.

AFTERNOON ENTERTAINMENT, 2.30 p.m. to 5.45 p.m.

- 2.30: Business efficiency talk by C. R. Hall.
2.45: "The Magic Carpet," by C. Price Conigrave, "Cave Exploring in Western Australia."
3.0: From the ballroom of the Oriental, Sydney Simpson's Syncopaters in Dance Music.

3.12: From the Studio, Esther Gunton, mezzo.

- (a) "The House of Happiness" (Melville Hope).
(b) "Where is the song of songs for me" (Berlin).
(c) "Here's to Love" (Rubens).
3.19: A Musical Moment.
3.22: From the ballroom of the Oriental: Sydney Simpson's Syncopaters in Dance Music.
3.32: From the Studio, Bob Graham and his Spanish Guitar.
(a) "Think of Me" (Wimbrow).
(b) "Mother I still have you" (Jolson and Silvers).
3.39: A Dance Number.
3.42: From the Ballroom of the Oriental, Sydney Simpson's Syncopaters in Dance Music.
3.52: From the Studio, Nellie Ferguson, monologues.
(a) "That's you, Baby" (Conrad, Mitchell, and Götter).
(b) "The Song I Love" (De Sylva, Brown, and Conrad).
3.59: Popular melodies.
4.2: From the ballroom of the Oriental, Sydney Simpson's Syncopaters in Dance Music.
4.12: From the Studio, Esther Gunton, mezzo.

- (a) "I love the Moon" (Rubens).
(b) "You were meant for me" (Brown).
(c) "Pale Moon" (Knight Logan).
4.19: Bob Graham and his Spanish Guitar.
(a) "Under the Moon" (Shay).
(b) "Louise" (Whiting).
(c) "Nothin'" (Handman).
4.26: From the ballroom of the Oriental, Sydney Simpson's Syncopaters in Dance Music.

- 4.36: From the Studio, "Nellie Ferguson, monologues.
(a) "Do Something" (Green and Stept).
(b) "That's how I feel about you" (Davis and Götter).
4.45: "The Trade Hour" demonstration music.
5.45: Weather information; close.

THE DINNER HOUR, 6.15 p.m. to 7.55 p.m.

- 6.15: The National Broadcasting Orchestra.
6.45: The A.B.C. "Younger Set" Session. The A.B.C. Boys' Aero Club, conducted by Mr. Norman Lyons.
7.5: Studio music.
7.15: The Country Man's Market Session: Wool, wheat, stock, farm produce, fruit, vegetables, poultry markets; truck bookings.
7.30: The National Broadcasting Orchestra.
7.45: Austradio Musical Reproduction.
7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION, 8 to 10.30.

- The feature of to-night's programme is the description of the big wrestling contest which commences at 8.30. 2FC have just as important a feature, but it offers sharp contrast to the listeners whose tastes lean towards sport. Music lovers will read with real appreciation of the first broadcast appearance of Arthur Benjamin, world famous Australian pianist, who will give a recital between 8.0 and 8.30 p.m. At 8.30 a concert from the Walshaw Memorial Hall, Bathurst, will be broadcast.
8 p.m.: G.P.O. chimes.
The Three Lads, vocal trio.
(a) "My blackbirds are bluebirds now" (Caesar and Friend).
(b) "A precious little thing called love."
(c) "Sonny boy."
(d) "There's a rainbow round my shoulder" (Jolson, Rise, and Breyer).
8.10: Frank Ryan, entertainer.
(a) "Orange Peel" (Clarke).
(b) "Little Jean" (Hazell).
8.20: Carlton Fay, pianist.
(a) "Running up and down" (Cohn).
(b) "Lady fingers" (Zimmerman).
(c) "Coaxing the piano" (Confrey).
8.30: From the Stadium: Description of the wrestling contest by the A.B.C. wrestling expert.

10.0: From the Studio, The Three Lads, vocal trio.
 (a) "Broadway Melody" (Freed).
 (b) "Girl of My Dreams" (Clapp).
 (c) "Think of me thinking of you."
 (d) "Ten little miles from Town" (Kahn)
 10.10: Carlton Fay, pianist.
 (a) "Contrasts" (Sims)
 (b) "Improvisation" (Sims).
 10.18: Frank Ryan, entertainer.
 Selection of stories.
 10.25: Official weather forecast — Metropolitan and country.
 Late news from the "Sun."
 10.30: Close; National Anthem.

2GB

Theosophical Broadcasting Station, 29 Bugh St., Sydney. (Wavelength, 316 Metres).

10.0: Music. 10.10: Happiness Talk by A. E. Bennett. 10.20: Music. 10.30: Women's Session by Miss Helen J. Beegling. 11.30: Music. 11.45: Close down. 2.0: Music. 2.5: Women's Radio Service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Address. 3.30: Close down. 5.30: Children's Session by Uncle George. 7.0: Music. 7.45: Feature story. 8.0: Miss Edna Lister, contralto. 8.7: Symphony Orchestra. 8.15: Mr. William Green, tenor. 8.22: Instrumental Trio. 8.30: Mr. Jack Win and Mr. Heath Burdock, humor. 8.35: Miss Doris Robinson, soprano. 8.45: Address. 9.0: Weather report. 9.1: Symphony Orchestra. 9.10: Miss Edna Lister, contralto. 9.20: Instrumental Trio. 9.30: Mr. Heath Burdock, Shakespearean recital. 9.40: Symphony Orchestra. 9.50: Miss Doris Robinson, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Palling's Building, Ash St., Sydney. (Wavelength, 267 Metres).

MIDDAY SESSION.

12.30: Request numbers. 1.0: G.P.O. clock and chimes. Music. 1.15: Talk on Homecraft by Pandora. 1.40: Music and request numbers. 2.30: Close down. 4.30: Musical programme.

EVENING SESSION.

5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close down. 7.0: G.P.O. clock and chimes; request numbers. 7.45: Radio talk by Mr. E. Hornfray. 8.0: Chamber music recital. 9.0: G.P.O. clock and chimes; comments on Foreign Affairs, by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close down

2KY

Trades and Labor Council, Goulburn St., Sydney. (Wavelength, 280 Metres).

MORNING SESSION

10.0: Tune in to the ticking of the clock. 10.3: Popular fox-trots. 10.15: Hawaiian steel guitar selections. 10.30: Women's Session, Home Hints and Information, conducted by Mrs. Gray. 11.0: A few laughs. 11.5: pianoforte selections. 11.15: Calls and announcements. 11.20: Musical interlude. 11.30: Request numbers. 11.40: Music and vocal numbers. 11.55: Where to go to-night. 12.0 noon: Closing announcements.

CHILDREN'S SESSION

6.0: Birthday calls, request numbers and kiddies' entertainment, Aunt Jemima and Uncle Bert.

EVENING SESSION

7.0: Musical interlude. 7.15: Dance music. 7.45: Militant Women's Group. 8.0: Overture. 8.8: Tenor solos, Mr. A. Hillman. 8.13: Dance music. 8.30: Request numbers. 8.45: Soprano solos, Miss Wright. 9.0: Novelty interlude. 9.10: Request numbers. 9.30: Selection of latest Brunswick, Columbia, Parlophone, Regal and Golden Tongue records. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney. (Wavelength, 293 Metres).

EARLY MORNING SESSION

7.15: Breakfast Time Hour orchestral music. 8.30: Weather forecast. Close down.

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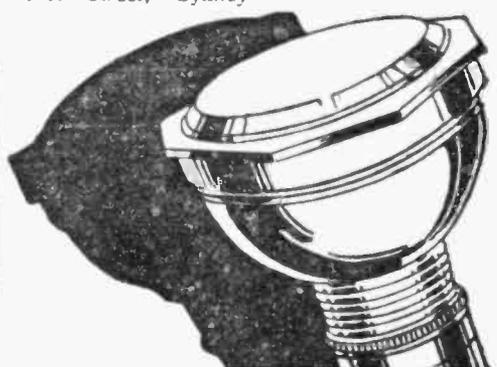
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Interstate Programmes, Monday, September 16

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 371 Metres).

EARLY MORNING SESSION.

7.0 to 8.15: See Friday.

MORNING SESSION.

10.30: Current happenings in sport, by Mel. Morris. 10.45: Melody broadcast. 12.0: Melbourne Observatory time signal. 12.1: Melody broadcast. 12.15: News service. British official wireless news. Corn Exchange midday report. Newmarket stock sales. Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION.

1.0: Melbourne Observatory time signal. Stock Exchange information. Meteorological data. Weather forecast for Victoria, New South Wales, South Australia, and Tasmania. Ocean forecast, river reports, and rainfall. 1.30: Luncheon speeches from Constitutional Club luncheon.

EDUCATIONAL SESSION.

2.0: Boys and Girls of Other Days, Miss D. Baington. 2.15: Musical interlude. 2.20: Science in Everyday Life, Dr. Loftus Hills, D.Sc. 2.25: Musical interlude. 2.40: Our Australian Writers, (7) Dowell O'Reilly, Mr. Percival Serle. 2.55: Musical interlude. 3.0: Melbourne Observatory time signal.

THE RADIO MATINEE.

3.0: "A.B.C. Troubadours," "Broadway Melody" (Brown), "You Were Meant For Me" (Brown), 3.6: R. Nicholson, baritone, "Drake Goes West" (Sanderson), "The Scarecrow" (Davies), 3.13: Nat Hanley and a piano—a little novelty entertainment. 3.18: A playlet, "The Step-mother," by Arnold Bennett, produced by Catherine Neill. He, Thomas Leslie, She, Catherine Neill. 3.30: A.B.C. Troubadours, novelty number, "She's Funny That Way" (Moret), 3.38: Jean Anthony, contralto, "Mornings" (Speaks), "The Star" (Rogers), 3.43: Nat Hanley and a piano, something different. 3.50: R. Nicholson, baritone, "Tommy Land" (Hagerton), Selected. 3.57: A.B.C. Troubadours, "Wob-a-ly Walk" (Green), "Blue Hawaii" (Bauer), 4.6: Jean Anthony, contralto, "I Be Hopin' You Remember" (Radcliffe-Hall), Selected. 4.13: Alf. Lawrence and Neil Crane, specialty entertainers. 4.22: A.B.C. Troubadours, novelty number, "Among My Souvenirs" (Nichols). 4.30: Close down.

THE CHILDREN'S CORNER.

5.45: "Billy Bunny" in a funny duo. 6.0: Musical interlude. 6.5: Birthday greetings by "Billy Bunny."

EVENING SESSION.

6.20: Illustrations of the forthcoming examinations in music, conducted by Lindsay Biggins. 6.55: Musical interlude. 7.0: Melbourne Observatory time signal. 7.1: Countryman's session. 7.25: Recent discoveries and inventions. 7.40: News service. 7.45: The World's Kaleidoscope, Prof. K. H. Bailey, B.A. LL.B.

NIGHT SESSION.

8.0: National Broadcasting Orchestra, under direction of Wm. G. James, Conductor, Percy Code—Overture, "Il Guarany" (Comes).

8.10: Etta Bernard, contralto—"Che Faro" (Gluck).
"Sapphic Ode" (Brahms).
8.17: Tasma Tiernan, cello—"Ave Maria" (Schubert).
8.22: Norman Bradshaw, tenor—"A Song of Sleep" (Somerset).
"An Eskisay Love Lilt" (Kennedy Fraser).

SOMEWHAT LIGHTER.

8.30: Hilo Duo—Songs of the Southern Seas.
8.37: Stan. Foley and Keith Conly—"Just Poolin'."
8.44: Edna Davis will entertain with her xylophone.
8.50: Orchestra—Selection from the musical comedy, "Sometime" (Primi).
9.0: Royal Victorian Liedertafel (conducted by J. Sutton Crow).

Unaccompanied part-songs—
(a) "Lullaby" (Williams).
(b) "Peace Breathes Along the Shade" (Burghett).

Part-songs—
(a) "Vintage Song" (Mendelssohn).
(b) "Turkish Cupbearer's Song" (Mendelssohn).

Part-songs—
"Oath of the Forest" (De Rille).
Unaccompanied part-songs—
(a) "Last Night" (Kjerulf).
(b) "The Forest" (Haezer).
Orchestral Tunes (Bantock)—
(a) "Foot Saddle to Horse"
(b) "Marching Along."
(c) "Give a Rouse."

FROM THE STUDIO

9.30: Orchestra—Suite, "Carmen" (Bizet).
9.40: Etta Bernard, contralto—"Mother Darling." Request item.
9.47: Edna Davis—Xylophone selections from popular hits.
9.52: Norman Bradshaw, tenor—"Sweet Evenings Come and Go, Love" (Coleridge-Taylor).
"One Golden Day" (Foster).
10.0: Orchestra—Selections from musical comedy.
10.7: Stan. Foley and Keith Conly—"Food for Laughter."

10.14: Hilo Duo—Slumber Melodies.
10.20: Meteorological information. British official wireless news. Items of interest.
10.30: "The Rex" Dance Band.
11.30: God Save the King.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 484 Metres).

MORNING SESSION.

8.15 to 11.0: See Friday.

MIDDAY SESSION.

12.0: Chimes. 12.1: Food and cookery—Eggs, their values and uses, Miss Kathleen Benfield. 12.15: Fifteen minutes' syncopeation. 12.30: Luncheon music, supplied by the National Broadcasting Orchestra, under direction Wm. G. James, Conductor. Percy Code. 2.0: Chimes.

AFTERNOON SESSION.

2.0: Syncopeated pianism, Vincent Lopes. 2.6: Popular airs, Little Jock Little. 2.12: Studio stunts, A melody. 2.23: A tuneful piano ballad, Victor Arden. 2.34: A little comedy, with Vaughan de Leath. 2.40: Concert syncopeation, Paul Whiteman and his band. 2.48: Australia's melody-maker, Len Maurice. 2.54: Ipana Troubadours. 3.0: Request music.

MAINLY FOR WOMEN.

3.20: Your Clothes, Miss Ruth Bunting. 3.35: Musical interlude. 3.40: Your Garden—the color scheme in the garden. 3.55: Musical interlude. 4.0: Travelling Abroad, Through Feminine Eyes, Mrs. Maurice Posner. 4.15: Reproduced music. 5.0: G.P.O. chimes; reproduced music. 5.30: Weather data. 5.45: Close down.

EVENING SESSION.

6.15: Dinner music, supplied by the "Troubadours." 7.30: What's on the air to-night? 7.32: Sporting results. 7.35: Latest musical releases. 8.0: G.P.O. chimes.

NIGHT SESSION.

8.0: A sixty-minute Revue, by Alfred Lawrence and his company. One hour of glamor and gaiety. A talk on literature.

9.0: Recent Books of Note—
Mr. A. A. Phillips, B.A.
9.15: "The Troubadours"—
"She's Funny That Way" (Moret).
9.20: Lillane Gay, soprano,
"Solveig's Song" (Grieg).
"The Flower Song" from "Faust."
9.27: A.B.C. Troubadours—
Saxophone solo, selected,
A. Urquhart.
9.30: Ted Nelson will entertain at the piano.
9.37: A.B.C. Troubadours—
"Tenderly" (Layman).
9.42: One-act Play—
"Domestic Bliss."

Produced by Mr. and Mrs. John Hopkins.
Characters—
Husband John H. Hopkins
Wife Mrs. John Hopkins
Scene, A Breakfast Room.
10.7: Weather data and "Herald" news
10.12: Lillane Gay, soprano—
"Only for Thee" (Tschakowsky).
"The Silver Ring" (Chaminade).
10.20: Ted Nelson—
Songs and novelties at the piano.
10.35: A.B.C. Troubadours—
"Sally of My Dreams" (Kernell).
10.30: God Save the King.

3DB

The "Herald" Broadcasting Station, Flinders Street, Melbourne. (255 Metres).

MORNING SESSION.

11.0: Thelma Ready's Band, transmitted from the Auditorium. 12.0: Community Singing, transmitted from the Auditorium; conductor, G. J. Mackay; accompanist, Rev. Brown. 1.45: Close down.

AFTERNOON SESSION.

2.15: Vern Buck and his orchestra—"My Suppressed Desire." 2.30: Jesse Crawford (organ), "High Hats." 3.0: Atwater Kent Radio Hour—sponsored by A. G. Healing, Ltd., and E. T. Muir. 4.0: Close down.

EARLY EVENING SESSION.

5.30: Budapest Philharmonic Orchestra—"Rakoczy March." 6.0: Peter Dawson (baritone)—"The Kerry Dance" (Molloy). 6.30: Plaza Theatre Orchestra—"My Lady Dainty." 7.0: Meta Selmenayer (soprano)—"Alto a Cloud O'erspread the Heavens." 7.15: Market reports—John McNamara and Co. Pty. Ltd. 7.20: Neil Allen (organ)—"When Day is Done." 7.30: Market reports—Gippsland and Northern Co-operative Co., Ltd. 7.40: The Shannon Four—"The Old Oaken Bucket."

EVENING SESSION.

8.0: The Acolian Session. 8.30: J. F. Mitchell's sponsored programme. 9.0: The Herald Hour. 10.0: Periphone Military Band—"The Middy March." 10.30: Frank Westfield's Orchestra—"Birthday Serenade." 10.40: News. 10.45: God Save the King.

4QG

Queensland Government Radio Service, Brisbane. (Wavelength, 385 Metres).

For day session schedules see Friday.

NIGHT SESSION.

8.0: The 4QG Mouth-organ Band (conductor, J. Tyson)—

A group of numbers, including—
"Side By Side."
"Look in the Mirror."
"Believe Me If All Those Endearing Young Charms."
"Ice Cream."

8.10: Kathleen Kelly, soprano—
"April is a Lady" (Phillips).
8.15: The Mouth-organ Band—
"The West, West, and You."
Hymn (by request), "Nearer, My God, To Thee."
8.20: A short farewell vocal recital (request numbers) by Verna Morcom, soprano, including—
"Elizabeth's Greeting" (from "Tannhauser," Wagner).
"Author of All My Joys" (Gluck).
"Shepherd, Thy Demeanor Vary" (Brown).
"What Good is There?" (Henry John King).
"The Nightingale" (Kjerulf).
"Dawn" (Curran).
"Ah, fors' e lui" (from "La Traviata," Verdi).
8.35: The Mouth-organ Band—
"Take in the Sun."
"Sally of My Dreams."
8.41: Dulcie Dunlop and Neville Raymond—
"A Short Comedy," "The Second Honeymoon."

George Brown (the Husband), Neville Raymond. Betty Brown (his Wife) Dulcie Dunlop. 8.58: Margaret Felsman, contralto—
"I Look into Your Garden" (Wood).
9.0: Metropolitan weather forecast.
9.1: "The Studio Orchestra"—
Overture, "The Comedy Director" (Mozart).
9.8: Kathleen Kelly, soprano—
"The Nightingales of Lincoln's Inn" (Olliver).
9.12: Ben Cloirec, tenor—
"A Hunting Song" (Mayhew).
9.17: The Sandman and his Accordeon.
9.22: The Studio Orchestra—
Valse, "Mione" (Myers).
9.29: Margaret Felsman, contralto—
"Only the River Running By" (Hopkins).
9.33: H. Jackson, cornetist—
Solo, "Arbucklian Polka" (Hartman).
9.38: Ben Cloirec, tenor—
"The Irish Emigrant" (Barker).
9.45: The Studio Orchestra—
A quarter of an hour's dance music.
10.0: News supplied by the metropolitan dailies. Weather information. Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide. (Wavelength, 409 Metres).

MORNING SESSION

11.15 to 2.0: See Friday.

AFTERNOON SESSION

3.0 to 5.0: See Friday.

EVENING SESSION

6.0: Chimes. 6.1: Birthday greetings. 6.15: Children's request numbers. 6.30: Dinner Session. 7.0: Chimes. 7.1: Rev. G. E. Hale, B.A. will give a talk entitled "Everybody Happy." Senior Birthday League greetings. 7.8: 5CL's sporting service. General Market Report.

EVENING SESSION

7.25 P.M.: Rev. D. T. Ridding will give a talk entitled, "The Reason Why." 7.35: The 5CL Twinkler Boy's Club. An entertainment by "The Twinkler," Mr. F. J. Mills.

NIGHT SESSION

8.0: G.P.O. chimes.
8.1: 50 years ago to-day!
"A Glimpse into the Past."
8.10: Walter Barratt and His Maison Masters of Melody—
"The Iron Division."
"The Sun is at my Window" (Lewis).
"That's What Puts the 'Sweet' in Home Sweet Home" (Lowry).
8.20: Fred. Williamson, tenor—
"Serenade" (Toselli).
8.24: Walter Barratt and his Maison Masters of Melody—
"I'm on the Crest of a Wave" (de Sylva).
"Good Little Bad Little You" (Green).
"The Desert Song" (Romberg).
8.34: Rupert Hazell.
8.40: Walter Barratt and His Maison Masters of Melody—
"I Just Roll Along" (Trent).
"Just like a Melody Out of the Sky" (Donaldson).
"The Savoy American Medley" (Somers).
8.50: Elsie Day, soprano—
8.54: Walter Barratt and his Maison Masters of Melody—
"Here Comes the Showboat" (Rose).
"Weary River" (Clarke).
"The ToyMaker's Dream" (Golden).
9.0: Chimes.
9.1: Meteorological information, including Semaphore Tides.
9.2: Overseas grain report.
9.3: Extracts from "The Advertiser" News Service.
9.6: Walter Barratt and his Maison Masters of Melody—
"That's How I Feel About You" (Davis).
"Don't Keep Me in the Dark, Bright Eyes" (Weidling).
"Making Whoopee" (Donaldson).
9.15: Fred. Williamson, tenor—
"Homeward to You."
9.19: Walter Barratt and his Maison Masters of Melody—
"Blue Hawaii" (Baer).
"Chilli-Pom-Pom-Poe" (Bryan).
"Mistery Farm" (Walls).
9.29: Rupert Hazell will entertain you again.
9.35: Walter Barratt and his Maison Masters of Melody—
"Round and Round"

"Tell Her in the Moonlight" (Davis).
 "Ten Little Miles from Town" (Kahn).
 9.45: Elsie Day, soprano—
 Selected.
 9.49: Walter Barratt and his Maison Masters of Melody.
 "When Sweet Susie goes Steppin' By" (Kauffman).
 "Girl of My Dream" (Chapp).
 "If You Want the Rainbow."
 9.59: Johnnie Gardiner, banjoist of the Maison Band—
 Selected banjo solos.
 10.3: Walter Barratt and his Maison Masters of Melody—
 "There's a Rainbow Round my Shoulder" (Johnson).
 "My Mother's Eyes" (Baer).
 "I'm Bringing a Red Red Rose" (Donaldson).
 10.12: Fred Williamsop, tenor—"Oft in the Silly Night."
 10.15: News Session. News service. British Official Wireless News. Meteorological information.
 10.30: Walter Barratt and his Maison Masters of Melody—
 Request numbers.
 11.0: G.P.O. chimes.
 Close Down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth. (Wavelength, 435 Metres).

EARLY MORNING SESSION.

7.30: Town Hall chimes. 7.31: Meteorological report. 7.32: The day's maxim. 7.35: Early rising music (reproduced). 7.55: Mails and shipping intelligence. 8.0: What's on to-day? 8.5: Early rising music (reproduced). 8.22: Comments on news. 8.27: Features of to-day's programme. 8.30: Close down.

MORNING SESSION—TRADERS' DEMONSTRATION.

10.0: Town Hall chimes. 10.1: Popular music (reproduced). 10.15: Women's interest talk. 10.30: Organ recital from the Ambassadors—Jack Laing at the console of the Wurlitzer organ. 11.0: Close down.

MIDDAY SESSION.

12.30: Town Hall chimes. 12.31: Vocal recital (reproduced). 12.45: Special midday news service. 12.50: Items of interest. 12.58: Weather report. 1.0: Perth Observatory time signal. 1.1: Luncheon music by the National Broadcasting Orchestra. 2.0: Close down.

THE RADIO MATINEE.

3.0: Town Hall chimes. 3.1: Vocal recital (reproduced). 3.15: Captain Donald McLean. "The Sack of Panama." 3.30: Fifteen minutes with great artists (reproduced). 3.45: Talk of interest to women. "The National Council of Women." 4.0: Town Hall chimes. 4.1: Instrumental music (reproduced). 4.30: Vocal music (reproduced). 4.55: Features of to-night's presentation. 5.0: Close down.

EARLY EVENING SESSION.

5.45: Children's "Good-night" stories, by Uncle Bas and Auntie Max. 6.15: A.B.O. younger set session. Y.A.L. night. 6.30: Studio dinner music. 7.30: Weather report. 7.31: News service. 7.35: Special A.B.O. market reports. 7.40: Stock Exchange. 7.42: Features of to-night's presentation.

EVENING SESSION.

8.0: An hour for the lovers of music, arranged by the L.A.B. Club of Australia. 9.0: Weather report. 9.1: Captain Donald McLean. "The Notorious Captain Avery." 9.16: Gems from comic opera (reproduced). 10.15: Temple Court dance band. 11.0: Close down. God Save the King.

7ZL

Tasmanian Broadcasters Pty., Bursary Bldgs., Elizabeth St., Hobart. (Wavelength, 316 Metres).

11.36 a.m. Record recital. 11.34: Midlands weather forecast. 11.35: Record recital. 11.58: Tasmanian stations' 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information, mail notices, housewives' guide. 12.8: Record recital. 12.30: News service announcements. 12.40: Record recital. 1.5: British official wireless news, railway auction sales. 1.10: Record recital. 1.30: Close down. 3.0: Chimes. 3.1: Record recital. 3.4: Weather information. 3.5: Record recital and Player selections. 4.15: "Aunt Edna" will speak on "Frocks for Spring." 4.30: Close down. 6.15: Children's hour with "Uncle David." 7.10: Recorded music. 7.30: News session. 7.40: Under the auspices of the Tasmanian University. H. T. Parker, M.A. will speak on "Doing What you are Told: A Talk on Psychology." 7.50: Geo Collis will speak on "Physical Culture." 8.0: Chimes. 8.1: Record recital. 8.15: A concert programme arranged by Madame Helen George. 9.30: News session. 9.45: Record recital. 10.0: Chimes. 10.1: Close down.

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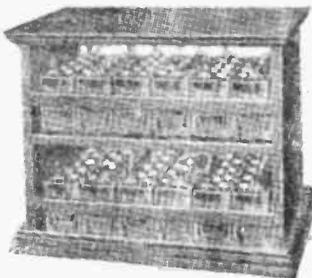
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Local Programmes, Tuesday, September 17

2FC

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 442 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
- 7.3: This morning's news from the "Daily Telegraph Pictorial."
- 7.8: Austradio Musical Reproduction
- 7.45: Mails and shipping.
- 7.48: What's On To-day?
- 7.50: Children's Birthday Calls
- 8.0: Music from the studio.
- 8.15: Close.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
- 10.32: Household Helps. Hints to Housewives, by Miss Ruth Furst.
- 10.45: Recital on the grand organ, by Horace Weber.
- 11.0: Household Helps. Hints to Housewives, by Miss Ruth Furst.
- 11.10: Cable, A.P.A. and "Sun"—"Herald" news service. British official wireless news.
- 11.15: Morning Devotion.
- 11.30: Austradio Musical Reproduction.
- 12.0: "B.G. Ben." Stock Exchange and Metal Quotations.
- 12.5: A Literary Talk, by C. N. Baeyer.
- 12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board
- 12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch to music, with the National Broadcasting Orchestra.
- 2.0: Stock Exchange, second call.
- 2.2: A Glance at the afternoon "Sun."
- 2.7: Popular Education. J. R. Kinghorne.
- 2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- Note: Race results from Gosford will be transmitted as received.
- 2.30: The 2FC Instrumental Trio.
 - 2.42: Anne Luciano, soprano—
 - (a) "The Dawn has a Song" (Phillips).
 - (b) "I Hear You Go By" (Wood)
 - 2.49: David McKissock, cellist—
 - (a) "Chant Sans Paroles" (Tschalkowsky).
 - (b) "Scherzo" (Kreisler).
 - 2.56: Dorothy Nall, monologues—
 - "In a London Crowd."
 - 3.3: The 2FC Instrumental Trio.
 - 3.15: Anne Luciano, soprano—
 - (a) "One Lone Star" (MacCunn).
 - (b) "Rosamund" (Forster).
 - (c) "Hushing Song" (Bath).
 - 3.22: Berenice Arthur, pianist—
 - (a) "Valse Chromatique" (Leschetizky).
 - (b) "Concert Study" (Liszt).
 - 3.32: David McKissock, cellist—
 - (a) "The Broken Melody" (Van Biene).
 - (b) "Gavotte" (Popper).
 - 3.39: Dorothy Nall, monologues—
 - (a) "Reflections of a Penny" (Sterndale Bennett).
 - (b) "Bush Christening" (Banjo Paterson).
 - 3.46: The 2FC Instrumental Trio.
 - 4.7: Berenice Arthur, pianist—
 - (a) "Valse Brillante" (Chopin).
 - (b) "Water Wagtail" (Scott).
 - 4.15: The 2FC Instrumental Trio.
 - 4.28: Stock Exchange, third call.
 - 4.30: Close.

THE EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies' "Good-night" stories told by Aunt Willa, assisted by Cousin Gwen and Cousin Clarice.
- 6.45: The National Broadcasting Orchestra will play dinner music.
- 7.30: A.B.C. sporting service.
- 7.37: Special country session. Stock Exchange resume. Markets. Weather forecast. Late news service from the "Sun." Truck bookings.
- 7.58: To-night's programme.

THE EVENING PRESENTATION—8 to 11.30 p.m.

In vivid contrast to the State-wide radio dance night, which 2FC features to-night, 2BL's progress programme offers a musical treat between 8 and 9.30, featuring the National Broadcasting Orchestra, solos by Muriel Lang, cellist; Vincent Aspey, violin-

- ist; Neville Amadio, flautist; and songs by Laurence Macaulay and Marjorie Allomes.
- 8.0: The Australian Broadcasting Dance Orchestra.
- 8.12: Lou James, comedian—
 - (a) "The Jewish Band" (Richards).
 - (b) "Cohen is Livin' the Life o' Reilly" (Yellen).
- (c) Monologues.
- 8.20: The Australian Broadcasting Dance Orchestra.
- 8.32: Rene Rich, violinist—
 - (a) "Hungarian Dance" (Brahms)
 - (c) "Medley of Scotch Airs."
- 8.39: The Australian Broadcasting Dance Orchestra.
- 8.51: Len Maurice, popular vocalist—
 - (a) "It Takes a Good Woman" (Ager).
 - (b) "Hungry Women" (Ager).
 - (c) "Rainbow Man" (Hanley).
- 8.58: The Country Man's Weather Session—
 - (a) "New South Wales Forecasts."
 - (b) Inter-State weather synopsis.
- 9.0: The Australian Broadcasting Dance Orchestra.
- 9.12: Maisie Ottey, novelty pianist—
 - (a) "Merry Mannikins" (Steiner).
 - (b) "Sonny Boy" (Jolsen).
 - (c) "Nobody's Fault but Your Own" (Noble).
 - (d) "A Bit of Honey" (Kremer).
- 9.19: The Australian Broadcasting Dance Orchestra.
- 9.31: Bernice Patterson, popular numbers—
 - (a) "Russian Moon" (Gusman).
 - (b) "In My Bouquet of Memories" (Akst).
- 9.38: The Australian Broadcasting Dance Orchestra.
- 9.50: Bernice Patterson, popular numbers—
 - (a) "Where is the Song of Songs for Me?" (Berlin).
 - (b) "Some Sweet Day" (Pollock).
- 9.57: The Australian Broadcasting Dance Orchestra.
- 10.15: Announcements.
- Late official weather forecast.
- 10.20: The Australian Broadcasting Dance Orchestra.
- 11.30: Close.
- National Anthem.

2BL

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 353 Metres).

OPENING SESSION, 8.15 a.m. to 11 a.m.

- 8.15: G.P.O. chimes. Music for every mood.
- 8.45: Meteorological data for the country.
- 8.50: Austradio musical reproduction
- 9.30: British official wireless news.
- 9.35: New music.
- 10.2: News from the "Labor Daily."
- 10.5: News from the "Daily Telegraph Pictorial."
- 10.10: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
- 10.30: Austradio musical reproduction.
- 10.45: This morning's story.
- 11.0: G.P.O. chimes. Close.

MIDDAY SESSION, 12 Noon to 2.30 p.m.

- 12.0: G.P.O. chimes. Announcements.
- 12.2: The National Broadcasting Orchestra.
- 1.0: Afternoon news, from "The Sun."
- 1.5: Studio music.
- 1.15: Women's "Interest talk," Sister Parry.
- 1.30: Austradio musical reproduction.
- 2.0: J. Knight Barnett, at the Wurlitzer.
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT, 2.30 p.m. to 5.45 p.m.

- 2.30: Business efficiency talk, by Fred Arlington Burke.
- 2.45: "The Magic Carpet," Tom Gurr, "Seychelles Isles—Mauritius."
- 3.0: Romano's Dance Orchestra, conducted by Bennie Abrahams.
- 3.12: From the studio. Olga Rasmussen, mezzo.
- 3.19: A popular melody.
- 3.22: Romano's Dance Orchestra, conducted by Bennie Abrahams.
- 3.32: From the studio. Edythe Cowley, entertainer.
- "A Touch of Flu" (Fisk).
- 3.38: Melody memories.
- 3.42: Romano's Dance Orchestra, conducted by Bennie Abrahams.
- 3.52: From the studio. Googs Hanlon, novelty pianist.

- (a) "I'll Always Be in Love With You" (Ruby Green and Stept).
- (b) "The Sun is at My Window" (Meyer).
- 4.0: Romano's Dance Orchestra, conducted by Bennie Abrahams.
- 4.12: From the studio. Olga Rasmussen, mezzo.
- 4.19: Googs Hanlon, novelty pianist.
- (a) "That's What Put the Sweet in Home, Sweet Home" (Lowry, Gordon and Newman)
- (b) "The Wedding March of the Painted Doll" (Brown)
- 4.26: Edythe Cowley, entertainer.
- (a) "Providing" (Paley).
- (b) "My Curly-headed Babby" (Clutsam).
- 4.34: Romano's Dance Orchestra, conducted by Bennie Abrahams.
- 4.45: From the studio. "The Trade Hour," demonstration music.
- 5.45: Weather information. Close.

THE DINNER HOUR, 6.15 p.m. to 7.55 p.m.

- 6.15: The National Broadcasting Orchestra.
- 6.45: The A.B.C. Younger Set session; the A.B.C. Girl Guides' Club, conducted by Miss Gwen Varley.
- 7.5: Studio music.
- 7.15: The Country Man's market session: Wool, wheat, stock, farm produce, fruit, vegetable, pig, and poultry markets; truck bookings.
- 7.30: The National Broadcasting Orchestra.
- 7.45: Austradio musical reproduction.
- 7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION, 8 p.m. to 10.30 p.m.

Tuesday is 2BL's Classic Night. Our soloists to-night are Laurence Macaulay and Marjorie Allomes, who will contribute song groups. Instrumental relief is provided by Muriel Lang, cellist; Vincent Aspey, violinist; and Neville Amadio, flautist. At 9.30 the Storyteller will weave one of his magic word webs. At 9.45 we turn, in lighter vein, to revue, which concludes our programme at 10.30. 2FC service features a State-wide radio dance night on Tuesday night, and those listeners who frankly prefer the lighter type of entertainment are reminded that Len Maurice, Lew James, Maisie Ottey, Rene Rich, and Bernice Patterson are breaking the 12-minute dance groups with the latest popular numbers.

- 8 p.m.: G.P.O. chimes. The National Broadcasting Orchestra.
- Suite, "The Pipes of Pan" (Knight-Logan).
- 8.15: Laurence Macaulay, baritone.
 - (a) "When the King Went Forth to War" (Koenemann).
 - (b) "See the Heavens Smile" (Purcell).
- 8.22: Vincent Aspey, violinist.
 - (a) "Tambourin Chinois" (Kreisler).
 - (b) "Gipsy Song" (Dvorak-Kreisler).
- 8.29: Marjory Allomes, contralto.
 - (a) "A Widow Bird Sat Mourning" (Hideev).
 - (b) "Ships That Pass in the Night" (Stephenson).
 - (c) "Mighty Like a Rose" (Neven).
- 8.36: The National Broadcasting Orchestra.
 - (a) "Dance of the Clowns" (Rimsky-Korsakoff).
 - (b) "The Fortune Teller" (Herbert).
- 8.51: Laurence Macaulay, baritone.
 - (a) "Sword of Ferrara" (Bullard).
 - (b) "Great Isis, Great Osiris" (Mozart)
- 8.58: Neville Amadio, flautist.
- 9.5: Marjorie Allomes, contralto.
 - (a) "May Night" (Brahms).
 - (b) "Omra Mai Fu" (Handel).
 - (c) "Cradle Me Low" (Brahe).
- 9.12: Muriel Lang, cellist.
- "Priere" (Squire).
- 9.17: The National Broadcasting Orchestra.
 - (a) Overture, "Rosamunde" (Schubert).
 - (b) "Polichinelle" (Rachmaninoff).
- 9.30: A tale by the Storyteller.
- 9.45: Harmony and hilarity, a popular pot-pourri.
- 10.25: Official weather forecast, metropolitan and country; late news from "The Sun."
- 10.30: Close. National Anthem.

2GB

Theosophical Broadcasting Station, 39 Bligh St. Sydney. (Wavelength, 316 Metres).

- 10.0: Music. 10.10: Happiness Talk by A. E. Bennett. 10.20: Music. 10.30: Women's Session by Miss Helen J. Beegling. 11.30: Music. 11.45: Close down. 2.0: Music. 2.5:

Women's Radio Service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Music. 3.30: Close down. 5.30: Children's Session by Uncle George. 7.0: Music. 7.30: Talk from Sifton's 2GB Radio Service. 7.45: Feature story. 8.0: Miss Mary Neal, contralto. 8.7: Violin solos. 8.15: Mr. J. Lou Walters, basso. 8.22: Symphony Orchestra. 8.30: Miss Elsie Brown, soprano. 8.40: Mr. Jack Win and Mr. Heath Burdock, humor. 8.45: Instrumental Quartette. 8.50: Miss Mary Neal. 9.0: Weather report. 9.3: Address. 9.15: Violin solos. 9.25: Mr. J. Lou Walters, basso. 9.35: Mr. Jack Win and Mr. Heath Burdock. 9.40: Symphony Orchestra. 9.50: Miss Elsie Brown, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Palling's Building, Ash St., Sydney. (Wavelength, 267 Metres).

MIDDAY SESSION.

12.30: Request numbers. 1.0: G.P.O. clock and chimes; music. 1.15: Talk on Homecraft by Pandora. 1.40: Music and request numbers. 2.30: Close down. 4.30: Musical programme.

EVENING SESSION.

5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close down. 7.0: G.P.O. clock and chimes; request numbers. 8.0: Some operatic duets. 9.0: G.P.O. clock and chimes; comments on Foreign Affairs, by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close down.

2KY

Trades and Labor Council, Goulburn St., Sydney. (Wavelength, 280 Metres).

MORNING SESSION

10.0: Tune in to the ticking of the clock. 10.3: Musical interlude. Selections of popular fox-trots. 10.15: News items. 10.50: Women's Session. Home Hints and Information conducted by Mrs. Gray. 11.0: A few laughs. 11.5: pianoforte selections. 11.15: Calls and announcements. 11.20: Musical numbers. 11.30: Request numbers. 11.40: Music and vocal items. 11.55: Where to go to-night. 12.0: noon: Closing announcements.

CHILDREN'S SESSION

6.0: Birthday calls, request numbers and kiddies' entertainment, Aunt Jemima and Uncle Bert.

EVENING SESSION

7.0: Musical interlude. 7.15: Sporting feature. Turi topics. How they should run tomorrow. Mr. Geo. A. Davis. 7.45: Request numbers. 8.0: Orchestral selections. 8.10: Women's information Service, Mrs. Gray. 8.15: Baritone solos, Mr. Higgins. 8.30: Piano-forte selections, Mr. Hancock. 8.45: Request numbers. 9.0: Sporting feature, presented by Tooth and Co., Ltd., Kent Brewery. From the ringside of M'Hugh's Leichhardt Stadium. Results of early events and full description of main 15 round event by Herbert Beaver. 9.40: Dance music from the studio. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney. (Wavelength, 293 Metres).

MIDDAY SESSION

11.30: Orchestral and vocal music. 12.30 Close down.

AFTERNOON SESSION

1.0: Vocal and instrumental items. 1.45: Organ recital. 2.0: Orchestral music. 2.30: Close down.

EVENING SESSION

7.15: Orchestral dinner music. 7.58: Programme announcements. 8.0: Overture "Light Cavalry." 8.10: Orchestral and vocal selections. 10.15: Close down.

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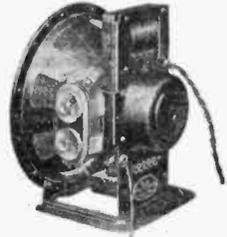
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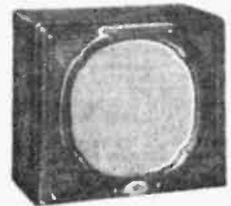
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Interstate Programmes, Tuesday, September 17

3LO

Australian Broadcasting Co., 129A Russell St., Melbourne. (Wavelength, 371 Metres).

EARLY MORNING SESSION.
7.0 to 8.15: See Friday.

MORNING SESSION.
10.30: Current happenings in sport, by Eric Welch
10.45: Melody broadcast. 12.0: Melbourne Observatory time signal. 12.1: Melody broadcast. 12.15: News service: British official wireless news.

MIDDAY SESSION.
1.0: Melbourne Observatory time signal. 1.1: Stock Exchange information. Meteorological data. Weather forecast for Victoria, New South Wales, South Australia, and Tasmania. Ocean forecast. River reports. Rainfall. Comments on the day's news. 1.30: Melody broadcast.

EDUCATIONAL SESSION.
2.0: Stories from the operas, with musical illustrations, by Miss D. Babington. 2.35: Musical interlude. 2.40: A talk in French. Mons. Th. Rouel. B.A. 2.55: Musical interlude.

THE RADIO MATINEE.
3.0: National Broadcasting Orchestra, under direction of Wm. G. James. Conductor, Percy Code. Caprice "Nola" (Arnott). "O Sole Mio." "Merla Mari" (Capua). 3.10: Tom Masters, tenor. "Night of Stars and Splendor" (Thompson). "Nightfall at Sea" (Phillips). 3.15: Guildford Bishop, violin. 3.22: Millicent Osmond, soprano. "Now Sleep the Crimson Petal" (Quilter). "Spring" (Henschel). 3.30: Orchestra, selection. "The Fortune Teller" (Herbert). 3.40: Austin Anderson, entertainer at the piano. A Few Moments with the Old Masters. 3.47: James Fraser, baritone. "The Road to Mandalay" (Speaks). "In An Old Garden" (Temple). 3.54: Orchestra. "Valse L'Estudiantina." 4.0: Millicent Osmond, mezzo-soprano. Barbara Allen (Old English). "Comin' Thro' the Rye" (Old Scotch). 4.7: Austin Anderson, entertainer at the piano—piano-ologue. "At the Wedding." 4.14: James Fraser, baritone, and Tom Masters, tenor—duet. "The Path of the Faithful" (Alexander). "In the Garden of Your Heart" (Dorel). 4.21: Orchestra—selection. "The Lido Lady" (Rogers). 4.30: Close down.

THE CHILDREN'S CORNER.
5.45: "Bobby Bluegum" welcomes "Ector oack. Poor 'Ector has had the mumps, but is getting his voice back by degrees. 6.0: "Clever Clarice" helps the show along. 6.15: Birthday greetings by "Bobby Bluegum."

EVENING SESSION.
6.40: Careers for our boys and girls—(6) Vocational guidance in Britain. Mr. J. M' Rae, M.A. 6.55: Musical interlude. 7.0: Melbourne Observatory time signal. 7.1: Countryman's Session. 7.25: For the man on the land—talk on the Royal Show. Mr. R. Crowe. 7.40: News service. 7.45: The things we drink—Port Wine. Mr. Francois De Castella. 8.0: Melbourne Observatory time signal.

NIGHT SESSION.
3.0: National Broadcasting Orchestra, under direction Wm. G. James. Conductor, Percy Code
8.10: "The A. B. C. Giesingers"—Chorus. "Come to the Fair." Song. "Bridgewater Fair." Chorus. "Waggle Taggle Gipsie O." Song. "Barbara Allen." Chorus. "Green Rushes." Song. "It's a Rosebud in June." Orchestra.

"Henry VIII. Dances" (German) Song. "The Bobbin." Chorus. "Dabbling in the Dew." Song. "I'm Seventeen Come Sunday." Song. "Lord Randall." Chorus. "Summer is A'comin' In." 8.40: Louis Hattabach, cello— "Ave Maria" (Schubert). "Berceuse" (Godard). "Gavotte" (Mozart). "Vito" (Popper).

9.0: The University Extension Series—The King's English. Prof. G. H. Cowling, M.A.
9.15: Orchestra—Excerpts from "Il Trovatore" (Verdi)
9.25: Amy Rochelle, soprano—The "Personality" Singer.
9.32: Norman's Royal Hawaiians.
9.40: "The Busy Bess," an original comedy duo— "Speaking of Love."
9.50: Orchestra—Selection of Mollay's Songs.

10.0: Amy Rochelle, soprano—The "Personality" Singer.
10.7: Norman's Royal Hawaiians.
10.17: Meteorological information. British official wireless news. Items of interest. Late sporting results. Eric Welch's selections for the Ballarat Turf Club's races.
10.30: "The Rex" Dance Band.
11.30: God Save the King.

3AR

Australian Broadcasting Co., 129A Russell St., Melbourne. (Wavelength, 384 Metres).

MORNING SESSION.
8.15 to 11: See Friday.

MIDDAY SESSION.
12.0: Chimes. 12.1: Beautifying the home—color schemes. Miss Lucy Ayon, M.A. 12.15: Fifteen minutes' synopticon. 12.30: Luncheon music, supplied by the A. B. C. Troubadours. 2.0: Chimes.

AFTERNOON SESSION.
2.0: Veselias Italian Band. 2.8: Wilfred Glen, baritone. 2.18: Al. Jolson, comedian. 2.24: Margaret M'Hue, whistler. 2.32: New York String Quar-

ette. 2.40: Josef Hofman, piano. 2.48: Elizabeth Lennox, contralto. 2.56: Walter Rogers and his band. 3.0: Request numbers. 3.20: The Baby—the Soother Problem. Sister Anne Purcell. 3.35: Musical interlude. 3.40: Useful Crafts at Home. Mrs. Henrietta Walker. 3.55: Musical interlude. 4.0: The Latest Fashions. Madame La Mode. 4.15: Reproduced music. 5.0: G.P.O. chimes. 5.30: Weather data. 5.45: Close down.

EVENING SESSION.

6.15: Dinner music. 7.30: What's on the air tonight? 7.32: Sporting results. 7.52: Latest musical releases. 8.0: Chimes.

NIGHT SESSION.

8.0: "A. B. C. Troubadours"— "I'm Crazy Over You" (Sherman). "In a Little Town Called Home. Sweet Home" (Donaldson). "I Faw Down and Go Boom" (Brockman). 8.8: Jane Douglas, soprano— "Carmena" (Wilson). 8.11: "A. B. C. Troubadours"— "My Inspiration is You" (Nicholls). "Carolina Moon" (Burke). "Sleep, Baby, Sleep" (Schuster). 8.19: Arthur Douglas, Scotch comedian— "They Ca' Me Sillic Willie." 8.22: "A. B. C. Troubadours"— "Sweethearts on Parade" (Lombardo). "A Precious Little Thing Called Love" (Davis). "I Can't Give You Anything But Love" (Fields). 8.30: Norman Bradshaw, tenor— "A Brown Bird Singing" (Haydn Wood). 8.33: "A. B. C. Troubadours"— "Makin' Whoopee" (Donaldson). "I'm Bringing a Red, Red Rose" (Donaldson). "Love Dreams" (Mendoza). 8.42: Arthur Douglas, Scotch comedian— "The Scotch Railway Porter." 8.44: "A. B. C. Troubadours"— "Chilly-Pom-Pom-Pee" (Wendling). "No Parking" (Rath). "Here Comes the Show Boat" (Rose). 8.52: Jane Douglas, soprano— "The Fairy Laundry" (Phillips). 8.55: "A. B. C. Troubadours"— "Weary Riever" (Clarke). "Coquette" (Berlin). "Blue Nights" (Rollins).

9.3: Norman Bradshaw, tenor— "Baljo Song" (Hornor). 9.6: "A. B. C. Troubadours"— "Paradise and You" (Packay). "Marie" (Berlin). 9.14: Jane Douglas, soprano— "Come to My Heart" (English). 9.17: "A. B. C. Troubadours"— "That's How I Feel About You" (Davis). "Down South" (Myddleton). "She's Funny That Way" (Moret). 9.25: Arthur Douglas, Scotch comedian— "Callin' Cali Callin' Cali." 9.28: "A. B. C. Troubadours"— "Think of Me. Thinking of You" (Marvin). "Flower of Love" (Mendoza). "I Love to Hear You Singing" (Wood). 9.36: Norman Bradshaw, tenor— "I'm a Longin' for You" (Hathaway). 9.39: "A. B. C. Troubadours"— "I Can't Do Without You" (Berlin). "Reaching for Someone" (Donaldson). "Glad Rag Doll." 9.57: Jane Douglas, soprano— "Forget Me Not" (Hull).

10.9: Weather data and Herald news. 10.10: "A. B. C. Troubadours"— "All by Yourself in the Moonlight" (Walls). "Joe College" (Lombardo). "Buck Town Blues" (Senter). 10.18: Arthur Douglas, Scotch comedian— "Doctor MacGregor." 10.21: "A. B. C. Troubadours"— "Honey" (Simons). "Mississippi Moon" (Terese). "Wedding of the Painted Doll" (Brown).

THE "HERALD" BROADCASTING STATION, FLINDERS STREET, MELBOURNE. (255 METRES).
MORNING SESSION
11.0: Edith Lorand Orchestra—"Rose Marie" (Frml.). 11.30: Regal Orchestra—"The Night Patrol." 12.0: John McCormack (tenor)—"Low Backed Car." 12.30: Halle Orchestra—"Solemn Melody." 1.0: John Curtis (baritone)—"Speak." 1.30: Singing Sophomores—"Slow River." 1.45: Close down.

AFTERNOON SESSION

2.15: New Mayfair Orchestra—"The Egg Song." 2.30: Ted Lewis and His Band. 3.0: Atwater Kent Radio Hour—Sponsored by A. G. Healing, Ltd. and E. T. Mulr. 4.0: Close down.

EARLY EVENING SESSION

5.30: Berlin State Opera Hour Orchestra—"Overture Don Juan" (Mozart). 6.0: Alfred O'Shea (tenor)—"The Star" (Rogers). 6.30: Mark Andrews (organ)—"Largo" (Handel). 7.0: Dora Labette (soprano)—"Song of a Nightingale." 7.15: Market reports—John McNamara and Co., Pty., Ltd. 7.20: Market reports—Gippsland and Northern Co-Operative Co., Ltd. 7.30: City Motors Supply Company's sponsored hour. 8.30: Phoenix Biscuit Company's sponsored hour. 9.30: Edith Lorand Orchestra. "Song of Autumn." 10.0: Gatty Sellers (organ)—"The Storm." 10.30: Arcadians Orchestra—"Counting the hours." 10.40: News. 10.45: God Save the King.

4QG

Queensland Government Radio Service, Brisbane. (Wavelength, 385 Metres).

For day session schedules see Friday.

NIGHT SESSION.

Group I—Grand Opera.
The 4QG Concert Orchestra—
Overture (from "Barber of Seville," Rossini).
4QG Choir and Concert Orchestra—
"Easter Hymn" (from "Cavalleria Rusticana," Mascagni). Soloist: Mrs. Robt. Bell.
Stanley Tamblin, bass-baritone—
"Toreador Song" (from "Carmen," Bizet).
Male Chorus—
"Pilgrims Chorus" (from "Tannhauser," Wagner).

Concert Orchestra—
"Coronation March" (from "The Prophet," Meyerbeer).
Group II—"In a Sicilian Garden."
George Williamson, tenor—
"Beppo is Singing" (Oliver).
Choir—
"Sicilian Mariner's Love Song" (Campana).
George Williamson, tenor, and J. P. Cornwell, bass—
Vocal duet, "I Left You in Damascus" (Olivier).

Concert Orchestra—
"Sizilietta" (Blon).
Group III—"At the Hour of Angelus."
Pat. M'Onigly, soprano—
"Ave Maria" (Bach-Gounod).
Choir and Concert Orchestra—
"Gloria" (from "Twelfth Mass," Mozart).
Mildred Bell, contralto—
"Nearer, My God, to Thee" (Carey).
Concert Orchestra—
"In the Chapel" (Ellenberg).

9.0: Metropolltan weather forecast.
9.1: Group IV—Miscellaneous.
George Williamson, tenor—
"Yeoman's Wedding Song."
Mabel Malouf, soprano—
"April Morn" (Batten).
Stanley Tamblin, baritone—
"The Lost Chord" (Sullivan).
Concert Orchestra—
"The Mill in the Black Forest" (Ellenberg).
Group V.—Classical.
W. W. Crisp, tenor—
Selected—

Mabel Malouf and Mildred Bell—
Soprano and contralto duet. "Trust in Friendship" (Haydn).
Choir—
"Marching Song" (from "The Winter Journey," Schubert).
Concert Orchestra—
"Waltz of the Flowers" (from "Nutcracker Suite" (Tchaikowsky).
Group VI—Light Opera.
Mildred Bell (contralto)—
"O, Who Will Say That Love is Cruel?" (from "Merrie England," Ed. German).
Pat. M'Onigly, soprano, and George Williamson, tenor—
Vocal duet. "The Flower" (from "Lilac Time," Schubert).

Choir—
"Quakers Meeting" (from "The Quaker Girl," Monckton).
Concert Orchestra—
Overture, "Raymond" (Thomas).
10.0: News supplied by the metropolitan dailies. Weather information. "Queenslander" news for distant listeners. Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide. (Wavelength, 409 Metres).

MORNING SESSION
11.15 to 2.0: See Friday.

AFTERNOON SESSION
3.0 to 5.0: See Friday.

EVENING SESSION
6.0 to 7.20: See Friday.

7.20: Under the auspices of the Worker's Education Association, Mr. H. G. Olliphant will speak 7.35: Mr. R. C. Bald, (Assistant Lecturer in English at the Adelaide University) will continue his series of talks. 7.45: Dr. Herbert Basedow, M.P., in an interesting Australian talk.

NIGHT SESSION

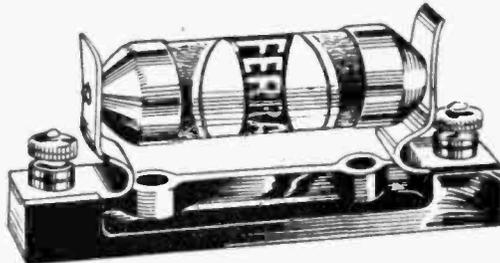
8.0: Chimes—
8.1: Brisbane Ward will give a talk entitled "Restraint."
8.5: 50 years ago to-day! "How the Years Roll By?" Programme Review.
8.10: A musical feast! (A special programme has been arranged)
9.0: Chimes.
9.1: Meteorological information, including Semaphore Tides.
9.2: Overseas grain report.
9.3: General news service.
9.5: Rupert Hazell and Elsie Day—
9.15: Continuation of Special Programme.
10.20: Under the auspices of the Legacy Club—
Lecturer A. S. Blackburn will speak.
10.30: General news service.
British Official Wireless News.
Meteorological information.
10.44: Modern Dance Music Recordings
11.0: Close down.

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Local Programmes, Wednesday, September 18

2FC

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 642 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
- 7.3: This morning's news from the "Daily Telegraph Pictorial."
- 7.8: Austradio Musical Reproduction.
- 7.45: Mails and shipping.
- 7.48: What's On To-day?
- 7.50: Children's birthday calls.
- 8.0: Music from the studio.
- 8.15: Close.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
- 10.32: General sporting talk by Oscar Lind.
- 10.45: Horace Weber at the grand organ.
- 11.0: Household Helps. Cooking, by Miss Ruth Furst.
- 11.10: Cables, A.P.A. and "Sun"—"Herald" news service. British official wireless press.
- 11.15: Morning devotion.
- 11.30: Austradio Musical Reproduction.
- 12.0: "Big Ben." Stock Exchange and metal quotations.
- 12.5: A Dickens' story.
- 12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board.
- 12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch to music, with the National Broadcasting Orchestra.
- 2.0: Stock Exchange, second call.
- 2.2: A glance at the afternoon "Sun."
- 2.7: Popular Education.
- 2.27: Announcements.

THE RADIO MATINEE. 2.30 to 4.45 p.m.

- 2.30: Googs Hanlon, novelty pianist—
 - (a) "Ah, Sweet Mystery of Life" (Herbert).
 - (b) Popular Number from "Lady Be Good" (Gershwin).
- 2.37: Nea Hallett, popular vocalist—
 - (a) "Love-Boat" (Brown).
 - (b) "Song of Songs for Me" (Berlin).
- 2.45: Popular Melodies.
- 3.0: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 3.12: Al Hammett, saxophone solos—
 - (a) "Saxophone Phantasy" (Rosebrook).
 - (b) "Valse Insolation" (Hazlett).
- 3.19: Studio music.
- 3.22: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 3.32: Relay from KGO, California.
- 4.0: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 4.12: Googs Hanlon, novelty pianist—
 - (a) "Do Something" (Green).
 - (b) "Kiss Me Again" (Herbert).
- 4.19: Nea Hallett, popular vocalist—
 - (a) "Some Sweet Day" (Pollack).
 - (b) "Love's Own Kiss" (Friml).
- 4.28: Stock Exchange, third call.
- 4.30: Al Hammett, saxophone solos—
 - (a) "Valse Vanite" (Weldoff).
 - (b) "Velma" (Rosebrook).
- 4.37: Popular music.
- 4.45: Close.

THE EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies "Good-night" Stories, told by the "Hello Man," assisted by Uncle Ted and "Sandy."
- 6.45: The National Broadcasting Orchestra will play dinner music.
- 7.30: A.B.C. sporting service.
- 7.37: Special country session. Stock Exchange resume. Markets. Weather forecast. Late news service from the "Sun." Truck bookings.
- 7.53: To-night's programme.

THE EVENING PRESENTATION—8 to 11.30 p.m.

There is a subtle fascination about radio drama, and to-night the two plays prepared by the A.B.C. players—"The Garden of Budda" and "The Cry in the Night" will come well up to the expectations of listeners who appreciate the spoken word on the air. This is 2BL's band night, and music, which is always popular, will provide musical relief for 2BL listeners.

- 8.0: An hour from the State Theatre.
- 9.0: From the studio. The country man's weather session—

- (a) New South Wales forecasts
- (b) Inter-State weather synopsis.
- 9.2: The A.B.C. Players—
 - "The Garden of Budda" and "The Cry in the Night."
- 9.30: Sonia Michell, pianist—
 - (a) "Nocturne" (Grieg).
 - (b) "Jolstring-Polk Dance" (Grieg).
 - (c) "Night in May" (Palmgren).
 - (d) "Juba" Dance (Dett).
 - (e) "Cradle Song" (Brahms-Granger).
 - (f) "Tarantella" (Liszt).
- 9.50: Art Song Recital, by Mini Gressier.
- 10.10: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 10.15: From the studio. Announcements. Late official weather forecast.
- 10.20: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 11.30: Close.
- National Anthem.

2BL

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 353 Metres).

OPENING SESSION, 8.15 a.m. to 11 a.m.

- 8.15: G.P.O. chimes.
- Music for every mood.
- 8.45: Meteorological data for the country.
- 8.50: Austradio Musical reproduction.
- 9.30: British official wireless news.
- 9.35: New music.
- 10.5: News from the "Daily Telegraph Pictorial."
- 10.10: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
- 10.30: Austradio Musical reproduction.
- 10.45: This morning's story.
- 11.0: G.P.O. chimes; close.

MIDDAY SESSION, 12 noon to 2.30 p.m.

- 12.0: G.P.O. Chimes.
- Announcements.
- 12.2: The National Broadcasting Orchestra
- 1.0: Afternoon news from the "Sun."
- 1.5: Studio music.
- 1.15: Women's interest talk, Goodie Reeve "Aids to personality."
- 1.30: Austradio Musical reproduction.
- 2.0: J. Knight Barnett at the "Wurlitzer."
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT, 2.30 p.m. to 5.45 p.m.

- 2.30: Business Efficiency Talk by the Doctor.
- 2.45: "The Magic Carpet," the Storyteller. "The Romance of Bridge Building."
- 3.0: The Warwick Instrumentalists.
- 3.12: Agnes M'Diarmid, soprano.
 - (a) "Come out, come out, my dears" (Dessauer).
 - (b) "Serenade" (Gounod)
 - (c) "Cradle Song" (Brahms).
- 3.19: Brunton Gibb, entertainer.
- 3.26: The Warwick Instrumentalists.
- 3.41: Eleanor Stanton, contralto.
 - (a) "The Garonne" (Adams)
 - (b) "Dream Boat" (Novello)
- 3.48: Marcus Burkitt, pianist.
 - (a) "Impromptu in A Flat" (Schubert)
 - (b) "Under the Leaves" (Thome).
- 3.58: The Warwick Instrumentalists.
- 4.13: Agnes M'Diarmid, soprano.
 - (a) "Angels Guard Thee" (Godard).
 - (b) "My Wonderful Garden" (Bigelow)
 - (c) "The Call of the Woods" (Bath).
- 4.20: Brunton Gibb, entertainer.
- 4.27: Marcus Burkitt, pianist.
 - (a) "Nocturne in G Minor" (Chopin).
 - (b) "Impromptu in A Flat" (Chopin).
- 4.37: Eleanor Stanton, contralto.
 - (a) "My Ships" (Barrett).
 - (b) "Callers Herrlin" (Traditional).
- 4.45: "The Trade Hour" demonstration music.
- 5.45: Weather information; close.

THE DINNER HOUR, 6.15 p.m. to 7.55 p.m.

- 6.15: The National Broadcasting Orchestra.
- 6.45: The A.B.C. "Younger Set" Session. The A.B.C. Boys Radio Club, conducted by Mr. Norman Lyons.
 - 7.5: Talk on "Bridge," by Graham Kent.
 - 7.15: The Country Man's Market Session. Wool, wheat, stock, farm produce, fruit vegetables, and poultry markets; truck bookings.
 - 7.30: The National Broadcastings Orchestra
 - 7.45: Austradio Musical reproduction.
 - 7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION, 8 to 10.30.

2BL's programme to-night features a band contribution by the Metropolitan Band, concerted vocal numbers by the Wireless Singers, and new songs by Frank M'Eachern and Jean Hibberd. 2FC service offers listeners a play at 9.30 by the A.B.C. Players after the hour from the State Theatre, followed by a pianoforte recital by Sonya Michell and an Art Song Group by Mini Gressier.

- 8 p.m.: G.P.O. chimes.
- The Metropolitan Band.
 - (a) Overture, "John o' Gaunt" (Rimmer)
 - (b) March, "Olympia" (Clark).
- 8.15: The Wireless Singers, conductor Mr. Harry Sherlock.
 - (a) "Sylvia" (Speakes).
 - (b) "Swing Low, Sweet Chariot" (Burleigh).
 - (c) "The Minstrel Boy" (Moore).
- 8.22: Frank M'Eachern, basso.
- 8.29: The Metropolitan Band. Selection, "Our Miss Gibbs" (Monckton).
- 8.44: Jean Hibberd, mezzo.
 - (a) "La Serenata" (Braga).
 - (b) "Butterfly Wings" (Phillips).
 - (c) "Ma Curly Headed Baby" (Clutsam)
- 8.51: The Wireless Singers.
 - (a) "A Precious Little Thing called Love"
 - (b) "Lazy River."
 - (c) "Old Man Sunshine."

9.1: The Metropolitan Band.

- (a) Selection, "Opera Bouquet No. 3" (Bedford).
- (b) March, "Sons of the Brave" (Hall).
- 9.16: Frank M'Eachern, basso.
- 9.23: Victor M'Mahon, flautist.
- 9.30: Late weather report for the man on the land.

9.31: The Metropolitan Band.

- (a) Waltz, "Golden Grain" (Roussel).
- (b) Intermezzo, "In a Monastery Garden" (Ketyby).
- 9.45: The Wireless Singers.
- 9.55: Victor M'Mahon, flautist.
- 10.2: Jean Hibberd, mezzo.
 - (a) "The Flower Song," from "Faust" (Gounod).
 - (b) "Three Little Fairy Songs" (Besly).
 - (c) "The Net Mender" (Coningsby Clarke).

10.9: Austradio Musical reproduction.

- 10.25: Official weather forecast—Metropolitan and country.
- Late news from the "Sun."
- 10.30: Close; National Anthem.

2GB

Theosophical Broadcasting Station, 29 Bligh St. Sydney. (Wavelength, 316 Metres).

- 10.0: Music.
- 10.10: Happiness Talk by A. E. Bennett.
- 10.20: Music.
- 10.30: Women's Session by Miss Helen J. Beegling.
- 11.30: Music.
- 11.45: Close down.
- 2.0: Music.
- 2.5: Women's Radio Service by Mrs. Dorothy Jordan.
- 2.50: Movie Know All.
- 3.0: Music.
- 3.30: Close down.
- 5.30: Children's Session by Uncle George.
- 7.0: Music.
- 7.45: Feature story.
- 8.0: Miss Heather Kinnaird, contralto.
- 8.7: Symphony Orchestra.
- 8.15: Mr. Cecil Houghton, tenor.
- 8.22: Mr. Jack Win and Mr. Heath Burdock, humor.
- 8.27: Selections from grand opera.
- 9.0: Weather report.
- 9.1: Address.
- 9.15: Miss Heather Kinnaird, contralto.
- 9.25: Instrumental Trio.
- 9.35: Mr. Jack Win and Mr. Heath Burdock, humor.
- 9.40: Mr. Cecil Houghton, tenor.
- 9.50: Symphony Orchestra.
- 10.0: Instrumental music.
- 10.30: Close down.

2UW

Radio Broadcasting Ltd., Palling's Building, Ash St. Sydney. (Wavelength, 267 Metres).

MIDDAY SESSION.

- 12.30: Request numbers.
- 1.0: G.P.O. clock and chimes; music.
- 1.15: Talk on Homecraft by Pandora.
- 1.40: Music and request numbers.
- 2.30: Close down.
- 4.30: Musical programme.

EVENING SESSION.

- 5.30: Children's Hour, conducted by Uncle Jack.
- 6.30: Close down.
- 7.0: G.P.O. clock and chimes; request numbers.
- 8.0: Band recital.
- 9.0: G.P.O. clock and chimes; comments on Foreign Affairs, by Mr. J. M. Prentice.
- 9.10: Music and request numbers.
- 10.30: Close down.

LOCAL PROGRAMMES
Wednesday, September 18

2KY

Trades and Labor Council, Goulburn St., Sydney. (Wavelength, 260 Metres).

MORNING SESSION

10.0: Tune in to the ticking of the clock
10.3: Popular fox-trots. 10.15: Hawaiian steel guitar selections. 10.30: Women's Session. Home Hints and Information, conducted by Mrs. Gray. 11.0: A few laughs. 11.5: pianoforte selections. 11.15: Calls and announcements. 11.20: Musical interlude. 11.30: Request numbers. 11.40: Music and vocal numbers. 11.55: Where to go to-night. 12.0 noon: Closing announcements.

CHILDREN'S SESSION

8.0: Birthday calls, request numbers and kiddies' entertainment. Aunt Jemima and Uncle Bert.

EVENING SESSION

7.0: Musical interlude. 7.15: Sporting feature. Complete review of to-day's racing, Mr Geo. A. Davis. 7.40: Health feature. 8.0: Hawaiian steel guitar selections. 8.15: Al Rosenberg, novelty pianist. 8.30: Banjo solos. Master Harry Weir. 8.45: Contralto solo. Miss Roter. 9.10: Sporting feature, presented by Tooth and Co. Ltd., Kent Brewery. From Sydney Stadium. Full description of main 15 rounds event from the ring-side. Result of main 15 round event. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney. (Wavelength, 298 Metres).

EARLY MORNING SESSION

7.15: Breakfast Time Hour orchestral music. 8.30: Weather forecast. Close down.

EVENING SESSION

7.15: Orchestral dinner music. 7.58: Programme announcements. 8.0: Overture, "Morning, Noon and Night." 8.10: Orchestral and vocal items. 10.15: National Anthem.

INTERSTATE PROGRAMMES
Tuesday, September 17

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth. (Wavelength, 435 Metres).

EARLY MORNING SESSION.

7.30: Town Hall chimes. 7.31: Meteorological report. 7.32: The day's maxims. 7.35: Early rising music (reproduced). 7.55: Mails and shipping intelligence. 8.0: What's on to-day? 8.6: Market reports. 8.10: Early rising music (reproduced). 8.22: Comments on news. 8.27: Features of to-day's programme. 8.30: Close down.

MORNING SESSION—TRADERS' DEMONSTRATION.

10.0: Town Hall chimes. 10.1: Vocal recital (reproduced). 10.15: Wool sales reports. 10.30: Organ recital from the Ambassadors—Jack Luing at the console of the Wurlitzer organ. 11.0: Close down

MIDDAY SESSION.

12.30: Town Hall chimes. 12.31: Vocal recital (reproduced). 12.45: Special midday news service. 12.50: Items of interest. 12.58: Weather report. 1.0: Perth Observatory time signal. 1.1: Luncheon music by the National Broadcasting Orchestra. 2.0: Close down.

THE RADIO MATINEE.

3.0: Town Hall chimes. 3.1: Wool sales reports. 3.15: Pirate stories. Captain Donald M'Lean. 3.30: Fifteen minutes with great artists (reproduced). 3.45: Talk of interest to women, "The West Australian Housewives' Association." 4.0: Town Hall chimes. 4.1: Instrumental music (reproduced). 4.15: The story of the day. 4.30: Ambassadors orchestra. 4.55: Features of this evening's presentation. 5.0: Close down.

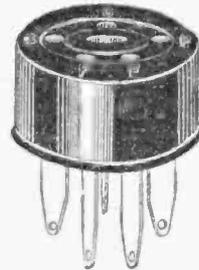
EARLY EVENING SESSION.

5.45: Children's "Good-night" stories by Uncle Bas and Auntie Max. 6.15: A.B.C. younger set session—"The Question Box." 6.30: Studio dinner music. 7.30: Weather report. 7.31: News service. 7.35: Special A.B.C. market reports. 7.42: Wool sales reports. 7.47: Features of to-night's presentation.

EVENING SESSION.

8.0: Overture (reproduced). 8.5: Talk by Dr. Battye. 8.20: Wireless singers. 9.20: Weather report. 9.21: Captain Donald M'Lean—"How Avrcy Captured the Great Mogul's Treasure Ship." 9.35: Piano solos. Miss Dean. 9.42: M'Lennan Lewis, Scotch comedian. 9.48: Piano solos. Miss Dean. 9.58. M'Lennan Lewis, Scotch comedian. 10.3: Features of to-morrow's programme. 10.5: Temple Court dance band, conducted by Merv. Lyons. 11.0: Close down. God Save the King.

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Radio Department, Lower Ground Floor, New Store

Interstate Programmes, Wednesday, September 18

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 371 Metres).

EARLY MORNING SESSION.

7.0 to 8.15: See Friday.

MORNING SESSION.

10.30: Current happenings in the world of sport, by Mel. Morris. 10.45: Melody broadcast. 12.0: Melbourne Observatory time signal. 12.1: Melody broadcast.

NEWS SESSION.

12.15: News service. British official wireless news. Corn Exchange midday report. Newmarket stock club. Associated Stocks and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION.

1.0: Melbourne Observatory time signal. Stock Exchange information. Meteorological data. Weather forecast for Victoria, New South Wales, South Australia, and Tasmania. Ocean forecast. River reports. Rainfall data. Comments on the day's news. 1.30: Transmission from the Freemasons' Hall. Rotary Club luncheon.

EDUCATIONAL SESSION.

2.0: Reading Aloud, Miss Alice Smith. 2.14: Description of Novice Handicap, 5 furlongs. Ballarat Turf Club races, by Eric Welch. 2.20: Rambles in the Bush, Mr. Charles Daley. 2.35: Musical interlude. 2.43: Description of Jumpers' Flat Race, 1 1/4 miles. Ballarat Turf Club races. 2.50: How Our Laws Are Made, Hon. J. H. Keating. L.L.B.

THE RADIO MATINEE.

3.35: The A.B.C. Troubadours—'Bringing a Red Rose' (Donaldson). 'Jericho' (Myers). 3.15: Description of Welter Plate, 6 furlongs. Ballarat Turf Club races. 3.20: Mary Lilley, contralto—'Love Lily' (Thomson). 'M. A. King' (For You) (Hathaway). 3.27: The A.B.C. Troubadours—'Cigarette' (Berlin). 'In a Little Town Called Home, Sweet Home' (Donaldson). 3.33: Ted Nelson—songs and novelties at the piano. 3.40: Les Sims, trumpet—selected. 3.43: Description of Plegah Handicap, one mile. Ballarat Turf Club races. 3.50: The A.B.C. Troubadours—'A Waltz I Can't Forget' (Kahn). 'Wedding of the Painted Doll' (Brown). 4.0: Mary Lilley, contralto—'Babe O' Mine' (Shmith). 'Little Town in Old County Down' (Sanders). 4.7: The Hilo Duo. Hawaiian instrumentalists. 4.13: Description of Welter Purse, 6 furlongs. Ballarat Turf Club races. 4.20: The A.B.C. Troubadours—'Sally of My Dreams' (Kernell). 'Ten Little Miles From Town' (Kahn). 4.26: Ted Nelson—songs and novelties at the piano. 4.33: The Hilo Duo. Hawaiian instrumentalists. 4.43: Description of Flying Handicap, 5 furlongs. Ballarat Turf Club races. 4.50: Close down.

THE CHILDREN'S CORNER.

5.45: 'Little Miss Kookaburra' has a story for the Little Kookaburrites. 6.0: Musical interlude. 6.5: Birthday greetings by 'Little Miss Kookaburra'. 6.20: 'Little Miss Kookaburra' has a story of interest for the older ones.

EVENING SESSION.

6.35: Musical interlude. 6.40: Romantic historical stories, Mr. J. R. Lyall. 6.55: Musical interlude. 7.0: Melbourne Observatory time signal. 7.1: Countryman's session. 7.25: Technical talks for mechanics. (6) Cast Iron, Prof. J. Neill Greenwood, D.Sc. 7.40: News service. 7.45: How to attain and retain good health—'Building Strong Teeth for Children.' Mr. T. J. Ryan, L.D.S., B.D.Sc. 8.0: Melbourne Observatory time signal.

NIGHT SESSION.

8.0: Organ recital from St. Paul's Cathedral, by Dr. A. E. Floyd. 8.20: One hour of music from the masters, arranged by Professor Bernard Heinze. 9.20: Doreen Berry—'The Happy Prince,' by Oscar Wilde. A recital with a musical background.

SOME MODERN MUSIC

9.40: The A.B.C. Troubadours—'That's Living' (Ryan). 'When Summer is Gone' (Wilhite). 'I Fell Head Over Heels in Love' (Thayer). 9.50: R. Nicholson, baritone—'If I Had You and You Had Me' (Gorman). 9.57: The A.B.C. Troubadours—'Happy Days and Lonely Nights' (Fisher). 'If You Want the Rainbow' (Rose). 10.7: R. Nicholson, baritone. 10.14: Meteorological information. British official wireless news. Items of interest. 10.25: 'The Rex' Dance Band. 11.30: God Save the King.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 484 Metres).

MORNING SESSION.

8.15: Morning music. 8.45: Weather data. 9.0: G.P.O. chimes. 9.1: 'Age' news service. 9.5: Reproduced music. 10.0: G.P.O. chimes. 10.1: British official wireless news. 10.10: Announcements. 10.30: Arnold Coleman at the Wurlitzer. 10.50: A message for the day. 11.0: Close down.

MIDDAY SESSION.

12.0: G.P.O. chimes. 12.1: Food and Cookery—Some Principles in Dieting, Miss R. Chisholm, B.A. (Melb.). M.A. (Toronto).

12.15: Organ recital from the Melbourne Town Hall, Dr. W. G. Price. 12.45: Luncheon music, supplied by the National Broadcasting Orchestra, under direction Wm. G. James; conductor, Percy Cote. 3.0: G.P.O. chimes.

AFTERNOON SESSION.

2.0: Overture, the London Symphony Orchestra. 2.8: Violin recital, Fritz Kreisler. 2.16: Piano recital. 2.24: Tenor solo, John McCormack. 2.30: Goldstream Guards Band. 2.46: Helen Hane, comedienne. 2.52: Nat Shilkret and his orchestra. 3.0: A piano recital—twenty minutes with Schubert. 3.20: The Pre-school Child—The Women of the Community and the Pre-school Child, Miss M. Lush. 3.35: Musical interlude. 3.40: Women's interests at the Show, Miss Hattie Knight. 3.55: Musical interlude. 4.0: Home Life in Other Countries—Poland, Miss Reva Leon. 4.15: Reproduced music. 5.9: G.P.O. chimes; reproduced music. 5.30: Weather data. 5.45: Close down.

EVENING SESSION.

6.15: Dinner music, supplied by the A.B.C. Troubadours. 7.30: What's on the air to-night. 7.32: Sporting results. 7.35: Latest musical releases. 8.0: G.P.O. chimes.

NIGHT SESSION.

8.0: From the Show Grounds—Mr. Henry Schwiager, secretary, Royal Agricultural Society. 8.15: 'The Aristo' Quartette—Ensemble: Violin, piano, soprano, and baritone. Soprano—'The Cuckoo Clock' (Schafer). 'Down in the Forest' (Ronald). Piano—'Country Gardens' (Grainger). 'To the Spring' (Grieg). Violin—'Meditation' (Gounod). A. Morris Dance (German). Duet—'Fairings' (Murtin). Ensemble: Violin, piano, soprano, and baritone. A VIENNESE PROGRAMME. 8.30: National Broadcasting Orchestra—Under direction Wm. G. James. Conductor, Percy Cote. 'Blue Danube' (Strauss). 'Hungarian Dance' (Brahms). 8.40: Rita Coonan, soprano—'To None Will I My Love Discourse' (Strauss). 'Tumultuous' (Keel). 8.47: Edouard Lambert, violin—'Caprice Viennois' (Kreisler). 'Dance Hongroise' (Brahms). 8.55: Eric Jones, baritone—'Lassie With the Lips So Rosy' (Franz). 'Dedication' (Franz). 9.2: 'How to Behave as Human Beings—(6) What Time is It?' Prof. J. A. Gunn, M.A., B.Sc., Ph.D. 9.17: Repertory Theatre Company present COLUMBINE, A Fantasy in One Act, by Reinhold A-b-a-t-t-i. The story of Harlequin, Columbine, and Pierrot is age-old, but of ever-fading interest, now is a new version of the continual struggle between the two men for the love of Columbine. Persons of the Play: Nathan, a Young Countryman—Arthur Davie; Dan, an Old One—Frederick Dew; Columbine—Mona Popyat; Harlequin—Frank D. Clewlow; Pierrot—Charles Langley. Play produced by Frank D. Clewlow. The scene is a Roman camp on the summit of the South Downs, England. Incidental music by the National Broadcasting Orchestra, under direction Wm. G. James; conductor, Percy Cote. 'Pierrette' (Flinck). 'Dance of the Hours' (Ponchielli). 'Orientale'. 'The Soldiers' Chorus' (Paisti). 'The Dream Melody' (Berbert). 'A Cottage Small'. 9.47: Orchestra—'From India' (Popy). 9.55: Rita Coonan, soprano—'Chanson Triste' (Duparel). 'Le Papillon d'Or' (Fourbrain). 10.2: Weather data and Herald news. 10.12: Eric Jones, baritone—'Fling Broad the Sails' (Gainez). 'Gypsy' (Dan Russell). 10.20: 'The North' String Quartette. 10.30: God Save the King.

3DB

The 'Herald' Broadcasting Station, Flinders Street, Melbourne. (255 Metres).

MORNING SESSION

11.0: Royal Air Force Band—'Weymouth Chimes'. 11.30: 'La Vogue' from 'The World's Fashions and Follies'. 11.35: Paul Oliver (tenor)—'Old Timer' (Rose). 12.0: Francesco Lambri (cello)—'Serenade' (Widor). 12.30: Sam Lavin's Orchestra—'Sweethearts on Parade'. 1.0: G. T. Patman (organ)—'The Doll Dance' (Poldini). 1.15: Pioneer Motors Sponsored Programme. 1.45: Close down.

AFTERNOON SESSION

2.15: Paul Whiteman and his Orchestra—'The Dove'. 2.30: Mrs. Dorothy Silk—'Homecrafts'. 2.45: Leslie Hutchinson—'Forever'. 3.0: Atwater Kent Radio Hour—Sponsored by A. G. Healing Ltd. and E. T. Muir. 4.5: Close down.

EARLY EVENING SESSION

4.45: Chorus Evensong from St. Paul's Cathedral. 5.30: J. H. Scuire Celeste Octet—'Humoresque' (Dvorak). 6.0: Colin O'More (tenor)—'Danny Boy'. 6.30: Eileen Boyd (contralto)—'Husheem'. 7.0: Sam Lavin's Famous Players—'The Toymaker's Dream'. 7.15: Market reports—John McNamara and Co., Pty., Ltd. 7.25: George Sorlie—'Down Along the sugar cane.' 7.30: Market reports—Gippsland

and Northern Co-Operative Co., Ltd. 7.40: Bourne-mouth Municipal Orchestra—'Two Imps'. 7.45: Mr. Harman, of Burns, Philip and Co.—a Travel Talk. 7.55: Gladys Carter's 'Some Day'.

EVENING SESSION

8.0: H. M. Grenadier Guards Band—'Les Serenes'. 8.30: Rhodes Motors Sponsored Session. 9.0: North and South—'I Ain't Never Been Kissed'. 9.30: Vaughan de Leath, 'Pat's Night Out'. 10.0: Black Diamonds Band—'In a Clockmaker's Shop'. 10.30: George Parker—Mother's Evening Hymn. 10.40: News. 10.45: God Save the King.

4QG

Queensland Government Radio Service, Brisbane. (Wavelength, 385 Metres).

For day session schedules see Friday.

NIGHT SESSION

8.0: Alf Featherstone and his Dance Orchestra—Paraphrase, 'Russian Fantasy' (arr. Langel). Fox-trot, 'Romany Love' (Zamecnik). 8.10: Jack Land, tenor—'La Donna e Mobile' (Verdi). 'On Wings of Song' (Meindelssohn). 8.20: Alf Featherstone and his Studio Orchestra—Fox-trots, 'Blue Hills of Pasadena' (Hubert). 'Love Tales of Alsace-Lorraine' (Davis). 8.30: B. F. Kelly, flautist—'Graceland' (Lemone). 'Saitarello' (German). 8.40: Alf Featherstone and his Orchestra—Jazz waltz, 'Shallmar' (Nichols). 8.45: The Hoot Owls—A quarter of an hour's fun. 9.0: Metropolitan weather forecast. Movements of Lighthouse steamers. 9.5: Alf Featherstone and his Orchestra—Fox-trots, 'Some Sweet Day' (Pollock). 'Honey' (Whiting). 9.15: Dorothy Sanders—'Sing! Break Into Song' (Mallinson). 'A Precious Little Thing Called Love' (Coots). 9.25: Alf Featherstone and his Dance Orchestra—Fox-trots, 'My Southern Home' (Shadson). 'If I Had You' (Shapiro). 9.35: Monument and Harrow—Entertainers. 9.50: Alf Featherstone and his Dance Orchestra—Spanish Jazz Waltz, 'Spanish Moon' (Hanley). 10.0: News supplied by the metropolitan dailies. Weather information. 10.15: Alf Featherstone and his Dance Orchestra—Three-quarters of an hour's dance music. 11.0: Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide. (Wavelength, 409 metres).

MORNING SESSION

11.15 to 2.0: See Friday.

AFTERNOON SESSION

2.0 to 5.0: See Friday.

EVENING SESSION

5.45: Amateur Turf Club acceptance. 6.0: Resumé of Ballarat race results. 6.1: Birthday greetings, correspondence. Songs and stories by 'Miss Wireless'. 6.30: Dinner Session. 7.1: Senior Birthday greetings. General market reports. 5CL's sporting service. 7.30: 'The 5CL Bluebird Girls' Club. 7.40: Rev. E. S. Kiek, will speak on 'The Rule of the Saints'. 7.55: Boy Scouts Corner. An address to boy scouts. 8.5: Mr. F. H. Stacey (Mayor of St. Peters) will give a talk entitled 'Not Sympathy'.

NIGHT SESSION

8.11: Opening Chorus by the Company. 'I Want to be Happy'. 8.16: Special Cheries. 8.18: Waltz. 'Blue Danube'. 8.22: Is everybody happy at Nackara; Muston, Kangaroo Island, Myponga, Loxton, Lyndhurst Siding, Lucindale, Kersbrook, Kilkerran, Aldgate, Kimba, Elliston. Old-time songs under the direction of Horace Perkins, assisted by the Madrigal Singers. 'Hear Dem Bells'. 'I don't want to play in your back yard.' 8.30: Schottische. 'Silver Threads Among the Gold'. 8.36: Rupert Hazell and Elsie Day. Will entertain you. 8.46: Marine Fourstep—Selected. 8.55: Fred. Williamson, tenor—'Believe Me if All Those Endearing Young Charms.' FROM 5CL STUDIO

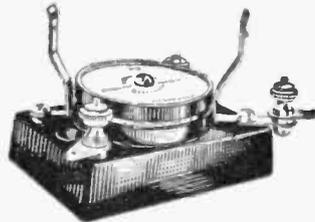
FROM 5CL STUDIO

9.1: Meteorological information, including semi-hourly tides. 9.2: Overseas grain report. 9.3: Extracts from 'The Advertiser.' General news service. 9.5: Dance and be merry everybody at Port Wakefield, Murrumbidgee, Murray Bridge, Port Germein, Towla, Tumby Bay. Old-time songs under the direction of Horace Perkins, assisted by the Madrigal Singers. 'The Rosary' (Nevin). 'It's a Long Long Trail'. 9.12: Lancers. 'The Quaker Girl'. 9.30: Fred. Williamson, tenor—'Come Into the Garden, Maid'. 9.34: Waltz. 'Destiny'. 9.40: Linda Wald and Phyllis Everett, vocal duetists. 'When Song is Sweet' (Sans Souci). 9.44: Military Two Step. 9.53: Rupert Hazell and Elsie Day.

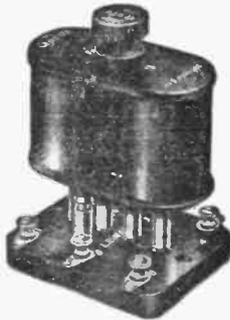
(Continued on Page 53.)

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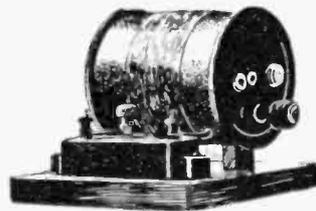


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Local Programmes, Thursday, September 19

2FC

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 442 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
- 7.3: This morning's news from the "Daily Telegraph Pictorial."
- 7.8: Austradio Musical Reproduction.
- 7.45: Mails and shipping.
- 7.48: What's On To-day?
- 7.50: Children's Birthday Calls.
- 8.0: Music from the studio.
- 8.15: Close.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
- 10.32: A.B.C. Racing Observer.
- 10.45: Horace Weber at the grand organ.
- 11.0: Household Helps. Domestic Notes. by Miss Ruth Furst.
- 11.10: Cables, A.P.A. and "Sun"—"Herald" news service. British official wireless press.
- 11.15: Morning devotion.
- 11.30: Austradio Musical Reproduction.
- 12.0: "Big Ben," Stock Exchange and Meta Quotations.
- 12.5: With the Poets. by Eleanor Ross.
- 12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board.
- 12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch to music, with the National Broadcasting Orchestra.
- 2.0: Stock Exchange, second call.
- 2.2: A glance at the afternoon "Sun."
- 2.7: Popular Education. "Spoken English," by C. N. Baeyeretz.
- 2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: The 2FC Instrumental Trio.
- 2.42: Aldyth Hern, soprano—
 - (a) "Serenade" (Gounod).
 - (b) "Without Thee" (Gounod).
 - (c) "Love in Spring" (Gounod).
- 2.49: Dorothy Farmer, pianist—
 - (a) "Poeme" (Scriabin).
 - (b) "Old Vienna" (Godowsky).
- 2.57: Robert Scott, tenor—
 - (a) "In the Dawn" (Elgar).
 - (b) "Mother o' Mine" (Tours).
- 2.59: The 2FC Instrumental Trio.
- 3.14: Aldyth Hern, soprano—
 - (a) "April is a Lady" (Phillips).
 - (b) "Butterfly Wings" (Phillips).
 - (c) "April Morn" (Baten).
- 3.21: Warwick M'Kenzie, violinist—
 - (a) "Menuett" (Bermeister).
 - (b) "Serenata" (Moszkowski, arr. Rehfeld).
 - (c) "Pantomime" (Mozart, arr. Franko).
- 3.28: Robert Scott, tenor—
 - (a) "Siegmund's Love Song" (Wagner).
 - (b) "Dear Love, Remember Me" (Marshall).
- 3.35: Dorothy Farmer, pianist—
 - (a) "Ballade in D Minor" (Brahms).
 - (b) "Danse de Clochettes" (Rebikoff).
- 3.43: Warwick M'Kenzie, violinist—
 - (a) "Am Meer" (Schubert-Wilhelmj).
 - (b) "Menuett" (Beethoven).
- 3.50: The 2FC Instrumental Trio.
- 4.0: An Afternoon Story.
- 4.15: The 2FC Instrumental Trio.
- 4.28: Stock Exchange, third call.
- 4.30: Close.

THE EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies' "Good-night Stories," told by Aunt Goodie, assisted by Cousin Marjory.
- 6.45: The National Broadcasting Orchestra will play dinner music.
- 7.30: A.B.C. Sporting Service.
- 7.37: Special Country Session. Stock Exchange resume. Markets. Weather forecast. Late news service from the "Sun." Truck bookings.
- 7.58: To-night's programme.

THE EVENING PRESENTATION—8 p.m. to 11.30 p.m.

Our Night of Contrasts.—2FC listeners, it is safe to conjecture, if they listen consistently to-night, will have every phase catered for. Into the melting-pot of our sectional-

ised programme is poured classical music, vaudeville, drama, and novelty.

2BL Service offers an Hour of Orchestral and Organ Music, with a spice of Talkie Short from the Capitol, followed by the feature of the evening—an unusual radio play from the facile pen of Scott Alexander.

8.0: Pianoforte Recital by Alexander Hmel-nitsky.

8.20: Cameos of our City, by G. R. Hall.

8.40: The Three Gilberts, in Popular Song and Story.

9.0: The Country Man's Weather Session—

(a) New South Wales Forecasts.

(b) Inter-State Weather Synopsis.

9.2: The Antique Trio—Playing Old World Melodies upon Old World Instruments—

Dulcitone—Mme. Evelyn Grieg.

Treble Viol—Veta Wareham.

Viol da Gamba—Keith Kennedy.

Trio. "Favorite Air of Louis XIII." (arr. Chys).

Dulcitone Solo. "Prelude." from "Suite XIV." (Handel).

Viol da Gamba—Keith Kennedy.

Trio and Voice. "A Song of Old London" Soloist, Mme. Evelyn Grieg.

Treble Viol Solo. "Rondo" (Mozart-Kreisler).

Trio. "Adagio" (Haydn).

"Gipsy Rondo" (Haydn), by request.

9.22: An Art Song Recital, by Clement Q. Williams and Constance Burt—

(a) "Largo Al Factotum" (Rossini).

(b) "Quand Ero Pagio" (Verdi).

(c) "And so I Made a Villanelle" (Scott).

(d) "Slow Coach" (Bennett).

9.42: In Merry Mood, with Ida Berridge and Harry Linden.

10.2: The Peerless Four—

(a) "Stars of the Summer Night" (arr. Cocks).

(b) "The Farmyard."

(c) "Dear Old Moonlight" (Old Negro) (arr. Cocks).

(d) "Asleep in the Deep" (Petrie).

(e) "Shine, Shine, Moon" (Gatty).

10.15: Announcements.

Late Official Weather Forecast.

10.20: From the Hotel Australia: Cec. Morrison's Dance Band.

11.30: Close.

2BL

Australian Broadcasting Company, Ltd., Market St. Sydney. (Wavelength, 353 Metres).

OPENING SESSION, 8.15 a.m. to 11 a.m.

8.15: G.P.O. chimes. Music for every mood.

8.45: Meteorological data for the country.

8.50: Austradio musical reproduction.

9.30: British official wireless news.

9.35: New music.

10.2: News from the "Labor Daily."

10.5: News from the "Daily Telegraph Pictorial."

10.10: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.

10.30: Austradio musical reproduction.

10.45: This morning's story.

11.0: G.P.O. chimes. Close.

MIDDAY SESSION, 12 Noon to 2.30 p.m.

12.0: G.P.O. chimes. Announcements.

12.2: The National Broadcasting Orchestra.

1.0: Afternoon news from "The Sun."

1.5: Studio music.

1.15: Women's "interest talk"—Annie Hughes, "Winston Churchill."

1.30: Austradio musical reproduction.

2.0: J. Knight Barnett, at the Wurlitzer.

2.12: Studio music.

AFTERNOON ENTERTAINMENT, 2.30 p.m. to 5.45 p.m.

2.30: Business efficiency talk, by Brunton Gibb.

2.45: "The Magic Carpet"—Jean Armstrong, "Faculties and Festivities of China."

3.0: Romano's Dance Orchestra, conducted by Bennie Abrahams.

3.12: From the studio. Harry Croot, baritone.

(a) "One Hour" (Longstaffe).

(b) "Beating Up the Channel" (Sanderson).

(c) "A Requiem" (Home).

3.19: A popular melody.

3.22: Romano's Dance Orchestra, conducted by Bennie Abrahams.

3.39: From the studio. The Ahad Duo, steel guitars.

(a) "Sweet Honolulu" (Hopkins).

(b) "Hawaiian Fox-trot Medley" (Kahn and Whiting).

3.39: The latest dance music.

3.42: Romano's Dance Orchestra, conducted by Bennie Abrahams.

3.52: From the studio. Heather Jones, popular vocalist.

3.59: Melody memories.

4.2: Romano's Dance Orchestra, conducted by Bennie Abrahams.

4.12: Harry Croot, baritone.

(a) "Listenin'" (Wood).

(b) "My Gift for You" (Cadman).

(c) "Duna" (McGill).

4.19: The Ahad Duo, steel guitars.

(a) "Medley" (Pearce, Nelson, and Morris), piano-accordion and Spanish guitar.

(b) "Hawaiian Frolic" (Kamiki).

4.26: Heather Jones, popular vocalist.

4.33: Romano's Dance Orchestra, conducted by Bennie Abrahams.

4.45: "The Trade Hour," demonstration music.

5.45: Weather information. Close.

THE DINNER HOUR, 6.15 p.m. to 7.55 p.m.

6.15: The National Broadcasting Orchestra.

6.45: The A.B.C. Younger Set session; the A.B.C. Girls' Radio Club, conducted by Miss Gwen Varley.

7.5: Studio music.

7.15: The Country Man's market session: Fruit, vegetables, wool, wheat, stock, farm produce, and poultry markets; truck bookings.

7.30: The National Broadcasting Orchestra.

7.45: Austradio musical reproduction.

7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION, 8 p.m. to 11.30 p.m.

Thursday night, through 2FC service, is featured as a "play" night. Scott Alexander has arranged to-night's dramatic offering. 2FC's programme is sectioned to 20 minutes to suit all tastes. Classic pianoforte and vocal recitals will rub shoulders with vaudeville, and the tears of the cameos of our city will be turned to laughter by entertainers of the merriest type.

8 p.m.: An hour from the Capitol.

9 p.m.: From the studio. Scott Alexander will present an original Codrington Ball radio comedy, entitled, "Sine, Sweetheart, Sing."

9.20: Victor Evans, baritone.

(a) "Mandalay" (Cobb).

(b) "Serenata" (Toselli).

9.27: Late weather forecast for the man on the land.

9.29: 2BL Instrumental Trio.

(a) "Scherzo" from Schubert "Trio in B Flat" (Somerville).

(b) "Menuet" (Paderewski).

9.39: Elsa Mayne, songs at the piano.

(a) "The Old Woman and the Pedlar" (Old English folk song).

(b) "Sweet Nightingale" (Old English folk song).

(c) "The Carrion Crow" (Old English folk song).

9.46: 2BL Instrumental Trio.

(a) "Melody" (Somerville).

(b) "Waltz in A Flat" (Somerville).

9.52: Victor Evans, baritone.

(a) "Out Where the Big Ships Go" (Hewitt).

(b) "Requiem" (Shanks).

9.59: 2BL Instrumental Trio.

(a) "Estate d'Amour" (Roze).

(b) "Menuet" from "Septette" (Saint-Saens).

10.7: Elsa Mayne, songs at the piano.

(a) "The Shadow March" (Del Riego).

(b) "The Camel's Hump" (German).

(c) "On the Day I Get to Heaven" (Lehmann).

10.14: 2BL Instrumental Trio.

(a) "Ballet Music" from "Rosamunde" (Schubert).

(b) Selected.

10.25: Official weather forecast, metropolitan and country; late news from "The Sun."

10.30: Close. National Anthem.

2GB

Theosophical Broadcasting Station, 29 Bilgh St. Sydney. (Wavelength, 216 Metres).

10.0: Music. 10.10: Happiness Talk by A. E. Bennett. 10.20: Music. 10.30: Women's Ses-

sion by Miss Helen J. Beegling; housekeeping hints and shopping guide. 11.30: Music. 11.45: Close down. 1.30: Speeches from the Legacy Club. 2.0: Music. 2.5: Women's Radio Service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Labor-saving demonstration from Buckinghams, Ltd. 4.0: Close down. 5.15: Children's Session by Uncle George. 7.0: Music. 7.45: Feature story. 8.0: Miss Florence Gordon, contralto. 8.7: Cello solos. 8.15: Mr. Norman Williams, baritone. 8.22: Symphony Orchestra. 8.30: Mr. Jack Win and Miss Nora Windle, in humorous sketch. 8.40: Miss Gladys Verona, soprano. 8.50: Instrumental Trio. 9.0: Weather report. 9.3: Address. 9.15: Miss Florence Gordon, contralto. 8.25: Cello solo. 9.30: Mr. Norman Williams, baritone. 9.40: Mr. Jack Win and Miss Nora Windle, in a humorous sketch. 9.50: Miss Gladys Verona, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Pallin's Building, Ash St., Sydney. (Wavelength, 267 Metres).

MIDDAY SESSION.

12.30: Request numbers. 1.0: G.P.O. clock and chimes; music. 1.15: Talk on Homecraft by Pandora. 1.40: Music and request numbers. 2.30: Close down. 4.30: Musical programme.

EVENING SESSION.

5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close down. 7.0: G.P.O. clock and chimes; request numbers. 7.45: Garden talk by Mr. S. H. Hunt. 8.0: Soprano and contralto recital. 9.0: G.P.O. clock and chimes; comments on Foreign Affairs, by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close down.

2KY

Trades and Labor Council, Goulburn St., Sydney. (Wavelength, 260 Metres).

MORNING SESSION

10.0: Tune in to the ticking of the clock. 10.3: Popular fox-trots. 10.15: Hawaiian steel guitar selections. 10.30: Women's Session, Home Hints and Information, conducted by Mrs. Gray. 11.0: A few laughs. 11.5: pianoforte selections. 11.15: Calls and announcements. 11.20: Musical interlude. 11.30: Request numbers. 11.40: Music and vocal numbers. 11.55: Where to go to-night. 12.0 noon: Closing announcements.

CHILDREN'S SESSION

6.0: Birthday calls, request numbers, and kiddies' entertainment. Aunt Jemima and Uncle Bert.

EVENING SESSION.

7.0: Musical interlude. 7.5: Birthday calls. 7.15: Request numbers. 7.30: Hawaiian steel guitar selections. 7.45: Humorous interlude. 8.0: Orchestral selections. 8.10: Tenor solos. Mr. G. Mason. 8.17: A humorous interlude. 8.30: Frederick Holt presents a recital of Australian composers and compositions, with musical and vocal illustrations. 8.45: Selections of humorous records. 9.10: Request numbers. 9.40: Continue record recital. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney. (Wavelength, 292 Metres).

EARLY MORNING SESSION

7.15: Breakfast Time orchestral selections. 7.58: Announcements. 8.0: Music. 8.30: Weather report. Close down.

MIDDAY SESSION

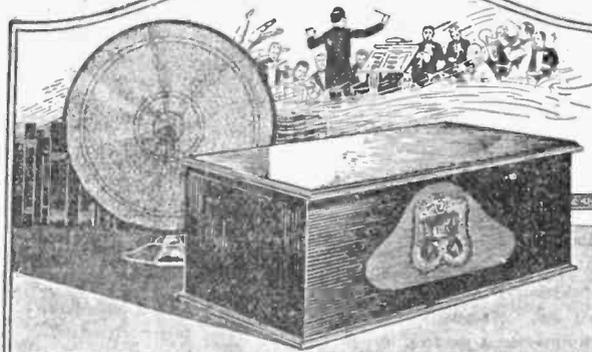
11.30: Music. 12.30: Close down.

AFTERNOON SESSION

1.0: Vocal and orchestral items. 1.45: Organ recital. 2.0: Orchestral music. 2.30: Close.

EVENING SESSION

7.15: Orchestral dinner music. 8.0: Overture, "Maritana" selections. 8.10: Musical selections. 10.15: Close down.

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AT 10 a.m. next Sunday, 2UE will broadcast the service from West Maitland Cathedral on the occasion of the installation of Father Gleeson as Bishop. The service will also be broadcast from 7.30 to 9.0 at night.

Interstate Programmes, Thursday, September 19

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 371 Metres).

7 to 8.15: See Friday.

MORNING SESSION

10.30: Current happenings in sport by Eric Welch.
10.45: Melody broadcast. 12.0: Melbourne Observatory Time Signal. 12.1: Melody Broadcast. 12.15: News service. British official wireless news. Corn Exchange mid-day report. Newmarket stock sales—Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION

1.0: Melbourne Observatory time signal. Stock Exchange information. Meteorological data. Weather forecast for Victoria, New South Wales, South Australia and Tasmania. Ocean forecast. River report. Rainfall; comments on the day's news.

COMMUNITY SINGING

1.20: Community singing, transmitted from the Melbourne Town Hall. Conductor, Frank Hatherley.

EDUCATIONAL SESSION

2.0: Great Australians (7) Peter Lalor. Mr. Chas. Daley.

SPORTING INTERLUDE

2.13: Description of Learmouth Hurdle Race—2 miles—Barrat Turf Club races—by Eric Welch.
2.20: Music explained and illustrated—Mr. C. E. Montearth. F.R.C.C. 2.35: Musical interlude. 2.43: Description of Trial Handicap—5 furlongs—Barrat Turf Club races. 2.50: Romantic stories of Australia's early days—Mr. C. R. Long, M.A.

THE RADIO MATINEE

3.5: Victory Brass Band (Conductor W. Honey).
March. "The Conqueror." Novelty March, "Miracology." 3.11: Rita Bernard. Contralto, "Night Gentle Shepherd." (Torrens). "Angus McDonald" (Roelke). 3.14: Description of Forest Handicap—1/4 miles—Barrat Turf Club Races. 3.20: Edna Davis, Xylophone. Some well-known melodies. 3.27: Victory Brass Band. Medley Waltz "Coquette" 3.32: Marjory Jacoby, Soprano. "Rain" (Curran). "Piper of Love" (Carew). 3.39: Victory Brass Band, Trumpet Solo. Selected. 3.42: Description of Dowling Steeplechase—2 miles—Barrat Turf Club races. 3.50: Victory Brass Band. Selection, "Gems of America." 4.0: Etta Bernard, Contralto. "Her Dream" (Waller). "Providence" (Carus). "The Second Minute" (Beely). 4.7: Victory Brass Band—One step "All Scotch." Fox trot. "Back in Your Own Backyard." 4.13: Description of Wendouree Welter—3 furlongs—Barrat Turf Club races. 4.20: Edna Davis—xylophone. Request numbers. 4.27: Margery Jacoby, soprano—"Pipes of Pan" (Monckton). "Morning" (Speaks). 4.34: Victory Brass Band—waltz. "Hypatia." Andante in G (Bastiste). 4.43: Description of Farewell Handicap—5 furlongs—Barrat Turf Club races. Acceptances and barrier positions for Mentone races on Saturday. 4.50: Close down.

THE CHILDREN'S CORNER

5.45: "Bobby Bluegum"—In song and story. "Clever Clarice at the Piano." 6.15: Birthday greetings by "Bobby Bluegum." 6.30: "Bobby Bluegum" and "Clever Clarice" will entertain the older children.

EVENING SESSION

6.40: Let's talk about our animals—"The Animals at the Show" Lt. Col. J. W. Carroll. 4.55: Musical Interlude. 7.0: Melbourne Observatory time signal. 7.1: Countryman's Session. 7.25: For the man on the land—Tobacco Topics. Mr. T. A. J. Smith. 7.40: News service. 7.45: Novels and authors of to-day—Mr. A. E. McKicken. 8.0: Melbourne Observatory time signal.

NIGHT SESSION

8.0: The National Broadcasting Orchestra, under direction of Mr. G. James, Conductor, Percy Code.
"Ballet Russe" (Luigini).
8.10: Jessie Shmith, contralto—"The String of Pearls" (Phillips).
"Don't You Mind the Sorrows" (Cowles).
8.16: You will hear the outstanding personality on the subject of the week.
8.30: A.B.C. Troubadours—"Louisiana Bo Bo" (Nixon).
"What D'Ya Say" (Brown).
"The Things that Were Made for Love" (Tobias).
8.39: Chas J. Bradley, baritone—"Trotlin' to the Fair" (Stanford).
8.42: The A.B.C. Troubadours—"My Mother's Eyes" (Bayer).
"Pleekin' Cotton" (Henderson).
"On the Crest of a Wave" (O'Hagan).
8.50: Lillane Gay, soprano—"I've Been Roaming" (Horn).
8.55: The A.B.C. Troubadours—"Stay at Home" (Henderson).
"Deep Night" (Henderson).
9.2: Ted Nelson—"A Piano Novelty."
9.3: The A.B.C. Troubadours—"I'm Crazy Over You" (Sherman).
"In a Little Town Called Home Sweet Home" (Donaldson).
"I Faw Down and Go Boom" (Brockman).
9.14: Jessie Shmith, contralto—"The Waters of Minnetonka" (Lieurance). (By Request).
9.17: The A.B.C. Troubadours—"My Inspiration is You" (Nicholls).
"Caroline Moon" (Burke).
"Sleep Baby Sleep" (Schuster).
9.26: Charles Bradley, baritone—"Uncle Rome" (Homer).
9.29: The A.B.C. Troubadours—"Sweethearts on Parade" (Lombardo).
"A Precious Little Thing Called Love" (Davis).
"I Can't Give You Anything but Love" (Flelds).
9.36: Lillane Gay, soprano—"The Little Damozel" (Novello).
9.41: The A.B.C. Troubadours—

"Makin' Whoopee" (Donaldson).
"Tim Bringing a Red Red Rose" (Donaldson).
"Love Dreams" (Mendoza).
9.50: Ted Nelson—"A Novelty Number."
9.53: The A.B.C. Troubadours—"Chilly Fom Pon See" (Wending).
"No Parking" (Rath).
"Here Comes the Showboat" (Rose).
10.2: Jessie Shmith, contralto—"Love Came Calling" (Zamecnik).
10.5: The A.B.C. Troubadours—"Weary River" (Clarke).
"Coquette" (Berlin).
"Blue Night" (Rollins).
10.14: Chas J. Bradley, baritone—"Me Little Banjo" (Dichmont).
10.17: The A.B.C. Troubadours—"High Tension" (Bee).
"Paradise and You" (Packay).
"Marie" (Berlin).
10.25: Meteorological information. British official wireless news. Items of interest.
10.40: The A.B.C. Troubadours—"That's How I Feel About You" (Davis).
"Down South" (Myddleton).
"She's Funny That Way" (Moret).
10.49: Ted Nelson—"Songs at the Piano."
10.53: A.B.C. Troubadours—"Think of Me Thinking of You" (Marvin).
"Flower of Love" (Mendoza).
"I Love to Hear you Singing" (Wood).
"Nothing to do But Think of You" (Bernard).
"I can't Do Without You" (Berlin).
"Reaching for Someone" (Donaldson).
"Glad Rag Doll" (Ager).
"Joe College" (Lombardo).
"Buck Town Blues" (Sontor).
Selected and Request numbers.
11.30: God Save the King.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne. (Wavelength, 484 Metres).

MORNING SESSION

8.15 to 11.0: See Friday.

MIDDAY SESSION

12.0: G.P.O. chimes. 12.1: Community singing from the Melbourne Town Hall; conductor, Frank Hatherley. 1.0: Luncheon music, supplied by the National Broadcasting Orchestra, under direction Wm G. James; conductor, Percy Code. 2.0: G.P.O. chimes.

AFTERNOON SESSION

2.0: Orchestral overture—the Southern Players Orchestra.

ENTERTAINERS

2.8: Victor Brooks and Elise Stewart—"Sit and Talk to the Moonbeams." "Let Me Call You Sweetheart." "Wonder Where He's Gone." "That's Your Baby." request numbers.

THE ARTISTIC REPRODUCTION OF ABSENT ARTISTS

2.28: Piano recital, Erno Donnelly. 2.35: Baritone solo, Robert Howe. 2.41: Bright piano numbers, Ada Carroll. 3.0: Request numbers.

MAINLY FOR WOMEN

3.20: At a City Registry Office—Miss Hattie Knight. 3.35: Musical interlude. 3.40: Food and Cookery—Electric Cooking, Miss B. Osborne. 3.55: Musical interlude. 4.0: Your Health and Appearance—The Value of Breathing Exercises, Miss Evelyn N. Ellis. 4.15: Reproduced music. 4.45: Evenson, transmitted from St. Paul's Cathedral. 5.30: From the studio—weather data; acceptances and barrier positions for the Mentone races on Saturday, September 21. 5.35: Reproduced music. 5.45: Close down.

EVENING SESSION

6.15: Dinner music, supplied by the National Broadcasting Orchestra, under direction Wm. G. James; conductor, Percy Code. 7.30: What's on the air to-night? 7.32: Sporting results. 7.35: Latest musical releases. 8.0: G.P.O. chimes.

NIGHT SESSION

8.0: A special reproduction of "The Messiah" (Handel), by Sir Thomas Beecham and orchestra.
10.25: Weather information and Herald news.
10.30: God Save the King.

3DB

The "Herald" Broadcasting Station, Flinders Street, Melbourne. (355 Metres).

MORNING SESSION

11.0: Jack Hylton and His Orchestra—"Melodious Memories" (Pink). 11.30: Gladys Moncrieff—"Hugule" 12.0: H.M. Goldstream Guards—"Figue Dame" Supper. 12.30: Market reports—John McNamara and Co., Pty., Ltd. 12.35: Maria Kurenko (soprano)—"Villanelle" (Del Aquas). 1.0: Gene Austin—"Lonesome Road." 1.30: Silver Stars Band—"Loving Cup Memories." 1.45: Close down.

AFTERNOON SESSION

2.15: National Military Band—"Prelude Act III, Cohenegrin." 2.30: Trix Sisters—"Where is My Meyer." 3.0: Atwater Kent Radio Hour—Sponsored by A. G. Healing, Ltd. and E. T. Muir. 4.0: Close down.

EARLY EVENING SESSION

5.30: Mayfair Orchestra—"Toy Symphony." 6.0: Alfred O'Shea—"Two Irish Eyes." 6.30: Arcadians Orchestra—"Aloma." 7.0: G. T. Pattman (organ)—"Worryin'" 7.15: Market reports—by John McNamara and Co., Pty., Ltd. 7.20: Debroy Somers Band—"Laughing Marionette." 7.30: Market reports—Gippsland and Northern Co-operative Co., Ltd. 7.40: Frederick Vettel (tenor)—"Poor Punchinello." 7.45: Mr. E. L. Coulter, of Sydney, Kiek, Son, and Coulter—"A Talk on Books."

EVENING SESSION

8.0: Royal Guards Band—"Coronation March" from "The Prophet" (Meyerbeer). 8.30: Charles Hill (tenor). "The Angelus was ringing." 9.0: Plaza Theatre Orchestra "My Lady Dainty." 9.30: Isolda Menges (violin). "Salut D'Amour" (Elgar). 10.0: Milton Hayes—"Is Leh-stick nourishing?" 10.30: Salon Orchestra—"Alma Sunset Land." 10.40: News. 10.45: God Save the King.

4QG

Queensland Government Radio Service, Brisbane. (Wavelength, 385 Metres).

For day session schedules see Friday.

NIGHT SESSION

8.0: From the Studio—
A programme by the Brisbane Apollo Club.
The Choir (unaccompanied).
"Defiance" (Attenhover).
D. M'Lennan, tenor—
"Like Stars Above" (Squire).
The Choir (unaccompanied).
Part-song, "Not a Spot on Earth" (Winter).
Vada Riek, violinist—
"Chanson Hindoue" (Rimsky-Korsakov).
The Choir—
Chorus, "Trim Ship" (Cross).
Percy Brier, pianist—
"Tempo di Minuetto, Op. 29" (Zanella).
Jack Land and Leonard Francis—
Vocal duet, "Love and War" (Cooke).
The Choir (unaccompanied).
Part-song, "The Young Musicians" (Kucken).
Beatrice Pugh and Mrs. Hugh Campbell—
Vocal duet, "A Figlia in Cautà" (Donizetti).
The Choir (unaccompanied)—
Chorus, "The Spartan Heroes" (Protheroe).
Tom Kelleher, baritone—
"Pals" (Squire).
Male Quartette—
"Imperial Quartette."
The Choir (unaccompanied)—
Humorous part-song, "Alexander" (Brewer).
The Choir (unaccompanied).
Part-song, "Eventide" (Shepherd).
9.0: Metropolitan weather forecast.
9.1: Movements of travelling dental clinic.
The Choir (accompanied)—
"Buccaneers" (Gandish).
A. G. Steele, baritone—
"Youth" (Allisen).
The Choir (accompanied)—
Part-song, "Vira" (Riker).
H. A. Thiele, Elocutionist—
"Father Rilly's Horse" (Banjo Paterson).
Beatrice Pugh and Mrs. Hugh Campbell—
Vocal duet, "Shepardess and Beau Brocade" (Phillips).
L. H. Muller, tenor—
"To a Miniature" (Brahe).
The Choir (accompanied)—
Part-song, "To the Death" (Wheeler).
Percy Brier, pianist—
"Aspiration" (Schumann).
The Choir (unaccompanied)—
Humorous part-song, "Old King Cole" (Forsyth).
Vada Riek, violinist—
"Dusk on the Hawkesbury" (Alfred Hill).
The Choir (accompanied)—
Chorus, "The Lost Chord" (Sullivan).
The Chafers—
Male Quartette, "The Two Roses" (Werner).
The Choir (unaccompanied)—
Part-song, "Old Farmer Buck" (Williams).
The Choir (unaccompanied)—
Part-song, "Lullaby" (Williams).
10.0: News supplied by the metropolitan dailies.
Weather information. Close down.

5CL

Central Broadcasters, Ltd., 111 Hindmarsh Square, Adelaide. (Wavelength, 409 Metres).

MORNING SESSION

11.15 to 2.0: See Friday.

AFTERNOON SESSION

2.0 to 5.0: See Friday.

EVENING SESSION

6.0 to 7.20: See Friday.
7.20: Dr. H. H. Wright, M.A., will continue his series of Literature Talks.
7.35: Rev. W. H. Cann, will speak on "Service."
7.45: Mr. A. M. Whittenbury—
Hints to Poultry Breeders.
8.0: Chimes.
8.10: Fireside Concert entitled—
Down for the Show!
In which the following artists will take part—
Rupert Hazzard and Elsie Day.
Luigi Dattrucco.
Jack Burgess.
Angelo Demodena.
The Madrigal Singers.
Phyllis Tier.
Allan's Mouth Organ Band.
9.1: Meteorological information.
9.2: Overseas Grain Report.
9.3: General news service.
9.5: Fireside Concert (continued).
10.15: General news service.
British Official Wireless News.
Meteorological information.
5CL's Sporting Service.
Including Athletic Gossip.
Motor Cycling Notes. Results Country Foot-ball.
10.29: Modern dance recordings.
11.0: Close down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth. (Wavelength, 435 Metres).

EARLY MORNING SESSION.

7.30: Town Hall chimes. 7.31: Meteorological report. 7.32: The day's maxim. 7.35: Early rising music (reproduced). 7.55: Mails and shipping intelligence. 8.0: What's on to-day? 8.5: Market reports. 8.10: Early rising music (reproduced). 8.22: Comments on news. 8.27: Features of to-day's programme. 8.30: Close down.

MORNING SESSION—TRADERS' DEMONSTRATION.

10.0: Town Hall chimes. 10.1: Popular music (reproduced). 10.15: Women's interest talk. 10.30: Organ recital from the Ambassadors—Jack Laing at the console of the Wurlitzer organ. 11.0: Close down.

MIDDAY SESSION.

12.30: Town Hall chimes. 12.31: Vocal recital (reproduced). 12.37: Racing anticipations. 12.45: Mid-day news service. 12.50: Items of interest. 12.58: Weather report. 1.0: Perth Observatory time signal. 1.1: Luncheon music by the National Broadcasting Orchestra. 2.0: Close down.

THE RADIO MATINEE.

3.0: Town Hall chimes. 3.1: Vocal recital (reproduced). 3.15: Captain Donald McLean—"Captain Kidd and His Treasure." 3.30: Fifteen minutes with great artists (reproduced). 3.45: Talk of interest to women—"Women's Service Guild." 4.0: Town Hall chimes. 4.1: Instrumental music (reproduced). 4.15: The story of the day. 4.30: Ambassadors orchestra, conducted by Bert Howell. 4.55: Features of this evening's presentation. 5.0: Close down.

EARLY EVENING SESSION.

5.45: Children's "Good-night" stories by Uncle Bas and Auntie Max. 6. A.B.C. younger set session—A.B.C. Junior Radio Club. 6.30: Studio dinner music. 7.30: Weather report. 7.31: News service. 7.35: Special A.B.C. market reports. 7.40: Stock Exchange. 7.45: H. S. Thompson, M.A.—"The Charm of the Evening." 7.57: Features of to-night's presentation.

EVENING SESSION.

8.0: Perth City Band. 8.15: Fred. Gibson, concertina solos. 8.22: Perth City Band. 8.37: Fred. Gibson, concertina solos. 8.44: Captain Donald McLean—"The Awful Captain." 9.0: Town Hall chimes. 9.1: Weather report. 9.2: Perth City Band. 9.17: First series, "Oh, By the Way" stories, Basil Kirke. 9.27: Perth City Band. 9.42: Maxine McKenzie, popular vocalist. 9.49: Temple Court dance band. 9.59: Maxine McKenzie, popular vocalist. 10.0: Temple Court dance band. 11.0: Close down. God Save the King.

7ZL

Tasmanian Broadcasters Pty., Bursary Bldgs., Elizabeth St., Hobart. (Wavelength, 316 Metres).

11.30 a.m.: Selections. 11.34: Midlands weather forecast. 11.35: Adeline Eager will speak on "Household hints." 11.50: Selections. 11.55: Tasmanian stations' 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information, mail notices, housewives' guide. 12.8: Selections. 12.30: News service, announcements. 12.40: Selections. 1.5: British official wireless news, railway auction sales. 1.10: Selections. 1.30: Close down. 3.0: G.P.O. clock chimes the hour. 3.1: Selections. 3.4: Weather information. 3.5: Selections. 4.15: A representative of the Child Welfare Association will speak on "Mother's Own Baby." 4.30: Close down. 6.15: Children's hour with "Uncle David" and "The Storey Lady." 7.10: Recorded music. 7.30: News session. 7.40: Under the auspices of the "Come to Tasmania" organisation, Rev. Brewster will speak on "Sandy Bay Regatta." 7.50: H. J. Corrigan will speak on "Soccer." 8.0: Chimes. 8.1: Selections. 8.30: Transmission from the Springs Hotel, Mt. Wellington. A special programme has been arranged. 9.45: News session. 10.0: Chimes. 10.1: Close down.

INTERSTATE, WEDNESDAY, SEPTEMBER 18

5CL

(Continued from Page 48.)

10.3: We hope you are all having a very happy time at Red Hill, Victor Harbor, Kadina, Sandalwood, Penola, Karoonda, Penong. Old-Time songs, under the direction of Horace Perkins, assisted by the Madrigal Singers. "Waltzing Matilda." "Massa's in de Cold, Cold Ground." 10.10: Broom Dance. Selected Waltzes.

FROM 5CL STUDIO

10.15: General News Service—British Official Wireless News, Meteorological Information, Announcements. 5CL's Sporting Service—Including a resume of Ballarat race results. Amateur Tug Competition. 10.30: From the Adelaide Town Hall. Old-Time Dance Night (continued). Alberts. "Jolly Times." 10.44: Gordon Hele and Norman Morphett. "Come to the Fair" (Easthope-Martin). 10.48: Military Two Step—"Dance of the Honey Bees." 10.56: Come on everybody at Wooltana, Torren-Vale, Streaky Bay, Balaclava, Strathalbyn, Summertown, Thrington, join in with us in song and dance. Old-time songs, under the direction of Horace Perkins, assisted by the Madrigal Singers. "Wrap Me Up in My Old Stable Jacket" "O Sussana." 11.3: Lancers. 11.21: Jack Burgess—11.25: Waltz—"Destiny." 11.4: G.P.O. chimes. 11.31: Close down.

WEDNESDAY, SEPTEMBER 18.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth. (Wavelength, 435 Metres).

EARLY MORNING SESSION.

7.30: Town Hall chimes. 7.31: Meteorological report. 7.32: The day's maxim. 7.35: Early rising music (reproduced). 7.55: Mails and shipping intelligence. 8.0: What's on to-day? 8.5: Market reports. 8.10: Early rising music (reproduced). 8.22: Comments on news. 8.27: Features of to-day's programme. 8.30: Close down.

MORNING SESSION—TRADERS' DEMONSTRATION.

10.0: Town Hall chimes. 10.1: Popular music (reproduced). 10.15: Women's interest talk. 10.30: Organ recital from the Ambassadors—Jack Laing at the console of the Wurlitzer organ. 11.0: Close down.

MIDDAY SESSION.

12.30: Town Hall chimes. 12.31: Vocal recital (reproduced). 12.45: Special midday news service. 12.50: Items of interest. 12.58: Weather report. 1.0: Perth Observatory time signal. 1.1: Luncheon music by the National Broadcasting Orchestra. 2.0: Close down.

THE RADIO MATINEE.

3.0: Town Hall chimes. 3.1: Vocal recital (reproduced). 3.15: Captain Donald McLean—"How Kidd Went Chasing Pirates, and Was Himself Caught." 3.30: Fifteen minutes with great artists (reproduced). 3.45: Women's interest talk—"The National Council of Women." 4.0: Town Hall chimes. 4.1: Instrumental music (reproduced). 4.15: The story of the day. 4.30: Vocal music (reproduced). 4.55: Features of this evening's presentation. 5.0: Close down.

EARLY EVENING SESSION.

5.45: Children's "Good-night" stories by Uncle Bas and Auntie Max. 6.15: A.B.C. younger set session—girls' night. 6.30: Studio dinner music. 7.30: Weather report. 7.31: News service. 7.35: A.B.C. market reports. 7.42: Sporting talk. 7.57: Features of to-night's presentation.

EVENING SESSION.

8.0: Overture, Ambassadors orchestra, conducted by Bert Howell. 8.7: Organ recital from the Ambassadors. Les, Waldron at the console of the grand organ. 8.15: C. Pighills, baritone. 8.23: Magic Carpet series—"The Fire Walkers of Bega, Fiji," by Basil Kirke. 8.40: Zlata Kalmikoff, cellist. 8.47: C. Pighills, baritone. 8.54: Zlata Kalmikoff, cellist. 9.1: Weather report. 9.2: Harley Edwards—"Scene from Dickens." 9.12: Stage presentation. 9.25: Ethel Treadgold, soprano. 9.32: Harley Edwards—"Scene from Dickens." 9.39: Ethel Treadgold, soprano. 9.46: Ambassadors unit orchestra. 10.10: Temple Court dance band, conducted by Merv. Lyons. 11.0: Close down. God Save the King.

7ZL

Tasmanian Broadcasters Pty., Bursary Bldgs., Elizabeth St., Hobart. (Wavelength, 316 Metres).

11.30 a.m.: Record recital. 11.34: Midlands weather forecast. 11.35: Record recital. 11.55: Tasmanian stations' 9 a.m. weather report. 12.0: G.P.O. clock chimes the hour. 12.1: Shipping information, mail notices, housewives' guide. 12.8: Record recital. 12.30: News service, announcements. 12.40: Record recital. 1.5: British official wireless news, railway auction sales. 1.10: Record recital. 1.30: Transmission from the Imperial Hotel, Collins Street, Hobart. Speeches at the Rotary Club luncheon. 2.0: Close down. 3.0: Transmission from the Hobart Public Hospital. Official handing over of the hospital wireless installation by his Excellency Sir James O'Grady, K.C.M.G., Governor of Tasmania. 4.0: Record recital. 4.15: Readings from the "Illustrated Tasmanian Mail." 4.30: Close down. 6.15: Transmission from the Beaumaris Zoo, A. R. Read, Curator of the Beaumaris Zoo, will speak on "Bears." 6.30: Children's Hour with Bertina Southey Brammall. 7.10: Record music. 7.30: News session. 7.40: Belle St. Lawrence will continue her travel talks. 7.50: An officer of the Public Health Department will speak on "Health Matters." 8.0: G.P.O. clock chimes the hour. 8.1: Record recital. 8.15: A Columbia recital, including latest releases specially arranged by Flinday's Music Warehouse. 9.30: News session. 9.45: Record recital (continued). 10.0: Clock chimes the hour. 10.1: Close down.

SEVERAL features announced for this issue, including Mr. Hull's article on "Choosing the Right Valve for the Right Purpose," are unable to appear this week owing to lack of space. They will be included in next number.

O'Grady, K.C.M.G., Governor of Tasmania. 4.0: Record recital. 4.15: Readings from the "Illustrated Tasmanian Mail." 4.30: Close down. 6.15: Transmission from the Beaumaris Zoo, A. R. Read, Curator of the Beaumaris Zoo, will speak on "Bears." 6.30: Children's Hour with Bertina Southey Brammall. 7.10: Record music. 7.30: News session. 7.40: Belle St. Lawrence will continue her travel talks. 7.50: An officer of the Public Health Department will speak on "Health Matters." 8.0: G.P.O. clock chimes the hour. 8.1: Record recital. 8.15: A Columbia recital, including latest releases specially arranged by Flinday's Music Warehouse. 9.30: News session. 9.45: Record recital (continued). 10.0: Clock chimes the hour. 10.1: Close down.

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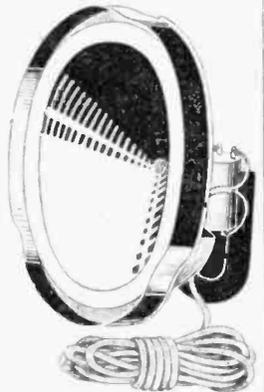
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The Countryman's One Valve Receiver

THE Countryman's One Valve receiver was originally published in WIRELESS WEEKLY, January 25, 1929. The circuit with coil data was republished in Queries columns, August 23, 1929. The reaction coil was fixed, and a later improvement on this receiver was the addition of a reaction condenser and an alteration to the coil. This circuit also appeared in Queries columns, August 23, 1929. Circuit of the original Countryman's One Valve with a stage of audio frequency added, appeared in Queries columns, March 1, 1929. Below are grouped a number of queries regarding the Countryman's One Valve and the Improved Countryman's One Valve.

H.P. (Drummoyn): "I have built the 'Improved Countryman's One Valve,' and wish to bring it up to speaker volume. I am thinking of adding two stages of audio amplification. Is there any advantage in adding a stage or two of radio amplification as well?"

Answer: Yes, it would give you good reception of inter-State stations on the speaker.
 (2) "What valves of the type mentioned below shall I use for the detector and audios, and state filament and plate voltage of each valve."

Answer: A415 detector, audios A409 and B406 Detector plate voltage about 30, first audio 90 volts O.K., second audio 135 volts or more; filaments 4 V.K.

(3) "What 'A' battery shall I need?"

Answer: Four volt 40 amp-hour accumulator.

(4) "How is a stage of R.F. connected up to set?"

Answer: Wind another primary and secondary coil as per detector stage. Connect aerial to first turn of aerial coil, and earth to last turn. First turn of R.F. secondary to grid of R.F. valve (A415; variable), and to fixed plates of a .0005 condenser (variable), and last turn of R.F. secondary to rotor plates of condenser and to filament of Valve. Other filament to rheostat. Connect up filament leads to filament leads of detector socket. Plate of R.F. valve to first turn of detector primary. Last turn to B plus 40 volts.

(5) "With two stages of audio amplification would I get Melbourne on earphones?"

Answer: It should be possible.

(6) "With the Improved 'Countryman's One Valve' tuning is affected when I place my hand near the .00025 condenser, and sometimes humming and whistling occurs."

Answer: Try a .002 condenser across the telephones, and try reversing condenser connections.

E.W. (Lelehardt): "I have a 'Countryman's One Valve,' and have got some wonderful results with it, bringing in inter-State and foreign stations on the phones. I now desire to add a stage of R.F. in order to clear up some long distance carrier waves, which I think are Japanese stations. I receive them late on Sunday night. Who would they be? How can the R.F. stage be added?"

Answer: Add R.F. stage as per reply to "H.P." above. Probably Japanese stations; they come in well late Sunday evening and early Monday morning.

Y.S.D. (Glebe): "On my 'Countryman's One Valve' I receive 1VA and 7ZL, and fair earphone volume. I do not desire to add any more controls to the set, but I wish to boost up the volume. What could be done?"

Answer: Add two stages of audio frequency amplification. Circuits appeared recently.

T.M. (Wauchope): "I built the 'Countryman's One Valve' (tried original and improved types). Both were exceptionally good, but cannot account for the fact that with the original receiver I still have both; there is a whistle on some stations. This cannot be eradicated."

Answer: Due to the reaction coil, which must be adjusted. It was owing to this inconvenience that the writer designed the 'improved' receiver, as this does away with the necessity of adjusting the reaction coil by hand.

H.A. (Lelehardt): "I have a 'Countryman's One Valve,' which is not too satisfactory. There is a motor-boating on 2GB, and I get a double reading on the dials."

Answer: Motor-boating may be caused through faulty grid leak or condenser, or open grid circuit. Try varying dial, and see if this alters pitch of motor-boating. If so, then the fault is almost certain to be in the grid circuit.

(2) "Results are very poor. Details are given below."

Answer: You deserve all you get for departing from coil data, which were painstakingly worked out, not on paper, but practically. When will readers understand that deviations in the case of coil windings and size of formers must not be made unless they know exactly what they are doing? The

The Radio Information Service

Under the Direction OF ROSS-A-HULL M.I.R.E

former is too small. Wind 25 turns on the same former, and tune with a .00025 mfd. condenser. The distance between the secondary and reaction coil should not be one inch. Reduce detector voltage also. Double readings may be through using old type condenser, which can be swung round full 360 degrees.

D.M. (East Hills): "I am thinking of constructing a one-valve receiver, and thought I would follow the instructions given in WIRELESS WEEKLY dated August 30, 1929. However, on reading letterpress on page 25, I find that it does not agree with the diagrams shown on pages 21 and 22. For instance, the article reads, 'connect the plate terminal of the valve socket to one side of the jack,' while the diagrams show the plate terminal connected to L3, and no provision is made in the letterpress for a connection to the other terminal of L3."

Answer: Thanks for calling our attention to this omission. Letterpress should read 'plate of valve to first terminal of L3, and last terminal of this coil to one side of the jack.' Diagrams are correct. Letterpress relating to reaction coil was, unfortunately, missed out. Receiver would still work, however.

"Aerial" (Canley Vale): "Many thanks for answering my last query re the 'Countryman's One Valve.' I made the set up, and am now getting excellent results. There is one small trouble, however, which still remains, so I wish your help again. This is rather broad tuning on 2FC and 2BL. What remedies would help?"

Answer: Try a .0001 fixed condenser or a midgeet condenser in series with the aerial lead, or decrease coupling between primary and secondary.

(2) "Will you please publish a request for some reader to forward me a copy of the issue containing the 'Countryman's One Valve,' with a stage of audio added?"

Answer: Some reader may see your request. Sorry we have no copies left. Circuit was published in Queries recently. Inquirer is Mr. George Harris, "Woodlands," Canley Vale Road, Canley Vale.

A.W.P. (Temora): "Please find enclosed circuit of 'Improved Countryman's One Valve,' as shown in Information Service, August 23, 1929. I have added a stage of audio amplification, and would like to know if this is correct. I could only get one station all the way round the tuning dial. I had every success with the original circuit. I have departed from instructions by using a 23 plate condenser for reaction (instead of .00025), and the tuning condenser is a .00035 instead of a .0005."

Answer: Change over the positions of the two variable condensers. Circuit is correct otherwise. Try also a .001 fixed condenser across the primary of the transformer. Tap the 25 turn coil about midway, and try aerial on that point.

S.W. (Summer Hill): "Using 'B' eliminator circuit shown hereunder on the Renown Three, first audio of which is double impedance coupled instead of transformer, motor-boating is so bad as to render the motor useless. One lead only of mains is used."

Answer: Take the B plus audio lead from that side of the 3 mfd. condenser that connects to one side of the filter chokes, thus placing the last part of the filter between the detector and amplifier. Both sides of main are used, as one side is earthed.

J.L. (Gisborne): "I built a 'B' eliminator to be used in conjunction with my Renown Three. It causes a hum, and music cannot be heard. I have changed my valves, but hum still obliterates music."

Answer: See reply to "S.W." above, and keep eliminator well away from set. Try another valve in place of the 201A.

L.B. (Cooma): "I am particularly interested in your article on 'Electrical Calculations' treated in your series on 'Radio Proficiency,' and shall be greatly obliged if you would recommend me a book on the subject."

Answer: The text book being used is the "Admiralty Handbook of Wireless Telegraphy, 1925," available from Messrs. Angus and Robertson. Price, 6/6

Anxious (Double Bay): Use the push-pull audio. The other would give you distortion. Suggest two stages of transformer coupled audio, using your Philips transformers. The writer recently included these in a receiver audio, which had to be utilised also for a pick-up. He found that a B406 was the first audio, followed by a G509 in the last stage, used in conjunction with a 40-volt "C" battery, gave excellent results.

H.V.P. (West Wyalong): May be faulty transformer. Mr. Martin, 48 St. Marks Road, Randwick. Approximately 30 volts on detector, probably less.

W.S.W. (Burren Junction): Try reducing detector voltage, and placing a .002 fixed condenser across secondary of last audio transformer.

F.J.C. (Flemington): Place a .001 fixed condenser across primary of first transformer, and a .002 fixed condenser across the midgeet reaction condenser.

J.R. (Lillyfield): Probably breakdown in primary of transformer, or loose connection in receiver, aerial, earth, or house switches.

GENERAL: Mr. Thomas Buist, Dumaresque Street, Hamilton, Newcastle, writes: "Seeing a lot of requests for old numbers of WIRELESS WEEKLY I can supply every number from January 18 every week up to August 30, 1929, at 3d per copy plus postage. In good condition. 31 copies."

J.E.G. (Reifern): Everything quite O.K. with the exception of the lead from the moving plates of the reaction condenser, which should be connected to the positive filament. No, we didn't laugh. If you hadn't submitted the circuit, it would have been impossible to help you. Wish other readers would remember this.

GENERAL: Can any reader supply Mr. W. Richardson, P.O. Kojilo, N.C.L. Queensland, with a copy of WIRELESS WEEKLY dated February 1, containing the Marco Four. He is willing to pay cost and postage.

H.C. (Mile End): It is necessary to have a licence from the patent holders.

C.M. (Newtown): See below.

GENERAL: We have had many inquiries for "B" Eliminator circuits and data. Inquirers will be pleased to see that a simple eliminator appears in this issue. It is suitable only for receivers up to three valves. Those who require something a little further advanced, should see that described with the Standard A.C. Four Power Unit.

G.D.H. (Adelaide): Favor the Peridine. All rests with adjustment of coils. May be that you have a poor crystal. Yes, S.G. valves can be used in the receiver. Did you see the article on the "S.G. Screen-grid Peridine"? Messrs. Harrington, Ltd., can supply you with the resistances.

"WELL WISHER" (South Australia):—A425, A425, A415, A409, B406. Wave trap will be about 600pF only chance to eliminate the interference, since this is the case of the commercial receivers which are of the riveted type.

S.H. (Dee Why):—Try a .001 fixed condenser across primary of first transformer. Sorry to hear it took you two hours to do the drawing. Back of panel diagrams of little use to us. Prefer the circuit diagram where it can be supplied. Try reversing plate and B plus connections on the coil.

R.M. (South Grafton):—Adding two audio stages to the Improved Countryman's One is as simple as adding it to any other receiver. Merely connect that phone terminal that comes from the plate of the detector valve to the plate of the first audio transformer, and the other phone terminal to the B plus connection of the same transformer. Circuits of two stage amplifiers have appeared in these columns several times recently.

QUERY COUPON

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

The Radio Information Service, (Not Admitt.)
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 This coupon in order to be returned at once. It is a bona-fide reader.

W.A. (Parkes)—"I noticed an article in WIRELESS WEEKLY, 23/8/29, under the heading 'The Exponential Speaker,' by Mr. Calvin A. Walters, of Eastwood. I would deem it a favor if you would insert a par to the effect that I should like to get in touch with this gentleman. He says the exponential speaker is worth making, if one knows how. I wonder if he would be sport enough to let me in the know?"

Answer: See below.

Mr. Calvin A. Walters (Eastwood).—Please see above. Inquirer is "W.A.," cor, Dalton and Bushman Street, Parkes, N.S.W.

W.A. (Parkes).—Due probably to old type condensers. Use the S.L.P. type.

GENERAL.—Mr. D. Mahony, 9 Spark Street, Georgetown, writes, "Just a few lines to let you know I have installed a four-valve Marco. The set was built from a circuit out of WIRELESS WEEKLY (dated November 11, 1927), though as I only have the leaf with the circuit on it I cannot find any details about the set. Set is working O.K., but there is a lot of interference in the speaker. I would like to try and get a Marco Four article. The circuit I have has two jacks. I should like to get this and also the circuit using one jack."

Answer: Perhaps some reader who has some spare back numbers may be able to oblige. Unfortunately, we are right out of these issues.

MITBOW (Borral).—Suggest small cone speaker. No. will not operate dynamic speaker to full advantage. Only one stage of audio, remember. Suggest battery-operated receiver would be better under your exceptional conditions. You could use an eliminator and "A" trickle charger.

R.C. (Campsie).—Receiver is probably not neutralised, or transformers unsuitable.

E.V.G. (East Mascot).—No; very seldom have queries from lady radio enthusiasts. Wish some of the males would be brief. Thanks. Try a Midget condenser in series with the aerial, and move primary, i.e., aerial coil, further away from secondary. Shortening aerial may help.

R.K. (Queensland).—The holes do not penetrate into the valve itself, but only through the bakelite. O.K. for the holes to be in legs of valves. Connecting wires from elements are soldered inside. You may be using too high voltage on the valves.

A.S. Cootamundra.—"I would esteem it a favor if you would advise me how to become a member of the 'Proving Radio Club'."

Answer: Write to the organising secretary, Mr. C. Y. Hook, 29 Bialagorris Street, Dulwich Hill.

(2) "Will you please inquire through your columns if any reader can supply the following numbers of 'Proving Radio'—will pay for copies and for postage: Nos. 4, 5, 8, 9, 11, and 16. Name and address, A. Sinfield, Sutton Street, Cootamundra."

GENERAL.—Mr. E. E. Eldridge, Box 27, Charlton (Victoria), writes: "Would you please insert a request in your information page for any reader having a spare copy of WIRELESS WEEKLY containing the 'Go-Getter' short-wave receiver to forward same to above address. I am prepared to pay sixpence plus postage for the copy."

A.H.P. (Burwood).—Sorry we have not his full address, but will publish a par for you. He may see it. See below.

W.C.R. (Dunoon).—Please get in touch with Mr. Allan Pinkerton, 91 Burwood Road, Burwood.

R.W. (Bondi).—"I am in possession of a one-valve Reinartz receiver, and wish to know if I substitute suitable coils and condensers for short-wave work, will this constitute a satisfactory form of short-wave receiver?"

Answer: Yes; Reinartz is a good S.W. receiver, but two stages of audio, though not absolutely necessary, would be an advantage. At least one stage of audio should be added.

(2) "Must a stage of audio be added?"

Answer: Not necessarily, but as stated above, it would be a great improvement.

(3) "I have a suitable short-wave kit, and a condenser of 60015 mfd. Are these O.K.?"

Answer: Yes; quite in order. Why not build a short-wave adaptor with the spare parts you have and add a stage of audio to your existing receiver? It can then be used on all waves.

(4) Valve is quite O.K. Same valve in audio.

A.V.E. (Seaton).—"I have a Go-Getter receiver. I hear a station nightly using Radiolox coil size smaller than broadcast band, dial set to 22 degrees. Heard Grand Opera music, piano, violin, and flute; also heard piece, 'Hearts and Flowers.' Announcer sounds like Japanese or German. Station closes down at 30 p.m. Sydney time, with what I believe to be a National Anthem. The first part of this sounds like Harry Lauder's 'I'm the Saffest of the Family.' Cannot get call sign. Can you please, advise what station it could be?"

Answer: Probably Russia, but it is very hard to say. Perhaps some other S.W. listener has heard this station, and can advise. If so, and he cares to write to this department, we will be pleased to publish the information.

R.L. (Coff's Harbor).—Reason for whistle is that intersection is taking place between the two coils. Our coil should not be placed inside the other. The transformer windings are of poor type. Keep them well apart or at right angles to each other. Re Below, quite O.K.

K.W. (Croydon).—Sorry, no copies. See below.

GENERAL. Can any reader please supply Mr. K. Walshaw, 61 Lang Street, Croydon, with two copies of WIRELESS WEEKLY containing the Air King receiver. Inquirer will be pleased to pay cost of copies and postage.

GENERAL.—Mr. M. Cohen writes: "On 15/7/29 you publish an 'All Wave' three-valve receiver. I would be much obliged if you would insert a paragraph to the effect that I should like to obtain this number. If it is unobtainable, your old publication, 'Radio,' for month August, 1927, will do, as this contained the circuit. I am prepared to pay for postage."

E.O. (Cabarita).—Build the 'Old Reliable.' Circuit appeared recently in queries column. We do not reply by post. The coil kit is known generally as a "Three Coil Tuner."

TINKER (City).—Valves O.K. We cannot compare manufacturers' goods. S.W. adaptor will be O.K.

"RONGLEN" (Victoria).—Coils suitable for the valves, but there is a chance you may have to increase primaries slightly. No alterations necessary for power amplifier. Will have to use power detector as per recent circuits published a few months ago.

S.R. (Redfern).—A425, A415, A409, B406.

J.R. (via Hornby). Reason is that you are very near 2B1's aerial. The most selective of crystal receivers you get very poor results. Try wavetrap. Will probably reduce volume.

(2) "I have made a bet of a dollar with a mate that you will reply to this letter by post. He is a Scotsman!"

Answer: Aye! he was canny, too. Whin are ye givin' him th' dollar?

P.W. (Port Adelaide). As the power is supplied by the ship's dynamo, you would find it difficult to use the power on your receiver without hum. A suitable filter and smoothing circuit could be used, but the receiver should be totally shielded. The six copies requested have been forwarded.

A.J.R. (Victoria). Copy has been forwarded as requested. Circuit and instructions for building and calibrating wavetrap will be found in this year's A.W.A. Handbook.

J.S. (Sydney). If you had followed instructions and attached all loose papers, your query would have been answered here. No circuit was found with your letter when it reached this department, and we have failed to locate it elsewhere.

A.L.W. (Gumulla). Your circuit is quite O.K. B plus amp. 90 volts. B plus det. 30 volts. Should work a speaker. May be faulty valve or transformer.

GENERAL. Mr. George Moore, White Lodge, The Height, Cardiff, N.S.W., writes: "Noticing many requests for old numbers of WIRELESS WEEKLY, will you kindly publish the following list in your columns. All copies are in good order. From July 1927: July 1, 8, 15, 22 August: 12, 19, 26 September: 2, 9, 16, 23 October: 7, 14, 21, 28 November: 4, 11, 18, 25 December: 2, 9, 16, 1928: March: 2, 9, 16, 23 February: 17, 24 April: 6, 13, 20, 27 May: 4, 11, 18, 25 June: 8, 15, July: 13, 20, 27 August: 10, 24, 31 September: 7, 14, 21, 28 October: 5, 12, 19, 26 November: 1, 8, 15, 22, 29 April: 5, 12, 19, 26 May: 3, 10, 17, 24, 31 June: 7, 14, 21, 28 July: 5, 12, 19, 26 August: 2, 9, 16, 30 Radio, 1928: February, June, September, March.

R.L.G. (Alstonville). Please give particulars for short-wave coils wound on valve bases to cover 15-100 metres. Could coils be used in any S.W. set?

Answer: Coils could be used in any S.W. set providing condenser capacity is correct, as shown below. Details of the coils are given in the GENERAL paragraph following. Your request for copies is also published under.

GENERAL. Many readers are inquiring for details of S.W. coils wound on valve bases to cover from 10-100 metres. Using a midget condenser, .00015 mfd., the coils for 9-12 metres are—aerial 3 1/2 turns, grid 3 1/2 turns (the coils can be used if used in this stage is used), detector coil 3 1/2, reaction 3 1/2. For 12-19 metres, the coils (given in same order) are: 5 1/2, 6 1/2, 7 1/2 turns. 19-28 metres, 8 1/2, 9 1/2, 10 1/2 turns. 28-40 metres, 10 1/2, 13 1/2, 12 1/2, 40 1/2 metres. 15 1/2, 18 1/2, 19 1/2, 100-110 metres, 20 1/2, 25 1/2, 18 1/2. Using a S.W. tuning condenser of .00015 mfd., the coils are: 9-15 metres, 2 1/2, 2 1/2, 2 1/2, 15-28 metres, 5 1/2, 6 1/2, 5 1/2, 28-50 metres, 6 1/2, 8 1/2, 8 1/2, 10 1/2, 50-100 metres, 12 1/2, 17 1/2, 15 1/2, 14 1/2 turns. Use 30 gauge d.s.c. wire. These values will be varied by the arrangement of the circuits connected to them. They are, therefore, approximate only.

GENERAL. Can any reader please supply Mr. R. L. Gibson, Alstonville, with following copies of RADIO: 24/11/26 and 8/12/26. Full price of copy and postage paid.

L.W. (Sydney). "In No. 26 'Proving Radio' is described a one-valve amplifier for use with a crystal set. Would it be possible to use an 80-v. valve and dry B battery with this amplifier? If so, what voltage B battery would be required, and what valve would you recommend using. Would any alterations be necessary to winding?"

Answer: Quite O.K. Can be used, 90-volt B battery, E194 A.C. valve. Aye, slight alteration necessary. Instead of connecting filament to grid return, connect cathode here. Filament leads are taken to output of filament transformer. B negative should be taken to cathode.

G.P.M. (Wilson's Point). Probably a matter of grid bias adjustment.

A.M. (Rockdale). The grid bias adjuster plug should be in the first row. Wavetrap will help selectivity problem.

F.M.C. (Newcastle). "I find that by placing my hand near the coil of my set, the volume increases. By putting three or four hands near the coil, would this not make it four or five times stronger. If so, will you kindly inform me where to procure the spare hands, and whether they should be connected in series or parallel?"

Answer: This is a suitable set where large parties of people are to be entertained. They are asked to join hands in series, and sing Auld Lang Syne. Further hands can be obtained from Sydney Hospital. Dirty hands should be well cleaned with spirit of salts, and soldered. If you desire to do away with the hands, try reversing connections to condenser, and make sure earth is making good connection. The hand capacity is probably tuning the set more accurately than the tuning condenser.

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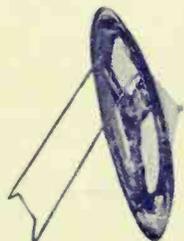
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